

## CONTRACT NO. 02574631X110

This Contract No. 02574631X110 ("Contract") is made between **Kentucky Power Company**, a Kentucky corporation ("Owner" or "KPCO") and **Asplundh Tree Expert Co.**, a Pennsylvania corporation ("Contractor"). Contractor and Owner may be referred to collectively as the "Parties" and individually as a "Party."

### 1. DESCRIPTION OF SERVICES

Subject to the terms and conditions hereof, Contractor agrees to furnish to Owner, on an as-needed basis, all supervision, labor, equipment and specified materials necessary to perform distribution vegetation management services, as delineated below, within Owner's service areas ("Work").

Vegetation management services may include but not be limited to the following:

Emergency- Local emergency restoration tree work on an on-call basis.

Herbicide and Tree Growth Regulator (TGR)- Application of appropriate herbicides and/or TGR in service areas as directed by Owner.

Mowing- Provide mowing services in Owner service areas where easements restrict the ability to use any other method for vegetation control and Owner has determined that mowing is the preferred maintenance method.

Removals- Hazard tree removals performed outside of Owner's routinely maintained right-of-ways.

Right-of-Way Maintenance- Tree and brush work on and off-road and/or cross-country on distribution lines, based upon Owner's specifications.

Side Trimming- Tree trimming along the edges of right-of-ways using either aerial lifts, climbing crews, aerial saw, chemicals and/or mechanical side trim equipment.

Storm Restoration- Emergency restoration in areas affected by storm damage without debris cleanup unless otherwise specified.

Work Planning- Perform inspection and planning services and develop plans, strategies and administrative work for various methods of vegetation management to be performed in Owner's service areas. Work planning services shall be performed using qualified Distribution Contract Utility Foresters, Work Planners, Inspectors, Pesticide Applicators and TGR Pre-Notifiers as described in the documents attached in Exhibit B.

This Contract covers only such Work as may be authorized by Owner and shall not constitute an exclusive agreement between Owner and Contractor. Owner reserves the right to use its own forces, equipment, tools, conveyances and materials or those of another vendor to perform the same or similar Work. Parties agree this Contract does not authorize Contractor to begin performance of any Work, nor does it guarantee Contractor any minimum volume of Work.

### 2. ENGAGEMENT PROCESS

All proposed Work will be discussed and assigned in periodic communications between Owner and Contractor, at which time Parties will agree upon the type of Work, the circuit in which Work will be performed and the pricing mechanism to be utilized. Owner shall authorize Work through the following process:

Work shall be requested by Owner via a written or electronic order request (individually or collectively referred to as "Work Request"). Each Work Request shall reference this Contract as governing the Work provided thereunder. The Work Request shall contain a scope of Work, the requested location, the term for which the Work shall be provided for that service area, any applicable specifications, this Contract number, any invoicing specifications, the pricing model utilized, and any other documents relevant to the Work.

Parties agree that any terms and conditions inconsistent with, additional to, or different than this Contract that may be preprinted or attached to a quote, acknowledgement, job authorization, Work Request, or any other written document that the Parties may use for the ordering or delivery of Work hereunder, shall not apply and each Party hereby rejects all such terms and conditions.

### 3. CONTRACT DOCUMENTS

Contractor and Owner agree that the Work shall be performed in accordance with the following Exhibits:

**Exhibit A –General and Supplementary Terms**, consisting of the following documents, which are attached hereto and made a part hereof;

1. AEP-Asplundh Agreed Exceptions for Contract No. 02574631X110 dated May 15, 2012;
2. AEP General Terms and Conditions for Labor and Services, dated March 2009 ("AEP General Terms and Conditions"); and
3. Supplementary Terms and Conditions for Forestry Contracts, dated June 24, 2011 ("Supplementary Terms").

**Exhibit B –Forestry Terms and Instructions**, consisting of the following documents, which are attached hereto and made a part hereof;

4. AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated May 14, 2009;
5. AEP Forestry Instructions for Forestry Contract Crew Audits, dated January 2007, including its Sample Audit Form ("Audit Instructions"); and
6. AEP Kentucky Power Distribution Line Clearance Guidelines, dated July 2010.

**Exhibit C –Rates**, consisting of the following documents, which are attached hereto and made a part hereof;

7. Kentucky Power Rate Clarifications, dated May 15, 2012 ("Rate Clarifications");
8. Workers' Compensation Rate Adjustment Process, dated June 15, 2012;
9. Owner's Unit Price Model, dated April 30, 2012, and the Lump Sum Price Model, dated April 30, 2012;
10. Labor Descriptions, dated August 1, 2011;
11. Contractor's Rates – Standard Labor Rates, Major Storm Rates, Equipment Rates, Material Pricing, Unit Pricing, all dated April 1, 2012 (individually or collectively, the "Rate Sheets");

12. A sample Work Request for Unit Price/Time and Materials Work, a sample Work Request for Lump Sum Work, and all applicable subsequently executed Work Requests; and
13. A sample Pricing Change Order Request Form and all applicable subsequently executed Pricing Change Orders.

**Exhibit D –KPI**, consisting of the following documents, which are attached hereto and made a part hereof;

14. AEP – Asplundh 2012/2013 Corporate Key Performance Incentive Plan Guidelines, (“CKPI”); and
15. AEP – Asplundh 2012/2013 Key Performance Incentive Plan Guidelines - AEP Kentucky (“KPI”).

In the event of a conflict among any of the Contract documents, the conflict shall be resolved by interpreting the documents in the following order of priority:

- a. any executed amendment to the Contract;
- b. this Contract Letter;
- c. Exhibit A;
- d. Exhibit B;
- e. any executed Pricing Change Order;
- f. Exhibit C;
- g. Exhibit D; and
- h. the applicable Work Request.

#### **4. TERM**

This Contract is made to be effective as of the date of Owner’s signature below (“Effective Date”) and shall terminate on March 31, 2017, unless terminated earlier in accordance with this Contract. If this Contract is terminated or expires prior to Work under a Work Request being completed, unless Parties agree otherwise in a signed writing, the Work under such Work Request shall be continued pursuant to the terms of this Contract.

#### **5. PRICING**

Parties agree that all Work performed under this Contract shall be completed on a Lump Sum, Unit Price, and/or Time and Materials basis priced in accordance with Contractor’s Rate Sheets in Exhibit C of the Contract.

Labor rates as described in Contractor’s Rate Sheets shall be held firm for the first six months of the Contract. It will be the sole discretion of the Owner to modify labor rates at that time, or to hold labor rates firm until one year after the Effective Date of this Contract. All other rates in Contractor’s Rate Sheets shall be held firm until one year after the Effective Date of this Contract.

Annual Rate Adjustments: Contractor’s Rate Sheets may be revised or updated during an annual Contract amendment process. Contractor must submit all proposed rates by February 15<sup>th</sup> of each year of the Contract starting in 2014. Approved annual rate adjustments shall become effective each year on April 1st beginning in 2014.

Pricing Change Order Process: If Contractor has unforeseen changes to Contractor's Rate Sheets that do not conform to the Annual Rate Adjustment process described above, these changes may be made, upon Owner discretion, in accordance with the following procedures:

- Changes to Contractor's Rate Sheets shall be made using the Pricing Change Order Request Form ("Pricing Change Order") included in Exhibit C and must be presented in the authorized pricing format designated by Owner.
- Each Pricing Change Order must be submitted to Owner's Representative and AEP Manager, Forestry Operations, as listed in Section 10 below and submitted at least 30 days before the desired effective date for the new rates. If Contractor fails to submit its proposed Pricing Change Order at least 30 days prior to the desired effective date, the proposed Pricing Change Order will not be considered and existing Contractor's Rate Sheets shall remain in effect.
- If Contractor's Pricing Change Order is accepted by Owner, the revised Contractor's Rate Sheets shall be incorporated into Exhibit C of the Contract upon the authorized signature of the Parties and shall become effective as of the date of the latter signature of the Pricing Change Order.

Lump Sum Work: Parties agree to designate the specific pricing for Work performed on a Lump Sum basis in the Work Request. In the event the Contractor is assigned additional Work that was not included in the original Work Request, that Work will be priced utilizing the Contractor's Rate Sheets included in Exhibit C.

## 6. KEY PERFORMANCE INCENTIVES

CKPI as described in Exhibit D will measure the Contractor's performance, at the corporate level and provide a penalty to the Contractor when performance does not meet established benchmarks. The documents in Exhibit D provide full details of the CKPI.

KPI as described in Exhibit D will measure Contractor's performance and provide a monetary incentive to Contractor when performance exceeds established benchmarks and a penalty to Contractor when the benchmarks are not met. The documents in Exhibit D provide full details of the KPI.

## 7. FUEL ADJUSTMENTS

The base fuel price is \$4.00 per gallon ("Base Fuel Price"). The weekly fuel price is the state average for regular grade unleaded gasoline taken from the American Automobile Association's website ("Weekly Fuel Price"). When preparing the weekly invoices, if that week's Weekly Fuel Price differs from the Base Fuel Price by more than ten (10) cents, a fuel adjustment for each piece of equipment will be calculated by using the following formula:

Fuel adjustment = [(Weekly Fuel Price) – (Base Fuel Price)] x gallons/hour x Equipment hours billed

The gallons/hour figure is taken from the Contractor's Rate Sheets in Exhibit C. The sum of the fuel adjustments for each piece of equipment used that week shall be added to or subtracted from that week's invoice amount. If the Unit Price Model, as described in Exhibit C, is used and billing is done with a single invoice when all the Work is completed, the Weekly Fuel Price used shall be that for the week in which the invoice is being prepared.

During the first quarter of each year, beginning in 2014, the equipment rates shall be adjusted based on the average gas price for the last quarter of the previous year. The average gas price for the last quarter shall be determined by adding the Weekly Fuel Prices used to calculate the fuel adjustment for the weeks of October, November and December and then dividing that sum by the number of those weeks. The resulting average gas price for the last quarter will be the new Base Fuel Price. The old Base Fuel Price shall be subtracted from the new Base Fuel Price and the difference shall be added to the hourly rate for each item of equipment on the equipment rates that uses fuel. In accordance with the annual rate adjustment process detailed above in Section 5, the new Base Fuel Price shall be incorporated into Exhibit C - Contractor's Rates.

## 8. MARK-UP ADJUSTMENTS

The mark-up percentages in the Contractor's Rate Sheets are fixed for the duration of the Contract, except as specified herein. Owner and Contractor have reviewed the development of the mark-up percentages in Contractor's Rate Sheets and have agreed that they were reasonably developed and fairly reflect Contractor costs they represent. Accordingly, without restricting any of the audit rights in Article 29.0 of the AEP General Terms and Conditions and except as may be provided elsewhere herein, Parties' intent is that Contractor's actual costs for Workers' Compensation and Public Liability and Property Damage Insurance shall not be subject to audit.

## 9. WORKERS' COMPENSATION ADJUSTMENTS

The mark-up for Workers' Compensation shall be adjusted annually, as described in the Workers' Compensation Rate Adjustment Process in Exhibit C.

## 10. NOTICES AND OPERATION CONTACTS

In accordance with Section 33.0 of the AEP General Terms and Conditions, the representatives of Parties for receipt of notices are:

### For Owner:

| Role                             | Name               | E-mail            | Phone          | Address  |
|----------------------------------|--------------------|-------------------|----------------|--|
| AEP Contract Analyst             | Georgiana Sullivan | gsullivan@aep.com | (614) 716-6815 | 1 Riverside Plaza 9 <sup>th</sup> Floor<br>Columbus, OH 43215  |
| AEP Manager, Forestry Operations | Walter Sherry      | washerry@aep.com  | (614) 716-2772 | 1 Riverside Plaza 12 <sup>th</sup> Floor<br>Columbus, OH 43215 |
| KPCO Representative              | Mark Jackson       | mejackson@aep.com | (606) 437-3818 | 3249 North Mayo Trail,<br>Pikeville, KY 41501                  |

### For Contractor:

|                           |                 |                     |                |  |
|---------------------------|-----------------|---------------------|----------------|--|
| Contractor Representative | Steven Asplundh | steven@asplundh.com | (215) 784-1348 | 708 Blair Mill Rd.<br>Willow Grove, PA 19090 |
|---------------------------|-----------------|---------------------|----------------|--|

## 11. INVOICES

Contractor shall create time sheets in Owner's Right-of-Way Management ("RWM") software system, or other applicable system as designated by Owner, weekly, in arrears. If necessary, paper invoices shall be sent to the Owner Representative as listed on the Work Request and must include this Contract number.

## 12. MISCELLANEOUS

All capitalized terms not defined herein are as defined in the applicable terms and conditions referenced herein.

**IN WITNESS WHEREOF**, Parties hereto have caused this Contract to be signed by their respective officers thereunto duly authorized on the dates set forth below to be effective as of the Effective Date.

**Kentucky Power Company**

**Asplundh Tree Expert Co.**

\_\_\_\_\_  
signature

\_\_\_\_\_  
signature

Nicholas K. Akins  
\_\_\_\_\_  
print/type name

\_\_\_\_\_  
print/type name

Chairman of the Board and CEO  
\_\_\_\_\_  
title

\_\_\_\_\_  
title

\_\_\_\_\_  
date

\_\_\_\_\_  
date

# EXHIBIT A

**AEP-Asplundh Agreed Exceptions  
dated May 15, 2012  
for Contract No. 02574631X110**

The AEP General Terms and Conditions are modified as follows:

**Article 16.0 – INSURANCE**

Add the following as a second sentence to Subsection 16.1.8:  
“Contractor may self-insure this exposure.”

**Article 17.0 – INDEMNIFICATION**

Delete Section 17.2 in its entirety and insert the following:

**“TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, “LIABILITIES”), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO THE EXTENT ANY LIABILITIES ARISE FROM OWNER'S NEGLIGENCE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.”**

**Article 23.0 – DEFAULT**

In Subsection 23.1.2, delete “two (2)” and replace with “five (5).”





**GENERAL TERMS AND CONDITIONS FOR  
LABOR AND SERVICES**

**March 2009**

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**AFFIDAVIT OF COMPLETION**

**Exhibit 1**

## **GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES**

### **1.0 DEFINITIONS**

- 1.1 Business Day: “Business Day” means any calendar day, other than a Saturday or Sunday or a calendar day on which U.S. commercial banking institutions are authorized or required by law to close.
- 1.2 Change Order: “Change Order” means a written order as defined and issued in accordance with Article 12.0.
- 1.3 Contract: “Contract” means collectively the Contracting Instrument and all documents referenced in the Contracting Instrument and any Change Orders, amendments or addenda.
- 1.4 Contract Price: “Contract Price” means the price to be paid to the Contractor for the performance of Work as set forth in the Contracting Instrument.
- 1.5 Contracting Instrument: “Contracting Instrument” means the contractual document that identifies the parties, the nature of the Work, the Contract Price, documents to be included as part of a Contract, and other matters relating to a Contract. The Contracting Instrument may be in the form of a contract letter, blanket purchase order, purchase order or other similar documents.
- 1.6 Contractor: “Contractor” means the entity contracting with Owner for the performance of Work.
- 1.7 Direct Cost: “Direct Cost” means the actual costs and charges incurred and payments made by Contractor, its Subcontractors, for Site equipment, materials, services and labor (including payroll burden and expenses) which are directly attributable to the performance of Contractor’s Work hereunder. Direct Cost includes Contractor’s home office or Site labor to the extent Contractor’s home office or Site labor is directly assignable to the Work which must be demonstrable under the circumstances. Direct Cost shall not include corporate, general and administrative costs including home office functions, sales, marketing, accounting, human resources, information technology, payroll, profit, research, development, quality assurance and control, purchasing, safety, management, administration, warranties, insurances, off-Site or other unabsorbed costs.
- 1.8 Final Acceptance: “Final Acceptance” means Owner’s determination that the Work has been completed in accordance with the Contract requirements.
- 1.9 Initial Acceptance: “Initial Acceptance” means Owner’s determination prior to final inspection and testing that the Work conforms to the Contract requirements for purposes of receipt.
- 1.10 Owner: “Owner” means any one or more of the companies of the American Electric Power System as may be specified in the Contract Instrument.
- 1.11 Site: “Site” means Owner's property or such other premises (including adjacent bodies of water and property owned or controlled by a third-party) upon which the Work is to be performed.
- 1.12 Subcontractor: “Subcontractor” means vendors, suppliers, consultants, and subcontractors of any tier, materialmen, professionals, laborers, and all other persons providing equipment, materials or services directly or indirectly to Contractor in connection with the Work.
- 1.13 Work: “Work” means all of Contractor's obligations under the Contract.

## 2.0 CONTRACTOR'S OBLIGATIONS

- 2.1 Contractor shall at its expense provide everything necessary for the complete, proper and timely execution of the Work including, but not limited to, home office support, supervision, labor, tools, transportation, safety equipment, construction equipment, temporary utilities and facilities, equipment to be installed, materials and supplies, unless explicitly excluded in the Contract. Contractor's performance of the Work shall include everything requisite and necessary to comply with prudent electric utility industry standards and to complete its Work, notwithstanding the fact that every item necessarily involved may not be specifically mentioned. Details and items not indicated by the Contract documents shall be adequately and properly performed by Contractor at no extra cost if such details and items are necessary to complete the intent of the Contract or otherwise to complete the Work.
- 2.2 Contractor is responsible for considering the conditions affecting the Work including, but not limited to, conditions affecting the transportation, disposal, handling and storage of materials; the availability and cost of labor, water, electric power, utilities and roads; the uncertainties of weather, river stages, and similar physical conditions at the Site; the conformation and condition of the ground; and the character of equipment and facilities needed. Contractor shall take into account the character, quality and quantity of surface and subsurface materials or obstacles to be encountered to the extent this information is reasonably ascertainable from the contract documents or an inspection of the Site.
- 2.3 Contractor shall immediately and before such conditions are disturbed notify Owner of: (a) subsurface or latent physical conditions at the Site which differ materially from those indicated in the Contract; (b) unusual geologic conditions at the Site which differ materially from conditions ordinarily encountered or from conditions addressed in the Contract; or (c) artifacts or articles which appear to have archaeological or historical significance. Owner shall promptly investigate such conditions and, if such conditions do materially differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of the Work, the parties shall agree to amend the Contract. No claim of Contractor under this clause shall be allowed unless Contractor has given immediate notice as required above and confirmed such notice in writing within ten (10) days of discovery.
- 2.4 Contractor shall have an authorized representative at the Site to whom Owner may give instructions at all times when Work is being performed.
- 2.5 Contractor shall assign qualified and competent personnel to perform the Work and have qualified and competent supervision at the Site at all times to direct and observe the Work. Key personnel shall not be removed from the Work without prior notice to, and consent by Owner which shall not be unreasonably withheld. Contractor will investigate and take appropriate action with respect to any personnel problems brought to its attention by Owner.
- 2.6 Contractor shall confine all of its operations and personnel to those areas of the Site to which Owner authorizes access.
- 2.7 Contractor's personnel may not operate Owner's tools, vehicles, materials or equipment ("Owner's Equipment") without Owner's prior authorization. If Contractor borrows Owner's Equipment, Contractor (a) agrees that Owner has provided Owner's Equipment AS IS, with no representations or warranties; (b) assumes full responsibility for the protection of the borrowed Owner's Equipment; (c) assumes all liability for injuries or damages resulting from the use of the borrowed Owner's Equipment; and (d) agrees to return the borrowed Owner's Equipment to Owner in the same condition as when it was borrowed, or, if repairs are necessary, to cause such repairs to be performed promptly at Contractor's expense before the Owner's Equipment is returned to Owner. Owner has no obligation to lend Owner's Equipment to Contractor.

- 2.8 Contractor shall cooperate with Owner and others working at or near the Site. Contractor shall promptly report to Owner any defects in the work of others which affects the Work. Failure to report such defects constitutes acceptance of the conditions by Contractor. Contractor shall properly fit, connect and coordinate its Work with that of Owner and other contractors.
- 2.9 Contractor shall keep all of its work areas free from trash and debris, and keep its work areas "broom clean" on a continuous basis.
- 2.10 Contractor shall secure and protect its materials, tools, equipment and the Work, including Owner-provided materials and equipment.
- 2.11 Contractor is responsible for the proper execution of the Work with respect to any base lines and bench marks established by Owner.
- 2.12 If the Work is subject to prevailing wage requirements, Contractor agrees to comply with such requirements.
- 2.13 Contractor, its Subcontractors, and their respective employees and agents involved in the Work shall adhere to the provisions contained in Owner's Code of Business Conduct which can be found at Owner's website.

3.0 TERM AND EFFECTIVE DATE

- 3.1 The Contract shall commence as of the effective date and, unless earlier terminated as provided in Article 27.0, shall terminate on the termination date set forth in the Contract. Unless specified elsewhere in the Contract, the effective date of the Contract shall be the earlier of the date on which Contractor begins performance hereunder or the date of the latter signature on the Contract.

4.0 RELATIONSHIP OF THE PARTIES

- 4.1 Contractor and all of its employees and Subcontractors are, with respect to Owner, independent contractors. Contractor will be solely responsible for the supervision, direction, and control of its employees and Subcontractors. Contractor is responsible for the payment of all compensation, benefits, and employment taxes with respect to the Contractor's employees.

5.0 ASSIGNMENT AND SUBCONTRACTING

- 5.1 Contractor shall not assign or otherwise dispose of the Contract, or any obligations hereunder, without the written consent of Owner. Any assignment or disposal without the written consent of Owner shall be null and void.
- 5.2 Prior to entering into any subcontract, Contractor shall submit to Owner a subcontractor data sheet that includes the name and address of the Subcontractor and the scope of work proposed to be included under such subcontract. Within five (5) Business Days of receipt of a Subcontractor data sheet, Owner may reject such Subcontractor without cost or contract extension by giving written notice of such rejection to Contractor.
- 5.3 Contractor is responsible for the selection of any Subcontractor and for the Subcontractor's proper performance of the Work assigned to it. If the work of a Subcontractor is not in compliance with the Contract requirements, Contractor shall take immediate steps to bring the Subcontractor's work into compliance and, at Owner's written request, terminate its contractual relationship with the Subcontractor as it relates to the Work at no cost to Owner.

## 6.0 LABOR RELATIONS

- 6.1 Contractor shall comply with any project, national or local labor agreements that are applicable to the Work or Site. Contractor shall cooperate with Owner and other contractors in establishing and maintaining labor work rules and practices.
- 6.2 When the Work is performed by building and construction trades labor, a pre-job conference shall be held with local labor representatives prior to starting Work. Owner shall be afforded the opportunity to attend and participate in pre-job conferences.
- 6.3 Contractor shall provide immediate notice to Owner of any actual or potential labor dispute that may delay the timely, efficient and productive performance of the Work.
- 6.4 Contractor shall inform and cooperate with Owner on labor matters. Contractor shall consult with Owner prior to rendering its decision(s) on labor matters that may impact the timely, efficient and productive performance of the Work.
- 6.5 Contractor shall exercise its management rights contained in applicable labor agreements to establish, maintain, and enforce work rules conducive to timely, efficient, productive and harmonious work operation. Contractor shall take the necessary steps available to resolve grievances, jurisdictional disputes, or other violations of collective bargaining agreements.

## 7.0 SAFETY AND SECURITY

- 7.1 Contractor shall perform the Work in a safe and careful manner, provide first aid facilities and transportation, and use such safety devices and methods as are necessary to protect its employees, agents, Subcontractors, Owner's employees and agents, other contractors and the public from bodily injury and property damage.
- 7.2 Contractor shall comply with and enforce all laws, rules and regulations applicable to safety and health standards, including, but not limited to, the Occupational Safety and Health Act of 1970 (OSHA) and any revisions of OSHA or successor legislation.
- 7.3 Contractor shall comply with project and Site safety and security rules and all procedures issued by Owner, provided that such rules and procedures do not conflict with OSHA or other safety laws, rules or regulations. Contractor shall assign a competent person at all times to manage, coordinate and enforce its safety program during performance of the Work.
- 7.4 Contractor shall provide Owner with Material Safety Data Sheets (MSDS) for all applicable materials prior to delivery to Owner's Site.
- 7.5 Contractor shall obtain Site permits or approval from Owner for its vehicles, any excavation, use of explosives, access to restricted areas, use of Owner's Equipment, tools and facilities, and other similar activities.
- 7.6 Owner will arrange all necessary clearances on energized equipment, electrical and communications circuits, piping systems or other operational equipment. Contractor shall notify Owner requesting the clearances prior to the scheduling of such Work. Contractor shall comply with Owner's clearance permit system regarding tagout and lockout of electrical and mechanical systems and other equipment.
- 7.7 Contractor shall fully inform Owner in writing regarding the types, quantities and use of any hazardous materials brought on the Site; the types and quantities of hazardous wastes being generated from the Work; and Contractor's program for proper storing, handling and disposal of such materials in a safe and secure manner.

- 7.8 Contractor shall immediately inform Owner of all regulatory safety, health and environmental inspections, citations and penalties associated with the Work. Contractor shall provide Owner with written reports and copies of all documents submitted to or by regulatory agencies and insurance companies.
- 7.9 Contractor shall promptly inform Owner of any injuries to its employees, agents, Subcontractors, or other persons arising out of the Work that require medical treatment.
- 7.10 Contractor shall obtain, maintain, and properly complete all record keeping required by regulatory agencies. Upon request, Contractor shall provide Owner with copies of all logs, reports and other records.
- 7.11 Contractor shall investigate all accidents resulting in personal injury, property damage, or near misses to determine root cause(s) and corrective action(s). Upon request, Contractor shall provide Owner with a copy of investigative reports, including all documents submitted to insurance companies.
- 7.12 All of Contractor's employees, agents, Subcontractors, vehicles, trailers, etc. entering or leaving the Site are subject to inspection at any time by Owner.
- 7.13 If a safety violation or other unsafe condition causes imminent danger, Owner may immediately shut down the Work involved without advance written notice.
- 7.14 Contractor and all Subcontractors performing Work at Site must have a substance abuse program. This program must apply to all personnel. Minimum requirements of this program shall include pre-hire testing, testing for cause and if requested, random testing. Screening substances and their associated cut-off limits are listed below.

| <u>Drug Classes</u> | <u>Screening Cut-Off Limit (ng/ml)</u> | <u>Confirmation Cut-Off Limit (ng/ml)</u> |
|---------------------|--|---|
| Amphetamines        | 1,000                                  | 500                                       |
| Benzoylcegonine     | 300                                    | 150                                       |
| Cannabinoids        | 50                                     | 15  |
| Opiates             | 2,000                                  | 2,000                                     |
| Phencyclidine       | 25                                     | 25  |

Blood & Breath alcohol content : .02% per Department of Transportation.

Testing shall be performed by a testing facility certified by Department of Health & Human Services. Personnel must have evidence of having tested negative within a year prior to employment. Owner will accept conditional employment predicated upon (a) employee(s) furnishing evidence that they have submitted to testing within forty-eight (48) hours of initial employment and (b) employee(s) furnishing evidence of negative test results within five (5) work days of initial employment. Contractor shall ensure personnel are "drug free". Owner reserves the right to examine evidence outlined herein. Contractor's program shall incorporate reciprocity on "drug free" employee verification to minimize Owner's economic impact and employee recertification while maintaining the program's intent.

- 7.15 If required by Owner, Contractor must meet certain security criteria set forth herein.
  - 7.15.1 Contractor shall submit to Owner a copy of its background investigation process for Owner's review and file. If Owner, in its sole discretion, determines that Contractor's background investigations do not meet certain specific requirements, then Contractor, at

its expense, must perform a background investigation that does meet Owner's certain specific requirements on each individual designated by Contractor to perform Work, or is performing Work on behalf of Contractor, for Owner (referred to herein for purposes of this Article, as an "individual"). Notwithstanding anything to the contrary stated herein, Owner reserves the right to conduct a background investigation on each individual at Contractor's expense.

- 7.15.2 Owner's certain specific requirements of background investigations include the following: (i) determination of whether an individual has been convicted of a felony crime in each state where the individual has resided during the past seven years; (ii) performance of the background investigation at the state level (in other words, to only search the records of the county in which the individual has resided during the past seven years is not a sufficient background investigation); and (iii) if the individual is to operate a motor vehicle while performing Work for Owner, then a state operator's license abstract must be completed in the states where the individual has been licensed as a vehicle operator during the past seven years.
- 7.15.3 If any background investigation reveals or indicates that an individual has been convicted of a felony crime, then the Contractor must notify the Owner prior to the individual commencing Work. Owner in its sole discretion shall have the option of barring from any Work Site any individual who has a reported felony conviction. Owner may audit or review specific Contractor screening files to ensure compliance with the Contract.
- 7.15.4 If an individual requires unescorted access to Owner's critical cyber assets, then Owner will conduct its own background investigation, which will include a Social Security Number verification. Additional specific provisions or requirements related to any Owner conducted background investigation pursuant to this Section 7.15.4 will be communicated to Contractor prior to implementation of such background investigation.
- 7.15.5 Contractor shall not perform any screening activities that violate the federal Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964 or any other applicable law in any circumstances. Contractor shall ensure that the substance and manner of any and all background investigations performed by Contractor conform fully to applicable law.
- 7.16 "Personally Identifiable Information" or "PII" means any information to which Contractor is provided access that could identify an individual either directly or indirectly including, without limitation to the individual's name, credit card numbers, social security number, biometric, bank account numbers, passport numbers, computer passwords or health, financial or employment information and other individual confidential information.
- 7.16.1 To the extent that Work under the Contract requires Contractor to be given access to PII gathered and/or maintained by or on behalf of Owner, or in the event Contractor acquires access to or encounters any PII during performance of the Work, Contractor shall after receipt thereof, treat such PII as confidential and safeguard such PII from unauthorized use and disclosure. Upon request of Owner, Contractor shall have its employees execute a confidentiality agreement protecting PII. Contractor agrees not to appropriate such PII for its own use or to disclose such PII to third parties unless specifically authorized by Owner in writing. Contractor shall ensure that its employees will not discuss, divulge or disclose any such PII to any person or entity except those persons directly concerned with and only to the extent necessary to complete the performance of the Work. Contractor shall access, use and process PII and other data on behalf of Owner only for the purposes specified in the Contract.



- 7.16.2 Contractor shall comply with (i) NERC Reliability Standards as applicable, including without limitation, those relating to Critical Infrastructure Protection, (ii) Owner's security standards, and (iii) such further instructions as Owner may provide regarding the processing of such PII. Contractor shall inform Owner promptly if it has reason to believe that applicable law (or changes in applicable law) prevents Contractor from fulfilling the obligations relating to treatment of PII or other data under Owner's security standards and/or the Contract.
- 7.16.3 To the extent permitted by law, Contractor shall notify Owner promptly and act only upon Owner's instruction concerning: (a) any request for disclosure of PII or other data by law enforcement or other governmental authority; (b) any request by law enforcement or other governmental authority for information concerning the processing of PII or other data in connection with the Contract; or (c) any request received directly from an individual concerning his/her PII.
- 7.16.4 Contractor may not store PII on computers, mobile devices, including but not limited to cellular telephones and/or personal digital assistants, servers and/or storage devices including removable media (any of which, hereinafter known as a "Computer"), unless required for the performance of Work. Any such information must be deleted from a Computer, in a manner that ensures that it cannot be accessed or read, as soon as such storage is no longer required for the performance of Work.
- 7.16.5 Upon termination of the Contract or upon Owner's request, Contractor must promptly (a) return all PII in written form to Owner, and (b) delete all PII in Contractor's possession or control (on computer or in whatever other form or media) in a manner that ensures that this information cannot be accessed or read.
- 7.16.6 Contractor shall administer a monitoring process to ensure compliance with Section 7.16 and the related subsections hereof, promptly report any breaches to Owner, and implement immediate, appropriate corrective actions to contain and prevent recurrence. Contractor shall report to Owner immediately upon discovery of a real or suspected loss of PII. In the event of a breach of this provision or the occurrence of any other event regarding PII that requires notification under applicable law, Contractor agrees to assume responsibility for informing all such individuals in accordance with applicable law.
- 7.16.7 In addition to any remedy available to Owner under the Contract, Contractor acknowledges that any breach of Section 7.16 or the related subsections hereof by Contractor or its Subcontractors may subject Contractor to civil and criminal penalties. Contractor shall include the full text of Section 7.16 and the related subsections 7.16.1 through 7.16.7 in all appropriate subcontracts. However, including such provision in the subcontracts shall not relieve Contractor of its obligation to ensure compliance with the provisions of Sections 7.16.1 through 7.17.7.

## 8.0 MATERIALS

- 8.1 All Contractor-furnished materials, equipment and related products (referred to in this Article 8.0 as "Materials"), which are to be installed shall be new and meet the requirements of all applicable codes. Materials which will not become a part of the permanent installation are not required to be new. Owner reserves the right to reject materials which have not been previously used but which have been in storage for an unreasonable period of time. Title to and risk of loss of the Materials shall pass to Owner upon Final Acceptance of the Work. Title to the Materials shall be free and clear of all liens and encumbrances.

- 8.2 Contractor shall not substitute Materials specified in the Contract unless authorized by Owner in writing. Unless substitution has been so authorized, Contractor shall, at its expense, remove and replace any improperly substituted material.
- 8.3 Upon Owner's request, Contractor shall, at its expense, submit to Owner samples of Contractor-furnished materials. Contractor must obtain Owner's written approval before performing Work involving the use of materials for which samples have been requested. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes. Materials used shall conform to the approved samples. Contractor shall remove and replace nonconforming materials at its expense.

9.0 INSPECTION AND ACCEPTANCE

- 9.1 Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed conforms to the Contract requirements. Owner reserves the right to review and approve the adequacy of Contractor's inspection system. Contractor shall provide all quality control and quality assurance program information requested by Owner.
- 9.2 Owner shall have free access to the Work for inspection purposes. Owner's inspection, receipt or Initial Acceptance of the Work shall not relieve Contractor of its obligation to comply with the terms of the Contract.
- 9.3 Each party shall bear its own expenses in performing inspections, except that (a) Owner may use Contractor's facilities, ladders and scaffolds to perform inspections of the Work; (b) Contractor shall pay Owner's expenses in re-inspecting Work which was rejected as non-conforming to the Contract requirements in an earlier inspection; (c) Contractor shall pay the costs of uncovering and re-covering Work for Owner's inspection if Contractor failed to give Owner reasonable notice that the Work was ready to be covered; and (d) prior to Final Acceptance, if Owner requests an inspection of Work already completed which requires removing and tearing out Work, and the Work is found to be materially defective, Contractor shall pay the expenses of inspection and reconstruction, but if the Work is found to be in conformance with the Contract requirements, Owner shall pay the expenses of inspection and reconstruction.
- 9.4 Owner will not pay for defective work. Contractor shall repair or replace all defective work at its expense. Contractor shall promptly remove from the Site any Contractor-furnished materials that do not comply with the requirements of the Contract. If Owner-furnished materials have been used in any defective work, the cost of such materials shall be backcharged to Contractor.
- 9.5 Owner shall have the right to take possession of or use any part of the Work. Owner's possession or use shall not constitute Initial Acceptance or Final Acceptance of the Work.
- 9.6 Unless otherwise provided in the Contract, Final Acceptance by Owner shall be made as soon as practicable after all Work has been completed and inspected. Any part of the Work not rejected by Owner following Final Inspection shall be deemed to have achieved Final Acceptance.

10.0 SCHEDULE

- 10.1 Contractor shall perform the Work to meet the schedule date(s) set forth in the Contract. Contractor shall not commence Work until authorized by Owner to do so.
- 10.2 In a format acceptable to Owner, Contractor shall develop, update, maintain and provide to Owner a written schedule for execution of the Work. The schedule shall be time scaled, complete, and accurate in detail depicting Contract milestone dates, work activities and durations. Upon review and approval by Owner, this schedule shall become the Contract schedule. Updates to the Contract schedule shall

be provided to Owner on at least a monthly basis. Updates shall depict actual progress measured against planned progress.

- 10.3 Contractor shall notify Owner within 24 hours of the first knowledge that any completion date(s) will not be met and shall, within five (5) Business Days thereafter, submit a detailed program depicting the plans and actions being taken to regain the lost time. The notice shall not limit any other rights or remedies afforded Owner under the Contract or by law.

## 11.0 TERMS OF PAYMENT

- 11.1 Except as otherwise provided in the Contract, the following terms of payment shall apply:

11.1.1 The Contract Price set forth in the Contract shall constitute full and complete payment for all Work.

11.1.2 Contractor shall submit invoices with proper documentation to Owner for the Work completed or for milestones achieved during the prior month. Owner may withhold all or any part of payment in an amount necessary to protect Owner from loss due to the occurrence, or imminent occurrence, of (i) Contractor's breach or failure to perform in accordance with the Contract, (ii) defective Work, (iii) Contractor's failure to pay any Subcontractor, (iv) other claims by Owner against Contractor, including indemnity claims, and (v) damages for delay or any agreed upon liquidated damages.

11.1.3 Owner shall pay 90% of each properly submitted and accepted invoice within thirty (30) days of receipt. The release of retention shall become due and payable thirty (30) days after the date of Final Acceptance of the Work.

11.1.4 Each invoice shall contain a statement that all bills for material and labor relating to the Work have been paid in full by Contractor, and there are no unpaid bills for which a lien could be filed. If requested by Owner, Contractor shall provide evidence of such payments. The final invoice for the Work shall be accompanied by a satisfactorily completed Affidavit of Completion in the form attached as Exhibit 1. Payment of the final invoice and retention constitutes a full and final release of Owner from all claims, damages, liabilities and obligations under the Contract.

- 11.2 Contractor shall promptly pay all of its Subcontractors.

## 12.0 CHANGES IN WORK AND EXTRA WORK

### 12.1 Change in Work

12.1.1 "Change Order" means a written order issued in accordance with this Article 12.0 documenting an addition to, deletion from, or other modification to the Work, including a change in the scope of Work, the Contract Price, the payment schedule, the completion dates, or the schedule for the Work.

12.1.2 Owner may issue a Change Order: (i) at Owner's option, or (ii) if requested by Contractor due to the occurrence of an event that entitles Contractor to a Change Order as determined by Owner.

12.1.3 If Owner issues a Change Order, Contractor shall perform the changed Work in accordance with the terms of the Contract and the issued Change Order.

- 12.1.4 No order, statement or other conduct of Owner shall be treated as a change in Work until such change is authorized in writing by Owner.
- 12.1.5 Contractor shall not be entitled to a Change Order for conditions such as, but not limited to, (i) work which is of such a nature as to be normally included in the Work or is reasonably inferable from the Contract; (ii) any errors, omissions, non-performance, negligence, deficiencies or improper or defective work on the part of Contractor (including miscalculations, incorrect estimates, or other errors in Contractor's proposal for the Work); (iii) changes relating to refinement, minor correction and detailing of the Work or any part of the Contract; or (iv) other unallowable claims such as cost impacts not due to Owner and cumulative impact claims.
- 12.1.6 With respect to Contractor claims for additional compensation, Owner shall pay only incremental Direct Costs associated with the proposed changes and only to the extent that Contractor can demonstrate that the changes actually increased its costs of performance. Any claims for additional compensation based on a change to the Work or extra work must be material in nature, and Contractor must provide full documentation supporting all elements of such claims. For a reduction in the scope of Work or a change which reduces Contractor's costs, the Contract Price shall be adjusted downward. The payment for changes to the Work shall be complete compensation to Contractor for performing such changes, including any schedule or cost impacts on the Work.
- 12.1.7 If Owner requests in writing that Contractor furnish materials or equipment to be permanently incorporated in changed work, extra work or cost-plus work, Owner shall reimburse Contractor for such materials or equipment its incremental Direct Cost plus a percentage mark-up to be agreed upon by the parties. Requests for payment for materials and equipment shall be accompanied by copies of receipted invoices. Owner has the right to audit Contractor's requests for changes and the financial basis therefor.
- 12.1.8 If Contractor and Owner disagree on whether any particular work is within the scope of Work and such work must be completed to insure timely progress, Owner will issue a disputed Change Order to cover the disputed work. Contractor shall diligently proceed with the disputed work. By noon on the work day following performance of the disputed work, Contractor shall submit to Owner for review timesheets itemizing all labor and equipment hours expended on the disputed work and an itemized listing of Contractor furnished materials. Such review is not an admission of liability by Owner. Prior to Final Acceptance, each disputed Change Order will be resolved to the mutual agreement of the parties.
- 12.2 Extra Work
- 12.2.1 "Extra work" is work which is beyond Contractor's scope of Work. At Owner's request, Contractor shall perform extra work at the applicable prices set forth in the Contract. If the Contract prices are not applicable to the type of extra work to be performed, Contractor shall promptly submit a proposal to perform the extra work, which proposal shall become an amendment to the Contract upon acceptance by Owner. If Owner directs Contractor to perform extra work on an overtime basis, Owner shall reimburse Contractor the actual payroll cost of premium time for direct job labor. Contractor shall invoice and maintain separate cost records for each extra work authorization issued by Owner.
- 12.2.2 If Owner elects, Contractor shall perform extra work on a cost-plus basis. Cost-plus extra work shall be paid in accordance with Article 13.0.
- 12.3 Contractor waives all claims for additional compensation for changes in work and extra work not made strictly in accordance with the terms of this Article 12.0.

### 13.0 REIMBURSEMENT FOR COST-PLUS WORK

- 13.1 Direct labor costs will be reimbursed at the actual payroll costs of direct labor wages, fringe benefits, payroll taxes and insurance required by collective bargaining agreements or by law, plus an agreed wage mark-up. Copies of certified payrolls and time sheets shall be provided to Owner for review and approval. Contractor shall not invoice Owner for social security, unemployment, workers' compensation, or other federal, state or local taxes or insurance at rates which exceed Contractor's actual costs.
- 13.2 Owner will pay Contractor actual invoice costs for subcontracted work, provided Owner has approved payment terms in advance of performing the work, plus an agreed mark-up.
- 13.3 Contractor-furnished permanent materials and equipment costs will be reimbursed at actual invoice costs plus an agreed mark-up.
- 13.4 Construction equipment costs will be reimbursed based on actual usage time during the performance of Work and established rental rates not to exceed monthly rates set forth in the "Rental Rate Blue Book for Construction Equipment" adjusted for geographical region as published by Dataquest or other basis acceptable to Owner. Hourly rates shall be established by taking the monthly rate divided by 176 hours per month.
- 13.5 Small tools and consumables costs will be reimbursed based on agreed rates.
- 13.6 Field supervision, clerical, safety and other non-direct labor costs will be reimbursed at agreed billing rates, except that reimbursement for these costs for cost plus extra work shall require the prior review and approval of Owner.

### 14.0 BACKCHARGES

- 14.1 Owner may impose backcharges against Contractor or deduct backcharges from monies owed to Contractor for performance or reperformance by Owner or others of Work, including but not limited to, costs associated with defective work, nonperformance by Contractor, termination for cause, clean-up and disposal of debris, damages to Owner's tools and equipment and warranty repairs. Contractor will be responsible for the cost of such performance or reperformance plus a fifteen percent (15%) administrative charge.

### 15.0 TAXES

- 15.1 The Contract Price shall include, and the Contractor shall pay, all taxes and assessments for unemployment insurance, workers' compensation, social security and disability benefits, and other taxes which are based upon the compensation paid to persons employed by Contractor or its Subcontractors for the performance of any Work under the Contract.
- 15.2 Except as provided below, the Contract Price shall include all applicable foreign, federal, state and local taxes payable by Contractor with respect to the Contract.
  - 15.2.1 Contractor Purchases. If Owner specifies that tangible personal property to be incorporated into real property as defined for sales and use tax purposes or taxable services to be purchased by Contractor from vendors or Subcontractors qualify for exemption from sales or use taxes, Contractor shall not include sales or use taxes on such exempt tangible personal property or services in the Contract Price. Unless otherwise specified: a) consumable materials and supplies or Contractor's tools and equipment that are not incorporated into the Work or the overall project are not eligible for exemption

and the Contract Price shall include, and Contractor shall pay, any sales or use taxes on such items; and b) Contractor will use its own properly-executed exemption or resale certificate, and not Owner's direct pay permit, to make exempt purchases of tangible personal property or services from vendors or Subcontractors.

- 15.2.2 Owner Purchases from Contractor. With respect to any Owner purchases from Contractor of tangible personal property not incorporated into real property as defined for sales and use tax purposes or taxable services, Owner shall provide to Contractor its direct pay permit (if Owner has been issued a direct pay permit) or an appropriate exemption certificate required to relieve the Contractor of its responsibility to collect sales or use tax from the Owner. If Owner provides Contractor such direct pay permit or exemption certificate, sales or use taxes on Owner purchases from Contractor of tangible personal property or taxable services shall not be collected from Owner or included in the Contract Price. Unless otherwise approved or directed by Owner in writing, Contractor shall not use Owner's direct pay permit to make exempt purchases of tangible personal property or taxable services from vendors or Subcontractors.
- 15.2.3 Contractor Cooperation. Contractor shall take all steps reasonably necessary to ensure that Contractor's purchases from vendors or Subcontractors of items of tangible personal property or services are exempt from sales and use tax pursuant to any applicable exemption pursuant to the law of any U.S. jurisdiction or its political subdivisions.

## 16.0 INSURANCE

- 16.1 Contractor shall at its sole expense, procure or maintain, and shall cause its Subcontractors to procure or maintain, throughout the term of this agreement except as set forth in Section 16.5, the following types of insurance with the following, minimum limits:
- 16.1.1 Workers' compensation insurance in accordance with all jurisdictions where Contractor has operations including where the Work is to be performed.
- 16.1.2 Employer's liability in an amount not less than \$1,000,000.
- 16.1.3 Business automobile insurance covering all Owned, Non-owned and Hired Autos in an amount not less than \$5,000,000 per occurrence.
- 16.1.4 Commercial general liability insurance covering claims of bodily injury and property damage in an amount not less than \$5,000,000 per occurrence.
- 16.1.5 Aircraft liability insurance with a combined limit of not less than \$10,000,000. Such insurance shall be required only if the Contractor or its Subcontractors shall utilize an aircraft in the performance of the Work.
- 16.1.6 Protection and Indemnity insurance (including Jones Act liability) and pollution liability in an amount not less than \$10,000,000 per occurrence. Such insurance shall be required only if the Contractor or its Subcontractors shall use a marine vessel or floating equipment in the performance of the Work.
- 16.1.7 Professional liability insurance and/or Errors and Omissions insurance in an amount not less than \$5,000,000. Such insurance shall be required only if the Work includes professional liability exposures.
- 16.1.8 "All risk" property insurance covering the full replacement cost of Contractor's personal property.

- 16.2 To the extent permitted by law, Contractor shall waive, and shall cause each of its insurers to waive, any and all rights of recovery, by subrogation or otherwise, against Owner and its affiliates, officers, directors, employees, agents and assigns of any type. Each of the insurance policies indicated above shall be primary to and non-contributory with any insurance or self-insurance of Owner.
- 16.3 The Commercial General Liability, the Business Automobile, and the Aircraft Liability insurance shall include Owner as an additional insured with respect to Owner's liability arising out of the operations of Contractor. Such coverage shall also include blanket contractual coverage and contain no exclusion for explosion, collapse, or underground property damage (XCU coverage).
- 16.4 The insurance required by this Article 16.0 is in addition to and separate from any other obligations contained in the Contract.
- 16.5 If any of the policies indicated above are placed on a "claims-made" basis, such coverage shall be maintained for a period of not less than five (5) years following the completion of the Work. Products and/or completed operations coverage shall be maintained for a period of five (5) years after the completion of the Work.
- 16.6 Any deductibles or retentions on any of the policies required herein shall be the sole responsibility of the Contractor.
- 16.7 The above referenced limit requirements may be met by any combination of umbrella or excess and primary policies so long as the total limit of insurance requirement is met. The required coverages referred to herein shall in no way affect, nor are they intended as a limitation of, Contractor's liability with respect to its performance of the Work. The limits of insurance indicated herein are minimum requirements and are in no way intended to limit Contractor's liability.
- 16.8 In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special, or statutory employees) are covered by the Louisiana Worker's Compensation Act, La. Rev. Stat. Ann. 23:1021 et seq., Owner and Contractor agree that pursuant to Section 23:1061 (A) (1) all Work performed by Contractor and its employees under the terms and conditions of the Contract is an integral part of Owner's operations and is essential to Owner's ability to generate its goods, products and services. Additionally, Owner and Contractor agree that for purposes of Section 23:1061 (A) (3) Owner is the principal or statutory employer of Contractor's employees. Irrespective of Owner's status as the statutory employer or special employer of Contractor's employees, pursuant to Section 23:1031 (C), Contractor shall remain primarily responsible for the payment of Louisiana Worker's Compensation benefits to its employees, shall indemnify Owner from any and all claims of Contractor's employees or its Subcontractor's employees and shall not be entitled to seek contribution for any such payments from Owner.
- 16.9 Contractor will not be permitted to bring its employees, materials or equipment on the Site until Owner receives from Contractor two copies each of acceptable certificates of insurance covering the terms of Subsections 16.1.1 through 16.1.8. Such certificates shall state that the insurance carrier has issued the policies providing for the insurance specified above, that such policies are in force, that the additional insured requirements have been satisfied, and that the insurance carrier will give Owner thirty (30) days prior written notice of any material change in, or cancellation of, such policies. If such insurance policies are subject to any exceptions to the terms specified herein, such exceptions shall be explained in full in such certificates. Owner may, at its discretion, require Contractor to obtain insurance policies that are not subject to non-standard exceptions.

- 16.10 In lieu of Sections 16.1 thru 16.9, if Owner has elected in the Contract to implement an Owner Controlled Insurance Program ("OCIP"), Owner and Contractor agree that the terms of the OCIP as contained in the Contract shall control.

17.0 INDEMNIFICATION

- 17.1 The laws of the state where the Work giving rise to the claim is performed shall apply to this Article 17.0.

- 17.2 **TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.**

- 17.3 **WITH RESPECT TO CLAIMS AGAINST OWNER BY CONTRACTOR'S EMPLOYEES, CONTRACTOR UNDERSTANDS AND AGREES THAT THIS INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY, AND CONTRACTOR EXPRESSLY WAIVES, ITS IMMUNITY AS A COMPLYING EMPLOYER UNDER ANY APPLICABLE WORKERS' COMPENSATION LAW, BUT ONLY TO THE EXTENT THAT SUCH IMMUNITY WOULD BAR OR AFFECT RECOVERY UNDER OR ENFORCEMENT OF THIS INDEMNIFICATION OBLIGATION.** With respect to the State of Ohio, this waiver applies to Section 35, Article II of the Ohio Constitution and Ohio Rev. Code Section 4123.74.

- 17.4 **CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT.**

18.0 LIMITATION OF LIABILITY

- 18.1 Except as expressly provided herein, neither party shall be liable to the other for any incidental, indirect, special, punitive or consequential damages. Contractor must bring any cause of action arising under the Contract within one year from the time the cause of action accrues.

19.0 LIENS

- 19.1 To the extent permitted by law, Contractor shall not file or permit to be filed any lien with respect to the Work and hereby expressly waives any right to file or cause to be filed a lien. Contractor, in



its subcontracts, shall require all Subcontractors to expressly waive the right to file any liens against Owner's property, and, if requested, provide Owner with copies of such waivers.

- 19.2 In the event any claim is asserted or any lien filed against Owner or its property, or notice of lien is provided to Owner in violation of this provision, further payment to Contractor shall not become due under the Contract until the claim is satisfied or the lien released without cost to Owner and Contractor shall provide Owner with evidence of payment relating to such claim or lien. If Contractor fails to settle any claim or secure the release of any lien, Owner may take whatever steps it deems necessary to settle the claim or release the lien, including bonding off the lien. Owner may deduct its costs and expenses for settling any claim or securing the release of any lien filed by Contractor or its Subcontractors from any money due or to become due to Contractor under the Contract. If final payment has been made, Contractor shall reimburse to Owner its costs to settle any claim or secure the release of any lien arising out of the Contract.

## 20.0 INTELLECTUAL PROPERTY

- 20.1 Contractor warrants that its performance of the Work will not infringe upon or violate any trademarks, patents, copyrights, trade secrets or other third party property rights. If the performance of Work is held in any action to constitute infringement, or the use of the Work is enjoined, Contractor, at its expense, shall procure for Owner the right to continue use of the Work, or replace the Work with non-infringing materials or methods satisfactory to Owner, or modify the Work in a manner satisfactory to Owner so that the Work becomes non-infringing. Contractor agrees to indemnify and save Owner harmless from and against any liability or damages, including attorneys' fees, arising out of any alleged infringement or violation.
- 20.2 All inventions, discoveries, documents, works of authorship, methods, and the derivative works thereof, resulting from the Work, including patents, patent applications, copyrights, trade secrets and other intellectual property (collectively "Intellectual Property"), shall be the sole and exclusive property of Owner. Contractor shall promptly inform Owner of the development of any such Intellectual Property and does hereby assign and transfer the entire right, title and interest, together with all rights of priority in and to such Intellectual Property to Owner. Contractor shall promptly cooperate with Owner in signing any additional documentation necessary to assign and perfect ownership of such Intellectual Property in Owner or to allow Owner to register its property rights therein. Contractor warrants that it has obtained written agreements from its employees and agents as necessary to effectuate the purpose of this Section. The Intellectual Property assigned and transferred to Owner shall be the Confidential Information of Owner.
- 20.3 Contractor grants Owner a nonexclusive, nonrevocable, perpetual, fully paid license to utilize Contractor's intellectual property existing separate from the Contract, including inventions, discoveries, works or authorship, methods, and trade secrets, regardless of whether such are the subject of patents, copyrights or other intellectual property protection, to the extent necessary for Owner to achieve the full benefit of the Work.
- 20.4 Contractor shall not use Owner's name or logo in marketing, endorsements, or other business purposes without prior written consent from Owner.

## 21.0 DRAWINGS AND DATA

- 21.1 Contractor shall furnish for Owner's review, prior to commencement of Equipment manufacture or fabrication, general and detailed drawings of the Equipment in the format requested. Such drawings shall be certified as to accuracy and completeness and shall show information adequate to enable Owner to design and provide suitable clearances. If required by the Contract or any code, law or agency, Contractor will provide professional engineer or architect sealed drawings and reports for the state where the Equipment is to be finally installed. Figures shall take precedence in all cases over

scaled measurements on drawings. Where obvious discrepancies exist, Contractor shall consult with and follow the instructions of Owner. Owner's approval of Contractor's drawings shall not relieve Contractor of its obligation to comply with the Contract requirements.

- 21.2 All written data, such as drawings, plans, reports, designs and specifications, prepared by Contractor for Owner during the performance of Work shall become the property of Owner. Such data, together with all data furnished by Owner and lent to Contractor for return, shall be delivered to Owner upon request, or upon completion of the Work or termination of the Contract. For clarification purposes, Owner shall have the unrestricted right to use, release, disclose, copy and reproduce such data for purposes of operation, maintenance, analysis, testing, cleaning, erection, improvement or modification of any facilities owned or operated by Owner. Contractor shall cooperate with Owner by executing such documents as are necessary to assign and perfect ownership in Contractor provided data to Owner.

## 22.0 CONFIDENTIALITY

- 22.1 "Confidential Information" means any confidential or proprietary information, whether written, oral, or visual, whether or not it constitutes a trade secret under applicable law. "Confidential Information" includes, but is not limited to, business plans and methods; customer information; engineering, operating and technical data; and the dates of Owner's outage schedule, information concerning the Work, and Owner's activities. "Confidential Information" does not include information that (a) has become part of the public domain other than by acts or omissions of the recipient; (b) has been furnished or made known to the recipient by a third person as a matter of legal right and without restriction on use; (c) was in the recipient's possession prior to disclosure by the disclosing party without restriction on use; or (d) is independently developed by the recipient without access to the Confidential Information.
- 22.2 Subject to Section 22.5, each party agrees (a) to protect the Confidential Information of the other with at least the same degree of care used to protect its own Confidential Information; (b) not to use (except for the purpose described herein), publish or disclose to third parties such Confidential Information; and (c) upon the request of the disclosing party, to promptly deliver to the disclosing party all written copies of its Confidential Information. Notwithstanding the foregoing, a recipient shall be entitled to disclose Confidential Information to its officers, employees, affiliates (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), agents, lenders, attorneys and other advisors (collectively, "Representatives"), provided that the Representatives shall be informed of the confidentiality obligations provided herein.
- 22.3 If either party is required pursuant to applicable law or otherwise becomes legally compelled to disclose any of the Confidential Information, such party shall promptly advise the disclosing party in order that the disclosing party may seek a protective order or such other remedy as the disclosing party may consider appropriate in the circumstances. In any event, the compelled party may disclose only that portion of the Confidential Information which such party is legally required to disclose in the judgment of the party's legal counsel without any liability to the disclosing party hereunder and such disclosure shall not be a breach of this Section.
- 22.4 Contractor shall require its Subcontractors, if any, to expressly comply with the confidentiality provisions as set forth herein.
- 22.5 All documents prepared by Contractor for Owner during the performance of Work that incorporate, in whole or in part, information owned or provided by Owner shall not be marked or designated in any way as the confidential or proprietary information of Contractor without also stating that Owner has rights in such documents. Owner shall have the right to question the designation of Confidential Information by Contractor and Contractor agrees to provide Owner

with reasonable cooperation in explaining such designation. Contractor agrees that Owner's acceptance of documents containing the Confidential Information of Contractor shall not be construed as a restriction on Owner's rights to use, release, disclose, distribute, copy or reproduce the documents.

## 23.0 DEFAULT

23.1 The occurrence of any of the following shall constitute an "Event of Default":

23.1.1 Contractor files a petition in bankruptcy, or if its creditors file an involuntary petition in bankruptcy, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency.

23.1.2 Contractor (a) fails to maintain the schedule set forth in the Contract, or (b) fails to promptly pay Subcontractors for material or labor, or (c) commits repeated or substantial violations of laws, rules, regulations or policies, or (d) fails to perform in accordance with the Contract, and Contractor fails to take corrective action or submit an acceptable plan within two (2) Business Days after the receipt of a notice of non-conformance from Owner.

23.2 Upon an Event of Default, Owner may take any or all of the following actions without affecting the Contract Price or schedule:

- (a) Owner may direct Contractor to cease performance on all or part of the Contract until satisfactory corrective action has been taken;
- (b) Owner may have others take corrective action necessary to achieve compliance with the Contract. Owner may deduct the cost of such corrective action by others from any monies due to Contractor. Corrective action by others shall be taken when, in the judgment of Owner, the noncompliance threatens safety, unreasonably interferes with or delays the work of others, or otherwise creates a situation the resolution of which cannot be delayed without adversely impacting quality, cost or timely completion;
- (c) Owner may pursue damages for delay under the terms of Article 24.0;
- (d) Owner may suspend the Contract under Article 26.0; and/or
- (d) Owner may terminate the Contract under the terms of Section 27.1

25.3 Each of Owner's rights set forth above shall be cumulative and additional to any other rights or remedies provide in law or equity or otherwise.

## 24.0 DAMAGES FOR DELAY

24.1 Contractor shall be liable for any direct damages incurred by Owner arising out of Contractor's failure to perform on time.

24.2 In lieu of Section 24.1, if the parties have agreed to liquidate the amount of direct damages resulting from Contractor's delay, the parties agree that such damages which might be incurred by Owner as a result of Contractor's delay in performance are uncertain and would be difficult to calculate. The parties agree that the liquidated damages contained in the Contract would be reasonable and fair compensation for late performance. Contractor commits to pay and Owner agrees to accept such sum as liquidated damages and not as a penalty in the event of late performance.

## 25.0 FORCE MAJEURE

- 25.1 Neither party shall be in breach of the Contract to the extent that any delay or default in performance is due to a Force Majeure Event. The term, "Force Majeure Event", shall mean any cause beyond the reasonable control of the delayed or defaulting party, including, but not limited to, acts of God including unusually adverse weather, fire, and epidemic; acts of public enemy including war, acts of terrorism, riot, and civil disturbance; and national labor strikes, which by exercise of due foresight such party could not have been expected to avoid or overcome. Contractor's inability to obtain adequate and sufficient labor in order to maintain progress of the Work shall not constitute a Force Majeure Event. No delay in performance resulting from a Force Majeure Event shall result in any liability on the part of Owner. Notwithstanding the preceding sentence, in the event of a delay caused by any act or failure to act on the part of Owner, Contractor's sole remedy shall be as set forth in Article 12.0.
- 25.2 The delaying party shall immediately notify the other party of the beginning of a delaying event, and shall confirm the notice in writing within ten (10) Business Days of the beginning of the event. The notice shall contain a detailed account of the delay, including the cause of the delay, an estimate of the duration of the delay, an estimate of the delay's impact to the schedule, and the plan to mitigate the effects of the delay.
- 25.3 If Contractor is the delaying party, and the delay is a Force Majeure Event as defined in Section 25.1, Owner shall grant Contractor an extension of the time for performance, to be mutually agreed upon by Contractor and Owner. The extension of time granted as a result of a Force Majeure Event shall in no case exceed the length of the delay and such extension may be withheld or reduced to the extent Contractor does not provide notice in accordance with Section 25.2. If Owner so requests, Contractor shall expedite its schedule to mitigate the effects of the excusable delay. Owner shall pay incremental, Direct Costs incurred by Contractor for expediting at Owner's request.

## 26.0 SUSPENSION

- 26.1 Owner may at any time suspend all or any part of the Work. Owner shall provide Contractor written notice verifying the suspension date. Immediately upon receipt of the suspension notice, Contractor shall take the necessary actions to comply with the suspension notice.
- 26.2 Owner shall pay Contractor in accordance with the terms of payment set forth in the Contract for the Work completed prior to the time of suspension and for the incremental, Direct Costs that result from Contractor's compliance with the suspension notice.
- 26.3 Owner may, at any time during the suspension period, either terminate the Contract in accordance with Section 27.2, or authorize the Work or any portion thereof to be restarted. Owner shall pay Contractor the incremental, Direct Costs associated with the restart of the Work and shall resume payments to Contractor in accordance with the terms of payment under the Contract thirty (30) days after the restart of Work.
- 26.4 The schedule shall be adjusted to provide for a reasonable extension of time for Contractor's performance.

## 27.0 TERMINATION

### 27.1 Termination for Cause

- 27.1.1 Upon an Event of Default, Owner may terminate the Contract upon written notice to Contractor.

- 27.1.2 In the event of such termination, Contractor shall immediately prepare and submit to Owner an itemization of the Work completed by Contractor. Owner may require Contractor to leave the Site. Owner may take over such Work and complete it, or have the Work completed by others. Owner may take possession of and utilize in completing the Work Contractor's materials, Equipment to be installed, supplies, tools and equipment at the Site.
- 27.1.3 Contractor shall not be entitled to further payment until all of the Work is completed in its entirety and Final Acceptance has been achieved. If the cost of completion exceeds the unpaid balance under the Contract, Contractor shall pay the difference to Owner within thirty (30) calendar days of demand.
- 27.1.4 In the event that a court determines that the termination was not properly a termination for cause, pursuant to Section 27.1.1, Contractor's remedy shall be limited to the payments permitted in accordance with Section 27.2.

27.2 Termination for Convenience

- 27.2.1 Owner may terminate the Contract, in whole or in part, for its convenience. Owner will give Contractor written notice of termination specifying the extent to which the Contract is terminated and the date, immediately or otherwise, on which termination becomes effective.
- 27.2.2 Upon termination for convenience, Contractor will comply with instructions in the notice of termination regarding delivery to Owner of all Work in progress and all completed Work, which shall become the property of Owner upon delivery.
- 27.2.3 In the event of such termination, Contractor shall receive payment, including the retained percentage, for the Work satisfactorily performed up to the time of such termination. In addition, Owner shall reimburse Contractor for incremental, Direct Costs resulting from the termination, provided that compensation was not otherwise made for such costs. Final payment shall be made upon the parties' agreement of the amount of the final invoice and Owner's receipt of an Affidavit of Completion in the form of Exhibit 1. Owner shall not be responsible for Contractor's lost profit on the terminated portion of the Contract.

28.0 MATERIALS AND WORKMANSHIP WARRANTY

- 28.1 Beginning upon Final Acceptance and for a period of one year thereafter, or for such period as may be specified elsewhere in the Contract, Contractor warrants that (a) it will perform the Work in accordance with the accepted standards of care and competence found in the applicable profession as such standards relate to and are commonly used in the electric utility industry and (b) all Contractor furnished materials and workmanship shall be free of any and all defects and shall be in conformity with the requirements of the Contract.
- 28.2 Subject to the provisions of Section 28.3, in the event that the material or workmanship does not comply with the warranty, Contractor shall, at no cost to Owner, promptly repair or replace such nonconforming material or workmanship with as little disruption to Owner's operations as practicable. Contractor shall be responsible for the total cost of correcting any defects, including but not limited to, the costs of materials, labor, any necessary equipment removal, disassembly, shipping, reinstallation and retesting of the installation. Owner shall give Contractor notice of observed defects with reasonable promptness. If nonconforming material or workmanship causes an outage or other delay of operations, Contractor shall make the repair or replacement on an overtime, maximum effort basis, at Contractor's expense.

- 28.3 If Owner directs Contractor to repair or replace any defect and Contractor fails to do so within a reasonable time, or if an emergency exists rendering it impracticable for Contractor to perform the repair or replacement, Owner may make or cause to be made such repair or replacement without affecting the validity of the warranty. Owner's cost for making the repair or replacement shall be deducted from the Contract Price or any unpaid portion thereof. If the unpaid portion of the Contract Price is insufficient to cover such cost, Contractor shall reimburse Owner.
- 28.4 Owner will not pay for any defective portion of the materials or workmanship until remedied by Contractor at Contractor's expense in accordance with the Contract requirements.
- 28.5 Owner must approve any proposed correction or alteration by Contractor of the materials or workmanship, or parts thereof, made at any time or at any location, before such correction or alteration is undertaken. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes.
- 28.6 Any materials or workmanship which are repaired or replaced pursuant to this Article 28.0 shall be warranted for a period of one year from the date of completion and acceptance of such repair or replacement, or for the remainder of the original warranty period, whichever is longer.
- 28.7 Contractor shall obtain, for the benefit of Owner, all available warranties from Subcontractors, vendors and suppliers of Contractor. Such warranties shall be in addition to the warranties set forth in this Article. If such warranties are in written form, Contractor shall provide Owner with the original warranties.

29.0 REPORTING OF COMPLAINTS

- 29.1 Contractor shall immediately report to Owner, in accordance with Article 33.0, the complete details of all complaints, including any OSHA violations and complaints received from governmental authorities, Subcontractors, laborers, other third parties or members of the public relating to the Work.

30.0 RETENTION AND EXAMINATION OF INFORMATION, BOOKS AND RECORDS

- 30.1 Owner reserves the right to audit records necessary to permit evaluation and verification of (i) claims submitted, (ii) Change Orders, and related overhead and general and administrative costs, and (iii) Contractor's compliance, in the performance of the Contract and its dealings with Owner, with (a) the Contract requirements; and (b) Owner's Code of Business Conduct governing business ethics. Owner's right to audit shall not extend to fixed, lump-sum or unit pricing.
- 30.2 Contractor shall cooperate with Owner and provide Owner with information and records ("information") pertaining to the Work as requested by governmental agencies, Owner, or courts of law.
- 30.3 Contractor shall retain for a period of three (3) years after Contract termination or expiration all information relating to the Work. Owner may audit and copy such information at Contractor's premises during regular business hours. If requested by Owner, Contractor shall submit to Owner a copy of each of its subcontracts. Contractor shall include in its subcontracts a provision granting Owner the rights against Subcontractors contained in this Article 30.0.

31.0 COMPLIANCE WITH LAWS

- 31.1 Contractor warrants that all materials and equipment supplied and all Work performed will comply with, and be manufactured, priced, sold and labeled in compliance with, all applicable federal, state and local laws, rules, regulations, orders and ordinances, including, without limitation, environmental

protection, energy, safety and health, and labor laws and regulations and applicable industry codes and standards.

31.2 Unless exempted, Contractor shall comply with the equal employment opportunity clause in Section 202 of Executive Order 11246 and all applicable rules, regulations, and relevant orders pertaining to Executive Order 11246, Section 503 of the Rehabilitation Act of 1973, and Section 4212 of the Vietnam Era Readjustment Assistance Act of 1974, as amended. Contractor represents that it does not, and shall not for the term of the Contract, provide or maintain for its employees facilities that are segregated on the basis of race, color, religion, sex or national origin. Contractor represents that it will not assign its employees to perform any work related to the Contract at a location where facilities are segregated on the basis of race, color, religion, sex or national origin. Contractor agrees that it will not enter into any agreement to obtain goods or services relating to the Contract with any entity that provides, maintains or assigns its employees to work at locations where facilities are segregated on the basis of race, color, religion, sex or national origin. As used herein, "facility" means waiting rooms; work areas; restaurants and other eating areas; time clocks; locker rooms and other storage or sleeping areas, except as necessary to ensure privacy between male and female employees; parking lots, drinking fountains; recreation or entertainment areas; and transportation. If not otherwise exempted by Title 48 and to the extent applicable, Contractor will comply with 48 CFR §52.219-8, Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns, and 48 CFR §52.219-9, Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan. If not otherwise exempted by 41 CFR §60-1.5, Contractor represents that it will file all reports or other required information specified in 41 CFR §60-1.7.

31.3 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of any violations of such laws, ordinances and regulations.

#### 32.0 PERMITS AND LICENSES

32.1 Contractor shall obtain all permits and licenses required by any regulatory authority for the performance of any portion of the Work, except that Owner shall obtain permits and licenses for all structures which are to become a permanent part of the Site. Before starting Work, Contractor shall submit to Owner a copy of all permits and licenses required by any such regulatory authority.

32.2 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of the failure of Contractor to obtain such permits and licenses.

#### 33.0 NOTICES

33.1 Each party shall designate in writing a representative to receive any and all notices required under the Contract. Notices shall be in writing and shall be given to the representative designated to receive them, either by personal delivery, certified mail, facsimile, e-mail or any similar means, properly addressed to such representative. All notices shall be effective upon receipt, or upon such later date following receipt as set forth in the notice. Either party may, by written notice to the other, change the representative or the address to which such notices are to be sent. Contract shall be strictly construed and Contractor expressly waives any claims which do not strictly comply with the written notice requirements of the Contract.

#### 34.0 SEVERABILITY

34.1 In the event that any of the provisions, or portions thereof, of the Contract are held to be unenforceable or invalid by any court, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

35.0 WAIVER

35.1 Either party's waiver of any breach of the Contract shall not be deemed to be a waiver of any other breach of the same or a different term of the Contract. Contractor agrees not to claim any waiver by Owner of such notice requirements based upon Owner's conduct or Owner having actual, verbal, implied, or constructive notice.

36.0 NON-DISCLOSURE

36.1 Except as required by law, regulation, or judicial or administrative order, neither party shall disclose the terms of the Contract without the consent of the other party. Notwithstanding the foregoing, Owner may disclose the terms of the Contract without the consent of Contractor (a) to any of its affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures); and (b) to any prospective transferee or purchaser of assets of Owner or any of affiliates.

37.0 HEADINGS

37.1 Headings are provided for the convenience of the parties, and shall not affect the interpretation of any provision.

38.0 AFFILIATED COMPANIES

38.1 Any indemnification of Owner or any limitation of Owner's or Contractor's liability under the Contract shall to the same extent apply to Owner's or Contractor's directors, officers, employees, agents, and affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), including any directors, officers, employees and agents thereof.

38.2 The affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures) of the American Electric Power System are severally and not jointly liable for obligations arising hereunder.

39.0 APPLICABLE LAWS AND JURISDICTION

39.1 Except for Article 17.0, the rights and obligations of the parties arising out of the Contract shall be governed in all respects by the laws of the State of Ohio. Any reference herein to the laws of other states is made only to the extent that the laws of that state might apply, notwithstanding the intent of the parties that the laws of the State of Ohio should apply.

39.2 Contractor agrees that all actions and proceedings brought by Owner against Contractor may be litigated in courts located in the State of Ohio or the state where the work was performed. Contractor agrees that such courts are convenient forums and irrevocably submits to the personal jurisdiction of such courts. Contractor waives personal service of process and consents to service of process by certified or registered mail at the address designated for receiving notices under the Contract.

40.0 ENTIRE AGREEMENT

40.1 The Contract constitutes the entire agreement between the parties and supersedes all previous and collateral agreements or understandings with respect to the subject matter of the Contract. No waiver, alteration, amendment or modification of any of the provisions of the Contract shall be binding unless in writing and signed by duly authorized representatives of the parties.



41.0 BINDING EFFECT; NO THIRD-PARTY BENEFICIARIES

41.1 Subject to the restrictions on assignment in Section 5.1, the Contract shall be binding upon and shall inure to the benefit of the parties of their respective successors and permitted assigns.

41.2 No provision of the Contract is intended or shall be construed to be for the benefit of third party other than as set forth in Article 36.0.

42.0 EXECUTION; COUNTERPARTS

42.1 The Contract shall not be binding or effective until properly executed by each of the parties hereto. The Contract may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which, taken together, shall constitute but one and the same Contract, which may be sufficiently evidenced by one counterpart.

43.0 SURVIVAL

43.1 All of the terms of the Contract which by their nature extend beyond the expiration or termination of the Contract, including indemnification obligations, confidentiality obligations, limitations of liability, shall survive expiration or termination of the Contract and remain in full force and effect.

**END OF DOCUMENT**

AFFIDAVIT OF COMPLETION

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, states that:  
(Name of Affiant)

1. S/He is the \_\_\_\_\_ of  
(Office held by Affiant)

\_\_\_\_\_  
(Legal Name of Contractor) (Contractor)

that has a contract with \_\_\_\_\_  
(Legal Name of Owner)

(Owner) dated \_\_\_\_\_ (Owner's Contract No. \_\_\_\_\_)  
(Contract Date) (Contract No.)

involving work on the Owner's property at \_\_\_\_\_  
(Project Name)

located near \_\_\_\_\_  
(City, State)

2. All of the Work required to be performed by the Contractor under said Contract has been performed. All bills and claims for material, labor and services to employees, Subcontractors, material suppliers, and others, covering the Work required to be performed under the Contract, have been paid in full by the Contractor. There are no unpaid amounts on the basis of which a lien has been filed, or can be filed, in connection with the Work performed under the Contract.

\_\_\_\_\_  
Signature of Affiant

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary



*AEP: America's Energy Partner®*

## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Prepared by:

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American Electric Power  
Service Corporation  
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June 24, 2011

**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

The following Supplementary Terms and Conditions for Forestry Contracts (“Supplementary Terms”) shall supplement any of the American Electric Power Service Corporation (“Owner” or “AEP”) General Terms and Conditions utilized in any Contract under which Contractor is authorized to perform Services. These Supplementary Terms shall not replace the safety or operational provisions in the applicable AEP General Terms and Conditions and are intended to support and reinforce other Contract documents.

All of the provisions of these Supplementary Terms shall also apply to Contractor’s subcontractors. Contractor is responsible for ensuring that its subcontractors comply with these Supplementary Terms.

Contractor’s and any of its subcontractors’ failure to comply with these Supplementary Terms is cause for the Contract to be terminated and may prevent eligibility for the consideration of providing Services in the future (i.e., removal from AEP’s qualified bidders list).

**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**SECTION 1**  
**GENERAL SUPPLEMENTARY TERMS AND CONDITIONS**

**1.1 Protection of Services**

- 1.1.1 Contractor shall use care and diligence so that performed Services and all materials, installed equipment and tools are thoroughly protected from the weather, loss and any and all damage. Contractor shall furnish and pay for all such protection.
- 1.1.2 Contractor shall provide and pay for the removal of snow, ice and water from its storage or work areas.
- 1.1.3 Contractor shall be liable for any loss or damage caused by carelessness, negligence or any act or failure to act on the part of Contractor, its subcontractors or employees. Such loss or damage includes, but is not limited to, losses and damages to performed Services, materials, equipment to be installed, private property, construction equipment and other property belonging to Owner or other contractors.

**1.2 Cleanup and Disposal of Non-Vegetative Debris**

- 1.2.1 Contractor shall keep its work areas, storage areas, parking areas and other areas of operations clean and safe.
- 1.2.2 Contractor shall promptly remove trash and other non-vegetative debris from these areas and properly dispose of all trash and other debris resulting from Services.
- 1.2.3 Upon completion of Services, Contractor shall remove from the site and dispose of its surplus material, chemicals, equipment, tools and, unless otherwise directed in writing by Owner, all temporary structures per all applicable laws.
- 1.2.4 Contractor shall bear the cost of providing the cleanup and removal, including the cost of all labor, supplies, tools, construction equipment and transportation.

**1.3 Material Storage and Handling**

- 1.3.1 Owner may designate a material storage location that can be used by Contractor.
- 1.3.2 Unless provided by Owner, Contractor is responsible for the purchase and proper handling and storage of material used during the course of providing Services. Contractor shall abide by all applicable laws.
- 1.3.3 Contractor shall be responsible for the impact of all shortages resulting from missing or damaged material issued to Contractor but not applied. Contractor shall replace such material at its own expense. Substitutions will not be allowed unless approved by Owner in writing.
- 1.3.4 All unused material furnished by Owner or provided by Contractor, and paid for by Owner, shall be returned by Contractor to Owner's designated storerooms or storage points upon notification from Owner.

## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **1.4 Electrical Clearances**

- 1.4.1 Owner will arrange for all necessary clearances on energized equipment or circuits required to be taken out of service for the performance of Services. When an outage is required, Contractor shall notify Owner prior to scheduling such Services, allowing sufficient time for scheduling with system operators.

### **1.5 Permits and Easements**

- 1.5.1 Owner will secure all right-of-way easements. Owner will also secure certain permits requiring Owner's signature (i.e., DOT permits, siting permits, building permits). Location specific and construction specific permits not already obtained by Owner are the responsibility of Contractor. Local vehicle registration/operation permits (i.e., frost law permit in Michigan) shall be the responsibility of Contractor.

### **1.6 Protection of Property**

- 1.6.1 Contractor shall use all possible care not to damage any existing buildings, structures, pipes, sewers, conduits, manholes or other property, or to interfere therewith without the consent of Owner's authorized representative. Such structures and other objects shall be properly supported, braced and secured in place to prevent damage thereto. They shall not be relocated or reconstructed except as authorized by Owner. Contractor shall be responsible for all damage claims due to this negligence, including the cost of all material and labor required to replace or repair any property damaged.
- 1.6.2 Contractor shall immediately report the complete details of all damage claims to Owner. If Owner determines the claim is valid and is a result of Contractor's negligence, Owner will present the claim to Contractor for settlement. Contractor is to settle all valid claims within 30 days. Contractor is to provide Owner with documentation specific to a settlement process for any claim not settled within 30 days, or the claim will be handled by Owner and the damage amount billed to Contractor. All such damage claims settled by Contractor are to be reported to Owner in writing.
- 1.6.3 Contractor shall be responsible for notifying appropriate state one-call systems, as well as any other utility company not a member of the systems, prior to performing Services involving excavation, boring, stump grinding and/or other activities that may affect underground facilities.

### **1.7 Work on Private Property**

- 1.7.1 Whenever any Services are to be completed on private property, Contractor shall attempt to notify owner and/or the tenants thereof and make arrangements with them so that Services will be completed with the least practicable inconvenience to them. Work on private property shall be done as expeditiously as possible and the premises restored immediately.

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

### 1.8 Access and Construction Roads

- 1.8.1 It is Contractor's responsibility to ensure that all property owners' roads traveled by Contractor are in the same condition as the roads were before Contractor elected to use the route. Should Contractor cause any damage to any such road, Contractor is obligated to restore the road to like or better condition than the road existed prior to Contractor's use. Such work shall be completed in a timely manner with proper written documentation of the damage/remedy supplied to property owner and Owner alike. Where Owner deems it necessary to maintain access roads on private property, crushed stone will be furnished or paid for by Owner, and Contractor shall provide labor and equipment to haul and place crushed stone as required. When approved in advanced writing by Owner, Owner shall pay for normal damage to fields or loss of crops resulting from necessary travel by Contractor.
- 1.8.2 Contractor shall keep fences in a sufficient state of repair to satisfactorily confine livestock and shall keep gates closed when not in immediate use. Before Services are considered to be completed, all temporary gates shall be removed and all fences cut or damaged shall be restored to original condition. Fencing damaged by Contractor shall be repaired at Contractor's expense.
- 1.8.3 When it is necessary to gain access to right-of-way over private roads, yards, pastures and cultivated fields, and it is impractical to restrict ingress and egress to the right-of-way, Contractor shall use the route agreed upon by the property owner, Contractor and Owner. Contractor shall notify the property owner prior to the use of these routes.

### 1.9 Emergency Assistance

- 1.9.1 In the event of extensive damage to Owners' facilities as a result of severe storms, flooding or other catastrophes, Owner may request assistance from Contractor in the repair of damages and restoration of service to customers. Under such circumstances, the "Forestry Policies and Procedures for Emergency Assistance" in Section 2 shall be followed.



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**SECTION 2  
FORESTRY POLICIES AND PROCEDURES FOR EMERGENCY ASSISTANCE**

In the case of emergencies, during which Contractor is called upon by Owner for storm assistance to restore service following catastrophic damage ("Emergency Assistance"), the following policies and procedures shall apply.

- 2.1 Contractor will provide Owner with emergency contacts, including 24-hour telephone numbers for requesting assistance.
- 2.2 Upon request for Emergency Assistance, Contractor shall provide Owner with a list of available personnel and their classification, labor rates, crew make up, equipment to be used and an estimated time of arrival.
- 2.3 Owner will specify the number of physical full time employees and any special equipment required and will notify Contractor as to where the crews are to be assigned and to whom they will report. Owner will check-in each crew upon arrival.
- 2.4 Contractor shall be responsible to make contact with the appropriate State officials concerning commercial driver's licenses and other transportation issues.
- 2.5 Contractor's crews shall arrive prepared to work and be equipped with PPE, PPI, tools, foul weather gear, lights and batteries to perform the assigned Services. Any crews arriving without the proper tools or equipment to perform the assigned Services may be released at Contractor's expense.
- 2.6 Owner shall determine the work hours for responding crews, including start time (at assigned crew headquarters) and duration. Contractor shall check in with Owner daily at the requested starting time for assignment of Services.
- 2.7 After working sixteen (16) consecutive hours up to a maximum of twenty-four (24) consecutive hours, Contractor's employees shall be released from providing Services for a minimum eight (8) hour rest period, which shall commence upon release by Owner.
- 2.8 Owner will allow a meal break every six (6) hours, or as near as practicable, while Contractor performs Emergency Assistance. Contractor's personnel will be off the clock for all meal breaks taken away from the work site.
- 2.9 Time sheets of Contractor employees shall be kept by Contractor. These time sheets shall be turned in daily to Owner for verification and approval.
- 2.10 Contractor shall be responsible for relaying all Owner communications to its crews.
- 2.11 Contractor shall be responsible for the safety of its crews. Contractor will provide safety statistical reporting of all hours worked on AEP property. This report format will be provided by the AEP Safety Coordinator.

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- 2.12 Owner shall reimburse Contractor for Emergency Assistance at the current contracted rate of the classification for each of Contractor employees utilized plus the applicable mark up percentage for straight and/or premium time. When responding from areas with existing AEP Contracts, Contractor's employees shall be paid at the rates incorporated in the Contract for the area from which they are responding. When Contractor responds from locations without existing contracted AEP rates, billing rates will be negotiated when the agreement to send crews is finalized.
- 2.13 Overtime pay for Emergency Assistance shall be paid based on provisions submitted by Contractor and approved in advance by Owner.
- 2.14 Owner will reimburse Contractor for lodging and meals (dollar amount for meals shall be predetermined by Owner) for the crew(s) requested. Owner may elect to supply meals and/or lodging to Contractor, in which case there will be no reimbursement. All other expenses: (i.e., personal phone calls, alcoholic beverages, tobacco, entertainment, etc.) will not be reimbursed by Owner.
- 2.15 Contractor's employees must register in person at the assigned lodging.
- 2.16 If Owner requests Contractor to provide an employee whose classification falls outside the standard Contractual labor billing rates, Owner shall provide the request in writing and will reimburse Contractor for said employee's labor, vehicle, lodging and meals.

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**SECTION 3**

**SUPPLEMENTARY ENVIRONMENTAL, SAFETY AND HEALTH TERMS AND CONDITIONS FOR  
FORESTRY CONTRACTS**

**3.1 General**

- 3.1.1 Contractor shall comply with AEP's Contractor Oversight program. Contractor's safety performance will be monitored and evaluated during performance of the Contract by Owners' representative.
- 3.1.2 Contractor shall adhere to all pertinent local, state and federal regulations and all rules and policies set forth in Contractor's own safety manual. Any shortcoming brought to the attention of Contractor by Owner shall be immediately corrected by Contractor. Repeated and/or severe safety violations, incidents or accidents may be cause for the Contract to be terminated, prevent eligibility for providing future Services and result in the potential removal from AEP's qualified bidders list.
- 3.1.3 Owner has the authority to immediately stop Contractor's Service performance indefinitely for practices, procedures and operations, which, in the opinion of Owner, constitute a safety concern. It is Contractor's responsibility to adequately satisfy Owner with any remediation necessary to provide a safe and healthful workplace.
- 3.1.4 Contractor shall have qualified and competent supervision on the job at all times to direct and observe the Work.
- 3.1.5 If Contractor in good faith believes that any rule or procedure set forth in these Supplementary Terms will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

**3.2 General Safety Requirements**

- 3.2.1 Owner, or Owner's representative, shall conduct random Forestry Contract crew safety audits and Contractor shall cooperate fully with Owner's representatives during this audit. The audit is defined in Appendix A.
- 3.2.2 Contractor shall promptly notify Owner if Contractor's or its subcontractors' Experience Modification Rate for workers compensation exceeds 1.0.
- 3.2.3 Contractor shall remain solely responsible for the proper and safe use of all tools, and for conducting safe work practices or procedures. Contractor shall provide information necessary for the job briefing identified in Section 3.6 below, Job Briefings.
- 3.2.4 Contractor shall provide Owner a list of all tools, practices or procedures it or its subcontractors will use in performing assigned Services with fabricated or modified tools ("Specialty Tooling"). Specialty Tooling includes all tooling fabricated, developed by or modified by Contractor. Contractor shall notify Owner of any Specialty Tooling it develops or modifies on site. Contractor shall also notify Owner, prior to use, if it intends to use standard tooling in ways other

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

than those for which the tooling was designed. All such Specialty Tooling is subject to review by Owner. Specialty Tooling shall have design plans, engineered diagrams, etc. with a Professional Engineer's stamp of approval. Contractor shall also inspect Specialty Tooling prior to each use. At its sole discretion, Owner may prohibit or restrict the Contractor's use of Specialty Tooling on Owner's site.

3.2.5 Contractor shall immediately cleanup all spills from Contractors' equipment and vehicles.

### **3.3 Contractor Safety Representative**

3.3.1 When Contractor has eleven (11) or more total employees on various projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

3.3.2 Qualifications of the aforementioned safety professional may be subject to Owner's review and approval.

3.3.3 Owner may require Contractor to assign additional safety professionals if Owner determines the scope of Services justifies additional safety oversight.

3.3.4 Owner may require Contractor to supply additional safety professionals if Owner has determined geographical Service locations justify additional safety oversight.

### **3.4 Monthly Reporting**

3.4.1 Contractor shall report various safety related statistics, using the most current revision of the AEP supplied form, AEP Contractor Performance Report in Appendix B. Reported statistics will include those of Contractor's subcontractors and will represent Services performed on AEP projects/Contracts only.

3.4.2 The above requirements must be reported by the tenth (10<sup>th</sup>) day of the following month to the following e-mail address: [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com). A copy of the AEP Contractor Performance Report will be supplied to Contractor for reporting this required data. The data will be used by Owner to evaluate Contractor's safety effectiveness and performance.

### **3.5 Event Reporting**

3.5.1 When performing Services for AEP and a safety event occurs, Contractor shall notify Owner about the event immediately (verbal reporting is sufficient). Contractor shall also submit a written preliminary notification (no later than 8:00 a.m. the following working day of the event) to the Forestry Supervisor, Region Support Manager and/or designee, Forestry Operations Manager, and shall also e-mail a copy to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com), listing any and all safety events occurring during the performance of Services. A separate report is required for each event. Reported events include near miss events, first aid and minor events, OSHA recordable injuries,

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

flash/outage events, vehicle accidents, spills/release, underground utility strikes and OSHA/EPA citations/visits. The written report should include sufficient detail to identify the nature of occurrence, the extent of injury (if any) and contact name and number of the person leading the investigation. Within seven (7) business days, Contractor shall submit an in depth report to the e-mail address listed above, along with a copy to the Forestry Supervisor, Region Support Manager and/or designee and Forestry Operations Manager. This report must include the time and date of event, location of event, name of injured employee, the injured employee's on the job experience, description of event, factors that may have caused or contributed to the event, corrective actions taken and/or planned and the person(s) responsible for corrective actions.

### **3.6 Job Briefings**

- 3.6.1 Prior to the commencement of Services in any location and before any changes in procedures or activities are made, Contractor shall perform a Job Briefing in written report/form to identify all potential work site risks. Each member of the crew must sign his/her name to this form in order to affirm their presence at the time the information was presented during the Job Briefing. The report shall include, at a minimum: 1) applicable hazards present during the course of performing the specific assignment 2) Service procedures involved 3) special precautions 4) energy source controls and 5) personal protective equipment requirements. Should Contractor not have its own Job Briefing requirements/forms, then Contractor shall use the AEP Supplied Job Briefing Form in Appendix C.
- 3.6.2 Contractor shall make its Job Briefing Forms available to Owner upon request.

### **3.7 Personal Protective Equipment Requirements**

- 3.7.1 Contractor is responsible for requiring the use of appropriate personal protective equipment ("PPE") in all operations where there is an exposure to hazardous conditions.
- 3.7.2 Owner requires Contractor and Subcontractor employees to wear the following PPE, at a minimum, while on/in any construction site and/or work area:
- Safety glasses or safety prescription glasses with side shields
  - Hardhat
  - Work gloves that provide protection for the type of work
  - Approved hearing protection devices when required
  - Shoes with a defined heel (employees that climb structures)
- 3.7.3 Open-toed, open-heeled, athletic footwear and tennis shoes are strictly prohibited. Additional foot protection and/or PPE may be required based on Contractor's PPE assessment or special environmental conditions.

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### **3.8 Substations/Switchyards**

- 3.8.1 OSHA requires personnel working within an electrical station be qualified to recognize equipment and hazards unless escorted by a qualified person. Employees not OSHA station qualified shall be under direct supervision of qualified personnel.
- 3.8.2 Gates to station fences shall remain closed and locked when they are not under the direct observation of an attendant.

### **3.9 Firearms, Alcohol and Drugs**

- 3.9.1 Firearms, alcohol, illegal drugs or drugs taken for non-medicinal purposes are prohibited on all Owner Sites.
- 3.9.2 Contractor shall be responsible for all Contractor and Subcontractor(s) employees who are under the care of a physician and are taking prescribed medicine, which may alter the employee's physical or mental ability. Contractor shall determine the necessity to modify the employee's job assignment while undergoing treatment.
- 3.9.3 If firearms or suspected illegal drugs are discovered on any AEP property or Work Site/area, the following guidelines should be followed by whoever discovers the firearms or suspected illegal drugs:
- First, if possible without putting themselves or others in harms way, attempt to secure the location and ensure that others cannot come in contact with the firearms or suspected illegal drugs. Do not handle or move firearms or suspected illegal drugs from their discovered location.
  - Second, immediately contact the Owner's Contract Supervisor or Distribution Line Representative and together make a decision whether or not the situation requires a call to the local law enforcement authorities. Immediately call the local law enforcement authorities and report the discovered item(s) if (a) neither the Owner's Contract Supervisor nor the Distribution Line Representative is available; (b) there is a threat of harm to any person; or (c) there is a risk of improper removal or disposal of the firearms or illegal drugs.
  - Third, call local Owner's security personnel or call the Owner's general Security hotline at 1-866-747-5845.
  - Fourth, for incidents involving Contractor personnel, Contractors shall submit reports according to Section 3.5, Event Reporting.

### **3.10 Drug/Alcohol Testing**

- 3.10.1 All Contractor and subcontractor employees performing Services under this Contract must complete and pass a pre-employment drug/alcohol screening. Screening substances and their associated cut-off limits are the same as listed in the applicable AEP General Terms and Conditions.

**SUPPLEMENTARY TERMS AND CONDITIONS  
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- 3.10.2 Post event drug and alcohol testing shall be performed, at Owner's discretion, on all Contractor and subcontractor employees involved in any safety related event. Testing results shall be shared with Owner upon request.
- 3.10.3 Contractor shall incur all costs associated with the required drug and alcohol testing as required in these Supplementary Terms.

**3.11 Language Requirements**

- 3.11.1 Contractor's and its subcontractor's employees shall be capable of communicating in English. At least one copy of all documents and reports, including Job Briefings, shall be prepared in English.

**3.12 Job Site Auditing**

- 3.12.1 Contractor representatives, at a minimum, shall perform and document a Job Site Observation based on the following table:

| Representative Level   | Frequency |
|------------------------|-----------|
| Senior Management      | 1/Quarter |
| Operational Management | 1/Month   |
| General Foreman        | 2/Week    |
| Safety Professional    | 2/Week    |

- 3.12.2 If Contractor does not meet the requirements of Safety Section 3.3.1 [less than eleven (11) employees], then the lowest representative level of the table in 3.12.1 above (safety professional) shall be followed by a company representative.
- 3.12.3 Contractor shall make documentation of such job site observations available to Owner upon request.

**3.13 Emergency Planning**

- 3.13.1 All job sites must have an Emergency Action Plan that has been communicated and documented to all employees. The Job Site Emergency Action Plan shall be documented on each job briefing conducted. This plan shall include, at a minimum:
  - Emergency contacts
  - Location and name of local emergency services
  - Location of closest communication method
  - Location of closest medical facility
  - Procedure to follow in the event of an emergency

**3.14 Traffic Control**

- 3.14.1 All Services performed on or adjacent to existing public road or rights-of-way and/or job site roadways shall be performed in conformance to the requirements of the Manual on Uniform Traffic Control Devices (current revision), state and local jurisdiction.

## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **3.15 Individuals Restricted from Access to AEP Sites**

3.15.1 Owner may deny access to its facilities by any person who fails to comply with the safety provisions set forth in the applicable AEP General Terms and Conditions or these Supplementary Terms or any person who, in Owner's sole judgment, otherwise demonstrates a lack of safety performance. Examples of a lack of safety performance include, but are not limited to, the following:

- Unsafe job performance
- Failure to pass drug/alcohol test
- Displaying incompetence in performing their job
- Employees that are determined to be unfit for project employment
- Playing of pranks, horseplay or practical jokes
- Failure to report injuries and/or accidents
- Fighting or acts of aggression
- Theft or vandalism
- Convicted Sexual Offenders

3.15.2 Prior to the commencement of Services and during the term of the Contract, Contractor shall provide Owner with a list of all individuals, including Contractor and subcontractor employees, whom Contractor intends to perform Services at Owner's sites. The list shall identify the individuals by their name and the last three digits of their Social Security number.

3.15.3 Owner may, at its sole discretion, deny access to any individual who has been previously removed from a project by Owner or any of its affiliates for safety reasons.

3.15.4 Contractor may request a restricted Contractor employee to be cleared for the performance of Services. A letter addressing the original safety violation(s) or reason(s) for removal and any documentation supporting the request shall be sent to Owner for approval. Contractor's employee shall not perform Services at any of Owner's sites until approved by Owner. Said approval may be granted or withheld at Owner's sole discretion.

### **3.16 Housekeeping**

3.16.1 Contractor shall ensure that debris, materials, scrap, trash, etc. is contained and removed daily in order to prevent it from interfering with the safety of any employee and/or general public.



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**APPENDIX A**  
**AEP FORESTRY CONTRACT CREW AUDIT FORM**



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX B  
AEP CONTRACTOR PERFORMANCE REPORT**



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX C**

**AEP SUPPLIED JOB BRIEFING FORM**

**(ONLY FOR CONTRACTORS THAT DO NOT HAVE THEIR OWN DOCUMENT)**

# EXHIBIT B



## **AEP Forestry**

# **Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations**

**May 14, 2009**

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

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## AEP System Forestry Guidelines

### Foreword

#### A. Introduction

The purpose of these AEP Forestry Guidelines is to document and inform AEP employees and its contractors of important criteria, practices and procedures pertaining to initial vegetation clearing for construction projects and the maintenance of rights of way. AEP incorporates these guidelines into each tree service contract; a copy shall be kept in all vegetation management contractor's vehicles. These guidelines are for the sole and exclusive use of the contractor and are to be read consistently with other contract documents by and between AEP and the Contractor.

#### B. Definitions

**Brush**: Woody stem vegetation less than four (4) inches DBH.

**Clearing**: The physical cutting and/or removal of woody stem vegetation within the right of way.

**DBH**: (Diameter at Breast Height). The diameter of a tree measured at the height of 4-1/2 feet above the ground on the uphill side.

**Danger Tree**: A tree considered a potential hazard to AEP's facilities positioned outside of the normally cleared right-of-way.

**Debris**: Non-vegetative material such as pop bottles, cans, wire, paper and old tires.

**Directional Pruning**: The reduction of a tree's crown in a manner that provides increased conductor clearance by pruning to direct growth of the upper crown away from the conductors.

**Fallen Tree**: A tree lying on the ground not cut by the Contractor.

**Hanger**: A limb cut from a parent stem or bole of a tree as part of the line clearance pruning procedure left aloft caught and held by the other branches of the tree.

**Hazard Tree**: A tree considered a potential threat to the safety and reliability of AEP's facilities growing within the normally maintained right-of-way.

**Log**: The merchantable portion of a tree as designated by AEP.

**Lopping**: The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Mowing**: The mechanical cutting of woody stem vegetation within the right-of-way.

**Prescription**: The plan prepared for each circuit or unit of work. It designates the vegetation to be maintained, the method(s) of maintenance, and who will perform the work.

**Removal**: The complete cutting down of trees at or near the ground line. AEP shall specify the disposal method.

**Slash**: The un-merchantable portion of a tree as designated by AEP.

**Tree**: Woody stem vegetation greater than four (4) inches DBH.

## **I. Contractor Guidelines**

### **A. Safety**

1. Protecting the safety of the public is of utmost importance to AEP. Contractors shall regard safety as their first priority. Contractors and their employees will recognize and follow all laws, rules and regulations regarding public and worker safety. Any safety related incidents (e.g., personal injury, vehicle accident, outages, flashes, near miss, customer issues, etc.) that occur on the job must be reported to the appropriate AEP personnel as soon as possible.
2. All contact incidents outages or operations caused by contract crews shall be reported to the appropriate AEP Dispatch center and Forestry immediately.

### **B. Personnel**

1. If required by state or local laws and regulations the contractor shall have an ISA Certified Arborist available.
2. No private work may be solicited or worked by Contractor employees while on AEP time. Contractors shall not receive compensation from anyone except AEP for tree work that is a part of AEP's Forestry program. The consequences will be crew and/or contractor disciplinary action.

### **C. Equipment**

1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chain saws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.

The use of spurs/climbers/hooks should be avoided. Where their use is necessary (as in the removal of some trees or in climbing trees, which do not provide a notch in which to tie in) only qualified persons shall be permitted to use them.



#### **D. Overtime**

Overtime is billable for work performed outside the scope of the normal work schedule.

#### **E.. Work Procedures**

1. Contractor practices shall be compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Changes in the workweek due to inclement weather, equipment breakdowns or other circumstances must have prior approval by AEP Forestry personnel.
3. The contractor will be responsible for the development of a plan to complete the assigned tasks. The assigned tasks must be performed in a systematic way that follows this plan. Some examples are: beginning work at substations, working between protection devices, or other methods to prevent inefficiency and/or skipped work. The plan must meet AEP approval before work begins.
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractor shall provide daily work locations to AEP, including changes to these locations throughout the workday.
6. Each crew shall have a planned worksheet at all times, except in the case of emergency work.
7. The Contractor's daily association with their crews and customers will allow planned outages and refusals to be worked on a progressive basis. A written list of such areas that have not been worked, including reasons, shall be supplied to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work shall be inspected on an ongoing basis. When an assigned task is complete, the Contractor must notify AEP Forestry for final inspection.
9. The Contractor will notify AEP of any hazardous conditions found during the performance of work under this contract. This is to include danger trees, soil erosion, and any attachment to AEP's facilities,

deteriorated, damaged or broken facilities and any other abnormal conditions.

#### **F. Public Relations**

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise. Advanced notification provides the property owner/resident with an opportunity to voice concerns.

1. Where required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor will document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the contractor should be on each card.

#### **G. Refusals**

1. A "refusal" is considered any property owner/resident refusing to allow or permit the contractor to manage vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits and easements.
2. The contractor shall fill out a refusal/complaint form with all pertinent information for all refusals.
3. If the contractor is unable to resolve the refusal within one week, the refusal shall be turned over to the appropriate AEP Forester.
4. Undocumented refusals or those left unaddressed for more than one week by the contractor may be worked at the Contractor's expense.

## H. Damage Claims and Complaints

1. The contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.
2. An on-site investigation with the resident/ property owner shall be made as soon as possible. This meeting, or telephone arrangements for the investigation, shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during this initial investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.
7. Costs to restore outages or repair the Owner's facilities due to negligence may be billed to Contractor as determined by AEP Forestry.

## II. Performance Guidelines

### A. Removals

1. Stumps shall be flush cut (three (3) inch maximum height) and treated with an approved herbicide, unless designated otherwise by AEP Forestry.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect yards, fences, houses, electric lines and other facilities.

3. Targets for removal are:

- All trees with the potential of growing into the conductors.
- Trees where adequate clearance cannot be obtained using proper pruning practices.
- Trees that will take less than three times the amount of time to remove as they would take to prune.
- Trees within five (5) feet of poles.
- Mature trees where more than 50% of the crown must be removed to obtain clearance.
- Young vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
- Palm species.

4. Trees that may be less suitable candidates for removal are:

- Those that would take more than three times longer to remove than to prune for proper clearance and at least 50% of the crown would be left intact.
- Species that will not reach a height that would affect the conductors.
- Slow-growing tree species.

5. Deciduous stumps shall be flush cut (three (3) in. maximum height) and shall be treated with an appropriate herbicide to prevent re-growth unless the situation prevents application according to label instructions, there is a documented customer refusal or an AEP forester directs otherwise.

6. At the request of the property owner/resident diseased, dying, or dead trees which could threaten AEP facilities will be "made safe", allowing for removal by the customer or private arborist. Generally, all brush and wood generated by this activity should be left on site, unless otherwise directed by AEP Forestry.

## **B. Pruning**

1. Contractor practices should be compliance with all applicable industry standards (i.e., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development.
3. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth in Tables I and II.

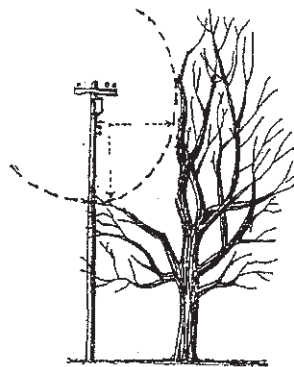
4. Reasonable care should be exercised to prevent the spreading of insects or diseases from one tree to another.
5. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut or damaged by the contractor's activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner.

### C. Clearances - Distribution

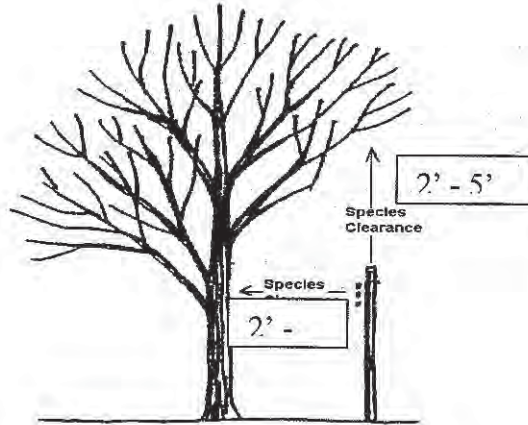
Variances to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/ or easements.

Minimum clearance for distribution system lines is that distance that will prevent re-growth into any AEP conductors for a minimum of three (3) years (see Table I in the appendix). The species, site, limb and conductor sag and sway during windy conditions and the effect of electrical load should all be considered when determining the clearance requirement.

**1. Primary Conductors-** Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the appropriate AEP Forestry representative.



**2. Open Wire Secondary Conductors-** Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



### **3. Twisted, Cabled Secondary, Service Drops or Street Light Conductors -**

Trees near twisted or cabled secondary service drops and street light wires will not be pruned unless limbs are applying pressure to the line. Do not prune for street light illumination except under the specific direction of the appropriate AEP Forestry representative.

**4. Span Guy Wires** – Trees near span guys should only be pruned of heavy limbs applying pressure on the wires.

**5. Poles and down guys** - All poles and down guys will be cleared of all volunteer trees, brush, and slash to obtain a minimum of a five (5) foot radius of clearance around the pole or guy.

**6. Vines** - Should be cut, but not removed from AEP or other facilities, and treated with an herbicide to prevent re-growth. Pulling / removing vines may damage equipment and endanger the employee.

### **D. Clearances - Transmission**

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right of way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right of way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no

more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

### Clearance Table Guidelines

| Right of Way No Restrictions   | Right of Way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove All Woody Stemmed Vegetation *   | 1) Trim or Remove Vegetation to Meet Column C *                                  |
| 2) Do Not Allow Vegetation Closer than Column E                                  | 2) Do Not Allow Vegetation Closer than Column E                                  |
| 3) Trigger Distance to Schedule Maintenance per Column D                         | 3) Trigger Distance to Schedule Maintenance per Column D                         |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or Remove Vegetation to meet Column B *                                  | 1) Trim or Remove Vegetation to Meet Column C *                                  |
| 2) Do Not Allow Vegetation Closer than Column E                                  | 2) Do Not Allow Vegetation Closer than Column E                                  |
| 3) Trigger Distance to Schedule Maintenance per Column D                         | 3) Trigger Distance to Schedule Maintenance per Column D                         |

\* Upon Completion

**1. Restrictions** - When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in -Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**2. Minimum Approach** - Additional maintenance should be scheduled when vegetation will encroach within the minimum approach distances from energized conductors for *qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and D). In areas where easement or other legal agreements, or regulations restrict vegetation management practices, the maximum allowable amount of vegetation will be removed or otherwise controlled. AEP will annually monitor locations where these clearances cannot be achieved. The monitoring will determine whether maintenance that is more frequent may be required in order to assure the safe, reliable operation of the circuit.

#### E. Hangers and Clean Up

1. All hangers should be removed from the pruned tree before leaving the job site.

2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of clean up work should be performed, especially when a property owner requests a tree be removed. Unless otherwise designated by AEP Forestry, wood shall not be cut up or hauled away. Where designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum clean up that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the contractor. Any cut debris that inadvertently falls into such an area, or any debris left in an area that may be prone to regular flooding, shall be moved/removed in an appropriate manner (chipped, stacked on top of ditch bank, etc.)

#### **F. Clearing and Re-clearing**

1. AEP Forestry will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into the lines should be controlled, either by removal, herbicide treatment or a combination of both. On distribution lines and areas approved by Transmission Forestry on transmission lines those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities, should be left undisturbed in the right-of-way whenever possible. Variances to this recommendation may be applied due to specific operating company guidelines.
3. During scheduled maintenance operations, prune or remove any vegetation within the rights-of-way of station entrances or exits that may affect the safe operation of AEP facilities, including station fences and equipment.
4. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the appropriate AEP personnel.
5. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practicable, but not to exceed three (3) inches in height above the ground line. Where possible, the cut shall be parallel to the slope and promptly treated with an approved herbicide, unless otherwise directed by AEP Forestry.
6. Trees shall be felled to avoid damage to crops, fences and other facilities. Any trees felled into crops, ditches, streams, roads or



across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP's facilities or the property of third parties, or hinder access along the right-of-way.

7. Tree, brush and slash shall be lopped as designated by AEP Forestry.
8. Danger trees are identified and addressed / worked at the discretion of the individual operating companies or regions. Consideration for danger tree removal shall be made for those trees that are an imminent hazard or threat to AEP facilities. Danger trees may include, but are not limited to, trees that have severe lean or sweep, are dead, or have visible defect or damage. When cut, danger trees shall be cut as low as possible.
8. Stumps of trees growing in fences may be cut at fence post height, as approved by AEP Forestry.
9. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
10. In remote areas, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
11. Brush should not be left in managed agricultural areas or other maintained areas unless designated by AEP Forestry.

#### **G. Herbicide Applications**

1. All woody plants that have the potential of growing into the lines, should be controlled. Those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities should be left untreated in the right-of-way whenever practical.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made and are required to abide by all Federal, State, and local laws concerning licensing, record keeping, and product handling.
3. Contractors shall attain 100% coverage and 95% control of treated vegetation.
4. AEP Forestry will make vegetation management prescriptions in consultation with contractors.

5. Where required, landowners should be notified before any herbicide treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps should be treated with an appropriate herbicide treatment.

#### **H. Tree Growth Regulator Application**

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (TGR) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in an excessive state of decline shall not be treated unless directed by AEP Forestry.
3. As designated by AEP Forestry, landowners should be notified before any TGR treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX I**

**Distribution Line Clearance Guidelines**

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as **minimum clearance** requirements unless designated otherwise by AEP Forestry. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that during maintenance intervals, trees may encroach into these minimum clearance zones. The guidelines are meant to be used a guide for trimming those trees currently being maintained.

**MINIMUM CLEARANCE FROM CONDUCTORS**

- **Species with Fast Re-growth Rates:** Prune for a *minimum* clearance of 20 feet from conductors

|                |           |
|----------------|-----------|
| Cottonwood     | Willow    |
| Poplar species | Ailanthus |
| Silver maple   | Box Elder |
| Sycamore       |           |

- **Species with Medium Re-growth Rates:** Prune for a *minimum* clearance of 15 feet from conductors

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Locust                          | Hackberry                             |
| Red maple species               | Hickory                               |
| Ornamental pear species         | Crabapple                             |
| Fruit trees (apple, pear, etc.) | Red oak                               |
| Elm species                     | Ash species                           |
| Pine, Spruce & Hemlock species  | Mulberry                              |
| Sweet gum                       | Bois d'arc (Osage orange, hedge tree) |
| Catalpa                         |                                       |

- **Species with Slow Re-growth Rates:** Prune for a *minimum* clearance of 10 feet from conductors

|                           |                         |
|---------------------------|-------------------------|
| Cedar                     | Persimmon               |
| Chinaberry                | White oak (round lobes) |
| Magnolia                  | (Redbud, dogwood, etc.) |
| Any small variety species |                         |

- **Possible Exceptions:**

- When the entire trunk of a tree falls within the minimum clearance specifications.
- When due to the branching structure of the tree less trimming would lend itself to an overall healthier tree, yet with acceptable clearance.
- Isolated instances approved by AEP Forestry representative.

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX II**

**Transmission Line Clearance Guidelines<sup>(7)</sup>**

| Column A<br>Nominal Voltage<br>(kV phase to<br>phase) | Column B <sup>(5)</sup><br>NERC Clearance 1<br>(no restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)(2)</sup> and<br>Vegetation | Column C <sup>(3)(5)</sup><br>NERC Clearance 1<br>(with restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column D <sup>(3)</sup><br>ANSI Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column E <sup>(4)</sup><br>NERC<br>Clearance 2<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation |
|---|---|---|--|---|
| 765 kV  | 45'   | 35' 00"   | 27' 04"  | 14' 0"  |
| 500 kV  | 45'   | 26' 08"   | 19' 00"  | 10' 0"  |
| 345 kV  | 30'   | 20' 05"   | 13' 02"  | 7' 6"   |
| 230 kV  | 30'   | 16' 05"   | 7' 11"   | 5' 2"   |
| 161 kV  | 25'   | 14' 00"   | 6' 00"   | 3' 5"   |
| 138 kV  | 25'   | 13' 02"   | 5' 02"   | 2' 11"  |
| 88 kV & 115kV   | 25'   | 12' 04"   | 4' 06"   | 2' 6"   |
| 69 kV   | 25'   | 10' 09"   | 3' 09"   | 2' 6"   |
| 46kV, 40kV, 34.5<br>kV & 23 kV                        | 20'   | 10' 00"   | 2' 09"   | 2' 6"   |

<sup>(1)</sup> Conductor at maximum sag condition<sup>(6)</sup>

<sup>(2)</sup> Desired clearance to maintain reasonable clearing cycles

<sup>(3)</sup> ANSI Z133.1 rev. 10/2000

<sup>(4)</sup> IEEE Standard 516-2003, Section 4.2.2.3, Tables 5 and 7, calculated clearances (Clearance 2)

<sup>(5)</sup> Application of herbicides will be considered as meeting these guidelines, as long as all treated vegetation meets or exceeds the desired clearance from maximum sag (Table AEP1.2, Columns A and C).

<sup>(6)</sup> AEP Guideline for Determining Maximum Conductor Sag and Blowout for Vegetation Management is to be used to adjust the conductor's found field condition to the maximum sag condition taking into account the conductor size, span length, elevation, and current temperature.

<sup>(7)</sup> (Columns A, B, C, and D) distances exceed clearances for NERC operationally significant circuits noted in NERC Standard FAC-003-1, which gives clearances (Columns A and E) to be maintained between vegetation and conductors under all rated electrical operating conditions, per IEEE Standard 516-2003 (Guide for Maintenance Methods on Energized Power Lines) and as specified in its Section 4.2.2.3, Minimum Air Insulation Distances without Tools in the Air Gap.

# AEP FORESTRY

## *Instructions*

### *For*

## **Forestry Contract Crew Audits**

**January 2007**

**The Forestry Contract Crew Safety and Forestry Contract Crew Audits** are tools that AEP Foresters can use to record a tree crew's compliance with safety regulations, contract guidelines and work performance. A crew, or the completed work, is rated as pass or fail and acceptable or unacceptable. Acceptable or pass means a crew meets contract guideline expectations. Unacceptable or fail means a crew, or the completed work, does not meet contract guideline expectations. An unacceptable or fail rating for any single item in the Crew Safety, Forestry Clearance or Forestry Work Quality audit sections will result in a failure rating for the audit section receiving the unacceptable or fail rating.

Each topic found on the Forestry Contract Crew Safety Audit and Forestry Contract Crew Audit is defined in this document. The 10 topics listed under Safety are forestry specific relating to the AEP Contractor Oversight program. The remaining five topics – Clearance, Work Quality, Equipment, Personnel and Reporting Accuracy relate to contract/guideline compliance and work performance.

Definitions of terms used in this document and more detailed explanations of right of way Forestry work compliance standards are supported by and provided in the document "AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations".

One copy of each completed crew audit is to be given to the audited tree crew foreman, one copy to the contractor general foreman/ supervisor responsible for the crew, and one copy kept on file at the responsible/ local AEP forester's office.

All audit information, including comments, should be entered into RWM

**Audit Frequency** – The expectation of AEP Forestry management is that contract crew audits are to be conducted on a regular basis.

**Fail or Unacceptable** - Any item marked 'Fail' or 'Unacceptable' must be explained. Use the comments sections on the audit forms to explain why an item was marked 'Fail' or 'Unacceptable'.

## Safety Audit

**Personal Protective Equipment** - Shall be worn as required by OSHA and ANSI specifications. Such PPE includes and is not limited to:

**Hard Hats** - Shall be worn when entering the job site. Visual inspection of hard hats should be made to insure they are not cracked, broken, or otherwise altered.

**Safety Glasses** - ANSI approved Z87.1 eye protection shall be worn on job site at all times. Safety glasses are required for all jobs.

**Ear Protection** - Shall be worn when running chippers or chainsaws. Exception- not required when using a chainsaw while working in tree.

**Proper Footwear** - Proper work boots that go above the ankle. Footwear should support the foot and ankle area.

**Chain Saw Chaps** - Are to be worn, according to ANSI guidelines, while operating chain saws.

**High Visibility Garments** – Are to be worn when exposed to vehicular traffic.

**Fall Protection Equipment** – Proper fall protection equipment shall be used while working in an aerial lift device or manually climbing. All such equipment shall be inspected on a daily basis for safe working condition.

**Properly Maintained Safety Equipment** - Each truck is required to have a fully stocked, removable first aid kit; fire extinguisher with current fire safety inspection; and wheel chocks.

**Traffic Control Devices** – Approved cones, signs and flagging personnel need to be properly placed in compliance with State and/or Federal DOT regulations (MUTCD). Be sure all vehicles are properly parked adhering to all city and state laws and regulations including OSHA regulations.

**Proper Fall Protection Procedures** – All climbing practices must be in accordance with OSHA and ANSI Z133 standards.

**Properly Barricade Work Area** – Public should be kept away from work area. Safety cones shall be used to isolate work area from public area. Any person not wearing proper PPE shall be escorted out of work area. Unattended equipment should not be left on the ground where it could jeopardize the public or worker safety.

**Properly Maintain and Store Work Tools** – All tools such as chain saws, pole pruners, ladders, etc. that are kept on a work vehicle are to be safely secured and stored away from public availability. Saws with blade scabbards should be stored with scabbard on. Tools should be in good working order and repair.

**Follow Proper Approach Distances** – All tree trimmers are required to follow OSHA 1910.269 minimum clearances for A.C. Live – Line Work Minimum Approach Distances.

**Properly Store and Mark Hazardous Material** – All herbicide sprayers and storage containers shall be properly labeled and kept in a secured location. Flammable liquids shall be stored in approved containers.

**MSDS and Labels Information Available** - Material Safety Data Sheets for all chemicals shall be readily available on each vehicle. State and federal pesticide regulations also require each vehicle to have labels for each herbicide being used by the crew or stored on the vehicle.

**Good Job Site Housekeeping** – Job site shall be kept orderly at all times. Equipment, trimmings and debris need to be contained to allow safe working operations and provide public safety.

### **Clearance Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Tree Pruning- Conductor Clearance** – All tree pruning shall be governed by approved principles of arboriculture and shall adhere to Tree Care Industry Association (TCIA) and International Society of Arboriculture (ISA) standards.

**Primary Conductors- Conductor Clearance** - It is AEP’s practice to prune trees in a manner that will direct growth away from the electrical conductors. Growth should be removed to a lateral or parent stem and vertical growth rolled back away from the conductor.

Minimum clearance for distribution system lines should be established by each Operating Company. Overhanging limbs should be removed unless otherwise directed by the appropriate AEP System Forestry representative.

**Secondary Conductors – Conductor Clearance** – Minimum clearance for open wire secondary should be established by each Operating Company. Overhanging limbs should not be removed unless otherwise directed by the appropriate AEP System Forestry representative.

Insulated, Twisted, or Cabled Secondary Conductor Clearance – Will not be pruned unless limbs are applying pressure to the line or unless directed by the appropriate AEP System Forestry representative.

**Tree Removal** – Tree removal is an important part of the AEP line clearance program. Targeted tree removals are all trees with the potential to grow into the conductors., Dead, diseased, fast growing tree species, and trees that cannot be properly pruned to obtain proper clearance for the AEP conductors are removal targets.



Stumps shall be flush cut and treated with an approved herbicide as designated by the appropriate AEP System Forestry representative.

**ROW Width** - AEP forestry will provide the width of the right of way. This area will vary depending on facilities. The full width of the R/W area or easement should be cleared of all tall growing or non-compatible woody plant species unless otherwise instructed by the appropriate AEP System Forestry representative.

**Danger Trees** - Danger trees shall be removed or pruned to eliminate the hazard. When cut, danger trees shall be cut as low as practicable, but not to exceed eight inches in height above the ground line. The logs and slash shall be left as felled, unless otherwise designated by AEP System Forestry.

### **Work Quality Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Clearance for Species** - The clearance for a species may be defined as the distance between the tree and conductors after pruning. It is the responsibility of each crew to adhere to the appropriate clearances specified in the AEP guidelines. No exceptions should be made unless otherwise instructed by the appropriate AEP System Forestry representative.

**Hangers Removed** – Any cut or broken limbs left in the tree after pruning shall be removed before leaving work site.

**Collar Cuts** - Collar cuts are important in order to reduce a tree's sprouting. Collar cuts shall be consistently made according to proper arboriculture standards (ANSI A300).

**Directional Pruning** – A pruning practice used to remove branches growing toward conductors; leaving branches growing away from conductors.

**Drop Crotch Selection** – Pruning cuts are to be made, whenever possible, to lateral branches that are at least 1/3 the diameter of the branch being removed.

**Peels / Tears** – Pruning cuts resulting in bark tearing or stripping below a cut shall be avoided.

**Clean Up / Brush Disposal** – All appropriate cleanup work shall be done before leaving a job site unless arrangements have been made with the property owner or AEP forestry personnel. This could include: Chipping or piling brush; removing trash/debris; raking the yard and sweeping driveway, sidewalk or street when appropriate.

**Regard for Property** - All line clearance personnel shall respect the property of the landowner at all times. The crew should take extra effort not to drop limbs on landscaped beds, gardens, yard decorations, fences, roofs, gas meters, cars, etc. The crew should take care not to damage property when walking across or dragging brush.

Ruts or other damage shall be brought to the land owner's attention and addressed accordingly.

**Stump Height** – Stumps should be cut as low to the ground as practical.

**Clearing Around Pole Locations** - A radius of five feet shall be cleared to provide a safe work area free of obstruction from vegetation around each pole location.

**Herbicide Application** – Herbicide applications shall be done in accordance with all Federal, State, and local laws. Contractors shall obtain 100% coverage and at least 95% control of all targeted woody plants.

**Tree Growth Regulator** – Trees designated for Tree Growth Regulators (TGR) shall be treated with an approved product in accordance with the label instructions.

### **Reporting Accuracy Audit**

**Number of trees trimmed** – Record timesheet data. Count the number of trees trimmed by a crew and record on audit sheet.

**Number of trees removed** – Record timesheet data. Count the number of trees removed by a crew and record on audit sheet.

**Footage/Units/Acres Re-cleared** - Record timesheet data. Field count the work completed by a crew.

**Footage/Units/Acres Ground Sprayed** - Record timesheet data. Field count the work completed by a crew.

### **Non-KPI Audit Items**

**Truck Appearance / ID** - Name of contractor clearly displayed with DOT numbers properly displayed. No personal bumper stickers. No long-standing, visible spills.

**Number of Working Saws** – Determined per contract specifications based on type of crew. These saws start and idle without assistance and have a maintained bar and chain.

**R/W Equipment/Chipper** - The proper vehicle, mower, or trimmer unit shall be used based on work location and tree/brush conditions. Chipper starts when key is turned on. Chips are of small size (2"-6"), and not stringy. Brush feeds correctly into chipper and chute deposits chips as directed.

**Crew Properly Equipped** –Each crew shall be equipped according to AEP contract specifications. Crews shall have all necessary tools, on a daily basis, to complete

assigned work productively. For example; ropes, saddles, saws, pruner poles, herbicide sprayer, etc...

**Herbicide Equipment** - Each crew shall have all necessary tools, sprayers and product to ensure safe, productive herbicide applications. Equipment must be in good working condition. All crews shall have all necessary PPE, sprayers etc. to apply according to label instructions.

**AEP Guidelines** - A complete, legible and current set of the AEP Forestry Guidelines and clearance specs is kept in the vehicle (English or Spanish).

**Professional Appearance** - All contract employees will conduct themselves and dress themselves in a manner that positively represents AEP. If required by AEP contract specifications, contract employees must be wearing contractor uniform (i.e. appropriate color T-shirt). Crew must be neat in personal appearance - no excessive holes in clothes and facial hair neat in appearance.

**Manpower Utilization** - All contract employees and equipment shall be used in a fashion that is conducive to maintaining safe work practices and production goals. Look to see if crews are working in efficient manner (i.e. standing around doing nothing, trees that should be treated with herbicide should not be cut then sprayed). Everyone on a crew must be working as a team. If workflow is disjointed with no organization, it is unacceptable. A job briefing should be held each morning to ensure that everyone knows their responsibilities and can perform their tasks in a safe and productive manner.

**Customer Relations** - All contractors will respect the needs and concerns of the customer or landowner. Demonstrate, on an ongoing basis, effective, courteous communication with AEP customers (both internal and external) and landowners and the general public.

**Tree Knowledge** - All members of a crew shall be able to identify and distinguish growth characteristics of trees common to their geographical work area. Ask crews to identify trees in their surrounding area.

**Planning** - The crew should work in a systematic and organized fashion on a daily basis (i.e. not skipping around). The crew supervisor should have a plan for the day and be prepared to discuss that plan with the property owner and any utility employee. It is the responsibility of each crew member to inform their supervisor of any equipment needs that may stand in the way of production or safety.

**Use of Forms** - Forms such as time sheets and production logs, herbicide records, refusal forms, removal cards etc. are filled out completely and accurately and kept up-to-date with all important information. Items such as tree count can be written in daily dairies before being transferred to the correct form; however they must be in a coherent and ordered format.

### Sample Audit Form

#### AEP FORESTRY CONTRACT (KPI) CREW AUDITS

No. \_\_\_\_\_

Audit Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Audit Quarter: 1 2 3 4 (circle one) Operating Co.: \_\_\_\_\_  
 Auditor Name: \_\_\_\_\_ State: \_\_\_\_\_  
 Crew Number: \_\_\_\_\_ District: \_\_\_\_\_ Forestry Region Number: \_\_\_\_\_  
 Circuit #: \_\_\_\_\_ Foreman/ General Foreman: \_\_\_\_\_  
 Circuit Name: \_\_\_\_\_ Pole Number: \_\_\_\_\_

#### Forestry Contract Crew Safety (KPI) Audit CHECK ONE: PASS FAIL

- Failure ratings for any single item will result in failure of this audit.
- Failure must be documented in comments fields and will require random periodic follow up observation.

|  | PASS                     | FAIL                     | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Personal Protective Equipment-<br>Shall be worn as required. Includes but not limited to hard hats, safety glasses, ear protection, proper footwear. | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 Property Maintained Safety Equipment-<br>Fully stocked, removable first aid kit, fire extinguisher and wheel chocks.                                 | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Traffic Control Devices-<br>Approved and placed in accordance with applicable State and Federal regulations.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 4 Proper Fall Protection Procedures-<br>All climbing practices must be in accordance with OSHA and ANSI Z -133 standards.                              | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 5 Properly Barricade Work Areas-<br>Barricade material available and used in accordance with safety rules.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 6 Properly Maintain and Store Work Tools   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 7 Follow Proper Approach Distances-<br>Follow OSHA 1910.269 minimum clearances for AC Live Work Minimum Approach Distances.                            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Acceptable/Unacceptable on items below

- An Unacceptable ratings may result in failure of this audit dependent on magnitude and frequency of the violation.
- Any item found to be Unacceptable must be documented in the comments fields and will require random, periodic follow up observation.

|  | ACCEPTABLE               | UNACCEPTABLE             | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Hazardous material properly stored, labeled and documented | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 MSDS and Herbicide Label information available             | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Jobsite Housekeeping                                       | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Forestry Clearance (KPI) Audit CHECK ONE: PASS FAIL

| Pass / Fail         | PASS                     | FAIL                     |              | PASS                     | FAIL                     | COMMENTS |
|---------------------|--------------------------|--------------------------|--------------|--------------------------|--------------------------|----------|
| Conductor Clearance | <input type="checkbox"/> | <input type="checkbox"/> | Danger Trees | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| ROW Width           | <input type="checkbox"/> | <input type="checkbox"/> |              |                          |                          | _____    |

#### Forestry Work Quality (KPI) Audits CHECK ONE: PASS FAIL

|                       | PASS                     | FAIL                     |                       | PASS                     | FAIL                     |                        | PASS                     | FAIL                     | COMMENTS |
|-----------------------|--------------------------|--------------------------|-----------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------|
| Collar Cuts           | <input type="checkbox"/> | <input type="checkbox"/> | Stump Height          | <input type="checkbox"/> | <input type="checkbox"/> | Peels/Tears            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Directional Pruning   | <input type="checkbox"/> | <input type="checkbox"/> | Hangers               | <input type="checkbox"/> | <input type="checkbox"/> | Cleanup/Brush Disposal | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Drop Crotch Selection | <input type="checkbox"/> | <input type="checkbox"/> | Clearing around poles | <input type="checkbox"/> | <input type="checkbox"/> | Regard for property    | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Reporting Accuracy (KPI) Audit

| Week ending date: ____/____/____     | Timesheet Data           |                          | Audit Data |       | Variance |       |
|--------------------------------------|--------------------------|--------------------------|------------|-------|----------|-------|
|                                      | Cap                      | O&M                      | Cap        | O&M   | Cap      | O&M   |
| Number of trees trimmed              | _____                    | _____                    | _____      | _____ | _____    | _____ |
| Number of trees removed              | _____                    | _____                    | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acres Re-cleared     | _____                    | _____                    | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acres Ground Sprayed | _____                    | _____                    | _____      | _____ | _____    | _____ |
| YES NO                               |                          |                          |            |       |          |       |
| Widening                             | <input type="checkbox"/> | <input type="checkbox"/> |            |       |          |       |

#### Non - KPI Crew Audit Items

| Equipment & Personnel  | PASS                     | FAIL                     | Professional appearance | PASS                     | FAIL                     | Crew Properly Equipped | PASS                     | FAIL                     | Tree Knowledge | PASS                     | FAIL                     |
|------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------------|--------------------------|--------------------------|
| Truck Appearance/ID    | <input type="checkbox"/> | <input type="checkbox"/> | Manpower utilization    | <input type="checkbox"/> | <input type="checkbox"/> | Herbicide Equipment    | <input type="checkbox"/> | <input type="checkbox"/> | Planning       | <input type="checkbox"/> | <input type="checkbox"/> |
| Number of Working Saws | <input type="checkbox"/> | <input type="checkbox"/> | Customer Relations      | <input type="checkbox"/> | <input type="checkbox"/> | AEP Guidelines         | <input type="checkbox"/> | <input type="checkbox"/> | Use of Forms   | <input type="checkbox"/> | <input type="checkbox"/> |
| ROW Equipment/Chipper  | <input type="checkbox"/> | <input type="checkbox"/> |                         |                          |                          |                        |                          |                          |                |                          |                          |

ADDITIONAL COMMENTS: \_\_\_\_\_

AEP REPRESENTATIVE: \_\_\_\_\_ CONTRACTOR REPRESENTATIVE: \_\_\_\_\_

Please give a copy to each of the following: WHITE - AEP FORESTRY OFFICE YELLOW - CONTRACTOR SUPERVISION PINK - CREW FOREMAN  
 \*\*\*\* Forestry Office send copy to: SAFETY HEALTH MANAGER (SAFETY AUDIT ONLY) \*\*\*\*

**AEP Kentucky Power Distribution Line Clearance Guidelines\***

July 2010

|  | <b>RIGHT-OF-WAY WIDTH</b>  | <b>BRUSH CUT</b>  | <b>STUMP TREATMENT</b>                                     |
|--|--|---|--|
| <b>Multi-Phase primary facilities</b>  | <b>ROW Width Varies. Reclear established ROW width to tree-line. If tree-line is indiscernible, reclear to 50 foot width</b> | <b>All Incompatible woody species are cut. In non-maintained areas, Cut Brush &amp; Limbs shall be lopped in a manner not to exceed two feet in height. All pole bases cleared to a 5' radius free of vegetation.</b> | <b>Required for all cut stumps within the Right-of-Way</b> |
| <b>Single-Phase primary facilities</b> | <b>ROW Width Varies. Reclear established ROW width to tree-line. If tree-line is indiscernible, reclear to 40 foot width</b> | <b>All Incompatible woody species are cut. In non-maintained areas, Cut Brush &amp; Limbs shall be lopped in a manner not to exceed two feet in height. All pole bases cleared to a 5' radius free of vegetation.</b> | <b>Required for all cut stumps within the Right-of-Way</b> |
| <b>Open-Wire and Cable Secondary</b>   | <b>Reclear to established width. Minimum of 5'</b>   | <b>All pole bases cleared to a 5' radius free of vegetation</b>   | <b>Required for all cut stumps within the Right-of-Way</b> |

\*Refer to AEP Forestry Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations 5/14/2009

# EXHIBIT C

Kentucky Power Rate Clarifications  
May 15, 2012

**1. Holidays**

- a. Contractor holidays include New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.
- b. Owner recognizes the following additional holidays: Good Friday, the day after Thanksgiving, and the day before Christmas.
- c. Contractor shall not schedule work on Owner holidays unless requested in writing by Owner or the holiday has been agreed to as a regularly scheduled day.
- d. Contractor shall not bill Owner for its employees' holiday pay. Holiday pay is covered as part of the benefits mark-up.
- e. On years when a Contractor or Owner holiday falls on a weekend, Owner shall notify Contractor of the date the holiday will be observed.

**2. Calculations and Examples**

- a. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
- b. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday at Owner's request.
- c. When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.
- d. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in 2.a above.
- e. Calculation examples are provided below.

Straight Time Rate = Taken from table

Overtime Rate = Straight Time Rate x 1.5

Sunday/Holiday Rate = Straight Time Rate x 2

Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)

Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)

Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)

Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate +  
(Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

|   |  |
|---|--|
| Straight Time Billing rate:                 | $\$15.35 + (\$15.35 \times .6644) = \$25.55$ |
| Overtime Billing rate:                      | $\$23.03 + (\$23.03 \times .3338) = \$30.72$ |
| Overtime storm restoration Billing rate:    | $\$23.03 + (\$23.03 \times .45) = \$33.40$   |
| Double Time Billing rate:                   | $\$30.70 + (\$30.70 \times .3338) = \$40.94$ |
| Double Time storm restoration Billing rate: | $\$30.70 + (\$30.70 \times .45) = \$44.52$   |

### 3. Herbicide Application

- a. When Contractor's employees are assigned to apply herbicides, their hourly rate will be increased by \$0.20. Anyone assigned to perform herbicide application must be certified, licensed, registered or otherwise qualified as required by the state where the Work is being performed or as otherwise required by law, statute or regulation. This increase does not apply to employees applying stump treatment as part of their normal daily duties.

### 4. Special Supervisor Payment

- a. If Owner has declared a major storm, or when otherwise determined by Owner and authorized in writing, Supervisors may be paid at the General Foreman straight time rate for all hours worked in excess of forty (40) per week. Contractor shall bill Owner the straight time rate without mark-ups.

### 5. Pay During Training

- a. Owner shall pay Contractor's employees' hourly rate while said employees attend either Owner-sponsored training or other training required and agreed to by Owner to obtain or retain a professional certification. All other training shall be Contractor's responsibility. Unless otherwise agreed to by Owner in writing, no other billing relating to attendance at training will be paid.

### 6. Travel to Work Site

- a. Contractor will designate a reporting site acceptable to Owner for each work area. A travel allowance (not to exceed one-half hour each way) will be allowed for travel via the most direct route from the reporting site to the work location while the crew is working in that work area. The Owner will not pay travel time from any other location unless otherwise agreed to.

### 7. Per Diem Rates

- a. When agreed by Owner and Contractor, Per Diem will be paid to crewmembers when performing Work outside their normal work area [out-of-town] at the following rates:



- \$20.00 per crewmember per day, for crewmembers who rent a house/apartment.
  - \$30.00 per crewmember per day, for crewmembers staying in a hotel with a cost of less than \$50.00 per night (hotel receipts must be submitted with invoice).
  - \$40.00 per crewmember per day, for crewmembers staying in a hotel with cost greater than \$50.00 per night (hotel receipts must be submitted with invoice).
- b. When held over at the request of the Owner on regularly scheduled work days, crew members shall be eligible for a meal if held over for two hours or more after normal quitting time. Owner shall reimburse Contractor \$12.00 per meal for each crew member entitled to a meal unless meals are provided by Owner.
- c. For Contractor employees entitled to a meal in accordance with the Supplementary Terms, Section 2, Item 2.8: Contractor personnel shall be off the clock for meal breaks. Owner shall reimburse Contractor \$12.00 per meal for each employee entitled to a meal unless meals are provided by Owner. Contractor personnel shall be on the clock for meals if they do not stop work to eat. Not stopping work to eat means eating on-the-fly at the jobsite (personnel spend less than 10 minutes eating) or while traveling from jobsite to jobsite. Owner shall not reimburse Contractor for breakfast or lunch meals if Contractor personnel return to their homes at night

#### **8. Quarterly True-up**

- a. Contractor and Owner have agreed to job classifications and labor rates for Work performed under the Contract as found in the Rate Sheets in Exhibit C. Contractor utilizes the established rates, multiplied by overheads, to bill Owner for hours worked. Both parties recognize that different employees in the same job classifications may be paid a rate more or less than the established rates, but agree that the average rate paid for hours worked in each job classification shall not exceed the established rate.
- b. By the last working day of the month following the end of each fiscal quarter, Contractor shall provide for each job classification within the Contract: the total number of hours worked at straight time rates, overtime rates and holiday rates, and the gross wages paid by Contractor to its employees for the hours worked at each rate: straight time, overtime and holiday. The difference between the straight time hours worked multiplied by the established rate, plus the overtime hours worked multiplied by 1.5 times the established rate, plus the holiday hours worked multiplied by 2 times the established rate, and the gross wages paid by Contractor for each job classification shall be totaled. Appropriate overhead markups shall be applied and settlement between the two parties shall be made. Contractor must present Owner with a plan to reduce the difference, if the difference in any single classification is greater than five percent (5%) for two (2) consecutive quarters.
- c. When the difference for all classifications, viewed individually within a contract unit, is less than 1% of the gross wages paid for 2 consecutive quarters, the true-up shall become a semi-annual process, following the end of the 2<sup>nd</sup> and 4<sup>th</sup> quarters. The semi-annual true-up will be based on the prior quarter's billing, not the entire six month period. In all true-ups, the settlement will be calculated and paid to the appropriate party. If the difference for all classifications, viewed individually within a contract unit, in a semi-annual true-up is equal to or exceeds 1% (one percent) of the gross wages paid, the true-ups shall again be made on a quarterly basis until the difference again drops to less than 1% (one percent).

| Labor                                      |            | August 1, 2011   |
|--|------------|--|
| Labor Description                          | Labor Code | Comments   |
| Equipment Operator                         | EO         | An equipment operator shall be able to operate and perform minor maintenance on a ROW brush mower or bulldozer   |
| General Foreman A/<br>General Foreperson A | GFA        | The primary contact with AEP Forestry field representatives Has worked a minimum of 12 months as an Assistant General Foreperson and should be ISA certified Individuals are responsible for all aspects of the contractor's local field operation including and not limited to employee safety, equipment maintenance, work planning effect (if applicable), and emergency response   |
| Foreman A/Foreperson A                     | FA         | Meet all the qualifications of a Foreperson B Has worked a minimum of 12 months as a Foreperson B and should meet all state required herbicide qualifications Is able to competently work and lead others with no direct supervision   |
| Foreman B/Foreperson B                     | FB         | Meet all the qualifications of a Trimmer A Individuals have completed all line clearance foreperson certification/ training programs as required Must be able to work and lead others with limited supervision Has worked a minimum of 18 months in the line clearance industry Must be able to effectively communicate with AEP representatives and landowners Must be able to prepare required record documents, read and follow instructions on maps and notification records Must possess a CDL and pesticide certification as required  |
| Work Planner A                             | WPA        | Meet all qualifications of Work Planner B and be ISA certified Two years experience as a Work Planner II or three years related utility experience Consistent work planning accuracy greater than or equal to 95% Demonstrates initiative and pro-actively looks for ways to do work cost effectively Demonstrated abilities in teamwork, leadership and problem solving Willing to travel and stay away from home overnight   |
| Work Planner B                             | WPB        | Meet all qualifications of Work Planner C and working towards ISA certification Six months satisfactory performance as a Work Planner C or related utility experience Thorough knowledge of species and growth characteristics of trees located in assigned work area Good understanding of electrical facilities and hardware and associated line/circuit maps Understanding of electric utility vegetation management and ability to communicate such to property owners Work effectively with people (utility, contractors, customers, etc ) Demonstrated ability to work safely and efficiently with minimal supervision and have the ability to travel and stay overnight |
| Work Planner C                             | WPC        | Two-year Degree in Forestry, Arboriculture, etc , or related utility experience is desirable Good verbal and written communications skills Positive attitude/neat professional appearance Able to work outside in a safe, productive manner in all weather conditions Valid drivers license  |
| General Foreman B/<br>General Foreperson B | GFB        | Individuals shall be able to communicate effectively with utility representatives, the public and their direct reports Determine the most effective manner within established guidelines of how to treat vegetation conditions and coordinate and instruct crew activities to safely and effectively complete an assigned task Must possess a pesticide license and where required strive to become a certified arborist   |
| Trimmer A                                  | TA         | Meet all qualifications of Trimmer B Individuals have completed all climbing trimmer and bucket (where required) certifications Individual has worked a minimum of 12 months in the line clearance industry Is able to perform all aspects of tree trimming and tree removal including and not limited to rigging ropes, and pulling overhang, and any other assigned duties in a safe, consistent, competent manner Individuals should be capable of filling in for a crew foreperson on a limited basis and have started foreperson training as required by the employer   |
| Trimmer B                                  | TB         | Meet all qualifications of Trimmer C Individual have completed climbing trimmer training Individual has worked a minimum of 6 months in the line clearance industry  |
| Trimmer C                                  | TC         | Entry level or trainee position that requires the individual passes screening criteria as established by employer A Trimmer C shall be able under direction to safely perform a variety of job duties including and not limited to chain saw maintenance, operate a brush chipper, and apply herbicides, clear and cut trees and brush They shall begin climbing trimmer training Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification   |



**RATES FOR KPCCO - Hazard**

ROW Vegetation Management Rate Sheet  
 4/1/2012

**Unit Cost Work Master Rates**

| Unit      | Rate | Rate | Rate | Rate | Rate | Rate | Rate |
|-----------|------|------|------|------|------|------|------|
| Code      | ST   | RL   | DT   | ST   | RL   | DT   | ST   |
| Labor     |      |      |      |      |      |      |      |
| Equipment |      |      |      |      |      |      |      |

| Line Item Description | Equipment Code | Equipment Rate (\$/hr) | Rate per Hour |
|-----------------------|----------------|------------------------|---------------|
| Labor                 |                |                        |               |
| Equipment             |                |                        |               |

**Storm Loaded Rates**

| Line Item Description | Line Item Code | Rate | Rate | Rate | Rate | Rate | Rate |
|-----------------------|----------------|------|------|------|------|------|------|
| Code                  | ST             | RL   | DT   | ST   | RL   | DT   | ST   |
| Labor                 |                |      |      |      |      |      |      |
| Equipment             |                |      |      |      |      |      |      |

| Line Item Description | Material Code | Material Rate | Material Markup % |
|-----------------------|---------------|---------------|-------------------|
| Labor                 |               |               |                   |
| Equipment             |               |               |                   |

**Overhead Rates**

| Line Item Description | Overhead Code | Rate | Rate | Rate | Rate | Rate | Rate |
|-----------------------|---------------|------|------|------|------|------|------|
| Code                  | ST            | RL   | DT   | ST   | RL   | DT   | ST   |
| Labor                 |               |      |      |      |      |      |      |
| Equipment             |               |      |      |      |      |      |      |

**Time Materials**

| Line Item Description | Material Code | Material Rate | Material Markup % |
|-----------------------|---------------|---------------|-------------------|
| Labor                 |               |               |                   |
| Equipment             |               |               |                   |

RATES FOR KPCCO - Pikeville

ROW Vegetation Management Rate Sheet  
 4/1/2017

Line Cost Work Manhour Rate 3  
 Base Fuel Rate

| Equipment Description | Labor      | Labor Code | Labor Rate | Blowing Rate | OT         |
|-----------------------|------------|------------|------------|--------------|------------|
| [REDACTED]            | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED]   | [REDACTED] |
| [REDACTED]            | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED]   | [REDACTED] |
| [REDACTED]            | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED]   | [REDACTED] |
| [REDACTED]            | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED]   | [REDACTED] |
| [REDACTED]            | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED]   | [REDACTED] |

| Equipment Description | Equipment Code | Equipment Rate (\$/hr) | Fuel per hour |
|-----------------------|----------------|------------------------|---------------|
| [REDACTED]            | [REDACTED]     | [REDACTED]             | [REDACTED]    |
| [REDACTED]            | [REDACTED]     | [REDACTED]             | [REDACTED]    |
| [REDACTED]            | [REDACTED]     | [REDACTED]             | [REDACTED]    |
| [REDACTED]            | [REDACTED]     | [REDACTED]             | [REDACTED]    |
| [REDACTED]            | [REDACTED]     | [REDACTED]             | [REDACTED]    |

| Job Description | ST         | SH         | OT         |
|-----------------|------------|------------|------------|
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] |

| Material Description | Material Code | Material Rate | Material Markup % |
|----------------------|---------------|---------------|-------------------|
| [REDACTED]           | [REDACTED]    | [REDACTED]    | [REDACTED]        |
| [REDACTED]           | [REDACTED]    | [REDACTED]    | [REDACTED]        |
| [REDACTED]           | [REDACTED]    | [REDACTED]    | [REDACTED]        |
| [REDACTED]           | [REDACTED]    | [REDACTED]    | [REDACTED]        |
| [REDACTED]           | [REDACTED]    | [REDACTED]    | [REDACTED]        |

| Job Description | ST         | SH         | OT         | Blow       |
|-----------------|------------|------------|------------|------------|
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| [REDACTED]      | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

| Job Description | Time Manhours Scenario 1 | Time Manhours Scenario 2 | Time Manhours Scenario 3 | Time Manhours Scenario 4 |
|-----------------|--------------------------|--------------------------|--------------------------|--------------------------|
| [REDACTED]      | [REDACTED]               | [REDACTED]               | [REDACTED]               | [REDACTED]               |
| [REDACTED]      | [REDACTED]               | [REDACTED]               | [REDACTED]               | [REDACTED]               |
| [REDACTED]      | [REDACTED]               | [REDACTED]               | [REDACTED]               | [REDACTED]               |
| [REDACTED]      | [REDACTED]               | [REDACTED]               | [REDACTED]               | [REDACTED]               |
| [REDACTED]      | [REDACTED]               | [REDACTED]               | [REDACTED]               | [REDACTED]               |

## Unit Price Model

April 30, 2012

Services may be paid under the following Unit Price model.

### 1. Unit Price Model Overview

Unit Price is a model where a Unit Price hourly rate is paid to Contractor for all work units completed in an assigned Circuit. The Unit Price hourly rate includes all costs, including but not limited to, wages, supervision, overheads, profit, equipment and materials required to complete the assigned Work. While the Unit Price hourly rate includes the labor required to apply herbicides, it does not include the cost of the herbicides. The Unit Price hourly rate is multiplied by the assigned work hour per unit, a rate that is assigned for each specific work unit (tree trim, tree removal, brush cut, etc.). This is a rate that has been determined to complete a unit of Work on the assigned Circuit, as agreed by the Owner and Contractor. All Unit Price Work issued to Contractor shall be completed by the agreed upon completion date.

### 2. Unit Price Calculation

#### a. Man Hours per Unit Calculation

Unit Price uses historical average times, or other method agreed to by Owner and Contractor, required to perform a specific type of Work (tree trim, tree removal, brush cutting, brush spraying) ("Work Unit") and includes all time necessary to complete that Work, including but not limited to travel, actual job site time, debris disposal, landowner contacts, immediate crew supervision and appropriate non-productive time (such as time lost to inclement weather and minor on-the-job equipment breakdown).

- I. Owner shall explain the method of calculation and the information used in a Circuit to Contractor's supervision and management prior to authorizing Work.
- II. The average times used to calculate hours per unit can be collected by distribution circuit, portions of a given circuit (sub-circuit), or other defined geographic area within the Contract region (e.g. "Circuit" or "Area.")
- III. The historical average times are developed by accumulating data for vegetation management Work performed on the Circuit during the last three calendar years or other time period as agreed by Owner and Contractor. Each time a Circuit is scheduled for maintenance, a new three-year average is calculated by replacing the earliest year's data with the most recent or next successive year's data. This rolling three year average is given in hours per unit.
- IV. If there are inconsistencies in the three-year data based on disparity in the actual work within a specific Contract region, the Owner and Contractor may agree to use another method to generate the hours per unit. This method shall be documented in the Work Request authorizing the Work.

#### b. Unit Price Calculation

Contractor has submitted a Unit Price hourly rate that shall be used for all units of Work performed, regardless of the Work Unit type. The cost for a given unit of Work (e.g. for a given Circuit) is established by multiplying the Contractor's Unit Price hourly rate for

that Work Unit by its hours per unit. If the Unit Price hourly rate is \$20.00 and the hours per unit is 1.25 hours, Contractor earns 1.25 hours x \$20.00 – \$25.00 for each unit of that Work Unit.

### **3. Job Assignment**

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned; prepare a Unit Price Sheet (sample attached); include any exceptions to the hours per unit; and shall schedule a field review with the Contractor to discuss the Work assignment, including how the hours per unit were developed. An exception to the hours per unit might be a tree removal where the location and size of the tree and its proximity to structures cause a substantial increase in the hours per unit required for the removal. These exceptions must be agreed to by both Parties and are not to include those deviations that are normally encountered in performing a Work Unit.

At the field review, Owner and Contractor shall review all the Work, agree to the exceptions to the hours per unit, agree to the Unit Price Sheet and determine a start date for the Work. A Work Request (“WR”), similar to the sample attached, shall be signed by both Parties and constitutes the written authority for Contractor to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Unit Price Sheet, the map, a list of exceptions to the hours per unit, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date, but subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor’s work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. The work planners, per current practice, shall be paid on a time and material basis and will not be included within the stated Unit Price or Unit Price calculation. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor’s employees are unable to resolve their concerns quickly, Contractor’s employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

## Lump Sum Price Model April 30, 2012

Services may be paid under the following Lump Sum Price model.

### **1. Authorizing Work**

Owner and Contractor may agree to perform work based on a Lump Sum price for the specified Circuit.

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned, complete a Lump Sum Price Sheet; and schedule a field review with the Contractor to discuss the Work assignment.

At the field review, Owner and Contractor shall review all the Work, agree to the Lump Sum Price and determine a start and end date for the Work. A Work Request ("WR") for Lump Sum Price Work, similar to the sample attached, shall be signed by both Parties and constitutes the Contractor's written authority to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Lump Sum Price, the map, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date but is subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor's work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor's employees are unable to resolve their concerns quickly, Contractor's employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.



**Work Request  
For  
Unit Price/Time and Materials Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Unit Price/Time and Materials Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ ("Contract") between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

If no map is attached, identify the circuit, sub-circuit, or the specific geographic area identifying the Work to be performed.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

**Unit Price** --- Contractor's weekly billing shall be calculated using the number of units completed during the week being billed multiplied by the cost per unit from the Rates as found in the Contract.

**Time and Materials** – Contractor's weekly billing shall be calculated using the following formula: (labor classification X number of hours worked during billable period) + (equipment rate X number of hours used during billable period). The labor classifications and equipment rates used will be in accordance to the Rates as found in Exhibit C of the Contract

Unless otherwise stated in this Work Request or the attached map, pricing will be per the price model as selected above and in accordance with the Rates as found in Exhibit C of the Contract.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent's respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**WORK REQUEST  
For  
Lump Sum Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Lump Sum Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ ("Contract") between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

Work shall be performed in accordance with the attached Request For Quote ("RFQ") attached hereto.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

Unless otherwise stated in the Work Request, Contractor shall be paid the total cost for the Circuit upon completion of all Work and subsequent acceptance by Owner. Contractor shall perform all Work for the lump sum amount of \$ \_\_\_\_\_.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent's respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print  
Name: \_\_\_\_\_

Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

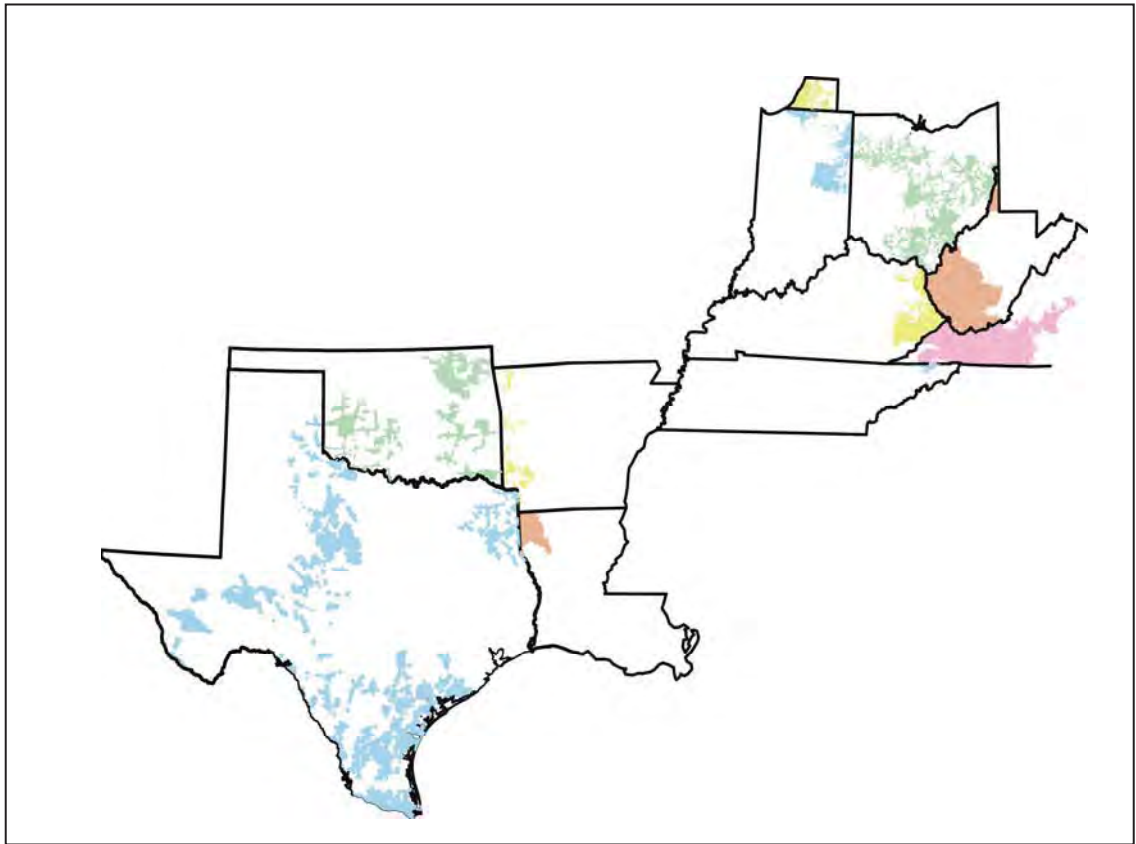






# EXHIBIT D

# AEP – ASPLUNDH 2012/2013 CORPORATE KEY PERFORMANCE INDICATOR PLAN GUIDELINES (CKPI)



## **2012/2013 AEP - Asplundh Corporate Key Performance Indicator Plan Guidelines (CKPI)**

This document describes the 2012/2013 Corporate Key Performance Indicator ("CKPI") Plan between American Electric Power ("Operating Companies") and Asplundh Tree Experts ("Unit") and explains how the adjusted performance payback allocation will be determined for each Asplundh Unit. The CKPI Plan provides insight into each Operating Companies' performance measures with a chance to set new goals and improve the ability to determine fair challenging targets which incorporate operating issues, regulatory requirements, and other measures. This CKPI Plan has been developed for the purpose of tracking and improving the safety and efficiency of the work performed by Asplundh under their AEP vegetation management contract(s) held by each Operating Company. The CKPI Plan's performance categories provide a "line of sight" for AEP Forestry management and Asplundh management so that performance expectations associated with AEP's vegetation management are communicated and understood.

Both parties have agreed to review the CKPI Plan structure no later than six months after commencement of the agreement. Both parties will mutually agree to any changes made to the CKPI Plan. Any changes agreed to during the review meeting must be submitted in writing within 30 days of the initial review meeting.

The CKPI will work in conjunction with the Key Performance Incentive ("KPI") Plans. If the performance categories are not met then Asplundh will sustain an adjusted performance payback allocated to them by the individualized AEP Operating Company,

In 2012/2013, each Operating Company CKPI Plan will have two (2) performance categories:

- Safety
- Efficiency

The safety performance category will be weighted at 40% of the CKPI Plan and will include three (3) measures: OSHA Severity Rate; OSHA Incident Rate; and Number of "At Fault" Safety Events Caused by the General Foreman or Foreman. These measures will carry individual weightings of 15%, 20% and 5%, respectively and will be set the same across the board with no quarterly changes.

The efficiency performance category will be weighted at 60% of the CKPI and will include three (3) measures: Hours per Tree Trimmed; Hours per Tree Removed; and Hours per Unit of Brush Cut. These measures will carry equal, individual weightings (totaling 60%). All performance measures under the efficiency



performance category contain performance factors that are specific to each of the Operating Companies and are revised on a quarterly basis.

A sample of the Quarterly CKPI Plan Target Worksheet is attached at the end of this document on page ten (10).

AEP Forestry management requires additional Performance Drivers to be supplied by Asplundh on a quarterly basis for the following items listed below:

- a) Percentage of Time General Foreman Spends with Crews
- b) Fuel Usage
- c) Asplundh Employee Turn Over
- d) Drive Time
- e) Vehicle Engine Idle Time
- f) Crew Down Time
- g) Equipment Down Time
- h) Pull Out Time

These additional performance drivers will be evaluated for potential inclusion into future CKPI targets. A detailed explanation of these drivers is included on page nine (9).

Each Asplundh Unit earns a performance factor of 0.0 – 1.0 for each performance measure in the CKPI Plan. The performance factor earned is based on the Unit's quarterly results. Each performance measure's weighting factor is multiplied by its earned performance factor to obtain its weighted performance factor. The sum of the weighted performance factors for all the performance measures results in the Unit's aggregate performance factor.

The quarterly CKPI Plan pot allocated for each Unit is 1.5 % of the Unit's Asplundh labor, with mark-ups, invoiced that quarter for the classifications of General Foreman and below. To determine each Unit's CKPI Plan adjusted performance payback to the AEP Operating Companies, its aggregate performance factor is multiplied by its quarterly CKPI Plan pot to determine the CKPI Plan performance dollars then the CKPI Plan pot is subtracted from the CKPI Plan performance dollars.

**Operating Company Unit Example:**

Quarterly CKPI Plan Pot = (1.5% x Quarterly Invoiced Labor with Mark Ups)

Quarterly Unit's CKPI Plan Performance Dollars = [(First Performance Factor x Weighting) + (Second Performance Factor x Weighting) +...+ (Last Performance Factor x Weighting)] x (Quarterly Unit's CKPI Plan pot)

Quarterly Unit's CKPI Plan Adjusted Performance Payback = (Quarterly Unit's CKPI Plan Pot - Quarterly Unit's CKPI Plan Performance Dollars)

For internal accounting purposes: Asplundh will issue a "credit memo" to any AEP Operating Company that has an adjusted performance payback allocated. The total CKPI Plans' adjusted performance payback will be allocated back to Capital and Operation and Maintenance ("O&M") in accordance with the Operating Company's actual outside services labor expenditures for the quarter by an AEP Forestry representative.

When Asplundh Units have an adjusted performance payback of zero (0), this CKPI Plan will be used for 'informational purposes' only for that specific quarter. This CKPI Plan is only designated for Asplundh to payback AEP Operating Companies if their performance measures are not met throughout this plan. AEP will never make a payout under the CKPI Plan to any Asplundh Unit.

Once each Operating Companies' Quarterly CKPI Plan Target Worksheet is complete, an AEP Forestry representative will provide each Asplundh Unit with a copy. If an adjusted performance payback is owed to any of AEP's Operating Companies, Asplundh must submit individual credit memos by Operating Company to the AEP Manager Forestry Operations, 1 Riverside Plaza, 12<sup>th</sup> Floor, Columbus, Ohio 43215 within 30 days from receipt of the final CKPI Plan target worksheets.

Descriptions of the various performance categories, performance measures, and objectives that are used in the CKPI Plan are outlined below.

#### ❖ **PERFORMANCE CATEGORY: SAFETY**

The Performance Measures under the Safety Performance category apply only when work, including service restoration work, is being performed in an AEP Operating Company and includes all Asplundh employees covered by an AEP contract(s) that includes this CKPI Plan. Safety incidents measured in this plan will be charged to the Asplundh employee's "home" unit regardless of the AEP location where the accident occurs.

If an Operating Company sustains a fatality by an Asplundh employee in a given quarter, then the Operating Company sustaining the fatality will receive zeros (0) in all performance categories of the CKPI Plan. All other Operating Company CKPI Plans' performance measures will be reduced under the safety category to a zero (0). An exception may be made, if after a thorough review, AEP determines the fatality occurred through "no fault" of an Asplundh employee.

- **Performance Measure: Severity Rate Per AEP Operating Company**
- **Objective: To meet or exceed a 28.75 severity rate threshold.**

Included in the accident severity rate are the days away from work and restricted duty days for injuries that are required to be recorded on the Contractor's OSHA 300 log. Days away from work are commonly referred to as "lost time". Restricted duty days are defined as the days the injured employee is restricted from performing the duties of his regular occupation by his doctor but is assigned alternate work or restricted duties within his occupation. All days between the first lost or restricted day and the day the restrictions are lifted by the doctor are included. Severity days will continue to count into the next quarter if need be. No single OSHA recordable incident shall accumulate more than 180 calendar days of lost time or restricted duty.

The quarterly accident severity rate is calculated per the following formula:

$$\frac{(\# \text{ of Days Away from Work} + \text{Restricted} + \text{Transfer Days}) \times 200,000}{(\text{Hours Worked in Qtr})}$$

Note: Hours worked in the quarter; lost time; restricted duty days; and transfer days for this performance measure will be derived from all Asplundh employees covered by this CKPI Plan at the Operating Company level, regardless of job classification. This will also include any outsource/off system crews working on AEP property.

- **Performance Measure: Incident Rate Per AEP Operating Company**
- **Objective: To meet or exceed a 2.08 incident rate threshold.**

Included in the incident rate is the total number of injuries, illnesses, and lost work cases that are required to be recorded on the Contractor's OSHA 300 log. An injury or illness is an abnormal condition or disorder. Injuries include cases such as, but not limited to, a cut, fracture, sprain, strain, or amputation. Illnesses include both acute and chronic, such as, but not limited to, a skin disease, respiratory disorder, or poisoning.

The quarterly accident incident rate is calculated per the following formula:

$$\frac{(\# \text{ of OSHA Recordable Incidents} \times 200,000)}{(\text{Hours Worked in Qtr})}$$

Note: Hours worked in the quarter and recordable injuries for this performance measure will be derived from all Asplundh employees covered by this CKPI Plan at the Operating Company level, regardless of

job classification. This will also include any outsource/off system crews working on AEP property.

- **Performance Measure: General Foreman and Foreman “Target Zero” Safety Per AEP Operating Company**
- **Objective: Within each operating company, general foreman and foreman should have no more than 4 “at fault” safety events per quarter.**

Each general foreman and foreman must stay focused and maintain a clear “line of sight” on safety using the “Target Zero” approach. This includes, but is not limited to, eliminating all general foreman and foreman “at fault” OSHA recordable injuries, vehicle accidents, and power interruptions (outages, flashes, and operations). If there are more than four (4) “at fault” safety events caused by the general foreman and foreman in a given quarter, AEP Operating Company & Asplundh management will mutually develop a plan designed to improve the general foreman and foreman’s safety performance.

The following explanations provide a guideline for “at fault” OSHA recordable injuries, vehicle accidents, and power interruptions (outages, flashes, and operations):

#### **OSHA Recordable Injuries**

See description on page five (5) under incident rate.

#### **Vehicle Accidents**

“At fault” vehicle accidents are defined as motor vehicle accidents in which the Asplundh driver/operator involved was the cause of the accident (i.e., disregarding traffic signals, backing into fixed objects, excessive speed, etc.).

“Not at fault” vehicle accidents are defined as motor vehicle accidents in which the actions of the Asplundh driver/operator involved was not the casual factor to the accident. However, there can be circumstances in which the accident could have been avoided had the Asplundh driver/operator taken defensive measures (i.e., braking suddenly and being struck in the rear, or being struck by a merging vehicle).

#### **Power Interruptions (Outages, Flashes, and Operations)**

A power interruption is defined as a tree contact, or human error, that disrupts the normal operation of the circuit whether momentary or for a sustained period of time. Included in the definition are outages, flashes and operations. Interruptions to AEP’s system can be very serious, and may easily result in personal injuries to the employees involved.

Interruptions also have the potential to affect large numbers of customers and large blocks of load.

❖ **PERFORMANCE CATEGORY: EFFICIENCY**

Efficiency performance measures provide a “line of sight” reference to the crews in the field and gives AEP and Asplundh management the opportunity to implement best practices in crew management. Target levels will be set quarterly to compensate for seasonal variations. These target levels will be based on historic data for each Asplundh Unit unless otherwise agreed to by AEP Operating Company and Asplundh management.

Accurate reporting of work units completed is required for efficiency measures to be viable. Reported work units will be verified through field audits of completed work. Variances will be addressed by AEP Operating Company and Asplundh management.

- **Performance Measure: Hours per Tree Trim Per Operating Company**
- **Objective: Increase the efficiency of crews performing tree trimming by the percentage designated by the AEP Operating Company over the previous 3-year average (see table below). Averages and percentages will vary by Operating Company.**

| Operating Company      | Tree Trimmed % |
|------------------------|----------------|
| APCO, KGPCO            |                |
| I&M                    |                |
| OPCO, WPCO             |                |
| SWEPCO                 |                |
| KYPCO                  |                |
| TX                     |                |
| PSO                    |                |
| T - APCO, KGPCO, KYPCO |                |
| T - SWEPCO             |                |

Hours per tree trimmed will be collected quarterly through the Right of Way Maintenance Forestry system (“RWM”). Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

- **Performance Measure: Hours per Tree Removal Per Operating Company**
- **Objective: Increase the efficiency of crews performing tree removals by the percentage designated by the AEP Operating Company over the previous 3-year average (see table below). Averages and percentages will vary by Operating Company.**

| Operating Company      | Tree Removed % |
|------------------------|----------------|
| APCO, KGPCO            |                |
| I&M                    |                |
| OPCO, WPCO             |                |
| SWEPCO                 |                |
| KYPCO                  |                |
| TX                     |                |
| PSO                    |                |
| T - APCO, KGPCO, KYPCO |                |
| T - SWEPCO             |                |

Hours per tree removed will be collected quarterly through RWM. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

- **Performance Measure: Hours per Unit of Brush Cut Per Operating Company**
- **Objective: Increase the efficiency of crews performing brush cutting operations by the percentage designated by the AEP Operating Company over the previous 3-year average (see table below). Averages and percentages will vary by Operating Company.**

| Operating Company      | Brush Cut % |
|------------------------|-------------|
| APCO, KGPCO            |             |
| I&M                    |             |
| OPCO, WPCO             |             |
| SWEPCO                 |             |
| KYPCO                  |             |
| TX                     |             |
| PSO                    |             |
| T - APCO, KGPCO, KYPCO |             |
| T - SWEPCO             |             |

Hours per unit of brush cut will be collected quarterly through RWM. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

- **Performance Measure: Future Performance Drivers**
- **Objective: To collect detailed information from Asplundh for future CKPI Plan performance drivers.**

The table below gives a brief explanation of potential performance drivers for Asplundh. This data will be tracked and submitted by Asplundh to the AEP Manager Forestry Operations on a quarterly basis.

**Table of Future Performance Drivers:**

| Future Performance Drivers                              | Descriptions  | Tracking Mechanism          | Initial Report Due |
|---|---|-----------------------------|--------------------|
| A. Percentage of Time General Foreman Spends with Crews | % of billed general foreman hours spent with crews  | GPS crew tracking records   | 3/31/2013          |
| B. Fuel Usage   | Actual fuel used by all billed vehicles and equipment (both on and off road)  | AVMS data points            | 12/31/2012         |
| C. Asplundh Employee Turnover Rate                      | # of Asplundh full time employees (FTE's) leaving Asplundh divided by the number of equivalent FTE's (equivalent FTE's = billed straight time labor hours / 2080) | Asplundh employment records | 12/31/2012         |
| D. Drive Time   | Time from start time at crew show-up to arrival at first job site location of the day.  | GPS crew tracking records   | 3/31/2013          |
| E. Vehicle Engine Idle Time                             | Hours main engine on vehicles is at idle while crew is on job site  | GPS crew tracking records   | 12/31/2012         |
| F. Crew Down Time                                       | Hours Crew is unproductive due to mechanical breakdowns, waiting on assignments, waiting on equipment, etc  | Asplundh timesheet data     | 3/31/2013          |
| G. Equipment Down Time                                  | Hours equipment is unavailable due to either required maintenance or breakdown.   | Asplundh timesheet data     | 3/31/2013          |
| H. Pull out time  | Time from start time at crew show-up to leaving for first job site of the day.  | GPS crew tracking records   | 12/31/2013         |

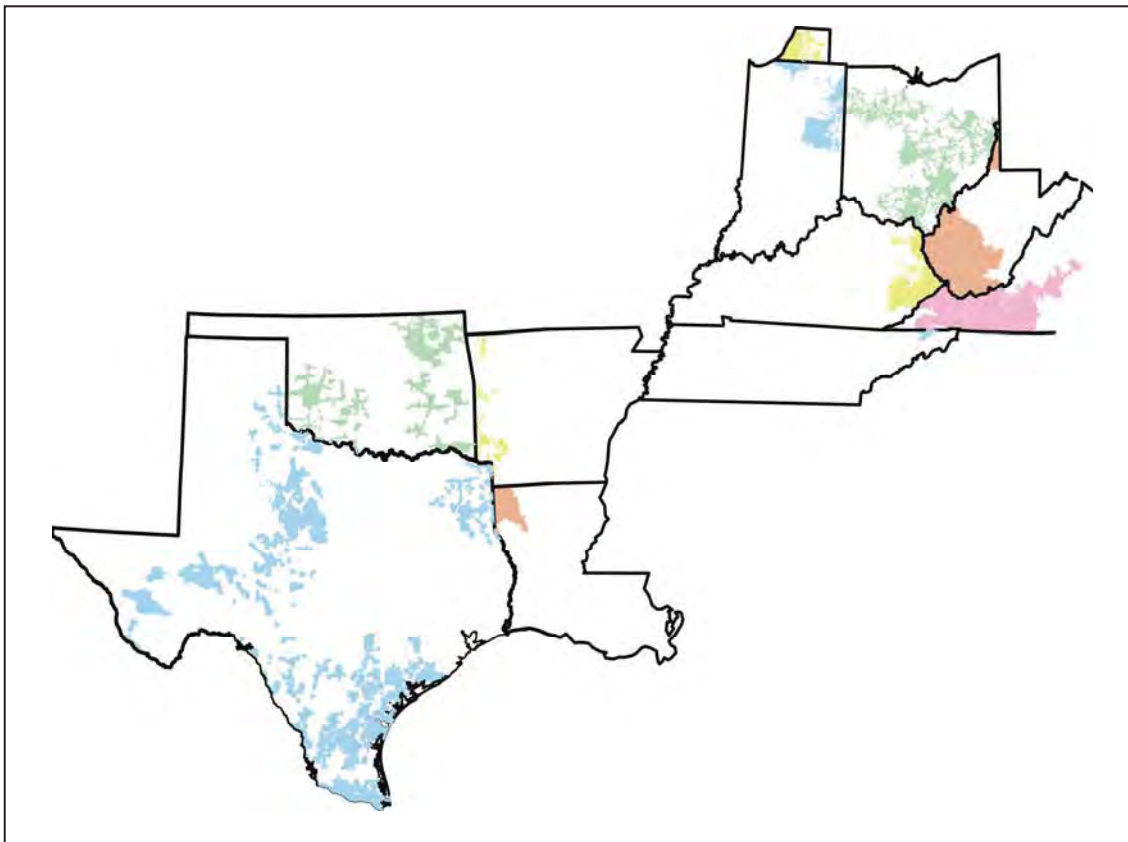
### SAMPLE QUARTERLY CKPI PLAN TARGET SHEET

|  |   | Asplundh Corporate - CKPI Measures   |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |
|--|---|--|-----------|-------------|-------------|------------------------------|---------------------|--------------------|------|------|------|----|--|--|--|
| Measure  | Definition  | LO Target  | Weighting | Quarterly   | Calculation | Aggregate Performance Factor | Eligible            | Performance Factor |      |      |      |    |  |  |  |
|  |   |  |           | CKPI \$ Pot |             |                              | CKPI Performance \$ | 0.0                | 0.25 | 0.50 | 0.75 | LO |  |  |  |
| SAFETY (40%)   | Severity Rate                                     | # of OSHA recordable lost work days + restricted duty days / 200,000 total man hours worked per quarter  |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |
|  | OSHA Incident Rate                                | # of Actual OSHA recordable cases / 200,000 total man hours worked per quarter   |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |
|  | General Foreman & Foreman Target Zero Safety Goal | Focus and maintain a clear "line of sight" with a "Target Zero" goal on actual "at fault" OSHA recordables, vehicle accidents, and power outages |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |
| EFFICIENCY (60%)   | Per Unit Measure                                  | Hours per Tree Trimmed   |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |
|  | Per Unit Measure                                  | Hours per Tree Removed   |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |
|  | Per Unit Measure                                  | Hours per Unit Brush Cut   |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |
| Were all the additional Asplundh CKPI Drivers turned in? |   | YES  |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |
|  |   | NO   |           |             |             |                              |                     |                    |      |      |      |    |  |  |  |



# AEP – ASPLUNDH 2012/2013 KEY PERFORMANCE INCENTIVE PLAN GUIDELINES

## AEP – KENTUCKY



## **2012/2013 AEP - Asplundh Key Performance Incentive Plan**

This document describes the 2012/2013 AEP - Asplundh Key Performance Incentive ("KPI") Plan and explains how payouts will be determined for Asplundh employees. The KPI has been developed for the purpose of improving the safety, efficiency, and effectiveness of the work performed by Asplundh under their AEP vegetation management contract(s), resulting in improved service and value to our customers. The KPI Plan's performance measures provide a "line of sight" for AEP Forestry Management and Asplundh employees so that performance expectations associated with vegetation management are communicated and understood. The KPI will work in conjunction with each of the Operating Company's Corporate Key Performance Indicator ("CKPI") Plans by meeting or exceeding the performance factor targets on a quarterly basis under safety and efficiency.

In 2012/2013, the KPI Plan will be based on the general performance categories of:

- Safety
- Efficiency
- Effectiveness

The Safety performance category contains the Injury Severity Rate, the key performance measure for the plan, which is the "gatekeeper" for the KPI Plan. The Injury Severity Rate has an established threshold that must be met or exceeded in order for a payment to be made under the KPI Plan. This threshold is the 3-year average, aggregate Severity Rate of all AEP Operating Companies and must be met by each Asplundh Operating Company Unit ("Unit") of vegetation management contractors working for AEP in order for that Unit to receive payment. If the threshold is exceeded by any Unit in a quarter, AEP and Asplundh will mutually develop a plan designed to improve the Injury Severity Rate for that Unit to at or below the threshold. If an Asplundh employee is fatally injured during the course of work under the contract(s) covered by this plan, the Unit sustaining the fatality will not be eligible for a KPI Plan payout in the quarter in which the fatality occurred. The payout for all Units outside the Unit incurring the fatality will be reduced by any earned payouts in the Safety portion of their KPI Plan during that same quarter. An exception may be made if, after a thorough review, AEP determines the fatality occurred through "no fault" of an Asplundh employee.

Each general performance category contains specific performance measures with targets specific to each of the Units. The targets have been developed using performance data from each of the Operating Companies, and are shown on the Quarterly KPI Target Worksheet attached on the last page of this document. These measures provide an alignment with the Operating

Companies' goals and improve the ability to determine fair, challenging targets which incorporate local operating issues, regulatory requirements, etc.

The 2012/2013 AEP - Asplundh KPI Plan has six (6) Safety Performance Measures that carry a 35% weighting, three (3) Efficiency Performance Measures that carry a 36% weighting, and two (2) Effectiveness Performance Measures that carry a 29% weighting. Each performance measure has a weighting factor assigned to it with the sum of the weighting factors equaling one. Each Unit earns a performance factor of 0.0 – 1.0 for each performance measure in the KPI Plan. The performance factor earned is based on the Unit's quarterly results. Each performance measure's weighting factor is multiplied by its earned performance factor to obtain its weighted performance factor. The sum of the weighted performance factors for all the performance measures results in the Unit's aggregate performance factor. The quarterly KPI Plan pot allocated for each Unit is 5% of the Unit's Asplundh labor, with mark-ups, invoiced that quarter for the classifications of General Foreman and below. To determine the Unit's KPI Plan payout, its aggregate performance factor is multiplied by its quarterly KPI Plan pot allocated.

Within a given Unit, if the total calculated KPI Plan payout for the quarter falls at or below 50% of the allocated KPI Plan pot, then there will be no KPI Plan payout for that specific quarter.

For internal accounting purposes: The total KPI Plan payout will be allocated between Capital and Operation & Maintenance (O&M) expenses in accordance with the Operating Company's actual outside services labor expenditures for that quarter.

**Operating Company Unit Example:**

$[(\text{First Performance Factor} \times \text{Weighting}) + (\text{Second Performance Factor} \times \text{Weighting}) + \dots + (\text{Last Performance Factor} \times \text{Weighting})] \times (\text{Quarterly KPI Plan Pot}) = \text{Unit's KPI Plan Payout}$

Asplundh will be responsible for allocating each Unit's KPI Plan payout to the employees working within the Unit. There is no one "best practice" for allocating the payout, so allocation methods may vary by Unit to provide the best motivation for performance improvement. Asplundh management (Regional VP or Manager) and AEP Operating Company management (Forestry Supervisor, Operations or Reliability Manager, and VP of Operations) must be in agreement on the allocation plan.

Descriptions of the various performance categories, performance measures, and objectives that are used in the KPI plan are outlined below.

## ❖ PERFORMANCE CATEGORY: SAFETY

The Performance Measures under the Safety Performance category apply only when work, including service restoration work, is being performed in an AEP Operating Company and includes all Asplundh employees covered by an AEP contract(s) that includes this KPI Plan. For recording against any performance measures in the KPI Plan, regardless of the AEP location where the accident occurs, it is charged to the Asplundh employee's "home" Unit.

- **Performance Measure: Severity Rate**
- **Objective: Reduce the accident severity rate for the quarter by 10% of the previous 3-year average.**

Included in the accident severity rate are the days away from work and restricted duty days for injuries recorded on the OSHA 300 log. Days away from work are commonly referred to as "lost time". Restricted duty days are defined as the days the injured employee is restricted from performing the duties of his regular occupation by his doctor but is assigned alternate work or restricted duties within his occupation. All days between the first lost or restricted day and the day the restrictions are lifted by the doctor are included. Severity days will continue to count into the next quarter if need be. No single OSHA recordable incident shall accumulate more than 180 calendar days of lost time or restricted duty.

The quarterly accident severity rate is calculated per the following formula:

$$\frac{(\# \text{ Of Days Away from Work} + \text{Restricted} + \text{Transfer Days}) \times 200,000}{(\text{Hours Worked in Qtr})}$$

- **Performance Measure: Incident Rate**
- **Objective: Reduce the accident incident rate for the quarter by 10% of the previous 3-year average.**

Included in the incident rate is the total number of injuries, illnesses and lost work cases that are required to be recorded on the Contractor's OSHA 300 log. An injury or illness is an abnormal condition or disorder. Injuries include cases such as, but not limited to, a cut, fracture, sprain, strain, or amputation. Illnesses include both acute and chronic, such as, but not limited to, a skin disease, respiratory disorder, or poisoning.

The quarterly accident incident rate is calculated per the following formula:

**(# OSHA Recordable Incidents x 200,000) / (Hours Worked in Qtr)**

If the calculated incident rate is above the 3-year average and only one (1) incident has occurred during the quarter, then the 0.25 performance factor will apply.

- **Performance Measure: Days Away, Restricted, or Transferred Cases (DART) Rate**
- **Objective: Reduce the number of cases that have days away, restricted, or transferred days for the quarter by 10% of the previous 3-year average.**

The DART rate includes the total number of cases involving days away from work, restricted work activity, and transfers to another job. These are required to be recorded on the Contractor's OSHA 300 log. Days away from work are commonly referred to as "lost time". Restricted duty days are defined as the days the injured employee is restricted from performing the duties of his regular occupation by his doctor but is assigned alternate work or restricted duties within his occupation. Transfers to another job include but are not limited to being able to perform "light" duty with restrictions. All days between the first lost, restricted, or job transfer day, and the day the restrictions are lifted by the doctor are included.

The quarterly DART rate is calculated per the following formula:

$$\text{(# OSHA Recordable Lost Time + Restricted + Job Transfer Cases) x 200,000 / (Hours Worked in Qtr)}$$

- **Performance Measure: Outages**
- **Objective: Reduce the "at fault/negligent" crew caused outages, flashes, and operations for the quarter by 10% of the previous 3-year average.**

Interruptions to the Distribution system can be very serious. A Contractor caused interruption (outages, flashes, and operations) may easily result in personal injuries to the employees involved. It also has the potential to affect large numbers of customers and large blocks of load. An interruption is defined as any tree contact or human error that disrupts the normal operation of the circuit whether momentary or for a sustained period of time. An exception may be made, if after a thorough review, AEP determines that there was no fault caused by the Contractor.

“At fault/negligent” crew causes outages will be calculated on a quarterly basis.

- **Performance Measure: Vehicle Accidents**
- **Objective: Reduce the number of “at fault” vehicle accidents for the quarter by 10% of the previous 3-year average.**

All vehicle accidents should be reviewed by AEP and Asplundh management to determine if they are “at fault”. The following definitions may be used as a guideline:

**“AT FAULT” VEHICLE ACCIDENT DEFINITION**

A motor vehicle accident in which the Asplundh driver/operator involved was the major cause of the accident (i.e., disregarding traffic signals, backing into fixed objects, excessive speed, etc.).

**NOT AT FAULT VEHICLE ACCIDENT DEFINITION**

A motor vehicle accident in which the actions of the Asplundh driver/operator involved was not the casual factor of the accident.

However, there can be circumstances in which the accident could have been avoided had the Asplundh driver/operator taken defensive measures (i.e., braking suddenly and being struck in the rear, or being struck by a merging vehicle).

Quarterly vehicle accident rates are calculated per the following formula:

$$\text{(# at Fault Vehicle Accidents x 200,000) / (Hours Worked in Qtr)}$$

If the calculated “at fault” vehicle accident rate is above the 3-year average and only one (1) incident has occurred during the quarter, then the 0.25 performance factor will apply.

- **Performance Measure: Field Safety Observations**
- **Objective: Monitor and improve crew safety performance to achieve a 99.5% pass rate of field safety observations.**

Individual crew safety observations will be performed throughout each quarter. As noted in the detailed criteria listed on the AEP Forestry Contract (KPI) Crew Audit form, the auditor will score the crew based on a pass/fail system. A “fail” rating will result from not meeting one of the first seven (7) criteria. A “fail” rating can also result when one of the last three (3) items is scored as “unacceptable” and the auditor believes the

magnitude or frequency of the unacceptable element warrants the “fail” rating. The inspector will document the reason for the “fail” or “unacceptable” ratings in the comments section of the form.

#### ❖ **PERFORMANCE CATEGORY: EFFICIENCY**

These performance measures provide a “line of sight” reference to the crew in the field and provide AEP and Asplundh management the opportunity to implement best practices in crew management. Target levels will be set quarterly to compensate for seasonal variations. These target levels will be based on historic data for each Operating Company Unit unless otherwise agreed to by AEP and Asplundh management.

Accurate reporting of Work Units completed is required for efficiency measures to be viable. Reported Work Units will be verified through field audits of completed work. Variances will be addressed with local Asplundh management. During the quarterly performance period, if the variance between the completed Work Units reported and the completed Work Units audited is greater than 5% for trims and removals and greater than 10% for Brush Cut, the performance factor applied to this performance measure will be zero (0).

- **Performance Measure: Hours per Tree Trim (Non Mechanical)**
- **Objective: Increase the efficiency of crews performing tree trimming by 5% over the previous 3-year average.**

Hours per tree trimmed will be collected quarterly through RWM for crews working on base and reliability capital and maintenance. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

- **Performance Measure: Hours per Tree Removal (Non Mechanical)**
- **Objective: Increase the efficiency of crews performing tree removal by 5% over the previous 3-year average.**

Hours per tree removed will be collected quarterly through RWM for crews working on base and reliability capital and maintenance. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

➤ **Performance Measure: Hours per Unit of Brush Cut (Non Mechanical)**

**Objective: Increase the efficiency of crews performing brush clearing by 5% over the previous 3-year average.**

Hours per unit of brush cut will be collected quarterly through RWM for crews working on base and reliability capital and maintenance. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

❖ **PERFORMANCE CATEGORY: EFFECTIVENESS**

➤ **Performance Measure: Work Quality – Clearance to Operating Company Standards**

➤ **Objective: A minimum of 98% or more of the spans maintained have conductor to vegetation clearances meeting or exceeding the Operating Company's specification.**

AEP will sample maintained spans and conduct field audits of span line clearance to determine if the work was completed to Operating Company standards. The AEP Forestry Contract (KPI) Crew Audit form will be used for these audits. Any defect found on any audit will be a "failed" audit unless an AEP Operating Company Forestry representative approves a variance. The percentage of passed audits will determine the performance factor.

➤ **Performance Measure: Work Quality – Trimming to arboricultural industry standards and AEP specifications.**

➤ **Objective: A minimum of 98% or more of the spans maintained had vegetation managed per arboricultural industry standards and AEP specifications.**

AEP will sample maintained spans and conduct field audits to determine if the work was completed to industry standards and AEP specifications. The AEP Forestry Contract (KPI) Crew Audit form will be used for these audits. Any defect found on any audit will be a "failed" audit unless an AEP Operating Company Forestry representative approves a variance. The percentage of passed audits will determine the performance factor.



SAMPLE QUARTERLY KPI TARGET SHEET

|    | A         | B  | C  | D   | E                 | F                |
|----|-----------|--|--|---|-------------------|------------------|
| 1  |           | <b>Asplundh - Kentucky P</b>                               |  |   |                   |                  |
| 2  |           |  |  |   |                   |                  |
| 3  |           |  |  |   |                   |                  |
| 4  |           | <b>Measure</b>   |  | <b>Definition</b>   | <b>1.0 Target</b> | <b>Weighting</b> |
| 5  | <b>1</b>  | <b>SAFETY<br/>(35%)</b>                                    | SEVERITY RATE<br>(KPI Gatekeeper <b>36.4</b> )     | # of OSHA recordable lost work days + restricted duty days X 200,000/total man hours worked per quarter |                   |                  |
| 6  | <b>2</b>  |  | OSHA Incident Rate                                 | # of Actual OSHA recordable cases X 200,000/total man hours worked per quarter                          |                   |                  |
| 7  | <b>3</b>  |  | DART Rate  | # of OSHA recordable lost time & restricted cases X 200,000/total man hours worked per quarter          |                   |                  |
| 8  | <b>4</b>  |  | Outages  | "At Fault/Negligent" Crew caused outages, flashes, & operations   |                   |                  |
| 9  | <b>5</b>  |  | Vehicle Accidents                                  | "At Fault" Vehicle Accidents  |                   |                  |
| 10 | <b>6</b>  |  | Field Safety Observations                          | Individual Pass/Fail using Crew Safety Inspections  |                   |                  |
| 11 | <b>7</b>  | <b>EFFICIENCY<br/>(36%)</b>                                | Per Unit Measure<br>(Reporting Accuracy Var < 5%)  | Hours per Tree Trimmed<br>(Manual Crews Only)   |                   |                  |
| 12 | <b>8</b>  |  | Per Unit Measure<br>(Reporting Accuracy Var < 5%)  | Hours per Tree Removed<br>(Manual Crews Only)   |                   |                  |
| 13 | <b>9</b>  |  | Per Unit Measure<br>(Reporting Accuracy Var < 10%) | Hours per Unit Brush Cut<br>(Manual Crews Only)   |                   |                  |
| 14 | <b>10</b> | <b>EFFECTIVENESS<br/>(29%)</b>                             | Work Quality                                       | Field audit of span line clearance per OpCo standards   |                   |                  |
| 15 | <b>11</b> |  |  | Field audit of spans trimmed per industry standards   |                   |                  |
| 16 |           | <b>Was KPI Performance Goals Achieved at or above 51%?</b> |  | <b>YES</b>  |                   |                  |
| 17 |           |  |  | <b>NO</b>   |                   |                  |



**THIRD AMENDMENT TO CONTRACT NO. 025765990000X103**

This Third Amendment to Contract No. 025765990000X103 (“Third Amendment”), executed to be effective December 25, 2016 (“Third Amendment Effective Date”), is by and between **American Electric Power Service Corporation**, a New York corporation, **as agent for the operating companies of the American Electric Power System** (“Owner”) and Asplundh Tree Expert Co., a Pennsylvania corporation (“Contractor”).

**WHEREAS**, Contractor and Owner entered into Contract No. 025765990000X103 with an Effective Date of September 5, 2012 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the Parties hereby agree as follows:

1. In order to update Section 5 Pricing, remove the Third paragraph in its entirety and replace with the following:

“Beginning June 1, 2015, and then on June 5, 2016 and June 4, 2017, Contractor’s labor rates will be adjusted using the Bureau of Labor Statistics, U.S. Department of Labor, Employment Cost Index (ECI) for Total Compensation (not seasonally adjusted), for (Table 9) Employment Cost Index for wages and salaries, for private industry workers, by occupational group and industry. The percent change for the 12-months ended in March of the year of the adjustment will be multiplied by the current labor rates to determine the adjusted labor rates.

All other rates in Contractor’s Rate Sheet may be revised annually. Proposed changes must be submitted by February 15<sup>th</sup> and, if accepted by Owner, shall become effective the first Sunday of June for that year.”

2. In Exhibit C, the existing Rate Sheets shall be removed in its entirety and replaced with the Contractor’s Rates dated January 1, 2017 (the “Rate Sheet”). These rates will be effective January 1, 2017.
3. In order to update Section 7 Fuel Adjustments in the Contract, remove in its entirety and replace with the following:

“The base Gasoline price is \$2.261 per gallon (“Base Gasoline Price”) and will remain in effect until contract termination. The weekly Gasoline price is the state average for Gasoline taken from the American Automobile Association’s website (“Weekly Gasoline Price”). When preparing the weekly invoices, if that week’s Weekly Gasoline Price differs from the Base Gasoline Price by more than ten (10) cents, a Gasoline adjustment for each piece of equipment will be calculated by using the following formula:

Gasoline adjustment = [(Weekly Gasoline Price) – (Base Gasoline Price)] x gallons/hour x Equipment hours billed

The gallons/hour figure is taken from the Contractor’s Rate Sheets in Exhibit C. The sum of the Gasoline adjustments for each piece of equipment used that week shall be added to or subtracted from that week’s invoice amount. If the Unit Price Model, as described in Exhibit C, is used and

billing is done with a single invoice when all the Work is completed, the Weekly Gasoline Price used shall be that for the week in which the invoice is being prepared.”

4. In order to update the AEP Transmission Forestry Rate Clarifications in Exhibit C, the Rate Clarifications dated May 15, 2012 shall be removed in its entirety and replaced with the Rate Clarifications dated October 1, 2016, attached hereto and incorporated herein.
5. In order to update Exhibit B, remove AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated June 1, 2015 in its entirety and replace with AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission dated October 1, 2016 attached hereto and incorporated herein.
6. Remove all references to Exhibit D -KPI, the Asplundh 2012/2013 Corporate Key Performance Incentive Plan Guidelines (“CKPI”) and AEP – AEP Transmission 2012/2013 Key Performance Incentive Plan Guidelines – Asplundh, APCO, KPCO & KGPCO (“KPI”) in their entirety. The KPI is no longer in effect. The final quarterly KPI performance will be calculated for 3rd Quarter 2016 and any resulting payback credit memo issued accordingly.
7. Except as amended by this Third Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Third Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Third Amendment Effective Date.

**American Electric Power Service Corporation, as agent for the operating companies of the American Electric Power**

**Asplundh Tree Expert Co.**

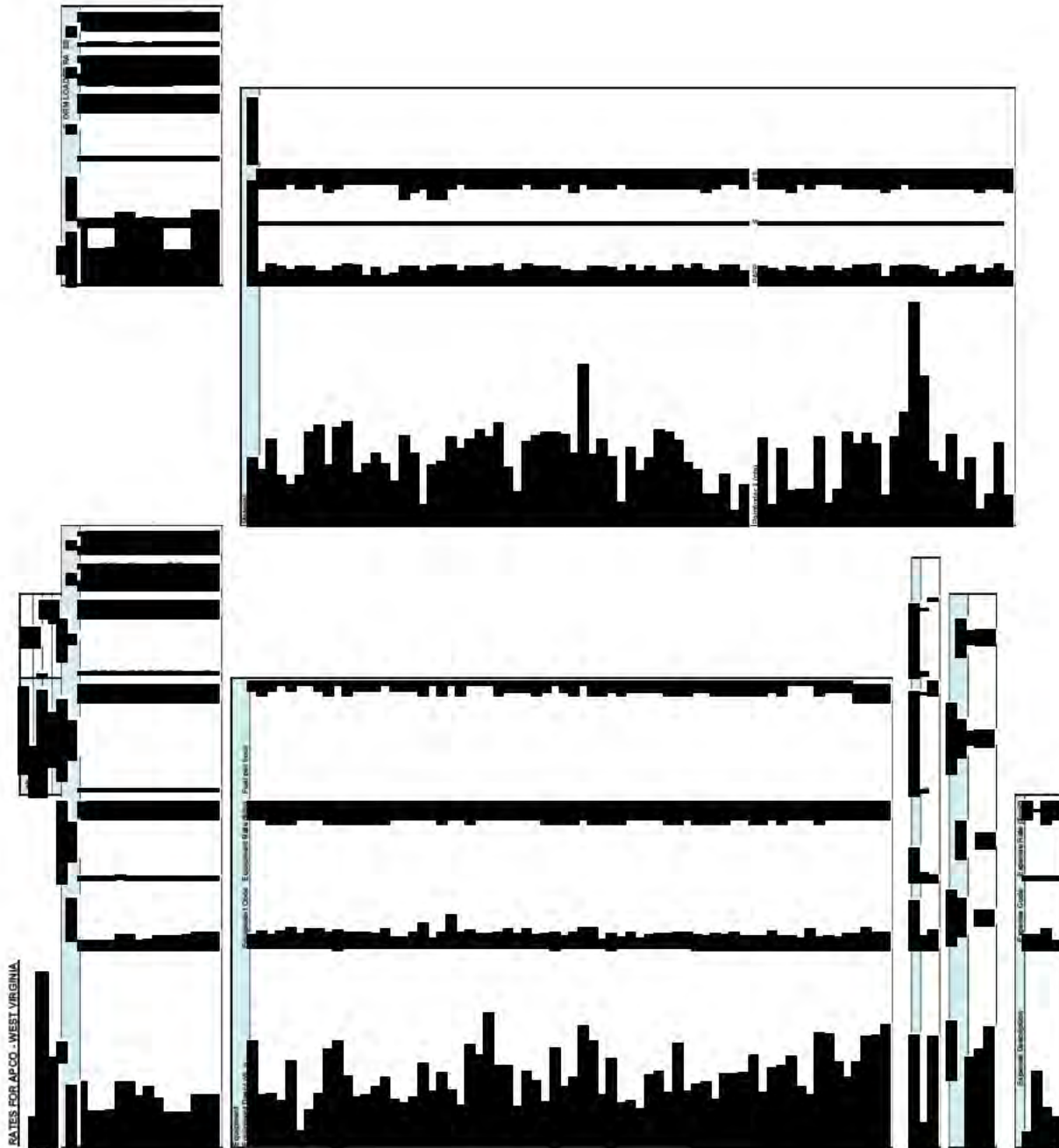
Sys DocuSigned by:  
By Thomas Kirkpatrick  
Name: THOMAS KIRKPATRICK

Sys DocuSigned by:  
By Brent Asplundh  
Name: BRENT ASPLUNDH

Title: Vice President Customer Service, Marketing and Distribution Services, EVP

Date: 1/5/2017 | 9:23 AM EST

Date: 1/9/2017 | 4:38 PM EST



**RATES FOR MICO TRANSCO.**

153537  
 ECOM Vegetation Management State Street  
 E Electric Date 5/19/2017

Letter increases (in Line of BPI)  
 2016 Item 201  
 Maximum Rate  
 State Fund Rate

| Job Code         | Unit    | Rate      | Rate | Rate |
|------------------|---------|-----------|------|------|
| Labor            |         |           |      |      |
| Equipment        |         |           |      |      |
| Material         |         |           |      |      |
| Subcontract      |         |           |      |      |
| Other            |         |           |      |      |
| Labor Code       | 010920W | 1317/2019 |      | D    |
| Labor Rate       |         |           |      |      |
| Equipment Code   | 010920W | 1317/2019 |      | D    |
| Equipment Rate   |         |           |      |      |
| Material Code    | 010920W | 1317/2019 |      | D    |
| Material Rate    |         |           |      |      |
| Subcontract Code | 010920W | 1317/2019 |      | D    |
| Subcontract Rate |         |           |      |      |
| Other Code       | 010920W | 1317/2019 |      | D    |
| Other Rate       |         |           |      |      |

| Job Code         | Unit    | Rate      | Rate | Rate |
|------------------|---------|-----------|------|------|
| Labor            |         |           |      |      |
| Equipment        |         |           |      |      |
| Material         |         |           |      |      |
| Subcontract      |         |           |      |      |
| Other            |         |           |      |      |
| Labor Code       | 010920W | 1317/2019 |      | D    |
| Labor Rate       |         |           |      |      |
| Equipment Code   | 010920W | 1317/2019 |      | D    |
| Equipment Rate   |         |           |      |      |
| Material Code    | 010920W | 1317/2019 |      | D    |
| Material Rate    |         |           |      |      |
| Subcontract Code | 010920W | 1317/2019 |      | D    |
| Subcontract Rate |         |           |      |      |
| Other Code       | 010920W | 1317/2019 |      | D    |
| Other Rate       |         |           |      |      |

| Equipment        | Equipment Code | Equipment Rate (\$/hr) | Equipment Rate | Equipment Rate |
|------------------|----------------|------------------------|----------------|----------------|
| Labor            |                |                        |                |                |
| Equipment        |                |                        |                |                |
| Material         |                |                        |                |                |
| Subcontract      |                |                        |                |                |
| Other            |                |                        |                |                |
| Equipment Code   | 010920W        | 1317/2019              |                | D              |
| Equipment Rate   |                |                        |                |                |
| Material Code    | 010920W        | 1317/2019              |                | D              |
| Material Rate    |                |                        |                |                |
| Subcontract Code | 010920W        | 1317/2019              |                | D              |
| Subcontract Rate |                |                        |                |                |
| Other Code       | 010920W        | 1317/2019              |                | D              |
| Other Rate       |                |                        |                |                |

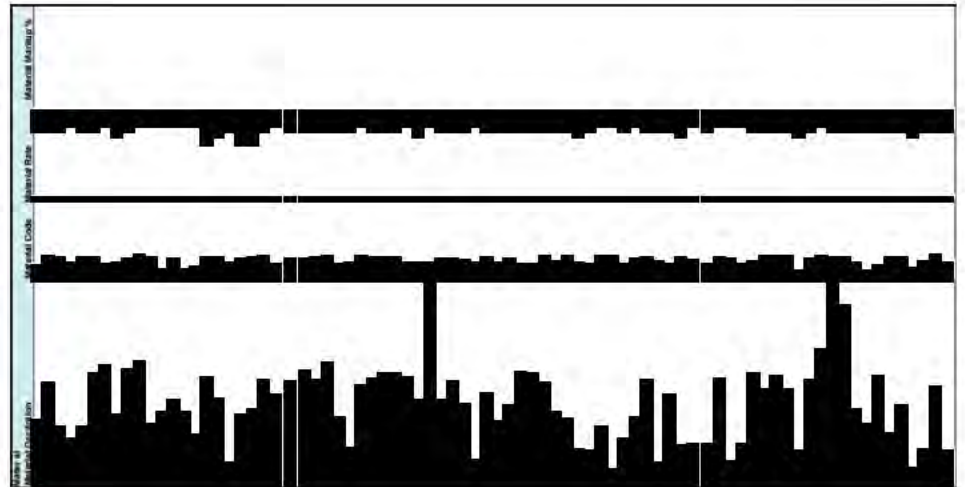
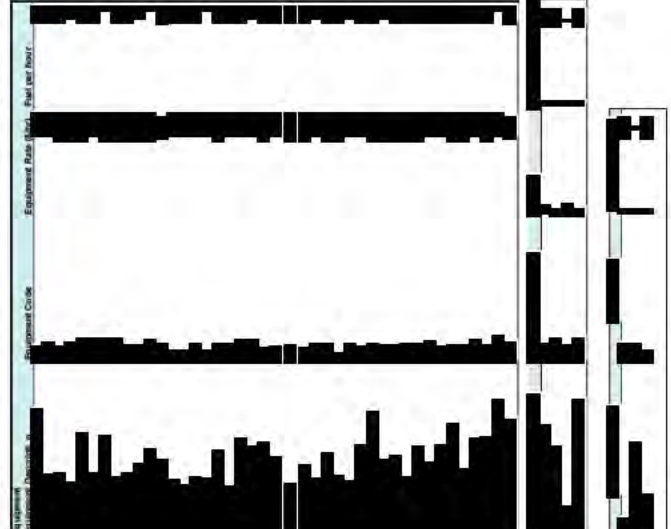
| Rate #           | Equipment Code | Equipment Rate (\$/hr) | Equipment Rate | Equipment Rate |
|------------------|----------------|------------------------|----------------|----------------|
| Labor            |                |                        |                |                |
| Equipment        |                |                        |                |                |
| Material         |                |                        |                |                |
| Subcontract      |                |                        |                |                |
| Other            |                |                        |                |                |
| Equipment Code   | 010920W        | 1317/2019              |                | D              |
| Equipment Rate   |                |                        |                |                |
| Material Code    | 010920W        | 1317/2019              |                | D              |
| Material Rate    |                |                        |                |                |
| Subcontract Code | 010920W        | 1317/2019              |                | D              |
| Subcontract Rate |                |                        |                |                |
| Other Code       | 010920W        | 1317/2019              |                | D              |
| Other Rate       |                |                        |                |                |

RATES FOR AEP OH TRANSCO

Leave Increases (B. Line of RFP)  
2016 - 2017  
2017 - 2018  
2018 - 2019  
2019 - 2020  
2020 - 2021  
2021 - 2022  
2022 - 2023  
2023 - 2024  
2024 - 2025  
2025 - 2026  
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2099 - 2100

04/01/2016 04/01/2017 04/01/2018 04/01/2019 04/01/2020 04/01/2021 04/01/2022 04/01/2023 04/01/2024 04/01/2025 04/01/2026 04/01/2027 04/01/2028 04/01/2029 04/01/2030 04/01/2031 04/01/2032 04/01/2033 04/01/2034 04/01/2035 04/01/2036 04/01/2037 04/01/2038 04/01/2039 04/01/2040 04/01/2041 04/01/2042 04/01/2043 04/01/2044 04/01/2045 04/01/2046 04/01/2047 04/01/2048 04/01/2049 04/01/2050 04/01/2051 04/01/2052 04/01/2053 04/01/2054 04/01/2055 04/01/2056 04/01/2057 04/01/2058 04/01/2059 04/01/2060 04/01/2061 04/01/2062 04/01/2063 04/01/2064 04/01/2065 04/01/2066 04/01/2067 04/01/2068 04/01/2069 04/01/2070 04/01/2071 04/01/2072 04/01/2073 04/01/2074 04/01/2075 04/01/2076 04/01/2077 04/01/2078 04/01/2079 04/01/2080 04/01/2081 04/01/2082 04/01/2083 04/01/2084 04/01/2085 04/01/2086 04/01/2087 04/01/2088 04/01/2089 04/01/2090 04/01/2091 04/01/2092 04/01/2093 04/01/2094 04/01/2095 04/01/2096 04/01/2097 04/01/2098 04/01/2099 04/01/2100

04/01/2016 04/01/2017 04/01/2018 04/01/2019 04/01/2020 04/01/2021 04/01/2022 04/01/2023 04/01/2024 04/01/2025 04/01/2026 04/01/2027 04/01/2028 04/01/2029 04/01/2030 04/01/2031 04/01/2032 04/01/2033 04/01/2034 04/01/2035 04/01/2036 04/01/2037 04/01/2038 04/01/2039 04/01/2040 04/01/2041 04/01/2042 04/01/2043 04/01/2044 04/01/2045 04/01/2046 04/01/2047 04/01/2048 04/01/2049 04/01/2050 04/01/2051 04/01/2052 04/01/2053 04/01/2054 04/01/2055 04/01/2056 04/01/2057 04/01/2058 04/01/2059 04/01/2060 04/01/2061 04/01/2062 04/01/2063 04/01/2064 04/01/2065 04/01/2066 04/01/2067 04/01/2068 04/01/2069 04/01/2070 04/01/2071 04/01/2072 04/01/2073 04/01/2074 04/01/2075 04/01/2076 04/01/2077 04/01/2078 04/01/2079 04/01/2080 04/01/2081 04/01/2082 04/01/2083 04/01/2084 04/01/2085 04/01/2086 04/01/2087 04/01/2088 04/01/2089 04/01/2090 04/01/2091 04/01/2092 04/01/2093 04/01/2094 04/01/2095 04/01/2096 04/01/2097 04/01/2098 04/01/2099 04/01/2100

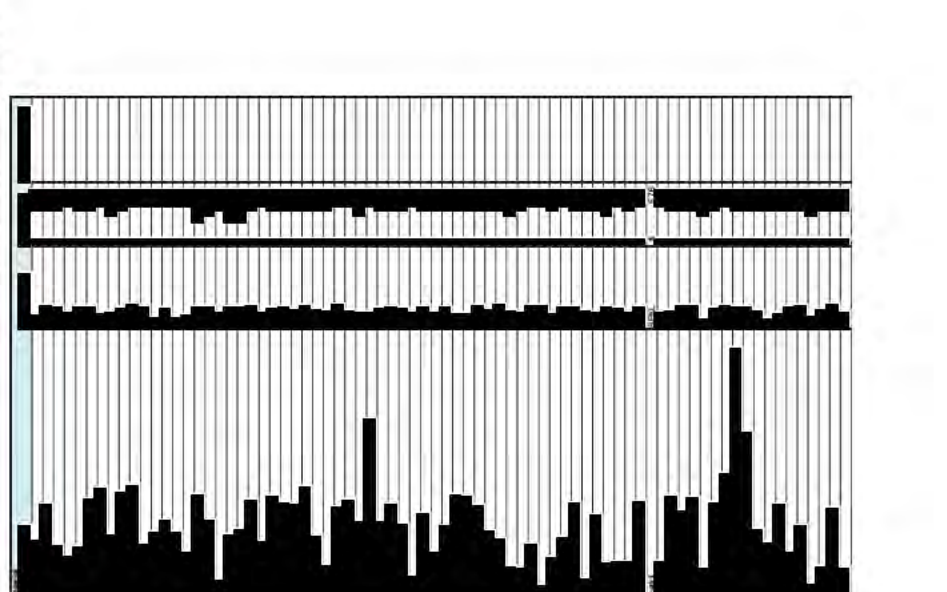
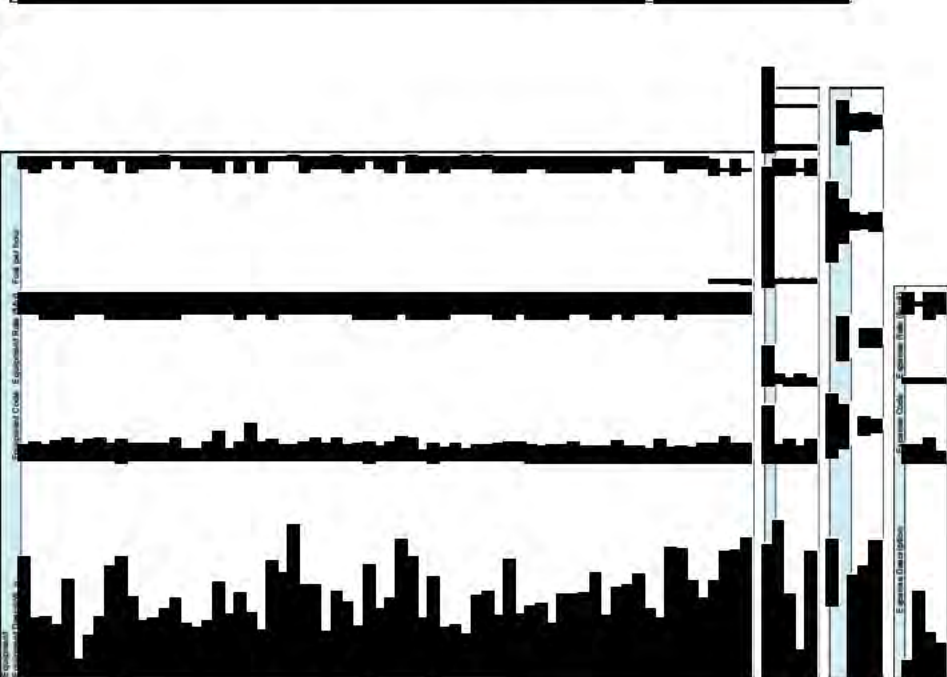


**RATES FOR APCCO - VIRGINIA CONTROL**

APCCO  
ROW Vegetation Management Rate Sheet  
Effective Date: 5/1/2017

| Rate Code | Rate Description      | Rate |
|-----------|-----------------------|------|
| 00000000  | 00000000 - 12/1/2016  | 0.00 |
| 00000000  | 00000000 - 01/01/2017 | 0.00 |
| 00000000  | 00000000 - 02/01/2017 | 0.00 |
| 00000000  | 00000000 - 03/01/2017 | 0.00 |
| 00000000  | 00000000 - 04/01/2017 | 0.00 |
| 00000000  | 00000000 - 05/01/2017 | 0.00 |
| 00000000  | 00000000 - 06/01/2017 | 0.00 |
| 00000000  | 00000000 - 07/01/2017 | 0.00 |
| 00000000  | 00000000 - 08/01/2017 | 0.00 |
| 00000000  | 00000000 - 09/01/2017 | 0.00 |
| 00000000  | 00000000 - 10/01/2017 | 0.00 |
| 00000000  | 00000000 - 11/01/2017 | 0.00 |
| 00000000  | 00000000 - 12/01/2017 | 0.00 |

| Rate Code | Rate Description      | Rate |
|-----------|-----------------------|------|
| 00000000  | 00000000 - 12/1/2016  | 0.00 |
| 00000000  | 00000000 - 01/01/2017 | 0.00 |
| 00000000  | 00000000 - 02/01/2017 | 0.00 |
| 00000000  | 00000000 - 03/01/2017 | 0.00 |
| 00000000  | 00000000 - 04/01/2017 | 0.00 |
| 00000000  | 00000000 - 05/01/2017 | 0.00 |
| 00000000  | 00000000 - 06/01/2017 | 0.00 |
| 00000000  | 00000000 - 07/01/2017 | 0.00 |
| 00000000  | 00000000 - 08/01/2017 | 0.00 |
| 00000000  | 00000000 - 09/01/2017 | 0.00 |
| 00000000  | 00000000 - 10/01/2017 | 0.00 |
| 00000000  | 00000000 - 11/01/2017 | 0.00 |
| 00000000  | 00000000 - 12/01/2017 | 0.00 |



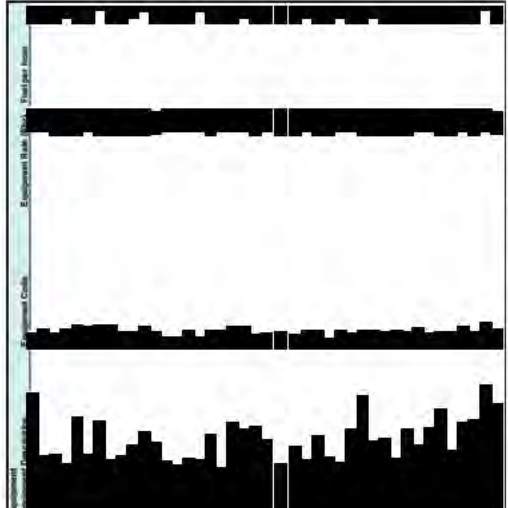


RATES FOR AEP ON TRANSCO

| Category                                   | Rate |
|--|------|
| Labor Increase (in Line of AEP)            | 0.00 |
| ROW Vegetation Management (in Line of AEP) | 0.00 |
| Electricity (in Line of AEP)               | 0.00 |
| Other (in Line of AEP)                     | 0.00 |

| Category     | Rate |
|--------------|------|
| Labor Code   | 0.00 |
| Labor Fee    | 0.00 |
| Billing Rate | 0.00 |

| Category     | Rate |
|--------------|------|
| Labor Code   | 0.00 |
| Labor Fee    | 0.00 |
| Billing Rate | 0.00 |



| Category     | Rate |
|--------------|------|
| Labor Code   | 0.00 |
| Labor Fee    | 0.00 |
| Billing Rate | 0.00 |

| Category     | Rate |
|--------------|------|
| Labor Code   | 0.00 |
| Labor Fee    | 0.00 |
| Billing Rate | 0.00 |





**RATES FOR WPCO**

|                                 |                         |
|---------------------------------|-------------------------|
| Labor Increase (in Lieu of KPI) |                         |
| 2016 June ECI                   |                         |
| Unit Cost Work Manhour Rate     | \$                      |
| Base Fuel Rate                  |                         |
| Effective Date: 01/01/2017      |                         |
| Labor Description               | Labor Rate              |
| Labor Code                      | Labor Rate              |
|                                 | 06/05/2016 - 12/31/2016 |
|                                 | 01/01/2017 - 06/04/2017 |
|                                 | Billing Rate            |
|                                 | ST                      |
|                                 | RH                      |
|                                 | DT                      |

|                   |                         |
|-------------------|-------------------------|
| Labor Description | Labor Rate              |
| Labor Code        | Labor Rate              |
|                   | 06/05/2016 - 12/31/2016 |
|                   | 01/01/2017 - 06/04/2017 |
|                   | Billing Rate            |
|                   | ST                      |
|                   | RH                      |
|                   | DT                      |

|                               |                        |                        |                                |
|-------------------------------|------------------------|------------------------|--------------------------------|
| Equipment Description         | Equipment Code         | Equipment Rate (\$/hr) | Fuel per hour                  |
| Supplemental Task Description | Supplemental Task Code | Unit Type              | Outside Service Rate (\$/unit) |
| Expense Description           | Expense Code           | Expense Rate (\$/unit) |                                |

|                      |               |               |                   |
|----------------------|---------------|---------------|-------------------|
| Material Description | Material Code | Material Rate | Material Markup % |
|----------------------|---------------|---------------|-------------------|



## **AEP Transmission Forestry**

### **Rate Clarifications for Right-of-Way Maintenance Contracts**

**October 1, 2016**

**Per Diem**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site as defined by the table:

| Operating Company | Per Diem Starting Location | Distance (miles) |
|-------------------|----------------------------|------------------|
| AEP Ohio          | Legal home address         | 50               |
| APCO              | Legal home address         | 80               |
| KGPCO             | Legal home address         | 80               |
| KYPCO             | Normal reporting site      | 80               |
| WPCO              | Legal home address         | 80               |

2. Per Diem will not be paid if lodging and meals are provided by Owner.
3. Contractor shall submit documentation with their invoice specifying the distance between home address of record or reporting site and work site for each individual claiming Per Diem on each submitted invoice. Contractor will submit to OPCO the employees due per diem using the template within this document.
4. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
5. The Per Diem rate is defined in the applicable contract rate sheets and includes lodging and meals.
6. Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.
7. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly timesheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

**Definitions**

**Per Diem** – Daily allowance for expenses that include housing and meals to cover expenses when traveling for work and agreed upon by the Contractor and the Owner's Designated Representative.

**Work Site** - The day's starting location for the performance of services ex, work site should be associated with vegetation management activities on the Company's rights-of-way.

**Owner's Designated Representative** – Owner Designated Representative for daily forestry operations will be the OPCO/transmission region forester or OPCO/transmission forestry supervisor.

**Reporting Site** – A Contractor designated location acceptable to the Owner's Designated Representative where the Contractor's trucks/equipment is parked and the employees go to get the trucks/equipment to travel to the work site. (In some regions called a show up location.)

**Emergency Assistance** – Owner's Designated Representative will have the authority to hold Contractor crews in an area during storm or other situations deemed an emergency when the mileage is less than in Bullet #1. If held in the an area the Contractor employee affected will be eligible for Per Diem if such charges would normally be incurred. All parties should understand this action is auditable and the time sheet and invoice must have the words Emergency Assistance and the forester's name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to Owner.

**Work Flow Driven(LEAN)** – Owner Designated Representative will have the authority to instruct crews to stay overnight when the mileage is less than in Bullet #1. There are times when it is cost effective to have the crews stay overnight instead of returning to the home address of record or reporting site. For example, crew is working 45 miles from the reporting site and the next work location is in the same direction but is 85 miles from the reporting site. In this situation the forester will have the authority to authorize an overnight stay that would require a Per Diem payment since staying overnight is more productive than to return to the reporting site or home address of record. All parties should understand this action is auditable for work efficiencies and productivity and the time sheet and invoice must have the words Work Flow Driven(LEAN) and the foresters name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to owner.

**Outsource or Off System** – Contractor employees that do not normally or exclusively work on the Owner's property and whose home address of record is 80 miles or more from the reporting site and is acceptable to Owner's Designated Representative.

**Home Address** – The legal address of record for tax purposes.

### **Equipment**

1. Contractor agrees to notify Owner when any equipment is not operable. They jointly will determine if work can continue in an efficient manner.
2. If no suitable work is available, the crew will be idled until the equipment is operable.
3. If for any reason, Contractor fails to notify Owner of inoperable equipment, it shall be assumed the crew was not working for at least eight hours prior to Owner's becoming aware of the problem. Invoices will be adjusted accordingly.

**Materials**

1. Materials and rental equipment furnished by the Contractor and authorized by the Owner will be invoiced at cost plus five percent(5%).
2. Contractor must obtain three bids for materials and provide copies of these bids to the Owner.
  - a. While the Contractor may purchase from any material vendor, AEP’s material pricing shall be based on the lowest pricesubmitted.

**Pay During Training**

Unless otherwise agreed to by Owner in writing, no billing relating to attendance at training or certification will be paid.

**Overtime Calculations and examples**

1. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week at Owner’s request.
2. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner’s request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner andContractor.
3. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday, when approved by Owner in advance.
4. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in items 1 and 2 above. The 40 hours pay shall include any holiday compensation paid by Contractor to the employee.
5. Calculation examples are provided below.
  - Straight Time Rate = Taken fromtable
  - Overtime Rate = Straight Time Rate x 1.5
  - Sunday/Holiday Rate = Straight Time Rate x2
  - Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)
  - Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)
  - Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)
  - Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)
  - Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime storm markup)

**Sample Calculations:**

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |



Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) =$

$\$30.72$  Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) =$

$\$33.40$  Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) =$

$\$40.94$  Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) =$

$\$44.52$

**Major Storm Events**

When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.

APCO/KGPCO/WPCO

|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |



|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

**Per Diem Eligibility Number:**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from that individual's legal home address.

2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.

3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

***Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.***

KYPCO

|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |



|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

|   |
|---|
| <b>Per Diem Eligibility Number:</b>   |
| 1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from the individual's normal reporting site.   |
| 2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.   |
| 3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS. |

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

***Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.***

AEP Ohio



|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |

|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

**Per Diem Eligibility Number:**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 50 miles or greater (one way) from that individual's legal home address.

2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.

3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

**Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.**

| Labor                                      |            | August 1, 2011   |
|--|------------|--|
| Labor Description                          | Labor Code | Comments   |
| Equipment Operator                         | EO         | An equipment operator shall be able to operate and perform minor maintenance on a ROW brush mower or bulldozer   |
| General Foreman A/<br>General Foreperson A | GFA        | The primary contact with AEP Forestry field representatives Has worked a minimum of 12 months as an Assistant General Foreperson and should be ISA certified Individuals are responsible for all aspects of the contractor's local field operation including and not limited to employee safety, equipment maintenance, work planning effect (if applicable), and emergency response   |
| Foreman A/Foreperson A                     | FA         | Meet all the qualifications of a Foreperson B Has worked a minimum of 12 months as a Foreperson B and should meet all state required herbicide qualifications Is able to competently work and lead others with no direct supervision   |
| Foreman B/Foreperson B                     | FB         | Meet all the qualifications of a Trimmer A Individuals have completed all line clearance foreperson certification/ training programs as required Must be able to work and lead others with limited supervision Has worked a minimum of 18 months in the line clearance industry Must be able to effectively communicate with AEP representatives and landowners Must be able to prepare required record documents, read and follow instructions on maps and notification records Must possess a CDL and pesticide certification as required  |
| Work Planner A                             | WPA        | Meet all qualifications of Work Planner B and be ISA certified Two years experience as a Work Planner II or three years related utility experience Consistent work planning accuracy greater than or equal to 95% Demonstrates initiative and pro-actively looks for ways to do work cost effectively Demonstrated abilities in teamwork, leadership and problem solving Willing to travel and stay away from home overnight   |
| Work Planner B                             | WPB        | Meet all qualifications of Work Planner C and working towards ISA certification Six months satisfactory performance as a Work Planner C or related utility experience Thorough knowledge of species and growth characteristics of trees located in assigned work area Good understanding of electrical facilities and hardware and associated line/circuit maps Understanding of electric utility vegetation management and ability to communicate such to property owners Work effectively with people (utility, contractors, customers, etc ) Demonstrated ability to work safely and efficiently with minimal supervision and have the ability to travel and stay overnight |
| Work Planner C                             | WPC        | Two-year Degree in Forestry, Arboriculture, etc , or related utility experience is desirable Good verbal and written communications skills Positive attitude/neat professional appearance Able to work outside in a safe, productive manner in all weather conditions Valid drivers license  |
| General Foreman B/<br>General Foreperson B | GFB        | Individuals shall be able to communicate effectively with utility representatives, the public and their direct reports Determine the most effective manner within established guidelines of how to treat vegetation conditions and coordinate and instruct crew activities to safely and effectively complete an assigned task Must possess a pesticide license and where required strive to become a certified arborist   |
| Trimmer A                                  | TA         | Meet all qualifications of Trimmer B Individuals have completed all climbing trimmer and bucket (where required) certifications Individual has worked a minimum of 12 months in the line clearance industry Is able to perform all aspects of tree trimming and tree removal including and not limited to rigging ropes, and pulling overhang, and any other assigned duties in a safe, consistent, competent manner Individuals should be capable of filling in for a crew foreperson on a limited basis and have started foreperson training as required by the employer   |
| Trimmer B                                  | TB         | Meet all qualifications of Trimmer C Individual have completed climbing trimmer training Individual has worked a minimum of 6 months in the line clearance industry  |
| Trimmer C                                  | TC         | Entry level or trainee position that requires the individual passes screening criteria as established by employer A Trimmer C shall be able under direction to safely perform a variety of job duties including and not limited to chain saw maintenance, operate a brush chipper, and apply herbicides, clear and cut trees and brush They shall begin climbing trimmer training Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification   |

## Unit Price Model

April 30, 2012

Services may be paid under the following Unit Price model.

### 1. Unit Price Model Overview

Unit Price is a model where a Unit Price hourly rate is paid to Contractor for all work units completed in an assigned Circuit. The Unit Price hourly rate includes all costs, including but not limited to, wages, supervision, overheads, profit, equipment and materials required to complete the assigned Work. While the Unit Price hourly rate includes the labor required to apply herbicides, it does not include the cost of the herbicides. The Unit Price hourly rate is multiplied by the assigned work hour per unit, a rate that is assigned for each specific work unit (tree trim, tree removal, brush cut, etc.). This is a rate that has been determined to complete a unit of Work on the assigned Circuit, as agreed by the Owner and Contractor. All Unit Price Work issued to Contractor shall be completed by the agreed upon completion date.

### 2. Unit Price Calculation

#### a. Man Hours per Unit Calculation

Unit Price uses historical average times, or other method agreed to by Owner and Contractor, required to perform a specific type of Work (tree trim, tree removal, brush cutting, brush spraying) ("Work Unit") and includes all time necessary to complete that Work, including but not limited to travel, actual job site time, debris disposal, landowner contacts, immediate crew supervision and appropriate non-productive time (such as time lost to inclement weather and minor on-the-job equipment breakdown).

- I. Owner shall explain the method of calculation and the information used in a Circuit to Contractor's supervision and management prior to authorizing Work.
- II. The average times used to calculate hours per unit can be collected by distribution circuit, portions of a given circuit (sub-circuit), or other defined geographic area within the Contract region (e.g. "Circuit" or "Area.")
- III. The historical average times are developed by accumulating data for vegetation management Work performed on the Circuit during the last three calendar years or other time period as agreed by Owner and Contractor. Each time a Circuit is scheduled for maintenance, a new three-year average is calculated by replacing the earliest year's data with the most recent or next successive year's data. This rolling three year average is given in hours per unit.
- IV. If there are inconsistencies in the three-year data based on disparity in the actual work within a specific Contract region, the Owner and Contractor may agree to use another method to generate the hours per unit. This method shall be documented in the Work Request authorizing the Work.

#### b. Unit Price Calculation

Contractor has submitted a Unit Price hourly rate that shall be used for all units of Work performed, regardless of the Work Unit type. The cost for a given unit of Work (e.g. for a given Circuit) is established by multiplying the Contractor's Unit Price hourly rate for

that Work Unit by its hours per unit. If the Unit Price hourly rate is \$20.00 and the hours per unit is 1.25 hours, Contractor earns 1.25 hours x \$20.00 – \$25.00 for each unit of that Work Unit.

### **3. Job Assignment**

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned; prepare a Unit Price Sheet (sample attached); include any exceptions to the hours per unit; and shall schedule a field review with the Contractor to discuss the Work assignment, including how the hours per unit were developed. An exception to the hours per unit might be a tree removal where the location and size of the tree and its proximity to structures cause a substantial increase in the hours per unit required for the removal. These exceptions must be agreed to by both Parties and are not to include those deviations that are normally encountered in performing a Work Unit.

At the field review, Owner and Contractor shall review all the Work, agree to the exceptions to the hours per unit, agree to the Unit Price Sheet and determine a start date for the Work. A Work Request (“WR”), similar to the sample attached, shall be signed by both Parties and constitutes the written authority for Contractor to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Unit Price Sheet, the map, a list of exceptions to the hours per unit, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date, but subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor’s work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. The work planners, per current practice, shall be paid on a time and material basis and will not be included within the stated Unit Price or Unit Price calculation. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor’s employees are unable to resolve their concerns quickly, Contractor’s employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

# Lump Sum Price Model

## April 30, 2012

Services may be paid under the following Lump Sum Price model.

### 1. Authorizing Work

Owner and Contractor may agree to perform work based on a Lump Sum price for the specified Circuit.

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned, complete a Lump Sum Price Sheet; and schedule a field review with the Contractor to discuss the Work assignment.

At the field review, Owner and Contractor shall review all the Work, agree to the Lump Sum Price and determine a start and end date for the Work. A Work Request ("WR") for Lump Sum Price Work, similar to the sample attached, shall be signed by both Parties and constitutes the Contractor's written authority to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Lump Sum Price, the map, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date but is subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor's work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor's employees are unable to resolve their concerns quickly, Contractor's employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.



# WORK REQUEST For Lump Sum Work

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Lump Sum Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

Work shall be performed in accordance with the attached Request For Quote (“RFQ”) attached hereto.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

Unless otherwise stated in the Work Request, Contractor shall be paid the total cost for the Circuit upon completion of all Work and subsequent acceptance by Owner. Contractor shall perform all Work for the lump sum amount of \$ \_\_\_\_\_.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print  
Name: \_\_\_\_\_

Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

### Work Request For Unit Price/Time and Materials Work

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Unit Price/Time and Materials Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

If no map is attached, identify the circuit, sub-circuit, or the specific geographic area identifying the Work to be performed.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

**Unit Price** --- Contractor’s weekly billing shall be calculated using the number of units completed during the week being billed multiplied by the cost per unit from the Rates as found in the Contract.

**Time and Materials** – Contractor’s weekly billing shall be calculated using the following formula: (labor classification X number of hours worked during billable period) + (equipment rate X number of hours used during billable period). The labor classifications and equipment rates used will be in accordance to the Rates as found in Exhibit C of the Contract

Unless otherwise stated in this Work Request or the attached map, pricing will be per the price model as selected above and in accordance with the Rates as found in Exhibit C of the Contract.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**PRICING CHANGE ORDER**

Contract #: \_\_\_\_\_

Request Date: \_\_\_\_\_

Owner: \_\_\_\_\_

Contractor: \_\_\_\_\_

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

Specific reason(s) for Change Order:  Rate Addition(s)  Rate Deletion(s)  
 Rate Description Change(s)  Rate Code Change(s)  
 Other (please describe): \_\_\_\_\_

| <b>Labor</b> |                   |            |            |      |      |      |
|--------------|-------------------|------------|------------|------|------|------|
| Reason       | Labor Description | Labor Code | Labor Rate | ST   | RH   | DT   |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
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| <b>Storm</b> |                   | <b>STORM LOADED RATES</b> |      |      |      |
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**PRICING CHANGE ORDER**

Contract # : \_\_\_\_\_  
Owner: \_\_\_\_\_

Request Date: \_\_\_\_\_  
Contractor: \_\_\_\_\_

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

- Specific reason(s) for Change Order:
- Rate Addition(s)                       Rate Deletion(s)  
 Rate Description Change(s)       Rate Code Change(s)  
 Other (please describe): \_\_\_\_\_

| <b>Labor</b> |                   |            |            |      |      |      |
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| <b>Storm</b> |                   | <b>STORM LOADED RATES</b> |      |      |      |
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**Pricing Change Order**

**Contract No: 0**

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Owner's Authorized Reviewer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Owner's Authorized Reviewer PrintName: \_\_\_\_\_

IN WITNESS WHEREOF, the Parties hereto have caused this Change Order to be signed by their respective officers thereunto duly authorized on the dates set forth below to be effective as of the Effective Date.

**Owner**

\_\_\_\_\_

Signature

\_\_\_\_\_

Print Name

\_\_\_\_\_

Title

\_\_\_\_\_

Date

**Contractor**

\_\_\_\_\_

Signature

\_\_\_\_\_

Print Name

\_\_\_\_\_

Title

\_\_\_\_\_

Date

File:


# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010-04**

Effective Date: October 1, 2016


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AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

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|---|------------------------|--|--------|--------------|
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## Revision History

| Rev. | Description of Change(s)  | By           | Date      | Approved                    |
|------|---|--------------|-----------|-----------------------------|
| 0    | Original Issue  |              |           |                             |
| 1    | Update  |              | 5/14/2009 |                             |
| 2    | Update; formatting changes; addition of company specific guidelines; addition of referenced documents table; addition of end notes to link to other documents; review of document performed by Legal; | Kevin Patton | 9/10/2014 | Walter Sherry<br>12/14/2016 |
| 3    | Addition of Transmission Forestry construction clearing guidelines  | Kevin Patton | 5/1/2016  | Walter Sherry<br>5/4/2016   |
| 4    | Addition of reporting site location to the guidelines from language that was previously in the rate clarification section of the contract.  | Kevin Patton | 9/21/2016 | Walter Sherry<br>9/23/2016  |

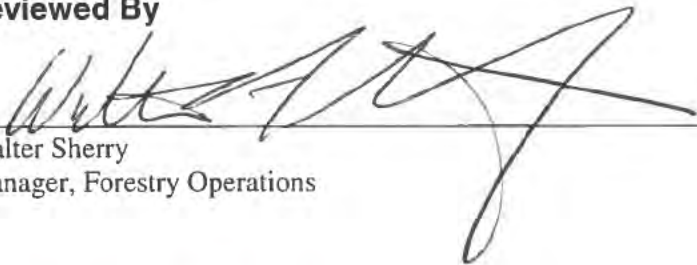
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## Revision Cycle

This document will be reviewed every three to five years depending on the average contract length.

## Signatures

### Reviewed By


  
 \_\_\_\_\_  
 Date 27 Sep 16

Walter Sherry  
Manager, Forestry Operations

Date

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- James Cruser, Supervisor, Transmission Forestry
- Grant Ehlen, Supervisor, AEP Texas Distribution Forestry
- Billy D. Roll, Supervisor, Kentucky Power Distribution Forestry
- Richard Karber, Supervisor, Transmission Forestry
- Marc Labrie, Supervisor, I&M Distribution Forestry
- Rick Mowbray, Supervisor, Transmission Forestry
- Phil Ross, Supervisor, APCO Distribution Forestry
- Danny Salter, Supervisor, SWEPCO Distribution Forestry
- Richard Simpson, Supervisor AEP Ohio Distribution Forestry
- Steve Matthews, Supervisor, PSO Distribution Forestry
- Kevin Patton, Coordinator, Forestry Operations
- Orlando De La Garza, Forester, Transmission Forestry (Translator)

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## I. Purpose

The purpose of these American Electric Power ("AEP") Forestry Vegetation Management Guidelines is to document and inform AEP employees and its contractors of important criteria, practices, and procedures pertaining to initial vegetation clearing for construction projects and the management of vegetation within rights-of-way. AEP incorporates these guidelines into each vegetation management contract; a copy shall be kept in all vegetation management Contractor's vehicles. These guidelines are to be read consistently with other contract documents by and between AEP and the Contractor. Variances and/or clarifications to these guidelines may be necessary and applied to specific operating companies.

These guidelines contain references to national industry standards; government regulations; and AEP standards and practices. Upon approval of this document, any editions referenced are valid. All standards, regulations and practices are subject to revision. AEP and the Contractor are encouraged to investigate the possibility of applying the most recent editions.

## II. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation.

**Control:** 100% defoliation with no viable buds one year after application; or, on species that require a number of years to achieve control, significant signs of herbicidal activity.

**Danger Tree:** A tree on or off the right-of-way with the potential to contact electric supply lines.<sup>1</sup>

**DBH:** (Diameter at Breast Height) The diameter of a tree measured at the height of 4 ½ feet above the ground on the uphill side.

**Debris:** Vegetative and non-vegetative material such as bottles; cans; wires; paper; branches; or other residue from clearing operations.

**Directional Pruning:** The removal of limbs in a manner that provides increased conductor clearance and directs growth away from the conductors.<sup>2</sup>

**Hanger:** A cut limb left hanging in a tree or on other facilities.

**Hazard Tree:** A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electric supply lines.<sup>3</sup>

**Log:** The merchantable portion of a tree as designated by AEP.


**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Refusal:** A property owner/resident prohibiting the Contractor from managing vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits, and easements.

**Removal:** The cutting of trees/brush at or near ground line.

**Slash:** The un-merchantable portion of a tree.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

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### III. Contractor Guidelines

#### A. Safety

Protecting the safety of all people (Contractors, public, and AEP employees) is of utmost importance to AEP. Contractors shall regard safety as a priority core value; their employees will recognize and follow all laws, rules, and regulations of public and worker safety. Any safety related incidents (e.g. personal injuries, vehicle accidents, outages, flashes, near misses, customer issues, etc.) that occur on the job shall be reported to the proper AEP personnel as specified by AEP management.<sup>iv</sup>

#### B. Reporting Site

1. The Contractor should establish reporting sites as close as possible to the work.
2. All reporting site locations must be acceptable to the Owner.
3. The reporting site may be relocated if travel time is excessive from the reporting site to the work site and the amount of work exceeds two weeks.

#### C. Personnel

1. Contractors shall comply with all federal, state and local laws for permits, certifications and licensing requirements necessary to perform vegetation management in specified operating areas.<sup>v</sup>
2. No private work may be solicited or performed by the Contractor or its employees while on AEP time. Contractors shall not seek nor receive compensation from anyone except AEP for any work that is a part of AEP's Forestry Vegetation Management program. The consequences will be crew and/or Contractor disciplinary actions.

#### D. Equipment


1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chainsaws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.
4. The use of spurs/climbers/hooks should be avoided.

#### E. Overtime

Overtime is billable as designated by each operating company.

#### F. Work Procedures

1. Contractor practices shall be compliant with applicable industry standards (e.g., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>vi</sup>

|   |  |        |                          |
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2. Changes in the work schedule due to inclement weather, equipment breakdowns, or other circumstances must have prior approval by AEP Forestry personnel.
3. The Contractor will be responsible for the development of a plan to complete the assigned tasks. The plan must meet AEP approval before work begins.<sup>vii</sup>
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractors shall provide daily work locations to AEP, including changes to these locations throughout the day.
6. Prior to work in any location and before any changes in procedures or activities are made, the Contractor shall perform a job briefing in written/report form to identify all potential work site risks. At least one copy of all documents and reports, including job briefings, shall be prepared in English.<sup>viii</sup>
7. An ongoing list of refusals, scheduled outages, or areas that have not been worked, including reasons, shall be provided to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work should be inspected for clearance and quality compliance on an ongoing basis by the Contractor and AEP Forestry. When an assigned task is complete, the Contractor shall notify AEP Forestry for final inspection.
9. The Contractor shall notify AEP of any hazardous conditions found during the performance of work under this contract.


## G. Public Relations

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise.

1. When required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, the Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor shall document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the Contractor shall be on the door card.

## H. Refusals

1. The Contractor shall notify the proper AEP Forester with all pertinent information for all refusals.
2. If the Contractor is unable to resolve the refusal, the refusal shall be turned over to AEP Forestry.
3. Undocumented refusals may be worked at the Contractor's expense.

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## I. Damage Claims and Complaints

1. The Contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.<sup>ix</sup>
2. An on-site investigation with the resident/property owner shall be made as soon as possible. A documented attempt to contact the complainant shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during the investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.<sup>x</sup>
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.<sup>xi</sup> The Contractor shall provide a copy of all supporting documentation to AEP.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.<sup>xii</sup>
7. Costs to restore outages or repair AEP's facilities due to negligence may be billed to the Contractor as determined by AEP.

## IV. Performance Guidelines

### A. Removals

1. Stumps shall be cut as close to the ground as practical, but not to exceed a three inch maximum height and treated with approved herbicide, unless the situation prevents application according to label instructions; there is a documented customer refusal; or an AEP Forester directs otherwise.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect electric lines, yards, fences, houses, and other facilities.
3. Targets for removal are:
  - a. All trees with the potential of growing into the conductor.
  - b. Trees where adequate clearance cannot be obtained using proper pruning practices.
  - c. Trees that will take less than three times the amount of time to remove as they would take to prune.
  - d. Trees within five (5) feet of poles.
  - e. Mature trees where more than 50% of the crown must be removed to obtain clearance.

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- f. Young, vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
  - g. Palm species.
4. At property owner's request, any tree situated such that the location of AEP's facilities impede, or add significantly to the cost of, the safe removal of the tree and an additional burden is placed upon the property owner, AEP should take the steps necessary to mitigate the impediment or to relieve the additional burden placed upon the property owner. AEP actions may include, but not be limited to, moving or protecting its facilities, removing portions of the tree to provide the clearances required by ANSI, OSHA, or any other regulatory authority, to allow removal by "non-line clearance" qualified arborists or non-professionals. Except in case of emergency, AEP must evaluate the property owner's request and prioritize any necessary work according to its benefit to the provision of electric service to all customers. At property owner's request, debris will be left for disposal by the property owner.
  5. State and local ordinances shall be obeyed during the disposal of debris.

## B. Pruning


1. Contractor practices should be compliant with all applicable industry standards (i.e., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>xiii</sup>
2. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth below in Section V. Distribution Clearances or Section VI.C. Transmission Clearances or as designated by the operating company.
3. Reasonable care should be exercised to help prevent the spread of insects and pathogens.
4. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut, treated with herbicide, or damaged by the Contractor's activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner in writing.
5. State and local ordinances shall be obeyed during the disposal of debris.

## C. Hangers and Cleanup

1. All hangers shall be removed from the pruned tree before leaving the job site.
2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of cleanup work should be performed. Unless otherwise designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum cleanup that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the Contractor.

## D. Clearing and Re-clearing


1. AEP will provide the width of the right-of-way.

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2. All woody plants that have the potential to grow into and interfere with service reliability; restoration; patrolling; or other maintenance operations of AEP facilities should be controlled by the operating company guidelines.
3. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the proper AEP personnel.
4. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practical, but not to exceed three inches in maximum height above the ground line. Where possible, the cut shall be parallel to the slope.
5. Trees shall be felled to avoid damage to crops, fences, and other facilities. Any trees felled into crops, ditches, streams, roads, or across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP facilities or the property of third parties, or hinder access along the right-of-way.
6. Trees, brush, and slash shall be lopped as designated by AEP Forestry.
7. Hazard Trees are identified and addressed/worked at the discretion of the individual operating companies or regions. Consideration for hazard tree removal shall be made for those trees that are an immediate threat to AEP facilities. Hazard Trees may include, but are not limited to, trees that have severe lean or sweep; are dead; or have visible defect or damage.
8. Stumps of trees growing in fences may be cut at fence post height. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
9. As designated by AEP Forestry, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
10. Brush and debris from vegetation clearing shall not be left in managed agricultural areas or other maintained areas. Piled and/or windrowed materials shall not be left on or interfere with fences or other facilities of the landowner or AEP unless designated by AEP Forestry.

## E. Herbicide Application

1. All woody plants that have the potential of growing into the lines or impair access should be controlled, as designated by AEP Forestry.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made as required by all Federal, State, and local laws.
3. The Contractor shall be required to control at least 90% or a percentage as designated by operating company of the targeted vegetation. Any areas not meeting the control requirements shall be retreated at the Contractor's expense.<sup>xiv</sup>
4. AEP Forestry may make vegetation management prescriptions in consultation with Contractors.
5. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xv</sup>
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.

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- 7. Contractor shall be responsible for training of herbicide applicators.
- 8. Unless specifically prohibited by property owners or AEP Forestry, stumps shall be treated with an appropriate herbicide treatment.

## F. Tree Growth Regulator Application

- 1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator ("TGR") in accordance with label instructions.
- 2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in excessive state of decline shall not be treated unless directed by AEP Forestry.
- 3. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xvi</sup>

## G. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.


## V. Distribution Clearances

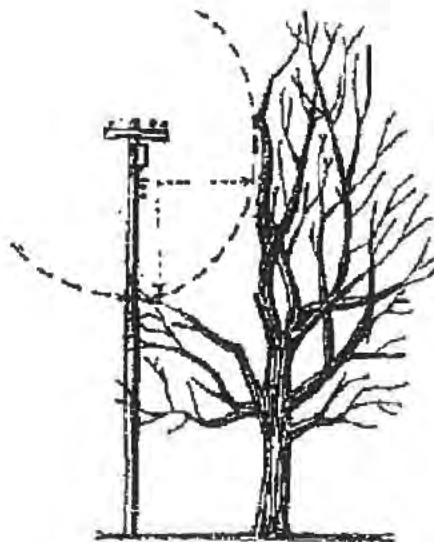
Variances to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/or easements.

Minimum clearance for distribution lines is that distance that will prevent regrowth into any AEP conductors for a minimum of three (3) years. The species, site, limb, conductor sag and sway during windy conditions; and the effect of electrical load should all be considered when determining the clearance requirement.

### A. Primary Conductors

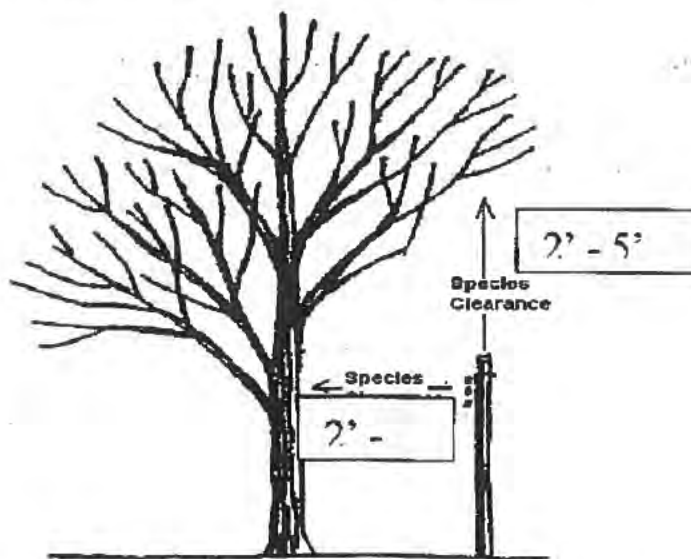
Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the proper AEP Forestry representative.

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### B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



### C. Service Drops and Street Light Conductors

Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.


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## D. Poles and Guys

1. Heavy limbs applying pressure on the span guy should be pruned or removed at the specific direction of the proper AEP Forestry representative.
2. Trees, brush, and slash should be cleared to obtain a minimum of a five (5) foot radius of clearance around the pole or guy unless otherwise specified by an AEP Forestry representative.

## E. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.

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## VI. Transmission

### A. Hazard Trees

Trees may exhibit potential threats to AEP facilities due to disease, damage, physical location, growth characteristics or environmental problems. Where these trees exist, AEP considers them high priority risks that need to be addressed and remediated.<sup>xvii</sup>

#### 1. Visual Assessment

While performing work on a circuit, contract crews shall conduct a visual assessment to identify trees with imminent<sup>1</sup> and/or probable<sup>2</sup> likelihood of failure inside and outside the right-of-way. The tree should be viewed from some distance away, if possible, to consider crown shape and surroundings.

Any tree identified to be a potential imminent threat to an AEP Transmission line shall be reported to the responsible transmission forester.

#### 2. Ground Evaluation

If a Hazard Tree is identified during the visual assessment, a 360° ground evaluation shall be required. The evaluations should include an inspection of:

- Tree crown
- Trunk
- Trunk flare
- Above-ground roots
- Site conditions around the tree in relation to targets.

The Contractor shall report risk and mitigation options to the responsible transmission forester.

### B. Tree Felling


Before beginning any tree felling operation, the Contractor shall consider relevant factors<sup>3</sup> pertaining to the tree and site and shall take appropriate actions to ensure a safe removal operation.<sup>xviii</sup>

1. When there is a danger that the tree pieces or tree being removed may fall in the wrong direction and contact utility facilities or damage other property, appropriate methods shall be used to control the direction of fall.<sup>xx</sup>
2. All limbs shall be removed to a height and width sufficient to allow the tree parts or tree to fall clear of hazards.<sup>xx</sup>
3. Notches shall be used on all trees and trunks greater than five inches DBH.<sup>xxi</sup>

<sup>1</sup> Imminent – failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. (Tree Risk Assessment Manual, pg. 100)

<sup>2</sup> Probable – failure may be expected under normal weather conditions within the specified time frame. (Tree Risk Assessment Manual, pg. 100)

<sup>3</sup> ANSI Z133-2012 Annex C.3, Manual Tree Felling Procedures contains a list of relevant factors to be considered during tree felling.

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4. Contractors shall provide evidence of training to employees related to tree felling upon request.

### C. Clearances

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| Right-of-way No Restrictions   | Right-of-way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2.</b>                   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |

<sup>4</sup> Upon completion of maintenance

**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |


## D. Transmission Dispatch Communication Procedures

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

## E. Transmission Forestry Construction Guidelines

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

<sup>5</sup>ANSI Z133-2012.

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All removals/trimming shall be done in accordance with the best recognized and approved principles of modern arboriculture and tree surgery, with balanced emphasis on current tree health and clearance.

The full width of the right-of-way, as determined by easement agreements, shall be cleared unless otherwise indicated on the Special Condition List.

Right-of-Way service will provide a contact list and will be handling damages for the construction work. Property owners who were notified of the construction work will receive a follow-up notification from the Contractor tree days before starting work on that property.

## 1. Contractor Qualifications

Contractor practices shall be in compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.

## 2. Clearing

The right-of-way shall not be cleared with a bulldozer, maintainer, or any other method that will disturb surface or sub-surface conditions unless specified in the right-of-way Special Conditions List. Reduction of disturbance of the surface or sub-surface soils reduces the risks of soil erosion and invasive species.

Contractor will take whatever measures necessary as specified in the SWPPP and elsewhere in the specification to prevent the erosion of soil from the right-of-way. The corrective measures may be in the form of grading, terracing, construction of sediment barriers, reseeding, mulching, or steps necessary to prevent erosions and must be approved by AEP.

Mowed right-of-ways shall be left with no stumps higher than three inches and no large chunks of debris left. Examples of preferred mowing equipment to be used on the right-of-ways will be equipped with, but not limited to, "FECON", "SEPP1" or equivalent type mowing heads.


## 3. Tree and Brush Removal

1. Trees and brush designated for cutting or mowing on the rights-of-way shall be cut as close to the ground as practicable, but not to exceed three inches in height above the ground line. All trees and brush cut shall be stump-treated with an approved herbicide as instructed on the label. All spraying procedures are to be fully explained to property owners if requested by landowner. If requested by landowner that no herbicides be used, their request is to be referred to Company. Certain state laws and regulations may require consent of the property owner to apply herbicides.

2. On portions of the right of way where the conductor to ground clearance is 100 feet, or less, all woody stemmed vegetation will be cut, limbed and lopped. No vegetation will be permitted to obstruct roads, lanes, trails, fences and streams. The brush shall also be cut and compacted.

Additional requirements are:

- Stump surfaces shall be cut parallel to and within three inches of the ground.
- Brush and logs shall not be placed within 25 feet of improved roads, or river and stream banks.
- Brush and logs shall not be piled in flood plains.
- Brush and logs shall not be placed in fields unless authorized by the property owner.

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- Brush and logs shall not be placed where it will obstruct ingress or egress on other rights-of-way such as roadways or trails.
  - Trees will be felled where possible to protect crops, fences and other facilities.
3. No clearing will be done where the line crosses valleys or ravines when the conductor profile indicates a height of 100 feet or greater above the ground at maximum sag; hence, impacts on streams and woody vegetation in valleys can be avoided or minimized. The exceptions to this are as follows:
- Trees that do not have at least 50' of clearance between conductors and tree under maximum sag conditions will be removed.
  - Where a conductor stringing path is specified
  - Wire set-up areas
  - Work areas, etc.
4. For trees in yards, grind stumps to six inches below grade and restore the ground to match the existing grade and vegetation in the surrounding yard.
5. Low-growing species can be left except in tower locations. All woody stem vegetation within the cleared right-of-way shall be removed on NERC-applicable lines.
6. Any required buffer zones/screens shall be selectively treated in areas designated by AEP. Only tall-growing species (i.e. those trees that will grow taller than 15 feet at maturity) will be cut or treated in these areas.


#### 4. Tree Pruning

Tree pruning will generally be limited to trees on the edge of the right-of-way or in locations designated as environmentally-sensitive; tree pruning will ensure that required clearances are achieved. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development. Manual pruning operations will utilize qualified line clearance arborists, as defined by ANSI Z133.1-2012, and seek to prune trees according to standards set by the International Society of Arboriculture, the American National Standards Institute and the Tree Care Industry Association. Trees will be pruned in accordance with the American National Standard Institute guidelines for "Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning), ANSI A300 (Part 1) – Pruning"

#### 5. Debris Disposal

Debris from construction clearing operations is left on the right-of-way to decompose and return nutrients to the soil and to reduce the possibility of soil erosion. Limbs are reduced in size to maintain a low profile, and both the main stem and brush left on the right-of-way.

1. All woody vegetation that falls into roadways, waterways, fences, lawns, or pastures shall be moved to a wooded area of the right-of-way or may, at times, be chipped and/or otherwise removed.

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2. Logs may be left in tree lengths or as designated. The merchantable value of the logs will be preserved as much as possible.
3. Alternatives to the debris disposal standard are the following:
  - Cut and Compact: Brush may be reduced in height by cutting and by compacting piles with crawler-type equipment at selected locations (depressions in topography) on the right-of-way outside of the conductor path.
  - Cut and Scatter: Brush may be reduced in height by cutting or scattering on the right-of-way outside of the conductor path or roadway, but as close to the edge of the right-of-way as possible.
  - Cut and Pile: Where required by right-of-way agreement, brush shall be piled or scattered off the right-of-way.
  - Chipping/Shredding: Chipping/shredding or other viable methods may be utilized where accessible by equipment.
  - Burning: brush burning shall only be done if it is specified in the right-of-way agreement and is in accordance with applicable regulations. This method requires formal approval by the Manager of Forestry Operations.

## F. Hazard Trees


Hazard trees (outside of right-of-way) will be cut or trimmed and the logs and laps will be left as felled. When the conductor to ground clearance is over 100 feet, only those trees that do not have the required clearance will be cut. Refer to Section VI.A on page 15 for additional information.

## G. Herbicide

Application of all herbicides shall be performed as required by federal, state, and local laws. The contractor will furnish and be responsible for all pesticides, including proper disposal of their containers, and insure their use in accordance with the label instructions. All work will be done as defined in Herbicide Application on page 11.

## H. Fences and Crops

1. No fences shall be cut unless contractor is authorized to do so by AEP, if fences are cut or broken by the contractor without prior AEP authorization, the Contractor, at their expense, shall promptly repair.
2. Contractor is responsible for the right-of-way clearing needed to perform the job, however, the Contractor agrees to not do unnecessary damage to growing crops or other properties and agrees to pay the tenant and/or landowner involved for any unnecessary damage to growing crops and other properties. AEP shall be the sole judge of what constitutes "necessary" and "unnecessary" damage under the terms hereof.

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## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species   |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d'arc (Osage orange, hedge tree) |


| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |

### 1. Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

## **B. Distribution Operating Company Specific Guidelines**


- 1. AEP Ohio**
- 2. AEP Texas**
- 3. Appalachian Power**
- 4. Indiana Michigan Power**
- 5. Kentucky Power**
- 6. Public Service of Oklahoma**
- 7. Southwestern Electric Power Company**
- 8. Wheeling Power**

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## C. Referenced Documents and Specifications

| Title  | Year | Version                              | Pages |
|--|------|--------------------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2                           | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                                      | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                             |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI <sup>®</sup> Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI <sup>®</sup> A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI <sup>®</sup> A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI <sup>®</sup> A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition                       | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008                        | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition                        | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                             |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                             |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                             |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                             |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                             |       |

<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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|---|------|---------------|-------|
| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

<sup>i</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH

<sup>ii</sup> *Best Management Practices – Utility Pruning of Trees.* International Society of Arboriculture. Champaign, IL

<sup>iii</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH

<sup>iv</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>v</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vi</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>viii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>ix</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>x</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xi</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xiii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>xiv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvi</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power


<sup>xvii</sup> *Managing Hazard Trees on FAC-003 Applicable Circuits.* American Electric Power

<sup>xviii</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xix</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xx</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xxi</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

|   |  |        |               |
|---|--|--------|---------------|
|  | AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations | Rev. 4 | TVMD-010      |
|   |  |        | Page 25 of 25 |





## CONFIDENTIAL

### Contract Routing Slip

| ROUTING            | Purpose                | Initials             | Date Signed               |
|--------------------|------------------------|----------------------|---------------------------|
| Gina Crabtree      | For your review        | <sup>DS</sup><br>GC  | 12/29/2016   9:26 PM EST  |
| Sonia Pickens      | For your review        | <sup>DS</sup><br>SP  | 12/29/2016   10:23 PM EST |
| Matt Curtis        | For your review        | <sup>DS</sup><br>MC  | 12/30/2016   6:13 AM EST  |
| Kevin Patton       | For your review        | <sup>DS</sup><br>KBP | 12/30/2016   7:14 AM EST  |
| Rick Mowbray       | For your review        | <sup>DS</sup><br>RM  | 1/3/2017   7:23 AM EST    |
| Richard Karber     | For your review        | <sup>DS</sup><br>RK  | 1/5/2017   7:33 AM EST    |
| Walter Sherry      | For your review        | <sup>DS</sup><br>WAS | 1/5/2017   8:55 AM EST    |
| Thomas Kirkpatrick | Signature on amendment | <sup>DS</sup><br>TK  | 1/5/2017   9:23 AM EST    |
| Brent Asplundh     | Contractor signatory   | NR                   | NR                        |
| AEP Audit          | Copy                   | NR                   | NR                        |
| Chris Donley       | Copy                   | NR                   | NR                        |
| Terri Stiltner     | Copy                   | NR                   | NR                        |

**Date:** December 29, 2016

**Company:** APCO, KY, OH

**Contractor Name:** Asplundh Tree Expert Co.

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 025765990000X103 Amd#3

**Term:** September 5, 2012 – May 26, 2018

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** No change

**Description of Service/Work:** Updating ECI table reference, rates, fuel rate, rate clarifications, and forestry goals and procedure document, removal of KPI







## Certificate Of Completion


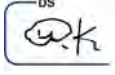

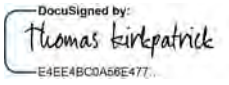

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| Subject: AEP Contract No. 025765990000X103 Amd#3; Asplundh Tree Expert Co |  |
| Source Envelope:  |  |
| Document Pages: 54  | Signatures: 2  |
| Supplemental Document Pages: 0  | Initials: 8  |
| Certificate Pages: 4  |  |
| AutoNav: Enabled  | Payments: 0  |
| Envelopeld Stamping: Enabled  | Envelope Originator:<br>Christopher Donley   |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                         | 1 Riverside Plz FL 1<br>Columbus, OH 43215-2373<br>cdonley@aep.com<br>IP Address: 167.239.221.81 |

## Record Tracking

|   |   |                    |
|---|---|--------------------|
| Status: Original<br>12/29/2016 2:32:16 PM | Holder: Christopher Donley<br>cdonley@aep.com | Location: DocuSign |
|---|---|--------------------|

## Signer Events

| Signer Events   | Signature   | Timestamp   |
|---|---|---|
| Gina Crabtree<br>gmcraabtree@aep.com<br>Contract Analyst<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:                       | <br><br>Using IP Address: 167.239.221.88                         | Sent: 12/29/2016 2:49:11 PM<br>Viewed: 12/29/2016 9:26:18 PM<br>Signed: 12/29/2016 9:26:25 PM   |
| Sonia Pickens<br>srvaughan@aep.com<br>Category Mgr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:   | <br><br>Using IP Address: 167.239.221.88                       | Sent: 12/29/2016 9:26:29 PM<br>Viewed: 12/29/2016 10:22:47 PM<br>Signed: 12/29/2016 10:23:20 PM |
| Matt Curtis<br>mpcurtis@aep.com<br>Director, T&D Services<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 11/2/2016 5:32:00 PM<br>ID: 5721ec11-5e5a-41d9-b30b-e29f9a2624bb                          | <br><br>Using IP Address: 24.210.58.237<br>Signed using mobile | Sent: 12/29/2016 10:23:23 PM<br>Viewed: 12/30/2016 6:12:33 AM<br>Signed: 12/30/2016 6:13:23 AM  |
| Kevin Patton<br>kbpattton@aep.com<br>Business Analyst Sr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/5/2014 2:08:35 PM<br>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409 | <br><br>Using IP Address: 167.239.221.88                       | Sent: 12/30/2016 6:13:25 AM<br>Viewed: 12/30/2016 7:12:57 AM<br>Signed: 12/30/2016 7:14:02 AM   |

| Signer Events  | Signature   | Timestamp  |
|--|---|--|
| Rick Mowbray<br>drmowbray@aep.com<br>Supv. Region Forestry<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 1/3/2017 7:09:52 AM<br>ID: 409d14a3-965d-493c-86af-93d710f1be45   | <br><br>Using IP Address: 167.239.221.88                         | Item No. 20<br>Attachment 1<br>Page 170 of 1469<br>REDACTED<br>Sent: 12/30/2016 7:14:49 AM<br>Viewed: 1/3/2017 7:09:52 AM<br>Signed: 1/3/2017 7:23:07 AM |
| Richard Karber<br>rkarber@aep.com<br>Transmission Forestry Supervisor<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 1/5/2017 7:32:06 AM<br>ID: cea367d4-ba69-44be-9b29-20a828456c90  | <br><br>Using IP Address: 167.239.221.81                         | Sent: 1/3/2017 7:23:09 AM<br>Resent: 1/5/2017 7:00:50 AM<br>Viewed: 1/5/2017 7:32:06 AM<br>Signed: 1/5/2017 7:33:51 AM                                   |
| Walter A. Sherry<br>washerry@aep.com<br>Forestry Operation Manager<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 7/1/2014 7:08:14 PM<br>ID: ca043d9b-eaab-40e4-bee5-8c449d93d309   | <br><br>Using IP Address: 167.239.221.80                         | Sent: 1/5/2017 7:33:54 AM<br>Viewed: 1/5/2017 8:52:13 AM<br>Signed: 1/5/2017 8:55:49 AM  |
| Thomas Kirkpatrick<br>tlkirkpatrick@aep.com<br>Vice President Customer Service, Marketing and Distribution Services<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 8/11/2014 7:22:30 AM<br>ID: 293b8fdf-68e0-46e9-b110-269f4199cb39 | <br><br>Using IP Address: 12.111.104.128<br>Signed using mobile | Sent: 1/5/2017 8:55:53 AM<br>Viewed: 1/5/2017 9:22:55 AM<br>Signed: 1/5/2017 9:23:22 AM  |
| Brent Asplundh<br>brent@asplundh.com<br>Brent D. Asplundh, EVP<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 1/9/2017 4:37:16 PM<br>ID: ec83762e-86f5-45aa-b976-f5445bb029cc   | <br><br>Using IP Address: 12.54.91.133<br>Signed using mobile  | Sent: 1/5/2017 9:23:26 AM<br>Viewed: 1/9/2017 4:37:16 PM<br>Signed: 1/9/2017 4:38:02 PM  |

|                                     |                  |                  |
|-------------------------------------|------------------|------------------|
| <b>In Person Signer Events</b>      | <b>Signature</b> | <b>Timestamp</b> |
| <b>Editor Delivery Events</b>       | <b>Status</b>    | <b>Timestamp</b> |
| <b>Agent Delivery Events</b>        | <b>Status</b>    | <b>Timestamp</b> |
| <b>Intermediary Delivery Events</b> | <b>Status</b>    | <b>Timestamp</b> |
| <b>Certified Delivery Events</b>    | <b>Status</b>    | <b>Timestamp</b> |
| <b>Carbon Copy Events</b>           | <b>Status</b>    | <b>Timestamp</b> |

| Carbon Copy Events  | Status   | Timestamp   |
|---|--|---|
| <p>AEP Audit<br/>           gbscontractassessments@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Not Offered via DocuSign<br/>             ID:</p>  | <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 0 auto;"><b>COPIED</b></div> | <p>Item No. 20<br/>           Attachment 1<br/>           Sent: 1/9/2017 4:38:06 PM<br/>           Page 171 of 1469<br/>           REDACTED</p> |
| <p>Christopher Donley<br/>           cdonley@aep.com<br/>           Contract Analyst<br/>           American Electric Power Service Corporation<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Not Offered via DocuSign<br/>             ID:</p> | <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 0 auto;"><b>COPIED</b></div> | <p>Sent: 1/9/2017 4:38:07 PM<br/>           Resent: 1/9/2017 4:38:12 PM</p>   |
| <p>Terri Stiltner<br/>           tastiltner@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Accepted: 6/18/2015 3:27:15 PM<br/>             ID: 592a4afd-f450-4104-bdeb-635cbde989d5</p>  | <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 0 auto;"><b>COPIED</b></div> | <p>Sent: 1/9/2017 4:38:08 PM<br/>           Viewed: 1/10/2017 7:15:28 AM</p>  |

| Notary Events | Timestamp |
|---------------|-----------|
|---------------|-----------|

| Envelope Summary Events | Status           | Timestamps          |
|-------------------------|------------------|---------------------|
| Envelope Sent           | Hashed/Encrypted | 1/9/2017 4:38:08 PM |
| Certified Delivered     | Security Checked | 1/9/2017 4:38:08 PM |
| Signing Complete        | Security Checked | 1/9/2017 4:38:08 PM |
| Completed               | Security Checked | 1/9/2017 4:38:08 PM |

| Payment Events | Status | Timestamps |
|----------------|--------|------------|
|----------------|--------|------------|

| Electronic Record and Signature Disclosure |
|--|
|--|

## **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

**FOURTH AMENDMENT TO CONTRACT NO. 025765990000X103**

This Fourth Amendment to Contract No. 025765990000X103 ("Fourth Amendment"), executed to be effective January 1, 2017 ("Fourth Amendment Effective Date"), is by and between **American Electric Power Service Corporation**, a New York corporation, as agent for the operating companies of the American Electric Power System ("Owner") and **Asplundh Tree Expert Co.**, a Pennsylvania corporation ("Contractor").

**WHEREAS**, Contractor and Owner entered into Contract No. 025765990000X103 with an Effective Date of September 5, 2012 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the Parties hereby agree as follows:

1. In Exhibit C, the existing Rate Sheets shall be removed in its entirety and replaced with the Contractor's Rates dated January 1, 2017 (the "Rate Sheet") attached hereto and incorporated within. These rates will be effective January 1, 2017.
2. Except as amended by this Fourth Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Fourth Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Fourth Amendment Effective Date.

**American Electric Power Service Corporation, as agent for the operating companies of the American Electric Power**

Syst DocuSigned by:  
By: Thomas Kirkpatrick  
E4EE4BC0A56E477...

Name: Thomas Kirkpatrick

Title: Vice President Customer Service, Marketing and Distribution Services

Date: 3/16/2017 | 7:04 AM EDT

**Asplundh Tree Expert Co.**

DocuSigned by:  
By: Brent D. Asplundh  
9ADEB0B20ABB4E9...

Name: Brent Asplundh

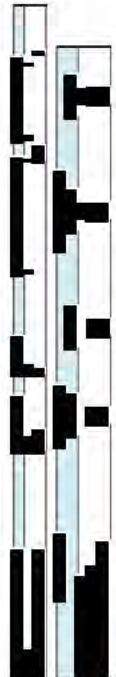
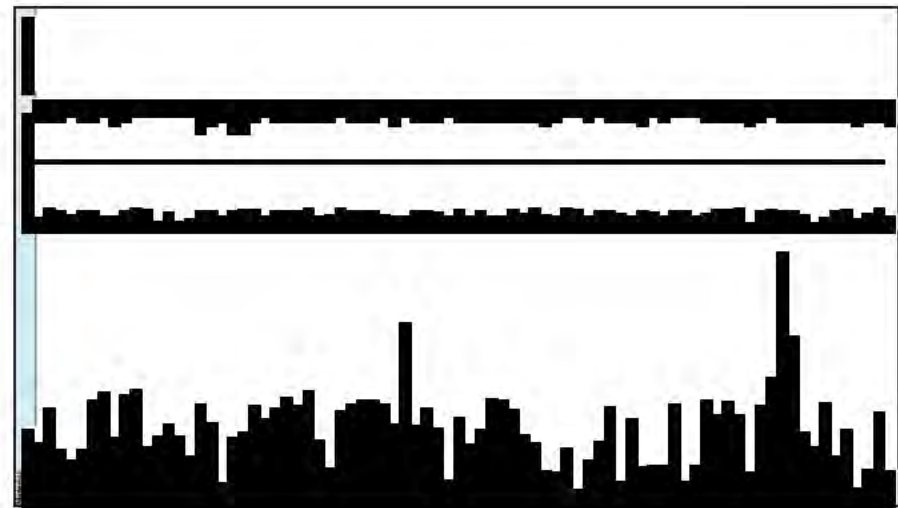
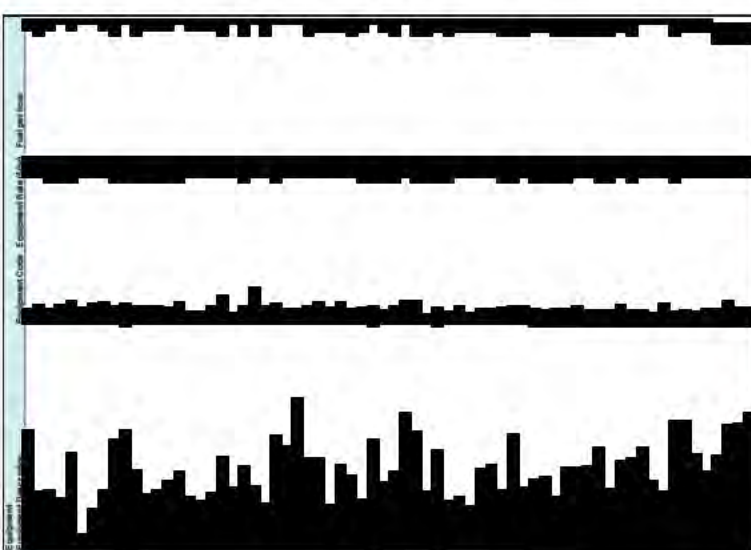
Title: Asplundh Tree Expert Co. EVP

Date: 3/21/2017 | 9:09 AM EDT

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**RATES FOR APCC - WEST VIRGINIA**

03/26/19  
Regulation Management Rate Sheet  
Effective Date: 01/01/2017



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RATES FOR KPSC TRANSCO

62282484  
FOR Vegetation Management Rate Sheet  
Effective 01/01/17

| Rate Code | Rate Name | Rate Type | Rate |
|-----------|-----------|-----------|------|
| 101       | Basic     | Fixed     | 0.00 |
| 102       | Basic     | Fixed     | 0.00 |
| 103       | Basic     | Fixed     | 0.00 |
| 104       | Basic     | Fixed     | 0.00 |
| 105       | Basic     | Fixed     | 0.00 |
| 106       | Basic     | Fixed     | 0.00 |
| 107       | Basic     | Fixed     | 0.00 |
| 108       | Basic     | Fixed     | 0.00 |
| 109       | Basic     | Fixed     | 0.00 |
| 110       | Basic     | Fixed     | 0.00 |
| 111       | Basic     | Fixed     | 0.00 |
| 112       | Basic     | Fixed     | 0.00 |
| 113       | Basic     | Fixed     | 0.00 |
| 114       | Basic     | Fixed     | 0.00 |
| 115       | Basic     | Fixed     | 0.00 |
| 116       | Basic     | Fixed     | 0.00 |
| 117       | Basic     | Fixed     | 0.00 |
| 118       | Basic     | Fixed     | 0.00 |
| 119       | Basic     | Fixed     | 0.00 |
| 120       | Basic     | Fixed     | 0.00 |

| Rate Code | Rate Name | Rate Type | Rate |
|-----------|-----------|-----------|------|
| 121       | Basic     | Fixed     | 0.00 |
| 122       | Basic     | Fixed     | 0.00 |
| 123       | Basic     | Fixed     | 0.00 |
| 124       | Basic     | Fixed     | 0.00 |
| 125       | Basic     | Fixed     | 0.00 |
| 126       | Basic     | Fixed     | 0.00 |
| 127       | Basic     | Fixed     | 0.00 |
| 128       | Basic     | Fixed     | 0.00 |
| 129       | Basic     | Fixed     | 0.00 |
| 130       | Basic     | Fixed     | 0.00 |
| 131       | Basic     | Fixed     | 0.00 |
| 132       | Basic     | Fixed     | 0.00 |
| 133       | Basic     | Fixed     | 0.00 |
| 134       | Basic     | Fixed     | 0.00 |
| 135       | Basic     | Fixed     | 0.00 |
| 136       | Basic     | Fixed     | 0.00 |
| 137       | Basic     | Fixed     | 0.00 |
| 138       | Basic     | Fixed     | 0.00 |
| 139       | Basic     | Fixed     | 0.00 |
| 140       | Basic     | Fixed     | 0.00 |

| Rate Code | Rate Name | Rate Type | Rate |
|-----------|-----------|-----------|------|
| 141       | Basic     | Fixed     | 0.00 |
| 142       | Basic     | Fixed     | 0.00 |
| 143       | Basic     | Fixed     | 0.00 |
| 144       | Basic     | Fixed     | 0.00 |
| 145       | Basic     | Fixed     | 0.00 |
| 146       | Basic     | Fixed     | 0.00 |
| 147       | Basic     | Fixed     | 0.00 |
| 148       | Basic     | Fixed     | 0.00 |
| 149       | Basic     | Fixed     | 0.00 |
| 150       | Basic     | Fixed     | 0.00 |
| 151       | Basic     | Fixed     | 0.00 |
| 152       | Basic     | Fixed     | 0.00 |
| 153       | Basic     | Fixed     | 0.00 |
| 154       | Basic     | Fixed     | 0.00 |
| 155       | Basic     | Fixed     | 0.00 |
| 156       | Basic     | Fixed     | 0.00 |
| 157       | Basic     | Fixed     | 0.00 |
| 158       | Basic     | Fixed     | 0.00 |
| 159       | Basic     | Fixed     | 0.00 |
| 160       | Basic     | Fixed     | 0.00 |

| Rate Code | Rate Name | Rate Type | Rate |
|-----------|-----------|-----------|------|
| 161       | Basic     | Fixed     | 0.00 |
| 162       | Basic     | Fixed     | 0.00 |
| 163       | Basic     | Fixed     | 0.00 |
| 164       | Basic     | Fixed     | 0.00 |
| 165       | Basic     | Fixed     | 0.00 |
| 166       | Basic     | Fixed     | 0.00 |
| 167       | Basic     | Fixed     | 0.00 |
| 168       | Basic     | Fixed     | 0.00 |
| 169       | Basic     | Fixed     | 0.00 |
| 170       | Basic     | Fixed     | 0.00 |
| 171       | Basic     | Fixed     | 0.00 |
| 172       | Basic     | Fixed     | 0.00 |
| 173       | Basic     | Fixed     | 0.00 |
| 174       | Basic     | Fixed     | 0.00 |
| 175       | Basic     | Fixed     | 0.00 |
| 176       | Basic     | Fixed     | 0.00 |
| 177       | Basic     | Fixed     | 0.00 |
| 178       | Basic     | Fixed     | 0.00 |
| 179       | Basic     | Fixed     | 0.00 |
| 180       | Basic     | Fixed     | 0.00 |

| Rate Code | Rate Name | Rate Type | Rate |
|-----------|-----------|-----------|------|
| 181       | Basic     | Fixed     | 0.00 |
| 182       | Basic     | Fixed     | 0.00 |
| 183       | Basic     | Fixed     | 0.00 |
| 184       | Basic     | Fixed     | 0.00 |
| 185       | Basic     | Fixed     | 0.00 |
| 186       | Basic     | Fixed     | 0.00 |
| 187       | Basic     | Fixed     | 0.00 |
| 188       | Basic     | Fixed     | 0.00 |
| 189       | Basic     | Fixed     | 0.00 |
| 190       | Basic     | Fixed     | 0.00 |
| 191       | Basic     | Fixed     | 0.00 |
| 192       | Basic     | Fixed     | 0.00 |
| 193       | Basic     | Fixed     | 0.00 |
| 194       | Basic     | Fixed     | 0.00 |
| 195       | Basic     | Fixed     | 0.00 |
| 196       | Basic     | Fixed     | 0.00 |
| 197       | Basic     | Fixed     | 0.00 |
| 198       | Basic     | Fixed     | 0.00 |
| 199       | Basic     | Fixed     | 0.00 |
| 200       | Basic     | Fixed     | 0.00 |





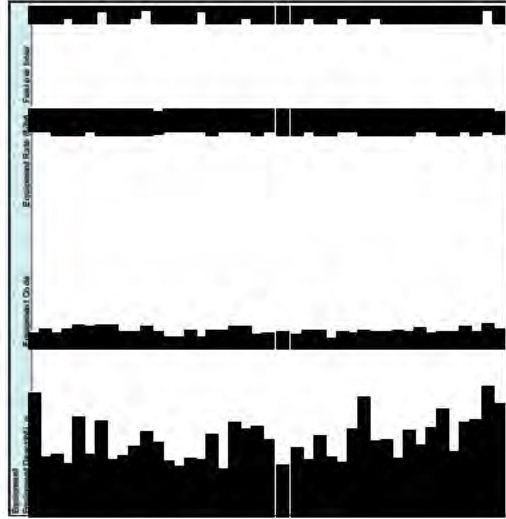
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**RATES FOR AEP, OH TRANS, NODD**

| Category | Rate   |
|----------|--------|
| OH TRANS | 0.0000 |
| AEP      | 0.0000 |
| NODD     | 0.0000 |

| Category  | Rate   |
|-----------|--------|
| LABOR     | 0.0000 |
| EQUIPMENT | 0.0000 |
| OTHER     | 0.0000 |

| Category  | Rate   |
|-----------|--------|
| LABOR     | 0.0000 |
| EQUIPMENT | 0.0000 |
| OTHER     | 0.0000 |



| Category  | Rate   |
|-----------|--------|
| LABOR     | 0.0000 |
| EQUIPMENT | 0.0000 |
| OTHER     | 0.0000 |

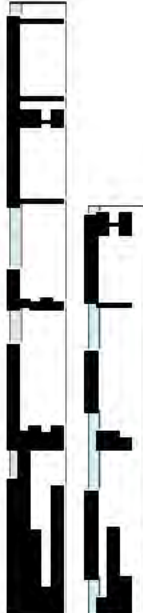
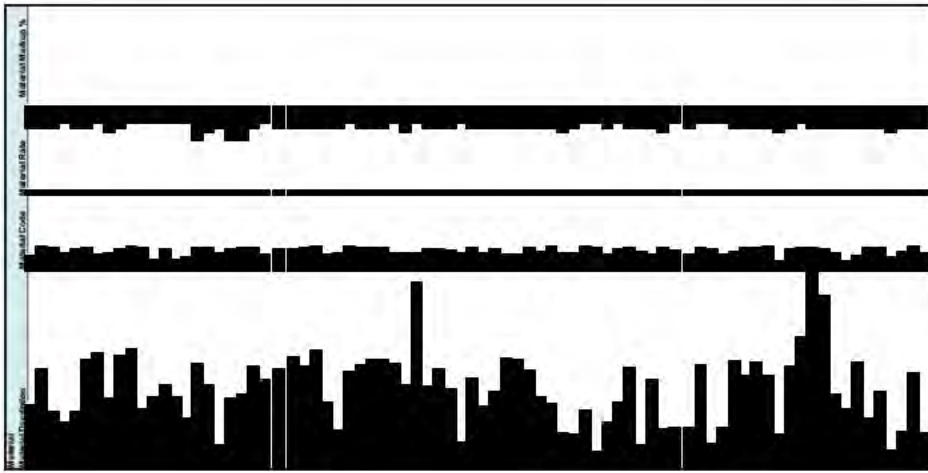
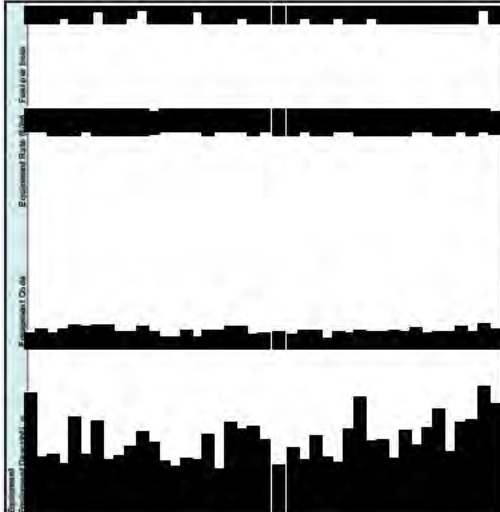
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**RATES FOR AEP-OILTRANS Central Metro**

| Category              | Rate   | Unit       |
|-----------------------|--------|------------|
| General Labor         | 0.0178 | Per Hour   |
| Skilled Labor         | 0.0221 | Per Hour   |
| Supervisor            | 0.0304 | Per Hour   |
| Management            | 0.0456 | Per Hour   |
| Professional          | 0.0549 | Per Hour   |
| Executive             | 0.0701 | Per Hour   |
| Travel                | 0.0000 | Per Mile   |
| Telephone             | 0.0000 | Per Minute |
| Office                | 0.0000 | Per Hour   |
| Printing              | 0.0000 | Per Hour   |
| Postage               | 0.0000 | Per Hour   |
| Insurance             | 0.0000 | Per Hour   |
| Utilities             | 0.0000 | Per Hour   |
| Repairs               | 0.0000 | Per Hour   |
| Tools                 | 0.0000 | Per Hour   |
| Materials             | 0.0000 | Per Hour   |
| Supplies              | 0.0000 | Per Hour   |
| Transportation        | 0.0000 | Per Hour   |
| Contractors           | 0.0000 | Per Hour   |
| Subcontractors        | 0.0000 | Per Hour   |
| Permits               | 0.0000 | Per Hour   |
| Compliance            | 0.0000 | Per Hour   |
| Training              | 0.0000 | Per Hour   |
| Recruitment           | 0.0000 | Per Hour   |
| Retention             | 0.0000 | Per Hour   |
| Turnover              | 0.0000 | Per Hour   |
| Employee Relations    | 0.0000 | Per Hour   |
| Health & Safety       | 0.0000 | Per Hour   |
| Environmental         | 0.0000 | Per Hour   |
| Quality Control       | 0.0000 | Per Hour   |
| Customer Service      | 0.0000 | Per Hour   |
| Public Relations      | 0.0000 | Per Hour   |
| Marketing             | 0.0000 | Per Hour   |
| Sales                 | 0.0000 | Per Hour   |
| Accounting            | 0.0000 | Per Hour   |
| Finance               | 0.0000 | Per Hour   |
| Legal                 | 0.0000 | Per Hour   |
| IT                    | 0.0000 | Per Hour   |
| Security              | 0.0000 | Per Hour   |
| Facilities            | 0.0000 | Per Hour   |
| Energy                | 0.0000 | Per Hour   |
| Water                 | 0.0000 | Per Hour   |
| Sewer                 | 0.0000 | Per Hour   |
| Waste                 | 0.0000 | Per Hour   |
| Recycling             | 0.0000 | Per Hour   |
| Landfill              | 0.0000 | Per Hour   |
| Incineration          | 0.0000 | Per Hour   |
| Composting            | 0.0000 | Per Hour   |
| Land Use              | 0.0000 | Per Hour   |
| Zoning                | 0.0000 | Per Hour   |
| Planning              | 0.0000 | Per Hour   |
| Development           | 0.0000 | Per Hour   |
| Construction          | 0.0000 | Per Hour   |
| Operations            | 0.0000 | Per Hour   |
| Maintenance           | 0.0000 | Per Hour   |
| Recreation            | 0.0000 | Per Hour   |
| Arts & Culture        | 0.0000 | Per Hour   |
| Historic Preservation | 0.0000 | Per Hour   |
| Archaeology           | 0.0000 | Per Hour   |
| Anthropology          | 0.0000 | Per Hour   |
| Geology               | 0.0000 | Per Hour   |
| Environmental Science | 0.0000 | Per Hour   |
| Ecology               | 0.0000 | Per Hour   |
| Botany                | 0.0000 | Per Hour   |
| Zoology               | 0.0000 | Per Hour   |
| Marine Biology        | 0.0000 | Per Hour   |
| Wildlife Management   | 0.0000 | Per Hour   |
| Conservation          | 0.0000 | Per Hour   |
| Recreation Management | 0.0000 | Per Hour   |
| Public Works          | 0.0000 | Per Hour   |
| Sanitation            | 0.0000 | Per Hour   |
| Waste Management      | 0.0000 | Per Hour   |
| Water Management      | 0.0000 | Per Hour   |
| Sewer Management      | 0.0000 | Per Hour   |
| Stormwater Management | 0.0000 | Per Hour   |
| Public Safety         | 0.0000 | Per Hour   |
| Police                | 0.0000 | Per Hour   |
| Fire                  | 0.0000 | Per Hour   |
| Emergency Management  | 0.0000 | Per Hour   |
| Disaster Preparedness | 0.0000 | Per Hour   |
| Public Health         | 0.0000 | Per Hour   |
| Sanitation            | 0.0000 | Per Hour   |
| Water                 | 0.0000 | Per Hour   |
| Sewer                 | 0.0000 | Per Hour   |
| Stormwater            | 0.0000 | Per Hour   |
| Public Works          | 0.0000 | Per Hour   |
| Sanitation            | 0.0000 | Per Hour   |
| Waste Management      | 0.0000 | Per Hour   |
| Water Management      | 0.0000 | Per Hour   |
| Sewer Management      | 0.0000 | Per Hour   |
| Stormwater Management | 0.0000 | Per Hour   |

| Category              | Rate   | Unit       |
|-----------------------|--------|------------|
| General Labor         | 0.0178 | Per Hour   |
| Skilled Labor         | 0.0221 | Per Hour   |
| Supervisor            | 0.0304 | Per Hour   |
| Management            | 0.0456 | Per Hour   |
| Professional          | 0.0549 | Per Hour   |
| Executive             | 0.0701 | Per Hour   |
| Travel                | 0.0000 | Per Mile   |
| Telephone             | 0.0000 | Per Minute |
| Office                | 0.0000 | Per Hour   |
| Printing              | 0.0000 | Per Hour   |
| Postage               | 0.0000 | Per Hour   |
| Insurance             | 0.0000 | Per Hour   |
| Utilities             | 0.0000 | Per Hour   |
| Repairs               | 0.0000 | Per Hour   |
| Tools                 | 0.0000 | Per Hour   |
| Materials             | 0.0000 | Per Hour   |
| Supplies              | 0.0000 | Per Hour   |
| Transportation        | 0.0000 | Per Hour   |
| Contractors           | 0.0000 | Per Hour   |
| Subcontractors        | 0.0000 | Per Hour   |
| Permits               | 0.0000 | Per Hour   |
| Compliance            | 0.0000 | Per Hour   |
| Training              | 0.0000 | Per Hour   |
| Recruitment           | 0.0000 | Per Hour   |
| Retention             | 0.0000 | Per Hour   |
| Turnover              | 0.0000 | Per Hour   |
| Employee Relations    | 0.0000 | Per Hour   |
| Health & Safety       | 0.0000 | Per Hour   |
| Environmental         | 0.0000 | Per Hour   |
| Quality Control       | 0.0000 | Per Hour   |
| Customer Service      | 0.0000 | Per Hour   |
| Public Relations      | 0.0000 | Per Hour   |
| Marketing             | 0.0000 | Per Hour   |
| Sales                 | 0.0000 | Per Hour   |
| Accounting            | 0.0000 | Per Hour   |
| Finance               | 0.0000 | Per Hour   |
| Legal                 | 0.0000 | Per Hour   |
| IT                    | 0.0000 | Per Hour   |
| Security              | 0.0000 | Per Hour   |
| Facilities            | 0.0000 | Per Hour   |
| Energy                | 0.0000 | Per Hour   |
| Water                 | 0.0000 | Per Hour   |
| Sewer                 | 0.0000 | Per Hour   |
| Waste                 | 0.0000 | Per Hour   |
| Recycling             | 0.0000 | Per Hour   |
| Landfill              | 0.0000 | Per Hour   |
| Incineration          | 0.0000 | Per Hour   |
| Composting            | 0.0000 | Per Hour   |
| Land Use              | 0.0000 | Per Hour   |
| Zoning                | 0.0000 | Per Hour   |
| Planning              | 0.0000 | Per Hour   |
| Development           | 0.0000 | Per Hour   |
| Construction          | 0.0000 | Per Hour   |
| Operations            | 0.0000 | Per Hour   |
| Maintenance           | 0.0000 | Per Hour   |
| Recreation            | 0.0000 | Per Hour   |
| Arts & Culture        | 0.0000 | Per Hour   |
| Historic Preservation | 0.0000 | Per Hour   |
| Archaeology           | 0.0000 | Per Hour   |
| Anthropology          | 0.0000 | Per Hour   |
| Geology               | 0.0000 | Per Hour   |
| Environmental Science | 0.0000 | Per Hour   |
| Ecology               | 0.0000 | Per Hour   |
| Botany                | 0.0000 | Per Hour   |
| Zoology               | 0.0000 | Per Hour   |
| Marine Biology        | 0.0000 | Per Hour   |
| Wildlife Management   | 0.0000 | Per Hour   |
| Conservation          | 0.0000 | Per Hour   |
| Recreation Management | 0.0000 | Per Hour   |
| Public Works          | 0.0000 | Per Hour   |
| Sanitation            | 0.0000 | Per Hour   |
| Waste Management      | 0.0000 | Per Hour   |
| Water Management      | 0.0000 | Per Hour   |
| Sewer Management      | 0.0000 | Per Hour   |
| Stormwater Management | 0.0000 | Per Hour   |

| Category              | Rate   | Unit       |
|-----------------------|--------|------------|
| General Labor         | 0.0178 | Per Hour   |
| Skilled Labor         | 0.0221 | Per Hour   |
| Supervisor            | 0.0304 | Per Hour   |
| Management            | 0.0456 | Per Hour   |
| Professional          | 0.0549 | Per Hour   |
| Executive             | 0.0701 | Per Hour   |
| Travel                | 0.0000 | Per Mile   |
| Telephone             | 0.0000 | Per Minute |
| Office                | 0.0000 | Per Hour   |
| Printing              | 0.0000 | Per Hour   |
| Postage               | 0.0000 | Per Hour   |
| Insurance             | 0.0000 | Per Hour   |
| Utilities             | 0.0000 | Per Hour   |
| Repairs               | 0.0000 | Per Hour   |
| Tools                 | 0.0000 | Per Hour   |
| Materials             | 0.0000 | Per Hour   |
| Supplies              | 0.0000 | Per Hour   |
| Transportation        | 0.0000 | Per Hour   |
| Contractors           | 0.0000 | Per Hour   |
| Subcontractors        | 0.0000 | Per Hour   |
| Permits               | 0.0000 | Per Hour   |
| Compliance            | 0.0000 | Per Hour   |
| Training              | 0.0000 | Per Hour   |
| Recruitment           | 0.0000 | Per Hour   |
| Retention             | 0.0000 | Per Hour   |
| Turnover              | 0.0000 | Per Hour   |
| Employee Relations    | 0.0000 | Per Hour   |
| Health & Safety       | 0.0000 | Per Hour   |
| Environmental         | 0.0000 | Per Hour   |
| Quality Control       | 0.0000 | Per Hour   |
| Customer Service      | 0.0000 | Per Hour   |
| Public Relations      | 0.0000 | Per Hour   |
| Marketing             | 0.0000 | Per Hour   |
| Sales                 | 0.0000 | Per Hour   |
| Accounting            | 0.0000 | Per Hour   |
| Finance               | 0.0000 | Per Hour   |
| Legal                 | 0.0000 | Per Hour   |
| IT                    | 0.0000 | Per Hour   |
| Security              | 0.0000 | Per Hour   |
| Facilities            | 0.0000 | Per Hour   |
| Energy                | 0.0000 | Per Hour   |
| Water                 | 0.0000 | Per Hour   |
| Sewer                 | 0.0000 | Per Hour   |
| Waste                 | 0.0000 | Per Hour   |
| Recycling             | 0.0000 | Per Hour   |
| Landfill              | 0.0000 | Per Hour   |
| Incineration          | 0.0000 | Per Hour   |
| Composting            | 0.0000 | Per Hour   |
| Land Use              | 0.0000 | Per Hour   |
| Zoning                | 0.0000 | Per Hour   |
| Planning              | 0.0000 | Per Hour   |
| Development           | 0.0000 | Per Hour   |
| Construction          | 0.0000 | Per Hour   |
| Operations            | 0.0000 | Per Hour   |
| Maintenance           | 0.0000 | Per Hour   |
| Recreation            | 0.0000 | Per Hour   |
| Arts & Culture        | 0.0000 | Per Hour   |
| Historic Preservation | 0.0000 | Per Hour   |
| Archaeology           | 0.0000 | Per Hour   |
| Anthropology          | 0.0000 | Per Hour   |
| Geology               | 0.0000 | Per Hour   |
| Environmental Science | 0.0000 | Per Hour   |
| Ecology               | 0.0000 | Per Hour   |
| Botany                | 0.0000 | Per Hour   |
| Zoology               | 0.0000 | Per Hour   |
| Marine Biology        | 0.0000 | Per Hour   |
| Wildlife Management   | 0.0000 | Per Hour   |
| Conservation          | 0.0000 | Per Hour   |
| Recreation Management | 0.0000 | Per Hour   |
| Public Works          | 0.0000 | Per Hour   |
| Sanitation            | 0.0000 | Per Hour   |
| Waste Management      | 0.0000 | Per Hour   |
| Water Management      | 0.0000 | Per Hour   |
| Sewer Management      | 0.0000 | Per Hour   |
| Stormwater Management | 0.0000 | Per Hour   |



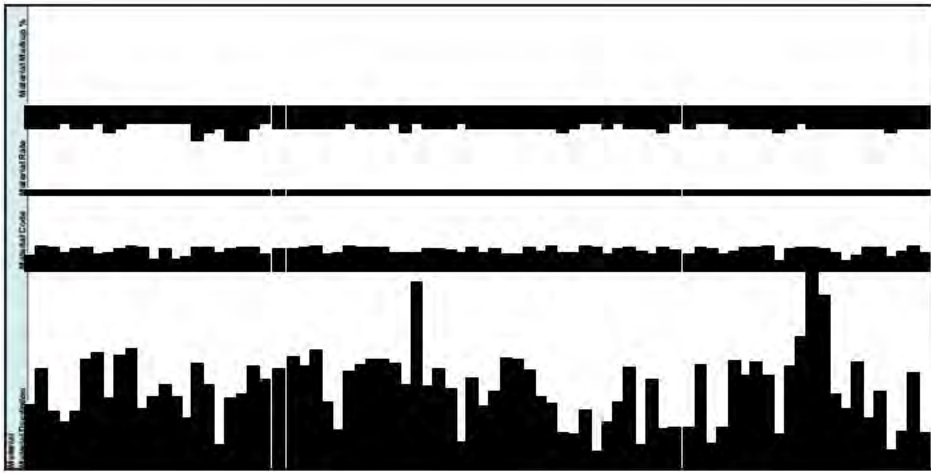
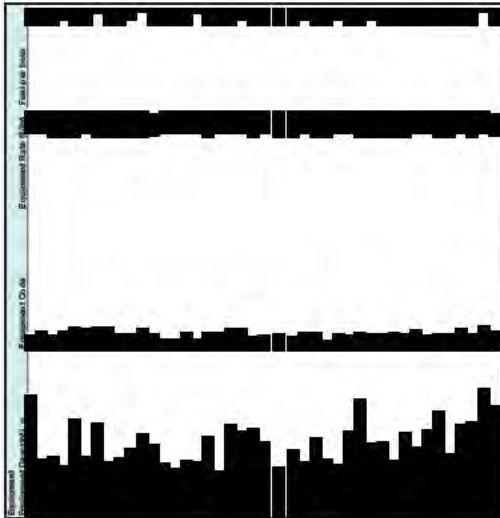
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**RATES FOR AEP-OILTRANS - ScajB**

| Category                       | Rate  |
|--------------------------------|-------|
| Oil Increase (in Line of 10%)  | 0.00% |
| Oil Increase (in Line of 20%)  | 0.00% |
| Oil Increase (in Line of 30%)  | 0.00% |
| Oil Increase (in Line of 40%)  | 0.00% |
| Oil Increase (in Line of 50%)  | 0.00% |
| Oil Increase (in Line of 60%)  | 0.00% |
| Oil Increase (in Line of 70%)  | 0.00% |
| Oil Increase (in Line of 80%)  | 0.00% |
| Oil Increase (in Line of 90%)  | 0.00% |
| Oil Increase (in Line of 100%) | 0.00% |

| Category                       | Rate  |
|--------------------------------|-------|
| Oil Increase (in Line of 10%)  | 0.00% |
| Oil Increase (in Line of 20%)  | 0.00% |
| Oil Increase (in Line of 30%)  | 0.00% |
| Oil Increase (in Line of 40%)  | 0.00% |
| Oil Increase (in Line of 50%)  | 0.00% |
| Oil Increase (in Line of 60%)  | 0.00% |
| Oil Increase (in Line of 70%)  | 0.00% |
| Oil Increase (in Line of 80%)  | 0.00% |
| Oil Increase (in Line of 90%)  | 0.00% |
| Oil Increase (in Line of 100%) | 0.00% |

| Category                       | Rate  |
|--------------------------------|-------|
| Oil Increase (in Line of 10%)  | 0.00% |
| Oil Increase (in Line of 20%)  | 0.00% |
| Oil Increase (in Line of 30%)  | 0.00% |
| Oil Increase (in Line of 40%)  | 0.00% |
| Oil Increase (in Line of 50%)  | 0.00% |
| Oil Increase (in Line of 60%)  | 0.00% |
| Oil Increase (in Line of 70%)  | 0.00% |
| Oil Increase (in Line of 80%)  | 0.00% |
| Oil Increase (in Line of 90%)  | 0.00% |
| Oil Increase (in Line of 100%) | 0.00% |



| Category                       | Rate  |
|--------------------------------|-------|
| Oil Increase (in Line of 10%)  | 0.00% |
| Oil Increase (in Line of 20%)  | 0.00% |
| Oil Increase (in Line of 30%)  | 0.00% |
| Oil Increase (in Line of 40%)  | 0.00% |
| Oil Increase (in Line of 50%)  | 0.00% |
| Oil Increase (in Line of 60%)  | 0.00% |
| Oil Increase (in Line of 70%)  | 0.00% |
| Oil Increase (in Line of 80%)  | 0.00% |
| Oil Increase (in Line of 90%)  | 0.00% |
| Oil Increase (in Line of 100%) | 0.00% |

| Category                       | Rate  |
|--------------------------------|-------|
| Oil Increase (in Line of 10%)  | 0.00% |
| Oil Increase (in Line of 20%)  | 0.00% |
| Oil Increase (in Line of 30%)  | 0.00% |
| Oil Increase (in Line of 40%)  | 0.00% |
| Oil Increase (in Line of 50%)  | 0.00% |
| Oil Increase (in Line of 60%)  | 0.00% |
| Oil Increase (in Line of 70%)  | 0.00% |
| Oil Increase (in Line of 80%)  | 0.00% |
| Oil Increase (in Line of 90%)  | 0.00% |
| Oil Increase (in Line of 100%) | 0.00% |

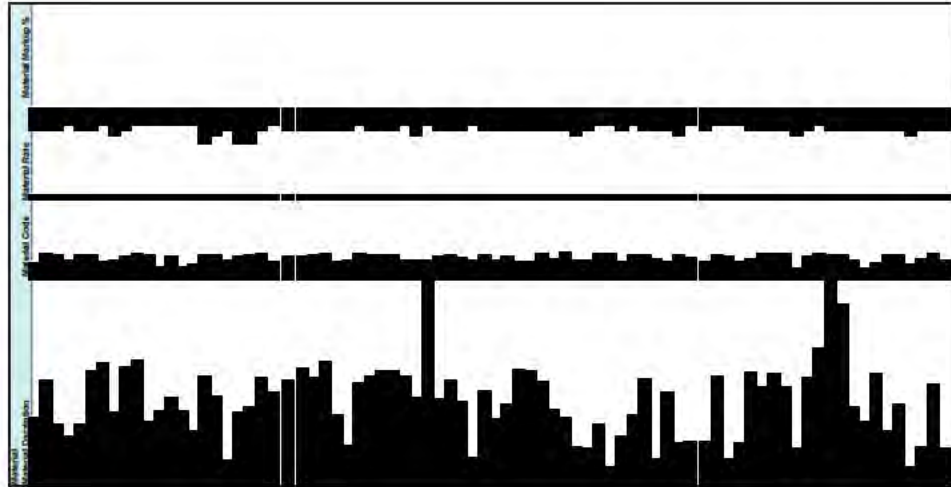
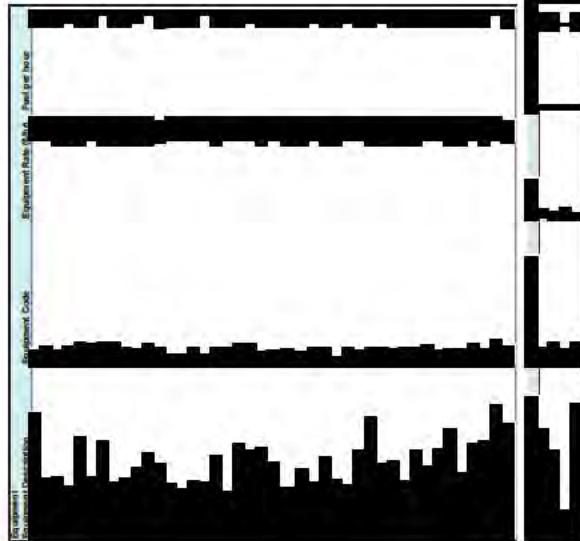
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RATES FOR AEP OH TRANSCO

| Line Item | Description                     | Unit  | Rate  |
|-----------|---------------------------------|-------|-------|
| 20000000  | Labor Increase (In Lieu of PPI) | \$/hr | 10.00 |
| 20000001  | Labor (Rate)                    | \$/hr | 10.00 |
| 20000002  | Material                        | \$/hr | 10.00 |
| 20000003  | Equipment                       | \$/hr | 10.00 |
| 20000004  | Permit                          | \$/hr | 10.00 |

| Line Item | Description  | Unit  | Rate  |
|-----------|--------------|-------|-------|
| 20000005  | Labor (Rate) | \$/hr | 10.00 |
| 20000006  | Material     | \$/hr | 10.00 |
| 20000007  | Equipment    | \$/hr | 10.00 |
| 20000008  | Permit       | \$/hr | 10.00 |

| Line Item | Description  | Unit  | Rate  |
|-----------|--------------|-------|-------|
| 20000009  | Labor (Rate) | \$/hr | 10.00 |
| 20000010  | Material     | \$/hr | 10.00 |
| 20000011  | Equipment    | \$/hr | 10.00 |
| 20000012  | Permit       | \$/hr | 10.00 |



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**RATES FOR KPSCO**

02282444  
ROW Vegetation Management Rate Sheet  
REVISED 01/19/11

BLM Area A-1  
Unit Cost Work Number Rate  
3/17/2017 3/17/2017

| Job Description | Rate | Job Description | Rate |
|-----------------|------|-----------------|------|
| B-1             |      | B-1             |      |
| B-2             |      | B-2             |      |
| B-3             |      | B-3             |      |
| B-4             |      | B-4             |      |
| B-5             |      | B-5             |      |
| B-6             |      | B-6             |      |
| B-7             |      | B-7             |      |
| B-8             |      | B-8             |      |
| B-9             |      | B-9             |      |
| B-10            |      | B-10            |      |
| B-11            |      | B-11            |      |
| B-12            |      | B-12            |      |
| B-13            |      | B-13            |      |
| B-14            |      | B-14            |      |
| B-15            |      | B-15            |      |
| B-16            |      | B-16            |      |
| B-17            |      | B-17            |      |
| B-18            |      | B-18            |      |
| B-19            |      | B-19            |      |
| B-20            |      | B-20            |      |
| B-21            |      | B-21            |      |
| B-22            |      | B-22            |      |
| B-23            |      | B-23            |      |
| B-24            |      | B-24            |      |
| B-25            |      | B-25            |      |
| B-26            |      | B-26            |      |
| B-27            |      | B-27            |      |
| B-28            |      | B-28            |      |
| B-29            |      | B-29            |      |
| B-30            |      | B-30            |      |
| B-31            |      | B-31            |      |
| B-32            |      | B-32            |      |
| B-33            |      | B-33            |      |
| B-34            |      | B-34            |      |
| B-35            |      | B-35            |      |
| B-36            |      | B-36            |      |
| B-37            |      | B-37            |      |
| B-38            |      | B-38            |      |
| B-39            |      | B-39            |      |
| B-40            |      | B-40            |      |

| Job Description | Rate | Job Description | Rate |
|-----------------|------|-----------------|------|
| B-41            |      | B-41            |      |
| B-42            |      | B-42            |      |
| B-43            |      | B-43            |      |
| B-44            |      | B-44            |      |
| B-45            |      | B-45            |      |
| B-46            |      | B-46            |      |
| B-47            |      | B-47            |      |
| B-48            |      | B-48            |      |
| B-49            |      | B-49            |      |
| B-50            |      | B-50            |      |
| B-51            |      | B-51            |      |
| B-52            |      | B-52            |      |
| B-53            |      | B-53            |      |
| B-54            |      | B-54            |      |
| B-55            |      | B-55            |      |
| B-56            |      | B-56            |      |
| B-57            |      | B-57            |      |
| B-58            |      | B-58            |      |
| B-59            |      | B-59            |      |
| B-60            |      | B-60            |      |
| B-61            |      | B-61            |      |
| B-62            |      | B-62            |      |
| B-63            |      | B-63            |      |
| B-64            |      | B-64            |      |
| B-65            |      | B-65            |      |
| B-66            |      | B-66            |      |
| B-67            |      | B-67            |      |
| B-68            |      | B-68            |      |
| B-69            |      | B-69            |      |
| B-70            |      | B-70            |      |

| Material Description | Material Rate | Material Description | Material Rate |
|----------------------|---------------|----------------------|---------------|
| C-1                  |               | C-1                  |               |
| C-2                  |               | C-2                  |               |
| C-3                  |               | C-3                  |               |
| C-4                  |               | C-4                  |               |
| C-5                  |               | C-5                  |               |
| C-6                  |               | C-6                  |               |
| C-7                  |               | C-7                  |               |
| C-8                  |               | C-8                  |               |
| C-9                  |               | C-9                  |               |
| C-10                 |               | C-10                 |               |
| C-11                 |               | C-11                 |               |
| C-12                 |               | C-12                 |               |
| C-13                 |               | C-13                 |               |
| C-14                 |               | C-14                 |               |
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| C-30                 |               | C-30                 |               |
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| C-48                 |               | C-48                 |               |
| C-49                 |               | C-49                 |               |
| C-50                 |               | C-50                 |               |

| Material Description | Material Rate | Material Description | Material Rate |
|----------------------|---------------|----------------------|---------------|
| D-1                  |               | D-1                  |               |
| D-2                  |               | D-2                  |               |
| D-3                  |               | D-3                  |               |
| D-4                  |               | D-4                  |               |
| D-5                  |               | D-5                  |               |
| D-6                  |               | D-6                  |               |
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| D-8                  |               | D-8                  |               |
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| D-10                 |               | D-10                 |               |
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| D-13                 |               | D-13                 |               |
| D-14                 |               | D-14                 |               |
| D-15                 |               | D-15                 |               |
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| D-17                 |               | D-17                 |               |
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| D-20                 |               | D-20                 |               |
| D-21                 |               | D-21                 |               |
| D-22                 |               | D-22                 |               |
| D-23                 |               | D-23                 |               |
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| D-29                 |               | D-29                 |               |
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| D-41                 |               | D-41                 |               |
| D-42                 |               | D-42                 |               |
| D-43                 |               | D-43                 |               |
| D-44                 |               | D-44                 |               |
| D-45                 |               | D-45                 |               |
| D-46                 |               | D-46                 |               |
| D-47                 |               | D-47                 |               |
| D-48                 |               | D-48                 |               |
| D-49                 |               | D-49                 |               |
| D-50                 |               | D-50                 |               |

| Material Description | Material Rate | Material Description | Material Rate |
|----------------------|---------------|----------------------|---------------|
| E-1                  |               | E-1                  |               |
| E-2                  |               | E-2                  |               |
| E-3                  |               | E-3                  |               |
| E-4                  |               | E-4                  |               |
| E-5                  |               | E-5                  |               |
| E-6                  |               | E-6                  |               |
| E-7                  |               | E-7                  |               |
| E-8                  |               | E-8                  |               |
| E-9                  |               | E-9                  |               |
| E-10                 |               | E-10                 |               |
| E-11                 |               | E-11                 |               |
| E-12                 |               | E-12                 |               |
| E-13                 |               | E-13                 |               |
| E-14                 |               | E-14                 |               |
| E-15                 |               | E-15                 |               |
| E-16                 |               | E-16                 |               |
| E-17                 |               | E-17                 |               |
| E-18                 |               | E-18                 |               |
| E-19                 |               | E-19                 |               |
| E-20                 |               | E-20                 |               |
| E-21                 |               | E-21                 |               |
| E-22                 |               | E-22                 |               |
| E-23                 |               | E-23                 |               |
| E-24                 |               | E-24                 |               |
| E-25                 |               | E-25                 |               |
| E-26                 |               | E-26                 |               |
| E-27                 |               | E-27                 |               |
| E-28                 |               | E-28                 |               |
| E-29                 |               | E-29                 |               |
| E-30                 |               | E-30                 |               |
| E-31                 |               | E-31                 |               |
| E-32                 |               | E-32                 |               |
| E-33                 |               | E-33                 |               |
| E-34                 |               | E-34                 |               |
| E-35                 |               | E-35                 |               |
| E-36                 |               | E-36                 |               |
| E-37                 |               | E-37                 |               |
| E-38                 |               | E-38                 |               |
| E-39                 |               | E-39                 |               |
| E-40                 |               | E-40                 |               |
| E-41                 |               | E-41                 |               |
| E-42                 |               | E-42                 |               |
| E-43                 |               | E-43                 |               |
| E-44                 |               | E-44                 |               |
| E-45                 |               | E-45                 |               |
| E-46                 |               | E-46                 |               |
| E-47                 |               | E-47                 |               |
| E-48                 |               | E-48                 |               |
| E-49                 |               | E-49                 |               |
| E-50                 |               | E-50                 |               |

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**RATES FOR KGPOZ**

0376890 - Correctional Management Rate Sheet  
 Effective Date: 03/01/2017

0376890 - Correctional Management Rate Sheet  
 Effective Date: 03/01/2017

| Job Code | Rate  | Rate  | Rate  | Rate  | Rate  |
|----------|-------|-------|-------|-------|-------|
| 0376890  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376891  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376892  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |

| Job Code | Rate  | Rate  | Rate  | Rate  | Rate  |
|----------|-------|-------|-------|-------|-------|
| 0376890  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376891  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376892  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |

| Job Code | Rate  | Rate  | Rate  | Rate  | Rate  |
|----------|-------|-------|-------|-------|-------|
| 0376890  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376891  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376892  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |

| Job Code | Rate  | Rate  | Rate  | Rate  | Rate  |
|----------|-------|-------|-------|-------|-------|
| 0376890  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376891  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376892  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |

| Job Code | Rate  | Rate  | Rate  | Rate  | Rate  |
|----------|-------|-------|-------|-------|-------|
| 0376890  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376891  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 0376892  | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |





# CONFIDENTIAL

## Contract Routing Slip

| ROUTING            | Purpose                | Initials             | Date Signed             |
|--------------------|------------------------|----------------------|-------------------------|
| Gina Crabtree      | For your review        | <sup>DS</sup><br>GC  | 3/14/2017   2:25 PM EDT |
| Sonia Pickens      | For your review        | <sup>DS</sup><br>SP  | 3/14/2017   2:40 PM EDT |
| Matt Curtis        | For your review        | <sup>DS</sup><br>MC  | 3/14/2017   2:45 PM EDT |
| Kevin Patton       | For your review        | <sup>DS</sup><br>KBP | 3/14/2017   4:39 PM EDT |
| Rick Mowbray       | For your review        | <sup>DS</sup><br>RM  | 3/15/2017   7:17 AM EDT |
| Richard Karber     | For your review        | <sup>DS</sup><br>RK  | 3/15/2017   6:19 PM EDT |
| Walter Sherry      | For your review        | <sup>DS</sup><br>WAS | 3/15/2017   8:37 PM EDT |
| Thomas Kirkpatrick | Signature on amendment | <sup>DS</sup><br>TK  | 3/16/2017   7:04 AM EDT |
| Brent Asplundh     | Contractor signatory   | NR                   | NR                      |
| AEP Audit          | Copy                   | NR                   | NR                      |
| Chris Donley       | Copy                   | NR                   | NR                      |
| Terri Stiltner     | Copy                   | NR                   | NR                      |

**Date:** March 14, 2017

**Company:** APCO, KY, OH

**Contractor Name:** Asplundh Tree Expert Co.

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 025765990000X103 Amd#4

**Term:** September 5, 2012 – May 26, 2018

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** No change

**Description of Service/Work:** Updating/clarifying rates







## Certificate Of Completion



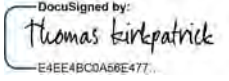
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|---|----------------------------|
| Envelope Id: 6942C2E5EEAF45D6BB4F0E4CDC8655C3                             | Status: Completed          |
| Subject: AEP Contract No. 025765990000X103 Amd#4; Asplundh Tree Expert Co |                            |
| Source Envelope:  |                            |
| Document Pages: 12  | Signatures: 2              |
| Supplemental Document Pages: 0  | Initials: 8                |
| Certificate Pages: 4  |                            |
| AutoNav: Enabled  | Payments: 0                |
| Envelopeld Stamping: Enabled  | Envelope Originator:       |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                         | Christopher Donley         |
|   | 1 Riverside Plz FL 1       |
|   | Columbus, OH 43215-2373    |
|   | cdonley@aep.com            |
|   | IP Address: 167.239.221.87 |

## Record Tracking

|  |   |                    |
|--|---|--------------------|
| Status: Original<br>3/14/2017 2:17:08 PM | Holder: Christopher Donley<br>cdonley@aep.com | Location: DocuSign |
|--|---|--------------------|

## Signer Events

| Signer Events   | Signature  | Timestamp  |
|---|--|--|
| Gina Crabtree<br>gmcraabtree@aep.com<br>Contract Analyst<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:   | <br><br>Using IP Address: 167.239.221.83                      | Sent: 3/14/2017 2:22:59 PM<br>Viewed: 3/14/2017 2:25:51 PM<br>Signed: 3/14/2017 2:25:57 PM |
| Sonia Pickens<br>srvaughan@aep.com<br>Category Mgr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:   | <br><br>Using IP Address: 167.239.221.87                    | Sent: 3/14/2017 2:25:59 PM<br>Viewed: 3/14/2017 2:39:21 PM<br>Signed: 3/14/2017 2:40:28 PM |
| Matt Curtis<br>mpcurtis@aep.com<br>Director, T&D Services<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 11/2/2016 5:32:00 PM<br>ID: 5721ec11-5e5a-41d9-b30b-e29f9a2624bb | <br><br>Using IP Address: 167.239.221.80                    | Sent: 3/14/2017 2:40:30 PM<br>Viewed: 3/14/2017 2:45:41 PM<br>Signed: 3/14/2017 2:45:52 PM |
| Kevin Patton<br>kbpattton@aep.com<br>Business Analyst Principal<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/5/2014 2:08:35 PM<br>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409                | <br><br>Using IP Address: 50.4.44.20<br>Signed using mobile | Sent: 3/14/2017 2:45:54 PM<br>Viewed: 3/14/2017 4:38:41 PM<br>Signed: 3/14/2017 4:39:23 PM |

| Signer Events  | Signature   | Timestamp   |
|--|---|---|
| Rick Mowbray<br>drmowbray@aep.com<br>Supv. Region Forestry<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 3/15/2017 7:00:15 AM<br>ID: 3aa016f1-13bb-45f4-b1d2-b5e77d5b5d65  | <br><br>Using IP Address: 167.239.221.87                         | Item No. 20<br>Attachment 1<br>Page 186 of 1469<br>REDACTED<br>Sent: 3/14/2017 4:39:23 AM<br>Viewed: 3/15/2017 7:00:15 AM<br>Signed: 3/15/2017 7:17:46 AM |
| Richard Karber<br>rkarber@aep.com<br>Transmission Forestry Supervisor<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 3/15/2017 6:18:56 PM<br>ID: 5b677f1b-3749-430c-9f8b-85707386c242   | <br><br>Using IP Address: 173.26.48.198<br>Signed using mobile   | Sent: 3/15/2017 7:17:47 AM<br>Viewed: 3/15/2017 6:18:56 PM<br>Signed: 3/15/2017 6:19:22 PM  |
| Walter A. Sherry<br>washerry@aep.com<br>Forestry Operation Manager<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 7/1/2014 7:08:14 PM<br>ID: ca043d9b-eaab-40e4-bee5-8c449d93d309   | <br><br>Using IP Address: 167.239.221.85                         | Sent: 3/15/2017 6:19:25 PM<br>Viewed: 3/15/2017 8:30:52 PM<br>Signed: 3/15/2017 8:37:05 PM  |
| Thomas Kirkpatrick<br>tlkirkpatrick@aep.com<br>Vice President Customer Service, Marketing and Distribution Services<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 8/11/2014 7:22:30 AM<br>ID: 293b8fdf-68e0-46e9-b110-269f4199cb39 | <br><br>Using IP Address: 167.239.221.88                        | Sent: 3/15/2017 8:37:07 PM<br>Viewed: 3/16/2017 7:04:18 AM<br>Signed: 3/16/2017 7:04:31 AM  |
| Brent Asplundh<br>brent@asplundh.com<br>Brent D. Asplundh, EVP<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 3/21/2017 9:08:02 AM<br>ID: 8e4b54ff-d557-4833-831b-dd9958595257  | <br><br>Using IP Address: 107.77.202.85<br>Signed using mobile | Sent: 3/16/2017 7:04:33 AM<br>Viewed: 3/20/2017 7:02:03 AM<br>Signed: 3/21/2017 9:09:00 AM  |

|                                     |                  |                  |
|-------------------------------------|------------------|------------------|
| <b>In Person Signer Events</b>      | <b>Signature</b> | <b>Timestamp</b> |
| <b>Editor Delivery Events</b>       | <b>Status</b>    | <b>Timestamp</b> |
| <b>Agent Delivery Events</b>        | <b>Status</b>    | <b>Timestamp</b> |
| <b>Intermediary Delivery Events</b> | <b>Status</b>    | <b>Timestamp</b> |
| <b>Certified Delivery Events</b>    | <b>Status</b>    | <b>Timestamp</b> |
| <b>Carbon Copy Events</b>           | <b>Status</b>    | <b>Timestamp</b> |

| Carbon Copy Events  | Status   | Timestamp  |
|---|--|--|
| <p>AEP Audit<br/>           gbscontractassessments@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Not Offered via DocuSign<br/>             ID:</p>  | <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 0 auto;"><b>COPIED</b></div> | <p>Item No. 20<br/>           Attachment 1<br/>           Sent: 3/21/2017 9:09:06 AM<br/>           Page 187 of 1469<br/>           REDACTED</p> |
| <p>Christopher Donley<br/>           cdonley@aep.com<br/>           Contract Analyst<br/>           American Electric Power Service Corporation<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Not Offered via DocuSign<br/>             ID:</p> | <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 0 auto;"><b>COPIED</b></div> | <p>Sent: 3/21/2017 9:09:04 AM<br/>           Resent: 3/21/2017 9:09:09 AM</p>  |
| <p>Terri Stiltner<br/>           tastiltner@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Accepted: 6/18/2015 3:27:15 PM<br/>             ID: 592a4afd-f450-4104-bdeb-635cbde989d5</p>  | <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 0 auto;"><b>COPIED</b></div> | <p>Sent: 3/21/2017 9:09:06 AM<br/>           Viewed: 3/22/2017 7:31:35 AM</p>  |

| Notary Events | Timestamp |
|---------------|-----------|
|---------------|-----------|

| Envelope Summary Events | Status           | Timestamps           |
|-------------------------|------------------|----------------------|
| Envelope Sent           | Hashed/Encrypted | 3/21/2017 9:09:06 AM |
| Certified Delivered     | Security Checked | 3/21/2017 9:09:06 AM |
| Signing Complete        | Security Checked | 3/21/2017 9:09:06 AM |
| Completed               | Security Checked | 3/21/2017 9:09:06 AM |

| Payment Events | Status | Timestamps |
|----------------|--------|------------|
|----------------|--------|------------|

| Electronic Record and Signature Disclosure |
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|--|

## **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

**AMERICAN ELECTRIC POWER SYSTEM  
ENERGY DELIVERY  
TOTAL EVALUATED COST**

**COMPANY:** Kentucky Power Company      **REGION:** Kentucky  
**TYPE OF CONTRACT:** Contract      **CONTRACT #:** 02574631X110  
**CONTRACTOR:** Asplundh Tree Service  
**SCOPE OF WORK:** Vegetation Management Services  
  
**CONTRACT DATES:** 9/5/12 - 5/26/18

| <b>SUMMARY OF PROJECTED COSTS:</b>     | <b>ORIGINAL*</b>  | <b>REVISION 1</b> | <b>REVISION 2</b> | <b>REVISION 3</b> |
|--|-------------------|-------------------|-------------------|-------------------|
| <i>Blanket Contract Value</i>          | <u>[REDACTED]</u> | <u>[REDACTED]</u> | <u>[REDACTED]</u> | <u>[REDACTED]</u> |
| <i>Increase Blanket Contract Value</i> | <u>[REDACTED]</u> | <u>[REDACTED]</u> | <u>[REDACTED]</u> | <u>[REDACTED]</u> |
| <b>TOTAL FROM ABOVE</b>                | <u>[REDACTED]</u> | <u>[REDACTED]</u> | <u>\$0</u>        | <u>\$0</u>        |

**REVISED TOTAL EVALUATED COST:** [REDACTED]

**APPROVED BY:**  
**Signature:**   
**Name:** Matthew Satterwhite  
**Title:** President & COO - KY  
**Date:** 12/21/2016 | 11:27 AM EST

**PREPARED BY:**  
**Name:** Gina Crabtree  
**Date:** 12/7/2016

**FIFTH AMENDMENT TO CONTRACT NO. 02574631X110**

This Fifth Amendment to Contract No. 02574631X110 ("Fifth Amendment"), executed to be effective November 27, 2016 ("Fifth Amendment Effective Date"), is by and between **Kentucky Power Company**, a Delaware corporation ("Owner") and **Asplundh Tree Expert Co.**, a Pennsylvania corporation ("Contractor").

**WHEREAS**, Contractor and Owner entered into Contract No. 02574631X110 with an Effective Date of September 5, 2012 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the Parties hereby agree as follows:

1. In order to update Section 5 Pricing, remove the Third paragraph in its entirety and replace with the following:

"Beginning June 1, 2015, and then on June 5, 2016 and June 4, 2017, Contractor's labor rates will be adjusted using the Bureau of Labor Statistics, U.S. Department of Labor, Employment Cost Index (ECI) for Total Compensation (not seasonally adjusted), for (Table 9) Employment Cost Index for wages and salaries, for private industry workers, by occupational group and industry. The percent change for the 12-months ended in March of the year of the adjustment will be multiplied by the current labor rates to determine the adjusted labor rates.

All other rates in Contractor's Rate Sheet may be revised annually. Proposed changes must be submitted by February 15<sup>th</sup> and, if accepted by Owner, shall become effective the first Sunday of June for that year."

2. In Exhibit C, the existing Rate Sheets shall be removed in its entirety and replaced with the Contractor's Rates dated January 1, 2017 (the "Rate Sheet"). These rates will be effective January 1, 2017.
3. In order to update Section 7 Fuel Adjustments in the Contract, remove in its entirety and replace with the following:

"The base Gasoline price is \$2.261 per gallon ("Base Gasoline Price") and will remain in effect until contract termination. The weekly Gasoline price is the state average for Gasoline taken from the American Automobile Association's website ("Weekly Gasoline Price"). When preparing the weekly invoices, if that week's Weekly Gasoline Price differs from the Base Gasoline Price by more than ten (10) cents, a Gasoline adjustment for each piece of equipment will be calculated by using the following formula:


Gasoline adjustment = [(Weekly Gasoline Price) – (Base Gasoline Price)] x gallons/hour x Equipment hours billed

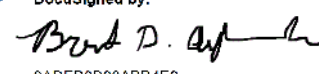
The gallons/hour figure is taken from the Contractor's Rate Sheets in Exhibit C. The sum of the Gasoline adjustments for each piece of equipment used that week shall be added to or subtracted from that week's invoice amount. If the Unit Price Model, as described in Exhibit C, is used and

billing is done with a single invoice when all the Work is completed, the Weekly Gasoline Price used shall be that for the week in which the invoice is being prepared.”

4. In order to update the Kentucky Power Rate Clarifications in Exhibit C, the Rate Clarifications dated May 15, 2012 shall be removed in its entirety and replaced with the Rate Clarifications dated October 1, 2016, attached hereto and incorporated herein.
5. In order to update Exhibit B, remove AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated June 1, 2015 in its entirety and replace with AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission dated October 1, 2016 attached hereto and incorporated herein.
6. Remove all references to Exhibit D -KPI, the Asplundh 2012/2013 Corporate Key Performance Incentive Plan Guidelines (“CKPI”) and AEP – Asplundh 2012/2013 Key Performance Incentive Plan Guidelines – AEP Kentucky (“KPI”) in their entirety. The KPI is no longer in effect. The final quarterly KPI performance will be calculated for 3rd Quarter 2016 and any resulting payback credit memo issued accordingly.
7. Except as amended by this Fifth Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Fifth Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Fifth Amendment Effective Date.

**Key** DocuSigned by:  
  
 By: 3D8D0E8E084C41C...  
 Name: Matthew Satterwhite  
 Title: Kentucky Power President  
 Date: 12/21/2016 | 11:27 AM EST

**Asplundh** DocuSigned by:  
  
 By: 9A4EB0B20ABB4E9...  
 Name: Brent Asplundh  
 Title: Brent D. Asplundh, EVP  
 Date: 12/21/2016 | 1:32 PM EST

**RATES FOR KPCCO**

08/14/17  
 Revision Management Rate Sheet  
 Effective Date: 01/01/2017

Labor Increase (in Line of NR) 2016 and 2017  
 State Fund Rate  
 9/11/2017 9/14/2017

| Category            | Rate |
|---------------------|------|
| Administrative      | ...  |
| Equipment           | ...  |
| Facilities          | ...  |
| Information Systems | ...  |
| Legal               | ...  |
| Medical             | ...  |
| Public Safety       | ...  |
| Transportation      | ...  |
| Utilities           | ...  |
| Waste               | ...  |
| Other               | ...  |

| Category            | Rate |
|---------------------|------|
| Administrative      | ...  |
| Equipment           | ...  |
| Facilities          | ...  |
| Information Systems | ...  |
| Legal               | ...  |
| Medical             | ...  |
| Public Safety       | ...  |
| Transportation      | ...  |
| Utilities           | ...  |
| Waste               | ...  |
| Other               | ...  |

| Equipment | Material Code | Department | Rate |
|-----------|---------------|------------|------|
| ...       | ...           | ...        | ...  |
| ...       | ...           | ...        | ...  |
| ...       | ...           | ...        | ...  |

| Material | Material Code | Department | Rate |
|----------|---------------|------------|------|
| ...      | ...           | ...        | ...  |
| ...      | ...           | ...        | ...  |
| ...      | ...           | ...        | ...  |

| Category | Rate |
|----------|------|
| ...      | ...  |
| ...      | ...  |
| ...      | ...  |



Kentucky Power Rate Clarifications  
October 1, 2016

**1. Holidays**

- a. Contractor holidays include New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.
- b. Owner recognizes the following additional holidays: Good Friday, the day after Thanksgiving, and the day before Christmas.
- c. Contractor shall not schedule work on Owner holidays unless requested in writing by Owner or the holiday has been agreed to as a regularly scheduled day.
- d. Contractor shall not bill Owner for its employees' holiday pay. Holiday pay is covered as part of the benefits mark-up.
- e. On years when a Contractor or Owner holiday falls on a weekend, Owner shall notify Contractor of the date the holiday will be observed.

**2. Calculations and Examples**

- a. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
- b. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday at Owner's request.
- c. When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.
- d. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in 2.a above.
- e. Calculation examples are provided below.

Straight Time Rate = Taken from table

Overtime Rate = Straight Time Rate x 1.5

Sunday/Holiday Rate = Straight Time Rate x 2

Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)

Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)

Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)

Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate +  
 (Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) =$

$\$30.72$  Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) = \$33.40$

Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) =$

$\$40.94$  Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) =$

$\$44.52$

### 3. Herbicide Application

- a. When Contractor's employees are assigned to apply herbicides, their hourly rate will be increased by \$0.20. Anyone assigned to perform herbicide application must be certified, licensed, registered or otherwise qualified as required by the state where the Work is being performed or as otherwise required by law, statute or regulation. This increase does not apply to employees applying stump treatment as part of their normal daily duties.

### 4. Special Supervisor Payment

- a. If Owner has declared a major storm, or when otherwise determined by Owner and authorized in writing, Supervisors may be paid at the General Foreman straight time rate for all hours worked in excess of forty (40) per week. Contractor shall bill Owner the straight time rate without mark-ups.

### 5. Pay During Training

- a. Owner shall pay Contractor's employees' hourly rate while said employees attend either Owner-sponsored training or other training required and agreed to by Owner to obtain or retain a professional certification. All other training shall be Contractor's responsibility. Unless otherwise agreed to by Owner in writing, no other billing relating to attendance at training will be paid.

### 6. Per Diem Rates

- a. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from that individual's normal reporting site.
- b. Per Diem will not be paid if lodging and meals are provided by Owner.
- c. Contractor shall submit documentation with their invoice specifying the distance between home address of record or reporting site and work site for each individual claiming Per Diem

- on each submitted invoice. Contractor will submit to OPCO the employees due per diem using the template within this document.
- d. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
- e. The Per Diem rate is defined in the applicable contract rate sheets and includes lodging and meals.
- f. Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.
- g. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.
- h. **Definitions**
- **Crew Cohesion** – The need of a crew member to stay overnight with a per diem eligible crew when that crew member may be within the mileage threshold but travel to the overnight stay location in a company vehicle.
  - **Emergency Assistance** – Owner's Designated Representative will have the authority to hold Contractor crews in an area during storm or other situations deemed an emergency when the mileage is less than in Bullet #1. If held in the an area the Contractor employee affected will be eligible for Per Diem if such charges would normally be incurred. All parties should understand this action is auditable and the time sheet and invoice must have the words Emergency Assistance and the forester's name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to Owner.
  - **Home Address** – The contract employee's legal address of record for tax purposes.
  - **Owner's Designated Representative** – Owner Designated Representative for daily forestry operations will be the OPCO/transmission region forester or OPCO/transmission forestry supervisor.
  - **Outsource or Off System** – Contractor employees that do not normally or exclusively work on the Owner's property and whose home address of record is 80 miles or more from the reporting site and is acceptable to Owner's Designated Representative.

- **Per Diem** – Daily allowance for expenses that include housing and meals to cover expenses when traveling for work and agreed upon by the Contractor and the Owner's Designated Representative.
- **Reporting Site** – A Contractor designated location acceptable to the Owner's Designated Representative where the Contractor's trucks/equipment is parked and the employees go to get the trucks/equipment to travel to the work site. (In some regions called a show up location.) If a crew is starting its billable time at a reporting site, travel time to the work site shall not be more than thirty (30) minutes, via the most direct route, unless authorized by Owner's Designated Representative.
- **Work Flow Driven(LEAN)** – Owner Designated Representative will have the authority to instruct crews to stay overnight when the mileage is less than in Bullet #1. There are times when it is cost effective to have the crews stay overnight instead of returning to the home address of record or reporting site. For example, crew is working 45 miles from the reporting site and the next work location is in the same direction but is 85 miles from the reporting site. In this situation the forester will have the authority to authorize an overnight stay that would require a Per Diem payment since staying overnight is more productive than to return to the reporting site or home address of record. All parties should understand this action is auditable for work efficiencies and productivity and the time sheet and invoice must have the words Work Flow Driven(LEAN) and the foresters name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to owner.
- **Work Site** - The day's starting location for the performance of services ex, work site should be associated with vegetation management activities on the Company's rights-of-way.
  - i. When held over at the request of the Owner on regularly scheduled work days, crew members shall be eligible for a meal if held over for two hours or more after normal quitting time. Owner shall reimburse Contractor \$12.00 per meal for each crew member entitled to a meal unless meals are provided by Owner.
  - j. For Contractor employees entitled to a meal in accordance with the Supplementary Terms, Section 2, Item 2.8: Contractor personnel shall be off the clock for meal breaks. Owner shall reimburse Contractor \$12.00 per meal for each employee entitled to a meal unless meals are provided by Owner. Contractor personnel shall be on the clock for meals if they do not stop work to eat. Not stopping work to eat means eating on-the-fly at the jobsite (personnel spend less than 10 minutes eating) or while traveling from jobsite to jobsite. Owner shall not reimburse Contractor for breakfast or lunch meals if Contractor personnel return to their homes at night.

Kentucky Power Distribution Forestry



|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |

|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

**Per Diem Eligibility Number:**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from the individual's normal reporting site.
2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

*Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.*

File:


# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010-04**

Effective Date: October 1, 2016


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AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

|   |                        |  |        |              |
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## Revision History

| Rev. | Description of Change(s)  | By           | Date      | Approved                    |
|------|---|--------------|-----------|-----------------------------|
| 0    | Original Issue  |              |           |                             |
| 1    | Update  |              | 5/14/2009 |                             |
| 2    | Update; formatting changes; addition of company specific guidelines; addition of referenced documents table; addition of end notes to link to other documents; review of document performed by Legal; | Kevin Patton | 9/10/2014 | Walter Sherry<br>12/14/2016 |
| 3    | Addition of Transmission Forestry construction clearing guidelines  | Kevin Patton | 5/1/2016  | Walter Sherry<br>5/4/2016   |
| 4    | Addition of reporting site location to the guidelines from language that was previously in the rate clarification section of the contract.  | Kevin Patton | 9/21/2016 | Walter Sherry<br>9/23/2016  |

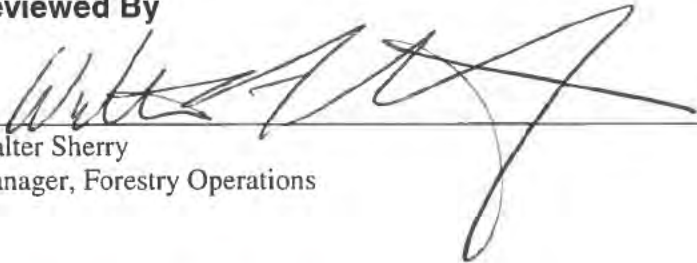
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## Revision Cycle

This document will be reviewed every three to five years depending on the average contract length.

## Signatures


### Reviewed By

  
 \_\_\_\_\_  
 Date 27 Sep 16

Walter Sherry  
Manager, Forestry Operations

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## I. Purpose

The purpose of these American Electric Power ("AEP") Forestry Vegetation Management Guidelines is to document and inform AEP employees and its contractors of important criteria, practices, and procedures pertaining to initial vegetation clearing for construction projects and the management of vegetation within rights-of-way. AEP incorporates these guidelines into each vegetation management contract; a copy shall be kept in all vegetation management Contractor's vehicles. These guidelines are to be read consistently with other contract documents by and between AEP and the Contractor. Variances and/or clarifications to these guidelines may be necessary and applied to specific operating companies.

These guidelines contain references to national industry standards; government regulations; and AEP standards and practices. Upon approval of this document, any editions referenced are valid. All standards, regulations and practices are subject to revision. AEP and the Contractor are encouraged to investigate the possibility of applying the most recent editions.

## II. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation.

**Control:** 100% defoliation with no viable buds one year after application; or, on species that require a number of years to achieve control, significant signs of herbicidal activity.

**Danger Tree:** A tree on or off the right-of-way with the potential to contact electric supply lines.<sup>1</sup>

**DBH:** (Diameter at Breast Height) The diameter of a tree measured at the height of 4 ½ feet above the ground on the uphill side.

**Debris:** Vegetative and non-vegetative material such as bottles; cans; wires; paper; branches; or other residue from clearing operations.

**Directional Pruning:** The removal of limbs in a manner that provides increased conductor clearance and directs growth away from the conductors.<sup>2</sup>

**Hanger:** A cut limb left hanging in a tree or on other facilities.

**Hazard Tree:** A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electric supply lines.<sup>3</sup>

**Log:** The merchantable portion of a tree as designated by AEP.


**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Refusal:** A property owner/resident prohibiting the Contractor from managing vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits, and easements.

**Removal:** The cutting of trees/brush at or near ground line.

**Slash:** The un-merchantable portion of a tree.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

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## III. Contractor Guidelines

### A. Safety

Protecting the safety of all people (Contractors, public, and AEP employees) is of utmost importance to AEP. Contractors shall regard safety as a priority core value; their employees will recognize and follow all laws, rules, and regulations of public and worker safety. Any safety related incidents (e.g. personal injuries, vehicle accidents, outages, flashes, near misses, customer issues, etc.) that occur on the job shall be reported to the proper AEP personnel as specified by AEP management.<sup>iv</sup>

### B. Reporting Site

1. The Contractor should establish reporting sites as close as possible to the work.
2. All reporting site locations must be acceptable to the Owner.
3. The reporting site may be relocated if travel time is excessive from the reporting site to the work site and the amount of work exceeds two weeks.

### C. Personnel

1. Contractors shall comply with all federal, state and local laws for permits, certifications and licensing requirements necessary to perform vegetation management in specified operating areas.<sup>v</sup>
2. No private work may be solicited or performed by the Contractor or its employees while on AEP time. Contractors shall not seek nor receive compensation from anyone except AEP for any work that is a part of AEP's Forestry Vegetation Management program. The consequences will be crew and/or Contractor disciplinary actions.

### D. Equipment


1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chainsaws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.
4. The use of spurs/climbers/hooks should be avoided.

### E. Overtime

Overtime is billable as designated by each operating company.

### F. Work Procedures

1. Contractor practices shall be compliant with applicable industry standards (e.g., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>vi</sup>

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2. Changes in the work schedule due to inclement weather, equipment breakdowns, or other circumstances must have prior approval by AEP Forestry personnel.
3. The Contractor will be responsible for the development of a plan to complete the assigned tasks. The plan must meet AEP approval before work begins.<sup>vii</sup>
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractors shall provide daily work locations to AEP, including changes to these locations throughout the day.
6. Prior to work in any location and before any changes in procedures or activities are made, the Contractor shall perform a job briefing in written/report form to identify all potential work site risks. At least one copy of all documents and reports, including job briefings, shall be prepared in English.<sup>viii</sup>
7. An ongoing list of refusals, scheduled outages, or areas that have not been worked, including reasons, shall be provided to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work should be inspected for clearance and quality compliance on an ongoing basis by the Contractor and AEP Forestry. When an assigned task is complete, the Contractor shall notify AEP Forestry for final inspection.
9. The Contractor shall notify AEP of any hazardous conditions found during the performance of work under this contract.


## G. Public Relations

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise.

1. When required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, the Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor shall document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the Contractor shall be on the door card.

## H. Refusals

1. The Contractor shall notify the proper AEP Forester with all pertinent information for all refusals.
2. If the Contractor is unable to resolve the refusal, the refusal shall be turned over to AEP Forestry.
3. Undocumented refusals may be worked at the Contractor's expense.

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## I. Damage Claims and Complaints

1. The Contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.<sup>ix</sup>
2. An on-site investigation with the resident/property owner shall be made as soon as possible. A documented attempt to contact the complainant shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during the investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.<sup>x</sup>
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.<sup>xi</sup> The Contractor shall provide a copy of all supporting documentation to AEP.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.<sup>xii</sup>
7. Costs to restore outages or repair AEP's facilities due to negligence may be billed to the Contractor as determined by AEP.

## IV. Performance Guidelines

### A. Removals

1. Stumps shall be cut as close to the ground as practical, but not to exceed a three inch maximum height and treated with approved herbicide, unless the situation prevents application according to label instructions; there is a documented customer refusal; or an AEP Forester directs otherwise.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect electric lines, yards, fences, houses, and other facilities.
3. Targets for removal are:
  - a. All trees with the potential of growing into the conductor.
  - b. Trees where adequate clearance cannot be obtained using proper pruning practices.
  - c. Trees that will take less than three times the amount of time to remove as they would take to prune.
  - d. Trees within five (5) feet of poles.
  - e. Mature trees where more than 50% of the crown must be removed to obtain clearance.

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- f. Young, vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
  - g. Palm species.
4. At property owner's request, any tree situated such that the location of AEP's facilities impede, or add significantly to the cost of, the safe removal of the tree and an additional burden is placed upon the property owner, AEP should take the steps necessary to mitigate the impediment or to relieve the additional burden placed upon the property owner. AEP actions may include, but not be limited to, moving or protecting its facilities, removing portions of the tree to provide the clearances required by ANSI, OSHA, or any other regulatory authority, to allow removal by "non-line clearance" qualified arborists or non-professionals. Except in case of emergency, AEP must evaluate the property owner's request and prioritize any necessary work according to its benefit to the provision of electric service to all customers. At property owner's request, debris will be left for disposal by the property owner.
  5. State and local ordinances shall be obeyed during the disposal of debris.

## B. Pruning


1. Contractor practices should be compliant with all applicable industry standards (i.e., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>xiii</sup>
2. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth below in Section V. Distribution Clearances or Section VI.C. Transmission Clearances or as designated by the operating company.
3. Reasonable care should be exercised to help prevent the spread of insects and pathogens.
4. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut, treated with herbicide, or damaged by the Contractor's activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner in writing.
5. State and local ordinances shall be obeyed during the disposal of debris.

## C. Hangers and Cleanup

1. All hangers shall be removed from the pruned tree before leaving the job site.
2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of cleanup work should be performed. Unless otherwise designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum cleanup that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the Contractor.

## D. Clearing and Re-clearing


1. AEP will provide the width of the right-of-way.

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2. All woody plants that have the potential to grow into and interfere with service reliability; restoration; patrolling; or other maintenance operations of AEP facilities should be controlled by the operating company guidelines.
3. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the proper AEP personnel.
4. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practical, but not to exceed three inches in maximum height above the ground line. Where possible, the cut shall be parallel to the slope.
5. Trees shall be felled to avoid damage to crops, fences, and other facilities. Any trees felled into crops, ditches, streams, roads, or across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP facilities or the property of third parties, or hinder access along the right-of-way.
6. Trees, brush, and slash shall be lopped as designated by AEP Forestry.
7. Hazard Trees are identified and addressed/worked at the discretion of the individual operating companies or regions. Consideration for hazard tree removal shall be made for those trees that are an immediate threat to AEP facilities. Hazard Trees may include, but are not limited to, trees that have severe lean or sweep; are dead; or have visible defect or damage.
8. Stumps of trees growing in fences may be cut at fence post height. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
9. As designated by AEP Forestry, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
10. Brush and debris from vegetation clearing shall not be left in managed agricultural areas or other maintained areas. Piled and/or windrowed materials shall not be left on or interfere with fences or other facilities of the landowner or AEP unless designated by AEP Forestry.

## E. Herbicide Application

1. All woody plants that have the potential of growing into the lines or impair access should be controlled, as designated by AEP Forestry.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made as required by all Federal, State, and local laws.
3. The Contractor shall be required to control at least 90% or a percentage as designated by operating company of the targeted vegetation. Any areas not meeting the control requirements shall be retreated at the Contractor's expense.<sup>xiv</sup>
4. AEP Forestry may make vegetation management prescriptions in consultation with Contractors.
5. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xv</sup>
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.

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7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps shall be treated with an appropriate herbicide treatment.

## F. Tree Growth Regulator Application

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator ("TGR") in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in excessive state of decline shall not be treated unless directed by AEP Forestry.
3. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xvi</sup>

## G. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.


## V. Distribution Clearances

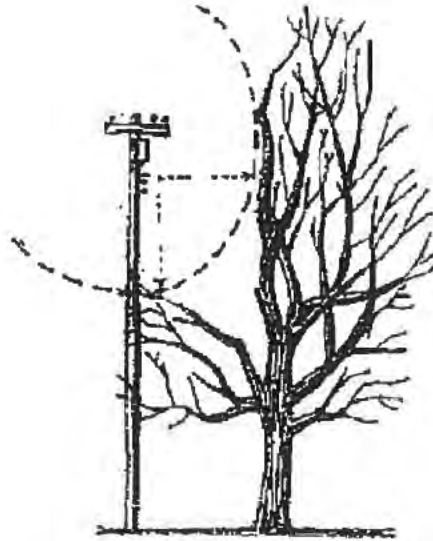
Variances to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/or easements.

Minimum clearance for distribution lines is that distance that will prevent regrowth into any AEP conductors for a minimum of three (3) years. The species, site, limb, conductor sag and sway during windy conditions; and the effect of electrical load should all be considered when determining the clearance requirement.

### A. Primary Conductors

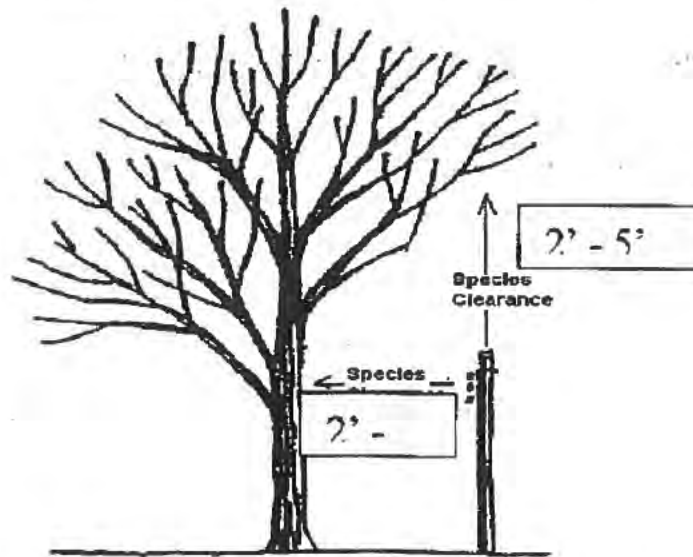
Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the proper AEP Forestry representative.

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### B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



### C. Service Drops and Street Light Conductors

Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.


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## D. Poles and Guys

1. Heavy limbs applying pressure on the span guy should be pruned or removed at the specific direction of the proper AEP Forestry representative.
2. Trees, brush, and slash should be cleared to obtain a minimum of a five (5) foot radius of clearance around the pole or guy unless otherwise specified by an AEP Forestry representative.

## E. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.

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## VI. Transmission

### A. Hazard Trees

Trees may exhibit potential threats to AEP facilities due to disease, damage, physical location, growth characteristics or environmental problems. Where these trees exist, AEP considers them high priority risks that need to be addressed and remediated.<sup>xvii</sup>

#### 1. Visual Assessment

While performing work on a circuit, contract crews shall conduct a visual assessment to identify trees with imminent<sup>1</sup> and/or probable<sup>2</sup> likelihood of failure inside and outside the right-of-way. The tree should be viewed from some distance away, if possible, to consider crown shape and surroundings.

Any tree identified to be a potential imminent threat to an AEP Transmission line shall be reported to the responsible transmission forester.

#### 2. Ground Evaluation

If a Hazard Tree is identified during the visual assessment, a 360° ground evaluation shall be required. The evaluations should include an inspection of:

- Tree crown
- Trunk
- Trunk flare
- Above-ground roots
- Site conditions around the tree in relation to targets.

The Contractor shall report risk and mitigation options to the responsible transmission forester.

### B. Tree Felling


Before beginning any tree felling operation, the Contractor shall consider relevant factors<sup>3</sup> pertaining to the tree and site and shall take appropriate actions to ensure a safe removal operation.<sup>xviii</sup>

1. When there is a danger that the tree pieces or tree being removed may fall in the wrong direction and contact utility facilities or damage other property, appropriate methods shall be used to control the direction of fall.<sup>xx</sup>
2. All limbs shall be removed to a height and width sufficient to allow the tree parts or tree to fall clear of hazards.<sup>xx</sup>
3. Notches shall be used on all trees and trunks greater than five inches DBH.<sup>xxi</sup>

<sup>1</sup> Imminent – failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. (Tree Risk Assessment Manual, pg. 100)

<sup>2</sup> Probable – failure may be expected under normal weather conditions within the specified time frame. (Tree Risk Assessment Manual, pg. 100)

<sup>3</sup> ANSI Z133-2012 Annex C.3, Manual Tree Felling Procedures contains a list of relevant factors to be considered during tree felling.

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4. Contractors shall provide evidence of training to employees related to tree felling upon request.

### C. Clearances


The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| Right-of-way No Restrictions   | Right-of-way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2.</b>                   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |

<sup>4</sup> Upon completion of maintenance

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**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |

**D. Transmission Dispatch Communication Procedures**

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

**E. Transmission Forestry Construction Guidelines**

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

<sup>5</sup>ANSI Z133-2012.

All removals/trimming shall be done in accordance with the best recognized and approved principles of modern arboriculture and tree surgery, with balanced emphasis on current tree health and clearance.

The full width of the right-of-way, as determined by easement agreements, shall be cleared unless otherwise indicated on the Special Condition List.

Right-of-Way service will provide a contact list and will be handling damages for the construction work. Property owners who were notified of the construction work will receive a follow-up notification from the Contractor tree days before starting work on that property.

### 1. Contractor Qualifications

Contractor practices shall be in compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.

### 2. Clearing

The right-of-way shall not be cleared with a bulldozer, maintainer, or any other method that will disturb surface or sub-surface conditions unless specified in the right-of-way Special Conditions List. Reduction of disturbance of the surface or sub-surface soils reduces the risks of soil erosion and invasive species.

Contractor will take whatever measures necessary as specified in the SWPPP and elsewhere in the specification to prevent the erosion of soil from the right-of-way. The corrective measures may be in the form of grading, terracing, construction of sediment barriers, reseeding, mulching, or steps necessary to prevent erosions and must be approved by AEP.

Mowed right-of-ways shall be left with no stumps higher than three inches and no large chunks of debris left. Examples of preferred mowing equipment to be used on the right-of-ways will be equipped with, but not limited to, "FECON", "SEPP1" or equivalent type mowing heads.


### 3. Tree and Brush Removal

1. Trees and brush designated for cutting or mowing on the rights-of-way shall be cut as close to the ground as practicable, but not to exceed three inches in height above the ground line. All trees and brush cut shall be stump-treated with an approved herbicide as instructed on the label. All spraying procedures are to be fully explained to property owners if requested by landowner. If requested by landowner that no herbicides be used, their request is to be referred to Company. Certain state laws and regulations may require consent of the property owner to apply herbicides.

2. On portions of the right of way where the conductor to ground clearance is 100 feet, or less, all woody stemmed vegetation will be cut, limbed and lopped. No vegetation will be permitted to obstruct roads, lanes, trails, fences and streams. The brush shall also be cut and compacted.

Additional requirements are:

- Stump surfaces shall be cut parallel to and within three inches of the ground.
- Brush and logs shall not be placed within 25 feet of improved roads, or river and stream banks.
- Brush and logs shall not be piled in flood plains.
- Brush and logs shall not be placed in fields unless authorized by the property owner.

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- Brush and logs shall not be placed where it will obstruct ingress or egress on other rights-of-way such as roadways or trails.
  - Trees will be felled where possible to protect crops, fences and other facilities.
3. No clearing will be done where the line crosses valleys or ravines when the conductor profile indicates a height of 100 feet or greater above the ground at maximum sag; hence, impacts on streams and woody vegetation in valleys can be avoided or minimized. The exceptions to this are as follows:
- Trees that do not have at least 50' of clearance between conductors and tree under maximum sag conditions will be removed.
  - Where a conductor stringing path is specified
  - Wire set-up areas
  - Work areas, etc.
4. For trees in yards, grind stumps to six inches below grade and restore the ground to match the existing grade and vegetation in the surrounding yard.
5. Low-growing species can be left except in tower locations. All woody stem vegetation within the cleared right-of-way shall be removed on NERC-applicable lines.
6. Any required buffer zones/screens shall be selectively treated in areas designated by AEP. Only tall-growing species (i.e. those trees that will grow taller than 15 feet at maturity) will be cut or treated in these areas.


#### 4. Tree Pruning

Tree pruning will generally be limited to trees on the edge of the right-of-way or in locations designated as environmentally-sensitive; tree pruning will ensure that required clearances are achieved. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development. Manual pruning operations will utilize qualified line clearance arborists, as defined by ANSI Z133.1-2012, and seek to prune trees according to standards set by the International Society of Arboriculture, the American National Standards Institute and the Tree Care Industry Association. Trees will be pruned in accordance with the American National Standard Institute guidelines for "Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning), ANSI A300 (Part 1) – Pruning"

#### 5. Debris Disposal

Debris from construction clearing operations is left on the right-of-way to decompose and return nutrients to the soil and to reduce the possibility of soil erosion. Limbs are reduced in size to maintain a low profile, and both the main stem and brush left on the right-of-way.

1. All woody vegetation that falls into roadways, waterways, fences, lawns, or pastures shall be moved to a wooded area of the right-of-way or may, at times, be chipped and/or otherwise removed.

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2. Logs may be left in tree lengths or as designated. The merchantable value of the logs will be preserved as much as possible.
3. Alternatives to the debris disposal standard are the following:
  - Cut and Compact: Brush may be reduced in height by cutting and by compacting piles with crawler-type equipment at selected locations (depressions in topography) on the right-of-way outside of the conductor path.
  - Cut and Scatter: Brush may be reduced in height by cutting or scattering on the right-of-way outside of the conductor path or roadway, but as close to the edge of the right-of-way as possible.
  - Cut and Pile: Where required by right-of-way agreement, brush shall be piled or scattered off the right-of-way.
  - Chipping/Shredding: Chipping/shredding or other viable methods may be utilized where accessible by equipment.
  - Burning: brush burning shall only be done if it is specified in the right-of-way agreement and is in accordance with applicable regulations. This method requires formal approval by the Manager of Forestry Operations.

## F. Hazard Trees


Hazard trees (outside of right-of-way) will be cut or trimmed and the logs and laps will be left as felled. When the conductor to ground clearance is over 100 feet, only those trees that do not have the required clearance will be cut. Refer to Section VI.A on page 15 for additional information.

## G. Herbicide

Application of all herbicides shall be performed as required by federal, state, and local laws. The contractor will furnish and be responsible for all pesticides, including proper disposal of their containers, and insure their use in accordance with the label instructions. All work will be done as defined in Herbicide Application on page 11.

## H. Fences and Crops

1. No fences shall be cut unless contractor is authorized to do so by AEP, if fences are cut or broken by the contractor without prior AEP authorization, the Contractor, at their expense, shall promptly repair.
2. Contractor is responsible for the right-of-way clearing needed to perform the job, however, the Contractor agrees to not do unnecessary damage to growing crops or other properties and agrees to pay the tenant and/or landowner involved for any unnecessary damage to growing crops and other properties. AEP shall be the sole judge of what constitutes "necessary" and "unnecessary" damage under the terms hereof.

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## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species   |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d'arc (Osage orange, hedge tree) |


| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |

### 1. Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

## **B. Distribution Operating Company Specific Guidelines**


- 1. AEP Ohio**
- 2. AEP Texas**
- 3. Appalachian Power**
- 4. Indiana Michigan Power**
- 5. Kentucky Power**
- 6. Public Service of Oklahoma**
- 7. Southwestern Electric Power Company**
- 8. Wheeling Power**

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## C. Referenced Documents and Specifications

| Title  | Year | Version                              | Pages |
|--|------|--------------------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2                           | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                                      | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                             |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI <sup>®</sup> Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI <sup>®</sup> A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI <sup>®</sup> A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI <sup>®</sup> A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition                       | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008                        | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition                        | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                             |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                             |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                             |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                             |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                             |       |

<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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|---|------|---------------|-------|
| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

<sup>i</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH

<sup>ii</sup> *Best Management Practices – Utility Pruning of Trees.* International Society of Arboriculture. Champaign, IL

<sup>iii</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH

<sup>iv</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>v</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vi</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>viii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>ix</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>x</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xi</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xiii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>xiv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvi</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvii</sup> *Managing Hazard Trees on FAC-003 Applicable Circuits.* American Electric Power

<sup>xviii</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xix</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xx</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xxi</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL





# CONFIDENTIAL

## Contract Routing Slip

| ROUTING             | Purpose                            | Initials             | Date Signed               |
|---------------------|------------------------------------|----------------------|---------------------------|
| Sonia Pickens       | For your review                    | <sup>DS</sup><br>SP  | 12/14/2016   11:05 AM EST |
| Kevin Patton        | For your review                    | <sup>DS</sup><br>KBP | 12/14/2016   1:33 PM EST  |
| Matt Curtis         | For your review                    | MC                   | 12/14/2016   11:07 AM EST |
| Walter Sherry       | For your review                    | <sup>DS</sup><br>WAS | 12/14/2016   2:29 PM EST  |
| Dusty Roll          | For your review                    | <sup>DS</sup><br>DR  | 12/14/2016   1:41 PM EST  |
| Greg Bell           | For your review                    | <sup>DS</sup><br>GAB | 12/14/2016   12:54 PM EST |
| Everett Phillips    | For your review                    | <sup>DS</sup><br>EP  | 12/14/2016   5:46 PM EST  |
| Matthew Satterwhite | Amendment Signature, TEC signature | <sup>DS</sup><br>MS  | 12/21/2016   11:27 AM EST |
| Brent Asplundh      | Contractor Signatory               |                      |                           |
| AEP Audit           | Copy                               |                      |                           |
| Terri Stiltner      | Copy                               | NR                   | NR                        |

**Date:** December 14, 2016

**Company:** Kentucky Power Company

**Contractor Name:** Asplundh Tree Service

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 02574631X110 Amd#5

**Term:** September 5, 2012 – May 26, 2018

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** [REDACTED] (Adding [REDACTED] per TEC)

**Description of Amendment:** Updating ECI table reference, rates, fuel rate, rate clarifications, and forestry goals and procedure document, removal of KPI, and adding funds via TEC



## Certificate Of Completion

Envelope Id: 9BC9758B0446448A9492B6A78268A16E Status: Completed  
Subject: AEP Contract No. 02574631X110; Amd#5: Asplundh Tree Expert Co.  
Source Envelope:  
Document Pages: 36 Signatures: 3 Envelope Originator:  
Certificate Pages: 4 Initials: 8 Gina Crabtree  
AutoNav: Enabled 1 Riverside Plz FL 1  
Envelopeld Stamping: Enabled Columbus, OH 43215-2373  
Time Zone: (UTC-05:00) Eastern Time (US & Canada) gmcrabtree@aep.com  
IP Address: 167.239.221.80





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


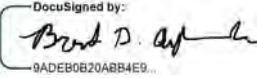
Status: Original Holder: Gina Crabtree Location: DocuSign  
12/14/2016 10:52:36 AM gmcrabtree@aep.com

## Signer Events

### Signature

### Timestamp

|   |   |   |
|---|---|---|
| <p>Sonia Pickens<br/>srvaughan@aep.com<br/>Category Mgr<br/>American Electric Power<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Not Offered via DocuSign<br/>ID:</p>                           | <p><br/>Using IP Address: 167.239.221.84</p>   | <p>Sent: 12/14/2016 11:00:53 AM<br/>Viewed: 12/14/2016 11:04:45 AM<br/>Signed: 12/14/2016 11:05:36 AM</p> |
| <p>Matt Curtis<br/>mpcurtis@aep.com<br/>Director, T&amp;D Services<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 11/2/2016 5:32:00 PM<br/>ID: 5721ec11-5e5a-41d9-b30b-e29f9a2624bb</p> | <p><br/>Using IP Address: 167.239.221.81</p>  | <p>Sent: 12/14/2016 11:05:38 AM<br/>Viewed: 12/14/2016 11:06:59 AM<br/>Signed: 12/14/2016 11:07:04 AM</p> |
| <p>Dusty Roll<br/>droll@aep.com<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 11/30/2016 5:29:11 PM<br/>ID: 39a85ba2-0e2e-4944-9f27-d31225212acf</p>                                   | <p><br/>Using IP Address: 167.239.221.85</p> | <p>Sent: 12/14/2016 11:07:06 AM<br/>Viewed: 12/14/2016 1:16:49 PM<br/>Signed: 12/14/2016 1:41:08 PM</p>   |
| <p>Gregory A Bell<br/>gabell@aep.com<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 2/17/2016 2:49:47 AM<br/>ID: 60a7b411-0823-4913-b894-de97874ad78c</p>                               | <p><br/>Using IP Address: 167.239.221.86</p> | <p>Sent: 12/14/2016 11:07:07 AM<br/>Viewed: 12/14/2016 12:52:21 PM<br/>Signed: 12/14/2016 12:54:48 PM</p> |

| Signer Events   | Signature  | Timestamp   |
|---|--|---|
| Kevin Patton<br>kbpatt@aepp.com<br>Business Analyst Sr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/5/2014 2:08:35 PM<br>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409     | <br>Using IP Address: 167.239.221.81                        | Item No. 20<br>Attachment 1<br>Page 206 of 1469<br>REDACTED<br>Sent: 12/14/2016 11:07:07 AM<br>Viewed: 12/14/2016 1:31:35 PM<br>Signed: 12/14/2016 1:33:53 PM |
| Walter A. Sherry<br>washerry@aepp.com<br>Forestry Operation Manager<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 7/1/2014 7:08:14 PM<br>ID: ca043d9b-aaab-40e4-bee5-8c449d93d309                   | <br>Using IP Address: 167.239.221.88                        | Sent: 12/14/2016 11:07:07 AM<br>Viewed: 12/14/2016 2:28:13 PM<br>Signed: 12/14/2016 2:29:06 PM  |
| Everett Phillips<br>egphillips@aepp.com<br>Managing Director Distribution Operations<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 7/3/2014 10:29:58 AM<br>ID: 0a7983a5-0efd-401d-b4b7-bbcb224a8091 | <br>Using IP Address: 108.86.234.75<br>Signed using mobile  | Sent: 12/14/2016 2:29:09 PM<br>Viewed: 12/14/2016 5:46:34 PM<br>Signed: 12/14/2016 5:46:56 PM   |
| Matthew Satterwhite<br>mjsatterwhite@aepp.com<br>Kentucky Power President<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 12/21/2016 8:42:45 AM<br>ID: 38ce43fc-d438-4489-b60c-58f8dec43df2           | <br>Using IP Address: 167.239.221.81                       | Sent: 12/14/2016 5:46:59 PM<br>Viewed: 12/21/2016 8:42:45 AM<br>Signed: 12/21/2016 11:27:41 AM  |
| Brent Asplundh<br>Brent@asplundh.com<br>Brent D. Asplundh, EVP<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 12/21/2016 1:34:43 PM<br>ID: fff403f6-49ee-4cfa-8c4f-d6af493b4558                      | <br>Using IP Address: 12.54.91.133<br>Signed using mobile | Sent: 12/21/2016 11:27:45 AM<br>Viewed: 12/21/2016 11:38:36 AM<br>Signed: 12/21/2016 1:32:41 PM   |

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| <b>Editor Delivery Events</b>       | <b>Status</b>    | <b>Timestamp</b> |
| <b>Agent Delivery Events</b>        | <b>Status</b>    | <b>Timestamp</b> |
| <b>Intermediary Delivery Events</b> | <b>Status</b>    | <b>Timestamp</b> |
| <b>Certified Delivery Events</b>    | <b>Status</b>    | <b>Timestamp</b> |
| <b>Carbon Copy Events</b>           | <b>Status</b>    | <b>Timestamp</b> |

| Carbon Copy Events  | Status        | Timestamp  |
|---|---------------|--|
| AEP Audit<br>gbscontractassessments@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:                                     | <b>COPIED</b> | Sent: 12/21/2016 1:32:47 PM<br>Viewed: 12/21/2016 1:35:22 PM |
| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/18/2015 3:27:15 PM<br>ID: 592a4afd-f450-4104-bdeb-635cbde989d5 | <b>COPIED</b> | Sent: 12/21/2016 1:32:47 PM<br>Viewed: 12/21/2016 1:35:22 PM |

Item No. 20  
Attachment 1  
Page 27 of 1469  
REDACTED

**Notary Events** **Timestamp**

**Envelope Summary Events** **Timestamps**

| Envelope Summary Events | Status           | Timestamps            |
|-------------------------|------------------|-----------------------|
| Envelope Sent           | Hashed/Encrypted | 12/21/2016 1:32:47 PM |
| Certified Delivered     | Security Checked | 12/21/2016 1:32:47 PM |
| Signing Complete        | Security Checked | 12/21/2016 1:32:47 PM |
| Completed               | Security Checked | 12/21/2016 1:32:47 PM |

**Electronic Record and Signature Disclosure**

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

## CONTRACT NO. 025765990000X103

This Contract No. 025765990000X103 (“Contract”) is made between **American Electric Power Service Corporation**, a New York corporation, as agent for **Appalachian Power Company**, **Kingsport Power Company**, and **Kentucky Power Company** (“Owner” or “AEP”), and **Asplundh Tree Expert Co.**, a Pennsylvania corporation (“Contractor”). Contractor and Owner may be referred to collectively as the “Parties” and individually as a “Party.”

### 1. DESCRIPTION OF SERVICES

Subject to the terms and conditions hereof, Contractor agrees to furnish to Owner, on an as-needed basis, all supervision, labor, equipment and specified materials necessary to perform transmission and distribution vegetation management services, as delineated below, within Owner’s service areas (“Work”).

Vegetation management services may include but not be limited to the following:

Emergency- Local emergency restoration tree work on an on-call basis.

Herbicide and Tree Growth Regulator (TGR)- Application of appropriate herbicides and/or TGR in service areas as directed by Owner.

Mowing- Provide mowing services in Owner service areas where easements restrict the ability to use any other method for vegetation control and Owner has determined that mowing is the preferred maintenance method.

Removals- Hazard tree removals performed outside of Owner’s routinely maintained right-of-ways.

Right-of-Way Maintenance- Tree and brush work on and off-road and/or cross-country on transmission and distribution lines, based upon Owner’s specifications.

Side Trimming- Tree trimming along the edges of right-of-ways using either aerial lifts, climbing crews, aerial saw, chemicals and/or mechanical side trim equipment.

Storm Restoration- Emergency restoration in areas affected by storm damage without debris cleanup unless otherwise specified.

Work Planning- Perform inspection and planning services and develop plans, strategies and administrative work for various methods of vegetation management to be performed in Owner’s service areas. Work planning services shall be performed using qualified transmission and distribution Contract Utility Foresters, Work Planners, Inspectors, Pesticide Applicators and TGR Pre-Notifiers as described in the documents attached in Exhibit B.

This Contract covers only such Work as may be authorized by Owner and shall not constitute an exclusive agreement between Owner and Contractor. Owner reserves the right to use its own forces, equipment, tools, conveyances and materials or those of another vendor to perform the same or similar Work. Parties agree this Contract does not authorize Contractor to begin performance of any Work, nor does it guarantee Contractor any minimum volume of Work.

## 2. ENGAGEMENT PROCESS

All proposed Work will be discussed and assigned in periodic communications between Owner and Contractor, at which time Parties will agree upon the type of Work, the circuit in which Work will be performed and the pricing mechanism to be utilized. Owner shall authorize Work through the following process:

Work shall be requested by Owner via a written or electronic order request (individually or collectively referred to as "Work Request"). Each Work Request shall reference this Contract as governing the Work provided thereunder. The Work Request shall contain a scope of Work, the requested location, the term for which the Work shall be provided for that service area, any applicable specifications, this Contract number, any invoicing specifications, the pricing model utilized, and any other documents relevant to the Work.

Parties agree that any terms and conditions inconsistent with, additional to, or different than this Contract that may be preprinted or attached to a quote, acknowledgement, job authorization, Work Request, or any other written document that the Parties may use for the ordering or delivery of Work hereunder, shall not apply and each Party hereby rejects all such terms and conditions.

## 3. CONTRACT DOCUMENTS

Contractor and Owner agree that the Work shall be performed in accordance with the following Exhibits:

**Exhibit A –General and Supplementary Terms**, consisting of the following documents, which are attached hereto and made a part hereof;

1. AEP-Asplundh Agreed Exceptions for Contract No. 025765990000X103 dated May 15, 2012;
2. AEP General Terms and Conditions for Labor and Services, dated March 2009 ("AEP General Terms and Conditions"); and
3. Supplementary Terms and Conditions for Forestry Contracts, dated June 24, 2011 ("Supplementary Terms").

**Exhibit B –Forestry Terms and Instructions**, consisting of the following documents, which are attached hereto and made a part hereof;

4. AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated May 14, 2009;
5. AEP Forestry Instructions for Forestry Contract Crew Audits, dated January 2007, including its Sample Audit Form ("Audit Instructions");
6. Transmission Vegetation Management Program ("TVMP"), dated July 30, 2011; and
7. AEP Transmission Forestry Specs for ROW Maintenance Contracts, dated October 25, 2010.

**Exhibit C –Rates**, consisting of the following documents, which are attached hereto and made a part hereof;

8. AEP Transmission Forestry Rate Clarifications for ROW Maintenance, dated May 15, 2012;
9. Workers' Compensation Rate Adjustment Process, dated June 15, 2012;

10. Owner's Unit Price Model, dated April 30, 2012, and the Lump Sum Price Model dated April 30, 2012;
11. Labor Descriptions, dated August 1, 2011;
12. Contractor's Rates – Standard Labor Rates, Major Storm Rates, Equipment Rates, Material Pricing, Unit Pricing, all dated April 1, 2012 (individually or collectively, the "Rate Sheets");
13. A sample Work Request for Unit Price/Time and Materials Work, a sample Work Request for Lump Sum Work, and all applicable subsequently executed Work Requests; and
14. A sample Pricing Change Order Request Form and all applicable subsequently executed Pricing Change Orders.

**Exhibit D –KPI**, consisting of the following documents, which is attached hereto and made a part hereof;

15. AEP – Asplundh 2012/2013 Corporate Key Performance Incentive Plan Guidelines, ("CKPI"); and
16. AEP Transmission 2012/2013 Key Performance Incentive Plan Guidelines for Asplundh APCO, KPCO, & KGPCO ("KPI").

In the event of a conflict of specific terms among any of the Contract documents, the conflict shall be resolved by interpreting the documents in the following order of priority:

- a. any executed amendment to the Contract;
- b. this Contract Letter;
- c. Exhibit A;
- d. Exhibit B;
- e. any executed Pricing Change Order;
- f. Exhibit C;
- g. Exhibit D; and
- h. the applicable Work Request.

#### **4. TERM**

This Contract is made to be effective as of the date of Owner's signature below ("Effective Date") and shall terminate on March 31, 2017, unless terminated earlier in accordance with this Contract. If this Contract is terminated or expires prior to Work under a Work Request being completed, unless Parties agree otherwise in a signed writing, the Work under such Work Request shall be continued pursuant to the terms of this Contract.

#### **5. PRICING**

Parties agree that all Work performed under this Contract shall be completed on a Lump Sum, Unit Price, and/or Time and Materials basis priced in accordance with Contractor's Rate Sheets in Exhibit C of the Contract.

Labor rates as described in Contractor's Rate Sheets shall be held firm for the first six months of the Contract. It will be the sole discretion of the Owner to modify labor rates at that time, or to hold labor

rates firm until one year after the Effective Date of this Contract. All other rates in Contractor's Rate Sheets shall be held firm until one year after the Effective Date of this Contract.

Annual Rate Adjustments: Contractor's Rate Sheets may be revised or updated during an annual Contract amendment process. Contractor must submit all proposed rates by February 15<sup>th</sup> of each year of the Contract starting in 2014. Approved annual rate adjustments shall become effective each year on April 1st beginning in 2014.

Pricing Change Order Process: If Contractor has unforeseen changes to Contractor's Rate Sheets that do not conform to the Annual Rate Adjustment process described above, these changes may be made, upon Owner discretion, in accordance with the following procedures:

- Changes to Contractor's Rate Sheets shall be made using the Pricing Change Order Request Form ("Pricing Change Order") included in Exhibit C and must be presented in the authorized pricing format designated by Owner.
- Each Pricing Change Order must be submitted to the AEP Manager, Forestry Operations, as listed in Section 10 below and submitted at least 30 days before the desired effective date for the new rates. If Contractor fails to submit its proposed Pricing Change Order at least 30 days prior to the desired effective date, the proposed Pricing Change Order will not be considered and existing Contractor's Rate Sheets shall remain in effect.
- If Contractor's Pricing Change Order is accepted by Owner, the revised Contractor's Rate Sheets shall be incorporated into Exhibit C of the Contract upon the authorized signature of the Parties and shall become effective as of the date of the latter signature of the Pricing Change Order.

Lump Sum Work: Parties agree to designate the specific pricing for Work performed on a Lump Sum basis in the Work Request. In the event the Contractor is assigned additional Work that was not included in the original Work Request, that Work will be priced utilizing the Contractor's Rate Sheets included in Exhibit C.

## **6. KEY PERFORMANCE INCENTIVES**

CKPI as described in Exhibit D will measure the Contractor's performance, at the corporate level and provide a penalty to the Contractor when performance does not meet established benchmarks. The documents in Exhibit D provide full details of the CKPI.

KPI as described in Exhibit D will measure Contractor's performance and provide a monetary incentive to Contractor when performance exceeds established benchmarks and a penalty to Contractor when the benchmarks are not met. The KPI process is to be reviewed annually and modifications to be mutually agreed by the Parties. The documents in Exhibit D provide full details of the KPI.

## **7. FUEL ADJUSTMENTS**

The base fuel price is \$4.00 per gallon ("Base Fuel Price"). The weekly fuel price is the state average for regular grade unleaded gasoline taken from the American Automobile Association's website ("Weekly Fuel Price"). When preparing the weekly invoices, if that week's Weekly Fuel



Price differs from the Base Fuel Price by more than ten (10) cents, a fuel adjustment for each piece of equipment will be calculated by using the following formula:

$$\text{Fuel adjustment} = [(\text{Weekly Fuel Price}) - (\text{Base Fuel Price})] \times \text{gallons/hour} \times \text{Equipment hours billed}$$

The gallons/hour figure is taken from the Contractor's Rate Sheets in Exhibit C. The sum of the fuel adjustments for each piece of equipment used that week shall be added to or subtracted from that week's invoice amount. If the Unit Price Model, as described in Exhibit C, is used and billing is done with a single invoice when all the Work is completed, the Weekly Fuel Price used shall be that for the week in which the invoice is being prepared.

During the first quarter of each year, beginning in 2014, the equipment rates shall be adjusted based on the average gas price for the last quarter of the previous year. The average gas price for the last quarter shall be determined by adding the Weekly Fuel Prices used to calculate the fuel adjustment for the weeks of October, November and December and then dividing that sum by the number of those weeks. The resulting average gas price for the last quarter will be the new Base Fuel Price. The old Base Fuel Price shall be subtracted from the new Base Fuel Price and the difference shall be added to the hourly rate for each item of equipment on the equipment rates that uses fuel. In accordance with the annual rate adjustment process detailed above in Section 5, the new Base Fuel Price shall be incorporated into Exhibit C - Contractor's Rates.

## 8. MARK-UP ADJUSTMENTS

The mark-up percentages in the Contractor's Rate Sheets are fixed for the duration of the Contract, except as specified herein. Owner and Contractor have reviewed the development of the mark-up percentages in Contractor's Rate Sheets and have agreed that they were reasonably developed and fairly reflect Contractor costs they represent. Accordingly, without restricting any of the audit rights in Article 29.0 of the AEP General Terms and Conditions and except as may be provided elsewhere herein, Parties' intent is that Contractor's actual costs for Workers' Compensation and Public Liability and Property Damage Insurance shall not be subject to audit.

## 9. WORKERS' COMPENSATION ADJUSTMENTS

The mark-up for Workers' Compensation shall be adjusted annually, as described in the Workers' Compensation Rate Adjustment Process in Exhibit C.

## 10. NOTICES AND OPERATION CONTACTS

In accordance with Section 33.0 of the AEP General Terms and Conditions, the representatives of Parties for receipt of notices are:

| Role                             | Name               | E-mail            | Phone          | Address   |
|----------------------------------|--------------------|-------------------|----------------|---|
| AEP Contract Analyst             | Georgiana Sullivan | gsullivan@aep.com | (614) 716-6815 | 1 Riverside Plaza, 9 <sup>th</sup> Fl.<br>Columbus, OH 43215  |
| AEP Manager, Forestry Operations | Walter Sherry      | washerry@aep.com  | (614) 716-2772 | 1 Riverside Plaza, 12 <sup>th</sup> Fl.<br>Columbus, OH 43215 |

|                           |                 |                     |                |  |
|---------------------------|-----------------|---------------------|----------------|--|
| Contractor Representative | Steven Asplundh | steven@asplundh.com | (215) 784-1348 | 708 Blair Mill Rd.<br>Willow Grove, PA 19090 |
|---------------------------|-----------------|---------------------|----------------|--|

### 11. INVOICES

Contractor shall create time sheets in Owner's Right-of-Way Management ("RWM") software system, or other applicable system as designated by Owner, weekly, in arrears. If necessary, paper invoices shall be sent to the Owner Representative as listed on the Work Request and must show this Contract number.

### 12. MISCELLANEOUS

All capitalized terms not defined herein are as defined in the applicable terms and conditions referenced herein.

**IN WITNESS WHEREOF**, Parties hereto have caused this Contract to be signed by their respective officers thereunto duly authorized on the dates set forth below to be effective as of the Effective Date.

**American Electric Power Service Corporation, as agent for Appalachian Power Company, Kingsport Power Company and Kentucky Power Company**

  
\_\_\_\_\_  
signature

Nicholas K. Akins  
print/type name

Chairman of the Board, President, and CEO  
title

9/5/12  
date

**Asplundh Tree Expert Co.**

  
\_\_\_\_\_  
signature

Christopher B. Asplundh, Jr.  
print/type name

Executive Vice President  
title

8/23/12  
date

# EXHIBIT A

**AEP-Asplundh Agreed Exceptions  
dated May 15, 2012  
for Contract No. 025765990000X103**

The AEP General Terms and Conditions are modified as follows:

**Article 16.0 – INSURANCE**

Add the following as a second sentence to Subsection 16.1.8:  
“Contractor may self-insure this exposure.”

**Article 17.0 – INDEMNIFICATION**

Delete Section 17.2 in its entirety and insert the following:

**“TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, “LIABILITIES”), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO THE EXTENT ANY LIABILITIES ARISE FROM OWNER'S NEGLIGENCE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR’S EXPENSE.”**

**Article 23.0 – DEFAULT**

In Subsection 23.1.2, delete “two (2)” and replace with “five (5).”



**GENERAL TERMS AND CONDITIONS FOR  
LABOR AND SERVICES**

**March 2009**

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**AFFIDAVIT OF COMPLETION**

**Exhibit 1**

## GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES

### 1.0 DEFINITIONS

- 1.1 Business Day: "Business Day" means any calendar day, other than a Saturday or Sunday or a calendar day on which U.S. commercial banking institutions are authorized or required by law to close.
- 1.2 Change Order: "Change Order" means a written order as defined and issued in accordance with Article 12.0.
- 1.3 Contract: "Contract" means collectively the Contracting Instrument and all documents referenced in the Contracting Instrument and any Change Orders, amendments or addenda.
- 1.4 Contract Price: "Contract Price" means the price to be paid to the Contractor for the performance of Work as set forth in the Contracting Instrument.
- 1.5 Contracting Instrument: "Contracting Instrument" means the contractual document that identifies the parties, the nature of the Work, the Contract Price, documents to be included as part of a Contract, and other matters relating to a Contract. The Contracting Instrument may be in the form of a contract letter, blanket purchase order, purchase order or other similar documents.
- 1.6 Contractor: "Contractor" means the entity contracting with Owner for the performance of Work.
- 1.7 Direct Cost: "Direct Cost" means the actual costs and charges incurred and payments made by Contractor, its Subcontractors, for Site equipment, materials, services and labor (including payroll burden and expenses) which are directly attributable to the performance of Contractor's Work hereunder. Direct Cost includes Contractor's home office or Site labor to the extent Contractor's home office or Site labor is directly assignable to the Work which must be demonstrable under the circumstances. Direct Cost shall not include corporate, general and administrative costs including home office functions, sales, marketing, accounting, human resources, information technology, payroll, profit, research, development, quality assurance and control, purchasing, safety, management, administration, warranties, insurances, off-Site or other unabsorbed costs.
- 1.8 Final Acceptance: "Final Acceptance" means Owner's determination that the Work has been completed in accordance with the Contract requirements.
- 1.9 Initial Acceptance: "Initial Acceptance" means Owner's determination prior to final inspection and testing that the Work conforms to the Contract requirements for purposes of receipt.
- 1.10 Owner: "Owner" means any one or more of the companies of the American Electric Power System as may be specified in the Contract Instrument.
- 1.11 Site: "Site" means Owner's property or such other premises (including adjacent bodies of water and property owned or controlled by a third-party) upon which the Work is to be performed.
- 1.12 Subcontractor: "Subcontractor" means vendors, suppliers, consultants, and subcontractors of any tier, materialmen, professionals, laborers, and all other persons providing equipment, materials or services directly or indirectly to Contractor in connection with the Work.
- 1.13 Work: "Work" means all of Contractor's obligations under the Contract.

## 2.0 CONTRACTOR'S OBLIGATIONS

- 2.1 Contractor shall at its expense provide everything necessary for the complete, proper and timely execution of the Work including, but not limited to, home office support, supervision, labor, tools, transportation, safety equipment, construction equipment, temporary utilities and facilities, equipment to be installed, materials and supplies, unless explicitly excluded in the Contract. Contractor's performance of the Work shall include everything requisite and necessary to comply with prudent electric utility industry standards and to complete its Work, notwithstanding the fact that every item necessarily involved may not be specifically mentioned. Details and items not indicated by the Contract documents shall be adequately and properly performed by Contractor at no extra cost if such details and items are necessary to complete the intent of the Contract or otherwise to complete the Work.
- 2.2 Contractor is responsible for considering the conditions affecting the Work including, but not limited to, conditions affecting the transportation, disposal, handling and storage of materials; the availability and cost of labor, water, electric power, utilities and roads; the uncertainties of weather, river stages, and similar physical conditions at the Site; the conformation and condition of the ground; and the character of equipment and facilities needed. Contractor shall take into account the character, quality and quantity of surface and subsurface materials or obstacles to be encountered to the extent this information is reasonably ascertainable from the contract documents or an inspection of the Site.
- 2.3 Contractor shall immediately and before such conditions are disturbed notify Owner of: (a) subsurface or latent physical conditions at the Site which differ materially from those indicated in the Contract; (b) unusual geologic conditions at the Site which differ materially from conditions ordinarily encountered or from conditions addressed in the Contract; or (c) artifacts or articles which appear to have archaeological or historical significance. Owner shall promptly investigate such conditions and, if such conditions do materially differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of the Work, the parties shall agree to amend the Contract. No claim of Contractor under this clause shall be allowed unless Contractor has given immediate notice as required above and confirmed such notice in writing within ten (10) days of discovery.
- 2.4 Contractor shall have an authorized representative at the Site to whom Owner may give instructions at all times when Work is being performed.
- 2.5 Contractor shall assign qualified and competent personnel to perform the Work and have qualified and competent supervision at the Site at all times to direct and observe the Work. Key personnel shall not be removed from the Work without prior notice to, and consent by Owner which shall not be unreasonably withheld. Contractor will investigate and take appropriate action with respect to any personnel problems brought to its attention by Owner.
- 2.6 Contractor shall confine all of its operations and personnel to those areas of the Site to which Owner authorizes access.
- 2.7 Contractor's personnel may not operate Owner's tools, vehicles, materials or equipment ("Owner's Equipment") without Owner's prior authorization. If Contractor borrows Owner's Equipment, Contractor (a) agrees that Owner has provided Owner's Equipment AS IS, with no representations or warranties; (b) assumes full responsibility for the protection of the borrowed Owner's Equipment; (c) assumes all liability for injuries or damages resulting from the use of the borrowed Owner's Equipment; and (d) agrees to return the borrowed Owner's Equipment to Owner in the same condition as when it was borrowed, or, if repairs are necessary, to cause such repairs to be performed promptly at Contractor's expense before the Owner's Equipment is returned to Owner. Owner has no obligation to lend Owner's Equipment to Contractor.



- 2.8 Contractor shall cooperate with Owner and others working at or near the Site. Contractor shall promptly report to Owner any defects in the work of others which affects the Work. Failure to report such defects constitutes acceptance of the conditions by Contractor. Contractor shall properly fit, connect and coordinate its Work with that of Owner and other contractors.
- 2.9 Contractor shall keep all of its work areas free from trash and debris, and keep its work areas "broom clean" on a continuous basis.
- 2.10 Contractor shall secure and protect its materials, tools, equipment and the Work, including Owner-provided materials and equipment.
- 2.11 Contractor is responsible for the proper execution of the Work with respect to any base lines and bench marks established by Owner.
- 2.12 If the Work is subject to prevailing wage requirements, Contractor agrees to comply with such requirements.
- 2.13 Contractor, its Subcontractors, and their respective employees and agents involved in the Work shall adhere to the provisions contained in Owner's Code of Business Conduct which can be found at Owner's website.

### 3.0 TERM AND EFFECTIVE DATE

- 3.1 The Contract shall commence as of the effective date and, unless earlier terminated as provided in Article 27.0, shall terminate on the termination date set forth in the Contract. Unless specified elsewhere in the Contract, the effective date of the Contract shall be the earlier of the date on which Contractor begins performance hereunder or the date of the latter signature on the Contract.

### 4.0 RELATIONSHIP OF THE PARTIES

- 4.1 Contractor and all of its employees and Subcontractors are, with respect to Owner, independent contractors. Contractor will be solely responsible for the supervision, direction, and control of its employees and Subcontractors. Contractor is responsible for the payment of all compensation, benefits, and employment taxes with respect to the Contractor's employees.

### 5.0 ASSIGNMENT AND SUBCONTRACTING

- 5.1 Contractor shall not assign or otherwise dispose of the Contract, or any obligations hereunder, without the written consent of Owner. Any assignment or disposal without the written consent of Owner shall be null and void.
- 5.2 Prior to entering into any subcontract, Contractor shall submit to Owner a subcontractor data sheet that includes the name and address of the Subcontractor and the scope of work proposed to be included under such subcontract. Within five (5) Business Days of receipt of a Subcontractor data sheet, Owner may reject such Subcontractor without cost or contract extension by giving written notice of such rejection to Contractor.
- 5.3 Contractor is responsible for the selection of any Subcontractor and for the Subcontractor's proper performance of the Work assigned to it. If the work of a Subcontractor is not in compliance with the Contract requirements, Contractor shall take immediate steps to bring the Subcontractor's work into compliance and, at Owner's written request, terminate its contractual relationship with the Subcontractor as it relates to the Work at no cost to Owner.

6.0 LABOR RELATIONS

- 6.1 Contractor shall comply with any project, national or local labor agreements that are applicable to the Work or Site. Contractor shall cooperate with Owner and other contractors in establishing and maintaining labor work rules and practices.
- 6.2 When the Work is performed by building and construction trades labor, a pre-job conference shall be held with local labor representatives prior to starting Work. Owner shall be afforded the opportunity to attend and participate in pre-job conferences.
- 6.3 Contractor shall provide immediate notice to Owner of any actual or potential labor dispute that may delay the timely, efficient and productive performance of the Work.
- 6.4 Contractor shall inform and cooperate with Owner on labor matters. Contractor shall consult with Owner prior to rendering its decision(s) on labor matters that may impact the timely, efficient and productive performance of the Work.
- 6.5 Contractor shall exercise its management rights contained in applicable labor agreements to establish, maintain, and enforce work rules conducive to timely, efficient, productive and harmonious work operation. Contractor shall take the necessary steps available to resolve grievances, jurisdictional disputes, or other violations of collective bargaining agreements.

7.0 SAFETY AND SECURITY

- 7.1 Contractor shall perform the Work in a safe and careful manner, provide first aid facilities and transportation, and use such safety devices and methods as are necessary to protect its employees, agents, Subcontractors, Owner's employees and agents, other contractors and the public from bodily injury and property damage.
- 7.2 Contractor shall comply with and enforce all laws, rules and regulations applicable to safety and health standards, including, but not limited to, the Occupational Safety and Health Act of 1970 (OSHA) and any revisions of OSHA or successor legislation.
- 7.3 Contractor shall comply with project and Site safety and security rules and all procedures issued by Owner, provided that such rules and procedures do not conflict with OSHA or other safety laws, rules or regulations. Contractor shall assign a competent person at all times to manage, coordinate and enforce its safety program during performance of the Work.
- 7.4 Contractor shall provide Owner with Material Safety Data Sheets (MSDS) for all applicable materials prior to delivery to Owner's Site.
- 7.5 Contractor shall obtain Site permits or approval from Owner for its vehicles, any excavation, use of explosives, access to restricted areas, use of Owner's Equipment, tools and facilities, and other similar activities.
- 7.6 Owner will arrange all necessary clearances on energized equipment, electrical and communications circuits, piping systems or other operational equipment. Contractor shall notify Owner requesting the clearances prior to the scheduling of such Work. Contractor shall comply with Owner's clearance permit system regarding tagout and lockout of electrical and mechanical systems and other equipment.
- 7.7 Contractor shall fully inform Owner in writing regarding the types, quantities and use of any hazardous materials brought on the Site; the types and quantities of hazardous wastes being generated from the Work; and Contractor's program for proper storing, handling and disposal of such materials in a safe and secure manner.

- 7.8 Contractor shall immediately inform Owner of all regulatory safety, health and environmental inspections, citations and penalties associated with the Work. Contractor shall provide Owner with written reports and copies of all documents submitted to or by regulatory agencies and insurance companies.
- 7.9 Contractor shall promptly inform Owner of any injuries to its employees, agents, Subcontractors, or other persons arising out of the Work that require medical treatment.
- 7.10 Contractor shall obtain, maintain, and properly complete all record keeping required by regulatory agencies. Upon request, Contractor shall provide Owner with copies of all logs, reports and other records.
- 7.11 Contractor shall investigate all accidents resulting in personal injury, property damage, or near misses to determine root cause(s) and corrective action(s). Upon request, Contractor shall provide Owner with a copy of investigative reports, including all documents submitted to insurance companies.
- 7.12 All of Contractor's employees, agents, Subcontractors, vehicles, trailers, etc. entering or leaving the Site are subject to inspection at any time by Owner.
- 7.13 If a safety violation or other unsafe condition causes imminent danger, Owner may immediately shut down the Work involved without advance written notice.
- 7.14 Contractor and all Subcontractors performing Work at Site must have a substance abuse program. This program must apply to all personnel. Minimum requirements of this program shall include pre-hire testing, testing for cause and if requested, random testing. Screening substances and their associated cut-off limits are listed below.

| Drug<br>Classes  | Screening Cut-Off<br>Limit (ng/ml) | Confirmation Cut-Off<br>Limit (ng/ml) |
|------------------|------------------------------------|---------------------------------------|
| Amphetamines     | 1,000                              | 500                                   |
| Benzoyllecgonine | 300                                | 150                                   |
| Cannabinoids     | 50                                 | 15                                    |
| Opiates          | 2,000                              | 2,000                                 |
| Phencyclidine    | 25                                 | 25                                    |

Blood & Breath alcohol content : .02% per Department of Transportation.

Testing shall be performed by a testing facility certified by Department of Health & Human Services. Personnel must have evidence of having tested negative within a year prior to employment. Owner will accept conditional employment predicated upon (a) employee(s) furnishing evidence that they have submitted to testing within forty-eight (48) hours of initial employment and (b) employee(s) furnishing evidence of negative test results within five (5) work days of initial employment. Contractor shall ensure personnel are "drug free". Owner reserves the right to examine evidence outlined herein. Contractor's program shall incorporate reciprocity on "drug free" employee verification to minimize Owner's economic impact and employee recertification while maintaining the program's intent.

- 7.15 If required by Owner, Contractor must meet certain security criteria set forth herein.
  - 7.15.1 Contractor shall submit to Owner a copy of its background investigation process for Owner's review and file. If Owner, in its sole discretion, determines that Contractor's background investigations do not meet certain specific requirements, then Contractor, at

its expense, must perform a background investigation that does meet Owner's certain specific requirements on each individual designated by Contractor to perform Work, or is performing Work on behalf of Contractor, for Owner (referred to herein for purposes of this Article, as an "individual"). Notwithstanding anything to the contrary stated herein, Owner reserves the right to conduct a background investigation on each individual at Contractor's expense.

- 7.15.2 Owner's certain specific requirements of background investigations include the following: (i) determination of whether an individual has been convicted of a felony crime in each state where the individual has resided during the past seven years; (ii) performance of the background investigation at the state level (in other words, to only search the records of the county in which the individual has resided during the past seven years is not a sufficient background investigation); and (iii) if the individual is to operate a motor vehicle while performing Work for Owner, then a state operator's license abstract must be completed in the states where the individual has been licensed as a vehicle operator during the past seven years.
- 7.15.3 If any background investigation reveals or indicates that an individual has been convicted of a felony crime, then the Contractor must notify the Owner prior to the individual commencing Work. Owner in its sole discretion shall have the option of barring from any Work Site any individual who has a reported felony conviction. Owner may audit or review specific Contractor screening files to ensure compliance with the Contract.
- 7.15.4 If an individual requires unescorted access to Owner's critical cyber assets, then Owner will conduct its own background investigation, which will include a Social Security Number verification. Additional specific provisions or requirements related to any Owner conducted background investigation pursuant to this Section 7.15.4 will be communicated to Contractor prior to implementation of such background investigation.
- 7.15.5 Contractor shall not perform any screening activities that violate the federal Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964 or any other applicable law in any circumstances. Contractor shall ensure that the substance and manner of any and all background investigations performed by Contractor conform fully to applicable law.
- 7.16 "Personally Identifiable Information" or "PII" means any information to which Contractor is provided access that could identify an individual either directly or indirectly including, without limitation to the individual's name, credit card numbers, social security number, biometric, bank account numbers, passport numbers, computer passwords or health, financial or employment information and other individual confidential information.
- 7.16.1 To the extent that Work under the Contract requires Contractor to be given access to PII gathered and/or maintained by or on behalf of Owner, or in the event Contractor acquires access to or encounters any PII during performance of the Work, Contractor shall after receipt thereof, treat such PII as confidential and safeguard such PII from unauthorized use and disclosure. Upon request of Owner, Contractor shall have its employees execute a confidentiality agreement protecting PII. Contractor agrees not to appropriate such PII for its own use or to disclose such PII to third parties unless specifically authorized by Owner in writing. Contractor shall ensure that its employees will not discuss, divulge or disclose any such PII to any person or entity except those persons directly concerned with and only to the extent necessary to complete the performance of the Work. Contractor shall access, use and process PII and other data on behalf of Owner only for the purposes specified in the Contract.

- 7.16.2 Contractor shall comply with (i) NERC Reliability Standards as applicable, including without limitation, those relating to Critical Infrastructure Protection, (ii) Owner's security standards, and (iii) such further instructions as Owner may provide regarding the processing of such PII. Contractor shall inform Owner promptly if it has reason to believe that applicable law (or changes in applicable law) prevents Contractor from fulfilling the obligations relating to treatment of PII or other data under Owner's security standards and/or the Contract.
- 7.16.3 To the extent permitted by law, Contractor shall notify Owner promptly and act only upon Owner's instruction concerning: (a) any request for disclosure of PII or other data by law enforcement or other governmental authority; (b) any request by law enforcement or other governmental authority for information concerning the processing of PII or other data in connection with the Contract; or (c) any request received directly from an individual concerning his/her PII.
- 7.16.4 Contractor may not store PII on computers, mobile devices, including but not limited to cellular telephones and/or personal digital assistants, servers and/or storage devices including removable media (any of which, hereinafter known as a "Computer"), unless required for the performance of Work. Any such information must be deleted from a Computer, in a manner that ensures that it cannot be accessed or read, as soon as such storage is no longer required for the performance of Work.
- 7.16.5 Upon termination of the Contract or upon Owner's request, Contractor must promptly (a) return all PII in written form to Owner, and (b) delete all PII in Contractor's possession or control (on computer or in whatever other form or media) in a manner that ensures that this information cannot be accessed or read.
- 7.16.6 Contractor shall administer a monitoring process to ensure compliance with Section 7.16 and the related subsections hereof, promptly report any breaches to Owner, and implement immediate, appropriate corrective actions to contain and prevent recurrence. Contractor shall report to Owner immediately upon discovery of a real or suspected loss of PII. In the event of a breach of this provision or the occurrence of any other event regarding PII that requires notification under applicable law, Contractor agrees to assume responsibility for informing all such individuals in accordance with applicable law.
- 7.16.7 In addition to any remedy available to Owner under the Contract, Contractor acknowledges that any breach of Section 7.16 or the related subsections hereof by Contractor or its Subcontractors may subject Contractor to civil and criminal penalties. Contractor shall include the full text of Section 7.16 and the related subsections 7.16.1 through 7.16.7 in all appropriate subcontracts. However, including such provision in the subcontracts shall not relieve Contractor of its obligation to ensure compliance with the provisions of Sections 7.16.1 through 7.17.7.

## 8.0 MATERIALS

- 8.1 All Contractor-furnished materials, equipment and related products (referred to in this Article 8.0 as "Materials"), which are to be installed shall be new and meet the requirements of all applicable codes. Materials which will not become a part of the permanent installation are not required to be new. Owner reserves the right to reject materials which have not been previously used but which have been in storage for an unreasonable period of time. Title to and risk of loss of the Materials shall pass to Owner upon Final Acceptance of the Work. Title to the Materials shall be free and clear of all liens and encumbrances.

- 8.2 Contractor shall not substitute Materials specified in the Contract unless authorized by Owner in writing. Unless substitution has been so authorized, Contractor shall, at its expense, remove and replace any improperly substituted material.
- 8.3 Upon Owner's request, Contractor shall, at its expense, submit to Owner samples of Contractor-furnished materials. Contractor must obtain Owner's written approval before performing Work involving the use of materials for which samples have been requested. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes. Materials used shall conform to the approved samples. Contractor shall remove and replace nonconforming materials at its expense.

#### 9.0 INSPECTION AND ACCEPTANCE

- 9.1 Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed conforms to the Contract requirements. Owner reserves the right to review and approve the adequacy of Contractor's inspection system. Contractor shall provide all quality control and quality assurance program information requested by Owner.
- 9.2 Owner shall have free access to the Work for inspection purposes. Owner's inspection, receipt or Initial Acceptance of the Work shall not relieve Contractor of its obligation to comply with the terms of the Contract.
- 9.3 Each party shall bear its own expenses in performing inspections, except that (a) Owner may use Contractor's facilities, ladders and scaffolds to perform inspections of the Work; (b) Contractor shall pay Owner's expenses in re-inspecting Work which was rejected as non-conforming to the Contract requirements in an earlier inspection; (c) Contractor shall pay the costs of uncovering and re-covering Work for Owner's inspection if Contractor failed to give Owner reasonable notice that the Work was ready to be covered; and (d) prior to Final Acceptance, if Owner requests an inspection of Work already completed which requires removing and tearing out Work, and the Work is found to be materially defective, Contractor shall pay the expenses of inspection and reconstruction, but if the Work is found to be in conformance with the Contract requirements, Owner shall pay the expenses of inspection and reconstruction.
- 9.4 Owner will not pay for defective work. Contractor shall repair or replace all defective work at its expense. Contractor shall promptly remove from the Site any Contractor-furnished materials that do not comply with the requirements of the Contract. If Owner-furnished materials have been used in any defective work, the cost of such materials shall be backcharged to Contractor.
- 9.5 Owner shall have the right to take possession of or use any part of the Work. Owner's possession or use shall not constitute Initial Acceptance or Final Acceptance of the Work.
- 9.6 Unless otherwise provided in the Contract, Final Acceptance by Owner shall be made as soon as practicable after all Work has been completed and inspected. Any part of the Work not rejected by Owner following Final Inspection shall be deemed to have achieved Final Acceptance.

#### 10.0 SCHEDULE

- 10.1 Contractor shall perform the Work to meet the schedule date(s) set forth in the Contract. Contractor shall not commence Work until authorized by Owner to do so.
- 10.2 In a format acceptable to Owner, Contractor shall develop, update, maintain and provide to Owner a written schedule for execution of the Work. The schedule shall be time scaled, complete, and accurate in detail depicting Contract milestone dates, work activities and durations. Upon review and approval by Owner, this schedule shall become the Contract schedule. Updates to the Contract schedule shall

be provided to Owner on at least a monthly basis. Updates shall depict actual progress measured against planned progress.

- 10.3 Contractor shall notify Owner within 24 hours of the first knowledge that any completion date(s) will not be met and shall, within five (5) Business Days thereafter, submit a detailed program depicting the plans and actions being taken to regain the lost time. The notice shall not limit any other rights or remedies afforded Owner under the Contract or by law.

## 11.0 TERMS OF PAYMENT

- 11.1 Except as otherwise provided in the Contract, the following terms of payment shall apply:

11.1.1 The Contract Price set forth in the Contract shall constitute full and complete payment for all Work.

11.1.2 Contractor shall submit invoices with proper documentation to Owner for the Work completed or for milestones achieved during the prior month. Owner may withhold all or any part of payment in an amount necessary to protect Owner from loss due to the occurrence, or imminent occurrence, of (i) Contractor's breach or failure to perform in accordance with the Contract, (ii) defective Work, (iii) Contractor's failure to pay any Subcontractor, (iv) other claims by Owner against Contractor, including indemnity claims, and (v) damages for delay or any agreed upon liquidated damages.

11.1.3 Owner shall pay 90% of each properly submitted and accepted invoice within thirty (30) days of receipt. The release of retention shall become due and payable thirty (30) days after the date of Final Acceptance of the Work.

11.1.4 Each invoice shall contain a statement that all bills for material and labor relating to the Work have been paid in full by Contractor, and there are no unpaid bills for which a lien could be filed. If requested by Owner, Contractor shall provide evidence of such payments. The final invoice for the Work shall be accompanied by a satisfactorily completed Affidavit of Completion in the form attached as Exhibit 1. Payment of the final invoice and retention constitutes a full and final release of Owner from all claims, damages, liabilities and obligations under the Contract.

- 11.2 Contractor shall promptly pay all of its Subcontractors.

## 12.0 CHANGES IN WORK AND EXTRA WORK

### 12.1 Change in Work

12.1.1 "Change Order" means a written order issued in accordance with this Article 12.0 documenting an addition to, deletion from, or other modification to the Work, including a change in the scope of Work, the Contract Price, the payment schedule, the completion dates, or the schedule for the Work.

12.1.2 Owner may issue a Change Order: (i) at Owner's option, or (ii) if requested by Contractor due to the occurrence of an event that entitles Contractor to a Change Order as determined by Owner.

12.1.3 If Owner issues a Change Order, Contractor shall perform the changed Work in accordance with the terms of the Contract and the issued Change Order.

- 12.1.4 No order, statement or other conduct of Owner shall be treated as a change in Work until such change is authorized in writing by Owner.
- 12.1.5 Contractor shall not be entitled to a Change Order for conditions such as, but not limited to, (i) work which is of such a nature as to be normally included in the Work or is reasonably inferable from the Contract; (ii) any errors, omissions, non-performance, negligence, deficiencies or improper or defective work on the part of Contractor (including miscalculations, incorrect estimates, or other errors in Contractor's proposal for the Work); (iii) changes relating to refinement, minor correction and detailing of the Work or any part of the Contract; or (iv) other unallowable claims such as cost impacts not due to Owner and cumulative impact claims.
- 12.1.6 With respect to Contractor claims for additional compensation, Owner shall pay only incremental Direct Costs associated with the proposed changes and only to the extent that Contractor can demonstrate that the changes actually increased its costs of performance. Any claims for additional compensation based on a change to the Work or extra work must be material in nature, and Contractor must provide full documentation supporting all elements of such claims. For a reduction in the scope of Work or a change which reduces Contractor's costs, the Contract Price shall be adjusted downward. The payment for changes to the Work shall be complete compensation to Contractor for performing such changes, including any schedule or cost impacts on the Work.
- 12.1.7 If Owner requests in writing that Contractor furnish materials or equipment to be permanently incorporated in changed work, extra work or cost-plus work, Owner shall reimburse Contractor for such materials or equipment its incremental Direct Cost plus a percentage mark-up to be agreed upon by the parties. Requests for payment for materials and equipment shall be accompanied by copies of receipted invoices. Owner has the right to audit Contractor's requests for changes and the financial basis therefor.
- 12.1.8 If Contractor and Owner disagree on whether any particular work is within the scope of Work and such work must be completed to insure timely progress, Owner will issue a disputed Change Order to cover the disputed work. Contractor shall diligently proceed with the disputed work. By noon on the work day following performance of the disputed work, Contractor shall submit to Owner for review timesheets itemizing all labor and equipment hours expended on the disputed work and an itemized listing of Contractor furnished materials. Such review is not an admission of liability by Owner. Prior to Final Acceptance, each disputed Change Order will be resolved to the mutual agreement of the parties.

## 12.2 Extra Work

- 12.2.1 "Extra work" is work which is beyond Contractor's scope of Work. At Owner's request, Contractor shall perform extra work at the applicable prices set forth in the Contract. If the Contract prices are not applicable to the type of extra work to be performed, Contractor shall promptly submit a proposal to perform the extra work, which proposal shall become an amendment to the Contract upon acceptance by Owner. If Owner directs Contractor to perform extra work on an overtime basis, Owner shall reimburse Contractor the actual payroll cost of premium time for direct job labor. Contractor shall invoice and maintain separate cost records for each extra work authorization issued by Owner.
- 12.2.2 If Owner elects, Contractor shall perform extra work on a cost-plus basis. Cost-plus extra work shall be paid in accordance with Article 13.0.

- 12.3 Contractor waives all claims for additional compensation for changes in work and extra work not made strictly in accordance with the terms of this Article 12.0.



13.0 REIMBURSEMENT FOR COST-PLUS WORK

- 13.1 Direct labor costs will be reimbursed at the actual payroll costs of direct labor wages, fringe benefits, payroll taxes and insurance required by collective bargaining agreements or by law, plus an agreed wage mark-up. Copies of certified payrolls and time sheets shall be provided to Owner for review and approval. Contractor shall not invoice Owner for social security, unemployment, workers' compensation, or other federal, state or local taxes or insurance at rates which exceed Contractor's actual costs.
- 13.2 Owner will pay Contractor actual invoice costs for subcontracted work, provided Owner has approved payment terms in advance of performing the work, plus an agreed mark-up.
- 13.3 Contractor-furnished permanent materials and equipment costs will be reimbursed at actual invoice costs plus an agreed mark-up.
- 13.4 Construction equipment costs will be reimbursed based on actual usage time during the performance of Work and established rental rates not to exceed monthly rates set forth in the "Rental Rate Blue Book for Construction Equipment" adjusted for geographical region as published by Dataquest or other basis acceptable to Owner. Hourly rates shall be established by taking the monthly rate divided by 176 hours per month.
- 13.5 Small tools and consumables costs will be reimbursed based on agreed rates.
- 13.6 Field supervision, clerical, safety and other non-direct labor costs will be reimbursed at agreed billing rates, except that reimbursement for these costs for cost plus extra work shall require the prior review and approval of Owner.

14.0 BACKCHARGES

- 14.1 Owner may impose backcharges against Contractor or deduct backcharges from monies owed to Contractor for performance or reperformance by Owner or others of Work, including but not limited to, costs associated with defective work, nonperformance by Contractor, termination for cause, clean-up and disposal of debris, damages to Owner's tools and equipment and warranty repairs. Contractor will be responsible for the cost of such performance or reperformance plus a fifteen percent (15%) administrative charge.

15.0 TAXES

- 15.1 The Contract Price shall include, and the Contractor shall pay, all taxes and assessments for unemployment insurance, workers' compensation, social security and disability benefits, and other taxes which are based upon the compensation paid to persons employed by Contractor or its Subcontractors for the performance of any Work under the Contract.
- 15.2 Except as provided below, the Contract Price shall include all applicable foreign, federal, state and local taxes payable by Contractor with respect to the Contract.
- 15.2.1 Contractor Purchases. If Owner specifies that tangible personal property to be incorporated into real property as defined for sales and use tax purposes or taxable services to be purchased by Contractor from vendors or Subcontractors qualify for exemption from sales or use taxes, Contractor shall not include sales or use taxes on such exempt tangible personal property or services in the Contract Price. Unless otherwise specified: a) consumable materials and supplies or Contractor's tools and equipment that are not incorporated into the Work or the overall project are not eligible for exemption

and the Contract Price shall include, and Contractor shall pay, any sales or use taxes on such items; and b) Contractor will use its own properly-executed exemption or resale certificate, and not Owner's direct pay permit, to make exempt purchases of tangible personal property or services from vendors or Subcontractors.

- 15.2.2 Owner Purchases from Contractor. With respect to any Owner purchases from Contractor of tangible personal property not incorporated into real property as defined for sales and use tax purposes or taxable services, Owner shall provide to Contractor its direct pay permit (if Owner has been issued a direct pay permit) or an appropriate exemption certificate required to relieve the Contractor of its responsibility to collect sales or use tax from the Owner. If Owner provides Contractor such direct pay permit or exemption certificate, sales or use taxes on Owner purchases from Contractor of tangible personal property or taxable services shall not be collected from Owner or included in the Contract Price. Unless otherwise approved or directed by Owner in writing, Contractor shall not use Owner's direct pay permit to make exempt purchases of tangible personal property or taxable services from vendors or Subcontractors.
- 15.2.3 Contractor Cooperation. Contractor shall take all steps reasonably necessary to ensure that Contractor's purchases from vendors or Subcontractors of items of tangible personal property or services are exempt from sales and use tax pursuant to any applicable exemption pursuant to the law of any U.S. jurisdiction or its political subdivisions.

## 16.0 INSURANCE

- 16.1 Contractor shall at its sole expense, procure or maintain, and shall cause its Subcontractors to procure or maintain, throughout the term of this agreement except as set forth in Section 16.5, the following types of insurance with the following, minimum limits:
- 16.1.1 Workers' compensation insurance in accordance with all jurisdictions where Contractor has operations including where the Work is to be performed.
- 16.1.2 Employer's liability in an amount not less than \$1,000,000.
- 16.1.3 Business automobile insurance covering all Owned, Non-owned and Hired Autos in an amount not less than \$5,000,000 per occurrence.
- 16.1.4 Commercial general liability insurance covering claims of bodily injury and property damage in an amount not less than \$5,000,000 per occurrence.
- 16.1.5 Aircraft liability insurance with a combined limit of not less than \$10,000,000. Such insurance shall be required only if the Contractor or its Subcontractors shall utilize an aircraft in the performance of the Work.
- 16.1.6 Protection and Indemnity insurance (including Jones Act liability) and pollution liability in an amount not less than \$10,000,000 per occurrence. Such insurance shall be required only if the Contractor or its Subcontractors shall use a marine vessel or floating equipment in the performance of the Work.
- 16.1.7 Professional liability insurance and/or Errors and Omissions insurance in an amount not less than \$5,000,000. Such insurance shall be required only if the Work includes professional liability exposures.
- 16.1.8 "All risk" property insurance covering the full replacement cost of Contractor's personal property.

- 16.2 To the extent permitted by law, Contractor shall waive, and shall cause each of its insurers to waive, any and all rights of recovery, by subrogation or otherwise, against Owner and its affiliates, officers, directors, employees, agents and assigns of any type. Each of the insurance policies indicated above shall be primary to and non-contributory with any insurance or self-insurance of Owner.
- 16.3 The Commercial General Liability, the Business Automobile, and the Aircraft Liability insurance shall include Owner as an additional insured with respect to Owner's liability arising out of the operations of Contractor. Such coverage shall also include blanket contractual coverage and contain no exclusion for explosion, collapse, or underground property damage (XCU coverage).
- 16.4 The insurance required by this Article 16.0 is in addition to and separate from any other obligations contained in the Contract.
- 16.5 If any of the policies indicated above are placed on a "claims-made" basis, such coverage shall be maintained for a period of not less than five (5) years following the completion of the Work. Products and/or completed operations coverage shall be maintained for a period of five (5) years after the completion of the Work.
- 16.6 Any deductibles or retentions on any of the policies required herein shall be the sole responsibility of the Contractor.
- 16.7 The above referenced limit requirements may be met by any combination of umbrella or excess and primary policies so long as the total limit of insurance requirement is met. The required coverages referred to herein shall in no way affect, nor are they intended as a limitation of, Contractor's liability with respect to its performance of the Work. The limits of insurance indicated herein are minimum requirements and are in no way intended to limit Contractor's liability.
- 16.8 In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special, or statutory employees) are covered by the Louisiana Worker's Compensation Act, La. Rev. Stat. Ann. 23:1021 et seq., Owner and Contractor agree that pursuant to Section 23:1061 (A) (1) all Work performed by Contractor and its employees under the terms and conditions of the Contract is an integral part of Owner's operations and is essential to Owner's ability to generate its goods, products and services. Additionally, Owner and Contractor agree that for purposes of Section 23:1061 (A) (3) Owner is the principal or statutory employer of Contractor's employees. Irrespective of Owner's status as the statutory employer or special employer of Contractor's employees, pursuant to Section 23:1031 (C), Contractor shall remain primarily responsible for the payment of Louisiana Worker's Compensation benefits to its employees, shall indemnify Owner from any and all claims of Contractor's employees or its Subcontractor's employees and shall not be entitled to seek contribution for any such payments from Owner.
- 16.9 Contractor will not be permitted to bring its employees, materials or equipment on the Site until Owner receives from Contractor two copies each of acceptable certificates of insurance covering the terms of Subsections 16.1.1 through 16.1.8. Such certificates shall state that the insurance carrier has issued the policies providing for the insurance specified above, that such policies are in force, that the additional insured requirements have been satisfied, and that the insurance carrier will give Owner thirty (30) days prior written notice of any material change in, or cancellation of, such policies. If such insurance policies are subject to any exceptions to the terms specified herein, such exceptions shall be explained in full in such certificates. Owner may, at its discretion, require Contractor to obtain insurance policies that are not subject to non-standard exceptions.

- 16.10 In lieu of Sections 16.1 thru 16.9, if Owner has elected in the Contract to implement an Owner Controlled Insurance Program ("OCIP"), Owner and Contractor agree that the terms of the OCIP as contained in the Contract shall control.

17.0 INDEMNIFICATION

- 17.1 The laws of the state where the Work giving rise to the claim is performed shall apply to this Article 17.0.

- 17.2 **TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.**

- 17.3 **WITH RESPECT TO CLAIMS AGAINST OWNER BY CONTRACTOR'S EMPLOYEES, CONTRACTOR UNDERSTANDS AND AGREES THAT THIS INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY, AND CONTRACTOR EXPRESSLY WAIVES, ITS IMMUNITY AS A COMPLYING EMPLOYER UNDER ANY APPLICABLE WORKERS' COMPENSATION LAW, BUT ONLY TO THE EXTENT THAT SUCH IMMUNITY WOULD BAR OR AFFECT RECOVERY UNDER OR ENFORCEMENT OF THIS INDEMNIFICATION OBLIGATION.** With respect to the State of Ohio, this waiver applies to Section 35, Article II of the Ohio Constitution and Ohio Rev. Code Section 4123.74.

- 17.4 **CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT.**

18.0 LIMITATION OF LIABILITY

- 18.1 Except as expressly provided herein, neither party shall be liable to the other for any incidental, indirect, special, punitive or consequential damages. Contractor must bring any cause of action arising under the Contract within one year from the time the cause of action accrues.

19.0 LIENS

- 19.1 To the extent permitted by law, Contractor shall not file or permit to be filed any lien with respect to the Work and hereby expressly waives any right to file or cause to be filed a lien. Contractor, in

its subcontracts, shall require all Subcontractors to expressly waive the right to file any liens against Owner's property, and, if requested, provide Owner with copies of such waivers.

- 19.2 In the event any claim is asserted or any lien filed against Owner or its property, or notice of lien is provided to Owner in violation of this provision, further payment to Contractor shall not become due under the Contract until the claim is satisfied or the lien released without cost to Owner and Contractor shall provide Owner with evidence of payment relating to such claim or lien. If Contractor fails to settle any claim or secure the release of any lien, Owner may take whatever steps it deems necessary to settle the claim or release the lien, including bonding off the lien. Owner may deduct its costs and expenses for settling any claim or securing the release of any lien filed by Contractor or its Subcontractors from any money due or to become due to Contractor under the Contract. If final payment has been made, Contractor shall reimburse to Owner its costs to settle any claim or secure the release of any lien arising out of the Contract.

## 20.0 INTELLECTUAL PROPERTY

- 20.1 Contractor warrants that its performance of the Work will not infringe upon or violate any trademarks, patents, copyrights, trade secrets or other third party property rights. If the performance of Work is held in any action to constitute infringement, or the use of the Work is enjoined, Contractor, at its expense, shall procure for Owner the right to continue use of the Work, or replace the Work with non-infringing materials or methods satisfactory to Owner, or modify the Work in a manner satisfactory to Owner so that the Work becomes non-infringing. Contractor agrees to indemnify and save Owner harmless from and against any liability or damages, including attorneys' fees, arising out of any alleged infringement or violation.
- 20.2 All inventions, discoveries, documents, works of authorship, methods, and the derivative works thereof, resulting from the Work, including patents, patent applications, copyrights, trade secrets and other intellectual property (collectively "Intellectual Property"), shall be the sole and exclusive property of Owner. Contractor shall promptly inform Owner of the development of any such Intellectual Property and does hereby assign and transfer the entire right, title and interest, together with all rights of priority in and to such Intellectual Property to Owner. Contractor shall promptly cooperate with Owner in signing any additional documentation necessary to assign and perfect ownership of such Intellectual Property in Owner or to allow Owner to register its property rights therein. Contractor warrants that it has obtained written agreements from its employees and agents as necessary to effectuate the purpose of this Section. The Intellectual Property assigned and transferred to Owner shall be the Confidential Information of Owner.
- 20.3 Contractor grants Owner a nonexclusive, nonrevocable, perpetual, fully paid license to utilize Contractor's intellectual property existing separate from the Contract, including inventions, discoveries, works or authorship, methods, and trade secrets, regardless of whether such are the subject of patents, copyrights or other intellectual property protection, to the extent necessary for Owner to achieve the full benefit of the Work.
- 20.4 Contractor shall not use Owner's name or logo in marketing, endorsements, or other business purposes without prior written consent from Owner.

## 21.0 DRAWINGS AND DATA

- 21.1 Contractor shall furnish for Owner's review, prior to commencement of Equipment manufacture or fabrication, general and detailed drawings of the Equipment in the format requested. Such drawings shall be certified as to accuracy and completeness and shall show information adequate to enable Owner to design and provide suitable clearances. If required by the Contract or any code, law or agency, Contractor will provide professional engineer or architect sealed drawings and reports for the state where the Equipment is to be finally installed. Figures shall take precedence in all cases over

scaled measurements on drawings. Where obvious discrepancies exist, Contractor shall consult with and follow the instructions of Owner. Owner's approval of Contractor's drawings shall not relieve Contractor of its obligation to comply with the Contract requirements.

- 21.2 All written data, such as drawings, plans, reports, designs and specifications, prepared by Contractor for Owner during the performance of Work shall become the property of Owner. Such data, together with all data furnished by Owner and lent to Contractor for return, shall be delivered to Owner upon request, or upon completion of the Work or termination of the Contract. For clarification purposes, Owner shall have the unrestricted right to use, release, disclose, copy and reproduce such data for purposes of operation, maintenance, analysis, testing, cleaning, erection, improvement or modification of any facilities owned or operated by Owner. Contractor shall cooperate with Owner by executing such documents as are necessary to assign and perfect ownership in Contractor provided data to Owner.

## 22.0 CONFIDENTIALITY

- 22.1 "Confidential Information" means any confidential or proprietary information, whether written, oral, or visual, whether or not it constitutes a trade secret under applicable law. "Confidential Information" includes, but is not limited to, business plans and methods; customer information; engineering, operating and technical data; and the dates of Owner's outage schedule, information concerning the Work, and Owner's activities. "Confidential Information" does not include information that (a) has become part of the public domain other than by acts or omissions of the recipient; (b) has been furnished or made known to the recipient by a third person as a matter of legal right and without restriction on use; (c) was in the recipient's possession prior to disclosure by the disclosing party without restriction on use; or (d) is independently developed by the recipient without access to the Confidential Information.
- 22.2 Subject to Section 22.5, each party agrees (a) to protect the Confidential Information of the other with at least the same degree of care used to protect its own Confidential Information; (b) not to use (except for the purpose described herein), publish or disclose to third parties such Confidential Information; and (c) upon the request of the disclosing party, to promptly deliver to the disclosing party all written copies of its Confidential Information. Notwithstanding the foregoing, a recipient shall be entitled to disclose Confidential Information to its officers, employees, affiliates (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), agents, lenders, attorneys and other advisors (collectively, "Representatives"), provided that the Representatives shall be informed of the confidentiality obligations provided herein.
- 22.3 If either party is required pursuant to applicable law or otherwise becomes legally compelled to disclose any of the Confidential Information, such party shall promptly advise the disclosing party in order that the disclosing party may seek a protective order or such other remedy as the disclosing party may consider appropriate in the circumstances. In any event, the compelled party may disclose only that portion of the Confidential Information which such party is legally required to disclose in the judgment of the party's legal counsel without any liability to the disclosing party hereunder and such disclosure shall not be a breach of this Section.
- 22.4 Contractor shall require its Subcontractors, if any, to expressly comply with the confidentiality provisions as set forth herein.
- 22.5 All documents prepared by Contractor for Owner during the performance of Work that incorporate, in whole or in part, information owned or provided by Owner shall not be marked or designated in any way as the confidential or proprietary information of Contractor without also stating that Owner has rights in such documents. Owner shall have the right to question the designation of Confidential Information by Contractor and Contractor agrees to provide Owner

with reasonable cooperation in explaining such designation. Contractor agrees that Owner's acceptance of documents containing the Confidential Information of Contractor shall not be construed as a restriction on Owner's rights to use, release, disclose, distribute, copy or reproduce the documents.

## 23.0 DEFAULT

23.1 The occurrence of any of the following shall constitute an "Event of Default":

23.1.1 Contractor files a petition in bankruptcy, or if its creditors file an involuntary petition in bankruptcy, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency.

23.1.2 Contractor (a) fails to maintain the schedule set forth in the Contract, or (b) fails to promptly pay Subcontractors for material or labor, or (c) commits repeated or substantial violations of laws, rules, regulations or policies, or (d) fails to perform in accordance with the Contract, and Contractor fails to take corrective action or submit an acceptable plan within two (2) Business Days after the receipt of a notice of non-conformance from Owner.

23.2 Upon an Event of Default, Owner may take any or all of the following actions without affecting the Contract Price or schedule:

- (a) Owner may direct Contractor to cease performance on all or part of the Contract until satisfactory corrective action has been taken;
- (b) Owner may have others take corrective action necessary to achieve compliance with the Contract. Owner may deduct the cost of such corrective action by others from any monies due to Contractor. Corrective action by others shall be taken when, in the judgment of Owner, the noncompliance threatens safety, unreasonably interferes with or delays the work of others, or otherwise creates a situation the resolution of which cannot be delayed without adversely impacting quality, cost or timely completion;
- (c) Owner may pursue damages for delay under the terms of Article 24.0;
- (d) Owner may suspend the Contract under Article 26.0; and/or
- (d) Owner may terminate the Contract under the terms of Section 27.1

25.3 Each of Owner's rights set forth above shall be cumulative and additional to any other rights or remedies provide in law or equity or otherwise.

## 24.0 DAMAGES FOR DELAY

24.1 Contractor shall be liable for any direct damages incurred by Owner arising out of Contractor's failure to perform on time.

24.2 In lieu of Section 24.1, if the parties have agreed to liquidate the amount of direct damages resulting from Contractor's delay, the parties agree that such damages which might be incurred by Owner as a result of Contractor's delay in performance are uncertain and would be difficult to calculate. The parties agree that the liquidated damages contained in the Contract would be reasonable and fair compensation for late performance. Contractor commits to pay and Owner agrees to accept such sum as liquidated damages and not as a penalty in the event of late performance.

25.0 FORCE MAJEURE

- 25.1 Neither party shall be in breach of the Contract to the extent that any delay or default in performance is due to a Force Majeure Event. The term, "Force Majeure Event", shall mean any cause beyond the reasonable control of the delayed or defaulting party, including, but not limited to, acts of God including unusually adverse weather, fire, and epidemic; acts of public enemy including war, acts of terrorism, riot, and civil disturbance; and national labor strikes, which by exercise of due foresight such party could not have been expected to avoid or overcome. Contractor's inability to obtain adequate and sufficient labor in order to maintain progress of the Work shall not constitute a Force Majeure Event. No delay in performance resulting from a Force Majeure Event shall result in any liability on the part of Owner. Notwithstanding the preceding sentence, in the event of a delay caused by any act or failure to act on the part of Owner, Contractor's sole remedy shall be as set forth in Article 12.0.
- 25.2 The delaying party shall immediately notify the other party of the beginning of a delaying event, and shall confirm the notice in writing within ten (10) Business Days of the beginning of the event. The notice shall contain a detailed account of the delay, including the cause of the delay, an estimate of the duration of the delay, an estimate of the delay's impact to the schedule, and the plan to mitigate the effects of the delay.
- 25.3 If Contractor is the delaying party, and the delay is a Force Majeure Event as defined in Section 25.1, Owner shall grant Contractor an extension of the time for performance, to be mutually agreed upon by Contractor and Owner. The extension of time granted as a result of a Force Majeure Event shall in no case exceed the length of the delay and such extension may be withheld or reduced to the extent Contractor does not provide notice in accordance with Section 25.2. If Owner so requests, Contractor shall expedite its schedule to mitigate the effects of the excusable delay. Owner shall pay incremental, Direct Costs incurred by Contractor for expediting at Owner's request.

26.0 SUSPENSION

- 26.1 Owner may at any time suspend all or any part of the Work. Owner shall provide Contractor written notice verifying the suspension date. Immediately upon receipt of the suspension notice, Contractor shall take the necessary actions to comply with the suspension notice.
- 26.2 Owner shall pay Contractor in accordance with the terms of payment set forth in the Contract for the Work completed prior to the time of suspension and for the incremental, Direct Costs that result from Contractor's compliance with the suspension notice.
- 26.3 Owner may, at any time during the suspension period, either terminate the Contract in accordance with Section 27.2, or authorize the Work or any portion thereof to be restarted. Owner shall pay Contractor the incremental, Direct Costs associated with the restart of the Work and shall resume payments to Contractor in accordance with the terms of payment under the Contract thirty (30) days after the restart of Work.
- 26.4 The schedule shall be adjusted to provide for a reasonable extension of time for Contractor's performance.

27.0 TERMINATION

27.1 Termination for Cause

- 27.1.1 Upon an Event of Default, Owner may terminate the Contract upon written notice to Contractor.



- 27.1.2 In the event of such termination, Contractor shall immediately prepare and submit to Owner an itemization of the Work completed by Contractor. Owner may require Contractor to leave the Site. Owner may take over such Work and complete it, or have the Work completed by others. Owner may take possession of and utilize in completing the Work Contractor's materials, Equipment to be installed, supplies, tools and equipment at the Site.
- 27.1.3 Contractor shall not be entitled to further payment until all of the Work is completed in its entirety and Final Acceptance has been achieved. If the cost of completion exceeds the unpaid balance under the Contract, Contractor shall pay the difference to Owner within thirty (30) calendar days of demand.
- 27.1.4 In the event that a court determines that the termination was not properly a termination for cause, pursuant to Section 27.1.1, Contractor's remedy shall be limited to the payments permitted in accordance with Section 27.2.

27.2 Termination for Convenience

- 27.2.1 Owner may terminate the Contract, in whole or in part, for its convenience. Owner will give Contractor written notice of termination specifying the extent to which the Contract is terminated and the date, immediately or otherwise, on which termination becomes effective.
- 27.2.2 Upon termination for convenience, Contractor will comply with instructions in the notice of termination regarding delivery to Owner of all Work in progress and all completed Work, which shall become the property of Owner upon delivery.
- 27.2.3 In the event of such termination, Contractor shall receive payment, including the retained percentage, for the Work satisfactorily performed up to the time of such termination. In addition, Owner shall reimburse Contractor for incremental, Direct Costs resulting from the termination, provided that compensation was not otherwise made for such costs. Final payment shall be made upon the parties' agreement of the amount of the final invoice and Owner's receipt of an Affidavit of Completion in the form of Exhibit 1. Owner shall not be responsible for Contractor's lost profit on the terminated portion of the Contract.

28.0 MATERIALS AND WORKMANSHIP WARRANTY

- 28.1 Beginning upon Final Acceptance and for a period of one year thereafter, or for such period as may be specified elsewhere in the Contract, Contractor warrants that (a) it will perform the Work in accordance with the accepted standards of care and competence found in the applicable profession as such standards relate to and are commonly used in the electric utility industry and (b) all Contractor furnished materials and workmanship shall be free of any and all defects and shall be in conformity with the requirements of the Contract.
- 28.2 Subject to the provisions of Section 28.3, in the event that the material or workmanship does not comply with the warranty, Contractor shall, at no cost to Owner, promptly repair or replace such nonconforming material or workmanship with as little disruption to Owner's operations as practicable. Contractor shall be responsible for the total cost of correcting any defects, including but not limited to, the costs of materials, labor, any necessary equipment removal, disassembly, shipping, reinstallation and retesting of the installation. Owner shall give Contractor notice of observed defects with reasonable promptness. If nonconforming material or workmanship causes an outage or other delay of operations, Contractor shall make the repair or replacement on an overtime, maximum effort basis, at Contractor's expense.

- 28.3 If Owner directs Contractor to repair or replace any defect and Contractor fails to do so within a reasonable time, or if an emergency exists rendering it impracticable for Contractor to perform the repair or replacement, Owner may make or cause to be made such repair or replacement without affecting the validity of the warranty. Owner's cost for making the repair or replacement shall be deducted from the Contract Price or any unpaid portion thereof. If the unpaid portion of the Contract Price is insufficient to cover such cost, Contractor shall reimburse Owner.
- 28.4 Owner will not pay for any defective portion of the materials or workmanship until remedied by Contractor at Contractor's expense in accordance with the Contract requirements.
- 28.5 Owner must approve any proposed correction or alteration by Contractor of the materials or workmanship, or parts thereof, made at any time or at any location, before such correction or alteration is undertaken. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes.
- 28.6 Any materials or workmanship which are repaired or replaced pursuant to this Article 28.0 shall be warranted for a period of one year from the date of completion and acceptance of such repair or replacement, or for the remainder of the original warranty period, whichever is longer.
- 28.7 Contractor shall obtain, for the benefit of Owner, all available warranties from Subcontractors, vendors and suppliers of Contractor. Such warranties shall be in addition to the warranties set forth in this Article. If such warranties are in written form, Contractor shall provide Owner with the original warranties.

29.0 REPORTING OF COMPLAINTS

- 29.1 Contractor shall immediately report to Owner, in accordance with Article 33.0, the complete details of all complaints, including any OSHA violations and complaints received from governmental authorities, Subcontractors, laborers, other third parties or members of the public relating to the Work.

30.0 RETENTION AND EXAMINATION OF INFORMATION, BOOKS AND RECORDS

- 30.1 Owner reserves the right to audit records necessary to permit evaluation and verification of (i) claims submitted, (ii) Change Orders, and related overhead and general and administrative costs, and (iii) Contractor's compliance, in the performance of the Contract and its dealings with Owner, with (a) the Contract requirements; and (b) Owner's Code of Business Conduct governing business ethics. Owner's right to audit shall not extend to fixed, lump-sum or unit pricing.
- 30.2 Contractor shall cooperate with Owner and provide Owner with information and records ("information") pertaining to the Work as requested by governmental agencies, Owner, or courts of law.
- 30.3 Contractor shall retain for a period of three (3) years after Contract termination or expiration all information relating to the Work. Owner may audit and copy such information at Contractor's premises during regular business hours. If requested by Owner, Contractor shall submit to Owner a copy of each of its subcontracts. Contractor shall include in its subcontracts a provision granting Owner the rights against Subcontractors contained in this Article 30.0.

31.0 COMPLIANCE WITH LAWS

- 31.1 Contractor warrants that all materials and equipment supplied and all Work performed will comply with, and be manufactured, priced, sold and labeled in compliance with, all applicable federal, state and local laws, rules, regulations, orders and ordinances, including, without limitation, environmental

protection, energy, safety and health, and labor laws and regulations and applicable industry codes and standards.

31.2 Unless exempted, Contractor shall comply with the equal employment opportunity clause in Section 202 of Executive Order 11246 and all applicable rules, regulations, and relevant orders pertaining to Executive Order 11246, Section 503 of the Rehabilitation Act of 1973, and Section 4212 of the Vietnam Era Readjustment Assistance Act of 1974, as amended. Contractor represents that it does not, and shall not for the term of the Contract, provide or maintain for its employees facilities that are segregated on the basis of race, color, religion, sex or national origin. Contractor represents that it will not assign its employees to perform any work related to the Contract at a location where facilities are segregated on the basis of race, color, religion, sex or national origin. Contractor agrees that it will not enter into any agreement to obtain goods or services relating to the Contract with any entity that provides, maintains or assigns its employees to work at locations where facilities are segregated on the basis of race, color, religion, sex or national origin. As used herein, "facility" means waiting rooms; work areas; restaurants and other eating areas; time clocks; locker rooms and other storage or sleeping areas, except as necessary to ensure privacy between male and female employees; parking lots, drinking fountains; recreation or entertainment areas; and transportation. If not otherwise exempted by Title 48 and to the extent applicable, Contractor will comply with 48 CFR §52.219-8, Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns, and 48 CFR §52.219-9, Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan. If not otherwise exempted by 41 CFR §60-1.5, Contractor represents that it will file all reports or other required information specified in 41 CFR §60-1.7.

31.3 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of any violations of such laws, ordinances and regulations.

#### 32.0 PERMITS AND LICENSES

32.1 Contractor shall obtain all permits and licenses required by any regulatory authority for the performance of any portion of the Work, except that Owner shall obtain permits and licenses for all structures which are to become a permanent part of the Site. Before starting Work, Contractor shall submit to Owner a copy of all permits and licenses required by any such regulatory authority.

32.2 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of the failure of Contractor to obtain such permits and licenses.

#### 33.0 NOTICES

33.1 Each party shall designate in writing a representative to receive any and all notices required under the Contract. Notices shall be in writing and shall be given to the representative designated to receive them, either by personal delivery, certified mail, facsimile, e-mail or any similar means, properly addressed to such representative. All notices shall be effective upon receipt, or upon such later date following receipt as set forth in the notice. Either party may, by written notice to the other, change the representative or the address to which such notices are to be sent. Contract shall be strictly construed and Contractor expressly waives any claims which do not strictly comply with the written notice requirements of the Contract.

#### 34.0 SEVERABILITY

34.1 In the event that any of the provisions, or portions thereof, of the Contract are held to be unenforceable or invalid by any court, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

35.0 WAIVER

35.1 Either party's waiver of any breach of the Contract shall not be deemed to be a waiver of any other breach of the same or a different term of the Contract. Contractor agrees not to claim any waiver by Owner of such notice requirements based upon Owner's conduct or Owner having actual, verbal, implied, or constructive notice.

36.0 NON-DISCLOSURE

36.1 Except as required by law, regulation, or judicial or administrative order, neither party shall disclose the terms of the Contract without the consent of the other party. Notwithstanding the foregoing, Owner may disclose the terms of the Contract without the consent of Contractor (a) to any of its affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures); and (b) to any prospective transferee or purchaser of assets of Owner or any of affiliates.

37.0 HEADINGS

37.1 Headings are provided for the convenience of the parties, and shall not affect the interpretation of any provision.

38.0 AFFILIATED COMPANIES

38.1 Any indemnification of Owner or any limitation of Owner's or Contractor's liability under the Contract shall to the same extent apply to Owner's or Contractor's directors, officers, employees, agents, and affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), including any directors, officers, employees and agents thereof.

38.2 The affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures) of the American Electric Power System are severally and not jointly liable for obligations arising hereunder.

39.0 APPLICABLE LAWS AND JURISDICTION

39.1 Except for Article 17.0, the rights and obligations of the parties arising out of the Contract shall be governed in all respects by the laws of the State of Ohio. Any reference herein to the laws of other states is made only to the extent that the laws of that state might apply, notwithstanding the intent of the parties that the laws of the State of Ohio should apply.

39.2 Contractor agrees that all actions and proceedings brought by Owner against Contractor may be litigated in courts located in the State of Ohio or the state where the work was performed. Contractor agrees that such courts are convenient forums and irrevocably submits to the personal jurisdiction of such courts. Contractor waives personal service of process and consents to service of process by certified or registered mail at the address designated for receiving notices under the Contract.

40.0 ENTIRE AGREEMENT

40.1 The Contract constitutes the entire agreement between the parties and supersedes all previous and collateral agreements or understandings with respect to the subject matter of the Contract. No waiver, alteration, amendment or modification of any of the provisions of the Contract shall be binding unless in writing and signed by duly authorized representatives of the parties.

41.0 BINDING EFFECT; NO THIRD-PARTY BENEFICIARIES

- 41.1 Subject to the restrictions on assignment in Section 5.1, the Contract shall be binding upon and shall inure to the benefit of the parties of their respective successors and permitted assigns.
- 41.2 No provision of the Contract is intended or shall be construed to be for the benefit of third party other than as set forth in Article 36.0.

42.0 EXECUTION; COUNTERPARTS

- 42.1 The Contract shall not be binding or effective until properly executed by each of the parties hereto. The Contract may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which, taken together, shall constitute but one and the same Contract, which may be sufficiently evidenced by one counterpart.

43.0 SURVIVAL

- 43.1 All of the terms of the Contract which by their nature extend beyond the expiration or termination of the Contract, including indemnification obligations, confidentiality obligations, limitations of liability, shall survive expiration or termination of the Contract and remain in full force and effect.

**END OF DOCUMENT**

EXHIBIT 1  
Page 1 of 1

AFFIDAVIT OF COMPLETION

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, states that:  
(Name of Affiant)

1. S/He is the \_\_\_\_\_ of  
(Office held by Affiant)

\_\_\_\_\_(Contractor)  
(Legal Name of Contractor)

that has a contract with \_\_\_\_\_  
(Legal Name of Owner)

(Owner) dated \_\_\_\_\_ (Owner's Contract No. \_\_\_\_\_)  
(Contract Date) (Contract No.)

involving work on the Owner's property at \_\_\_\_\_  
(Project Name)

located near \_\_\_\_\_.  
(City, State)

2. All of the Work required to be performed by the Contractor under said Contract has been performed. All bills and claims for material, labor and services to employees, Subcontractors, material suppliers, and others, covering the Work required to be performed under the Contract, have been paid in full by the Contractor. There are no unpaid amounts on the basis of which a lien has been filed, or can be filed, in connection with the Work performed under the Contract.

\_\_\_\_\_  
Signature of Affiant

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Prepared by:

Contract Services  
American Electric Power  
Service Corporation  
1 Riverside Plaza  
Columbus, OH 43215

June 24, 2011



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

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**Appendix A – AEP Forestry Contract Crew Audit Form**

**Appendix B – AEP Contractor Performance Report**

**Appendix C – AEP Supplied Job Briefing Form**





**SUPPLEMENTARY TERMS AND CONDITIONS  
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The following Supplementary Terms and Conditions for Forestry Contracts ("Supplementary Terms") shall supplement any of the American Electric Power Service Corporation ("Owner" or "AEP") General Terms and Conditions utilized in any Contract under which Contractor is authorized to perform Services. These Supplementary Terms shall not replace the safety or operational provisions in the applicable AEP General Terms and Conditions and are intended to support and reinforce other Contract documents.

All of the provisions of these Supplementary Terms shall also apply to Contractor's subcontractors. Contractor is responsible for ensuring that its subcontractors comply with these Supplementary Terms.

Contractor's and any of its subcontractors' failure to comply with these Supplementary Terms is cause for the Contract to be terminated and may prevent eligibility for the consideration of providing Services in the future (i.e., removal from AEP's qualified bidders list).



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**SECTION 1  
GENERAL SUPPLEMENTARY TERMS AND CONDITIONS**

**1.1 Protection of Services**

- 1.1.1 Contractor shall use care and diligence so that performed Services and all materials, installed equipment and tools are thoroughly protected from the weather, loss and any and all damage. Contractor shall furnish and pay for all such protection.
- 1.1.2 Contractor shall provide and pay for the removal of snow, ice and water from its storage or work areas.
- 1.1.3 Contractor shall be liable for any loss or damage caused by carelessness, negligence or any act or failure to act on the part of Contractor, its subcontractors or employees. Such loss or damage includes, but is not limited to, losses and damages to performed Services, materials, equipment to be installed, private property, construction equipment and other property belonging to Owner or other contractors.

**1.2 Cleanup and Disposal of Non-Vegetative Debris**

- 1.2.1 Contractor shall keep its work areas, storage areas, parking areas and other areas of operations clean and safe.
- 1.2.2 Contractor shall promptly remove trash and other non-vegetative debris from these areas and properly dispose of all trash and other debris resulting from Services.
- 1.2.3 Upon completion of Services, Contractor shall remove from the site and dispose of its surplus material, chemicals, equipment, tools and, unless otherwise directed in writing by Owner, all temporary structures per all applicable laws.
- 1.2.4 Contractor shall bear the cost of providing the cleanup and removal, including the cost of all labor, supplies, tools, construction equipment and transportation.

**1.3 Material Storage and Handling**

- 1.3.1 Owner may designate a material storage location that can be used by Contractor.
- 1.3.2 Unless provided by Owner, Contractor is responsible for the purchase and proper handling and storage of material used during the course of providing Services. Contractor shall abide by all applicable laws.
- 1.3.3 Contractor shall be responsible for the impact of all shortages resulting from missing or damaged material issued to Contractor but not applied. Contractor shall replace such material at its own expense. Substitutions will not be allowed unless approved by Owner in writing.
- 1.3.4 All unused material furnished by Owner or provided by Contractor, and paid for by Owner, shall be returned by Contractor to Owner's designated storerooms or storage points upon notification from Owner.



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**1.4 Electrical Clearances**

- 1.4.1 Owner will arrange for all necessary clearances on energized equipment or circuits required to be taken out of service for the performance of Services. When an outage is required, Contractor shall notify Owner prior to scheduling such Services, allowing sufficient time for scheduling with system operators.

**1.5 Permits and Easements**


- 1.5.1 Owner will secure all right-of-way easements. Owner will also secure certain permits requiring Owner's signature (i.e., DOT permits, siting permits, building permits). Location specific and construction specific permits not already obtained by Owner are the responsibility of Contractor. Local vehicle registration/operation permits (i.e., frost law permit in Michigan) shall be the responsibility of Contractor.

**1.6 Protection of Property**

- 1.6.1 Contractor shall use all possible care not to damage any existing buildings, structures, pipes, sewers, conduits, manholes or other property, or to interfere therewith without the consent of Owner's authorized representative. Such structures and other objects shall be properly supported, braced and secured in place to prevent damage thereto. They shall not be relocated or reconstructed except as authorized by Owner. Contractor shall be responsible for all damage claims due to this negligence, including the cost of all material and labor required to replace or repair any property damaged.
- 1.6.2 Contractor shall immediately report the complete details of all damage claims to Owner. If Owner determines the claim is valid and is a result of Contractor's negligence, Owner will present the claim to Contractor for settlement. Contractor is to settle all valid claims within 30 days. Contractor is to provide Owner with documentation specific to a settlement process for any claim not settled within 30 days, or the claim will be handled by Owner and the damage amount billed to Contractor. All such damage claims settled by Contractor are to be reported to Owner in writing.
- 1.6.3 Contractor shall be responsible for notifying appropriate state one-call systems, as well as any other utility company not a member of the systems, prior to performing Services involving excavation, boring, stump grinding and/or other activities that may affect underground facilities.

**1.7 Work on Private Property**

- 1.7.1 Whenever any Services are to be completed on private property, Contractor shall attempt to notify owner and/or the tenants thereof and make arrangements with them so that Services will be completed with the least practicable inconvenience to them. Work on private property shall be done as expeditiously as possible and the premises restored immediately.



**SUPPLEMENTARY TERMS AND CONDITIONS  
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**1.8 Access and Construction Roads**

- 1.8.1 It is Contractor's responsibility to ensure that all property owners' roads traveled by Contractor are in the same condition as the roads were before Contractor elected to use the route. Should Contractor cause any damage to any such road, Contractor is obligated to restore the road to like or better condition than the road existed prior to Contractor's use. Such work shall be completed in a timely manner with proper written documentation of the damage/remedy supplied to property owner and Owner alike. Where Owner deems it necessary to maintain access roads on private property, crushed stone will be furnished or paid for by Owner, and Contractor shall provide labor and equipment to haul and place crushed stone as required. When approved in advanced writing by Owner, Owner shall pay for normal damage to fields or loss of crops resulting from necessary travel by Contractor.
- 1.8.2 Contractor shall keep fences in a sufficient state of repair to satisfactorily confine livestock and shall keep gates closed when not in immediate use. Before Services are considered to be completed, all temporary gates shall be removed and all fences cut or damaged shall be restored to original condition. Fencing damaged by Contractor shall be repaired at Contractor's expense.
- 1.8.3 When it is necessary to gain access to right-of-way over private roads, yards, pastures and cultivated fields, and it is impractical to restrict ingress and egress to the right-of-way, Contractor shall use the route agreed upon by the property owner, Contractor and Owner. Contractor shall notify the property owner prior to the use of these routes.

**1.9 Emergency Assistance**

- 1.9.1 In the event of extensive damage to Owners' facilities as a result of severe storms, flooding or other catastrophes, Owner may request assistance from Contractor in the repair of damages and restoration of service to customers. Under such circumstances, the "Forestry Policies and Procedures for Emergency Assistance" in Section 2 shall be followed.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**SECTION 2  
FORESTRY POLICIES AND PROCEDURES FOR EMERGENCY ASSISTANCE**

In the case of emergencies, during which Contractor is called upon by Owner for storm assistance to restore service following catastrophic damage ("Emergency Assistance"), the following policies and procedures shall apply.

- 2.1 Contractor will provide Owner with emergency contacts, including 24-hour telephone numbers for requesting assistance.
- 2.2 Upon request for Emergency Assistance, Contractor shall provide Owner with a list of available personnel and their classification, labor rates, crew make up, equipment to be used and an estimated time of arrival.
- 2.3 Owner will specify the number of physical full time employees and any special equipment required and will notify Contractor as to where the crews are to be assigned and to whom they will report. Owner will check-in each crew upon arrival.
- 2.4 Contractor shall be responsible to make contact with the appropriate State officials concerning commercial driver's licenses and other transportation issues.
- 2.5 Contractor's crews shall arrive prepared to work and be equipped with PPE, PPI, tools, foul weather gear, lights and batteries to perform the assigned Services. Any crews arriving without the proper tools or equipment to perform the assigned Services may be released at Contractor's expense.
- 2.6 Owner shall determine the work hours for responding crews, including start time (at assigned crew headquarters) and duration. Contractor shall check in with Owner daily at the requested starting time for assignment of Services.
- 2.7 After working sixteen (16) consecutive hours up to a maximum of twenty-four (24) consecutive hours, Contractor's employees shall be released from providing Services for a minimum eight (8) hour rest period, which shall commence upon release by Owner.
- 2.8 Owner will allow a meal break every six (6) hours, or as near as practicable, while Contractor performs Emergency Assistance. Contractor's personnel will be off the clock for all meal breaks taken away from the work site.
- 2.9 Time sheets of Contractor employees shall be kept by Contractor. These time sheets shall be turned in daily to Owner for verification and approval.
- 2.10 Contractor shall be responsible for relaying all Owner communications to its crews.
- 2.11 Contractor shall be responsible for the safety of its crews. Contractor will provide safety statistical reporting of all hours worked on AEP property. This report format will be provided by the AEP Safety Coordinator.



**SUPPLEMENTARY TERMS AND CONDITIONS  
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- 2.12 Owner shall reimburse Contractor for Emergency Assistance at the current contracted rate of the classification for each of Contractor employees utilized plus the applicable mark up percentage for straight and/or premium time. When responding from areas with existing AEP Contracts, Contractor's employees shall be paid at the rates incorporated in the Contract for the area from which they are responding. When Contractor responds from locations without existing contracted AEP rates, billing rates will be negotiated when the agreement to send crews is finalized.
- 2.13 Overtime pay for Emergency Assistance shall be paid based on provisions submitted by Contractor and approved in advance by Owner.
- 2.14 Owner will reimburse Contractor for lodging and meals (dollar amount for meals shall be predetermined by Owner) for the crew(s) requested. Owner may elect to supply meals and/or lodging to Contractor, in which case there will be no reimbursement. All other expenses: (i.e., personal phone calls, alcoholic beverages, tobacco, entertainment, etc.) will not be reimbursed by Owner.
- 2.15 Contractor's employees must register in person at the assigned lodging.
- 2.16 If Owner requests Contractor to provide an employee whose classification falls outside the standard Contractual labor billing rates, Owner shall provide the request in writing and will reimburse Contractor for said employee's labor, vehicle, lodging and meals.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**SECTION 3  
SUPPLEMENTARY ENVIRONMENTAL, SAFETY AND HEALTH TERMS AND CONDITIONS FOR  
FORESTRY CONTRACTS**

**3.1 General**

- 3.1.1 Contractor shall comply with AEP's Contractor Oversight program. Contractor's safety performance will be monitored and evaluated during performance of the Contract by Owners' representative.
- 3.1.2 Contractor shall adhere to all pertinent local, state and federal regulations and all rules and policies set forth in Contractor's own safety manual. Any shortcoming brought to the attention of Contractor by Owner shall be immediately corrected by Contractor. Repeated and/or severe safety violations, incidents or accidents may be cause for the Contract to be terminated, prevent eligibility for providing future Services and result in the potential removal from AEP's qualified bidders list.
- 3.1.3 Owner has the authority to immediately stop Contractor's Service performance indefinitely for practices, procedures and operations, which, in the opinion of Owner, constitute a safety concern. It is Contractor's responsibility to adequately satisfy Owner with any remediation necessary to provide a safe and healthful workplace.
- 3.1.4 Contractor shall have qualified and competent supervision on the job at all times to direct and observe the Work.
- 3.1.5 If Contractor in good faith believes that any rule or procedure set forth in these Supplementary Terms will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

**3.2 General Safety Requirements**

- 3.2.1 Owner, or Owner's representative, shall conduct random Forestry Contract crew safety audits and Contractor shall cooperate fully with Owner's representatives during this audit. The audit is defined in Appendix A.
- 3.2.2 Contractor shall promptly notify Owner if Contractor's or its subcontractors' Experience Modification Rate for workers compensation exceeds 1.0.
- 3.2.3 Contractor shall remain solely responsible for the proper and safe use of all tools, and for conducting safe work practices or procedures. Contractor shall provide information necessary for the job briefing identified in Section 3.6 below, Job Briefings.
- 3.2.4 Contractor shall provide Owner a list of all tools, practices or procedures it or its subcontractors will use in performing assigned Services with fabricated or modified tools ("Specialty Tooling"). Specialty Tooling includes all tooling fabricated, developed by or modified by Contractor. Contractor shall notify Owner of any Specialty Tooling it develops or modifies on site. Contractor shall also notify Owner, prior to use, if it intends to use standard tooling in ways other



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

than those for which the tooling was designed. All such Specialty Tooling is subject to review by Owner. Specialty Tooling shall have design plans, engineered diagrams, etc. with a Professional Engineer's stamp of approval. Contractor shall also inspect Specialty Tooling prior to each use. At its sole discretion, Owner may prohibit or restrict the Contractor's use of Specialty Tooling on Owner's site.

3.2.5 Contractor shall immediately cleanup all spills from Contractors' equipment and vehicles.

### **3.3 Contractor Safety Representative**

3.3.1 When Contractor has eleven (11) or more total employees on various projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

3.3.2 Qualifications of the aforementioned safety professional may be subject to Owner's review and approval.

3.3.3 Owner may require Contractor to assign additional safety professionals if Owner determines the scope of Services justifies additional safety oversight.

3.3.4 Owner may require Contractor to supply additional safety professionals if Owner has determined geographical Service locations justify additional safety oversight.

### **3.4 Monthly Reporting**

3.4.1 Contractor shall report various safety related statistics, using the most current revision of the AEP supplied form, AEP Contractor Performance Report in Appendix B. Reported statistics will include those of Contractor's subcontractors and will represent Services performed on AEP projects/Contracts only.

3.4.2 The above requirements must be reported by the tenth (10<sup>th</sup>) day of the following month to the following e-mail address: [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com). A copy of the AEP Contractor Performance Report will be supplied to Contractor for reporting this required data. The data will be used by Owner to evaluate Contractor's safety effectiveness and performance.

### **3.5 Event Reporting**

3.5.1 When performing Services for AEP and a safety event occurs, Contractor shall notify Owner about the event immediately (verbal reporting is sufficient). Contractor shall also submit a written preliminary notification (no later than 8:00 a.m. the following working day of the event) to the Forestry Supervisor, Region Support Manager and/or designee, Forestry Operations Manager, and shall also e-mail a copy to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com), listing any and all safety events occurring during the performance of Services. A separate report is required for each event. Reported events include near miss events, first aid and minor events, OSHA recordable injuries,





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flash/outage events, vehicle accidents, spills/release, underground utility strikes and OSHA/EPA citations/visits. The written report should include sufficient detail to identify the nature of occurrence, the extent of injury (if any) and contact name and number of the person leading the investigation. Within seven (7) business days, Contractor shall submit an in depth report to the e-mail address listed above, along with a copy to the Forestry Supervisor, Region Support Manager and/or designee and Forestry Operations Manager. This report must include the time and date of event, location of event, name of injured employee, the injured employee's on the job experience, description of event, factors that may have caused or contributed to the event, corrective actions taken and/or planned and the person(s) responsible for corrective actions.

**3.6 Job Briefings**

3.6.1 Prior to the commencement of Services in any location and before any changes in procedures or activities are made, Contractor shall perform a Job Briefing in written report/form to identify all potential work site risks. Each member of the crew must sign his/her name to this form in order to affirm their presence at the time the information was presented during the Job Briefing. The report shall include, at a minimum: 1) applicable hazards present during the course of performing the specific assignment 2) Service procedures involved 3) special precautions 4) energy source controls and 5) personal protective equipment requirements. Should Contractor not have its own Job Briefing requirements/forms, then Contractor shall use the AEP Supplied Job Briefing Form in Appendix C.

3.6.2 Contractor shall make its Job Briefing Forms available to Owner upon request.

**3.7 Personal Protective Equipment Requirements**

3.7.1 Contractor is responsible for requiring the use of appropriate personal protective equipment ("PPE") in all operations where there is an exposure to hazardous conditions.

3.7.2 Owner requires Contractor and Subcontractor employees to wear the following PPE, at a minimum, while on/in any construction site and/or work area:

- Safety glasses or safety prescription glasses with side shields
- Hardhat
- Work gloves that provide protection for the type of work
- Approved hearing protection devices when required
- Shoes with a defined heel (employees that climb structures)

3.7.3 Open-toed, open-heeled, athletic footwear and tennis shoes are strictly prohibited. Additional foot protection and/or PPE may be required based on Contractor's PPE assessment or special environmental conditions.



**SUPPLEMENTARY TERMS AND CONDITIONS  
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**3.8 Substations/Switchyards**

- 3.8.1 OSHA requires personnel working within an electrical station be qualified to recognize equipment and hazards unless escorted by a qualified person. Employees not OSHA station qualified shall be under direct supervision of qualified personnel.
- 3.8.2 Gates to station fences shall remain closed and locked when they are not under the direct observation of an attendant.

**3.9 Firearms, Alcohol and Drugs**

- 3.9.1 Firearms, alcohol, illegal drugs or drugs taken for non-medicinal purposes are prohibited on all Owner Sites.
- 3.9.2 Contractor shall be responsible for all Contractor and Subcontractor(s) employees who are under the care of a physician and are taking prescribed medicine, which may alter the employee's physical or mental ability. Contractor shall determine the necessity to modify the employee's job assignment while undergoing treatment.
- 3.9.3 If firearms or suspected illegal drugs are discovered on any AEP property or Work Site/area, the following guidelines should be followed by whoever discovers the firearms or suspected illegal drugs:
- First, if possible without putting themselves or others in harms way, attempt to secure the location and ensure that others cannot come in contact with the firearms or suspected illegal drugs. Do not handle or move firearms or suspected illegal drugs from their discovered location.
  - Second, immediately contact the Owner's Contract Supervisor or Distribution Line Representative and together make a decision whether or not the situation requires a call to the local law enforcement authorities. Immediately call the local law enforcement authorities and report the discovered item(s) if (a) neither the Owner's Contract Supervisor nor the Distribution Line Representative is available; (b) there is a threat of harm to any person; or (c) there is a risk of improper removal or disposal of the firearms or illegal drugs.
  - Third, call local Owner's security personnel or call the Owner's general Security hotline at 1-866-747-5845.
  - Fourth, for incidents involving Contractor personnel, Contractors shall submit reports according to Section 3.5, Event Reporting.

**3.10 Drug/Alcohol Testing**

- 3.10.1 All Contractor and subcontractor employees performing Services under this Contract must complete and pass a pre-employment drug/alcohol screening. Screening substances and their associated cut-off limits are the same as listed in the applicable AEP General Terms and Conditions.



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3.10.2 Post event drug and alcohol testing shall be performed, at Owner's discretion, on all Contractor and subcontractor employees involved in any safety related event. Testing results shall be shared with Owner upon request.

3.10.3 Contractor shall incur all costs associated with the required drug and alcohol testing as required in these Supplementary Terms.

**3.11 Language Requirements**

3.11.1 Contractor's and its subcontractor's employees shall be capable of communicating in English. At least one copy of all documents and reports, including Job Briefings, shall be prepared in English.

**3.12 Job Site Auditing**

3.12.1 Contractor representatives, at a minimum, shall perform and document a Job Site Observation based on the following table:

| <b>Representative Level</b> | <b>Frequency</b> |
|-----------------------------|------------------|
| Senior Management           | 1/Quarter        |
| Operational Management      | 1/Month          |
| General Foreman             | 2/Week           |
| Safety Professional         | 2/Week           |

3.12.2 If Contractor does not meet the requirements of Safety Section 3.3.1 [less than eleven (11) employees], then the lowest representative level of the table in 3.12.1 above (safety professional) shall be followed by a company representative.

3.12.3 Contractor shall make documentation of such job site observations available to Owner upon request.

**3.13 Emergency Planning**

3.13.1 All job sites must have an Emergency Action Plan that has been communicated and documented to all employees. The Job Site Emergency Action Plan shall be documented on each job briefing conducted. This plan shall include, at a minimum:

- Emergency contacts
- Location and name of local emergency services
- Location of closest communication method
- Location of closest medical facility
- Procedure to follow in the event of an emergency

**3.14 Traffic Control**

3.14.1 All Services performed on or adjacent to existing public road or rights-of-way and/or job site roadways shall be performed in conformance to the requirements of the Manual on Uniform Traffic Control Devices (current revision), state and local jurisdiction.



**SUPPLEMENTARY TERMS AND CONDITIONS  
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**3.15 Individuals Restricted from Access to AEP Sites**

3.15.1 Owner may deny access to its facilities by any person who fails to comply with the safety provisions set forth in the applicable AEP General Terms and Conditions or these Supplementary Terms or any person who, in Owner's sole judgment, otherwise demonstrates a lack of safety performance. Examples of a lack of safety performance include, but are not limited to, the following:

- Unsafe job performance
- Failure to pass drug/alcohol test
- Displaying incompetence in performing their job
- Employees that are determined to be unfit for project employment
- Playing of pranks, horseplay or practical jokes
- Failure to report injuries and/or accidents
- Fighting or acts of aggression
- Theft or vandalism
- Convicted Sexual Offenders

3.15.2 Prior to the commencement of Services and during the term of the Contract, Contractor shall provide Owner with a list of all individuals, including Contractor and subcontractor employees, whom Contractor intends to perform Services at Owner's sites. The list shall identify the individuals by their name and the last three digits of their Social Security number.

3.15.3 Owner may, at its sole discretion, deny access to any individual who has been previously removed from a project by Owner or any of its affiliates for safety reasons.

3.15.4 Contractor may request a restricted Contractor employee to be cleared for the performance of Services. A letter addressing the original safety violation(s) or reason(s) for removal and any documentation supporting the request shall be sent to Owner for approval. Contractor's employee shall not perform Services at any of Owner's sites until approved by Owner. Said approval may be granted or withheld at Owner's sole discretion.

**3.16 Housekeeping**

3.16.1 Contractor shall ensure that debris, materials, scrap, trash, etc. is contained and removed daily in order to prevent it from interfering with the safety of any employee and/or general public.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**APPENDIX A  
AEP FORESTRY CONTRACT CREW AUDIT FORM**



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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**APPENDIX B  
AEP CONTRACTOR PERFORMANCE REPORT**



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**APPENDIX C**

**AEP SUPPLIED JOB BRIEFING FORM**

**(ONLY FOR CONTRACTORS THAT DO NOT HAVE THEIR OWN DOCUMENT)**

# EXHIBIT B





## **AEP Forestry**

# **Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations**

**May 14, 2009**

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

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## AEP System Forestry Guidelines

### Foreword

#### A. Introduction

The purpose of these AEP Forestry Guidelines is to document and inform AEP employees and its contractors of important criteria, practices and procedures pertaining to initial vegetation clearing for construction projects and the maintenance of rights of way. AEP incorporates these guidelines into each tree service contract; a copy shall be kept in all vegetation management contractor's vehicles. These guidelines are for the sole and exclusive use of the contractor and are to be read consistently with other contract documents by and between AEP and the Contractor.

#### B. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation within the right of way.

**DBH:** (Diameter at Breast Height). The diameter of a tree measured at the height of 4-1/2 feet above the ground on the uphill side.

**Danger Tree:** A tree considered a potential hazard to AEP's facilities positioned outside of the normally cleared right-of-way.

**Debris:** Non-vegetative material such as pop bottles, cans, wire, paper and old tires.

**Directional Pruning:** The reduction of a tree's crown in a manner that provides increased conductor clearance by pruning to direct growth of the upper crown away from the conductors.

**Fallen Tree:** A tree lying on the ground not cut by the Contractor.

**Hanger:** A limb cut from a parent stem or bole of a tree as part of the line clearance pruning procedure left aloft caught and held by the other branches of the tree.

**Hazard Tree:** A tree considered a potential threat to the safety and reliability of AEP's facilities growing within the normally maintained right-of-way.

**Log:** The merchantable portion of a tree as designated by AEP.

**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Mowing:** The mechanical cutting of woody stem vegetation within the right-of-way.

**Prescription:** The plan prepared for each circuit or unit of work. It designates the vegetation to be maintained, the method(s) of maintenance, and who will perform the work.

**Removal:** The complete cutting down of trees at or near the ground line. AEP shall specify the disposal method.

**Slash:** The un-merchantable portion of a tree as designated by AEP.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

## **I. Contractor Guidelines**

### **A. Safety**

1. Protecting the safety of the public is of utmost importance to AEP. Contractors shall regard safety as their first priority. Contractors and their employees will recognize and follow all laws, rules and regulations regarding public and worker safety. Any safety related incidents (e.g., personal injury, vehicle accident, outages, flashes, near miss, customer issues, etc.) that occur on the job must be reported to the appropriate AEP personnel as soon as possible.
2. All contact incidents outages or operations caused by contract crews shall be reported to the appropriate AEP Dispatch center and Forestry immediately.

### **B. Personnel**

1. If required by state or local laws and regulations the contractor shall have an ISA Certified Arborist available.
2. No private work may be solicited or worked by Contractor employees while on AEP time. Contractors shall not receive compensation from anyone except AEP for tree work that is a part of AEP's Forestry program. The consequences will be crew and/or contractor disciplinary action.

### **C. Equipment**

1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chain saws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.

The use of spurs/climbers/hooks should be avoided. Where their use is necessary (as in the removal of some trees or in climbing trees, which do not provide a notch in which to tie in) only qualified persons shall be permitted to use them.

#### **D. Overtime**

Overtime is billable for work performed outside the scope of the normal work schedule.

#### **E.. Work Procedures**

1. Contractor practices shall be compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Changes in the workweek due to inclement weather, equipment breakdowns or other circumstances must have prior approval by AEP Forestry personnel.
3. The contractor will be responsible for the development of a plan to complete the assigned tasks. The assigned tasks must be performed in a systematic way that follows this plan. Some examples are: beginning work at substations, working between protection devices, or other methods to prevent inefficiency and/or skipped work. The plan must meet AEP approval before work begins.
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractor shall provide daily work locations to AEP, including changes to these locations throughout the workday.
6. Each crew shall have a planned worksheet at all times, except in the case of emergency work.
7. The Contractor's daily association with their crews and customers will allow planned outages and refusals to be worked on a progressive basis. A written list of such areas that have not been worked, including reasons, shall be supplied to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work shall be inspected on an ongoing basis. When an assigned task is complete, the Contractor must notify AEP Forestry for final inspection.
9. The Contractor will notify AEP of any hazardous conditions found during the performance of work under this contract. This is to include danger trees, soil erosion, and any attachment to AEP's facilities,

deteriorated, damaged or broken facilities and any other abnormal conditions.

#### **F. Public Relations**

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise. Advanced notification provides the property owner/resident with an opportunity to voice concerns.

1. Where required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor will document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the contractor should be on each card.

#### **G. Refusals**

1. A "refusal" is considered any property owner/resident refusing to allow or permit the contractor to manage vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits and easements.
2. The contractor shall fill out a refusal/complaint form with all pertinent information for all refusals.
3. If the contractor is unable to resolve the refusal within one week, the refusal shall be turned over to the appropriate AEP Forester.
4. Undocumented refusals or those left unaddressed for more than one week by the contractor may be worked at the Contractor's expense.

## **H. Damage Claims and Complaints**

1. The contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.
2. An on-site investigation with the resident/ property owner shall be made as soon as possible. This meeting, or telephone arrangements for the investigation, shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during this initial investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.
7. Costs to restore outages or repair the Owner's facilities due to negligence may be billed to Contractor as determined by AEP Forestry.

## **II. Performance Guidelines**

### **A. Removals**

1. Stumps shall be flush cut (three (3) inch maximum height) and treated with an approved herbicide, unless designated otherwise by AEP Forestry.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect yards, fences, houses, electric lines and other facilities.

3. Targets for removal are:

- All trees with the potential of growing into the conductors.
- Trees where adequate clearance cannot be obtained using proper pruning practices.
- Trees that will take less than three times the amount of time to remove as they would take to prune.
- Trees within five (5) feet of poles.
- Mature trees where more than 50% of the crown must be removed to obtain clearance.
- Young vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
- Palm species.

4. Trees that may be less suitable candidates for removal are:

- Those that would take more than three times longer to remove than to prune for proper clearance and at least 50% of the crown would be left intact.
- Species that will not reach a height that would affect the conductors.
- Slow-growing tree species.

5. Deciduous stumps shall be flush cut (three (3) in. maximum height) and shall be treated with an appropriate herbicide to prevent re-growth unless the situation prevents application according to label instructions, there is a documented customer refusal or an AEP forester directs otherwise.

6. At the request of the property owner/resident diseased, dying, or dead trees which could threaten AEP facilities will be "made safe", allowing for removal by the customer or private arborist. Generally, all brush and wood generated by this activity should be left on site, unless otherwise directed by AEP Forestry.

**B. Pruning**

1. Contractor practices should be compliance with all applicable industry standards (i.e., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development.
3. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth in Tables I and II.



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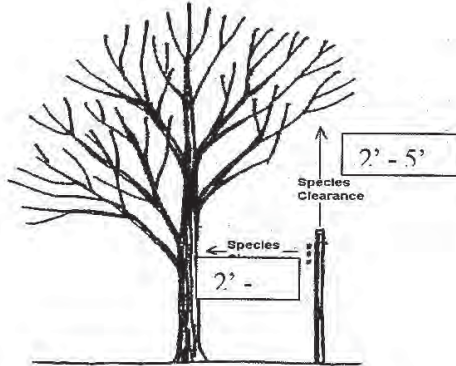
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**3. Twisted, Cabled Secondary, Service Drops or Street Light Conductors -**

Trees near twisted or cabled secondary service drops and street light wires will not be pruned unless limbs are applying pressure to the line. Do not prune for street light illumination except under the specific direction of the appropriate AEP Forestry representative.

**4. Span Guy Wires –** Trees near span guys should only be pruned of heavy limbs applying pressure on the wires.

**5. Poles and down guys -** All poles and down guys will be cleared of all volunteer trees, brush, and slash to obtain a minimum of a five (5) foot radius of clearance around the pole or guy.

**6. Vines -** Should be cut, but not removed from AEP or other facilities, and treated with an herbicide to prevent re-growth. Pulling / removing vines may damage equipment and endanger the employee.

**D. Clearances - Transmission**

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right of way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right of way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no

*[Redacted text block]*

*[Redacted text block]*

*[Redacted text block]*

*[Redacted text block]*

2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of clean up work should be performed, especially when a property owner requests a tree be removed. Unless otherwise designated by AEP Forestry, wood shall not be cut up or hauled away. Where designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum clean up that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the contractor. Any cut debris that inadvertently falls into such an area, or any debris left in an area that may be prone to regular flooding, shall be moved/removed in an appropriate manner (chipped, stacked on top of ditch bank, etc.)

#### **F. Clearing and Re-clearing**

1. AEP Forestry will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into the lines should be controlled, either by removal, herbicide treatment or a combination of both. On distribution lines and areas approved by Transmission Forestry on transmission lines those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities, should be left undisturbed in the right-of-way whenever possible. Variances to this recommendation may be applied due to specific operating company guidelines.
3. During scheduled maintenance operations, prune or remove any vegetation within the rights-of-way of station entrances or exits that may affect the safe operation of AEP facilities, including station fences and equipment.
4. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the appropriate AEP personnel.
5. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practicable, but not to exceed three (3) inches in height above the ground line. Where possible, the cut shall be parallel to the slope and promptly treated with an approved herbicide, unless otherwise directed by AEP Forestry.
6. Trees shall be felled to avoid damage to crops, fences and other facilities. Any trees felled into crops, ditches, streams, roads or

across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP's facilities or the property of third parties, or hinder access along the right-of-way.

7. Tree, brush and slash shall be lopped as designated by AEP Forestry.
8. Danger trees are identified and addressed / worked at the discretion of the individual operating companies or regions. Consideration for danger tree removal shall be made for those trees that are an imminent hazard or threat to AEP facilities. Danger trees may include, but are not limited to, trees that have severe lean or sweep, are dead, or have visible defect or damage. When cut, danger trees shall be cut as low as possible.
8. Stumps of trees growing in fences may be cut at fence post height, as approved by AEP Forestry.
9. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
10. In remote areas, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
11. Brush should not be left in managed agricultural areas or other maintained areas unless designated by AEP Forestry.

#### **G. Herbicide Applications**

1. All woody plants that have the potential of growing into the lines, should be controlled. Those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities should be left untreated in the right-of-way whenever practical.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made and are required to abide by all Federal, State, and local laws concerning licensing, record keeping, and product handling.
3. Contractors shall attain 100% coverage and 95% control of treated vegetation.
4. AEP Forestry will make vegetation management prescriptions in consultation with contractors.

5. Where required, landowners should be notified before any herbicide treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps should be treated with an appropriate herbicide treatment.

#### **H. Tree Growth Regulator Application**

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (TGR) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in an excessive state of decline shall not be treated unless directed by AEP Forestry.
3. As designated by AEP Forestry, landowners should be notified before any TGR treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX I**

**Distribution Line Clearance Guidelines**

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as **minimum clearance** requirements unless designated otherwise by AEP Forestry. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that during maintenance intervals, trees may encroach into these minimum clearance zones. The guidelines are meant to be used as a guide for trimming those trees currently being maintained.

**MINIMUM CLEARANCE FROM CONDUCTORS**

- **Species with Fast Re-growth Rates:** Prune for a *minimum* clearance of 20 feet from conductors

|                |           |
|----------------|-----------|
| Cottonwood     | Willow    |
| Poplar species | Ailanthus |
| Silver maple   | Box Elder |
| Sycamore       |           |

- **Species with Medium Re-growth Rates:** Prune for a *minimum* clearance of 15 feet from conductors

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Locust                          | Hackberry                             |
| Red maple species               | Hickory                               |
| Ornamental pear species         | Crabapple                             |
| Fruit trees (apple, pear, etc.) | Red oak                               |
| Elm species                     | Ash species                           |
| Pine, Spruce & Hemlock species  | Mulberry                              |
| Sweet gum                       | Bois d'arc (Osage orange, hedge tree) |
| Catalpa                         |                                       |

- **Species with Slow Re-growth Rates:** Prune for a *minimum* clearance of 10 feet from conductors

|                           |                         |
|---------------------------|-------------------------|
| Cedar                     | Persimmon               |
| Chinaberry                | White oak (round lobes) |
| Magnolia                  | (Redbud, dogwood, etc.) |
| Any small variety species |                         |

- **Possible Exceptions:**

[REDACTED]

[REDACTED]



**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX II**

Transmission Line Clearance Guidelines<sup>(7)</sup>

| Column A<br>Nominal Voltage<br>(kV phase to<br>phase) | Column B <sup>(5)</sup><br>NERC Clearance 1<br>(no restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)(2)</sup> and<br>Vegetation | Column C <sup>(3)(5)</sup><br>NERC Clearance 1<br>(with restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column D <sup>(3)</sup><br>ANSI Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column E <sup>(4)</sup><br>NERC<br>Clearance 2<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation |
|---|---|---|--|---|
| 765 kV  | 45'   | 35' 00"   | 27' 04"  | 14' 0"  |
| 500 kV  | 45'   | 26' 08"   | 19' 00"  | 10' 0"  |
| 345 kV  | 30'   | 20' 05"   | 13' 02"  | 7' 6"   |
| 230 kV  | 30'   | 16' 05"   | 7' 11"   | 5' 2"   |
| 161 kV  | 25'   | 14' 00"   | 6' 00"   | 3' 5"   |
| 138 kV  | 25'   | 13' 02"   | 5' 02"   | 2' 11"  |
| 88 kV & 115kV   | 25'   | 12' 04"   | 4' 06"   | 2' 6"   |
| 69 kV   | 25'   | 10' 09"   | 3' 09"   | 2' 6"   |
| 46kV, 40kV, 34.5<br>kV & 23 kV                        | 20'   | 10' 00"   | 2' 09"   | 2' 6"   |

<sup>(1)</sup> Conductor at maximum sag condition<sup>(6)</sup>

<sup>(2)</sup> Desired clearance to maintain reasonable clearing cycles

<sup>(3)</sup> ANSI Z133.1 rev. 10/2000

<sup>(4)</sup> IEEE Standard 516-2003, Section 4.2.2.3, Tables 5 and 7, calculated clearances (Clearance 2)

<sup>(5)</sup> Application of herbicides will be considered as meeting these guidelines, as long as all treated vegetation meets or exceeds the desired clearance from maximum sag (Table AEP1.2, Columns A and C).

<sup>(6)</sup> AEP Guideline for Determining Maximum Conductor Sag and Blowout for Vegetation Management is to be used to adjust the conductor's found field condition to the maximum sag condition taking into account the conductor size, span length, elevation, and current temperature.

<sup>(7)</sup> (Columns A, B, C, and D) distances exceed clearances for NERC operationally significant circuits noted in NERC Standard FAC-003-1, which gives clearances (Columns A and E) to be maintained between vegetation and conductors under all rated electrical operating conditions, per IEEE Standard 516-2003 (Guide for Maintenance Methods on Energized Power Lines) and as specified in its Section 4.2.2.3, Minimum Air Insulation Distances without Tools in the Air Gap.

# AEP FORESTRY

## *Instructions*

### *For*

## **Forestry Contract Crew Audits**

**January 2007**

**The Forestry Contract Crew Safety and Forestry Contract Crew Audits** are tools that AEP Foresters can use to record a tree crew's compliance with safety regulations, contract guidelines and work performance. A crew, or the completed work, is rated as pass or fail and acceptable or unacceptable. Acceptable or pass means a crew meets contract guideline expectations. Unacceptable or fail means a crew, or the completed work, does not meet contract guideline expectations. An unacceptable or fail rating for any single item in the Crew Safety, Forestry Clearance or Forestry Work Quality audit sections will result in a failure rating for the audit section receiving the unacceptable or fail rating.

Each topic found on the Forestry Contract Crew Safety Audit and Forestry Contract Crew Audit is defined in this document. The 10 topics listed under Safety are forestry specific relating to the AEP Contractor Oversight program. The remaining five topics – Clearance, Work Quality, Equipment, Personnel and Reporting Accuracy relate to contract/guideline compliance and work performance.

Definitions of terms used in this document and more detailed explanations of right of way Forestry work compliance standards are supported by and provided in the document "AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations".

One copy of each completed crew audit is to be given to the audited tree crew foreman, one copy to the contractor general foreman/ supervisor responsible for the crew, and one copy kept on file at the responsible/ local AEP forester's office.

All audit information, including comments, should be entered into RWM

**Audit Frequency** – The expectation of AEP Forestry management is that contract crew audits are to be conducted on a regular basis.

**Fail or Unacceptable** - Any item marked 'Fail' or 'Unacceptable' must be explained. Use the comments sections on the audit forms to explain why an item was marked 'Fail' or 'Unacceptable'.

## Safety Audit

**Personal Protective Equipment** - Shall be worn as required by OSHA and ANSI specifications. Such PPE includes and is not limited to:

**Hard Hats** - Shall be worn when entering the job site. Visual inspection of hard hats should be made to insure they are not cracked, broken, or otherwise altered.

**Safety Glasses** - ANSI approved Z87.1 eye protection shall be worn on job site at all times. Safety glasses are required for all jobs.

**Ear Protection** - Shall be worn when running chippers or chainsaws. Exception-not required when using a chainsaw while working in tree.

**Proper Footwear** - Proper work boots that go above the ankle. Footwear should support the foot and ankle area.

**Chain Saw Chaps** - Are to be worn, according to ANSI guidelines, while operating chain saws.

**High Visibility Garments** – Are to be worn when exposed to vehicular traffic.

**Fall Protection Equipment** – Proper fall protection equipment shall be used while working in an aerial lift device or manually climbing. All such equipment shall be inspected on a daily basis for safe working condition.

**Properly Maintained Safety Equipment** - Each truck is required to have a fully stocked, removable first aid kit; fire extinguisher with current fire safety inspection; and wheel chocks.

**Traffic Control Devices** – Approved cones, signs and flagging personnel need to be properly placed in compliance with State and/or Federal DOT regulations (MUTCD). Be sure all vehicles are properly parked adhering to all city and state laws and regulations including OSHA regulations.

**Proper Fall Protection Procedures** – All climbing practices must be in accordance with OSHA and ANSI Z133 standards.

**Properly Barricade Work Area** – Public should be kept away from work area. Safety cones shall be used to isolate work area from public area. Any person not wearing proper PPE shall be escorted out of work area. Unattended equipment should not be left on the ground where it could jeopardize the public or worker safety.

**Properly Maintain and Store Work Tools** – All tools such as chain saws, pole pruners, ladders, etc. that are kept on a work vehicle are to be safely secured and stored away from public availability. Saws with blade scabbards should be stored with scabbard on. Tools should be in good working order and repair.

**Follow Proper Approach Distances** – All tree trimmers are required to follow OSHA 1910.269 minimum clearances for A.C. Live – Line Work Minimum Approach Distances.

**Properly Store and Mark Hazardous Material** – All herbicide sprayers and storage containers shall be properly labeled and kept in a secured location. Flammable liquids shall be stored in approved containers.

**MSDS and Labels Information Available** - Material Safety Data Sheets for all chemicals shall be readily available on each vehicle. State and federal pesticide regulations also require each vehicle to have labels for each herbicide being used by the crew or stored on the vehicle.

**Good Job Site Housekeeping** – Job site shall be kept orderly at all times. Equipment, trimmings and debris need to be contained to allow safe working operations and provide public safety.

### **Clearance Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Tree Pruning- Conductor Clearance** – All tree pruning shall be governed by approved principles of arboriculture and shall adhere to Tree Care Industry Association (TCIA) and International Society of Arboriculture (ISA) standards.

**Primary Conductors- Conductor Clearance** - It is AEP's practice to prune trees in a manner that will direct growth away from the electrical conductors. Growth should be removed to a lateral or parent stem and vertical growth rolled back away from the conductor.

Minimum clearance for distribution system lines should be established by each Operating Company. Overhanging limbs should be removed unless otherwise directed by the appropriate AEP System Forestry representative.

**Secondary Conductors – Conductor Clearance** – Minimum clearance for open wire secondary should be established by each Operating Company. Overhanging limbs should not be removed unless otherwise directed by the appropriate AEP System Forestry representative.

Insulated, Twisted, or Cabled Secondary Conductor Clearance – Will not be pruned unless limbs are applying pressure to the line or unless directed by the appropriate AEP System Forestry representative.

**Tree Removal** – Tree removal is an important part of the AEP line clearance program. Targeted tree removals are all trees with the potential to grow into the conductors., Dead, diseased, fast growing tree species, and trees that cannot be properly pruned to obtain proper clearance for the AEP conductors are removal targets.

Stumps shall be flush cut and treated with an approved herbicide as designated by the appropriate AEP System Forestry representative.

**ROW Width** - AEP forestry will provide the width of the right of way. This area will vary depending on facilities. The full width of the R/W area or easement should be cleared of all tall growing or non-compatible woody plant species unless otherwise instructed by the appropriate AEP System Forestry representative.

**Danger Trees** - Danger trees shall be removed or pruned to eliminate the hazard. When cut, danger trees shall be cut as low as practicable, but not to exceed eight inches in height above the ground line. The logs and slash shall be left as felled, unless otherwise designated by AEP System Forestry.

### **Work Quality Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Clearance for Species** - The clearance for a species may be defined as the distance between the tree and conductors after pruning. It is the responsibility of each crew to adhere to the appropriate clearances specified in the AEP guidelines. No exceptions should be made unless otherwise instructed by the appropriate AEP System Forestry representative.

**Hangers Removed** – Any cut or broken limbs left in the tree after pruning shall be removed before leaving work site.

**Collar Cuts** - Collar cuts are important in order to reduce a tree's sprouting. Collar cuts shall be consistently made according to proper arboriculture standards (ANSI A300).

**Directional Pruning** – A pruning practice used to remove branches growing toward conductors; leaving branches growing away from conductors.

**Drop Crotch Selection** – Pruning cuts are to be made, whenever possible, to lateral branches that are at least 1/3 the diameter of the branch being removed.

**Peels / Tears** – Pruning cuts resulting in bark tearing or stripping below a cut shall be avoided.

**Clean Up / Brush Disposal** – All appropriate cleanup work shall be done before leaving a job site unless arrangements have been made with the property owner or AEP forestry personnel. This could include: Chipping or piling brush; removing trash/debris; raking the yard and sweeping driveway, sidewalk or street when appropriate.

**Regard for Property** - All line clearance personnel shall respect the property of the landowner at all times. The crew should take extra effort not to drop limbs on landscaped beds, gardens, yard decorations, fences, roofs, gas meters, cars, etc. The crew should take care not to damage property when walking across or dragging brush.

Ruts or other damage shall be brought to the land owner's attention and addressed accordingly.

**Stump Height** – Stumps should be cut as low to the ground as practical.

**Clearing Around Pole Locations** - A radius of five feet shall be cleared to provide a safe work area free of obstruction from vegetation around each pole location.

**Herbicide Application** – Herbicide applications shall be done in accordance with all Federal, State, and local laws. Contractors shall obtain 100% coverage and at least 95% control of all targeted woody plants.

**Tree Growth Regulator** – Trees designated for Tree Growth Regulators (TGR) shall be treated with an approved product in accordance with the label instructions.

### **Reporting Accuracy Audit**

**Number of trees trimmed** – Record timesheet data. Count the number of trees trimmed by a crew and record on audit sheet.

**Number of trees removed** – Record timesheet data. Count the number of trees removed by a crew and record on audit sheet.

**Footage/Units/Acres Re-cleared** - Record timesheet data. Field count the work completed by a crew.

**Footage/Units/Acres Ground Sprayed** - Record timesheet data. Field count the work completed by a crew.

### **Non-KPI Audit Items**

**Truck Appearance / ID** - Name of contractor clearly displayed with DOT numbers properly displayed. No personal bumper stickers. No long-standing, visible spills.

**Number of Working Saws** – Determined per contract specifications based on type of crew. These saws start and idle without assistance and have a maintained bar and chain.

**R/W Equipment/Chipper** - The proper vehicle, mower, or trimmer unit shall be used based on work location and tree/brush conditions. Chipper starts when key is turned on. Chips are of small size (2"-6"), and not stringy. Brush feeds correctly into chipper and chute deposits chips as directed.

**Crew Properly Equipped** –Each crew shall be equipped according to AEP contract specifications. Crews shall have all necessary tools, on a daily basis, to complete

assigned work productively. For example; ropes, saddles, saws, pruner poles, herbicide sprayer, etc...

**Herbicide Equipment** - Each crew shall have all necessary tools, sprayers and product to ensure safe, productive herbicide applications. Equipment must be in good working condition. All crews shall have all necessary PPE, sprayers etc. to apply according to label instructions.

**AEP Guidelines** - A complete, legible and current set of the AEP Forestry Guidelines and clearance specs is kept in the vehicle (English or Spanish).

**Professional Appearance** - All contract employees will conduct themselves and dress themselves in a manner that positively represents AEP. If required by AEP contract specifications, contract employees must be wearing contractor uniform (i.e. appropriate color T-shirt). Crew must be neat in personal appearance - no excessive holes in clothes and facial hair neat in appearance.

**Manpower Utilization** - All contract employees and equipment shall be used in a fashion that is conducive to maintaining safe work practices and production goals. Look to see if crews are working in efficient manner (i.e. standing around doing nothing, trees that should be treated with herbicide should not be cut then sprayed). Everyone on a crew must be working as a team. If workflow is disjointed with no organization, it is unacceptable. A job briefing should be held each morning to ensure that everyone knows their responsibilities and can perform their tasks in a safe and productive manner.

**Customer Relations** - All contractors will respect the needs and concerns of the customer or landowner. Demonstrate, on an ongoing basis, effective, courteous communication with AEP customers (both internal and external) and landowners and the general public.

**Tree Knowledge** - All members of a crew shall be able to identify and distinguish growth characteristics of trees common to their geographical work area. Ask crews to identify trees in their surrounding area.

**Planning** - The crew should work in a systematic and organized fashion on a daily basis (i.e. not skipping around). The crew supervisor should have a plan for the day and be prepared to discuss that plan with the property owner and any utility employee. It is the responsibility of each crew member to inform their supervisor of any equipment needs that may stand in the way of production or safety.

**Use of Forms** - Forms such as time sheets and production logs, herbicide records, refusal forms, removal cards etc. are filled out completely and accurately and kept up-to-date with all important information. Items such as tree count can be written in daily dairies before being transferred to the correct form; however they must be in a coherent and ordered format.

### Sample Audit Form

#### AEP FORESTRY CONTRACT (KPI) CREW AUDITS

No. \_\_\_\_\_

Audit Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Audit Quarter: 1 2 3 4 (circle one) Operating Co.: \_\_\_\_\_  
 Auditor Name: \_\_\_\_\_ State: \_\_\_\_\_  
 Crew Number: \_\_\_\_\_ District: \_\_\_\_\_ Forestry Region Number: \_\_\_\_\_  
 Circuit #: \_\_\_\_\_ Foreman/ General Foreman: \_\_\_\_\_  
 Circuit Name: \_\_\_\_\_ Pole Number: \_\_\_\_\_

#### Forestry Contract Crew Safety (KPI) Audit CHECK ONE: PASS FAIL

- Failure ratings for any single item will result in failure of this audit.
- Failure must be documented in comments fields and will require random periodic follow up observation.

|  | PASS                     | FAIL                     | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Personal Protective Equipment-<br>Shall be worn as required. Includes but not limited to hard hats, safety glasses, ear protection, proper footwear. | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 Property Maintained Safety Equipment-<br>Fully stocked, removable first aid kit, fire extinguisher and wheel chocks.                                 | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Traffic Control Devices-<br>Approved and placed in accordance with applicable State and Federal regulations.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 4 Proper Fall Protection Procedures-<br>All climbing practices must be in accordance with OSHA and ANSI Z -133 standards.                              | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 5 Property Barricade Work Areas-<br>Barricade material available and used in accordance with safety rules.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 6 Properly Maintain and Store Work Tools   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 7 Follow Proper Approach Distances-<br>Follow OSHA 1910.269 minimum clearances for AC Live Work Minimum Approach Distances.                            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Acceptable/Unacceptable on items below

- An Unacceptable ratings may result in failure of this audit dependent on magnitude and frequency of the violation.
- Any item found to be Unacceptable must be documented in the comments fields and will require random, periodic follow up observation.

|  | ACCEPTABLE               | UNACCEPTABLE             | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Hazardous material properly stored, labeled and documented | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 MSDS and Herbicide Label information available             | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Jobsite Housekeeping                                       | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Forestry Clearance (KPI) Audit CHECK ONE: PASS FAIL

| Pass / Fail         | PASS                     | FAIL                     |              | PASS                     | FAIL                     | COMMENTS |
|---------------------|--------------------------|--------------------------|--------------|--------------------------|--------------------------|----------|
| Conductor Clearance | <input type="checkbox"/> | <input type="checkbox"/> | Danger Trees | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| ROW Width           | <input type="checkbox"/> | <input type="checkbox"/> |              |                          |                          | _____    |

#### Forestry Work Quality (KPI) Audits CHECK ONE: PASS FAIL

|                       | PASS                     | FAIL                     |                       | PASS                     | FAIL                     |                        | PASS                     | FAIL                     | COMMENTS |
|-----------------------|--------------------------|--------------------------|-----------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------|
| Collar Cuts           | <input type="checkbox"/> | <input type="checkbox"/> | Stump Height          | <input type="checkbox"/> | <input type="checkbox"/> | Peels/Tears            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Directional Pruning   | <input type="checkbox"/> | <input type="checkbox"/> | Hangers               | <input type="checkbox"/> | <input type="checkbox"/> | Cleanup/Brush Disposal | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Drop Crotch Selection | <input type="checkbox"/> | <input type="checkbox"/> | Clearing around poles | <input type="checkbox"/> | <input type="checkbox"/> | Regard for property    | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Reporting Accuracy (KPI) Audit

Week ending date: \_\_\_\_/\_\_\_\_/\_\_\_\_

|                                     | TimeSheet Data |       | Audit Data |       | Variance |       |
|-------------------------------------|----------------|-------|------------|-------|----------|-------|
|                                     | Cap            | O&M   | Cap        | O&M   | Cap      | O&M   |
| Number of trees trimmed             | _____          | _____ | _____      | _____ | _____    | _____ |
| Number of trees removed             | _____          | _____ | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acre Re-cleared     | _____          | _____ | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acre Ground Sprayed | _____          | _____ | _____      | _____ | _____    | _____ |

YES  NO   
 Widening

#### Non - KPI Crew Audit Items

|                        | PASS                     | FAIL                     |                         | PASS                     | FAIL                     |                        | PASS                     | FAIL                     |                | PASS                     | FAIL                     |
|------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------------|--------------------------|--------------------------|
| Equipment & Personnel  | <input type="checkbox"/> | <input type="checkbox"/> | Professional appearance | <input type="checkbox"/> | <input type="checkbox"/> | Crew Properly Equipped | <input type="checkbox"/> | <input type="checkbox"/> | Tree Knowledge | <input type="checkbox"/> | <input type="checkbox"/> |
| Truck Appearance/ID    | <input type="checkbox"/> | <input type="checkbox"/> | Manpower utilization    | <input type="checkbox"/> | <input type="checkbox"/> | Herbicide Equipment    | <input type="checkbox"/> | <input type="checkbox"/> | Planning       | <input type="checkbox"/> | <input type="checkbox"/> |
| Number of Working Saws | <input type="checkbox"/> | <input type="checkbox"/> | Customer Relations      | <input type="checkbox"/> | <input type="checkbox"/> | AEP Guidelines         | <input type="checkbox"/> | <input type="checkbox"/> | Use of Forms   | <input type="checkbox"/> | <input type="checkbox"/> |
| ROW Equipment/Chipper  | <input type="checkbox"/> | <input type="checkbox"/> |                         |                          |                          |                        |                          |                          |                |                          |                          |

ADDITIONAL COMMENTS: \_\_\_\_\_

AEP REPRESENTATIVE: \_\_\_\_\_ CONTRACTOR REPRESENTATIVE: \_\_\_\_\_




# Transmission Vegetation Management Program

Document #: TVMP-001  
 Effective July 30, 2011



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|---|---|---|---------|--------------|
| Transmission Vegetation Management Program  |   |   |         |              |
|  | Responsible Engineer:<br>D.K. Killingsworth | Copyright 2011<br>American Electric Power | Rev. 10 | TVMP-001     |
|   |   |   |         | Page 1 of 38 |

## Review Cycle

| Version | Description                               | Review Cycle | Retention Period | Review Date |
|---------|---|--------------|------------------|-------------|
| 1       | Reviewed with Changes to Ver. 0           | Annual       | 3 Yrs            | 01/16/2006  |
| 2       | Reviewed with Changes to Ver. 1 and 2     | Annual       | 3 Yrs            | 03/12/2007  |
| 5       | Reviewed with Changes to Ver. 3, 4, and 5 | Annual       | 3 Yrs            | 05/06/2008  |
| 8       | Reviewed with Changes to Ver. 6           | Annual       | 5 Yrs            | 05/26/2009  |
| 9       | Reviewed with Changes to Ver. 8           | Annual       | 5 Yrs            | 07/27/2010  |
| 10      | Reviewed with Changes to Ver. 9           | Annual       | 5 Yrs            |             |

## Revision History

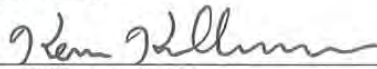
| Version | Description   | Prepared by                          | Reviewed by | Approved by  | Effective Date |
|---------|---|--------------------------------------|-------------|--|----------------|
| 1       | Added Appendix A and B  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr. Trans.<br>Line Asset<br>Engineering | 01/16/2006     |
| 2       | Added Appendix C  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr. Trans.<br>Line Asset<br>Engineering | 10/02/2006     |
| 3       | Added Revision History  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr. Trans.<br>Line Asset<br>Engineering | 03/12/2007     |
| 3       | Revised Appendix C from Version 2. Clarified video text associated with aerial patrols, page 8. | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr. Trans.<br>Line Asset<br>Engineering | 03/22/2007     |

| Version | Description   | Prepared by                                  | Reviewed by   | Approved by  | Effective Date |
|---------|---|--|---|--|----------------|
| 4       | Revised Maintenance Clearances in Table I, page 11. Removed Appendix A from Revision 0 and inserted a new Appendix A. Removed Appendix B from Revision 0 and renamed Appendix C from Revision 0 to Appendix B.  | H.R. Jones, Principal Engineer               | -   | J. E. Schechter, Mgr. Trans. Line Asset Engineering    | 11/09/2007     |
| 5       | Revised Maintenance Clearances text page 10. Revised Appendix B.  | H.R. Jones, Principal Engineer               | -   | J. E. Schechter, Mgr. Trans. Line Asset Engineering    | 05/06/2008     |
| 6       | Added third level of review/approval. Added Internal Mailing list. Added Standard mapped to TVMP. Revised Contents and page numbers. Revised Maintenance Clearances, pages 13 and 14. Revised Imminent Threat, pages 10 and 11. Revised Appendix A. Added new Appendix C. Added new Appendix D. Added hyperlinks. | S .J. Reaves, Forestry Program Coordinator I | J. E. Schechter, Mgr. Trans. Line Asset Engineering | D. R. Boezio, Dir., Trans. Asset Engineering           | 06/15/2009     |
| 8       | Revised Version History. Revised Personnel Qualifications, Appendix D. Included References on Contents Page. Revised Subject Matter Experts (SMEs).   | S .J. Reaves, Forestry Program Coordinator I | J. E. Schechter, Mgr. Trans. Line Asset Engineering | D. R. Boezio, Dir. Transmission Asset Engineering      | 07/31/2009     |
| 9       | Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Landowner and Community Relations section to Land Owner Relationships and Environmental Sustainability. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved.   | D.K. Killingsworth, Engineer I               | J. E. Momme, Dir Trans. Line Projects Engineering   | D. J. Recker, Managing Dir Trans. Projects Engineering | 07/30/2010     |

| Version | Description   | Prepared by                    | Reviewed by                                       | Approved by  | Effective Date |
|---------|---|--------------------------------|---|--|----------------|
| 10      | Reformatted Document to match Transmission Forum Model TVMP | D.K. Killingsworth, Engineer I | J. E. Momme, Dir Trans. Line Projects Engineering | D. J. Recker, Managing Dir Trans. Projects Engineering |                |

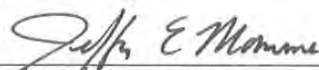
## Signatures

### Prepared By


  
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 D. K. Killingsworth, P.E.  
 Engineer, Transmission Line Engineering Administration

7-21-11  
 \_\_\_\_\_  
 Date

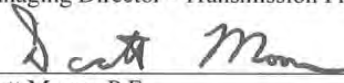
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7-22-11  
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 Date

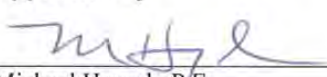
  
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7/26/11  
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7/28/2011  
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 Date

|   |  |         |              |
|---|--|---------|--------------|
|  | Transmission Vegetation Management Program | Rev. 10 | TVMP-001     |
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## I. Directive

NERC Standard FAC-003-1—Transmission Vegetation Management Program: R1. The Transmission Owner shall prepare, and keep current, a formal transmission vegetation management program (TVMP). The TVMP shall include the Transmission Owner’s objectives, practices, approved procedures, and work specifications.

**Table 1: FAC-003-1 Requirements Addressed**

The following table shows where specific requirements of FAC-003-1 have been addressed.

| <b>FAC-003-1 Requirement</b>  | <b>Location(s) in Document</b>  |
|---|---|
| R1—Transmission Owner’s Formal Program  | TVMP-001 III.A. The TVMP Program, Introduction and Purpose, page 9  |
| R1—Transmission Owner’s Objectives  | TVMP-001 III.B. Vegetation Management Objectives, pages 9–10  |
| R1—Transmission Owner’s Approved Practices, Procedures, and Work Specifications | TVMP-001 IV.E. Right-of-Way Maintenance Methods, pages 19–21<br>TVMP-001 IV.F. New Construction Clearing, pages 21–22<br><i>Also AEP Forestry Goals, Procedures &amp; Guidelines for Distribution and Transmission Line Clearance Operations (May 14, 2009)</i> |
| R1.1—Inspections and Patrols  | TVMP-001 III.C.1. Vegetation Inspections & Patrols, page 11   |
| R1.2—Clearances   | TVMP-001 III.D.1. Right-of-Way Clearance Guidelines, page 15  |
| R1.3—Personnel Directly Involved  | TVMP-001 Appendix C: Personnel Directly Involved, page 30   |
| R1.4—Restrictions   | TVMP-001 III.D.2. Restrictions, page 16   |
| R1.5—Imminent Threat  | TVMP-001 III.C.7. Communicating Imminent Threats, page 14<br>TVMP-001 Appendix A: Imminent Threat Procedures, page 27<br>TVMP-001 Appendix B: Imminent Threat Communication, page 29  |
| R2—Work Plan  | TVMP-001 IV.A. Annual Work Plan, page 18<br>TVMP-001 IV.C. Unscheduled Work, page 18<br>TVMP-001 IV.G. Inspections (Work Quality), page 23  |
| R3—Reporting  | TVMP-001 V. Reporting, page 25  |

## II. Referenced Specifications

| Document ID        | Document Title   |
|--------------------|--|
| —                  | <i>AEP Forestry Goals, Procedures &amp; Guidelines for Distribution and Transmission Line Clearance Operations (May 14, 2009)</i>  |
| AEP ROW Brochure   | American Electric Power (AEP). <i>Transmission Right of Way Clearing and Maintenance: A Balanced Approach to Vegetation Management</i> . American Electric Power, Columbus, OH 43215. 2008.  |
| ANSI A-300, Part 1 | American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning)</i> . 2006. Tree Care Industry Association, Inc. Londonderry, NH 03053. 2008. Pages 1–19.   |
| ANSI A-300, Part 7 | American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices Part 7 – Integrated Vegetation Management a. Electric Utility Rights-of-way</i> . Tree Care Industry Association, Inc. Londonderry, NH 03053. 2008. Pages 1–13. |
| ANSI Z133.1-2006   | American National Standard Institute. <i>Arboricultural Operations - Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush - Safety Requirements</i> . International Society of Arboriculture (ISA). Champaign, IL 61826. 2007. Pages 1–68.                                 |
| IEEE 516-2003      | IEEE 516-2003. Institute of Electrical and Electronics Engineers, Inc. <i>IEEE Guide for Maintenance Methods on Energized Power Lines</i> . Institute of Electrical and Electronics Engineers, Inc. New York, NY 10016-5997. 2003. Pages 1–119.  |



### III. The TVMP Program

#### A. Introduction and Purpose

The Forestry Operations group of American Electric Power manages vegetation along approximately 8,600 miles of NERC-reportable transmission rights-of-way in portions of eleven states. This is accomplished through the implementation of a comprehensive, systematic, integrated vegetation management program designed to ensure that the vegetation along each transmission line is managed at the proper time and in the most cost-effective and environmentally sound manner.

The American Electric Power Transmission Vegetation Management Program (TVMP) has been developed and implemented to ensure compliance with the North American Electric Reliability Corporation reliability standard FAC-003.

- This program is intended to improve the reliability of the electric transmission system by preventing outages from vegetation located on transmission rights-of-way (ROW) and minimizing outages from vegetation located adjacent to ROW.
- Maintaining clearances between transmission lines and vegetation on and along transmission ROW.
- Report vegetation-related outages of the transmission systems to the appropriate Regional Reliability Organization (RRO) and the North American Electric Reliability Corporation (NERC).

This program only applies to those transmission lines that fall within the scope of FAC-003-1.

#### B. Vegetation Management Objectives


The primary objective of the AEP Vegetation Management Program is to provide for the safe, reliable operation of the AEP transmission system. The key measure of success is 0 (zero) vegetation-related outages or operations on AEP's extra-high voltage (EHV) transmission system ( $\geq 200$  kV) and other lower-voltage transmission circuits that have been designated as critical or operationally significant by the Regional Transmission Organization.

For EHV and lower-voltage operationally significant circuits, AEP's objective is to clear the right-of-way to the maximum appropriate width, removing all woody-stemmed vegetation within the right-of-way. Danger trees that are outside the right-of-way will be addressed with the landowner and removed or made safe.

AEP conducts aerial and ground inspections and develops annual vegetation management plans to ensure this Program Objective is achieved in the most efficient and economical manner practical.

Other objectives include:

- Minimizing adverse environmental impacts
- Complying with laws and regulations
- Achieving cost efficiency
- Maintaining a harmonious relationship with landowners and the public

|   |  |         |              |
|---|--|---------|--------------|
|  | Transmission Vegetation Management Program | Rev. 10 | TVMP-001     |
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## 1. Philosophy of the AEP Vegetation Management Program

Vegetation on AEP's transmission system is managed on a prescriptive basis. Ongoing evaluation of the system through ground and aerial inspections by both Transmission Line and System Forestry personnel, together with guidance from the program objectives, provides the basic information used by Forestry Operations to develop its annual plan. Circuit criticality, historical data, line voltage, location, vegetative inventory information, and land use are among the items considered when developing the annual vegetation management plan. These plans are dynamic during the year because of vegetation patrols and changing conditions.

As succession occurs within the plant communities along the rights-of-way, these annual work prescriptions will change based on the sizes and types of vegetation present. Forestry Operations staff and their contractors continuously work to ensure the appropriate prescription is utilized to maximize effectiveness and efficiency.

Forestry Operations is a centralized organization in both reporting and budgeting. It primarily employs or contracts degreed foresters. Certified utility line clearance contractors provide the labor force for the ground-based clearing and herbicide applications. FAA-licensed aerial contractors provide patrol, side trimming, and herbicide application services. Contract work is designated and inspected by AEP foresters to ensure that the work is complete, performed in a timely manner, to AEP and industry standards, at reasonable cost, and with courtesy to property owners and to the public. Foresters travel throughout their assigned regions of the AEP companies to accomplish these tasks.

## 2. Land Owner Relationships and Environmental Sustainability


AEP values landowner relationships as much as landowners value their trees. Great efforts are made to strike a balance between service reliability and the landowner's landscaped vegetation. Contract personnel utilize face-to-face communication and door cards to contact resident landowners before routine line clearance work is done.

AEP has invested time and resources into public education concerning proper tree care and sound environmental practices. Forestry Operations participates in many "green" organizations such as the National Arbor Day Foundation, the Utility Arborist Association, the International Society of Arboriculture, and various state and local vegetation management organizations. AEP Corporate Communications, in cooperation with Transmission Management, has produced a brochure, *Transmission Right of Way Clearing and Maintenance, A Balanced Approach to Vegetation Management*, which is given to landowners and other community groups, outlining general policies for AEP's Transmission vegetation program.

While AEP goes to great lengths to satisfy landowners, there are times when a landowner lodges a complaint. Complaints are viewed as advice on potential program changes, and AEP works diligently to amicably resolve any differing points of view.

## 3. Property Owner Right of Maintenance

AEP is required by law or regulation in some areas to provide private property owners with an option of maintaining vegetation within the easement on their property in lieu of herbicide use. Although AEP discourages this practice, when applicable, this option is handled through contractual agreement with AEP on a case-by-case basis.

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## C. Inspections

### 1. Vegetation Inspections & Patrols

Since right-of-way maintenance is not on a rigid schedule, rigorous routine aerial and ground inspections are critical to meeting the objectives of the AEP Vegetation Management Program.

The maintenance work plan is developed primarily through aerial patrol inspections, except where the FAA or other ordinance prohibits flight. These patrols cover substantial portions of the transmission system to identify areas where attention may be needed to prevent vegetation from interfering with circuit operation.


### 2. Forestry Patrol Procedures

#### a. Patrol of the AEP Transmission System

Bi-annual patrols of the AEP Transmission System are required for all designated EHV and operationally significant lower-voltage circuits to provide Transmission Foresters a view of right-of-way conditions and judge the efficacy of the vegetation management program. Patrols are an integral part of both planning for the future and meeting the AEP goal of providing a June 1 assurance to corporate management that all designated EHV and operationally significant lower voltage circuits are “summer ready.” In areas at higher elevation or with later vegetation emergence, this date may be extended to June 14.

#### b. Patrol Requirements

- (1) Patrols shall be made bi-annually for all designated EHV and operationally significant lower voltage circuits.
  - (a) Fall Patrol—Barring inclement weather or helicopter unavailability, the EHV and operationally significant lower-voltage circuits shall be patrolled between August 15 and October 30 in the East and September 1 and November 15 in the West. The goal of this patrol is to detect areas that must be mitigated on EHV and operationally significant lower-voltage circuits to ensure summer readiness for the following year and plan future maintenance activities on these circuits.
  - (b) Spring Patrol—Barring inclement weather or helicopter unavailability, all EHV and operationally significant lower-voltage circuits shall be patrolled in the spring; this patrol shall be completed by May 21. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 4. The purpose of this patrol is to monitor current conditions and to ensure mitigation work has been completed on all EHV and operationally significant lower-voltage circuits.
- (2) Helicopters shall be used for aerial observations. Fixed-wing aircraft may only be used in extenuating circumstances with the approval of Manager, Forestry Operations or Director Transmission Engineering.
- (3) Forestry personnel should be the observers in all patrols. An experienced observer may substitute for the forester, but the forester is ultimately responsible for the observations of that person.

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- (4) Observers must have at least one year experience in aerial patrol work or in viewing videos for vegetation conditions. Lacking that experience, an additional observer must be in the helicopter.
- (5) Where practical, all EHV and operationally significant lower-voltage circuits shall be patrolled in one direction in the fall patrol and the opposite direction in the spring patrol.
- (6) All areas requiring immediate mitigation will be documented with GPS readings and locations on the line. These areas shall be mitigated within 24 hours.
- (7) Video photography must be taken annually of all EHV and operationally significant lower-voltage circuits' rights-of-way during patrol to be used as reference and documentation. The video photography must be in color and have sufficient clarity to identify vegetation conditions. The video photography should be imprinted with the line name, GPS position, date, time, and audio capability if available. The Forester shall retain one copy of the video photography and the Manager Forestry Operations shall retain one copy.
- (8) The Aerial Patrol Log shall be submitted to the Manager Forestry Operations when all patrols have been completed.
- (9) Mitigation of problems detected in the Spring Patrol on EHV and operationally significant lower-voltage circuits are scheduled to be completed by May 30 in order to achieve summer readiness. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 14. Reports on the progress of mitigation shall be included with the Aerial Patrol Log.
- (10) Mitigation of problems detected in the Fall Patrol on EHV and operationally significant lower-voltage circuits are scheduled to be completed by March 1 of the following year. Reports on the progress of mitigation shall be made weekly to the Manager Forestry Operations with the Aerial Patrol Log.
- (11) Weather conditions should be considered for each flight in order to ensure safety and that the lighting conditions are adequate to ensure good visual observation of vegetation and site locations.
- (12) The helicopter should be flown at speeds sufficiently slow enough (generally 40–60 mph) to ensure comprehensive observations of the right-of-way vegetation conditions.
- (13) An aerial patrol is considered complete when a) all scheduled circuits have been flown (and restricted lines have been inspected), b) all Patrol Logs have been submitted to the Manager Forestry Operations, c) all areas requiring mitigation have been documented, and d) all videos taken on the aerial patrols have been submitted to the Manager Forestry Operations.
- (14) In prohibited areas, alternate methods, including but not limited to ground inspection, will be used. Video photography, GPS, map locations, or other means of archiving points of interest are used.
- (15) Forestry personnel investigate all observed and reported concerns and take appropriate timely action to mitigate any threat to safety or reliability.

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### 3. Exceptions

Annual patrols of certain line sections may be interrupted by force majeure, such as severe storms or floods. However, American Electric Power will patrol those sections within six months of the event.

### 4. Action Thresholds

AEP has established a set of Risk Assessment Procedures that comprise the maximum acceptable levels of plant growth, density, and height that initiate a control action. Thresholds are given in Table 3 on page 17.

### 5. Conditions and Actions

#### a. A1 Condition

- Vegetation clearances closer than those stated in column E of Table 3 on page 17.
- Danger trees on or off the ROW that, if the tree fell, would have clearances closer than those stated in column E. Considered an “Imminent Threat,” requiring the Transmission Forester to immediately implement the Imminent Threat procedures as stated in the TVMP. This condition requires at least two views from different viewpoints.

#### b. P1 Condition

Vegetation clearances or danger trees closer than stated in column D of Table 3 on page 17 but more than Column E. Requires ground-based patrol/mitigation within mitigation deadlines for patrols as set forth in the TVMP. This condition requires at least two views from different viewpoints.

#### c. P2 Condition

Vegetation clearances closer than those stated in Column B of Table 3 on page 17 but more than Column D. Ground-based patrol required within the next growing season to determine a future mitigation plan.

#### d. P3 Condition

- Vegetation clearances equal to or greater as stated in column B of Table 3 on page 17.
- These are noted for planning purposes only and should be observed and documented during future aerial patrols.

## 6. High Risk Vegetation Conditions

The vegetation conditions below are classified as High Risk. These conditions require increased scrutiny or for the observer to get additional views by hovering, returning the helicopter back to the location, and/or ground inspection.

### a. Tree species

Fast-growing species: e.g., willows, elms, ailanthus, vines.

### b. River/creek crossings

Erosion around tree trunks or other issues caused by moving water may affect vegetation.

### c. Wetlands

Areas with dense vegetation and ideal growing conditions.

### d. Upslope timber

Particularly dead, dying, or leaning trees.

### e. Span length and blow outs

Spans with longer-than-average lengths have more capability of sagging into vegetation and blowing out to edge trees.

### f. Fence rows

Vegetation growth may be accelerated by agricultural fertilization.

## 7. Communicating Imminent Threats

An imminent threat is a condition that potentially threatens the reliable operation of a NERC-reportable circuit or a Regional Transmission Organization-reportable circuit and must be mitigated, typically within 24 hours. This condition is usually characterized by either vegetation that is approaching or threatens to approach the minimum vegetation clearance distance to the conductor or one or more danger trees that appear likely to contact a transmission line. For locations found during patrols, routine work, or other observations, where an imminent threat condition may cause a reliability event, **an immediate notification to the local dispatching authority and area forestry personnel is required.** This will allow for mitigating actions, such as removal of the vegetation, temporary reduction in circuit rating, or switching the circuit out of service, until the threat is relieved.

Regional Transmission Organizations grant Utility operators the right to take emergency actions to prevent an imminent Emergency Condition or to restore the transmission grid to a secure state in the event of a system emergency. If the field notification is that AEP has an imminent threat condition where no immediate mitigation can be obtained, the Transmission Dispatch Center will notify the System Operator and coordinate removal of the circuit from service. If the imminent threat can be mitigated by reducing the rating, the Transmission Dispatch Center will contact the respective System Control Center Operator who will work with the AEP on-call Engineer to reduce the circuit rating and coordinate appropriate actions with the respective Regional Entity. After safe minimum approach can be obtained, the vegetation condition will be mitigated.

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Refer to the imminent threat procedure in Appendix A: Imminent Threat Procedures, which starts on page 27.

## D. Clearances

### 1. Right-of-Way Clearance Guidelines

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall. Actively maintained trees that could be considered a crop such as in nurseries or orchards will be maintained in accordance with Table 2. Table 3 on page 17 shows Transmission Line Clearance Guidelines.

**Table 2: Clearance Table Guidelines**

| <b>Right-of-Way with No Restrictions</b>   | <b>Right-of-Way With Restrictions</b>  |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove All Woody Stemmed Vegetation <sup>1</sup>                              | 1) Trim or Remove Vegetation to Meet Column C, Table 3 <sup>1</sup>              |
| 2) Do Not Allow Vegetation Closer than Column E, Table 3                         | 2) Do Not Allow Vegetation Closer than Column E, Table 3                         |
| 3) Trigger Distance to Schedule Maintenance per Column D, Table 3                | 3) Trigger Distance to Schedule Maintenance per Column D, Table 3                |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or Remove Vegetation to meet Column B, Table 3 <sup>1</sup>              | 1) Trim or Remove Vegetation to Meet Column C, Table 3 <sup>1</sup>              |
| 2) Do Not Allow Vegetation Closer than Column E, Table 3                         | 2) Do Not Allow Vegetation Closer than Column E, Table 3                         |
| 3) Trigger Distance to Schedule Maintenance per Column D, Table 3                | 3) Trigger Distance to Schedule Maintenance per Column D, Table 3                |


<sup>1</sup> Upon completion.

## 2. Restrictions

When removal of all woody-stemmed vegetation is not achievable (i.e., there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work, no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C in Table 3 on page 17. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and C in Table 3 on page 17).

## 3. Minimum Approach

Additional maintenance should be scheduled when vegetation will encroach within the minimum approach distances from energized conductors for *qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and D in Table 3 on page 17). In areas where easements, other legal agreements, or regulations restrict vegetation management practices, the maximum allowable amount of vegetation will be removed or otherwise controlled. AEP will annually monitor locations where these clearances cannot be achieved. The monitoring will determine whether maintenance that is more frequent may be required in order to assure the safe, reliable operation of the circuit.

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**Table 3: Transmission Line Clearance Guidelines**

| <b>Column A</b><br><br><b>Nominal Voltage (kV phase to phase)</b> | <b>Column B<sup>2</sup></b><br><b>NERC Clearance 1 (no restrictions)</b><br><b>Desired Clearance between Conductor<sup>3, 4, 5</sup> &amp; Vegetation</b> | <b>Column C<sup>2, 6</sup></b><br><b>NERC Clearance 1 (with restrictions)</b><br><b>Desired Clearance between Conductor<sup>3, 5</sup> &amp; Vegetation</b> | <b>Column D<sup>6</sup></b><br><br><b>ANSI Clearance between Conductor<sup>3, 5</sup> &amp; Vegetation</b> | <b>Column E<sup>7</sup></b><br><br><b>NERC Clearance 2 between Conductor<sup>3, 5</sup> &amp; Vegetation</b> |
|---|---|---|--|--|
| 765 kV  | 45'   | 35' 00"   | 27' 04"  | 14' 0"   |
| 500 kV  | 45'   | 26' 08"   | 19' 00"  | 10' 0"   |
| 345 kV  | 30'   | 20' 05"   | 13' 02"  | 7' 6"  |
| 230 kV  | 30'   | 16' 05"   | 7' 11"   | 5' 2"  |
| 161 kV  | 25'   | 14' 00"   | 6' 00"   | 3' 5"  |
| 138 kV  | 25'   | 13' 02"   | 5' 02"   | 2' 11"   |
| 88 kV & 115 kV  | 25'   | 12' 04"   | 4' 06"   | 2' 6"  |
| 69 kV   | 25'   | 10' 09"   | 3' 09"   | 2' 6"  |
| 46 kV, 40 kV, 34.5 kV, & 23 kV                                    | 20'   | 10' 00"   | 2' 09"   | 2' 6"  |

<sup>2</sup> Application of herbicides will be considered as meeting these guidelines, as long as all treated vegetation meets or exceeds the desired clearance from maximum sag (Table 3, Columns A and C).

<sup>3</sup> Conductor at maximum sag condition.

<sup>4</sup> Desired clearance to maintain reasonable clearing cycles.

<sup>5</sup> AEP Guideline for Determining Maximum Conductor Sag and Blowout for Vegetation Management is to be used to adjust the conductor's found field condition to the maximum sag condition taking into account the conductor size, span length, elevation, and current temperature.

<sup>6</sup> ANSI Z133.1 rev. 10/2000.

<sup>7</sup> IEEE Standard 516-2003, Section 4.2.2.3, Tables 5 and 7, calculated clearances (Clearance 2).

## E. Personnel Qualifications

Refer to Appendix C: Personnel Directly Involved, which starts on page 30, for qualifications of personnel directly involved in TVMP.

## F. Restriction Mitigation

AEP has developed a set of procedures for achieving sufficient clearances in those locations on its rights-of-way where we are restricted from attaining the "Clearance 1" listed in Column C of Table 3. This is described in AEP's Right-of-Way Clearance Guidelines; see III.D.1 "Right-of-Way Clearance Guidelines" on page 15.

Right-of-Way Restrictions are recorded in a restriction log.

# IV. Annual Plan

## A. Annual Work Plan

Annual Transmission Vegetation Management work plan is developed by AEP. Using inspection information and various data from other sources, specific transmission lines are identified and prioritized for inclusion in the upcoming year's plan. The lines are further prioritized based on any potential for tree-caused line contacts, criticality of the line, etc. For lines requiring attention, AEP work plans may consist of manually or mechanically removing and/or trimming trees on and off the right-of-way, selective or broadcast applications of herbicides, either aerially or from the ground, and the application of tree-growth regulators. The range of required work may either involve management of the vegetation along the entire line or addressing individual locations of concern.

### 1. Facilities List on Annual Plan

Annual Work Plan Facilities List is documented in RWM and is finalized by late January.

### 2. Start and End Dates

The annual work plan starts on January 1 and ends on December 31.


## B. Maintenance Cycle

AEP's program is an integrated vegetation management program utilizing a variety of management techniques. Maintenance does not occur on a rigid "cycle" basis; rather, the maintenance technique and schedule is driven by the condition of the vegetation.

## C. Unscheduled Work

Forestry Operation deals with a dynamic, living system. Variables such as tree species, weather patterns, and soil conditions all affect tree growth and the growth rates of trimmed trees.

Even the most aggressive line clearance program must make allowances for responding to isolated vegetation-related threats. AEP Forestry dedicates a portion of its total budget and resources to this type of work that is incremental to the work plan. Such work may include isolated stands of fast-growing trees, vines growing on AEP poles and hardware, fire- or insect-damaged stands adjacent to the right-of-way, or trees located in slips or slide areas.

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## D. Specifications

Reference the *AEP Forestry Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations* document listed on page 7.

## E. Right-of-Way Maintenance Methods

### 1. Annual Work Planning/Notification

Landowners are normally notified prior to vegetation management activities on their properties. Contractor personnel are often utilized to perform this notification and are trained to evaluate vegetation management requirements so that they can communicate these requirements to property owners. As required in some states, legal advertisements are posted to advise non-resident property owners of impending vegetation management activity. Should a property owner refuse to allow the contractor to perform the required work, AEP foresters are immediately notified and the necessary steps to complete the work are taken, up to and including legal action against the property owner. If a property owner refuses AEP access to clear trees on an valid transmission easement, or if the easement rights are insufficient to ensure the Program Objectives are obtainable, then Foresters, in concert with asset managers, right-of-way agents, legal and/or public policy personnel will document the condition and direct mitigating actions.

### 2. Tree Removal


The AEP System Vegetation Management Program emphasizes tree removal to promote long-term vegetation control and to minimize future maintenance expenditures. In urban areas, tree replacement, with low-growing species, and stump grinding may be offered as an incentive for property owners to allow the removal of larger or fast-growing trees on or near the Rights-of-Way. Contractor personnel inspect for danger trees (those trees considered a hazard to AEP's facilities growing outside of the normally maintained right-of-way), during scheduled maintenance and they are removed, or "made safe," when found. If necessary, damage payments may be made to the property owner for the removal of these off-Right-of-Way trees. Suspected danger trees discovered by other parties or brought to the attention of AEP foresters by property owners are addressed on a case-by-case basis with the appropriate forester having the final decision on what action is appropriate.

### 3. Tree Pruning

When tree removal is not practical or feasible, tree pruning<sup>8</sup> may be employed. Pruning may be carried out by a number of means.

Pruning is a part of AEP Forestry Operations' contract with all tree-pruning contractors. Fast-growing trees, where removal permission is not obtained, are pruned to greater distances than slower-growing varieties.

<sup>8</sup> During manual pruning operations, qualified line clearance arborists, as defined by ANSI Z133.1-2000, seek to prune trees according to standards set by the International Society of Arboriculture, the American National Standards Institute, and the Tree Care Industry Association. The American National Standard *for Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning)*, ANSI A300 (Part 1).

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Mechanical pruning operations employ a variety of configurations of boom-mounted saws mounted on vehicles capable of traversing the rights-of-way. Access, terrain, and tree heights influence the type of equipment used. In very difficult terrain or inaccessible areas, an aerial saw may be employed for side trimming on transmission rights-of-way.

Rights-of-way maintained with the aerial saw normally possess the following characteristics: steep, mountainous terrain; limited access; and prohibitive costs to prune by conventional means.

#### **4. Clearing**

Manual clearing is employed where the terrain is too steep or rough for mechanized equipment, where the vegetation is too tall for herbicide applications and aerial application is not possible, or where the immediate removal of vegetation is necessary. Contract employees use chainsaws or brush saws to selectively remove vegetation from the rights-of-way. In many situations, due to the ability of the tree species present on AEP's rights-of-way to re-sprout, manual clearing actually increases the amount and growth rate of the vegetation present.

Mechanical clearing may be employed where terrain and access allow and where the vegetation is not too large for mechanical equipment to handle, where the vegetation is too tall for herbicide applications, aerial application is not possible, or where the immediate removal of vegetation is necessary. As with manual clearing, mechanical clearing often results in increased growth rate and density of incompatible vegetation on the rights-of-way, unless follow-up applications of herbicides are made. Use of mechanical equipment in inappropriate locations and during certain times of year may result in rutting and erosion or soil compaction problems and may not be acceptable to some property owners.

#### **5. Debris Cleanup**

Debris from these operations is left on the rights-of-way to decompose and return nutrients to the soil and to reduce the possibility of soil erosion. Any brush that falls into roadways, waterways, fences, lawns, or pastures is moved to a wooded area of the right-of-way or may, at times, be chipped and/or otherwise removed. Logs may be left in tree lengths or as designated by AEP foresters. The merchantable value of logs will be preserved as much as possible.

#### **6. Herbicide Application**

Manual and mechanical clearing without follow-up herbicide applications does not control the root systems of incompatible vegetation and often increases the future maintenance requirements in the areas where it is employed. It is the goal of AEP's vegetation management program to convert the vegetative cover types on its transmission rights-of-way to low growing grass-forbs-herb covers that inhibit the germination, establishment and growth of most tree species. More than 50 years of research has shown that selective herbicide applications or the application of selective herbicides are the most effective means to bring about this conversion. That same research has also shown that herbicide applications are more beneficial to wildlife than clearing operations.

Aerial, hydraulic or high volume foliar, low volume foliar, ultra-low volume foliar, cut stubble, stumps, basal and granular applications are all employed.

United States EPA registered herbicides are applied by licensed pesticide application businesses employing trained applicators.

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## 7. Tree Growth Regulators

Caring for trees under power lines requires regular pruning. Each new pruning places a tree under stress because it removes leaves and branches, which manufacture and store nutrients. This forces the tree to tap its reserves to grow new wood. Tree-Growth Regulators (TGRs) control crown growth and reduce the frequency and amount that trees must be trimmed. TGRs control growth, allowing a tree to use its reserves to survive disease and insect attacks, and to withstand environmental assaults like drought and pollution.

A treated tree grows more slowly and requires less pruning, meaning fewer branches may be removed when it is re-pruned. That means a healthier, more natural-looking tree, and fewer visits from line clearance crews. TGR products reduce tree growth for two to eight years, depending on species, application rates and other environmental conditions.

## F. New Construction Clearing

System Forestry contractors clear new easements in accordance with the following portions of the Right-of-Way Clearing Policy. The following policy guides AEP's right-of-way agents when they seek to obtain easements from property owners prior to the construction of new transmission and distribution lines. This work is accomplished to establish an initial cleared width and height for our facilities.

### 1. General Guidelines

This section is included in this manual for informational purposes so that the ROW Agents and other personnel can be aware of the requirements. Normally the Transmission Forestry group will deal with seeing that actual cutting requirements are met and deal with problems arising from not following the guidelines. When clearing right-of-way for maintenance, it will be the responsibility of the Forestry personnel to make contact and arrangements with all property owners as well as resolve any damage claims resulting from the vegetation management activity. It is the ROW Agent's responsibility to assist in obtaining copies of easements and obtaining legal assistance when the Forestry personnel encounter resistance by property owners.

When securing line rights-of-way, it is the operating company's practice to obtain the rights necessary to cut down, trim, clear all woody stemmed vegetation or otherwise control the vegetation for the construction, operation and maintenance of the line.

Generally, AEP will cut, limb and let lay the vegetation in order to reduce scarring or compaction of the soil. Other disposal methods, such as windrowing and removal when requested by property owners will be considered.


Trees will be felled where possible to protect crops, fences and other facilities.

During the foliage season, wild cherry will be removed from areas where there is livestock.

No logs or debris will be left in streams, springs, pastures or cultivated fields.

### 2. Clear Cutting

On portions of the right-of-way where the conductor to ground clearance is 100 feet, or less, all woody stemmed vegetation will be cut, limbed and lopped with laps windrowed within the limits of the right-of-way so as not to obstruct roads, lanes, trails, fences and streams. The limbed trees will remain on the right-of-way adjacent and parallel to the windrow.

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### 3. Selective Clearing Areas

When the conductor to ground clearance is over 100 feet, only those trees that do not have the required conductor clearance will be cut. These trees will be cut, limbed and let lay. In certain instances where the conductor to ground clearance is over 100 feet, all or part of the woody stemmed vegetation will be cut to allow for wire set-ups, work areas, etc.

#### a. Road Crossings

Where required by a governing agency, it is AEP's practice to leave a natural vegetative screen to maintain the natural environment of the areas affected. To provide this screen, no cutting other than those trees not having adequate conductor clearance will be performed in these areas. These trees will be cut, limbed, and let lay. The length of the screen on either side of the road will vary according to terrain and location, however, in most cases will not exceed 100 feet.

#### b. Danger Trees

Danger trees (outside of right-of-way) will be cut or trimmed and the logs and laps will be left as felled.

### 4. Slash Disposal

#### a. Windrow

The slash is piled along the edge(s) of the right-of-way.

#### b. Lop and let lay

The vegetation will be cut and limbed in such a manner that it lies as close to the ground as practical, but not to exceed 2 feet in height.

#### c. Clear cut and remove

All woody stemmed plant species within the right-of-way will be cleared. Logs greater than 4 inches in diameter will be placed parallel to the right-of-way along the edge(s) of the right-of-way. The remaining slash will be removed to designated areas.

#### d. Burning


Slash will be collected, piled and burned in designated areas.

#### e. Chipping

Slash will be chipped on the site in designated areas.

#### f. Burial

Slash will be buried in designated areas.

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## G. Inspections (Work Quality)

### 1. Auditing/Inspection/Record Keeping

AEP Foresters inspect work on a routine basis to ensure that contract crews have maintained adequate clearances to help prevent vegetation contact outages, follow proper arboricultural techniques, and perform their work safely. Inspection logs and copies of inspections are retained as documentation. The audit form can be found on page 24.

Timesheets, maps, and other paper records generated during maintenance activities are normally retained in AEP files until succeeding maintenance is performed on said line or for a minimum of three years whichever is longer. When work is performed on a line or circuit, data is collected about Tree Trimming, Tree Removals, Brush Cut, Brush Sprayed, and Miles Accomplished, thus supplying a permanent history of quantity, productivity, and cost. This data is electronically stored in AEP's invoicing and recordkeeping system, Right-of-Way Maintenance (RWM). RWM is an AEP-developed software program used by System Forestry to record and analyze information about maintenance activities, and to generate invoices for vegetation management work performed on our transmission and distribution facilities. This record is used to estimate the expected workload, cost, and the management tools needed for each circuit/line. RWM is also used to post annual work plans and to track progression through those work plans.

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Following is the Forestry Crew Audit Form.

RWMMR2820 AMERICAN ELECTRIC POWER DATE : 7/27/2011  
 RIGHT OF WAY MAINTENANCE TIME : 15:41:24  
 AUDIT FORM

**Forestry Contract (KPI) Crew Audits**

|   |   |                             |
|---|---|-----------------------------|
| Audit Nbr: <input type="text"/>               | Oper Co: <input type="text"/>                       |                             |
| Audit Quarter: <input type="text" value="3"/> | Audit Date: <input type="text" value="07/27/2011"/> | State: <input type="text"/> |
| Auditor Name: <input type="text"/>            | Dept Id: <input type="text"/>                       |                             |
| Crew Nbr: <input type="text"/>                | Foreman Name: <input type="text"/>                  |                             |
| Circuit Nbr: <input type="text"/>             | Pole No: <input type="text"/>                       |                             |

**Forestry Contract Crew Safety Audit**  Pass  Fail

|   |           |
|---|-----------|
| 1. Personal Protective Equipment <input type="radio"/> Pass <input type="radio"/> Fail          | Comments: |
| 2. Properly Maintained Safety Equipment <input type="radio"/> Pass <input type="radio"/> Fail   |           |
| 3. Traffic Control Devices <input type="radio"/> Pass <input type="radio"/> Fail                |           |
| 4. Proper Fall Protection Procedures <input type="radio"/> Pass <input type="radio"/> Fail      |           |
| 5. Properly Barricade Work Area <input type="radio"/> Pass <input type="radio"/> Fail           |           |
| 6. Properly Maintain and Store Work tools <input type="radio"/> Pass <input type="radio"/> Fail |           |
| 7. Follow Proper Approach Distances <input type="radio"/> Pass <input type="radio"/> Fail       |           |

**Acceptable/Unacceptable/On items below**

|   |           |
|---|-----------|
| 1. Hazardous Material properly stored, labeled and documented <input type="radio"/> Acc. <input type="radio"/> Unac | Comments: |
| 2. MSDS and Herbicide Label information available <input type="radio"/> Acc. <input type="radio"/> Unac             |           |
| 3. Jobsite Housekeeping <input type="radio"/> Acc. <input type="radio"/> Unac                                       |           |

**Forestry Clearance Audit**  Pass  Fail

|  |           |
|--|-----------|
| Clearance for Species: <input type="radio"/> Pass <input type="radio"/> Fail | Comments: |
| Row Width: <input type="radio"/> Pass <input type="radio"/> Fail             |           |
| Danger Trees: <input type="radio"/> Pass <input type="radio"/> Fail          |           |

**Forestry Work Quality Audit:**  Pass  Fail

|  |  |   |  |
|--|--|---|--|
| Collar Cuts: <input type="radio"/> Pass <input type="radio"/> Fail           | Stump Height: <input type="radio"/> Pass <input type="radio"/> Fail          | Peels/Tears: <input type="radio"/> Pass <input type="radio"/> Fail            |  |
| Directional Pruning: <input type="radio"/> Pass <input type="radio"/> Fail   | Hangers: <input type="radio"/> Pass <input type="radio"/> Fail               | Cleanup/Brush Disposal: <input type="radio"/> Pass <input type="radio"/> Fail |  |
| Drop Crotch Selection: <input type="radio"/> Pass <input type="radio"/> Fail | Clearing around poles: <input type="radio"/> Pass <input type="radio"/> Fail | Regard for Property: <input type="radio"/> Pass <input type="radio"/> Fail    |  |
| Comments: <input type="text"/>   |  |   |  |

**Reporting Accuracy (KPI) Audit**

| Week ending date: <input type="text" value="00/00/0000"/>   | Timesheet Data       |                      | Audit Data           |                      | Variance             |                      |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|   | Cap                  | O&M                  | Cap                  | O&M                  | Cap                  | O&M                  |
| Number of trees trimmed                                     | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Number of trees removed                                     | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Footage/Units/Acres Re-cleared                              | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Footage/Units/Acres Ground Sprayed                          | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Widening <input type="radio"/> Yes <input type="radio"/> No |                      |                      |                      |                      |                      |                      |

**Non-KPI Crew Audit Items:**

|                                | Pass                  | Fail                  |                         | Pass                  | Fail                  |                        | Pass                  | Fail                  |                |                       |                       |
|--------------------------------|-----------------------|-----------------------|-------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|----------------|-----------------------|-----------------------|
| Truck Appearance/ID            | <input type="radio"/> | <input type="radio"/> | Professional Appearance | <input type="radio"/> | <input type="radio"/> | Crew Properly Equipped | <input type="radio"/> | <input type="radio"/> | Tree Knowledge | <input type="radio"/> | <input type="radio"/> |
| Number of working saws         | <input type="radio"/> | <input type="radio"/> | Manpower Utilization    | <input type="radio"/> | <input type="radio"/> | Herbicide Equipment    | <input type="radio"/> | <input type="radio"/> | Planning       | <input type="radio"/> | <input type="radio"/> |
| ROW Equipment /Chipper         | <input type="radio"/> | <input type="radio"/> | Customer Relations      | <input type="radio"/> | <input type="radio"/> | AEP Guidelines         | <input type="radio"/> | <input type="radio"/> | Use of Forms   | <input type="radio"/> | <input type="radio"/> |
| Comments: <input type="text"/> |                       |                       |                         |                       |                       |                        |                       |                       |                |                       |                       |



## 2. Purpose of Documentation

AEP has developed a system for documenting all vegetation management activities to ensure the following:

- All scheduled work is properly identified and listed in the annual work plan.
- All adjustments to the work plan are properly noted and recorded.
- Maintenance methods employed are noted for each type of work on each project listed in the annual work plan.
- Work quality inspections are properly performed and all work completed meets company specifications.
- Completed work is properly recorded to ensure progress on the annual work plan is tracked.
- Verify that the company has established an annual plan, that any adjustments to the work plan are properly noted, that work has been inspected for work quality. and that the completion of all work is tracked against the annual goals.

## V. Reporting

Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Transmission Organizations, or their designees. The reporting frequency of these reports is quarterly, or more frequently as determined by the Regional Transmission Organizations. The supporting evidence AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system, "Transmission Outage Report System" (TORS), listing all vegetation related outages by Regional Transmission Organizations, or their designees, operated voltages, the names of circuits where outages occurred, the date, time, and duration of the outage, including a description of the cause of the outage.

### A. Recording Outages Caused by Vegetation


#### 1. Outage information

All outages determined to be caused by vegetation are investigated by a qualified transmission vegetation management employee and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained.

- Category 1—Grow-ins: Outages caused by vegetation growing into lines from vegetation inside and/or outside of the ROW.
- Category 2—Fall-ins: Outages caused by vegetation falling into lines from inside the ROW.
- Category 3—Fall ins: Outages caused by vegetation falling into lines from outside the ROW.


#### 2. Reports

A standard report format is used to document the outages caused by vegetation with the information specific for each outage and pictures included when practical.

|   |  |         |               |
|---|--|---------|---------------|
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## B. Reporting Outages Caused by Vegetation


NERC Critical Facility Outage Reporting Outages caused by vegetation on NERC critical facilities are reported on a quarterly basis (or more frequently if required) to the Regional Transmission Organization at the end of each calendar quarter.

|   |  |         |                           |
|---|--|---------|---------------------------|
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## Appendix A: Imminent Threat Procedures

Outlined below is the action to be taken depending on which party initially received the notification where an imminent threat condition may cause a reliability event. This is also summarized in an Imminent Threat Communication Flow Chart shown in Appendix B: Imminent Threat Communication on page 29.

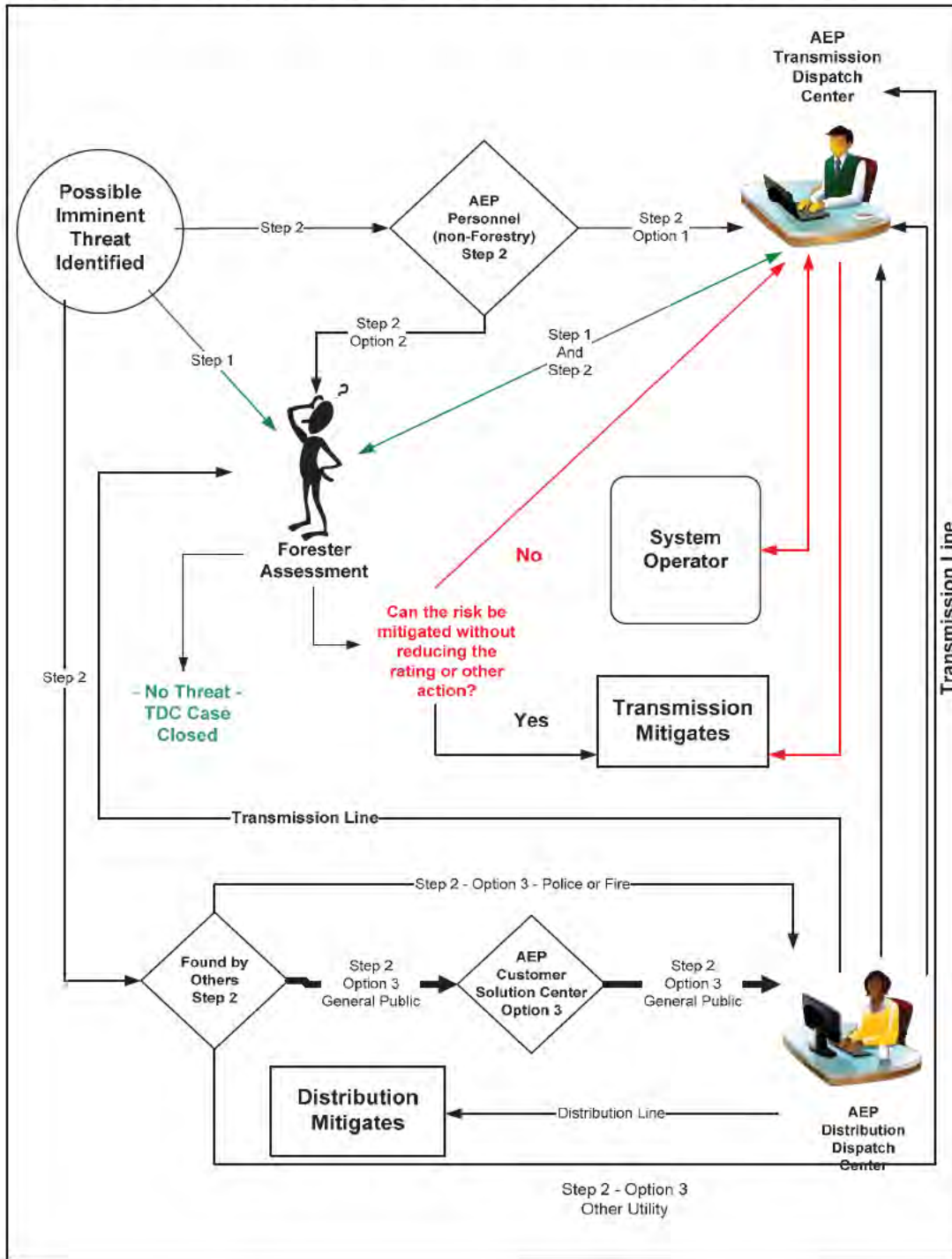
1. **When AEP Forestry personnel find a vegetation issue**, they shall immediately notify the Transmission Dispatch Center. The Transmission Dispatch Center shall capture the date and time in the Dispatcher Operating Log. After rectifying the vegetation issue, Forestry personnel shall follow up with documentation of the action taken, completing the Vegetation Imminent Threat Incident Report (see page 28) and the Forestry Supervisor will route the report to management.
2. When a vegetation issue is found by AEP personnel (non-Forestry), such as AEP line maintenance personnel, other experienced observers, or the general public, notification shall be sent to the Transmission Dispatch Center, Forestry personnel, or Customer Solutions Center, as identified below, depending on the type or geographical location of the observer:
  - a. **Option 1: When AEP personnel (non-Forestry) find a vegetation issue**, they shall immediately notify the Transmission Dispatch Center of a vegetation issue, the Transmission Dispatch Center shall notify AEP Forestry personnel and capture the date and time in the Dispatcher Operating Log. If Forestry's subsequent professional evaluation reveals the vegetation condition is not an imminent threat, they shall notify the Transmission Dispatch Center. The Transmission Dispatch Center will note this in the Dispatcher Operating Log. After investigating or rectifying the vegetation issue, Forestry personnel shall follow up with documentation of the action taken, completing the "Vegetation Imminent Threat Incident Report," as prescribed.
  - b. **Option 2: When AEP personnel (non-Forestry) find a vegetation issue**, they shall immediately notify AEP Forestry personnel of a vegetation issue, AEP Forestry personnel shall immediately notify the Transmission Dispatch Center. The Transmission Dispatch Center captures the date and time in the Dispatcher Operating Log. If Forestry's subsequent professional evaluation reveals the vegetation condition is not an imminent threat, they shall notify the Transmission Dispatch Center. The Transmission Dispatch Center will note this in the Dispatcher Operating Log. After investigating or rectifying the vegetation issue, Forestry personnel shall follow up with documentation of the action taken, completing the "Vegetation Imminent Threat Incident Report," as prescribed.
  - c. **Option 3: When non-AEP personnel (public, police, fire, or other dispatching entities) find a suspected vegetation issue**, the preferred notification is to an AEP Customer Solution Center, where the AEP Customer Solution Center immediately notifies the AEP Distribution Dispatch Center, where the line is determined to be Distribution or Transmission and appropriate notification is given. Other notifications can come from neighboring utilities, police, fire, or other dispatch centers. When other notification is received, the Transmission Dispatch Center captures the date and time in the Dispatcher Operating Log and notifies AEP's Forestry personnel. If Forestry's subsequent professional evaluation reveals the vegetation condition is not an imminent threat, they shall notify the Transmission Dispatch Center. The Transmission Dispatch Center will note this in the Dispatcher Operating Log. After investigating or rectifying the vegetation issue, Forestry personnel shall follow up with documentation of the action taken, completing the "Vegetation Imminent Threat Incident Report," as prescribed.

|   |  |         |               |
|---|--|---------|---------------|
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The completed Forestry "Vegetation Imminent Threat Incident Report" contains the documentation of actions taken, because of reported conditions where vegetation may imminently cause an outage. Reports are to be kept on file.

| <b>Vegetation Imminent Threat Incident Report</b>                                 |                              | Rev. 6/15/2009                |
|---|------------------------------|-------------------------------|
| Forester: _____   |                              |                               |
| <b>Part I – Basic Information</b>   |                              |                               |
| Line Name: _____  |                              |                               |
| Circuit Name: _____   | Right-of-Way                 |                               |
| Structure #: _____  | In: <input type="checkbox"/> | Out: <input type="checkbox"/> |
| Operating Voltage: (i.e. 345KV) _____   | yes or no      yes or no     |                               |
| Date and Time of Discovery or Notification: _____                                 |                              |                               |
| Location Information: (provide as much information as possible)                   |                              |                               |
| Property Owner: _____   |                              |                               |
| County/Parish: _____  |                              |                               |
| State: _____  |                              |                               |
| <b>Part II – Vegetation Information</b> (provide as much information as possible) |                              |                               |
| Species: _____  |                              |                               |
| Estimated Height: _____   |                              |                               |
| Estimated Age: _____  |                              |                               |
| DBH: _____  |                              |                               |
| <b>Part III – Circuit Parameters at Time of Discovery/Notification</b>            |                              |                               |
| (at Time of Discovery/Notification)   |                              |                               |
| Conductor Height: _____   | Time: _____                  |                               |
| Circuit Electrical Load: _____  |                              |                               |
| Estimated Ambient Air Temperature: _____  |                              |                               |
| Estimated Wind Speed: _____   |                              |                               |
| Weather Conditions: _____   |                              |                               |
| Conductor Size and Type: _____  |                              |                               |
| <b>Part IV – Action Taken:</b>  |                              |                               |
| <b>Transmission Operations Reduced Loading:</b>                                   |                              |                               |
| Operations-Reduced Load   | Returned to Normal Load      |                               |
| <input type="checkbox"/>  | <input type="checkbox"/>     | <input type="checkbox"/>      |
| yes or no   | date and time                | date and time                 |
| <b>Operations-Out of Service</b>  |                              |                               |
| <input type="checkbox"/>  | <input type="checkbox"/>     | <input type="checkbox"/>      |
| yes or no   | date and time                | date and time                 |
| <b>Circuit/Section Removed from Service:</b>                                      |                              |                               |
| <b>Removed from Service</b>   |                              |                               |
| <input type="checkbox"/>  | <input type="checkbox"/>     | <input type="checkbox"/>      |
| yes or no   | date and time                | date and time                 |
| <b>Vegetation Condition Rectified:</b>  |                              |                               |
| <input type="checkbox"/>  | <input type="checkbox"/>     |                               |
| yes or no   | If yes, date and time        |                               |
| <b>Comments:</b>  |                              |                               |
| Describe the circumstances of the event.  |                              |                               |
| Forestry Supervisor Approval _____  |                              | date _____                    |

## Appendix B: Imminent Threat Communication



## Appendix C: Personnel Directly Involved

| Title  | Name              | Qualification Requirements  | Training Requirements  | Period (Once, Annually, etc.)   | Meet Qualifications? (Y/N) |
|--|-------------------|---|--|---|----------------------------|
| Director, Transmission Line Projects Engineering | Jeffrey E Momme   | 15 years electric utility engineering experience, preferably with 7 years' line engineering experience since the ABET accredited engineering Bachelor's degree, including 3 years' management experience. Civil or Electrical Engineering degree is preferred. Registration as a Professional Engineer in any state of the U. S. is required. | Training requirements for this position are incorporated in the Qualifications named to the left, except: Ongoing continuing professional development (CPD) training for Professional Engineering recertification is required according to individual state law. NERC Reliability Compliance training  | Once for academic and experience requirements. Annually or as required for Professional Engineering CPD training according to individual state law. | Y                          |
| Manager, Protection & Control Engineering        | John E. Schechter | Bachelor's Degree in Electrical or Civil Engineering with specific training or experience in electric power system applications. A Professional Engineer's License. Fifteen years experience in Energy Transmission activities including seven years experience in the design, construction and operation of transmission lines.              | Training requirements for this position are incorporated in the Qualifications named to the left, except: Ongoing continuing professional development (CPD) training for Professional Engineering recertification is required according to individual state law. NERC Reliability Compliance training. | Once for academic and experience requirements. Annually or as required for Professional Engineering CPD training according to individual state law. | Y                          |

| Title  | Name                  | Qualification Requirements  | Training Requirements  | Period (Once, Annually, etc.)   | Meet Qualifications? (Y/N) |
|--|-----------------------|---|--|---|----------------------------|
| Principal Engineer, Transmission Line Engineering Design Standards | Eric K Engdahl        | Bachelor's degree in engineering in a program accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Sustained excellent performance at the Senior level. Typically requires a minimum of 15 years of experience since for this position. | Training requirements for this position are incorporated in the Qualifications named to the left, except: Ongoing continuing professional development (CPD) training for Professional Engineering recertification is required according to individual state law. NERC Reliability Compliance training. | Once for academic and experience requirements. Annually or as required for Professional Engineering CPD training according to individual state law. | Y                          |
| Engineer I   | D Kevin Killingsworth | Bachelor's degree in engineering in a program accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Minimum of 4-7 years experience as an Engineer II or equivalent.   | Training requirements for this position are incorporated in the Qualifications named to the left, except: NERC Reliability Compliance training.  | Once for academic and experience requirements.  | Y                          |

| Title                             | Name             | Qualification Requirements  | Training Requirements   | Period (Once, Annually, etc.)                  | Meet Qualifications? (Y/N) |
|-----------------------------------|------------------|---|---|--|----------------------------|
| Manager, Forestry Operations      | Walter A. Sherry | Bachelor's degree in forestry, arboriculture, or equivalent education and/or experience. Minimum of 8 years' experience in utility forestry or equivalent related experience. Possession of Certified Pesticide Applicator's license desired. Must have the ability to work effectively across organizational boundaries to achieve desired results, requiring excellent interpersonal, analytical and business skills. | Training requirements for this position are incorporated in the Qualifications named to the left. NERC Reliability Compliance training. | Once for academic and experience requirements. | Y                          |
| Supervisor, Transmission Forestry | H. Lynn Grayson  | Bachelor's degree in forestry, arboriculture or equivalent education and/or experience. Minimum of 5 years' experience as a transmission utility forester or equivalent related experience. International Society of Arborists (ISA) certification desirable.   | Training requirements for this position are incorporated in the Qualifications named to the left. NERC Reliability Compliance training. | Once for academic and experience requirements. | Y                          |



| Title                   | Name  | Qualification Requirements   | Training Requirements   | Period (Once, Annually, etc.)  | Meet Qualifications? (Y/N) |
|-------------------------|---|--|---|--|----------------------------|
| Forestry Coordinator I  | Richard Mowbray, James Crusser  | Bachelor's degree in forestry, arboriculture or related field and typically a minimum of 9 years' experience as a Utility Forester or equivalent related experience. A demonstrated understanding of utility vegetation management practices; work plan and crew management is desired. International Society of Arborists (ISA) certification desirable.  | Training requirements for this position are incorporated in the Qualifications named to the left.   | Once for academic and experience requirements.   | Y                          |
| Senior Utility Forester | John Ertz, Richard Karber, Frank Forrest, Dale Hopkins, Jon Radebaugh | Bachelor's Degree in Forestry, Arboriculture, or equivalent education and/or experience. Knowledge and safe use of pesticides required. Possession of Certified Pesticide Applicator's license required. Six years' experience in right-of-way maintenance. Demonstrated administrative ability in the area of supervising employees, decision-making, and proficiency in planning and scheduling work. Thorough knowledge of the Company's right-of-way maintenance | Training requirements for this position are incorporated in the Qualifications named to the left, except: Pesticide Applicator's training required per applicable State requirements. | Once for academic and experience requirements. Pesticide Applicator's training required per applicable State requirements. | Y                          |

| Title               | Name   | Qualification Requirements   | Training Requirements   | Period (Once, Annually, etc.)  | Meet Qualifications? (Y/N) |
|---------------------|--|--|---|--|----------------------------|
|                     |  | program. International Society of Arborists (ISA) certification desirable.   |   |  |                            |
| Utility Forester II | Mark Boucher, John Gire, Richard Madrigal, Kevin Patton, Marc Labrie | Bachelor's Degree in Forestry, Arboriculture, or equivalent education and/or experience. Knowledge and safe use of pesticides required. Courses in horticulture and/or vegetation management desirable. Possession of Certified Pesticide Applicator's license required.<br><br>Three years' experience as a Utility Forester III or equivalent. International Society of Arborists (ISA) certification desirable. | Training requirements for this position are incorporated in the Qualifications named to the left. Pesticide Applicator's training required per applicable State requirements. | Once for academic and experience requirements. Pesticide Applicator's training required per applicable State requirements. | Y                          |

| Title                | Name   | Qualification Requirements  | Training Requirements   | Period (Once, Annually, etc.)  | Meet Qualifications? (Y/N) |
|----------------------|--|---|---|--|----------------------------|
| Utility Forester III | Ben Bradburn, Orlando DeLa Garza, Scott Klinebriel, Ben Thorp, Kristalle Wadsworth | Bachelor's Degree in Forestry, Arboriculture, or equivalent education and/or experience. Knowledge and safe use of pesticides required. Courses in horticulture and/or vegetation management desirable. Possession of Certified Pesticide Applicator's license required.<br><br>Two years' experience as a Utility Forester IV or equivalent. International Society of Arborists (ISA) certification desirable. | Training requirements for this position are incorporated in the Qualifications named to the left. Pesticide Applicator's training required per applicable State requirements. | Once for academic and experience requirements. Pesticide Applicator's training required per applicable State requirements. | Y                          |
| Contractors          | Various  | Must be qualified employees who meet all local, state and Federal laws and regulations.   | N/A   | N/A  | Y                          |


## Appendix D: Subject Matter Experts

| Requirement | Description   | Preparer   | SME  | Reviewer  |
|-------------|---|--|--|---|
| R1.-M1.     | TVMP document   | D. K. Killingsworth<br>Engineer I, AEP<br>614-552-1930<br>dkkillingsworth@aep.com  | E. K. Engdahl<br>Principal Engineer, AEP<br>614-552-1676<br>ekengdahl@aep.com                      | J.E. Momme<br>Director, Trans. Line<br>Projects Engineering,<br>AEP, 614552-1818,<br>jemomme@aep.com        |
| R1.1.-M1.1. | Inspection schedule                                     | H. L. Grayson, Supervisor, Forestry Operations, AEP<br>540-985-2959<br>hlgrayson@aep.com   |  | J. E. Schechter,<br>Manager., Trans. Line<br>Asset Engineering,<br>AEP, 614-552-1908<br>jeschechter@aep.com |
| R1.2.-M1.2. | Clearance document                                      | E.M. Lorcher<br>Engineer I, AEP<br>614-552-1327<br>emlorcher@aep.com   | E. K. Engdahl,<br>Principal Engineer, AEP<br>614-552-1676<br>ekengdahl@aep.com                     |   |
| R1.2.1.     | Clearance 1   | M.J. Polasek, Supervisor Planning<br>and Engineering II, AEP<br>918-599-2370<br>mjpolasek@aep.com<br><br>R. J. Whitaker, Engineer I, AEP<br>540-562-7054<br>rjwhitaker@aep.com |  |   |
| R1.2.2.     | Clearance 2   |  |  |   |
| R1.2.2.1    | Unknown transient<br>overvoltage                        |  |  |   |
| R1.2.2.2    | Known transient<br>overvoltage                          |  |  |   |
| R1.3.-M1.3. | Personnel qualifications                                | H. L. Grayson, Supervisor, Forestry Operations, AEP<br>540-985-2959<br>hlgrayson@aep.com   |  |   |
| R1.4.-M1.4. | Vegetation Restrictions                                 |  |  |   |
| R1.5.-M1.5. | Imminent threat   | D. K. Killingsworth<br>Engineer I, AEP<br>614-552-1930,<br>dkkillingsworth@aep.com   | E. K. Engdahl<br>Principal Engineer, AEP<br>614-552-1676,<br>ekengdahl@aep.com                     |   |
| R2.-M2.     | Annual Veg. Mgt. plan                                   | H. L. Grayson, Supervisor, Forestry Operations, AEP<br>540-985-2959<br>hlgrayson@aep.com   |  |   |
| R3.-M3.     | Quarterly Outage Reports                                | D. K. Killingsworth<br>Engineer I, AEP<br>614-552-1930<br>dkkillingsworth@aep.com  | J.E. Momme, Director<br>Trans. Line Projects<br>Engineering, AEP<br>614552-1818<br>jemomme@aep.com |   |
| R3.1.       | Multiple Outages in 24 Hrs.                             |  |  |   |
| R3.2.       | Reporting Exemptions                                    |  |  |   |
| R3.3.       | Outage circuit, date, time,<br>description, cause, etc. |  |  |   |
| R3.4.       | Outage Categories                                       |  |  |   |
| R3.4.1.     | Category 1 - Grow-ins:                                  |  |  |   |
| R3.4.2.     | Category 2 - Fall-ins:                                  |  |  |   |
| R3.4.3.     | Category 3 - Fall-ins:                                  |  |  |   |
| R4.-M4.     | Quarterly Reporting to<br>NERC                          | Not Applicable to AEP  |  |   |

## TVMP Internal Mailing List

| Name/Lotus Notes Group | Department                               | Title   |
|------------------------|--|---|
| Jobes, Thomas S        | Asset Management - Distribution          | Dir Distr System Reliability                        |
| Garrett, James G       | Audit Services                           | Project Mgr. Audits                                 |
| T Forestry             | Trans. Foresters and Forestry Management | Group Mailing List                                  |
| TCR All                | Transmission Construction Management     | Group Mailing List                                  |
| Schnell, Edward G      | Transmission Dispatching                 | Dir Transmission Dispatching                        |
| Kunkel, Dennis K       | Transmission Dispatching                 | Mgr Transmission Dispatching                        |
| Milford, David L       | Transmission Dispatching                 | Mgr Transmission Dispatching                        |
| Moses, Clinton D       | Transmission Dispatching                 | Mgr Transmission Dispatching                        |
| Guill, Darrell E       | Transmission Dispatching                 | Mgr Transmission Dispatching                        |
| Pritchard, David A     | Transmission Real Time Operations        | Mgr Operations Reliability                          |
| Hostetler, Timothy A   | Transmission Operations Engineering      | Mgr Operations Engineering                          |
| Parrish, T. David      | Transmission Line Design Standards       | Mgr Trans. Line Design Stds                         |
| Krause, Stan A         | Transmission Line Engineering            | Mgr Trans. Line Engineering                         |
| Persing, Carl A        | Transmission Line Engineering            | Mgr Trans. Line Engineering                         |
| TLPE All               | Transmission Line Project Engineering    | Group Mailing List                                  |
| Momme, Jeffrey E       | Transmission Line Projects Engineering   | Dir Trans. Line Projects Engineering                |
| Johnson, Paul B        | Transmission Operations                  | Mng Dir Transmission Ops                            |
| TCI PM ALL             | Transmission Project Mgt & Control       | Group Mailing List                                  |
| Emberger, Joseph H     | Transmission Region Operations           | Dir Trans. Region Ops                               |
| Matthews, Charles D    | Transmission Region Operations           | Dir Trans. Region Ops                               |
| Boezio, Daniel R       | Transmission Region Operations           | Dir Trans. Region Ops                               |
| Trott, William M       | Transmission Region Operations           | Dir Trans. Region Ops                               |
| Cook, James K          | Transmission Region Operations           | Dir Trans. Region Ops                               |
| TRELCOMP               | Transmission Reliability Compliance      | Group Mailing List                                  |
| Schaffer, Thomas O     | Transmission Right-of-Way                | Mgr Trans. Right-of-Way                             |
| Nguyen, Thuy P         | Transmission Region Operations           | Mgr Transmission Region Operations Support Services |

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|---|--|---------|---------------|
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## **AEP Transmission Forestry**

### **Specifications for Right-of-Way Maintenance Contracts**

**October 25, 2010**

### **Work Schedules**

1. Owner recognizes the following holidays: New Year's Day, Good Friday, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and the day after Thanksgiving, and Christmas and the day before Christmas.
2. Contractor shall not schedule work on Owner holidays unless requested in writing by Owner or the holiday has been agreed to as a regularly scheduled day.
3. Contractor shall provide Owner a list of holidays recognized by the Contractor.
4. Contractor shall not bill Owner for its employees' holiday pay. Holiday pay is covered as part of the benefits mark-up.
5. On years when a Contractor or Owner holiday falls on a weekend, Owner shall notify Contractor of the date the holiday will be observed.

### **Communications**

Supervisors, including notifier(s), shall have a cell phone available to facilitate contact with Owner and landowners. The cost of this device shall be included as part of Contractor's overheads.

### **Notification to TDC**

Contractor shall log on to each circuit through the Transmission Dispatch Center (TDC) with the location of all crews between 7:30 a.m. and 8:00 a.m. each work day. If the crew leaves the job early, relocates or has any problems, Owner and the TDC shall be notified.

### **Work Plans and Records**

1. Contractor and Owner will jointly prepare an annual written plan and schedule for the completion of the work. The plan shall include the number and type of crews, and an estimate of completion dates for each line.
2. A record of all work performed at each address or easement shall be kept by Contractor and supplied to Owner prior to invoicing the work covered by these records.
3. Unless otherwise instructed, Contractor shall submit timesheets for crews weekly to AEP's Right-of-Way Maintenance Program via the designated Web site.
  - a. Owner will create invoices for payment unless otherwise directed, and will send a copy of the invoice to Contractor.
  - b. Contractor has two weeks from the date on the invoice to review it and request corrections.
  - c. Contractor can also utilize the Web site to check the status of invoices, the check number with which the invoice was paid and the date the check was issued.

### **Supervision**

1. Supervision must be adequate to ensure that all work is performed in a safe and productive manner.
  - a. Contractor's supervisor must be available to consult with Owner within one working day should the need arise.
2. Supervisory field observations, at a minimum, shall be made on a weekly basis.
3. All costs of supervision above General Supervisor shall be the responsibility of Contractor, unless Owner authorizes these costs in advance, in writing.



**Application of Herbicides and Tree Growth Regulators (“TGR”)**

1. Contractor is responsible for property owner notification prior to application of herbicides and TGRs.
  - a. Because notification requirements vary by locale, Contractor should contact Owner’s local representative prior to beginning work in an area.
2. All application procedures, including materials being utilized, shall be fully explained to property owners if requested.
3. If landowner specifically requests that no herbicides and/or TGRs be applied, such requests shall be turned over to Owner for action.
4. Contractor is responsible for all herbicides and TGRs under its control (including those stored, transported and applied), whether provided by Owner or Contractor.
  - a. Such responsibility includes the proper disposal and labeling of the material containers.
5. Contractor will ensure that herbicides and TGRs are stored, transported, and applied in accordance with label instructions, as well as with any applicable local, state and Federal laws and regulations.
6. All applications will be made in accordance with label directions.
  - a. If more stringent restrictions are required by Owner, applications shall be made in accordance with these AEP restrictions.
7. Contractor guarantees control of at least ninety five percent (95%) of treated brush and control of at least ninety five percent (95%) of all stumps in all cut or mowed areas treated with herbicides.
  - a. Any areas with less than ninety five percent (95%) control shall be retreated at Contractor’s expense.
  - b. An evaluation will be performed during the growing season following the application.
8. For herbicide applications, the record shall contain, at minimum, the following information:
  - a. Date of application
  - b. Location description
  - c. Line name
  - d. Start and end pole or structure numbers
  - e. Name, address and phone number of Landowner/Tenant when available
  - f. Herbicide (or mixture applied)
  - g. Volume applied
  - h. Application method
  - i. Size of area treated
  - j. Weather conditions
  - k. Crew Foreperson
  - l. Landowner/Tenant comments or issue
9. For TGR applications, a record shall be made for each treated tree and contain, at minimum, the following information:
  - a. Date of application
  - b. Location description
  - c. Line name
  - d. Start and end pole or structure numbers
  - e. Name, address and phone number of Landowner/Tenant when available

- f. Tree species
- g. DBH
- h. Tree condition
- i. GPS coordinates
- j. Map designating the approximate location/address where each tree was treated
- k. Material used
- l. Amount of material used (each tree)
- m. Soil conditions
- n. Weather conditions
- o. Crew Foreperson
- p. Landowner/tenant comments or issues

#### **Spray Application Equipment**

1. Equipment must be equipped as follows at a minimum:
  - **Tractor with Sprayer**
    - A tractor equipped with an attached high-pressure sprayer, a two hundred (200) gallon minimum tank with agitation, two (2) foliage spray guns and six hundred (600) feet of hose.
  - **Basal or Soil Applied Spray Truck**
    - Either two (2) or four (4) wheel drive truck equipped with a low-pressure sprayer, one hundred (100) gallon minimum tank with agitation, two (2) spray guns, four hundred (400) feet of hose and suitable storage for at least thirty (30) gallons of chemical concentrate.
  - **High Volume Spray Truck**
    - Four (4) wheel drive truck equipped with a winch, a high-pressure sprayer, a three hundred (300) gallon minimum tank with agitation, two (2) foliage spray guns, (one thousand) 1,000 feet of hose and suitable storage for at least thirty (30) gallons of chemical concentrate.
  - **Roadside Spray Truck**
    - Either two (2) or four (4) wheel-drive truck equipped with a high-pressure sprayer, a two hundred (200) gallon minimum tank with agitation, two (2) foliage spray guns, six hundred (600) feet of hose and suitable storage for at least thirty (30) gallons of chemical concentrate.

# EXHIBIT C

## WORKERS' COMPENSATION RATE ADJUSTMENT PROCESS

June 15, 2012

### Federal (FUTA) and State (SUTA) Unemployment Payroll Tax and Worker's Compensation Reconciliations

Contractor shall calculate the actual costs of the social security and state and federal unemployment taxes paid during the year. Those actual costs shall be compared to the invoiced costs billed to and paid by Owner for that year. If there is a difference, Contractor shall prepare an invoice adjustment that must be received by Owner prior to March 31 of the following year. If the actual costs exceed the invoiced costs, the invoice adjustment will be added to the amount invoiced on the first weekly invoice received by Owner after March 31. If the invoiced costs exceed the actual costs, the invoice adjustment will be deducted from the amount invoiced on the first weekly invoice received by Owner after March 31.

#### Work Compensation/Experience Modification Rate ("EMR") Calculation

1. The Workers' Compensation markup percentage in the Rate Sheets ("WC Rate"), will be reviewed annually and based on the results of the review, may be adjusted upward or downward effective April of each Contract year. The contract allows for an annual adjustment to the Workers' Compensation (WC) markup based on the annual EMR percentage change. The EMR change is capped based on language in the contract. Contractor's insurance year runs from August 1st to July 31st. The EMR modifier is known prior to the end of the Insurance year.
2. Based on the EMR change, there is the potential for Asplundh to adjust the WC markup percentage in April of the subsequent calendar year. Based on these circumstances, there is an eight month period from August of the base year to March of the following year in which the rate, eligible for change, remains the same.
3. WC is subject to an annual reconciliation, similar to payroll taxes. The calculation should be as follows:
  - a. Period 1 Labor - January through March
  - b. Period 2 Labor - April through July
  - c. Period 3 Labor - August through December
4. For 2012 only, the period from January 1, 2012 through April 1, 2012 (Period 1) will be based on the Workers Comp rates established in the previous contract.
5. Effective April 1, 2012 new Workers Comp rates were established and will serve as the base for all future calculations covered in the current contract period.
  - a. Period 1 Labor will be multiplied by the change in WC rate (Revised April WC markup rate minus the Previous December WC rate). Except for Period 1 of 2012 (see item #4).
  - b. The markup on Period 2 Labor is correct as the April adjusted rate is applied to this period.

- c. The markup on Period 3 Labor has the potential to be adjusted, up or down, depending on the EMR change. The EMR change calculated in September will be applied to Period 3 Labor. (This change will also be applied to the subsequent year's Period 1 Labor.)

6. Determination of the annual adjustment (if any) is based on the EMR.

- a. Contractor's Insurance Broker will calculate the annual EMR based on the Contractor's loss experience in its Regions. The calculation will follow standardized Insurance Industry methodology. Contractor's Insurance Broker will provide the annual EMR calculations on their letter heads and, if requested by the customer, the rating worksheets.
- b. The change in the EMR from the previous year to the current year will be stated as a percent. The percent EMR change cannot exceed five percent (5%) and will be negative for a decrease in the EMR and positive for an increase in the EMR.
- c. If Contractor's EMR increases in two consecutive years, the second year's change cannot exceed 2.5%. If Contractor's EMR increases in a third consecutive year, there will be no adjustment.

7. WC Rate Calculation

- a. The percent EMR change will be divided by 100 and the result added to 1.0.
- b. The result in (a) is then multiplied by the current WC Rate, resulting in the adjusted WC Rate for the next twelve (12) months.
- c. Examples:
  - i. The percent EMR change is -2.0%.  $-2.0$  divided by 100 equals  $-.02$ .  $1$  plus  $-.02$  equals  $.98$ . If the current WC Rate is 12.25, the adjusted WC Rate would be 12.25 times  $.98$  equaling 12.01 (rounded).
  - ii. The percent EMR change is 5.0%.  $5.0$  divided by 100 equals  $.05$ .  $1$  plus  $.05$  equals  $1.05$ . If the current WC Rate is 12.25, the adjusted WC Rate would be 12.25 times  $1.05$  equaling 12.86 (rounded)
  - iii. The percent EMR change is 6.5%. There is a cap of 5% so we use a 5% EMR change. See ii for the calculation.

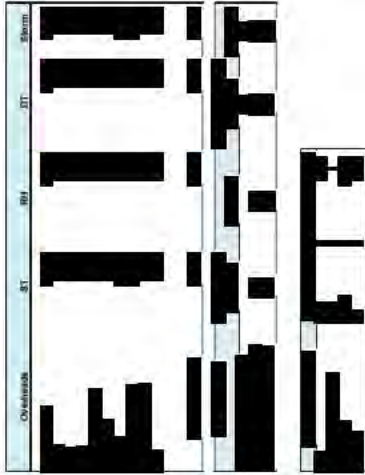
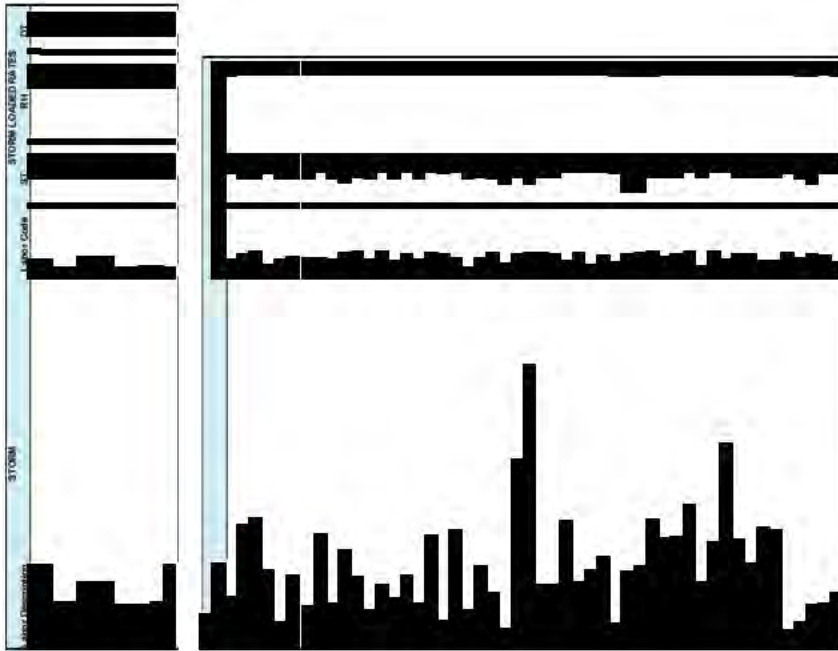
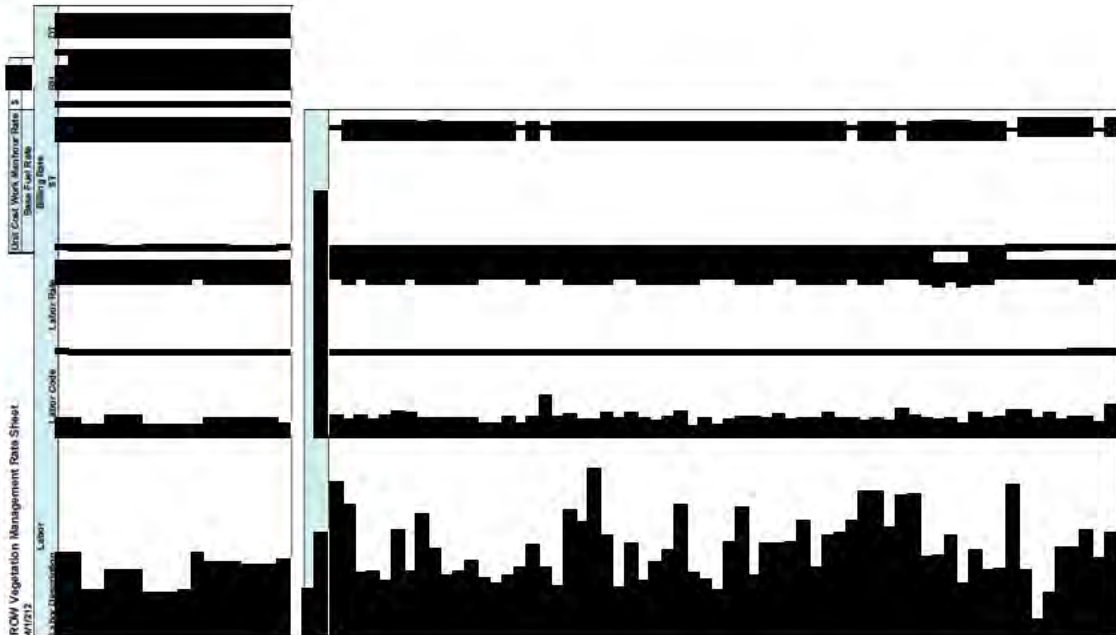
d. Example calculation:

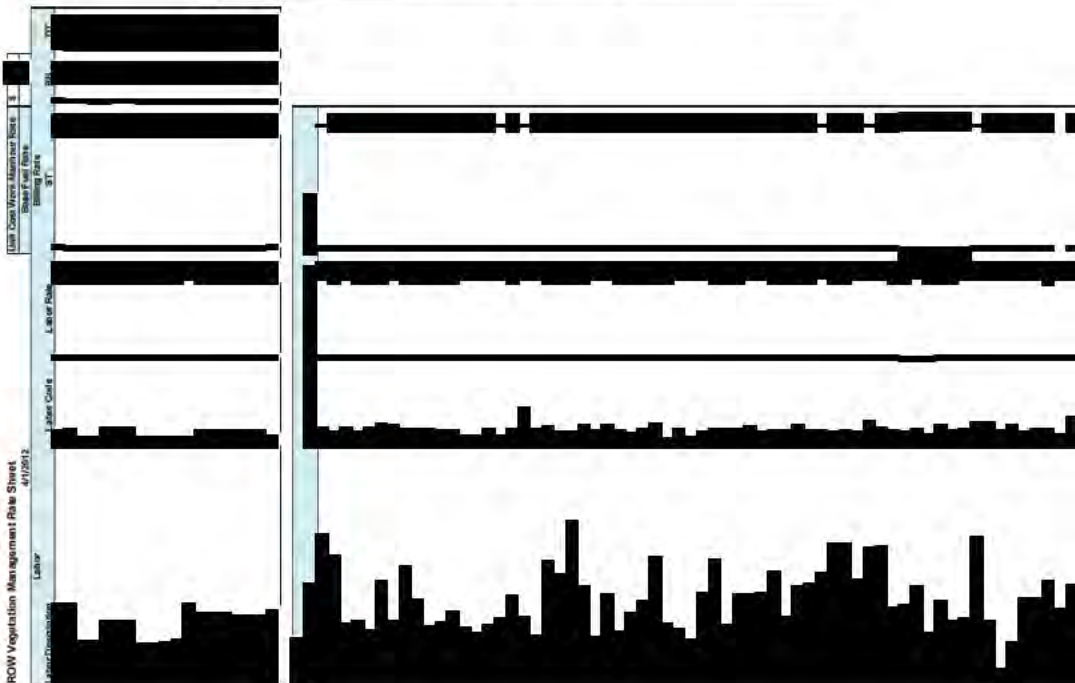
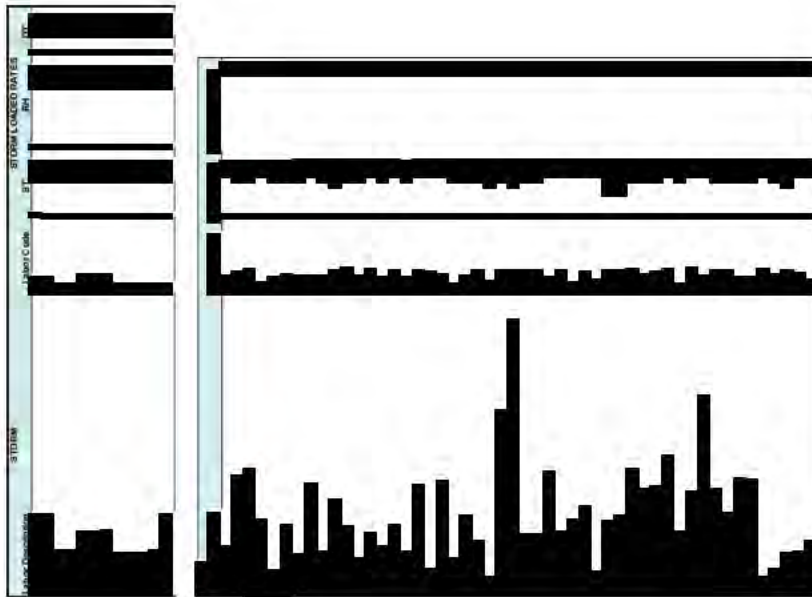
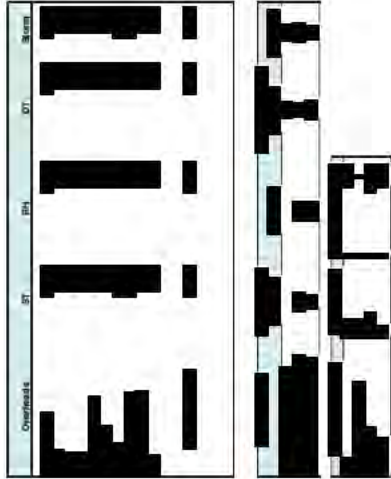
- 12/31/2009 WC billing markup 10%
- 2008/2009 EMR increase 5%
- 4/1/2010 WC billing markup 10.50% (2009 rate plus the EMR change)
- 2009/2010 EMR decrease 2.5%
- April 2011 WC billing markup 10.24% ( $10.50\% \times .975$ )
- Monthly Labor \$1,000,000
- Period 1 Labor -  $\$3,000,000 \times (10.50\% - 10.00\%) = \$15,000$
- Period 2 Labor - no adjustment
- Period 3 Labor -  $\$4,000,000 \times (10.24\% - 10.50\%) = (\$10,400)$
  
- The amount due Asplundh would be \$4,600.

8. This calculation will be performed on an annual basis and will be submitted to Owner along with the annual payroll tax reconciliation.

| Labor                                      |            | August 1, 2011   |
|--|------------|--|
| Labor Description                          | Labor Code | Comments   |
| Equipment Operator                         | EO         | An equipment operator shall be able to operate and perform minor maintenance on a ROW brush mower or bulldozer   |
| General Foreman A/<br>General Foreperson A | GFA        | The primary contact with AEP Forestry field representatives Has worked a minimum of 12 months as an Assistant General Foreperson and should be ISA certified Individuals are responsible for all aspects of the contractor's local field operation including and not limited to employee safety, equipment maintenance, work planning effect (if applicable), and emergency response   |
| Foreman A/Foreperson A                     | FA         | Meet all the qualifications of a Foreperson B Has worked a minimum of 12 months as a Foreperson B and should meet all state required herbicide qualifications Is able to competently work and lead others with no direct supervision   |
| Foreman B/Foreperson B                     | FB         | Meet all the qualifications of a Trimmer A Individuals have completed all line clearance foreperson certification/ training programs as required Must be able to work and lead others with limited supervision Has worked a minimum of 18 months in the line clearance industry Must be able to effectively communicate with AEP representatives and landowners Must be able to prepare required record documents, read and follow instructions on maps and notification records Must possess a CDL and pesticide certification as required  |
| Work Planner A                             | WPA        | Meet all qualifications of Work Planner B and be ISA certified Two years experience as a Work Planner II or three years related utility experience Consistent work planning accuracy greater than or equal to 95% Demonstrates initiative and pro-actively looks for ways to do work cost effectively Demonstrated abilities in teamwork, leadership and problem solving Willing to travel and stay away from home overnight   |
| Work Planner B                             | WPB        | Meet all qualifications of Work Planner C and working towards ISA certification Six months satisfactory performance as a Work Planner C or related utility experience Thorough knowledge of species and growth characteristics of trees located in assigned work area Good understanding of electrical facilities and hardware and associated line/circuit maps Understanding of electric utility vegetation management and ability to communicate such to property owners Work effectively with people (utility, contractors, customers, etc ) Demonstrated ability to work safely and efficiently with minimal supervision and have the ability to travel and stay overnight |
| Work Planner C                             | WPC        | Two-year Degree in Forestry, Arboriculture, etc , or related utility experience is desirable Good verbal and written communications skills Positive attitude/neat professional appearance Able to work outside in a safe, productive manner in all weather conditions Valid drivers license  |
| General Foreman B/<br>General Foreperson B | GFB        | Individuals shall be able to communicate effectively with utility representatives, the public and their direct reports Determine the most effective manner within established guidelines of how to treat vegetation conditions and coordinate and instruct crew activities to safely and effectively complete an assigned task Must possess a pesticide license and where required strive to become a certified arborist   |
| Trimmer A                                  | TA         | Meet all qualifications of Trimmer B Individuals have completed all climbing trimmer and bucket (where required) certifications Individual has worked a minimum of 12 months in the line clearance industry Is able to perform all aspects of tree trimming and tree removal including and not limited to rigging ropes, and pulling overhang, and any other assigned duties in a safe, consistent, competent manner Individuals should be capable of filling in for a crew foreperson on a limited basis and have started foreperson training as required by the employer   |
| Trimmer B                                  | TB         | Meet all qualifications of Trimmer C Individual have completed climbing trimmer training Individual has worked a minimum of 6 months in the line clearance industry  |
| Trimmer C                                  | TC         | Entry level or trainee position that requires the individual passes screening criteria as established by employer A Trimmer C shall be able under direction to safely perform a variety of job duties including and not limited to chain saw maintenance, operate a brush chipper, and apply herbicides, clear and cut trees and brush They shall begin climbing trimmer training Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification   |

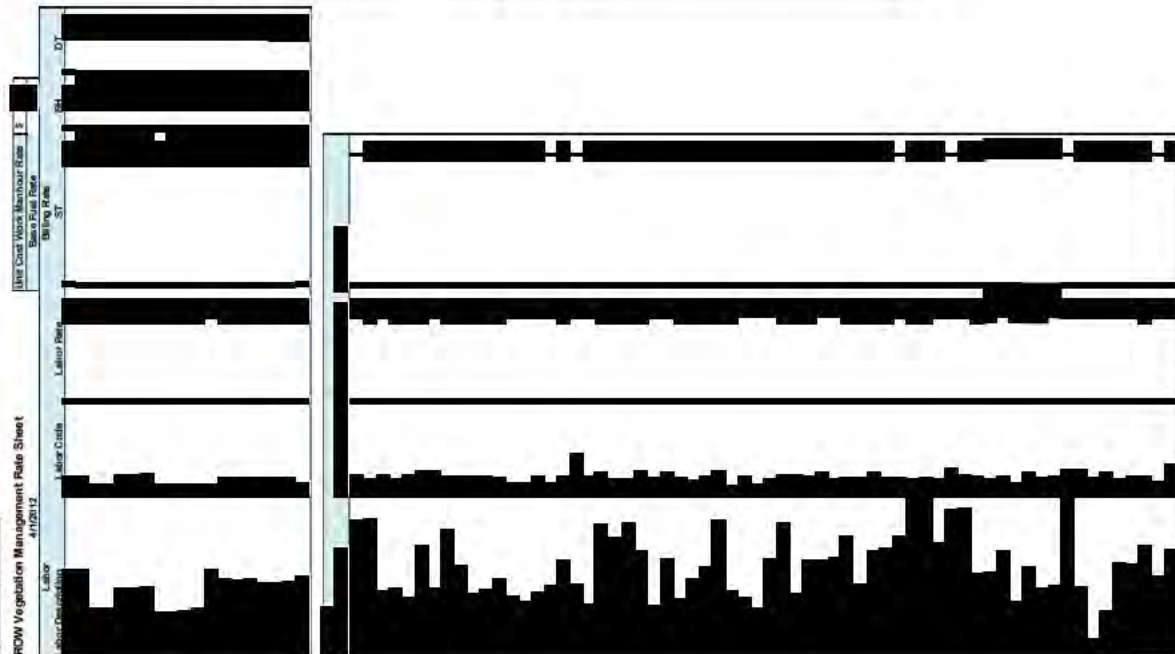
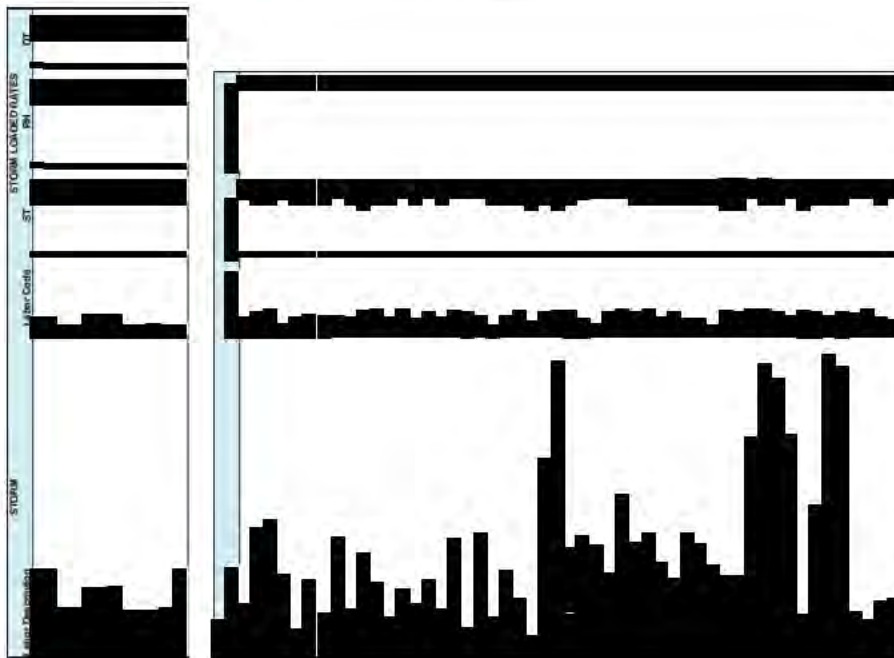
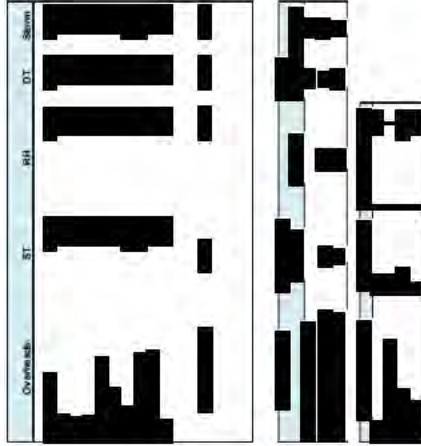
**RATES FOR APCO - WEST VIRGINIA**  
ROW Vegetation Management Rate Sheet  
4/1/12





RATES FOR APCCO - VIRGINIA  
ROW Vegetation Management Rate Sheet  
4/12/2012





RATES FOR KGECQ  
ROW Vegetation Management Rate Sheet  
4/1/2013

**RATES FOR KRCC**

ROW Vegetation Management Rate Sheet  
 4/1/2012

| Unit Description             | ST | TH | DT | STORM | STORMLOADED RATES |
|------------------------------|----|----|----|-------|-------------------|
| End Cost Work Hour/acre Rate |    |    |    |       |                   |
| Basic Post Rate              |    |    |    |       |                   |
| Billing Rate                 |    |    |    |       |                   |
| ST                           |    |    |    |       |                   |
| TH                           |    |    |    |       |                   |
| DT                           |    |    |    |       |                   |

| Unit Description             | ST | TH | DT | STORM | STORMLOADED RATES |
|------------------------------|----|----|----|-------|-------------------|
| End Cost Work Hour/acre Rate |    |    |    |       |                   |
| Basic Post Rate              |    |    |    |       |                   |
| Billing Rate                 |    |    |    |       |                   |
| ST                           |    |    |    |       |                   |
| TH                           |    |    |    |       |                   |
| DT                           |    |    |    |       |                   |

| Equipment Description          | ST | TH | DT | STORM | STORMLOADED RATES |
|--------------------------------|----|----|----|-------|-------------------|
| Equipment Code                 |    |    |    |       |                   |
| Equipment Rate (Fuel per hour) |    |    |    |       |                   |
| ST                             |    |    |    |       |                   |
| TH                             |    |    |    |       |                   |
| DT                             |    |    |    |       |                   |

| Material Description | ST | TH | DT | STORM | STORMLOADED RATES |
|----------------------|----|----|----|-------|-------------------|
| Material Code        |    |    |    |       |                   |
| Material Rate        |    |    |    |       |                   |
| Material Markup %    |    |    |    |       |                   |
| ST                   |    |    |    |       |                   |
| TH                   |    |    |    |       |                   |
| DT                   |    |    |    |       |                   |

| Unit Description        | ST | TH | DT | STORM | STORMLOADED RATES |
|-------------------------|----|----|----|-------|-------------------|
| Ydm Manhours Scenario 1 |    |    |    |       |                   |
| Ydm Manhours Scenario 2 |    |    |    |       |                   |
| Remov Scenario Scenario |    |    |    |       |                   |
| Brush (less than 4"DBH) |    |    |    |       |                   |
| ST                      |    |    |    |       |                   |
| TH                      |    |    |    |       |                   |
| DT                      |    |    |    |       |                   |
| STORM                   |    |    |    |       |                   |

# Unit Price Model

## April 30, 2012

Services may be paid under the following Unit Price model.

### 1. Unit Price Model Overview

Unit Price is a model where a Unit Price hourly rate is paid to Contractor for all work units completed in an assigned Circuit. The Unit Price hourly rate includes all costs, including but not limited to, wages, supervision, overheads, profit, equipment and materials required to complete the assigned Work. While the Unit Price hourly rate includes the labor required to apply herbicides, it does not include the cost of the herbicides. The Unit Price hourly rate is multiplied by the assigned work hour per unit, a rate that is assigned for each specific work unit (tree trim, tree removal, brush cut, etc.). This is a rate that has been determined to complete a unit of Work on the assigned Circuit, as agreed by the Owner and Contractor. All Unit Price Work issued to Contractor shall be completed by the agreed upon completion date.

### 2. Unit Price Calculation

#### a. Man Hours per Unit Calculation

Unit Price uses historical average times, or other method agreed to by Owner and Contractor, required to perform a specific type of Work (tree trim, tree removal, brush cutting, brush spraying) ("Work Unit") and includes all time necessary to complete that Work, including but not limited to travel, actual job site time, debris disposal, landowner contacts, immediate crew supervision and appropriate non-productive time (such as time lost to inclement weather and minor on-the-job equipment breakdown).

- I. Owner shall explain the method of calculation and the information used in a Circuit to Contractor's supervision and management prior to authorizing Work.
- II. The average times used to calculate hours per unit can be collected by distribution circuit, portions of a given circuit (sub-circuit), or other defined geographic area within the Contract region (e.g. "Circuit" or "Area.")
- III. The historical average times are developed by accumulating data for vegetation management Work performed on the Circuit during the last three calendar years or other time period as agreed by Owner and Contractor. Each time a Circuit is scheduled for maintenance, a new three-year average is calculated by replacing the earliest year's data with the most recent or next successive year's data. This rolling three year average is given in hours per unit.
- IV. If there are inconsistencies in the three-year data based on disparity in the actual work within a specific Contract region, the Owner and Contractor may agree to use another method to generate the hours per unit. This method shall be documented in the Work Request authorizing the Work.

#### b. Unit Price Calculation

Contractor has submitted a Unit Price hourly rate that shall be used for all units of Work performed, regardless of the Work Unit type. The cost for a given unit of Work (e.g. for a given Circuit) is established by multiplying the Contractor's Unit Price hourly rate for

that Work Unit by its hours per unit. If the Unit Price hourly rate is \$20.00 and the hours per unit is 1.25 hours, Contractor earns 1.25 hours x \$20.00 – \$25.00 for each unit of that Work Unit.

### **3. Job Assignment**

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned; prepare a Unit Price Sheet (sample attached); include any exceptions to the hours per unit; and shall schedule a field review with the Contractor to discuss the Work assignment, including how the hours per unit were developed. An exception to the hours per unit might be a tree removal where the location and size of the tree and its proximity to structures cause a substantial increase in the hours per unit required for the removal. These exceptions must be agreed to by both Parties and are not to include those deviations that are normally encountered in performing a Work Unit.

At the field review, Owner and Contractor shall review all the Work, agree to the exceptions to the hours per unit, agree to the Unit Price Sheet and determine a start date for the Work. A Work Request (“WR”), similar to the sample attached, shall be signed by both Parties and constitutes the written authority for Contractor to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Unit Price Sheet, the map, a list of exceptions to the hours per unit, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date, but subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor’s work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. The work planners, per current practice, shall be paid on a time and material basis and will not be included within the stated Unit Price or Unit Price calculation. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor’s employees are unable to resolve their concerns quickly, Contractor’s employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

## Lump Sum Price Model

April 30, 2012

Services may be paid under the following Lump Sum Price model.

### **1. Authorizing Work**

Owner and Contractor may agree to perform work based on a Lump Sum price for the specified Circuit.

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned, complete a Lump Sum Price Sheet; and schedule a field review with the Contractor to discuss the Work assignment.

At the field review, Owner and Contractor shall review all the Work, agree to the Lump Sum Price and determine a start and end date for the Work. A Work Request ("WR") for Lump Sum Price Work, similar to the sample attached, shall be signed by both Parties and constitutes the Contractor's written authority to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Lump Sum Price, the map, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date but is subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor's work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor's employees are unable to resolve their concerns quickly, Contractor's employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.



## **AEP Transmission Forestry**

### **Rate Clarifications for Right-of-Way Maintenance Contracts**

**May 15, 2012**

### **Reporting Sites**

1. The Contractor shall establish reporting sites as close as possible to the work.
  - a. All reporting site locations must be acceptable to the Owner.
  - b. The Owner will accept invoices for no more than 30 minutes travel time from a reporting site to the work site.
  - c. The reporting site shall be relocated if travel time exceeds 30 minutes one way from the reporting site to the work site and the amount of work exceeds two weeks.
2. If the Contractor is requested to work outside the normal working area (80 miles or more from the reporting site) and it is necessary for the crews to remain in the area overnight, Owner may pay a per diem.
  - a. Per diem must be approved by Owner in advance.
  - b. The per diem rate shall include meals, lodging, and all other expenses incurred.

### **Equipment**

1. Contractor agrees to notify Owner when any equipment is not operable. They jointly will determine if work can continue in an efficient manner.
2. If no suitable work is available, the crew will be idled until the equipment is operable.
3. If for any reason, Contractor fails to notify Owner of inoperable equipment, it shall be assumed the crew was not working for at least eight hours prior to Owner's becoming aware of the problem. Invoices will be adjusted accordingly.
4. Equipment Fuel Costs are based on fuel costs as follows: Base Fuel Rate = \$4.00 per gallon.
5. Equipment rates will be adjusted in accordance with the current AAA Average Fuel Price Gauge Report. The rates will be adjusted automatically through AEP's RWM invoicing system.

### **Materials**

1. Materials and rental equipment furnished by the Contractor and authorized by the Owner will be invoiced at cost plus five percent (5%).
2. Contractor must obtain three bids for materials and provide copies of these bids to the Owner, if requested.
  - a. While the Contractor may purchase from any material vendor, AEP's material pricing shall be based on the lowest price submitted.

### **Pay During Training**

Unless otherwise agreed to by Owner in writing, no billing relating to attendance at training or certification will be paid.

### **Overtime Calculations and examples**

1. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week at Owner's request.
2. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.

3. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday, when approved by Owner in advance.
4. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in items 1 and 2 above. The 40 hours pay shall include any holiday compensation paid by Contractor to the employee.
5. Calculation examples are provided below.

- Straight Time Rate = Taken from table
- Overtime Rate = Straight Time Rate x 1.5
- Sunday/Holiday Rate = Straight Time Rate x 2
  
- Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)
- Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)
- Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)
- Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)
- Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) = \$30.72$

Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) = \$33.40$

Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) = \$40.94$

Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) = \$44.52$

**Major Storm Events**

When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.



**Work Request  
For  
Unit Price/Time and Materials Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Unit Price/Time and Materials Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ ("Contract") between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

If no map is attached, identify the circuit, sub-circuit, or the specific geographic area identifying the Work to be performed.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

**Unit Price** --- Contractor's weekly billing shall be calculated using the number of units completed during the week being billed multiplied by the cost per unit from the Rates as found in the Contract.

**Time and Materials** – Contractor's weekly billing shall be calculated using the following formula: (labor classification X number of hours worked during billable period) + (equipment rate X number of hours used during billable period). The labor classifications and equipment rates used will be in accordance to the Rates as found in Exhibit C of the Contract

Unless otherwise stated in this Work Request or the attached map, pricing will be per the price model as selected above and in accordance with the Rates as found in Exhibit C of the Contract.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent's respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**WORK REQUEST  
For  
Lump Sum Work**

**Work Request No:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_ **Issued To:** \_\_\_\_\_  
(Owner) (Contractor)

This Work Request for Lump Sum Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ ("Contract") between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

Work shall be performed in accordance with the attached Request For Quote ("RFQ") attached hereto.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

Unless otherwise stated in the Work Request, Contractor shall be paid the total cost for the Circuit upon completion of all Work and subsequent acceptance by Owner. Contractor shall perform all Work for the lump sum amount of \$ \_\_\_\_\_.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent's respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print  
Name: \_\_\_\_\_

Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**PRICING CHANGE ORDER**

---

Contract # : \_\_\_\_\_ Request Date: \_\_\_\_\_  
 Owner: \_\_\_\_\_ Contractor: \_\_\_\_\_

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

Specific reason(s) for Change Order:
  Rate Addition(s)
     
  Rate Deletion(s)  
 Rate Description Change(s)
     
  Rate Code Change(s)  
 Other (please describe): \_\_\_\_\_

| Labor  |                   |            |            |      |      |      |
|--------|-------------------|------------|------------|------|------|------|
| Reason | Labor Description | Labor Code | Labor Rate | ST   | RH   | DT   |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
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| Storm  |                   | STORM LOADED RATES |      |      |      |
|--------|-------------------|--------------------|------|------|------|
| Reason | Labor Description | Labor Code         | ST   | RH   | DT   |
|        |                   |                    | \$ - | \$ - | \$ - |
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Pricing Change Order

Contract No: 0

| Material |                      |               |                         |                     |
|----------|----------------------|---------------|-------------------------|---------------------|
| Reason   | Material Description | Material Code | Material Rate (\$/unit) | Material Markup (%) |
|          |                      |               | \$ -                    | 0%                  |
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| Expense |                     |              |                        |
|---------|---------------------|--------------|------------------------|
| Reason  | Expense Description | Expense Code | Expense Rate (\$/unit) |
|         |                     |              | \$ -                   |
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|         |                     |              | \$ -                   |

Owner's Authorized Reviewer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Owner's Authorized Reviewer Print Name: \_\_\_\_\_

IN WITNESS WHEREOF, the Parties hereto have caused this Change Order to be signed by their respective officers thereunto duly authorized on the dates set forth below to be effective as of the Effective Date.

**Owner**

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Print Name

\_\_\_\_\_  
 Title

\_\_\_\_\_  
 Date

**Contractor**

\_\_\_\_\_  
 Signature

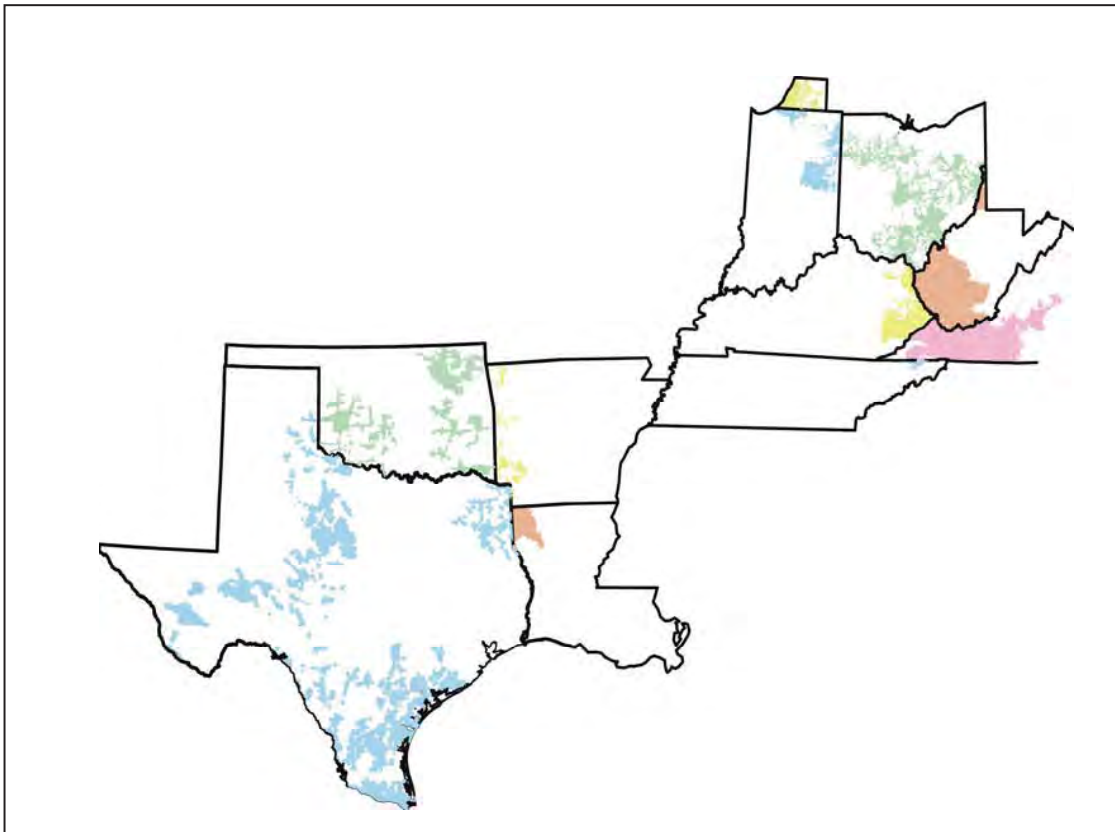
\_\_\_\_\_  
 Print Name

\_\_\_\_\_  
 Title

\_\_\_\_\_  
 Date

# EXHIBIT D

# AEP – ASPLUNDH 2012/2013 CORPORATE KEY PERFORMANCE INDICATOR PLAN GUIDELINES (CKPI)



## **2012/2013 AEP - Asplundh Corporate Key Performance Indicator Plan Guidelines (CKPI)**

This document describes the 2012/2013 Corporate Key Performance Indicator (“CKPI”) Plan between American Electric Power (“Operating Companies”) and Asplundh Tree Experts (“Unit”) and explains how the adjusted performance payback allocation will be determined for each Asplundh Unit. The CKPI Plan provides insight into each Operating Companies’ performance measures with a chance to set new goals and improve the ability to determine fair challenging targets which incorporate operating issues, regulatory requirements, and other measures. This CKPI Plan has been developed for the purpose of tracking and improving the safety and efficiency of the work performed by Asplundh under their AEP vegetation management contract(s) held by each Operating Company. The CKPI Plan’s performance categories provide a “line of sight” for AEP Forestry management and Asplundh management so that performance expectations associated with AEP’s vegetation management are communicated and understood.

Both parties have agreed to review the CKPI Plan structure no later than six months after commencement of the agreement. Both parties will mutually agree to any changes made to the CKPI Plan. Any changes agreed to during the review meeting must be submitted in writing within 30 days of the initial review meeting.

The CKPI will work in conjunction with the Key Performance Incentive (“KPI”) Plans. If the performance categories are not met then Asplundh will sustain an adjusted performance payback allocated to them by the individualized AEP Operating Company,

In 2012/2013, each Operating Company CKPI Plan will have two (2) performance categories:

- Safety
- Efficiency

The safety performance category will be weighted at 40% of the CKPI Plan and will include three (3) measures: OSHA Severity Rate; OSHA Incident Rate; and Number of “At Fault” Safety Events Caused by the General Foreman or Foreman. These measures will carry individual weightings of 15%, 20% and 5%, respectively and will be set the same across the board with no quarterly changes.

The efficiency performance category will be weighted at 60% of the CKPI and will include three (3) measures: Hours per Tree Trimmed; Hours per Tree Removed; and Hours per Unit of Brush Cut. These measures will carry equal, individual weightings (totaling 60%). All performance measures under the efficiency



performance category contain performance factors that are specific to each of the Operating Companies and are revised on a quarterly basis.

A sample of the Quarterly CKPI Plan Target Worksheet is attached at the end of this document on page ten (10).

AEP Forestry management requires additional Performance Drivers to be supplied by Asplundh on a quarterly basis for the following items listed below:

- a) Percentage of Time General Foreman Spends with Crews
- b) Fuel Usage
- c) Asplundh Employee Turn Over
- d) Drive Time
- e) Vehicle Engine Idle Time
- f) Crew Down Time
- g) Equipment Down Time
- h) Pull Out Time

These additional performance drivers will be evaluated for potential inclusion into future CKPI targets. A detailed explanation of these drivers is included on page nine (9).

Each Asplundh Unit earns a performance factor of 0.0 – 1.0 for each performance measure in the CKPI Plan. The performance factor earned is based on the Unit's quarterly results. Each performance measure's weighting factor is multiplied by its earned performance factor to obtain its weighted performance factor. The sum of the weighted performance factors for all the performance measures results in the Unit's aggregate performance factor.

The quarterly CKPI Plan pot allocated for each Unit is 1.5 % of the Unit's Asplundh labor, with mark-ups, invoiced that quarter for the classifications of General Foreman and below. To determine each Unit's CKPI Plan adjusted performance payback to the AEP Operating Companies, its aggregate performance factor is multiplied by its quarterly CKPI Plan pot to determine the CKPI Plan performance dollars then the CKPI Plan pot is subtracted from the CKPI Plan performance dollars.

**Operating Company Unit Example:**

Quarterly CKPI Plan Pot = (1.5% x Quarterly Invoiced Labor with Mark Ups)

Quarterly Unit's CKPI Plan Performance Dollars = [(First Performance Factor x Weighting) + (Second Performance Factor x Weighting) +...+ (Last Performance Factor x Weighting)] x (Quarterly Unit's CKPI Plan pot)

Quarterly Unit's CKPI Plan Adjusted Performance Payback = (Quarterly Unit's CKPI Plan Pot - Quarterly Unit's CKPI Plan Performance Dollars)

For internal accounting purposes: Asplundh will issue a "credit memo" to any AEP Operating Company that has an adjusted performance payback allocated. The total CKPI Plans' adjusted performance payback will be allocated back to Capital and Operation and Maintenance ("O&M") in accordance with the Operating Company's actual outside services labor expenditures for the quarter by an AEP Forestry representative.

When Asplundh Units have an adjusted performance payback of zero (0), this CKPI Plan will be used for 'informational purposes' only for that specific quarter. This CKPI Plan is only designated for Asplundh to payback AEP Operating Companies if their performance measures are not met throughout this plan. AEP will never make a payout under the CKPI Plan to any Asplundh Unit.

Once each Operating Companies' Quarterly CKPI Plan Target Worksheet is complete, an AEP Forestry representative will provide each Asplundh Unit with a copy. If an adjusted performance payback is owed to any of AEP's Operating Companies, Asplundh must submit individual credit memos by Operating Company to the AEP Manager Forestry Operations, 1 Riverside Plaza, 12<sup>th</sup> Floor, Columbus, Ohio 43215 within 30 days from receipt of the final CKPI Plan target worksheets.

Descriptions of the various performance categories, performance measures, and objectives that are used in the CKPI Plan are outlined below.

#### ❖ **PERFORMANCE CATEGORY: SAFETY**

The Performance Measures under the Safety Performance category apply only when work, including service restoration work, is being performed in an AEP Operating Company and includes all Asplundh employees covered by an AEP contract(s) that includes this CKPI Plan. Safety incidents measured in this plan will be charged to the Asplundh employee's "home" unit regardless of the AEP location where the accident occurs.

If an Operating Company sustains a fatality by an Asplundh employee in a given quarter, then the Operating Company sustaining the fatality will receive zeros (0) in all performance categories of the CKPI Plan. All other Operating Company CKPI Plans' performance measures will be reduced under the safety category to a zero (0). An exception may be made, if after a thorough review, AEP determines the fatality occurred through "no fault" of an Asplundh employee.

- **Performance Measure: Severity Rate Per AEP Operating Company**
- **Objective: To meet or exceed a 28.75 severity rate threshold.**

Included in the accident severity rate are the days away from work and restricted duty days for injuries that are required to be recorded on the Contractor's OSHA 300 log. Days away from work are commonly referred to as "lost time". Restricted duty days are defined as the days the injured employee is restricted from performing the duties of his regular occupation by his doctor but is assigned alternate work or restricted duties within his occupation. All days between the first lost or restricted day and the day the restrictions are lifted by the doctor are included. Severity days will continue to count into the next quarter if need be. No single OSHA recordable incident shall accumulate more than 180 calendar days of lost time or restricted duty.

The quarterly accident severity rate is calculated per the following formula:

$$\frac{(\# \text{ of Days Away from Work} + \text{Restricted} + \text{Transfer Days}) \times 200,000}{(\text{Hours Worked in Qtr})}$$

Note: Hours worked in the quarter; lost time; restricted duty days; and transfer days for this performance measure will be derived from all Asplundh employees covered by this CKPI Plan at the Operating Company level, regardless of job classification. This will also include any outsource/off system crews working on AEP property.

- **Performance Measure: Incident Rate Per AEP Operating Company**
- **Objective: To meet or exceed a 2.08 incident rate threshold.**

Included in the incident rate is the total number of injuries, illnesses, and lost work cases that are required to be recorded on the Contractor's OSHA 300 log. An injury or illness is an abnormal condition or disorder. Injuries include cases such as, but not limited to, a cut, fracture, sprain, strain, or amputation. Illnesses include both acute and chronic, such as, but not limited to, a skin disease, respiratory disorder, or poisoning.

The quarterly accident incident rate is calculated per the following formula:

$$\frac{(\# \text{ of OSHA Recordable Incidents} \times 200,000)}{(\text{Hours Worked in Qtr})}$$

Note: Hours worked in the quarter and recordable injuries for this performance measure will be derived from all Asplundh employees covered by this CKPI Plan at the Operating Company level, regardless of

job classification. This will also include any outsource/off system crews working on AEP property.

- **Performance Measure: General Foreman and Foreman “Target Zero” Safety Per AEP Operating Company**
- **Objective: Within each operating company, general foreman and foreman should have no more than 4 “at fault” safety events per quarter.**

Each general foreman and foreman must stay focused and maintain a clear “line of sight” on safety using the “Target Zero” approach. This includes, but is not limited to, eliminating all general foreman and foreman “at fault” OSHA recordable injuries, vehicle accidents, and power interruptions (outages, flashes, and operations). If there are more than four (4) “at fault” safety events caused by the general foreman and foreman in a given quarter, AEP Operating Company & Asplundh management will mutually develop a plan designed to improve the general foreman and foreman’s safety performance.

The following explanations provide a guideline for “at fault” OSHA recordable injuries, vehicle accidents, and power interruptions (outages, flashes, and operations):

#### **OSHA Recordable Injuries**

See description on page five (5) under incident rate.

#### **Vehicle Accidents**

“At fault” vehicle accidents are defined as motor vehicle accidents in which the Asplundh driver/operator involved was the cause of the accident (i.e., disregarding traffic signals, backing into fixed objects, excessive speed, etc.).

“Not at fault” vehicle accidents are defined as motor vehicle accidents in which the actions of the Asplundh driver/operator involved was not the casual factor to the accident. However, there can be circumstances in which the accident could have been avoided had the Asplundh driver/operator taken defensive measures (i.e., braking suddenly and being struck in the rear, or being struck by a merging vehicle).

#### **Power Interruptions (Outages, Flashes, and Operations)**

A power interruption is defined as a tree contact, or human error, that disrupts the normal operation of the circuit whether momentary or for a sustained period of time. Included in the definition are outages, flashes and operations. Interruptions to AEP’s system can be very serious, and may easily result in personal injuries to the employees involved.

Interruptions also have the potential to affect large numbers of customers and large blocks of load.

❖ **PERFORMANCE CATEGORY: EFFICIENCY**

Efficiency performance measures provide a “line of sight” reference to the crews in the field and gives AEP and Asplundh management the opportunity to implement best practices in crew management. Target levels will be set quarterly to compensate for seasonal variations. These target levels will be based on historic data for each Asplundh Unit unless otherwise agreed to by AEP Operating Company and Asplundh management.

Accurate reporting of work units completed is required for efficiency measures to be viable. Reported work units will be verified through field audits of completed work. Variances will be addressed by AEP Operating Company and Asplundh management.

- **Performance Measure: Hours per Tree Trim Per Operating Company**
- **Objective: Increase the efficiency of crews performing tree trimming by the percentage designated by the AEP Operating Company over the previous 3-year average (see table below). Averages and percentages will vary by Operating Company.**

| Operating Company      | Tree Trimmed % |
|------------------------|----------------|
| APCO, KGPCO            |                |
| I&M                    |                |
| OPCO, WPCO             |                |
| SWEPCO                 |                |
| KYPCO                  |                |
| TX                     |                |
| PSO                    |                |
| T - APCO, KGPCO, KYPCO |                |
| T - SWEPCO             |                |

Hours per tree trimmed will be collected quarterly through the Right of Way Maintenance Forestry system (“RWM”). Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

- **Performance Measure: Hours per Tree Removal Per Operating Company**
- **Objective: Increase the efficiency of crews performing tree removals by the percentage designated by the AEP Operating Company over the previous 3-year average (see table below). Averages and percentages will vary by Operating Company.**

| Operating Company      | Tree Removed % |
|------------------------|----------------|
| APCO, KGPCO            |                |
| I&M                    |                |
| OPCO, WPCO             |                |
| SWEPCO                 |                |
| KYPCO                  |                |
| TX                     |                |
| PSO                    |                |
| T - APCO, KGPCO, KYPCO |                |
| T - SWEPCO             |                |

Hours per tree removed will be collected quarterly through RWM. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

- **Performance Measure: Hours per Unit of Brush Cut Per Operating Company**
- **Objective: Increase the efficiency of crews performing brush cutting operations by the percentage designated by the AEP Operating Company over the previous 3-year average (see table below). Averages and percentages will vary by Operating Company.**

| Operating Company      | Brush Cut % |
|------------------------|-------------|
| APCO, KGPCO            |             |
| I&M                    |             |
| OPCO, WPCO             |             |
| SWEPCO                 |             |
| KYPCO                  |             |
| TX                     |             |
| PSO                    |             |
| T - APCO, KGPCO, KYPCO |             |
| T - SWEPCO             |             |

Hours per unit of brush cut will be collected quarterly through RWM. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management.

- **Performance Measure: Future Performance Drivers**
- **Objective: To collect detailed information from Asplundh for future CKPI Plan performance drivers.**

The table below gives a brief explanation of potential performance drivers for Asplundh. This data will be tracked and submitted by Asplundh to the AEP Manager Forestry Operations on a quarterly basis.

**Table of Future Performance Drivers:**

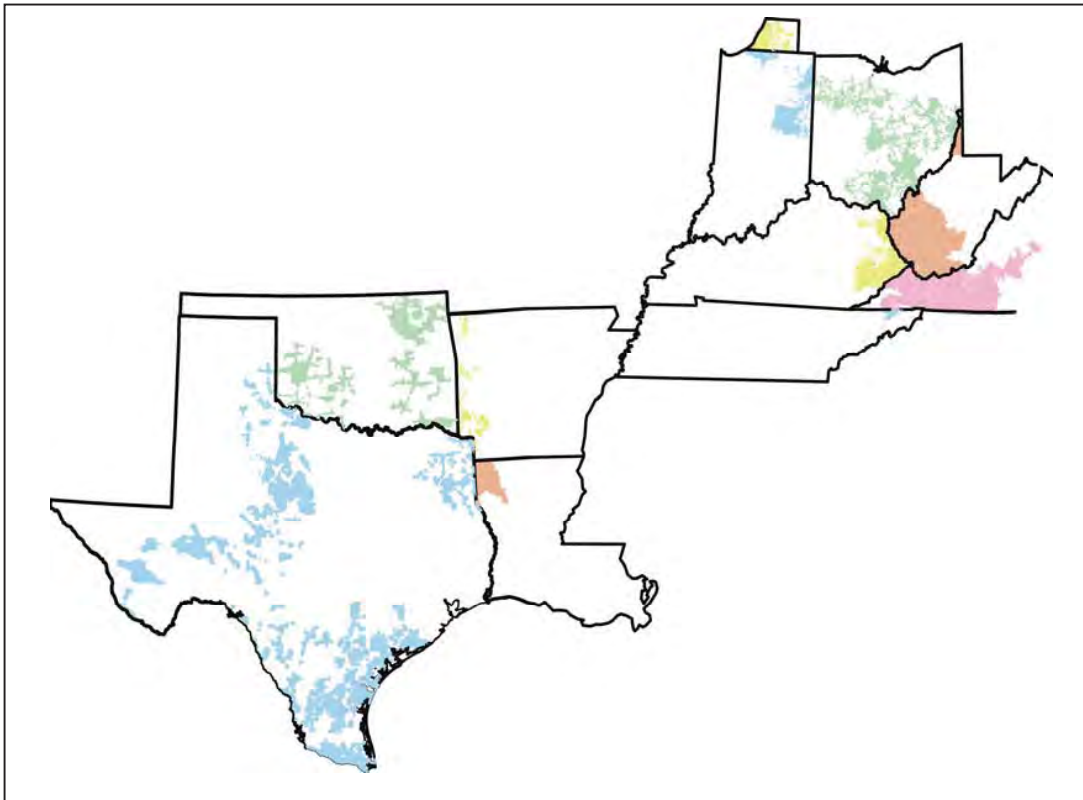
| Future Performance Drivers                              | Descriptions  | Tracking Mechanism          | Initial Report Due |
|---|---|-----------------------------|--------------------|
| A. Percentage of Time General Foreman Spends with Crews | % of billed general foreman hours spent with crews  | GPS crew tracking records   | 3/31/2013          |
| B. Fuel Usage   | Actual fuel used by all billed vehicles and equipment (both on and off road)  | AVMS data points            | 12/31/2012         |
| C. Asplundh Employee Turnover Rate                      | # of Asplundh full time employees (FTE's) leaving Asplundh divided by the number of equivalent FTE's (equivalent FTE's = billed straight time labor hours / 2080) | Asplundh employment records | 12/31/2012         |
| D. Drive Time   | Time from start time at crew show-up to arrival at first job site location of the day.  | GPS crew tracking records   | 3/31/2013          |
| E. Vehicle Engine Idle Time                             | Hours main engine on vehicles is at idle while crew is on job site  | GPS crew tracking records   | 12/31/2012         |
| F. Crew Down Time                                       | Hours Crew is unproductive due to mechanical breakdowns, waiting on assignments, waiting on equipment, etc  | Asplundh timesheet data     | 3/31/2013          |
| G. Equipment Down Time                                  | Hours equipment is unavailable due to either required maintenance or breakdown.   | Asplundh timesheet data     | 3/31/2013          |
| H. Pull out time  | Time from start time at crew show-up to leaving for first job site of the day.  | GPS crew tracking records   | 12/31/2013         |

**SAMPLE QUARTERLY CKPI PLAN TARGET SHEET**

|   |   |  | Asplundh Corporate - CKPI Measures |                          |             |                                    |                     |                    |      |      |      |     |  |  |
|---|---|--|------------------------------------|--------------------------|-------------|------------------------------------|---------------------|--------------------|------|------|------|-----|--|--|
| Measure   | Definition  | LO Target  | Weighting                          | Quarterly<br>CKPI \$ Pot | Calculation | Aggregate<br>Performance<br>Factor | Eligible            | Performance Factor |      |      |      |     |  |  |
|   |   |  |                                    |                          |             |                                    | CKPI Performance \$ | 0.0                | 0.25 | 0.50 | 0.75 | 1.0 |  |  |
| SAFETY<br>(40%)   | Severity Rate   | # of OSHA recordable lost work days + restricted duty days /<br>200,000 total man hours worked per<br>quarter  |                                    |                          |             |                                    |                     |                    |      |      |      |     |  |  |
|   | OSHA Incident Rate                                      | # of Actual OSHA recordable cases<br>/ 200,000 total man hours worked<br>per quarter   |                                    |                          |             |                                    |                     |                    |      |      |      |     |  |  |
|   | General Foreman &<br>Foreman Target Zero<br>Safety Goal | Focus and maintain a clear "line of<br>sight" with a "Target Zero" goal on<br>actual "at fault" OSHA recordables,<br>vehicle accidents, and power<br>outages |                                    |                          |             |                                    |                     |                    |      |      |      |     |  |  |
| EFFICIENCY<br>(60%)   | Per Unit Measure  | Hours per Tree Trimmed   |                                    |                          |             |                                    |                     |                    |      |      |      |     |  |  |
|   | Per Unit Measure  | Hours per Tree Removed   |                                    |                          |             |                                    |                     |                    |      |      |      |     |  |  |
|   | Per Unit Measure  | Hours per Unit Brush Cut   |                                    |                          |             |                                    |                     |                    |      |      |      |     |  |  |
| Were all the<br>additional<br>Asplundh CKPI<br>Drivers turned in? |   | YES  |                                    |                          |             |                                    |                     |                    |      |      |      |     |  |  |
|   |   | NO   |                                    |                          |             |                                    |                     |                    |      |      |      |     |  |  |



# AEP TRANSMISSION 2012/2013 KEY PERFORMANCE INCENTIVE PLAN GUIDELINES FOR ASPLUNDH APCO, KPCO, & KGPCO



## **2012/2013 AEP Transmission Key Performance Incentive Plan for Asplundh**

This document describes the 2012/2013 AEP Transmission Key Performance Incentive (“KPI”) Plan and explains how payouts will be determined for Asplundh contract employees working on the AEP Transmission System. The KPI Plan has been developed for the purpose of improving the safety, efficiency, effectiveness, and reliability of the work performed by Asplundh under their AEP vegetation management contract(s), resulting in improved service and value to our customers. The KPI’s Plan performance measures provide a “line of sight” for AEP Forestry Management and Asplundh employees so that performance expectations associated with vegetation management are communicated and understood. The KPI will work in conjunction with each of the Operating Company’s Corporate Key Performance Indicator (“CKPI”) Plans by meeting or exceeding the performance factor targets on a quarterly basis under safety and efficiency.

In 2012/2013, the KPI Plan will be based on the general performance categories of:

- Safety
- Efficiency
- Effectiveness
- Reliability

The Safety performance category contains the Injury Severity Rate, the key performance measure for the plan, which is the “gatekeeper” for the KPI Plan. The Injury Severity Rate has an established threshold that must be met or exceeded in order for a payment to be made under the KPI Plan. This threshold is the three (3) year average, aggregate Severity Rate of all AEP Operating Companies and must be met by each Asplundh Operating Company Unit (“Unit”) of vegetation management contractors working for AEP in order for that Unit to receive payment. If the threshold is exceeded by any Unit in a quarter, AEP and Asplundh will mutually develop a plan designed to improve the Injury Severity Rate for that Unit to at or below the threshold. If an Asplundh employee is fatally injured during the course of work under the contract(s) covered by this Plan, the Unit sustaining the fatality will not be eligible for a KPI Plan payout in the quarter in which the fatality occurred. The payout for all Units outside the Unit incurring the fatality will be reduced by any earned payouts in the Safety portion of their KPI Plan during that same quarter. An exception may be made if, after a thorough review, AEP determines the fatality occurred through “no fault” of an Asplundh employee.

Each general performance category contains specific performance measures with targets specific to each of the Units. The targets have been developed using performance data from each of the Operating Companies, and are shown on the Quarterly KPI Target Worksheet attached on the last page of this

document. These measures provide an alignment with the Operating Companies' goals and improve the ability to determine fair, challenging targets which incorporate local operating issues, regulatory requirements, etc.

The 2012/2013 AEP Transmission KPI Plan with Asplundh will consist of five (5) Safety Performance Measures that carry a 44% weighting, four (4) Efficiency Performance Measures that carry a 26% weighting, two (2) Effectiveness Performance Measures that carry a 30% weighting, and (1) one Reliability Measure. Each performance measure has a weighing factor assigned to it with the sum of the weighing factors equaling one. Each Unit earns a performance factor of 0.0 - 1.0 for each performance measure in the KPI Plan. The performance factor earned is based on the Unit's quarterly results. Each performance measure's weighting factor is multiplied by its earned performance factor to obtain its weighted performance factor. The sum of the weighted performance factors for all the performance measures results in the Unit's aggregate performance factor. The quarterly KPI Plan pot allocated for each Unit is 5% of the Unit's Asplundh labor, with mark-ups, invoiced that quarter for the classifications of General Foreman and below. This includes both Asplundh home based crews and outsource crews (off system), but outsource crews must work at least 80% of that specific quarter within the Unit to be included in the allocation. To determine the Unit's KPI Plan payout, its aggregate performance factor is multiplied by its quarterly KPI Plan pot allocated.

Within a given Unit, if the total calculated KPI Plan payout for the quarter falls at or below 50% of the allocated KPI Plan pot, then there will be no KPI Plan payout for that specific quarter.

The Reliability Performance category consists of a penalty for Contractor caused interruptions (outages, flashes, and operations). If a Contractor caused interruption (outages, flashes, and operations), whether momentary or sustained occurs within a quarter, the Contractor will lose 50% of the quarterly KPI Plan payout earned in that quarter. An exception may be made, if after a thorough review, AEP determines that there was no fault caused by the Contractor.

For internal accounting purposes: The total KPI Plan payout will be allocated between Capital and Operation and Maintenance (O&M) expenses in accordance with the Operating Company's actual outside services labor expenditures for the quarter.

**Operating Company Unit Example:**

[First Performance Factor x Weighting) + (Second Performance Factor x Weighting) +...+ (Last Performance Factor x Weighting)] x (Quarterly KPI Plan Pot) = Unit's KPI Plan Payout.

Asplundh will be responsible for allocating each Unit's KPI Plan payout to the employees working within the Unit. There is no one "best practice" for allocating the payout, so allocation methods may vary by Unit to provide the best motivation for performance improvement. Asplundh management (Regional VP or

Manager) and AEP Operating Company management (Forestry Supervisor, Operations or Reliability Manager, and VP of Operations) must be in agreement on the allocation plan.

Descriptions of the various performance categories, performance measures, and objectives that are used in the KPI Plan are outlined below.

#### ❖ **PERFORMANCE CATEGORY: SAFETY**

The Performance Measures under the Safety Performance category apply only when work, including service restoration work, is being performed in an AEP Operating Company and includes Asplundh employees covered by an AEP contract(s) that includes this KPI plan. For recording against any performance measures in the KPI Plan, regardless of the AEP location where the accident occurs, it is charged to the Asplundh employee's "home" Unit.

- **Performance Measure: Severity Rate**
- **Objective: Reduce the accident severity rate for the quarter by 5% of the previous 3-year average.**

Included in the accident severity rate are the days away from work and restricted duty days for injuries recorded on the OSHA 300 log. Days away from work are commonly referred to as "lost time". Restricted duty days are defined as the days the injured employee is restricted from performing the duties of his regular occupation by his doctor but is assigned alternate work or restricted duties within his occupation. All days between the first lost or restricted day and the day the restrictions are lifted by the doctor are included. Severity days will continue to count into the next quarter if need be. No single OSHA recordable incident shall accumulate more than 180 calendar days of lost time or restricted duty.

The quarterly severity rate is calculated per the following formula:

**(# of Days Away from Work + Restricted + Transfer Days) x 200,000 /  
(Hours Worked in QTR)**

- **Performance Measure: Days Away, Restricted, or Transferred Cases (DART) Rate**
- **Objective: Reduce the number of cases that have days away, restricted, or transferred days for the quarter by 10% of the previous 3-year average.**

The DART rate includes the total number of cases involving days away from work, restricted work activity, and transfers to another job. These are required to be recorded on the Contractor's OSHA 300 log. Days away from work are commonly referred to as "lost time". Restricted duty days are defined as the days the injured employee is restricted from performing the duties of his regular occupation by his doctor but is assigned alternate work or restricted duties within his occupation. Transfers to another job include but are not limited to being able to perform "light" duty with restrictions. All days between the first lost, restricted, job transfer day, and the day the restrictions are lifted by the doctor are included.

The quarterly DART rate is calculated per the following formula:

$$\frac{(\# \text{ OSHA Recordable Lost Time} + \text{Restricted} + \text{Job Transfer Cases}) \times 200,000}{(\text{Hours Worked in Qtr})}$$

- **Performance Measure: Vehicle Accidents**
- **Objective: Reduce the number of "at fault" vehicle accidents for the quarter by 10% of the previous 3-year average.**

All vehicle accidents should be reviewed by AEP and Asplundh management to determine if they are "at fault". The following definitions may be used as a guideline:

**"AT FAULT" VEHICLE ACCIDENT DEFINITION**

A motor vehicle accident in which the Asplundh driver/operator involved was the major cause of the accident (i.e., disregarding traffic signals, backing into fixed objects, excessive speed, etc.).

**NOT AT FAULT VEHICLE ACCIDENT DEFINITION**

A motor vehicle accident in which the actions of the Asplundh driver/operator involved was not the casual factor to the accident. However, there can be circumstances in which the accident could have been avoided had the Asplundh driver/operator taken defensive measures (i.e., braking suddenly and being struck in the rear, or being struck by a merging vehicle).

Quarterly vehicle accident rates are calculated per the following formula:

$$\frac{(\# \text{ at Fault Vehicle Accidents} \times 200,000)}{(\text{Hours Worked in Qtr})}$$

If the calculated "at fault" vehicle accident rate is above the 3 year average and only (one) 1 incident has occurred during the quarter, then the 0.25 performance factor will apply.

➤ **Performance Measure: Field Safety Observations**

- **Objective: Monitor and improve crew safety performance to achieve a 98% pass rate of field safety observations.**

Individual crew safety observations will be performed throughout each quarter. As noted in the detailed criteria listed on the AEP Forestry Contract (KPI) Crew Audit form, the auditor will score the crew based on a pass/fail system. A “fail” rating will result from not meeting one of the first seven (7) criteria. A “fail” rating can also result when one of the last three (3) items is scored as “unacceptable” and the auditor believes the magnitude or frequency of the unacceptable element warrants the “fail” rating. The inspector will document the reason for the “fails” or “unacceptable” ratings in the comments section of the form.

➤ **Performance Measure: General Foreman and Foreman “Target Zero” Safety**

- **Objective: General foreman and foreman must focus on safety at hand and maintain a “Target Zero” baseline in regards to actual “at fault” OSHA recordable injuries, vehicle accidents and outages.**

General foreman and foreman must stay focused and maintain a clear “line of sight” on safety using the “Target Zero” approach. This includes and not limited to eliminating all general foreman and foreman “at fault” OSHA recordable injuries, outages, and vehicle accidents. If there is an excessive amount of “at fault” incidents by the general foreman and foreman in a given quarter then AEP Operating Company & Asplundh management will mutually meet and develop a plan designed to improve the general foreman and foreman’s safety goal.

❖ **PERFORMANCE CATEGORY: EFFICIENCY**

These performance measures provide a “line of sight” reference to the crews in the field and provide the AEP Operating Company and Asplundh management the opportunity to implement best practices in crew management. Target levels will be set quarterly to compensate for seasonal variations. These target levels will be based on historic data for each Operating Company Unit unless otherwise agreed to by AEP Operating Company and Asplundh management. The hot spotting work type will be excluded from all productivity measures.

Accurate reporting of Work Units completed is required for efficiency measures to be viable. Reported Work Units will be verified through field

audits of completed work. Variances will be addressed with local Asplundh management.

➤ **Performance Measure: Hours per Tree Trim**

➤ **Objective: Increase the efficiency of crews performing tree trimming by 5% over the previous 3-year average.**

Hours per tree trimmed will be collected quarterly through RWM for crews working on base and reliability capital and maintenance. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management. The hot spotting work type will be excluded from this productivity measure.

➤ **Performance Measure: Hours per Tree Removal**

➤ **Objective: Increase the efficiency of crews performing tree removal by 3% over the previous 3-year average.**

Hours per tree removed will be collected quarterly through RWM for crews working on base and reliability capital and maintenance. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management. The hot spotting work type will be excluded from this productivity measure.

➤ **Performance Measure: Hours per Unit of Brush Cut**

➤ **Objective: Increase the efficiency of crews performing brush clearing by 3% over the previous 3-year average.**

Hours per unit of brush cut will be collected quarterly through RWM for crews working on base and reliability capital and maintenance. Crew types and RWM work types included in this performance measure will be agreed upon by AEP Operating Company and Asplundh management. The hot spotting work type will be excluded from this productivity measure.

➤ **Performance Measure: Quarterly Plan**

➤ **Objective: Complete the Operating Company quarterly circuit plan**

A plan will be created for each quarter in 2012/2013, by the Unit. This plan will have a numbered list for the circuits to be completed in each quarter. The percent of the quarterly planned circuits completed will determine the performance factor. AEP and Asplundh management will both agree on any changes to this plan before the end of each quarter, and the agreed outcome (number of circuits still on the plan) will

determine the performance factor. The term "circuit" should be defined clearly in each plan, and can include partial circuits or line sections. Any quarterly plan work not completed within that quarter will be carried forward and included in the next quarterly plan. If AEP changes or contributes to Asplundh not meeting the quarterly plan, AEP and Asplundh management will negotiate a revised plan to adjust the plan without penalty.

Each Unit will clearly define the details to describe the type of work to be done on circuits for this plan.

Work reported complete by Asplundh that, upon review, includes undocumented work not complying with the AEP Forestry Goals, Procedures, & Guidelines for Distribution and Transmission Line Clearance Operations\*\* will be deemed incomplete and will result in zero (0) miles credit for that circuit or circuit section. The incomplete work must be corrected; however correction will not result in the mileage being restored to the plan.

\*\* AEP Forestry Goals, Procedures, & Guidelines for Distribution and Transmission Line Clearance Operations (section "II. Performance Guidelines", sub-section "F. Clearing and Re-clearing", paragraphs 1 & 2)

F. Clearing and Re-clearing

- a. AEP System Forestry will provide the width of the right-of-way.
- b. All woody plants that have the potential to grow into the lines should be controlled, either by removal, herbicide treatment, or a combination of both. On distribution lines and areas approved by Transmission Forestry on transmission lines those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities should be left undisturbed in the right-of-way whenever possible. Variances to this recommendation may be applied due to specific Operating Company guidelines.

❖ **PERFORMANCE CATEGORY: EFFECTIVENESS**

- **Performance Measure – Work Quality – Clearance to Operating Company Standards**
- **Objective: A minimum of 99% or more of the spans maintained have conductor to vegetation clearances meeting or exceeding the Operating Company's specifications.**

AEP will sample maintained spans and conduct field audits of span line clearance to determine if the work was completed to Operating Company standards. The AEP Forestry Contract (KPI) Crew Audit form will be used for these audits. Any defect found on any audit will be a "failed" audit unless an AEP Operating Company Forestry representative approves a



variance. The percentage of passed audits will determine the performance factor.

- **Performance Measure – Work Quality – Trimming to arboricultural industry standards and AEP specifications.**
- **Objective: A minimum of 98% or more of the spans maintained had vegetation managed per arboricultural industry standards and AEP specifications.**

AEP will sample maintained spans and conduct field audits to determine if the work was completed to industry standards and AEP specifications. The AEP Forestry Contract (KPI) Crew Audit form will be used for these audits. Any defect found on any audit will be a “failed” audit unless an AEP Operating Company Forestry representative approves a variance. The percentage of passed audits will determine the performance factor.

❖ **Performance Category: Reliability**

- **Performance Measure: Contractor caused interruptions (outages, flashes, and operations)**
- **Objective: Eliminate Contractor caused interruptions (outages, flashes, and operations) to the Transmission system.**

Interruptions to the Transmission System can be very serious. A Contractor caused interruption (outages, flashes, and operations) may easily result in personal injuries to the employees involved. It also has the potential to effect large numbers of customers and large blocks of load. To encourage safe work practices, a penalty of 50% of the quarterly KPI Plan payout will be incurred by the Operating Unit. An interruption is defined as any tree contact or human error that disrupts the normal operation of the circuit whether momentary or for a sustained period of time. An exception may be made, if after a thorough review, AEP determines that there was no fault caused by the Contractor.

### SAMPLE QUARTERLY KPI TARGET SHEET

|    | A         | B  | C  | D  | E                | F |
|----|-----------|--|--|--|------------------|---|
| 1  |           | <b>Asplundh Transmission - APCO, K</b>                     |  |  |                  |   |
| 2  |           |  |  |  |                  |   |
| 3  |           |  |  |  |                  |   |
| 4  |           | <b>Measure</b>   | <b>Definition</b>  | <b>1.0 Target</b>  | <b>Weighting</b> |   |
| 5  | <b>1</b>  | <b>SAFETY<br/>(44%)</b>                                    | SEVERITY RATE<br>( <i>NPI GATEKEEPER</i><br><i>36%</i> ) | # of OSHA recordable lost work days + restricted duty days X 200,000/total man hours worked per quarter                                    |                  |   |
| 6  | <b>2</b>  |  | OSHA DART Rate   | # of OSHA recordable lost time & restricted cases X 200,000/total man hours worked per quarter   |                  |   |
| 7  | <b>3</b>  |  | Vehicle Accidents  | "At Fault" Vehicle Accidents   |                  |   |
| 8  | <b>4</b>  |  | Field Safety Observations                                | Individual Pass/Fail using Crew Safety Inspections   |                  |   |
| 9  | <b>5</b>  |  | General Foreman & Foreman Target Zero Safety Goal        | Focus and maintain a clear "line of sight" with a "Target Zero" goal on actual "at fault" OSHA recordables, vehicle accidents, and outages |                  |   |
| 10 | <b>6</b>  | <b>EFFICIENCY<br/>(26%)</b>                                | Hours per Tree Trimmed                                   | Hours per Tree Trimmed   |                  |   |
| 11 | <b>7</b>  |  | Hours per Unit - Tree Removal                            | Hours per Tree Removal   |                  |   |
| 12 | <b>8</b>  |  | Hours per Unit - acres of brush                          | Unit manhours per acre of brush out  |                  |   |
| 13 | <b>9</b>  |  | Quarterly Plan   | % rate fulfillment of plan   |                  |   |
| 14 | <b>10</b> | <b>EFFECTIVENESS<br/>(30%)</b>                             | Work Quality   | Field audit of span line clearance per OpCo standards  |                  |   |
| 15 | <b>11</b> |  |  | Field audit of spans trimmed per industry standards  |                  |   |
| 16 |           |  |  |  |                  |   |
| 17 | <b>12</b> | <b>RELIABILITY</b>   | Work Quality   | At Fault/Negligent Crew caused outages, flashes, & operations  |                  |   |
| 18 |           | <b>Was KPI Performance Goals Achieved at or above 51%?</b> |  | <b>YES</b>   |                  |   |
| 19 |           |  |  | <b>NO</b>  |                  |   |

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## Pricing Change Order

Contract No.: 25765990000X103 Request Date: 8/29/2016  
 Owner: Richard Karber Effective Date: 8/29/2016  
 Authorized Reviewer: Walter Sherry Contractor: Asplundh Tree Expert

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

| Equipment  |                       |                | Base Rate Fuel           |               |
|------------|-----------------------|----------------|--------------------------|---------------|
| Reason     | Equipment Description | Equipment Code | Equipment Rate (\$/unit) | Fuel Per Hour |
| [REDACTED] | [REDACTED]            | [REDACTED]     | [REDACTED]               | [REDACTED]    |
| [REDACTED] | [REDACTED]            | [REDACTED]     | [REDACTED]               | [REDACTED]    |
| [REDACTED] | [REDACTED]            | [REDACTED]     | [REDACTED]               | [REDACTED]    |
|            |                       |                |                          |               |
|            |                       |                |                          |               |

**American Electric Power Service Corporation, as agent for Ohio Power Company**

DocuSigned by:  
  
 320F2FBB3E224DB...

Signature

walter A. Sherry

Name

Forestry Operation Manager

Title

9/21/2016 | 8:25 AM EDT

Date

**Asplundh Tree Expert**

DocuSigned by:  
  
 677D096762314EE...

Signature

Gregg G. Asplundh

Name

Vice President

Title

9/23/2016 | 10:59 AM EDT

Date



## Certificate Of Completion

|  |                            |
|--|----------------------------|
| Envelope Id: C68055FCC4B44297B9C377B7295E8AA6  | Status: Completed          |
| Subject: AEP Contract 025765990000X103 Asplundh Tree Expert Co. Pricing Change Order 8/29/16 |                            |
| Source Envelope:   |                            |
| Document Pages: 1  | Signatures: 2              |
| Certificate Pages: 3   | Initials: 0                |
| AutoNav: Enabled   | Envelope Originator:       |
| Envelopeld Stamping: Enabled   | Gina Crabtree              |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)  | 1 Riverside Plz FL 1       |
|  | Columbus, OH 43215-2373    |
|  | gmcraabtree@aep.com        |
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|                      |                       |                    |
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| Status: Original     | Holder: Gina Crabtree | Location: DocuSign |
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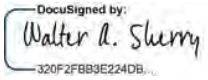
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| Signature  | Timestamp  |
|--|--|
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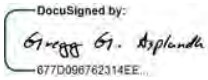
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| In Person Signer Events | Signature | Timestamp |
|-------------------------|-----------|-----------|
| Editor Delivery Events  | Status    | Timestamp |
| Agent Delivery Events   | Status    | Timestamp |

| <b>Intermediary Delivery Events</b>               | <b>Status</b>    | <b>Timestamp</b>      |
|---|------------------|-----------------------|
| <b>Certified Delivery Events</b>                  | <b>Status</b>    | <b>Timestamp</b>      |
| <b>Carbon Copy Events</b>                         | <b>Status</b>    | <b>Timestamp</b>      |
| <b>Notary Events</b>                              |                  | <b>Timestamp</b>      |
| <b>Envelope Summary Events</b>                    | <b>Status</b>    | <b>Timestamps</b>     |
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| Certified Delivered                               | Security Checked | 9/21/2016 9:06:50 AM  |
| Signing Complete                                  | Security Checked | 9/23/2016 10:59:35 AM |
| Completed   | Security Checked | 9/23/2016 10:59:35 AM |
| <b>Electronic Record and Signature Disclosure</b> |                  |                       |

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM  
Parties agreed to: Terri Stiltner, Richard Karber, Walter A. Sherry, Gregg G. Asplundh

**ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

CAMPS2110

AMERICAN ELECTRIC POWER  
 CONTRACT ADMINISTRATION MAINTENANCE PAYMENT SYSTEM  
 CONTRACT DETAIL

DATE : 8/19/2016  
 TIME : 09:28:50  
 PAGE : 1 of 2

Contractor:  Contractor ID:  Status:   
 Contract Id:  Start Date:  End Date:   
 Description:  Contract Group:  Net Payment Term:   
 Material Markup:  Retention Percent:  Penalty Percent:   
 Fuel Rate Source:  Fuel Type:  Fuel Tolerance:

Co:  State:  Type:  Dept:  Work Area:

Labor Markup  Override Rates  ABD Rate Plan  OT Equipment Base Fuel Unit Price Fuel  
 Straight RtHalf Double AO HW Multiplier % Rate Rate Factor

Eff Date: From:  To:  Version:  Status:

| Labor             |            | Billing Rates (\$/hr) |    |    |    |     |     |     |
|-------------------|------------|-----------------------|----|----|----|-----|-----|-----|
| Labor Description | Labor Code | Labor Rt              | ST | RH | DT | STM | RHX | DTX |
| FOREMAN A         | FA         |                       |    |    |    |     |     |     |
| FOREMAN B         | FB         |                       |    |    |    |     |     |     |
| General Foreman A | GFA        |                       |    |    |    |     |     |     |
| General Foreman B | GFB        |                       |    |    |    |     |     |     |
| TRIMMER A         | TRA        |                       |    |    |    |     |     |     |
| TRIMMER B         | TRB        |                       |    |    |    |     |     |     |
| TRIMMER C         | TRC        |                       |    |    |    |     |     |     |
| WORK PLANNER A    | WPA        |                       |    |    |    |     |     |     |

| Material                  |               |                        |                     |
|---------------------------|---------------|------------------------|---------------------|
| Material Description      | Material Code | Material Rate(\$/unit) | Material Markup (%) |
| ARGO BACKPACK SPRAY MIX   |               |                        |                     |
| ACCORD (QT)               |               |                        |                     |
| Argo/Esc 1oz/ Hab 14oz/TH |               |                        |                     |
| ARGO HABITATE SPRAY MIX   |               |                        |                     |
| Arsenal (Pint)            |               |                        |                     |
| DRIFT CONTROL AGENT       |               |                        |                     |
| ESCORT                    |               |                        |                     |
| Garlon 4 Pre-mix 20% (PT) |               |                        |                     |
| GARLON 4 PREMIX (25%)     |               |                        |                     |
| GARLON 4                  |               |                        |                     |
| GARLON 3A                 |               |                        |                     |
| Gar 4(20%);Tor K(5%);Oil  |               |                        |                     |
| KRENITE/ARSENAL PREMIX    |               |                        |                     |
| KRENITE                   |               |                        |                     |
| Krenite/Tordon Pre-Mix    |               |                        |                     |
| MILESTONE (QUART)         |               |                        |                     |
| NUFILM IR                 |               |                        |                     |
| NU-FILM IR (oz.)          |               |                        |                     |
| BASAL OIL                 |               |                        |                     |
| PATHFINDER II             |               |                        |                     |
| PATHFINDER II (Pts.)      |               |                        |                     |
| PROFILE                   |               |                        |                     |
| SHORT STOP                |               |                        |                     |
| SPRAY PAINT (MARK TREES)  |               |                        |                     |
| SPIKE 80W                 |               |                        |                     |
| Sprakil S-5 w/5% Arsenal  |               |                        |                     |
| Sprakil                   |               |                        |                     |
| Krenite S 7% TordonK 2% S |               |                        |                     |
| SURFACTANT                |               |                        |                     |
| TORDON/GARLON FOL. PREM   |               |                        |                     |
| TORDON K                  |               |                        |                     |
| 1qtTorKherb7ozMSVM+Thin   |               |                        |                     |
| Thin/Kre S %/Viewpoint 12 |               |                        |                     |
| TORDON 101                |               |                        |                     |

| Equipment                 |                |                        |                       |               |
|---------------------------|----------------|------------------------|-----------------------|---------------|
| Equipment Description     | Equipment Code | Equipment Rate (\$/hr) | Overtime Rate (\$/hr) | Fuel per hour |
| 4X4 PICKUP/CAR TRANS. ONL |                |                        |                       |               |
| 4X4 R/W TRUCK             |                |                        |                       |               |
| 4X4 URBAN LIFT W/DUMP BED |                |                        |                       |               |
| 4WD SPRAYER               |                |                        |                       |               |
| Argo w/Sprayer & Trailer  |                |                        |                       |               |
| GATOR or ATV w/ SPRAYER   |                |                        |                       |               |
| SS Mow W/Trk and Trail    |                |                        |                       |               |
| 4 WD TRACTOR BROWN        |                |                        |                       |               |
| MOWER(TRACK)W/TRK&TRAI    |                |                        |                       |               |
| BACK YARD BUCKET          |                |                        |                       |               |
| 52' BACKYARD BUCKET       |                |                        |                       |               |
| BACK YARD CHIPPER         |                |                        |                       |               |
| CHIPPER, DRUM             |                |                        |                       |               |
| CHIPPER DISC              |                |                        |                       |               |
| CHIPPER DIESEL            |                |                        |                       |               |
| CELLULAR PHONE            |                |                        |                       |               |
| CRASH BARRIER W/TRUCK     |                |                        |                       |               |
| DUMP TRUCK                |                |                        |                       |               |
| GEN FOREMAN TRUCK 4X4     |                |                        |                       |               |
| 9HP Iron Horse w/Trailer  |                |                        |                       |               |

CAMPS2110

AMERICAN ELECTRIC POWER  
 CONTRACT ADMINISTRATION MAINTENANCE PAYMENT SYSTEM  
 CONTRACT DETAIL

DATE : 8/19/2016

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PAGE : 2 of 2

| Equipment                 |                |                        |                       |               |
|---------------------------|----------------|------------------------|-----------------------|---------------|
| Equipment Description     | Equipment Code | Equipment Rate (\$/hr) | Overtime Rate (\$/hr) | Fuel per hour |
| 70' TRKD JAR W/PU&MU      |                |                        |                       |               |
| 30 YD. CHIP TRUCK         |                |                        |                       |               |
| LARGE BUCKET              |                |                        |                       |               |
| LOG LOADER TRUCK          |                |                        |                       |               |
| Mini skid steer           |                |                        |                       |               |
| Mechanical Side Trimmer   |                |                        |                       |               |
| Puddle Jumper             |                |                        |                       |               |
| Extended Length Chain Saw |                |                        |                       |               |
| PICKUP TRANS. ONLY        |                |                        |                       |               |
| RUBBER TIRE OFF-RD. BUCKE |                |                        |                       |               |
| Specialized Bucket        |                |                        |                       |               |
| Standard Diesel Lift      |                |                        |                       |               |
| STUMP GRINDER             |                |                        |                       |               |
| Stump Grinder Tracked     |                |                        |                       |               |
| 200 GAL SKID SPRAY        |                |                        |                       |               |
| LOW VOL. SPRAY 4X4 3/4 TO |                |                        |                       |               |
| SKID STEER 76-100 HP      |                |                        |                       |               |
| STANDARD BUCKET           |                |                        |                       |               |
| Tracked 4x4 ATV w/Sprayer |                |                        |                       |               |
| 4X4 55' Standard Bucket   |                |                        |                       |               |
| WP GIS Elec.Pk.w/Trk./LT  |                |                        |                       |               |
| WPlanner 2x4 truck w/ pho |                |                        |                       |               |

| Material             |               |                        |                     |
|----------------------|---------------|------------------------|---------------------|
| Material Description | Material Code | Material Rate(\$/unit) | Material Markup (%) |
| THINVERT RTU         |               |                        |                     |
| VISTA                |               |                        |                     |

| Expense                |              |                        |
|------------------------|--------------|------------------------|
| Expense Description    | Expense Code | Expense Rate (\$/unit) |
| Meal                   |              |                        |
| Other Billable Expense |              |                        |
| Per Diem               |              |                        |

| Task                                     |           |           |                             |                         |
|--|-----------|-----------|-----------------------------|-------------------------|
| Task Description                         | Task Code | Unit Type | Outside Serv Rate (\$/unit) | Material Rate (\$/unit) |
| Tree Growth Regulator app (labr+product) |           |           |                             |                         |
| TGR app (Labor Only)                     |           |           |                             |                         |



CAMPS2110

AMERICAN ELECTRIC POWER

DATE: 8/19/2016

CONTRACT ADMINISTRATION MAINTENANCE PAYMENT SYSTEM

TIME: 09:29:15

CONTRACT DETAIL

PAGE: 1 of 2

Contractor:  Contractor ID:  Status:   
 Contract Id:  Start Date:  End Date:   
 Description:  Contract Group:  Net Payment Term:   
 Material Markup:  Retention Percent:  Penalty Percent:   
 Fuel Rate Source:  Fuel Type:  Fuel Tolerance:

Co:  State:  Type:  Dept:  Work Area:

Labor Markup  Override Rates  ABD Rate Plan  OT Equipment  Base Fuel  Unit Price  Fuel  
 Straight RtHalf Double AO HW Multiplier % Rate Rate Factor

Eff Date: From:  To:  Version:  Status:

| Labor             |            |                       |    |    |    |     |     |     |
|-------------------|------------|-----------------------|----|----|----|-----|-----|-----|
| Labor Description | Labor Code | Billing Rates (\$/hr) |    |    |    |     |     |     |
|                   |            | Labor Rt              | ST | RH | DT | STM | RHX | DTX |
| FOREMAN A         |            |                       |    |    |    |     |     |     |
| TRIMMER A         |            |                       |    |    |    |     |     |     |
| WORK PLANNER A    |            |                       |    |    |    |     |     |     |
| TRIMMER B         |            |                       |    |    |    |     |     |     |
| TRIMMER C         |            |                       |    |    |    |     |     |     |
| FOREMAN B         |            |                       |    |    |    |     |     |     |
| General Foreman A |            |                       |    |    |    |     |     |     |
| General Foreman B |            |                       |    |    |    |     |     |     |

| Material                  |               |                        |                     |
|---------------------------|---------------|------------------------|---------------------|
| Material Description      | Material Code | Material Rate(\$/unit) | Material Markup (%) |
| ARGO BACKPACK SPRAY MIX   | ABSM          | 15.18                  | .00                 |
| ACCORD (QT)               |               |                        |                     |
| Argo/Esc 1oz/ Hab 14oz/TH |               |                        |                     |
| ARGO HABITATE SPRAY MIX   |               |                        |                     |
| Arsenal (Pint)            |               |                        |                     |
| DRIFT CONTROL AGENT       |               |                        |                     |
| ESCORT                    |               |                        |                     |
| Garlon 4 Pre-mix 20% (PT) |               |                        |                     |
| GARLON 4 PREMIX (25%)     |               |                        |                     |
| GARLON 4                  |               |                        |                     |
| GARLON 3A                 |               |                        |                     |
| Gar 4(20%);Tor K(5%);Oil  |               |                        |                     |
| KRENITE/ARSENAL PREMIX    |               |                        |                     |
| KRENITE                   |               |                        |                     |
| Krenite/Tordon Pre-Mix    |               |                        |                     |
| MILESTONE (QUART)         |               |                        |                     |
| NUFILM IR                 |               |                        |                     |
| NU-FILM IR (oz.)          |               |                        |                     |
| BASAL OIL                 |               |                        |                     |
| PATHFINDER II             |               |                        |                     |
| PATHFINDER II (Pts.)      |               |                        |                     |
| PROFILE                   |               |                        |                     |
| SHORT STOP                |               |                        |                     |
| SPRAY PAINT (MARK TREES)  |               |                        |                     |
| SPIKE 80W                 |               |                        |                     |
| Sprakil S-5 w/5% Arsenal  |               |                        |                     |
| Sprakil                   |               |                        |                     |
| Krenite S 7% TordonK 2% S |               |                        |                     |
| SURFACTANT                |               |                        |                     |
| TORDON/GARLON FOL. PREM   |               |                        |                     |
| TORDON K                  |               |                        |                     |
| 1qtTorKherb7ozMSVM+Thin   |               |                        |                     |
| Thin/Kre S %/Viewpoint 12 |               |                        |                     |
| TORDON 101                |               |                        |                     |

| Equipment                 |                |                        |                       |               |
|---------------------------|----------------|------------------------|-----------------------|---------------|
| Equipment Description     | Equipment Code | Equipment Rate (\$/hr) | Overtime Rate (\$/hr) | Fuel per hour |
| 4X4 PICKUP/CAR TRANS. ONL |                |                        |                       |               |
| 4X4 R/W TRUCK             |                |                        |                       |               |
| 4X4 URBAN LIFT W/DUMP BED |                |                        |                       |               |
| 4WD SPRAYER               |                |                        |                       |               |
| Argo w/Sprayer & Trailer  |                |                        |                       |               |
| GATOR or ATV w/ SPRAYER   |                |                        |                       |               |
| SS Mow W/Trk and Trail    |                |                        |                       |               |
| 4 WD TRACTOR BROWN        |                |                        |                       |               |
| MOWER(TRACK)W/TRK&TRAIL   |                |                        |                       |               |
| BACK YARD BUCKET          |                |                        |                       |               |
| 52' BACKYARD BUCKET       |                |                        |                       |               |
| BACK YARD CHIPPER         |                |                        |                       |               |
| CHIPPER, DRUM             |                |                        |                       |               |
| CHIPPER DISC              |                |                        |                       |               |
| CHIPPER DIESEL            |                |                        |                       |               |
| CELLULAR PHONE            |                |                        |                       |               |
| CRASH BARRIER W/TRUCK     |                |                        |                       |               |
| DUMP TRUCK                |                |                        |                       |               |
| GEN FOREMAN TRUCK 4X4     |                |                        |                       |               |
| 9HP Iron Horse w/Trailer  |                |                        |                       |               |

CAMPS2110

AMERICAN ELECTRIC POWER  
 CONTRACT ADMINISTRATION MAINTENANCE PAYMENT SYSTEM  
 CONTRACT DETAIL

DATE : 8/19/2016

TIME : 09:29:15

PAGE : 2 of 2

| Equipment                 |                |                        |                       |               |
|---------------------------|----------------|------------------------|-----------------------|---------------|
| Equipment Description     | Equipment Code | Equipment Rate (\$/hr) | Overtime Rate (\$/hr) | Fuel per hour |
| 70' TRKD JAR W/PU&MU      |                |                        |                       |               |
| 30 YD. CHIP TRUCK         |                |                        |                       |               |
| LARGE BUCKET              |                |                        |                       |               |
| LOG LOADER TRUCK          |                |                        |                       |               |
| Mini skid steer           |                |                        |                       |               |
| Mechanical Side Trimmer   |                |                        |                       |               |
| Puddle Jumper             |                |                        |                       |               |
| Extended Length Chain Saw |                |                        |                       |               |
| PICKUP TRANS. ONLY        |                |                        |                       |               |
| RUBBER TIRE OFF-RD. BUCKE |                |                        |                       |               |
| Specialized Bucket        |                |                        |                       |               |
| Standard Diesel Lift      |                |                        |                       |               |
| STUMP GRINDER             |                |                        |                       |               |
| Stump Grinder Tracked     |                |                        |                       |               |
| 200 GAL SKID SPRAY        |                |                        |                       |               |
| LOW VOL. SPRAY 4X4 3/4 TO |                |                        |                       |               |
| SKID STEER 76-100 HP      |                |                        |                       |               |
| STANDARD BUCKET           |                |                        |                       |               |
| Tracked 4x4 ATV w/Sprayer |                |                        |                       |               |
| 4X4 55' Standard Bucket   |                |                        |                       |               |
| WP GIS Elec.Pk.w/Trk./LT  |                |                        |                       |               |
| WPlanner 2x4 truck w/ pho |                |                        |                       |               |

| Material             |               |                        |                     |
|----------------------|---------------|------------------------|---------------------|
| Material Description | Material Code | Material Rate(\$/unit) | Material Markup (%) |
| THINVERT RTU         |               |                        |                     |
| VISTA                |               |                        |                     |

| Expense                |              |                        |
|------------------------|--------------|------------------------|
| Expense Description    | Expense Code | Expense Rate (\$/unit) |
| Meal                   |              |                        |
| Other Billable Expense |              |                        |
| Per Diem               |              |                        |

| Task                                     |           |           |                             |                         |
|--|-----------|-----------|-----------------------------|-------------------------|
| Task Description                         | Task Code | Unit Type | Outside Serv Rate (\$/unit) | Material Rate (\$/unit) |
| Tree Growth Regulator app (labr+product) |           |           |                             |                         |
| TGR app (Labor Only)                     |           |           |                             |                         |

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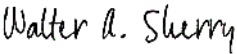
## Pricing Change Order

Contract No.: 025765990000X103 Request Date: 9/16/2016  
 Owner: Rick Mowbray Effective Date: 9/16/2016  
 Authorized Reviewer: Walter Sherry Contractor: Asplundh

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

| Material |                      |               |                         |
|----------|----------------------|---------------|-------------------------|
| Reason   | Material Description | Material Code | Material Rate (\$/unit) |
| █        | █                    | █             | █                       |
|          |                      |               |                         |
|          |                      |               |                         |
|          |                      |               |                         |
|          |                      |               |                         |

**American Electric Power Service Corporation, as agent for Appalachian Power Company, Wheeling Power Company, and Kingsport Power Company**

DocuSigned by:  
  
 320F2FBB3E224DB...  
 Signature

Walter A. Sherry  
 \_\_\_\_\_  
 Name

Forestry Operation Manager  
 \_\_\_\_\_  
 Title

9/21/2016 | 8:23 AM EDT  
 \_\_\_\_\_  
 Date

**Asplundh Tree Expert Inc.**

DocuSigned by:  
  
 677D098762314EE...  
 Signature

Larry Kirk  
 \_\_\_\_\_  
 Name

Vice President  
 \_\_\_\_\_  
 Title

9/21/2016 | 9:09 AM EDT  
 \_\_\_\_\_  
 Date



### Certificate Of Completion

|   |                            |
|---|----------------------------|
| Envelope Id: BA7ADAECEA149709FF571C5087B58CA  | Status: Completed          |
| Subject: AEP Contract 02576599000X103 Asplundh Tree Expert Co. Pricing Change Order 9/16/16 |                            |
| Source Envelope:  |                            |
| Document Pages: 1   | Signatures: 2              |
| Certificate Pages: 3  | Initials: 0                |
| AutoNav: Enabled  | Envelope Originator:       |
| Envelopeld Stamping: Enabled  | Gina Crabtree              |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)   | 1 Riverside Plz FL 1       |
|   | Columbus, OH 43215-2373    |
|   | gmcraintree@aep.com        |
|   | IP Address: 167.239.221.83 |

### Record Tracking

|                       |                       |                    |
|-----------------------|-----------------------|--------------------|
| Status: Original      | Holder: Gina Crabtree | Location: DocuSign |
| 9/16/2016 10:37:15 AM | gmcraintree@aep.com   |                    |

### Signer Events

| Signature  | Timestamp   |
|--|---|
| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication (None)<br>Using IP Address: 167.239.221.81 | Sent: 9/16/2016 10:40:18 AM<br>Viewed: 9/19/2016 7:05:01 AM<br>Signed: 9/19/2016 7:05:08 AM |

Electronic Record and Signature Disclosure:  
 Accepted: 6/18/2015 3:27:15 PM  
 ID: 592a4afd-f450-4104-bdeb-635cbde989d5

|  |  |
|--|--|
| Rick Mowbray<br>drmowbray@aep.com<br>Supv. Region Forestry<br>Security Level: Email, Account Authentication (None)<br>Using IP Address: 167.239.221.80 | Sent: 9/19/2016 7:05:09 AM<br>Viewed: 9/21/2016 7:14:06 AM<br>Signed: 9/21/2016 7:14:11 AM |
|--|--|

Electronic Record and Signature Disclosure:  
 Accepted: 9/21/2016 7:14:06 AM  
 ID: c258f669-5991-4f0b-9664-aad6820f2c5d

|  |   |
|--|---|
| Walter A. Sherry<br>washerry@aep.com<br>Forestry Operation Manager<br>Security Level: Email, Account Authentication (None)<br>Using IP Address: 167.239.221.88 | <br>Sent: 9/21/2016 7:14:12 AM<br>Viewed: 9/21/2016 8:22:48 AM<br>Signed: 9/21/2016 8:23:07 AM |
|--|---|

Electronic Record and Signature Disclosure:  
 Accepted: 7/1/2014 7:08:14 PM  
 ID: ca043d9b-eaab-40e4-bee5-8c449d93d309

|  |   |
|--|---|
| Larry Kirk<br>kirk@asplundh.com<br>Vice President<br>Asplundh Tree Expert Co<br>Security Level: Email, Account Authentication (None)<br>Using IP Address: 68.105.205.217 | <br>Sent: 9/21/2016 8:23:09 AM<br>Viewed: 9/21/2016 9:08:12 AM<br>Signed: 9/21/2016 9:09:04 AM |
|--|---|

Electronic Record and Signature Disclosure:  
 Accepted: 9/20/2016 2:26:02 PM  
 ID: 7a44c0b1-f5c8-40dd-9da8-919574219a51

| In Person Signer Events | Signature | Timestamp |
|-------------------------|-----------|-----------|
| Editor Delivery Events  | Status    | Timestamp |
| Agent Delivery Events   | Status    | Timestamp |

| <b>Intermediary Delivery Events</b>               | <b>Status</b>    | <b>Timestamp</b>     |
|---|------------------|----------------------|
| <b>Certified Delivery Events</b>                  | <b>Status</b>    | <b>Timestamp</b>     |
| <b>Carbon Copy Events</b>                         | <b>Status</b>    | <b>Timestamp</b>     |
| <b>Notary Events</b>                              |                  | <b>Timestamp</b>     |
| <b>Envelope Summary Events</b>                    | <b>Status</b>    | <b>Timestamps</b>    |
| Envelope Sent                                     | Hashed/Encrypted | 9/21/2016 8:23:09 AM |
| Certified Delivered                               | Security Checked | 9/21/2016 9:08:12 AM |
| Signing Complete                                  | Security Checked | 9/21/2016 9:09:04 AM |
| Completed   | Security Checked | 9/21/2016 9:09:04 AM |
| <b>Electronic Record and Signature Disclosure</b> |                  |                      |

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM  
Parties agreed to: Terri Stiltner, Rick Mowbray, Walter A. Sherry, Larry Kirk

**ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

X DocuSign Envelope ID: E0703F57-F63A-4018-B695-A4B4CE82E3AE

### **THIRD AMENDMENT TO CONTRACT NO. 025765990000X103**

This Third Amendment to Contract No. 025765990000X103 (“Third Amendment”), executed to be effective December 25, 2016 (“Third Amendment Effective Date”), is by and between **American Electric Power Service Corporation**, a New York corporation, as agent for the operating companies of the **American Electric Power System** (“Owner”) and Asplundh Tree Expert Co., a Pennsylvania corporation (“Contractor”).

**WHEREAS**, Contractor and Owner entered into Contract No. 025765990000X103 with an Effective Date of September 5, 2012 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the Parties hereby agree as follows:

1. In order to update Section 5 Pricing, remove the Third paragraph in its entirety and replace with the following:

“Beginning June 1, 2015, and then on June 5, 2016 and June 4, 2017, Contractor’s labor rates will be adjusted using the Bureau of Labor Statistics, U.S. Department of Labor, Employment Cost Index (ECI) for Total Compensation (not seasonally adjusted), for (Table 9) Employment Cost Index for wages and salaries, for private industry workers, by occupational group and industry. The percent change for the 12-months ended in March of the year of the adjustment will be multiplied by the current labor rates to determine the adjusted labor rates.

All other rates in Contractor’s Rate Sheet may be revised annually. Proposed changes must be submitted by February 15<sup>th</sup> and, if accepted by Owner, shall become effective the first Sunday of June for that year.”

2. In Exhibit C, the existing Rate Sheets shall be removed in its entirety and replaced with the Contractor’s Rates dated January 1, 2017 (the “Rate Sheet”). These rates will be effective January 1, 2017.
3. In order to update Section 7 Fuel Adjustments in the Contract, remove in its entirety and replace with the following:

“The base Gasoline price is \$2.261 per gallon (“Base Gasoline Price”) and will remain in effect until contract termination. The weekly Gasoline price is the state average for Gasoline taken from the American Automobile Association’s website (“Weekly Gasoline Price”). When preparing the weekly invoices, if that week’s Weekly Gasoline Price differs from the Base Gasoline Price by more than ten (10) cents, a Gasoline adjustment for each piece of equipment will be calculated by using the following formula:

Gasoline adjustment = [(Weekly Gasoline Price) – (Base Gasoline Price)] x gallons/hour x Equipment hours billed

The gallons/hour figure is taken from the Contractor’s Rate Sheets in Exhibit C. The sum of the Gasoline adjustments for each piece of equipment used that week shall be added to or subtracted from that week’s invoice amount. If the Unit Price Model, as described in Exhibit C, is used and

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billing is done with a single invoice when all the Work is completed, the Weekly Gasoline Price used shall be that for the week in which the invoice is being prepared.”

4. In order to update the AEP Transmission Forestry Rate Clarifications in Exhibit C, the Rate Clarifications dated May 15, 2012 shall be removed in its entirety and replaced with the Rate Clarifications dated October 1, 2016, attached hereto and incorporated herein.
5. In order to update Exhibit B, remove AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated June 1, 2015 in its entirety and replace with AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission dated October 1, 2016 attached hereto and incorporated herein.
6. Remove all references to Exhibit D -KPI, the Asplundh 2012/2013 Corporate Key Performance Incentive Plan Guidelines (“CKPI”) and AEP – AEP Transmission 2012/2013 Key Performance Incentive Plan Guidelines – Asplundh, APCO, KPCO & KGPCO (“KPI”) in their entirety. The KPI is no longer in effect. The final quarterly KPI performance will be calculated for 3rd Quarter 2016 and any resulting payback credit memo issued accordingly.
7. Except as amended by this Third Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Third Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Third Amendment Effective Date.

**American Electric Power Service Corporation, as agent for the operating companies of the American Electric Power**

Sys DocuSigned by:  
By: Thomas Kirkpatrick  
E4EE4BC0A56E477...  
Name: Thomas Kirkpatrick

Title: Vice President Customer Service, Marketing and Distribution Services  
Date: 1/5/2017 | 9:23 AM EST

**Asplundh Tree Expert Co.**

Sys DocuSigned by:  
By: Brent Asplundh  
9AEE0B20A8C4E9...  
Name: Brent Asplundh

Title: Branch Manager, EVF  
Date: 1/9/2017 | 4:38 PM EST



**RATES FOR AGRIC. - WEST VIRGINIA**

02/26/2008  
ROW Vegetation Management Rate Sheet  
Effective Date: 01/01/2008

| Job Description | 01/01/2008 - 12/31/2008 | 01/01/2009 - 12/31/2009 | 01/01/2010 - 12/31/2010 | 01/01/2011 - 12/31/2011 | 01/01/2012 - 12/31/2012 | 01/01/2013 - 12/31/2013 | 01/01/2014 - 12/31/2014 | 01/01/2015 - 12/31/2015 | 01/01/2016 - 12/31/2016 | 01/01/2017 - 12/31/2017 |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Labor           |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Equipment       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Materials       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Overhead        |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Profit          |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |

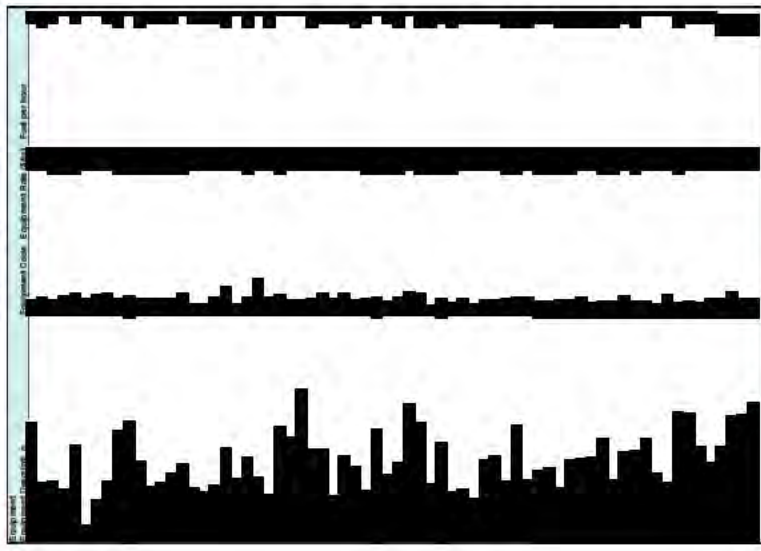
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01/01/2013 - 12/31/2013  
01/01/2014 - 12/31/2014  
01/01/2015 - 12/31/2015  
01/01/2016 - 12/31/2016  
01/01/2017 - 12/31/2017



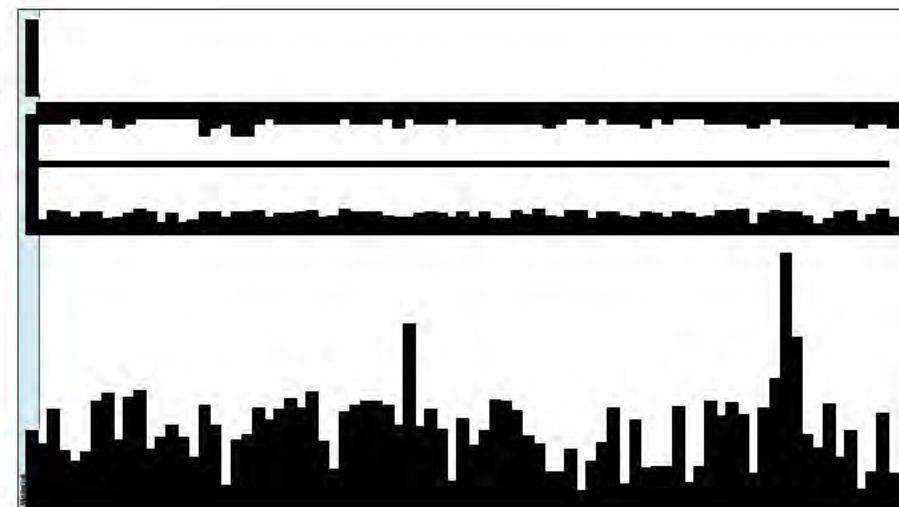
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01/01/2013 - 12/31/2013  
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01/01/2015 - 12/31/2015  
01/01/2016 - 12/31/2016  
01/01/2017 - 12/31/2017



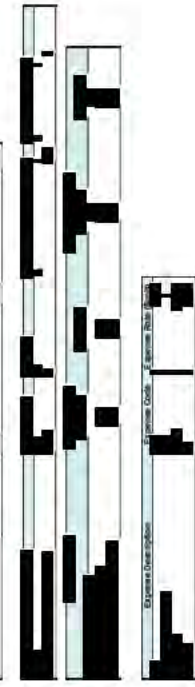
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|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Equipment       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Materials       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Overhead        |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Profit          |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |



| Job Description | 01/01/2008 - 12/31/2008 | 01/01/2009 - 12/31/2009 | 01/01/2010 - 12/31/2010 | 01/01/2011 - 12/31/2011 | 01/01/2012 - 12/31/2012 | 01/01/2013 - 12/31/2013 | 01/01/2014 - 12/31/2014 | 01/01/2015 - 12/31/2015 | 01/01/2016 - 12/31/2016 | 01/01/2017 - 12/31/2017 |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Equipment       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Materials       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Overhead        |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Profit          |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |



| Job Description | 01/01/2008 - 12/31/2008 | 01/01/2009 - 12/31/2009 | 01/01/2010 - 12/31/2010 | 01/01/2011 - 12/31/2011 | 01/01/2012 - 12/31/2012 | 01/01/2013 - 12/31/2013 | 01/01/2014 - 12/31/2014 | 01/01/2015 - 12/31/2015 | 01/01/2016 - 12/31/2016 | 01/01/2017 - 12/31/2017 |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Equipment       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Materials       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Overhead        |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Profit          |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |



| Job Description | 01/01/2008 - 12/31/2008 | 01/01/2009 - 12/31/2009 | 01/01/2010 - 12/31/2010 | 01/01/2011 - 12/31/2011 | 01/01/2012 - 12/31/2012 | 01/01/2013 - 12/31/2013 | 01/01/2014 - 12/31/2014 | 01/01/2015 - 12/31/2015 | 01/01/2016 - 12/31/2016 | 01/01/2017 - 12/31/2017 |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Equipment       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Materials       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Overhead        |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| Profit          |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |





**RATES FOR AEP ON TRANSCO**

| 027999<br>RCW Vegetation Management R<br>Service Description | 028000<br>Labor | 028001<br>Labor Cost | 028002<br>Labor Rate | 028003<br>Living Rate | 028004<br>Material Rate | 028005<br>Material Markup % |
|--|-----------------|----------------------|----------------------|-----------------------|-------------------------|-----------------------------|
| 027999<br>RCW Vegetation Management R<br>Service Description | 028000<br>Labor | 028001<br>Labor Cost | 028002<br>Labor Rate | 028003<br>Living Rate | 028004<br>Material Rate | 028005<br>Material Markup % |

| 027999<br>RCW Vegetation Management R<br>Service Description | 028000<br>Labor | 028001<br>Labor Cost | 028002<br>Labor Rate | 028003<br>Living Rate | 028004<br>Material Rate | 028005<br>Material Markup % |
|--|-----------------|----------------------|----------------------|-----------------------|-------------------------|-----------------------------|
| 027999<br>RCW Vegetation Management R<br>Service Description | 028000<br>Labor | 028001<br>Labor Cost | 028002<br>Labor Rate | 028003<br>Living Rate | 028004<br>Material Rate | 028005<br>Material Markup % |

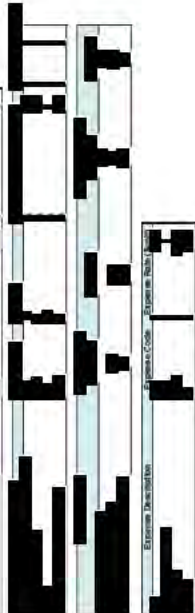
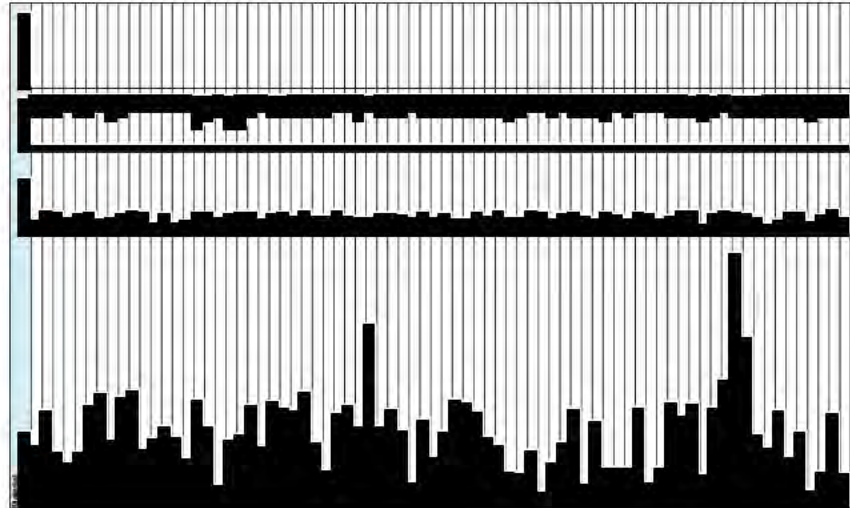
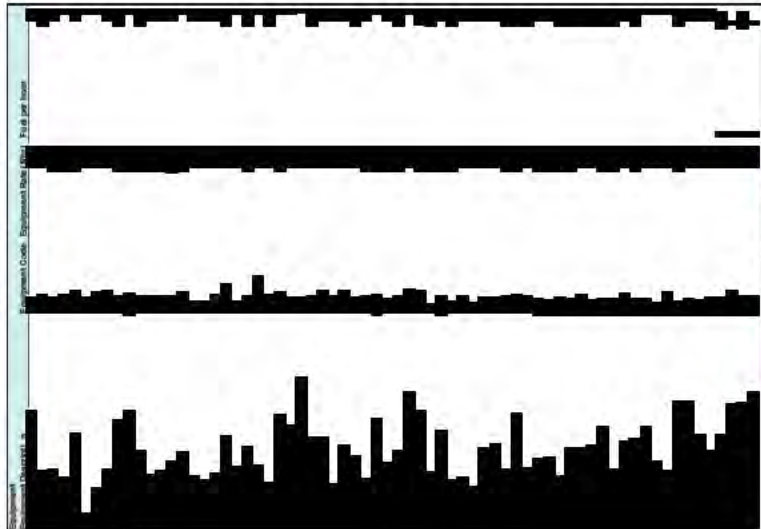
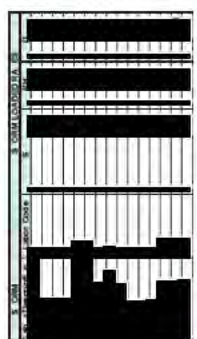
| Equipment Description | Equipment Code | Equipment Rate (Hour) | Hour per Hour | Material Rate | Material Markup % |
|-----------------------|----------------|-----------------------|---------------|---------------|-------------------|
| Equipment Description | Equipment Code | Equipment Rate (Hour) | Hour per Hour | Material Rate | Material Markup % |

| 027999<br>RCW Vegetation Management R<br>Service Description | 028000<br>Labor | 028001<br>Labor Cost | 028002<br>Labor Rate | 028003<br>Living Rate | 028004<br>Material Rate | 028005<br>Material Markup % |
|--|-----------------|----------------------|----------------------|-----------------------|-------------------------|-----------------------------|
| 027999<br>RCW Vegetation Management R<br>Service Description | 028000<br>Labor | 028001<br>Labor Cost | 028002<br>Labor Rate | 028003<br>Living Rate | 028004<br>Material Rate | 028005<br>Material Markup % |

| Equipment Description | Equipment Code | Equipment Rate (Hour) | Hour per Hour | Material Rate | Material Markup % |
|-----------------------|----------------|-----------------------|---------------|---------------|-------------------|
| Equipment Description | Equipment Code | Equipment Rate (Hour) | Hour per Hour | Material Rate | Material Markup % |

**RATES FOR ABCCO-VIRGINIA CONTRACT**

02/25/15  
 ROW Vegetation Management Rate Sheet  
 Project Code: 011313000



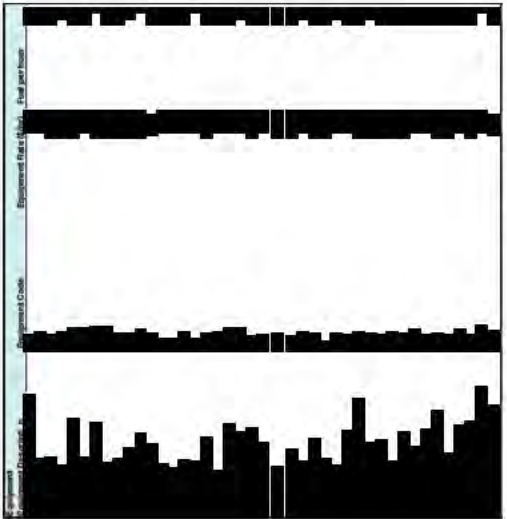
BATES FOR AEE OH TRANSCO

10/1/2016  
ROVV Vegetation Management Plan  
Effective Date: 10/01/2017  
Labor  
Labor Organization

| Year                           | 10/01/2016 | 10/01/2017 | 10/01/2018 | 10/01/2019 | 10/01/2020 | 10/01/2021 |
|--------------------------------|------------|------------|------------|------------|------------|------------|
| Labor Invoice (for Use of RFI) |            |            |            |            |            |            |
| Unit Cost (MCS, Machine Rate)  | 3          |            |            |            |            |            |
| Base Fuel Rate                 |            |            |            |            |            |            |
| Labor Code                     |            |            |            |            |            |            |
| Labor Rate                     |            |            |            |            |            |            |
| Billing Rate                   |            |            |            |            |            |            |
| Rate                           |            |            |            |            |            |            |

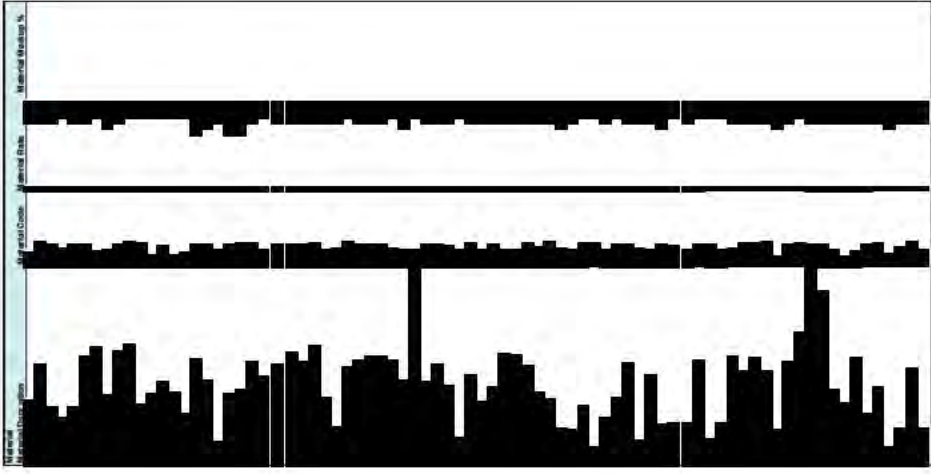
| Year                           | 10/01/2016 | 10/01/2017 | 10/01/2018 | 10/01/2019 | 10/01/2020 | 10/01/2021 |
|--------------------------------|------------|------------|------------|------------|------------|------------|
| Labor Invoice (for Use of RFI) |            |            |            |            |            |            |
| Unit Cost (MCS, Machine Rate)  | 3          |            |            |            |            |            |
| Base Fuel Rate                 |            |            |            |            |            |            |
| Labor Code                     |            |            |            |            |            |            |
| Labor Rate                     |            |            |            |            |            |            |
| Billing Rate                   |            |            |            |            |            |            |
| Rate                           |            |            |            |            |            |            |

| Year                           | 10/01/2016 | 10/01/2017 | 10/01/2018 | 10/01/2019 | 10/01/2020 | 10/01/2021 |
|--------------------------------|------------|------------|------------|------------|------------|------------|
| Labor Invoice (for Use of RFI) |            |            |            |            |            |            |
| Unit Cost (MCS, Machine Rate)  | 3          |            |            |            |            |            |
| Base Fuel Rate                 |            |            |            |            |            |            |
| Labor Code                     |            |            |            |            |            |            |
| Labor Rate                     |            |            |            |            |            |            |
| Billing Rate                   |            |            |            |            |            |            |
| Rate                           |            |            |            |            |            |            |



| Year                           | 10/01/2016 | 10/01/2017 | 10/01/2018 | 10/01/2019 | 10/01/2020 | 10/01/2021 |
|--------------------------------|------------|------------|------------|------------|------------|------------|
| Labor Invoice (for Use of RFI) |            |            |            |            |            |            |
| Unit Cost (MCS, Machine Rate)  | 3          |            |            |            |            |            |
| Base Fuel Rate                 |            |            |            |            |            |            |
| Labor Code                     |            |            |            |            |            |            |
| Labor Rate                     |            |            |            |            |            |            |
| Billing Rate                   |            |            |            |            |            |            |
| Rate                           |            |            |            |            |            |            |

| Year                           | 10/01/2016 | 10/01/2017 | 10/01/2018 | 10/01/2019 | 10/01/2020 | 10/01/2021 |
|--------------------------------|------------|------------|------------|------------|------------|------------|
| Labor Invoice (for Use of RFI) |            |            |            |            |            |            |
| Unit Cost (MCS, Machine Rate)  | 3          |            |            |            |            |            |
| Base Fuel Rate                 |            |            |            |            |            |            |
| Labor Code                     |            |            |            |            |            |            |
| Labor Rate                     |            |            |            |            |            |            |
| Billing Rate                   |            |            |            |            |            |            |
| Rate                           |            |            |            |            |            |            |



| Year                           | 10/01/2016 | 10/01/2017 | 10/01/2018 | 10/01/2019 | 10/01/2020 | 10/01/2021 |
|--------------------------------|------------|------------|------------|------------|------------|------------|
| Labor Invoice (for Use of RFI) |            |            |            |            |            |            |
| Unit Cost (MCS, Machine Rate)  | 3          |            |            |            |            |            |
| Base Fuel Rate                 |            |            |            |            |            |            |
| Labor Code                     |            |            |            |            |            |            |
| Labor Rate                     |            |            |            |            |            |            |
| Billing Rate                   |            |            |            |            |            |            |
| Rate                           |            |            |            |            |            |            |

**RATES FOR KP100**

City of  
POMONA  
POMONA Regional Management Rate Sheet  
Effective Date: 7/1/17/2017

| Job Title | Rate | Unit Code | Workstation Rate | State Fund Rate |
|-----------|------|-----------|------------------|-----------------|
| ...       | ...  | ...       | ...              | ...             |
| ...       | ...  | ...       | ...              | ...             |
| ...       | ...  | ...       | ...              | ...             |

| Job Title | Rate | Unit Code | Workstation Rate | State Fund Rate |
|-----------|------|-----------|------------------|-----------------|
| ...       | ...  | ...       | ...              | ...             |
| ...       | ...  | ...       | ...              | ...             |
| ...       | ...  | ...       | ...              | ...             |

| Equipment | Rate | Unit Code | Workstation Rate | State Fund Rate |
|-----------|------|-----------|------------------|-----------------|
| ...       | ...  | ...       | ...              | ...             |
| ...       | ...  | ...       | ...              | ...             |
| ...       | ...  | ...       | ...              | ...             |

| Material | Rate | Unit Code | Workstation Rate | State Fund Rate |
|----------|------|-----------|------------------|-----------------|
| ...      | ...  | ...       | ...              | ...             |
| ...      | ...  | ...       | ...              | ...             |
| ...      | ...  | ...       | ...              | ...             |

| Material | Rate | Unit Code | Workstation Rate | State Fund Rate |
|----------|------|-----------|------------------|-----------------|
| ...      | ...  | ...       | ...              | ...             |
| ...      | ...  | ...       | ...              | ...             |
| ...      | ...  | ...       | ...              | ...             |

| Material | Rate | Unit Code | Workstation Rate | State Fund Rate |
|----------|------|-----------|------------------|-----------------|
| ...      | ...  | ...       | ...              | ...             |
| ...      | ...  | ...       | ...              | ...             |
| ...      | ...  | ...       | ...              | ...             |



**RATES FOR WPCO**

|  |                         |
|--|-------------------------|
| Labor Increase (In Lieu of KPI)<br>2016 June ECI |                         |
| Unit Cost Work Manhour Rate                      | \$                      |
| Base Fuel Rate                                   |                         |
| Effective Date: 01/01/2017                       |                         |
|  | 06/05/2016 - 12/31/2016 |
|  | 01/01/2017 - 06/04/2017 |
| Labor Description                                | Labor Rate              |
| Labor Code                                       | Labor Rate              |
|  | Billing Rate            |
|  | ST                      |
|  | RH                      |
|  | DT                      |

|                   |                    |
|-------------------|--------------------|
| STORM             | STORM LOADED RATES |
| Labor Description | Labor Code         |
|                   | ST                 |
|                   | RH                 |
|                   | DT                 |

|                               |                        |                        |                                |
|-------------------------------|------------------------|------------------------|--------------------------------|
| Equipment Description         | Equipment Code         | Equipment Rate (\$/hr) | Fuel per hour                  |
|                               |                        |                        |                                |
| Supplemental Task Description | Supplemental Task Code | Unit Type              | Outside Service Rate (\$/unit) |
|                               |                        |                        |                                |
| Expense Description           | Expense Code           | Expense Rate (\$/unit) |                                |
|                               |                        |                        |                                |

|                      |               |               |                   |
|----------------------|---------------|---------------|-------------------|
| Material Description | Material Code | Material Rate | Material Markup % |
|                      |               |               |                   |



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## **AEP Transmission Forestry**

### **Rate Clarifications for Right-of-Way Maintenance Contracts**

**October 1, 2016**

DocuSign Envelope ID: E0703F57-F63A-4018-B695-A4B4CE82E3AE

**Per Diem**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site as defined by the table:

| Operating Company | Per Diem Starting Location | Distance (miles) |
|-------------------|----------------------------|------------------|
| AEP Ohio          | Legal home address         | 50               |
| APCO              | Legal home address         | 80               |
| KGPCO             | Legal home address         | 80               |
| KYPCO             | Normal reporting site      | 80               |
| WPCO              | Legal home address         | 80               |

2. Per Diem will not be paid if lodging and meals are provided by Owner.
3. Contractor shall submit documentation with their invoice specifying the distance between home address of record or reporting site and work site for each individual claiming Per Diem on each submitted invoice. Contractor will submit to OPCO the employees due per diem using the template within this document.
4. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
5. The Per Diem rate is defined in the applicable contract rate sheets and includes lodging and meals.
6. Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.
7. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly timesheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

**Definitions**

**Per Diem** – Daily allowance for expenses that include housing and meals to cover expenses when traveling for work and agreed upon by the Contractor and the Owner's Designated Representative.

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**Work Site** - The day's starting location for the performance of services ex, work site should be associated with vegetation management activities on the Company's rights-of-way.

**Owner's Designated Representative** – Owner Designated Representative for daily forestry operations will be the OPCO/transmission region forester or OPCO/transmission forestry supervisor.

**Reporting Site** – A Contractor designated location acceptable to the Owner's Designated Representative where the Contractor's trucks/equipment is parked and the employees go to get the trucks/equipment to travel to the work site. (In some regions called a show up location.)

**Emergency Assistance** – Owner's Designated Representative will have the authority to hold Contractor crews in an area during storm or other situations deemed an emergency when the mileage is less than in Bullet #1. If held in the an area the Contractor employee affected will be eligible for Per Diem if such charges would normally be incurred. All parties should understand this action is auditable and the time sheet and invoice must have the words Emergency Assistance and the forester's name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to Owner.

**Work Flow Driven(LEAN)** – Owner Designated Representative will have the authority to instruct crews to stay overnight when the mileage is less than in Bullet #1. There are times when it is cost effective to have the crews stay overnight instead of returning to the home address of record or reporting site. For example, crew is working 45 miles from the reporting site and the next work location is in the same direction but is 85 miles from the reporting site. In this situation the forester will have the authority to authorize an overnight stay that would require a Per Diem payment since staying overnight is more productive than to return to the reporting site or home address of record. All parties should understand this action is auditable for work efficiencies and productivity and the time sheet and invoice must have the words Work Flow Driven(LEAN) and the foresters name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to owner.

**Outsource or Off System** – Contractor employees that do not normally or exclusively work on the Owner's property and whose home address of record is 80 miles or more from the reporting site and is acceptable to Owner's Designated Representative.

**Home Address** – The legal address of record for tax purposes.

### **Equipment**

1. Contractor agrees to notify Owner when any equipment is not operable. They jointly will determine if work can continue in an efficient manner.
2. If no suitable work is available, the crew will be idled until the equipment is operable.
3. If for any reason, Contractor fails to notify Owner of inoperable equipment, it shall be assumed the crew was not working for at least eight hours prior to Owner's becoming aware of the problem. Invoices will be adjusted accordingly.

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### **Materials**

1. Materials and rental equipment furnished by the Contractor and authorized by the Owner will be invoiced at cost plus five percent(5%).
2. Contractor must obtain three bids for materials and provide copies of these bids to the Owner.
  - a. While the Contractor may purchase from any material vendor, AEP's material pricing shall be based on the lowest pricesubmitted.

### **Pay During Training**

Unless otherwise agreed to by Owner in writing, no billing relating to attendance at training or certification will be paid.

### **Overtime Calculations and examples**

1. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week at Owner's request.
2. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner andContractor.
3. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday, when approved by Owner inadvance.
4. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in items 1 and 2 above. The 40 hours pay shall include any holiday compensation paid by Contractor to the employee.
5. Calculation examples are provided below.
  - Straight Time Rate = Taken fromtable
  - Overtime Rate = Straight Time Rate x 1.5
  - Sunday/Holiday Rate = Straight Time Rate x2
  - Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)
  - Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)
  - Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)
  - Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)
  - Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime storm markup)

#### **Sample Calculations:**

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

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Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) =$

$\$30.72$  Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) =$

$\$33.40$  Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) =$

$\$40.94$  Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) =$

$\$44.52$

**Major Storm Events**

When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.

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APCO/KGPCO/WPCO

|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |



|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

**Per Diem Eligibility Number:**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from that individual's legal home address.
2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

**Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.**

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KYPCO

|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |



|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

|   |
|---|
| <b>Per Diem Eligibility Number:</b>   |
| 1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from the individual's normal reporting site.   |
| 2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.   |
| 3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS. |

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

**Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.**

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AEP Ohio

|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |



|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

**Per Diem Eligibility Number:**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 50 miles or greater (one way) from that individual's legal home address.

2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.

3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

*Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.*



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| Labor                                      |            | August 1, 2011   |
|--|------------|--|
| Labor Description                          | Labor Code | Comments   |
| Equipment Operator                         | EO         | An equipment operator shall be able to operate and perform minor maintenance on a ROW brush mower or bulldozer   |
| General Foreman A/<br>General Foreperson A | GFA        | The primary contact with AEP Forestry field representatives Has worked a minimum of 12 months as an Assistant General Foreperson and should be ISA certified Individuals are responsible for all aspects of the contractor's local field operation including and not limited to employee safety, equipment maintenance, work planning effect(if applicable), and emergency response  |
| Foreman A/Foreperson A                     | FA         | Meet all the qualifications of a Foreperson B Has worked a minimum of 12 months as a Foreperson B and should meet all state required herbicide qualifications Is able to competently work and lead others with no direct supervision   |
| Foreman B/Foreperson B                     | FB         | Meet all the qualifications of a Trimmer A Individuals have completed all line clearance foreperson certification/ training programs as required Must be able to work and lead others with limited supervision Has worked a minimum of 18 months in the line clearance industry Must be able to effectively communicate with AEP representatives and landowners Must be able to prepare required record documents, read and follow instructions on maps and notification records Must possess a CDL and pesticide certification as required  |
| Work Planner A                             | WPA        | Meet all qualifications of Work Planner B and be ISA certified Two years experience as a Work Planner II or three years related utility experience Consistent work planning accuracy greater than or equal to 95% Demonstrates initiative and pro-actively looks for ways to do work cost effectively Demonstrated abilities in teamwork, leadership and problem solving Willing to travel and stay away from home overnight   |
| Work Planner B                             | WPB        | Meet all qualifications of Work Planner C and working towards ISA certification Six months satisfactory performance as a Work Planner C or related utility experience Thorough knowledge of species and growth characteristics of trees located in assigned work area Good understanding of electrical facilities and hardware and associated line/circuit maps Understanding of electric utility vegetation management and ability to communicate such to property owners Work effectively with people (utility, contractors, customers, etc ) Demonstrated ability to work safely and efficiently with minimal supervision and have the ability to travel and stay overnight |
| Work Planner C                             | WPC        | Two-year Degree in Forestry, Arboriculture, etc , or related utility experience is desirable Good verbal and written communications skills Positive attitude/neat professional appearance Able to work outside in a safe, productive manner in all weather conditions Valid drivers license  |
| General Foreman B/<br>General Foreperson B | GFB        | Individuals shall be able to communicate effectively with utility representatives, the public and their direct reports Determine the most effective manner within established guidelines of how to treat vegetation conditions and coordinate and instruct crew activities to safely and effectively complete an assigned task Must possess a pesticide license and where required strive to become a certified arborist   |
| Trimmer A                                  | TA         | Meet all qualifications of Trimmer B Individuals have completed all climbing trimmer and bucket (where required) certifications Individual has worked a minimum of 12 months in the line clearance industry Is able to perform all aspects of tree trimming and tree removal including and not limited to rigging ropes, and pulling overhang, and any other assigned duties in a safe, consistent, competent manner Individuals should be capable of filling in for a crew foreperson on a limited basis and have started foreperson training as required by the employer   |
| Trimmer B                                  | TB         | Meet all qualifications of Trimmer C Individual have completed climbing trimmer training Individual has worked a minimum of 6 months in the line clearance industry  |
| Trimmer C                                  | TC         | Entry level or trainee position that requires the individual passes screening criteria as established by employer A Trimmer C shall be able under direction to safely perform a variety of job duties including and not limited to chain saw maintenance, operate a brush chipper, and apply herbicides, clear and cut trees and brush They shall begin climbing trimmer training Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification   |

## Unit Price Model

April 30, 2012

Services may be paid under the following Unit Price model.

### 1. Unit Price Model Overview

Unit Price is a model where a Unit Price hourly rate is paid to Contractor for all work units completed in an assigned Circuit. The Unit Price hourly rate includes all costs, including but not limited to, wages, supervision, overheads, profit, equipment and materials required to complete the assigned Work. While the Unit Price hourly rate includes the labor required to apply herbicides, it does not include the cost of the herbicides. The Unit Price hourly rate is multiplied by the assigned work hour per unit, a rate that is assigned for each specific work unit (tree trim, tree removal, brush cut, etc.). This is a rate that has been determined to complete a unit of Work on the assigned Circuit, as agreed by the Owner and Contractor. All Unit Price Work issued to Contractor shall be completed by the agreed upon completion date.

### 2. Unit Price Calculation

#### a. Man Hours per Unit Calculation

Unit Price uses historical average times, or other method agreed to by Owner and Contractor, required to perform a specific type of Work (tree trim, tree removal, brush cutting, brush spraying) ("Work Unit") and includes all time necessary to complete that Work, including but not limited to travel, actual job site time, debris disposal, landowner contacts, immediate crew supervision and appropriate non-productive time (such as time lost to inclement weather and minor on-the-job equipment breakdown).

- I. Owner shall explain the method of calculation and the information used in a Circuit to Contractor's supervision and management prior to authorizing Work.
- II. The average times used to calculate hours per unit can be collected by distribution circuit, portions of a given circuit (sub-circuit), or other defined geographic area within the Contract region (e.g. "Circuit" or "Area.")
- III. The historical average times are developed by accumulating data for vegetation management Work performed on the Circuit during the last three calendar years or other time period as agreed by Owner and Contractor. Each time a Circuit is scheduled for maintenance, a new three-year average is calculated by replacing the earliest year's data with the most recent or next successive year's data. This rolling three year average is given in hours per unit.
- IV. If there are inconsistencies in the three-year data based on disparity in the actual work within a specific Contract region, the Owner and Contractor may agree to use another method to generate the hours per unit. This method shall be documented in the Work Request authorizing the Work.

#### b. Unit Price Calculation

Contractor has submitted a Unit Price hourly rate that shall be used for all units of Work performed, regardless of the Work Unit type. The cost for a given unit of Work (e.g. for a given Circuit) is established by multiplying the Contractor's Unit Price hourly rate for

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that Work Unit by its hours per unit. If the Unit Price hourly rate is \$20.00 and the hours per unit is 1.25 hours, Contractor earns 1.25 hours x \$20.00 – \$25.00 for each unit of that Work Unit.

### **3. Job Assignment**

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned; prepare a Unit Price Sheet (sample attached); include any exceptions to the hours per unit; and shall schedule a field review with the Contractor to discuss the Work assignment, including how the hours per unit were developed. An exception to the hours per unit might be a tree removal where the location and size of the tree and its proximity to structures cause a substantial increase in the hours per unit required for the removal. These exceptions must be agreed to by both Parties and are not to include those deviations that are normally encountered in performing a Work Unit.

At the field review, Owner and Contractor shall review all the Work, agree to the exceptions to the hours per unit, agree to the Unit Price Sheet and determine a start date for the Work. A Work Request (“WR”), similar to the sample attached, shall be signed by both Parties and constitutes the written authority for Contractor to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Unit Price Sheet, the map, a list of exceptions to the hours per unit, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date, but subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor’s work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. The work planners, per current practice, shall be paid on a time and material basis and will not be included within the stated Unit Price or Unit Price calculation. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor’s employees are unable to resolve their concerns quickly, Contractor’s employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

## Lump Sum Price Model

April 30, 2012

Services may be paid under the following Lump Sum Price model.

### **1. Authorizing Work**

Owner and Contractor may agree to perform work based on a Lump Sum price for the specified Circuit.

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned, complete a Lump Sum Price Sheet; and schedule a field review with the Contractor to discuss the Work assignment.

At the field review, Owner and Contractor shall review all the Work, agree to the Lump Sum Price and determine a start and end date for the Work. A Work Request ("WR") for Lump Sum Price Work, similar to the sample attached, shall be signed by both Parties and constitutes the Contractor's written authority to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Lump Sum Price, the map, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date but is subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor's work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor's employees are unable to resolve their concerns quickly, Contractor's employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

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**WORK REQUEST  
For  
Lump Sum Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Lump Sum Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

Work shall be performed in accordance with the attached Request For Quote (“RFQ”) attached hereto.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

Unless otherwise stated in the Work Request, Contractor shall be paid the total cost for the Circuit upon completion of all Work and subsequent acceptance by Owner. Contractor shall perform all Work for the lump sum amount of \$ \_\_\_\_\_.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

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## Work Request For Unit Price/Time and Materials Work

Work Request No: \_\_\_\_\_

Date: \_\_\_\_\_

Issued By: \_\_\_\_\_  
(Owner)

Issued To: \_\_\_\_\_  
(Contractor)

This Work Request for Unit Price/Time and Materials Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

### Description of Work:

The Work to be performed is (check **one**):

If no map is attached, identify the circuit, sub-circuit, or the specific geographic area identifying the Work to be performed.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

### Pricing:

**Unit Price** --- Contractor’s weekly billing shall be calculated using the number of units completed during the week being billed multiplied by the cost per unit from the Rates as found in the Contract.

**Time and Materials** – Contractor’s weekly billing shall be calculated using the following formula: (labor classification X number of hours worked during billable period) + (equipment rate X number of hours used during billable period). The labor classifications and equipment rates used will be in accordance to the Rates as found in Exhibit C of the Contract

Unless otherwise stated in this Work Request or the attached map, pricing will be per the price model as selected above and in accordance with the Rates as found in Exhibit C of the Contract.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

Print \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_

Print \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**PRICING CHANGE ORDER**

Contract #: \_\_\_\_\_

Request Date: \_\_\_\_\_

Owner: \_\_\_\_\_

Contractor: \_\_\_\_\_

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

- Specific reason(s) for Change Order:
- Rate Addition(s)
  - Rate Deletion(s)
  - Rate Description Change(s)
  - Rate Code Change(s)
  - Other (please describe): \_\_\_\_\_

| <b>Labor</b> |                   |            |            |      |      |      |
|--------------|-------------------|------------|------------|------|------|------|
| Reason       | Labor Description | Labor Code | Labor Rate | ST   | RH   | DT   |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
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|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |

| <b>Storm</b> |                   | <b>STORM LOADED RATES</b> |      |      |      |
|--------------|-------------------|---------------------------|------|------|------|
| Reason       | Labor Description | Labor Code                | ST   | RH   | DT   |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
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|              |                   |                           | \$ - | \$ - | \$ - |

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**PRICING CHANGE ORDER**

Contract #: \_\_\_\_\_

Request Date: \_\_\_\_\_

Owner: \_\_\_\_\_

Contractor: \_\_\_\_\_

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

Specific reason(s) for Change Order:  Rate Addition(s)  Rate Deletion(s)  
 Rate Description Change(s)  Rate Code Change(s)  
 Other (please describe): \_\_\_\_\_

| <b>Labor</b> |                   |            |            |      |      |      |
|--------------|-------------------|------------|------------|------|------|------|
| Reason       | Labor Description | Labor Code | Labor Rate | ST   | RH   | DT   |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
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|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
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|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |

| <b>Storm</b> |                   | <b>STORM LOADED RATES</b> |      |      |      |
|--------------|-------------------|---------------------------|------|------|------|
| Reason       | Labor Description | Labor Code                | ST   | RH   | DT   |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
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| Reason         | <b>Expense Description</b> | <b>Expense Code</b> | <b>Expense Rate (\$/unit)</b> |
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Owner's Authorized Reviewer Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Owner's Authorized Reviewer Print Name: \_\_\_\_\_

IN WITNESS WHEREOF, the Parties hereto have caused this Change Order to be signed by their respective officers thereunto duly authorized on the dates set forth below to be effective as of the Effective Date.

**Owner**

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Print Name

\_\_\_\_\_  
 Title

\_\_\_\_\_  
 Date

**Contractor**

\_\_\_\_\_  
 Signature

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 Print Name

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 Title

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 Date

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# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010-04**

Effective Date: October 1, 2016

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AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

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|---|------------------------|--|--------|--------------|
|  | Owner:<br>Kevin Patton | Copyright 2016<br>American Electric Power<br>Company, Inc. | Rev. 4 | TVMD-010     |
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## Revision History

| Rev. | Description of Change(s)  | By           | Date      | Approved                    |
|------|---|--------------|-----------|-----------------------------|
| 0    | Original Issue  |              |           |                             |
| 1    | Update  |              | 5/14/2009 |                             |
| 2    | Update; formatting changes; addition of company specific guidelines; addition of referenced documents table; addition of end notes to link to other documents; review of document performed by Legal; | Kevin Patton | 9/10/2014 | Walter Sherry<br>12/14/2016 |
| 3    | Addition of Transmission Forestry construction clearing guidelines  | Kevin Patton | 5/1/2016  | Walter Sherry<br>5/4/2016   |
| 4    | Addition of reporting site location to the guidelines from language that was previously in the rate clarification section of the contract.  | Kevin Patton | 9/21/2016 | Walter Sherry<br>9/23/2016  |

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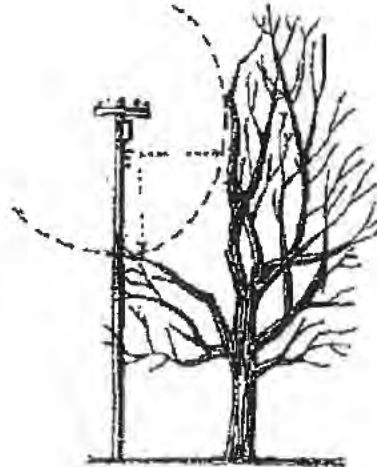
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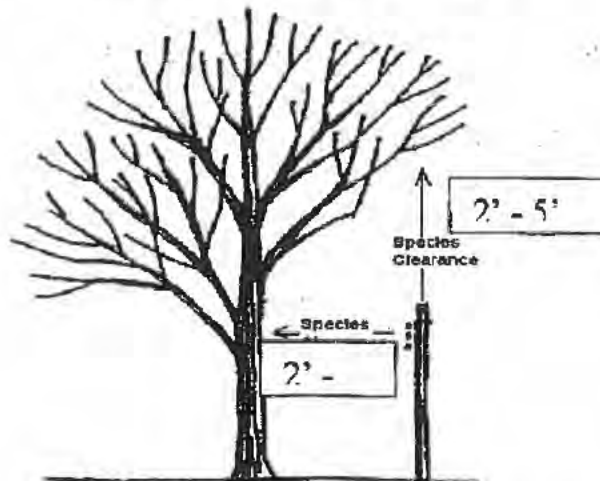
Vegetation Management Goals  
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## B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



## C. Service Drops and Street Light Conductors

Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.

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4. Contractors shall provide evidence of training to employees related to tree felling upon request.

### C. Clearances


The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| Right-of-way No Restrictions   | Right-of-way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2.</b>                   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |

<sup>4</sup> Upon completion of maintenance

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**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |


### D. Transmission Dispatch Communication Procedures

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

### E. Transmission Forestry Construction Guidelines

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

<sup>5</sup>ANSI Z133-2012.

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## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species   |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d'arc (Osage orange, hedge tree) |

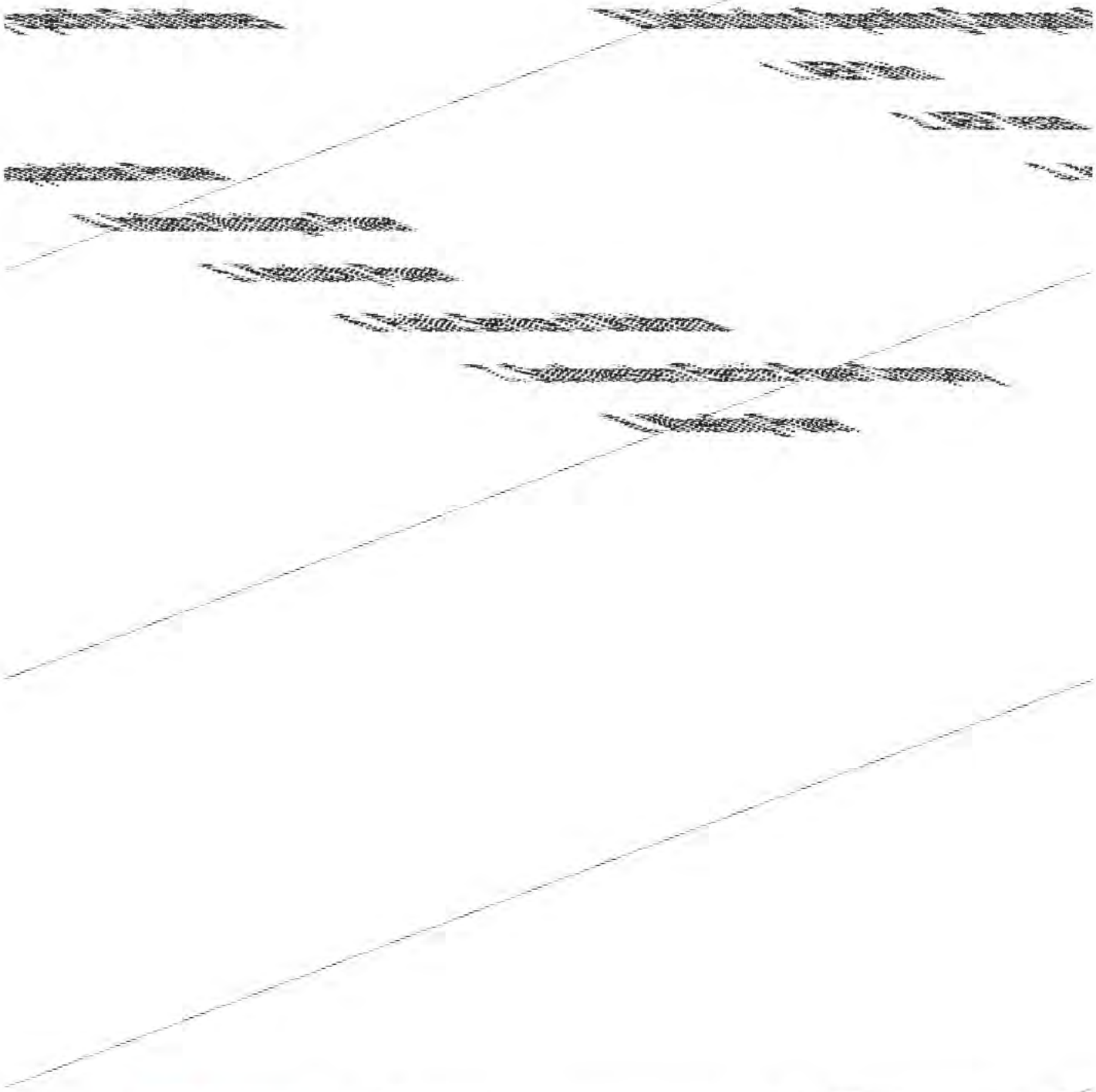
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| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |

### 1. Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

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### C. Referenced Documents and Specifications

| Title  | Year | Version                              | Pages |
|--|------|--------------------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2                           | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                                      | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                             |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI <sup>®</sup> Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI <sup>®</sup> A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI <sup>®</sup> A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI <sup>®</sup> A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition                       | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008                        | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition                        | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                             |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                             |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                             |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                             |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                             |       |

<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

- <sup>1</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006).* Tree Care Industry Association, Manchester, NH
- <sup>ii</sup> *Best Management Practices – Utility Pruning of Trees.* International Society of Arboriculture. Champaign, IL
- <sup>iii</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006).* Tree Care Industry Association, Manchester, NH
- <sup>iv</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>v</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>vi</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>vii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>viii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>ix</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>x</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xi</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xiii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>xiv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xvi</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xvii</sup> *Managing Hazard Trees on FAC-003 Applicable Circuits.* American Electric Power
- <sup>xviii</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xix</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xx</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xxi</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

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## CONFIDENTIAL

### Contract Routing Slip

| ROUTING            | Purpose                | Initials             | Date Signed               |
|--------------------|------------------------|----------------------|---------------------------|
| Gina Crabtree      | For your review        | <sup>DS</sup><br>GC  | 12/29/2016   9:26 PM EST  |
| Sonia Pickens      | For your review        | <sup>DS</sup><br>SP  | 12/29/2016   10:23 PM EST |
| Matt Curtis        | For your review        | <sup>DS</sup><br>MC  | 12/30/2016   6:13 AM EST  |
| Kevin Patton       | For your review        | <sup>DS</sup><br>KBP | 12/30/2016   7:14 AM EST  |
| Rick Mowbray       | For your review        | <sup>DS</sup><br>RM  | 1/3/2017   7:23 AM EST    |
| Richard Karber     | For your review        | <sup>DS</sup><br>RK  | 1/5/2017   7:33 AM EST    |
| Walter Sherry      | For your review        | <sup>DS</sup><br>WAS | 1/5/2017   8:55 AM EST    |
| Thomas Kirkpatrick | Signature on amendment | <sup>DS</sup><br>TK  | 1/5/2017   9:23 AM EST    |
| Brent Asplundh     | Contractor signatory   | NR                   | NR                        |
| AEP Audit          | Copy                   | NR                   | NR                        |
| Chris Donley       | Copy                   | NR                   | NR                        |
| Terri Stiltner     | Copy                   | NR                   | NR                        |

**Date:** December 29, 2016

**Company:** APCO, KY, OH

**Contractor Name:** Asplundh Tree Expert Co.

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 025765990000X103 Amd#3

**Term:** September 5, 2012 – May 26, 2018

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** No change

**Description of Service/Work:** Updating ECI table reference, rates, fuel rate, rate clarifications, and forestry goals and procedure document, removal of KPI







## Certificate Of Completion


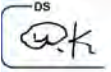

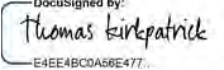
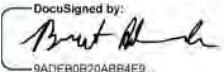
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| Document Pages: 54  | Signatures: 2     | Envelope Originator:       |
| Supplemental Document Pages: 0  | Initials: 8       | Christopher Donley         |
| Certificate Pages: 4  |                   |                            |
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| Envelopeld Stamping: Enabled  |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                         |                   | cdonley@aep.com            |
|   |                   | IP Address: 167.239.221.81 |

## Record Tracking

|                       |                            |                    |
|-----------------------|----------------------------|--------------------|
| Status: Original      | Holder: Christopher Donley | Location: DocuSign |
| 12/29/2016 2:32:16 PM | cdonley@aep.com            |                    |

## Signer Events

| Signer Events   | Signature   | Timestamp  |
|---|---|--|
| <p>Gina Crabtree<br/>gmcraabtree@aep.com<br/>Contract Analyst<br/>American Electric Power Service Corporation<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Not Offered via DocuSign<br/>ID:</p>                       | <br><br>Using IP Address: 167.239.221.88                         | <p>Sent: 12/29/2016 2:49:11 PM<br/>Viewed: 12/29/2016 9:26:18 PM<br/>Signed: 12/29/2016 9:26:25 PM</p>   |
| <p>Sonia Pickens<br/>srvaughan@aep.com<br/>Category Mgr<br/>American Electric Power<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Not Offered via DocuSign<br/>ID:</p>   | <br><br>Using IP Address: 167.239.221.88                       | <p>Sent: 12/29/2016 9:26:29 PM<br/>Viewed: 12/29/2016 10:22:47 PM<br/>Signed: 12/29/2016 10:23:20 PM</p> |
| <p>Matt Curtis<br/>mpcurtis@aep.com<br/>Director, T&amp;D Services<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 11/2/2016 5:32:00 PM<br/>ID: 5721ec11-5e5a-41d9-b30b-e29f9a2624bb</p>                       | <br><br>Using IP Address: 24.210.58.237<br>Signed using mobile | <p>Sent: 12/29/2016 10:23:23 PM<br/>Viewed: 12/30/2016 6:12:33 AM<br/>Signed: 12/30/2016 6:13:23 AM</p>  |
| <p>Kevin Patton<br/>kbpattton@aep.com<br/>Business Analyst Sr<br/>American Electric Power<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 8/5/2014 2:08:35 PM<br/>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409</p> | <br><br>Using IP Address: 167.239.221.88                       | <p>Sent: 12/30/2016 6:13:25 AM<br/>Viewed: 12/30/2016 7:12:57 AM<br/>Signed: 12/30/2016 7:14:02 AM</p>   |

| Signer Events   | Signature  | Timestamp   |
|---|--|---|
| <p>Rick Mowbray<br/>           drmowbray@aep.com<br/>           Supv. Region Forestry<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 1/3/2017 7:09:52 AM<br/>           ID: 409d14a3-965d-493c-86af-93d710f1be45</p>   | <br>Using IP Address: 167.239.221.88                          | <p>Sent: 12/30/2016 7:14:05 AM<br/>           Viewed: 1/3/2017 7:09:52 AM<br/>           Signed: 1/3/2017 7:23:07 AM</p>  |
| <p>Richard Karber<br/>           rkarber@aep.com<br/>           Transmission Forestry Supervisor<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 1/5/2017 7:32:06 AM<br/>           ID: cea367d4-ba69-44be-9b29-20a828456c90</p>  | <br>Using IP Address: 167.239.221.81                          | <p>Sent: 1/3/2017 7:23:09 AM<br/>           Resent: 1/5/2017 7:00:50 AM<br/>           Viewed: 1/5/2017 7:32:06 AM<br/>           Signed: 1/5/2017 7:33:51 AM</p> |
| <p>Walter A. Sherry<br/>           washerry@aep.com<br/>           Forestry Operation Manager<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 7/1/2014 7:08:14 PM<br/>           ID: ca043d9b-aaab-40e4-bee5-8c449d93d309</p>   | <br>Using IP Address: 167.239.221.80                          | <p>Sent: 1/5/2017 7:33:54 AM<br/>           Viewed: 1/5/2017 8:52:13 AM<br/>           Signed: 1/5/2017 8:55:49 AM</p>  |
| <p>Thomas Kirkpatrick<br/>           tlkirkpatrick@aep.com<br/>           Vice President Customer Service, Marketing and Distribution Services<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 8/11/2014 7:22:30 AM<br/>           ID: 293b8fdf-68e0-46e9-b110-269f4199cb39</p> | <br>Using IP Address: 12.111.104.128<br>Signed using mobile | <p>Sent: 1/5/2017 8:55:53 AM<br/>           Viewed: 1/5/2017 9:22:55 AM<br/>           Signed: 1/5/2017 9:23:22 AM</p>  |
| <p>Brent Asplundh<br/>           brent@asplundh.com<br/>           Brent D. Asplundh, EVP<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 1/9/2017 4:37:16 PM<br/>           ID: ec83762e-86f5-45aa-b976-f5445bb029cc</p>   | <br>Using IP Address: 12.54.91.133<br>Signed using mobile   | <p>Sent: 1/5/2017 9:23:26 AM<br/>           Viewed: 1/9/2017 4:37:16 PM<br/>           Signed: 1/9/2017 4:38:02 PM</p>  |

| In Person Signer Events      | Signature | Timestamp |
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| Editor Delivery Events       | Status    | Timestamp |
| Agent Delivery Events        | Status    | Timestamp |
| Intermediary Delivery Events | Status    | Timestamp |
| Certified Delivery Events    | Status    | Timestamp |
| Carbon Copy Events           | Status    | Timestamp |

| Carbon Copy Events  | Status  | Timestamp  |
|---|---|--|
| <p>AEP Audit<br/>           gbscontractassessments@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Not Offered via DocuSign<br/>             ID:</p>  | <div style="border: 1px solid blue; padding: 5px; display: inline-block;"><b>COPIED</b></div> | <p>Sent: 1/9/2017 4:38:06 PM</p>   |
| <p>Christopher Donley<br/>           cdonley@aep.com<br/>           Contract Analyst<br/>           American Electric Power Service Corporation<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Not Offered via DocuSign<br/>             ID:</p> | <div style="border: 1px solid blue; padding: 5px; display: inline-block;"><b>COPIED</b></div> | <p>Sent: 1/9/2017 4:38:07 PM<br/>           Resent: 1/9/2017 4:38:12 PM</p>  |
| <p>Terri Stiltner<br/>           tastiltner@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>             Accepted: 6/18/2015 3:27:15 PM<br/>             ID: 592a4afd-f450-4104-bdeb-635cbde989d5</p>  | <div style="border: 1px solid blue; padding: 5px; display: inline-block;"><b>COPIED</b></div> | <p>Sent: 1/9/2017 4:38:08 PM<br/>           Viewed: 1/10/2017 7:15:28 AM</p> |
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| Completed   | Security Checked  | 1/9/2017 4:38:08 PM  |
| Payment Events  | Status  | Timestamps   |
| Electronic Record and Signature Disclosure  |   |  |

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Matt Curtis, Kevin Patton, Rick Mowbray, Richard Karber, Walter A. Sherry, Thomas Kirkpatrick, Brent Asplundh, Terri Stiltner

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.



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### FOURTH AMENDMENT TO CONTRACT NO. 025765990000X103

This Fourth Amendment to Contract No. 025765990000X103 ("Fourth Amendment"), executed to be effective January 1, 2017 ("Fourth Amendment Effective Date"), is by and between **American Electric Power Service Corporation**, a New York corporation, as agent for the operating companies of the American Electric Power System ("Owner") and **Asplundh Tree Expert Co.**, a Pennsylvania corporation ("Contractor").

**WHEREAS**, Contractor and Owner entered into Contract No. 025765990000X103 with an Effective Date of September 5, 2012 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the Parties hereby agree as follows:

1. In Exhibit C, the existing Rate Sheets shall be removed in its entirety and replaced with the Contractor's Rates dated January 1, 2017 (the "Rate Sheet") attached hereto and incorporated within. These rates will be effective January 1, 2017.
2. Except as amended by this Fourth Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Fourth Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Fourth Amendment Effective Date.

**American Electric Power Service Corporation, as agent for the operating companies of the American Electric Power**

Syst  
DocuSigned by:  
By: Thomas Kirkpatrick  
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Name: Thomas Kirkpatrick

Title: Vice President Customer Service, Marketing and Distribution Services EVP

Date: 3/16/2017 | 7:04 AM EDT

**Asplundh Tree Expert Co.**

DocuSigned by:  
By: Brent D. Asplundh  
9ADEB0B20ABB4E9...

Name: Brent Asplundh

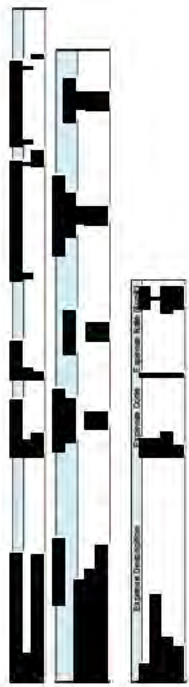
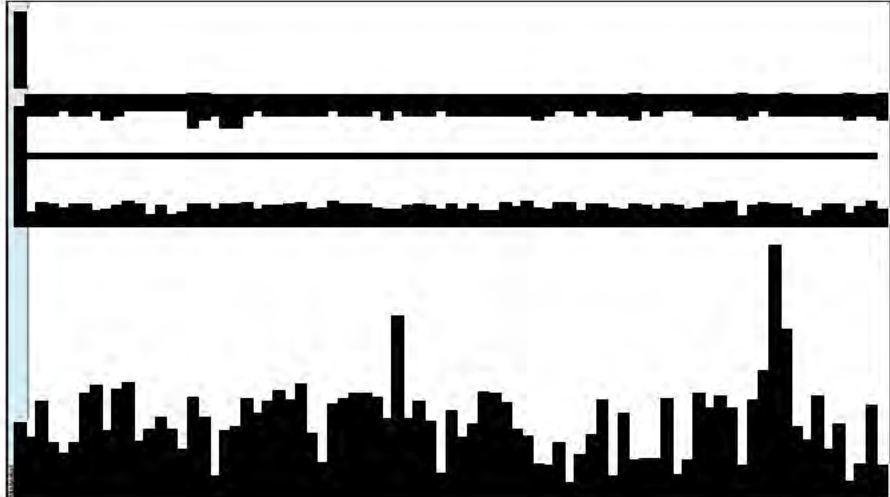
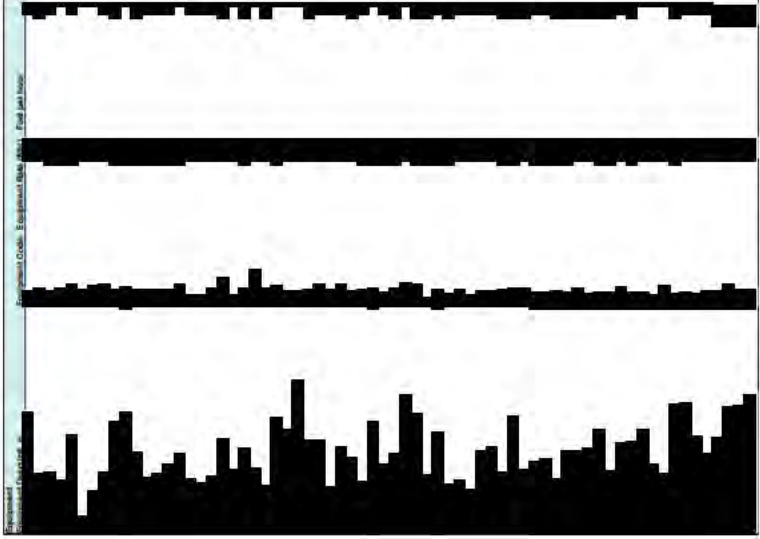
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Date: 3/21/2017 | 9:09 AM EDT

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**RATES FOR APCO - WEST VIRGINIA**

02/15/2008  
ROW Vegetation Management Rate Sheet  
AT:Work Date 1/10/12/17



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**BATES FOR KPCCO, IBANSO**

627696  
ROW Vegetation Management Rate Sheet  
1/1/2011



6/28/2016 7/1/2016 7/5/2016 7/9/2016 7/13/2016 7/17/2016 7/21/2016 7/25/2016 7/27/2016

6/28/2016 7/1/2016 7/5/2016 7/9/2016 7/13/2016 7/17/2016 7/21/2016 7/25/2016 7/27/2016

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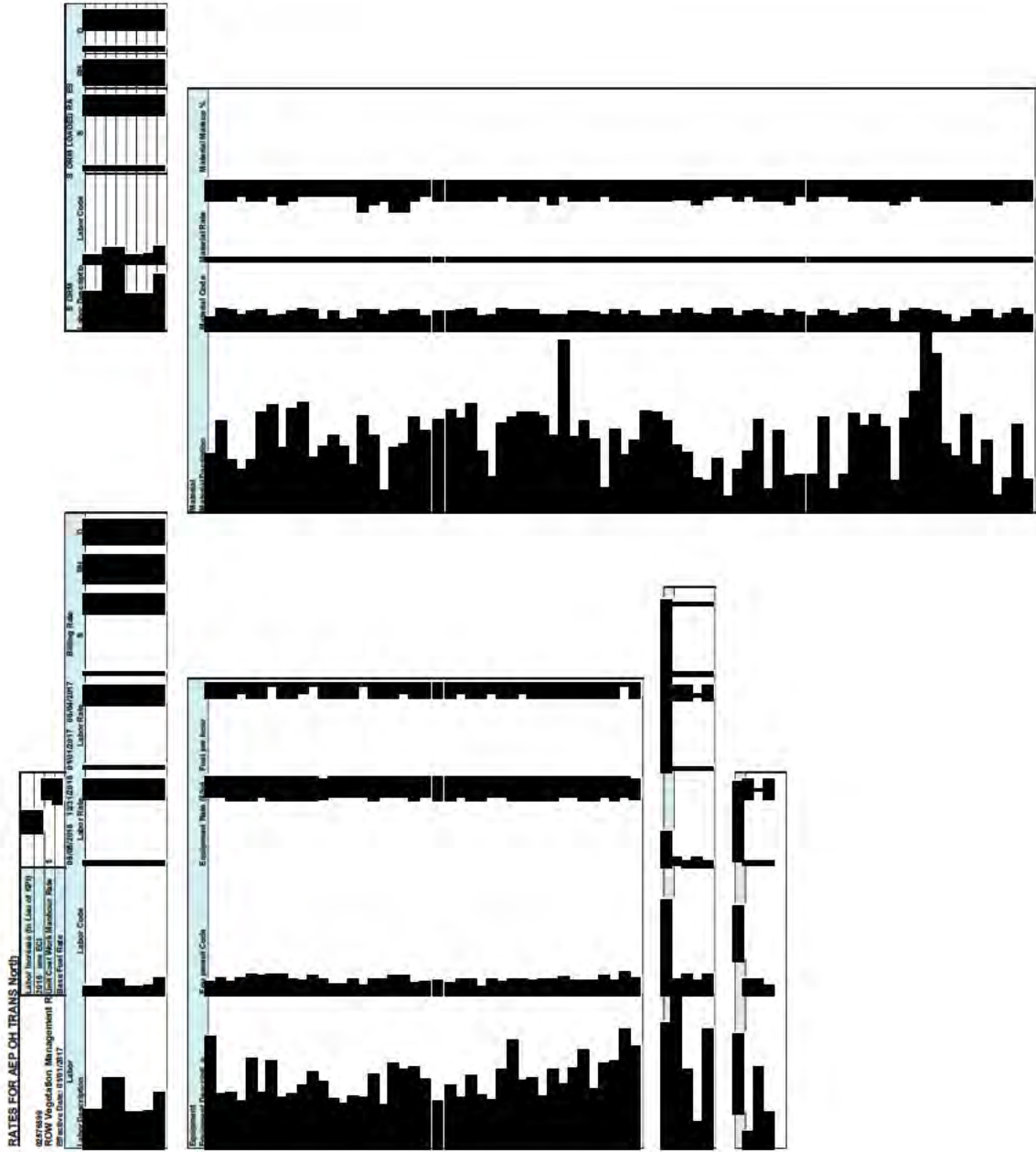
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**RATES FOR AEP OH TRANS Central Metro**

Contract  
ROW Vegetation Management  
Contract Work Breakdown  
Labor

2016 Jan 01  
2016 Jan 01  
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Contract  
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**RATES FOR AEP OH TRANS Central Metro**

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Contract Work Breakdown  
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**RATES FOR AEP OH TRANS - South**

address  
 ROW Vegetation Management  
 Project Code: 130117  
 Labor Code  
 Labor Description

| 2015 Unit Cost | 2015 Unit Rate | 2016 Unit Cost | 2016 Unit Rate | 2017 Unit Cost | 2017 Unit Rate |
|----------------|----------------|----------------|----------------|----------------|----------------|
|                |                |                |                |                |                |

Labor Hours (in Line # 407)

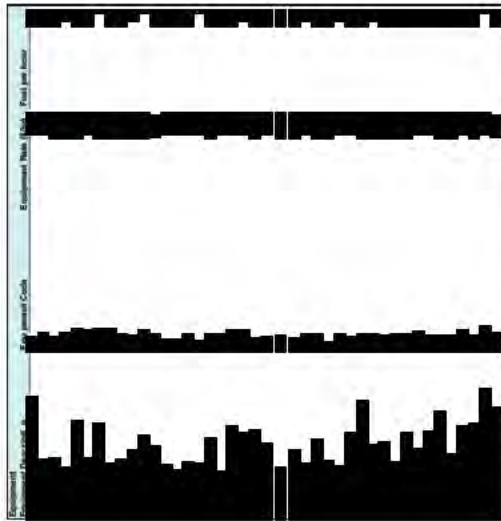
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|------------|----------------|----------------|----------------|----------------|----------------|----------------|
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Equipment Description

| Equipment Code | 2015 Unit Cost | 2015 Unit Rate | 2016 Unit Cost | 2016 Unit Rate | 2017 Unit Cost | 2017 Unit Rate |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                |                |                |                |                |                |                |

Labor Code

| Labor Code | 2015 Unit Cost | 2015 Unit Rate | 2016 Unit Cost | 2016 Unit Rate | 2017 Unit Cost | 2017 Unit Rate |
|------------|----------------|----------------|----------------|----------------|----------------|----------------|
|            |                |                |                |                |                |                |



| Labor Code | 2015 Unit Cost | 2015 Unit Rate | 2016 Unit Cost | 2016 Unit Rate | 2017 Unit Cost | 2017 Unit Rate |
|------------|----------------|----------------|----------------|----------------|----------------|----------------|
|            |                |                |                |                |                |                |

| Labor Code | 2015 Unit Cost | 2015 Unit Rate | 2016 Unit Cost | 2016 Unit Rate | 2017 Unit Cost | 2017 Unit Rate |
|------------|----------------|----------------|----------------|----------------|----------------|----------------|
|            |                |                |                |                |                |                |



Labor Code

| Labor Code | 2015 Unit Cost | 2015 Unit Rate | 2016 Unit Cost | 2016 Unit Rate | 2017 Unit Cost | 2017 Unit Rate |
|------------|----------------|----------------|----------------|----------------|----------------|----------------|
|            |                |                |                |                |                |                |

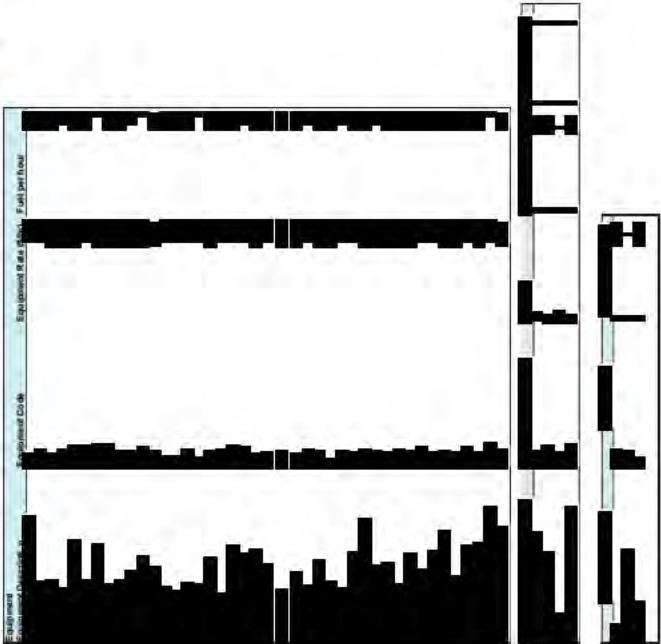
Labor Code

| Labor Code | 2015 Unit Cost | 2015 Unit Rate | 2016 Unit Cost | 2016 Unit Rate | 2017 Unit Cost | 2017 Unit Rate |
|------------|----------------|----------------|----------------|----------------|----------------|----------------|
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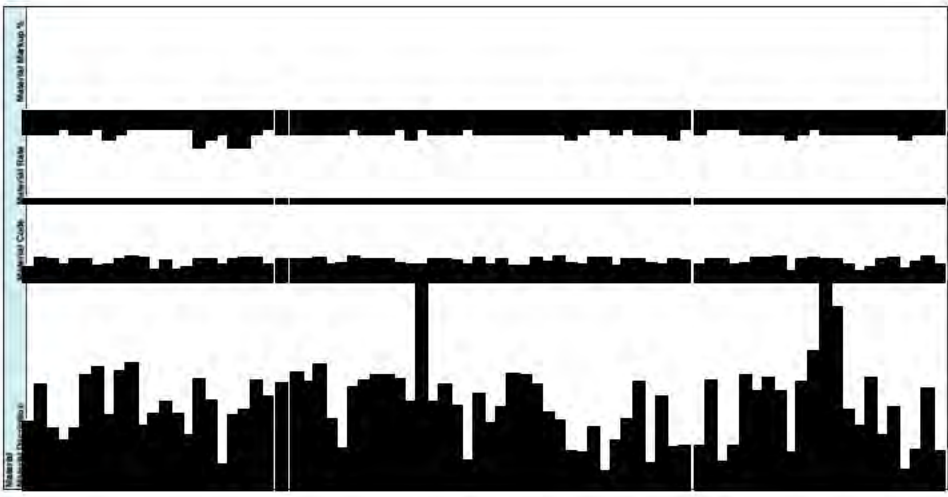
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**RATES FOR AEP\_OH\_TRANS00**

| Rate Increase (in % of 2016) | Rate   |           |              |
|------------------------------|--|-----------|--------------|
| ROW Vegetation Management R  | 3  |           |              |
| Rate Paid Rate               | 9/25/2016 - 12/31/2016 01/01/2017 - 06/30/2017 |           |              |
| Lab. Description             | Lab. Code                                      | Lab. Rate | Billing Rate |



| Rate Increase (in % of 2016) | Rate   |           |              |
|------------------------------|--|-----------|--------------|
| ROW Vegetation Management R  | 3  |           |              |
| Rate Paid Rate               | 9/25/2016 - 12/31/2016 01/01/2017 - 06/30/2017 |           |              |
| Lab. Description             | Lab. Code                                      | Lab. Rate | Billing Rate |

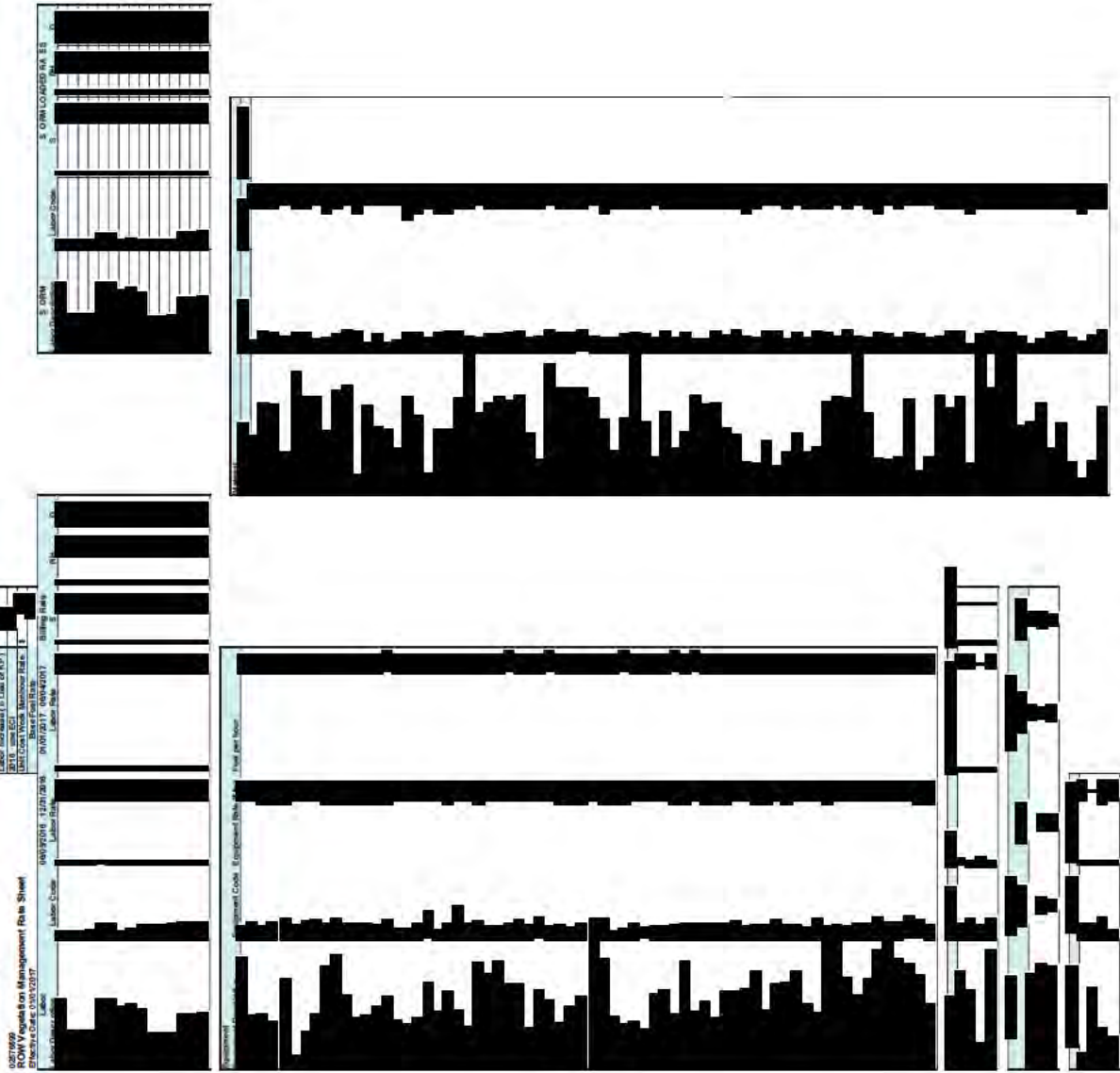






DocuSign Envelope ID: B942C2E5-EEAF-46D6-BB4F-0E4C0C8655C3

**RATES FOR WSPCC**





DocuSign Envelope ID: 6942C2E5-EAAF-45D6-BB4F-0E4CDC8655C3



## CONFIDENTIAL

### Contract Routing Slip

| ROUTING            | Purpose                | Initials             | Date Signed             |
|--------------------|------------------------|----------------------|-------------------------|
| Gina Crabtree      | For your review        | <sup>DS</sup><br>GL  | 3/14/2017   2:25 PM EDT |
| Sonia Pickens      | For your review        | <sup>DS</sup><br>SP  | 3/14/2017   2:40 PM EDT |
| Matt Curtis        | For your review        | <sup>DS</sup><br>MC  | 3/14/2017   2:45 PM EDT |
| Kevin Patton       | For your review        | <sup>DS</sup><br>KBP | 3/14/2017   4:39 PM EDT |
| Rick Mowbray       | For your review        | <sup>DS</sup><br>RM  | 3/15/2017   7:17 AM EDT |
| Richard Karber     | For your review        | <sup>DS</sup><br>RK  | 3/15/2017   6:19 PM EDT |
| Walter Sherry      | For your review        | <sup>DS</sup><br>WRS | 3/15/2017   8:37 PM EDT |
| Thomas Kirkpatrick | Signature on amendment | <sup>DS</sup><br>TK  | 3/16/2017   7:04 AM EDT |
| Brent Asplundh     | Contractor signatory   | NR                   | NR                      |
| AEP Audit          | Copy                   | NR                   | NR                      |
| Chris Donley       | Copy                   | NR                   | NR                      |
| Terri Stiltner     | Copy                   | NR                   | NR                      |

**Date:** March 14, 2017

**Company:** APCO, KY, OH

**Contractor Name:** Asplundh Tree Expert Co.

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 025765990000X103 Amd#4

**Term:** September 5, 2012 – May 26, 2018

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** No change

**Description of Service/Work:** Updating/clarifying rates







## Certificate Of Completion




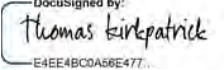
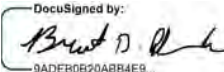
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| Subject: AEP Contract No. 025765990000X103 Amd#4; Asplundh Tree Expert Co |                   |                            |
| Source Envelope:  |                   |                            |
| Document Pages: 12  | Signatures: 2     | Envelope Originator:       |
| Supplemental Document Pages: 0  | Initials: 8       | Christopher Donley         |
| Certificate Pages: 4  |                   |                            |
| AutoNav: Enabled  | Payments: 0       | 1 Riverside Plz FL 1       |
| Envelopeld Stamping: Enabled  |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                         |                   | cdonley@aep.com            |
|   |                   | IP Address: 167.239.221.87 |

## Record Tracking

|                      |                            |                    |
|----------------------|----------------------------|--------------------|
| Status: Original     | Holder: Christopher Donley | Location: DocuSign |
| 3/14/2017 2:17:08 PM | cdonley@aep.com            |                    |

## Signer Events

| Signer Events   | Signature  | Timestamp   |
|---|--|---|
| <p>Gina Crabtree<br/>gmcraabtree@aep.com<br/>Contract Analyst<br/>American Electric Power Service Corporation<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Not Offered via DocuSign<br/>ID:</p>   | <br><br>Using IP Address: 167.239.221.83                      | <p>Sent: 3/14/2017 2:22:59 PM<br/>Viewed: 3/14/2017 2:25:51 PM<br/>Signed: 3/14/2017 2:25:57 PM</p> |
| <p>Sonia Pickens<br/>srvaughan@aep.com<br/>Category Mgr<br/>American Electric Power<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Not Offered via DocuSign<br/>ID:</p>   | <br><br>Using IP Address: 167.239.221.87                    | <p>Sent: 3/14/2017 2:25:59 PM<br/>Viewed: 3/14/2017 2:39:21 PM<br/>Signed: 3/14/2017 2:40:28 PM</p> |
| <p>Matt Curtis<br/>mpcurtis@aep.com<br/>Director, T&amp;D Services<br/>American Electric Power Service Corporation<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 11/2/2016 5:32:00 PM<br/>ID: 5721ec11-5e5a-41d9-b30b-e29f9a2624bb</p> | <br><br>Using IP Address: 167.239.221.80                    | <p>Sent: 3/14/2017 2:40:30 PM<br/>Viewed: 3/14/2017 2:45:41 PM<br/>Signed: 3/14/2017 2:45:52 PM</p> |
| <p>Kevin Patton<br/>kbpattton@aep.com<br/>Business Analyst Principal<br/>American Electric Power<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 8/5/2014 2:08:35 PM<br/>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409</p>                    | <br><br>Using IP Address: 50.4.44.20<br>Signed using mobile | <p>Sent: 3/14/2017 2:45:54 PM<br/>Viewed: 3/14/2017 4:38:41 PM<br/>Signed: 3/14/2017 4:39:23 PM</p> |

| Signer Events   | Signature   | Timestamp   |
|---|---|---|
| <p>Rick Mowbray<br/>           drmowbray@aep.com<br/>           Supv. Region Forestry<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 3/15/2017 7:00:15 AM<br/>           ID: 3aa016f1-13bb-45f4-b1d2-b5e77d5b5d65</p>  | <br>Using IP Address: 167.239.221.87                         | <p>Sent: 3/14/2017 4:39:25 PM<br/>           Viewed: 3/15/2017 7:00:15 AM<br/>           Signed: 3/15/2017 7:17:46 AM</p> |
| <p>Richard Karber<br/>           rkarber@aep.com<br/>           Transmission Forestry Supervisor<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 3/15/2017 6:18:56 PM<br/>           ID: 5b677f1b-3749-430c-9f8b-85707386c242</p>   | <br>Using IP Address: 173.26.48.198<br>Signed using mobile   | <p>Sent: 3/15/2017 7:17:47 AM<br/>           Viewed: 3/15/2017 6:18:56 PM<br/>           Signed: 3/15/2017 6:19:22 PM</p> |
| <p>Walter A. Sherry<br/>           washerry@aep.com<br/>           Forestry Operation Manager<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 7/1/2014 7:08:14 PM<br/>           ID: ca043d9b-aaab-40e4-bee5-8c449d93d309</p>   | <br>Using IP Address: 167.239.221.85                         | <p>Sent: 3/15/2017 6:19:25 PM<br/>           Viewed: 3/15/2017 8:30:52 PM<br/>           Signed: 3/15/2017 8:37:05 PM</p> |
| <p>Thomas Kirkpatrick<br/>           tlkirkpatrick@aep.com<br/>           Vice President Customer Service, Marketing and Distribution Services<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 8/11/2014 7:22:30 AM<br/>           ID: 293b8fdf-68e0-46e9-b110-269f4199cb39</p> | <br>Using IP Address: 167.239.221.88                       | <p>Sent: 3/15/2017 8:37:07 PM<br/>           Viewed: 3/16/2017 7:04:18 AM<br/>           Signed: 3/16/2017 7:04:31 AM</p> |
| <p>Brent Asplundh<br/>           brent@asplundh.com<br/>           Brent D. Asplundh, EVP<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 3/21/2017 9:08:02 AM<br/>           ID: 8e4b54ff-d557-4833-831b-dd9958595257</p>  | <br>Using IP Address: 107.77.202.85<br>Signed using mobile | <p>Sent: 3/16/2017 7:04:33 AM<br/>           Viewed: 3/20/2017 7:02:03 AM<br/>           Signed: 3/21/2017 9:09:00 AM</p> |

|                                     |                  |                  |
|-------------------------------------|------------------|------------------|
| <b>In Person Signer Events</b>      | <b>Signature</b> | <b>Timestamp</b> |
| <b>Editor Delivery Events</b>       | <b>Status</b>    | <b>Timestamp</b> |
| <b>Agent Delivery Events</b>        | <b>Status</b>    | <b>Timestamp</b> |
| <b>Intermediary Delivery Events</b> | <b>Status</b>    | <b>Timestamp</b> |
| <b>Certified Delivery Events</b>    | <b>Status</b>    | <b>Timestamp</b> |
| <b>Carbon Copy Events</b>           | <b>Status</b>    | <b>Timestamp</b> |

| Carbon Copy Events   |  | Status           | Timestamp  |
|--|--|------------------|--|
| AEP Audit<br>gbscontractassessments@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:  |  | <b>COPIED</b>    | Sent: 3/21/2017 9:09:03 AM                                 |
| Christopher Donley<br>cdonley@aep.com<br>Contract Analyst<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID: |  | <b>COPIED</b>    | Sent: 3/21/2017 9:09:04 AM<br>Resent: 3/21/2017 9:09:09 AM |
| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/18/2015 3:27:15 PM<br>ID: 592a4afd-f450-4104-bdeb-635cbde989d5                          |  | <b>COPIED</b>    | Sent: 3/21/2017 9:09:06 AM<br>Viewed: 3/22/2017 7:31:35 AM |
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| Envelope Summary Events  |  | Status           | Timestamps   |
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| Certified Delivered  |  | Security Checked | 3/21/2017 9:09:06 AM                                       |
| Signing Complete   |  | Security Checked | 3/21/2017 9:09:06 AM                                       |
| Completed  |  | Security Checked | 3/21/2017 9:09:06 AM                                       |
| Payment Events   |  | Status           | Timestamps   |
| Electronic Record and Signature Disclosure   |  |                  |  |

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Matt Curtis, Kevin Patton, Rick Mowbray, Richard Karber, Walter A. Sherry, Thomas Kirkpatrick, Brent Asplundh, Terri Stiltner

**ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.



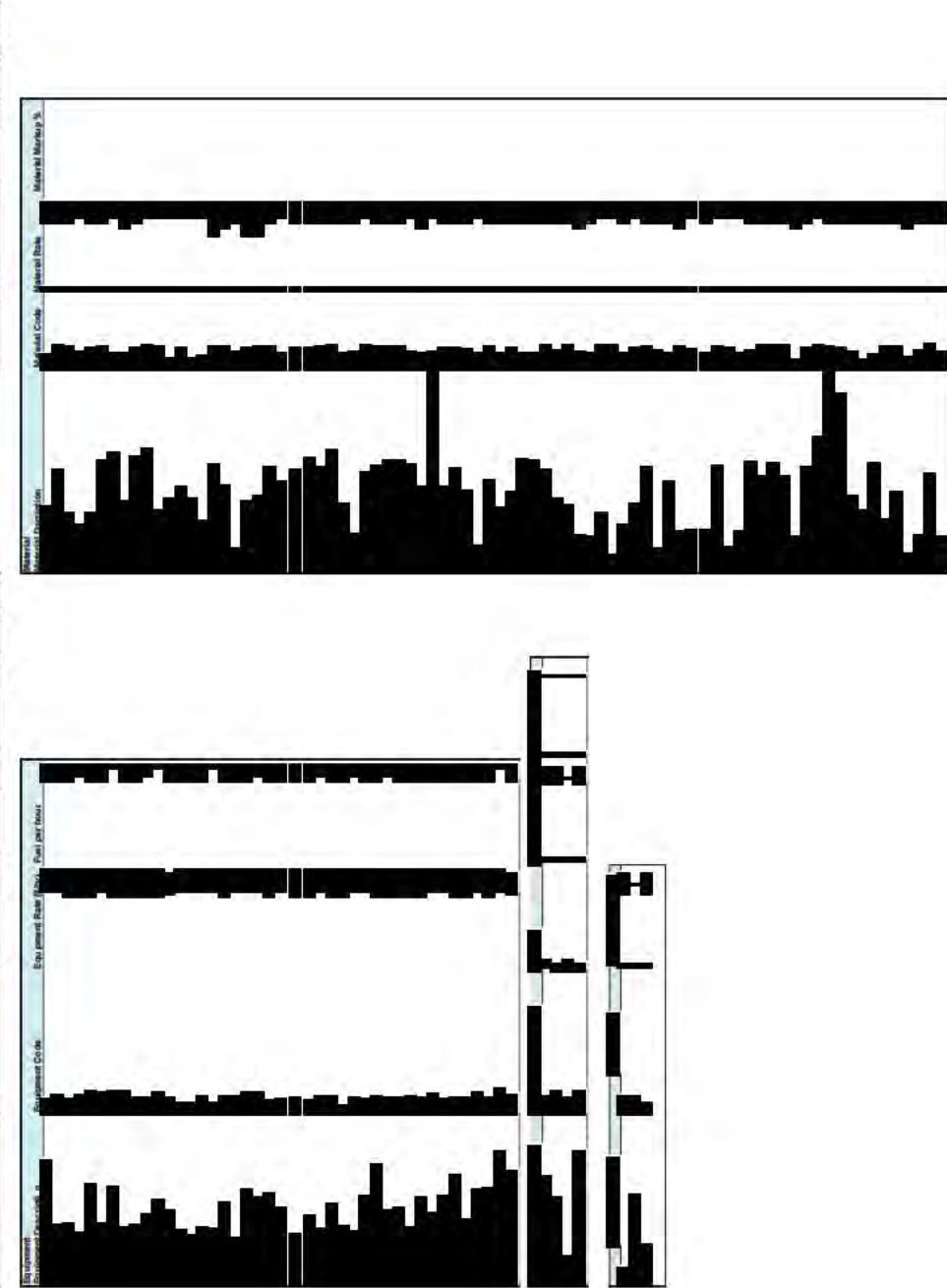


RATES FOR KPCCO TRANSCO.



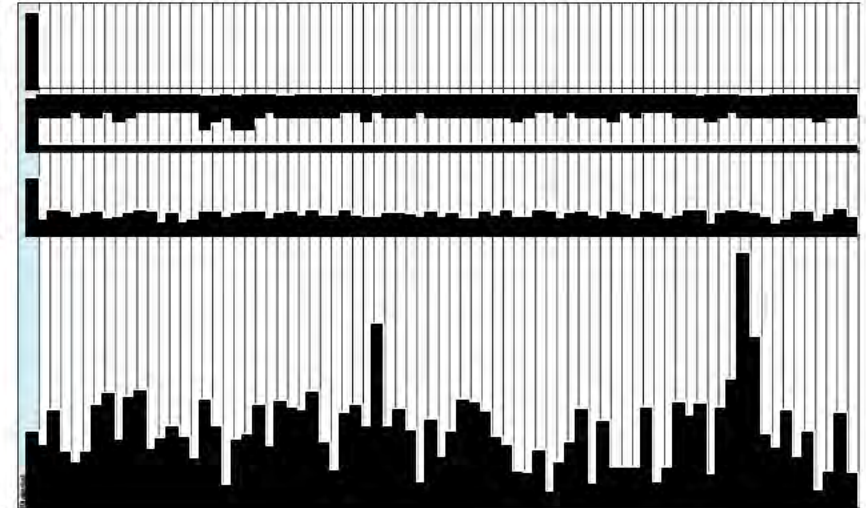
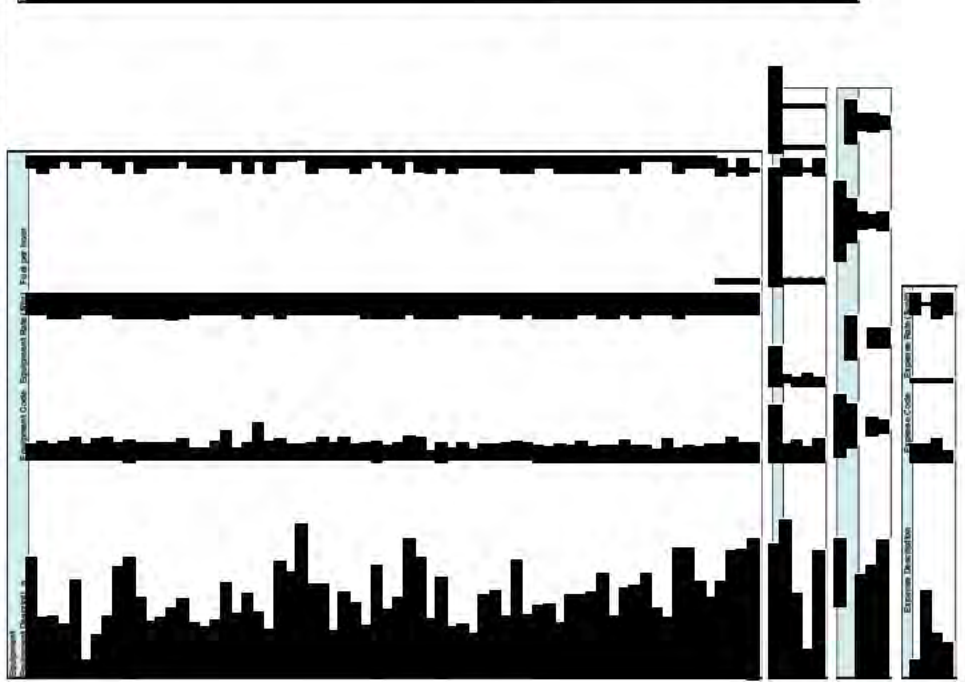
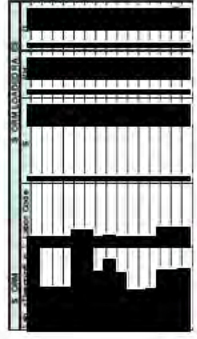
RATES FOR AEP ON TRANSOCO

| 027999<br>ROW Vegetation Management R<br>Project Description | 027999<br>Labor | 027999<br>Labor Costs | 027999<br>Labor Rate | 027999<br>Living Rate | 027999<br>U | 027999<br>M | 027999<br>S | 027999<br>D | 027999<br>L |
|--|-----------------|-----------------------|----------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|
| 027999<br>ROW Vegetation Management R<br>Project Description | 027999<br>Labor | 027999<br>Labor Costs | 027999<br>Labor Rate | 027999<br>Living Rate | 027999<br>U | 027999<br>M | 027999<br>S | 027999<br>D | 027999<br>L |



**RATES FOR ABCCO-VIRGINIA CONTRACT**

02/25/19  
 ROW Vegetation Management Rate Sheet  
 Project Code: 011213000



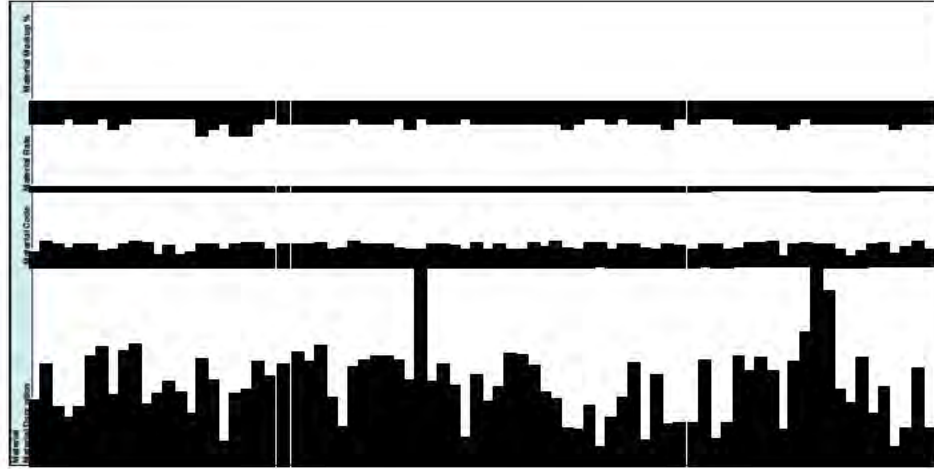
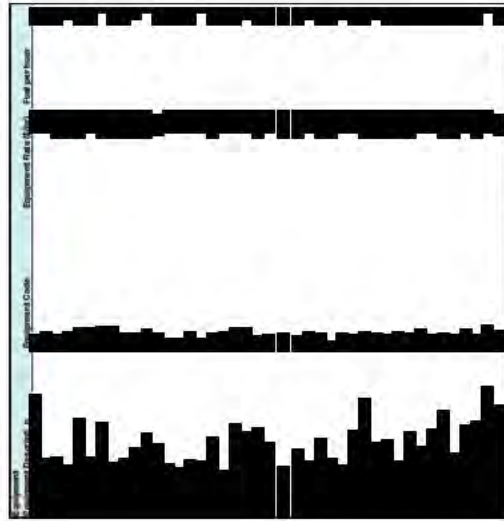
**BATES FOR AEE OH TRANSCO**

| Contract | Contract Description              | Contract Start Date | Contract End Date | Contract Status |
|----------|-----------------------------------|---------------------|-------------------|-----------------|
| 1000000  | ROV Vegetation Management Project | 10/1/2016           | 9/30/2017         | Active          |

Contract Description: Labor  
Effective Date: 10/1/2017  
Labor Code: 90000000  
Billing Rate: 1000000

| Month   | Hours | Rate    | Total   |
|---------|-------|---------|---------|
| 10/2016 | 1000  | 1000000 | 1000000 |
| 11/2016 | 1000  | 1000000 | 1000000 |
| 12/2016 | 1000  | 1000000 | 1000000 |
| 1/2017  | 1000  | 1000000 | 1000000 |
| 2/2017  | 1000  | 1000000 | 1000000 |
| 3/2017  | 1000  | 1000000 | 1000000 |
| 4/2017  | 1000  | 1000000 | 1000000 |
| 5/2017  | 1000  | 1000000 | 1000000 |
| 6/2017  | 1000  | 1000000 | 1000000 |
| 7/2017  | 1000  | 1000000 | 1000000 |
| 8/2017  | 1000  | 1000000 | 1000000 |
| 9/2017  | 1000  | 1000000 | 1000000 |

| Month   | Hours | Rate    | Total   |
|---------|-------|---------|---------|
| 10/2016 | 1000  | 1000000 | 1000000 |
| 11/2016 | 1000  | 1000000 | 1000000 |
| 12/2016 | 1000  | 1000000 | 1000000 |
| 1/2017  | 1000  | 1000000 | 1000000 |
| 2/2017  | 1000  | 1000000 | 1000000 |
| 3/2017  | 1000  | 1000000 | 1000000 |
| 4/2017  | 1000  | 1000000 | 1000000 |
| 5/2017  | 1000  | 1000000 | 1000000 |
| 6/2017  | 1000  | 1000000 | 1000000 |
| 7/2017  | 1000  | 1000000 | 1000000 |
| 8/2017  | 1000  | 1000000 | 1000000 |
| 9/2017  | 1000  | 1000000 | 1000000 |

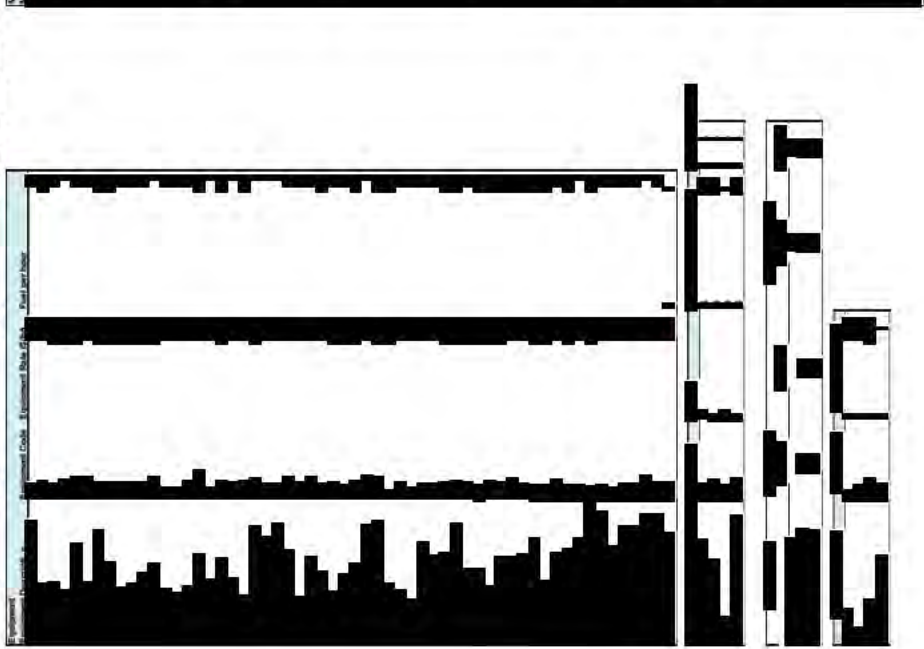


| Month   | Hours | Rate    | Total   |
|---------|-------|---------|---------|
| 10/2016 | 1000  | 1000000 | 1000000 |
| 11/2016 | 1000  | 1000000 | 1000000 |
| 12/2016 | 1000  | 1000000 | 1000000 |
| 1/2017  | 1000  | 1000000 | 1000000 |
| 2/2017  | 1000  | 1000000 | 1000000 |
| 3/2017  | 1000  | 1000000 | 1000000 |
| 4/2017  | 1000  | 1000000 | 1000000 |
| 5/2017  | 1000  | 1000000 | 1000000 |
| 6/2017  | 1000  | 1000000 | 1000000 |
| 7/2017  | 1000  | 1000000 | 1000000 |
| 8/2017  | 1000  | 1000000 | 1000000 |
| 9/2017  | 1000  | 1000000 | 1000000 |

**RATES FOR KP100**

**CITY OF  
POWYREGATION MANAGEMENT RATE SHEET**  
Effective Date: 7/1/17/2017

| Job Code | Labor | Equipment Code | Equipment Rate \$/HR | Overhaul | Light | Light Rate | Light Rate | Light Rate |
|----------|-------|----------------|----------------------|----------|-------|------------|------------|------------|
| 9 0800   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0801   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0802   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0803   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0804   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0805   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0806   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0807   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0808   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0809   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0810   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0811   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0812   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0813   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0814   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0815   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0816   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0817   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0818   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0819   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0820   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0821   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0822   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0823   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0824   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0825   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0826   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0827   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0828   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0829   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0830   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0831   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0832   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0833   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0834   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0835   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0836   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0837   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0838   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0839   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0840   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0841   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0842   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0843   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0844   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0845   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0846   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0847   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0848   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0849   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0850   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0851   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0852   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0853   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0854   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0855   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0856   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0857   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0858   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0859   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0860   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0861   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0862   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0863   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0864   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0865   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0866   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0867   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0868   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0869   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0870   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0871   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0872   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0873   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0874   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0875   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0876   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0877   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0878   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0879   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0880   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0881   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0882   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0883   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0884   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0885   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0886   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0887   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0888   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0889   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0890   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0891   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0892   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0893   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0894   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0895   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0896   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0897   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0898   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0899   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |
| 9 0900   | 0.00  | 0.00           | 0.00                 | 0.00     | 0.00  | 0.00       | 0.00       | 0.00       |



**RATES FOR KGPFCO**

WATERWORKS SECTION MANAGEMENT RATE SHEET  
BUDGET YEAR: 2017-2018  
BUDGET DATE: 03/15/2017

| Job  | Rate    |
|------|---------|
| 2017 | 1000000 |
| 2018 | 1000000 |
| 2019 | 1000000 |
| 2020 | 1000000 |
| 2021 | 1000000 |
| 2022 | 1000000 |
| 2023 | 1000000 |
| 2024 | 1000000 |
| 2025 | 1000000 |
| 2026 | 1000000 |
| 2027 | 1000000 |
| 2028 | 1000000 |
| 2029 | 1000000 |
| 2030 | 1000000 |

| Job  | Rate    |
|------|---------|
| 2017 | 1000000 |
| 2018 | 1000000 |
| 2019 | 1000000 |
| 2020 | 1000000 |
| 2021 | 1000000 |
| 2022 | 1000000 |
| 2023 | 1000000 |
| 2024 | 1000000 |
| 2025 | 1000000 |
| 2026 | 1000000 |
| 2027 | 1000000 |
| 2028 | 1000000 |
| 2029 | 1000000 |
| 2030 | 1000000 |

| Job  | Rate    |
|------|---------|
| 2017 | 1000000 |
| 2018 | 1000000 |
| 2019 | 1000000 |
| 2020 | 1000000 |
| 2021 | 1000000 |
| 2022 | 1000000 |
| 2023 | 1000000 |
| 2024 | 1000000 |
| 2025 | 1000000 |
| 2026 | 1000000 |
| 2027 | 1000000 |
| 2028 | 1000000 |
| 2029 | 1000000 |
| 2030 | 1000000 |

| Job  | Rate    |
|------|---------|
| 2017 | 1000000 |
| 2018 | 1000000 |
| 2019 | 1000000 |
| 2020 | 1000000 |
| 2021 | 1000000 |
| 2022 | 1000000 |
| 2023 | 1000000 |
| 2024 | 1000000 |
| 2025 | 1000000 |
| 2026 | 1000000 |
| 2027 | 1000000 |
| 2028 | 1000000 |
| 2029 | 1000000 |
| 2030 | 1000000 |

| Job  | Rate    |
|------|---------|
| 2017 | 1000000 |
| 2018 | 1000000 |
| 2019 | 1000000 |
| 2020 | 1000000 |
| 2021 | 1000000 |
| 2022 | 1000000 |
| 2023 | 1000000 |
| 2024 | 1000000 |
| 2025 | 1000000 |
| 2026 | 1000000 |
| 2027 | 1000000 |
| 2028 | 1000000 |
| 2029 | 1000000 |
| 2030 | 1000000 |

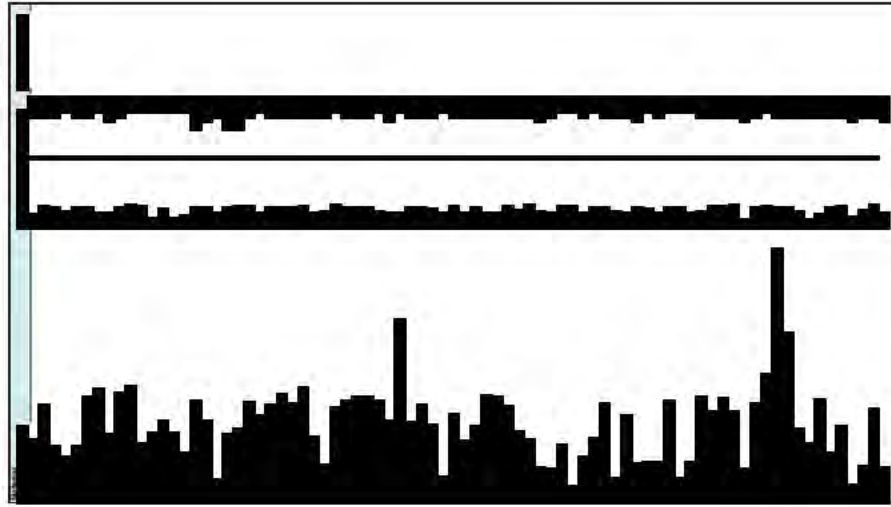
| Job  | Rate    |
|------|---------|
| 2017 | 1000000 |
| 2018 | 1000000 |
| 2019 | 1000000 |
| 2020 | 1000000 |
| 2021 | 1000000 |
| 2022 | 1000000 |
| 2023 | 1000000 |
| 2024 | 1000000 |
| 2025 | 1000000 |
| 2026 | 1000000 |
| 2027 | 1000000 |
| 2028 | 1000000 |
| 2029 | 1000000 |
| 2030 | 1000000 |



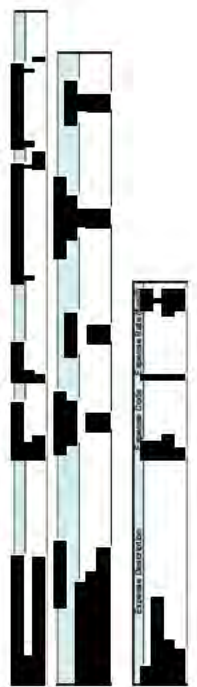
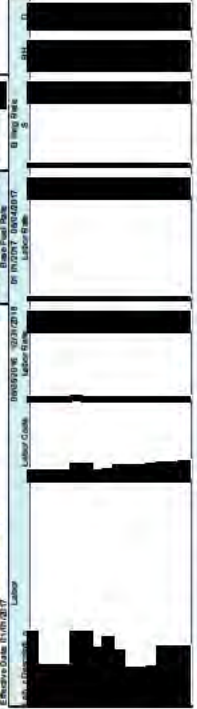


**RATES FOR A.PCO - WEST VIRGINIA**

02/28/18  
ROW Vegetation Management Rate Sheet  
Contract No. 11112181  
BY NUTLEY INVAASION



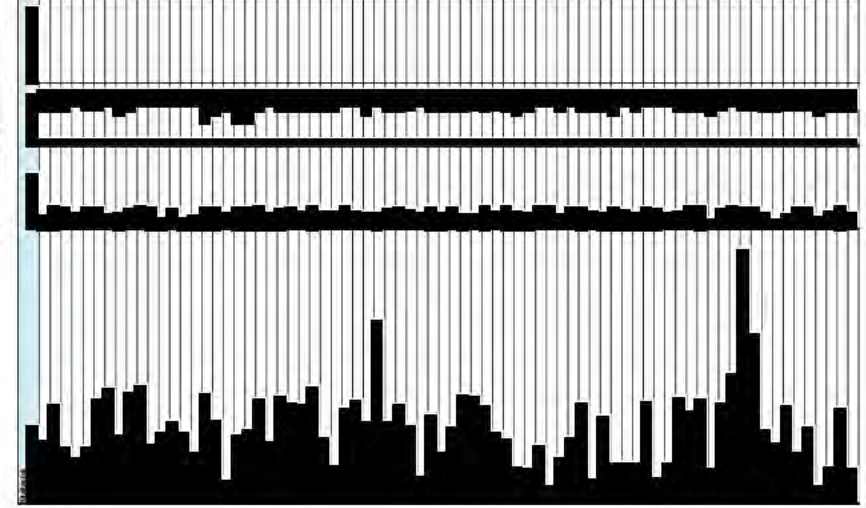
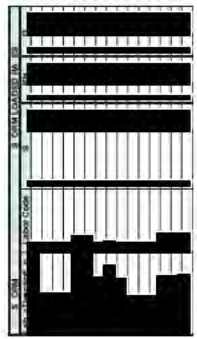
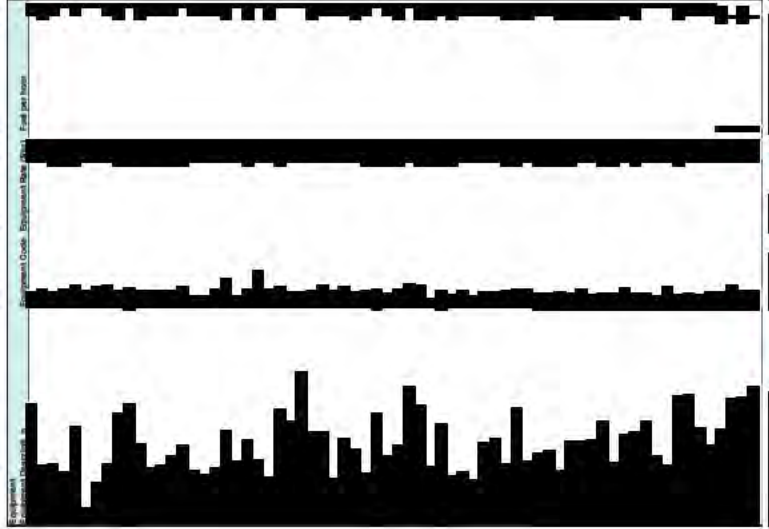
Lower Increases the Line of A.P.C.O.  
2018 - 2018  
Fuel Cost Work  
Maintenance Rate 1





**RATES FOR ARCO - VIRGINIA CONTRACT**

02/27/2016  
ROW Vegetation Management Rate Sheet  
Effective Date: 01/01/2016

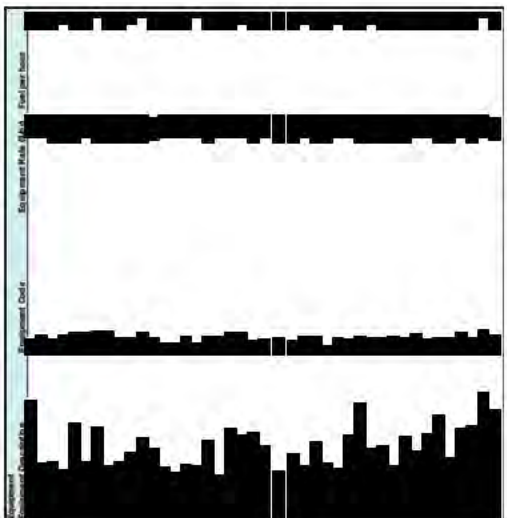


**RATES FOR AEP/OH TRANS NORTH**

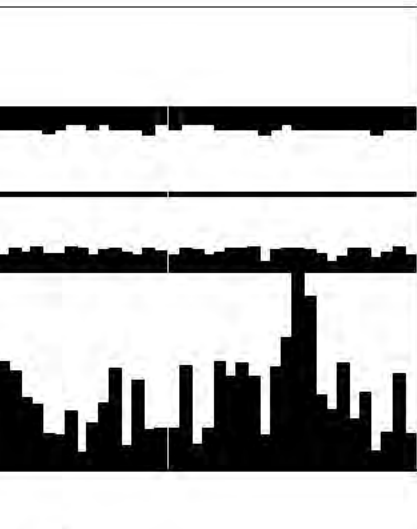
| Category                         | Rate    |
|----------------------------------|---------|
| Labor & services for Line of AEP | 1000000 |
| ROW Vegetation Management        | 1000000 |
| ROW Construction                 | 1000000 |
| ROW Maintenance                  | 1000000 |
| ROW Utilities                    | 1000000 |
| ROW Other                        | 1000000 |
| ROW Total                        | 6000000 |

| Category  | Rate    |
|-----------|---------|
| Labor     | 1000000 |
| Material  | 1000000 |
| Equipment | 1000000 |
| Other     | 1000000 |
| Total     | 4000000 |

| Category  | Rate    |
|-----------|---------|
| Labor     | 1000000 |
| Material  | 1000000 |
| Equipment | 1000000 |
| Other     | 1000000 |
| Total     | 4000000 |



| Category  | Rate    |
|-----------|---------|
| Labor     | 1000000 |
| Material  | 1000000 |
| Equipment | 1000000 |
| Other     | 1000000 |
| Total     | 4000000 |

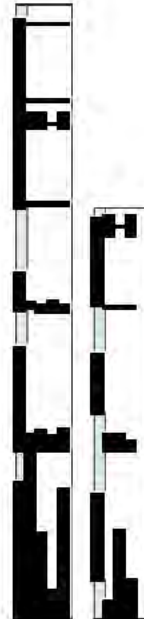
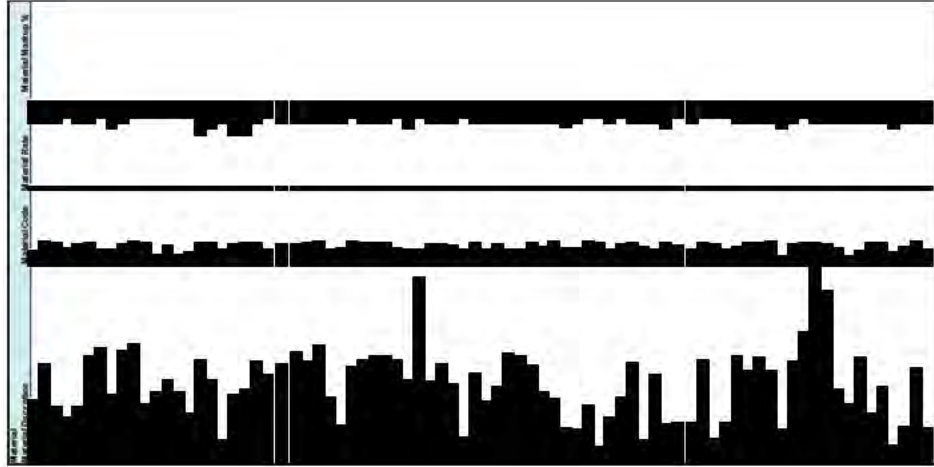
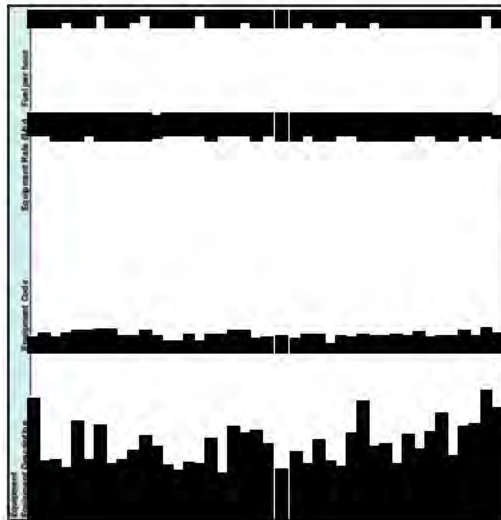


**RATES FOR AEP/OH TRANS CONTROL MGR**

| Category                        | Rate |
|---------------------------------|------|
| Site Fee                        | 0.00 |
| Labor Expenses (in Line of AEP) | 0.00 |
| ROW Vegetation Management       | 0.00 |
| Structure Make                  | 0.00 |
| Other                           | 0.00 |
| Material                        | 0.00 |
| Equipment                       | 0.00 |
| Subcontractor                   | 0.00 |
| Permit                          | 0.00 |
| Travel                          | 0.00 |
| Insurance                       | 0.00 |
| Other                           | 0.00 |
| Contingency                     | 0.00 |
| Profit                          | 0.00 |

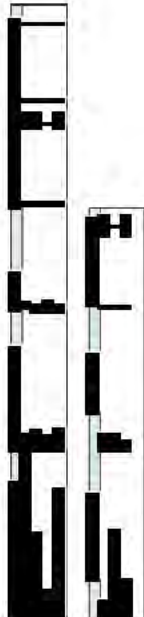
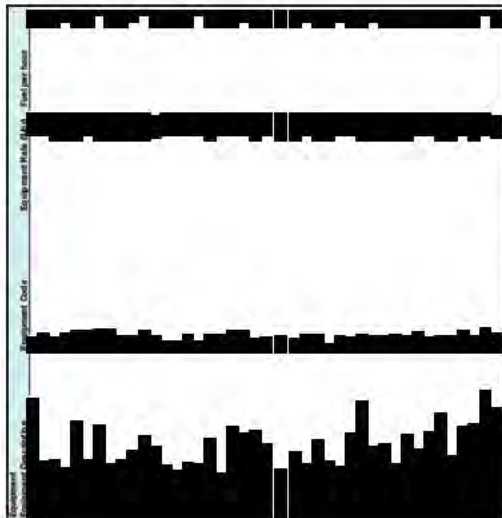
| Category      | Rate |
|---------------|------|
| Labor         | 0.00 |
| Material      | 0.00 |
| Equipment     | 0.00 |
| Subcontractor | 0.00 |
| Permit        | 0.00 |
| Travel        | 0.00 |
| Insurance     | 0.00 |
| Other         | 0.00 |
| Contingency   | 0.00 |
| Profit        | 0.00 |

| Category      | Rate |
|---------------|------|
| Labor         | 0.00 |
| Material      | 0.00 |
| Equipment     | 0.00 |
| Subcontractor | 0.00 |
| Permit        | 0.00 |
| Travel        | 0.00 |
| Insurance     | 0.00 |
| Other         | 0.00 |
| Contingency   | 0.00 |
| Profit        | 0.00 |



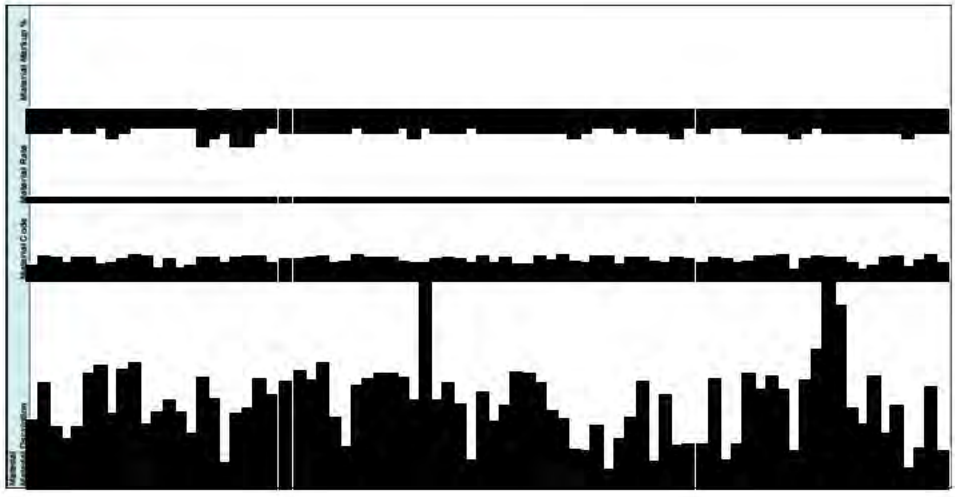
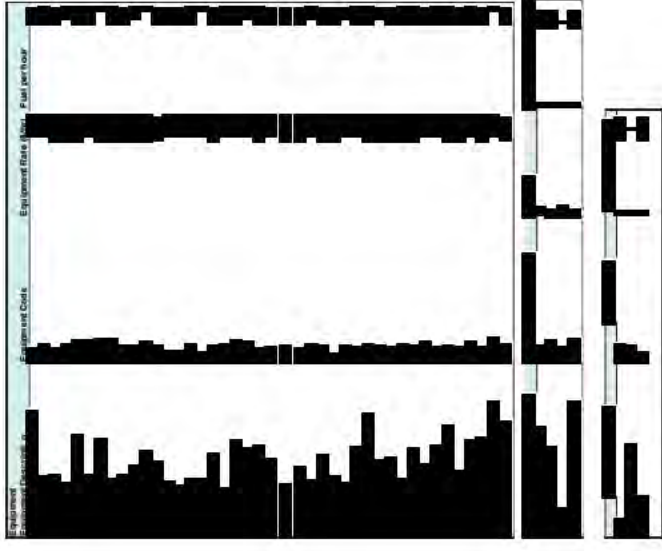
**RATES FOR AEP/DH TRANS - Solid**

| City Code | Line Item | Description | Rate | Unit     |
|-----------|-----------|-------------|------|----------|
| 01        | 033.0208  | LABOR       | 0.00 | PER HOUR |
| 01        | 033.0209  | EQUIPMENT   | 0.00 | PER HOUR |
| 01        | 033.0210  | MATERIALS   | 0.00 | PER HOUR |
| 01        | 033.0211  | OVERHEAD    | 0.00 | PER HOUR |
| 01        | 033.0212  | PROFIT      | 0.00 | PER HOUR |



**RATES FOR AEP OH TRANSSCO**

5277499  
 ROW Vegetation Management  
 District Code: 0017  
 LANS  
 Labor/Weeks (1 Hour of 60%)  
 2016 Use BCI  
 User Cost Work Rate per Hour  
 3  
 04/01/2016 - 03/31/2017  
 04/01/2016 - 03/31/2017  
 04/01/2017 - 03/31/2017

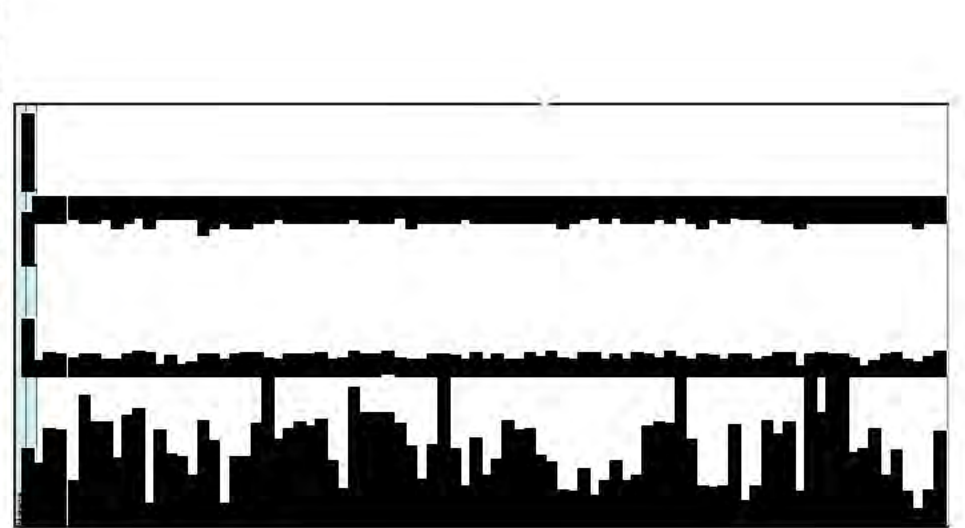
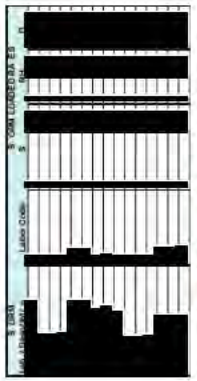
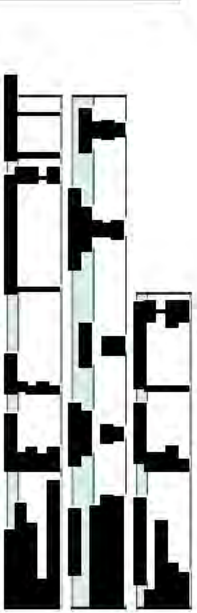
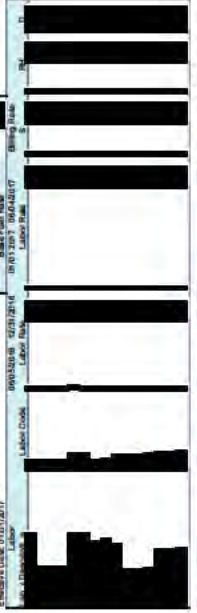






BATES FOR KGRCC

REGISTRATION  
KGRCC  
Bates Management Rate Sheet  
Marked Date: 12/11/2017



**RATES FOR WPCO.**

02576599  
 ROW Vegetation Management R  
 Effective Date: 01/01/2017

| Labor Increase (In Lieu of KPI) | 2016 June ECI | Unit Cost Work Manhour Rate | Base Fuel Rate |
|---------------------------------|---------------|-----------------------------|----------------|
|                                 |               | \$                          |                |

| Labor             | 06/05/2016 - 12/31/2016 | 01/01/2017 - 06/04/2017 | Billing Rate | DT |
|-------------------|-------------------------|-------------------------|--------------|----|
| Labor Description | Labor Rate              | Labor Rate              | ST           | RH |

| STORM             | ST         | RH | DT |
|-------------------|------------|----|----|
| Labor Description | Labor Code |    |    |

| Material | Material Description | Material Code | Material Rate | Material Markup % |
|----------|----------------------|---------------|---------------|-------------------|
|          |                      |               |               |                   |

| Equipment | Equipment Description | Equipment Code | Equipment Rate (\$/hr) | Fuel per hour |
|-----------|-----------------------|----------------|------------------------|---------------|
|           |                       |                |                        |               |

| Supplemental Task Description | Supplemental Task Code | Unit Type | Outside Service Rate (\$/unit) | Material Rate (\$/unit) | Material Markup % |
|-------------------------------|------------------------|-----------|--------------------------------|-------------------------|-------------------|
|                               |                        |           |                                |                         |                   |

| Expense Description | Expense Code | Expense Rate (\$/unit) |
|---------------------|--------------|------------------------|
|                     |              |                        |

**CONTRACT LETTER FOR  
CONTRACT NO. 026987430000X103**

This Contract No. 026987430000X103 (“Contract”) is made to be effective as of the 1<sup>st</sup> day of May 2014 (the “Effective Date”) by and between **American Electric Power Service Corporation**, a New York corporation, **as agent for the operating companies of the American Electric Power System** (“Owner”), with offices at 1 Riverside Plaza, Columbus, Ohio 43215 and **The Davey Tree Expert Company**, (“Contractor”), with offices at 1500 North Mantua Street, Kent, Ohio 44240.

**1. DESCRIPTION OF SERVICES**

Subject to the terms and conditions hereof, Contractor agrees to furnish to Owner on an as-needed basis contract utility foresters, work planners and inspectors, as further described in Exhibit C. This Contract covers only such services as may be assigned by Owner to Contractor, with no guarantees of a minimum volume of services.

**2. ENGAGEMENT PROCESS**

This Contract is intended to be a master agreement under which Owner may request services to be performed by Contractor on an as needed basis. The parties agree the execution of this Contract does not authorize Contractor to begin performance of services. Services shall be requested by Owner either by verbal, written or electronic request (“Work Request”). All verbal requests shall be followed by a written confirmation. Each Work Request shall contain a detailed description of the requested services, the location, start and completion dates, pricing method, points of contact and other pertinent information.

Upon receipt of a Work Request, Contractor shall promptly perform the services described in said Work Request. Each Work Request shall be governed by the terms, conditions and provisions of this Contract, whether or not such statement is made or included in any individual Work Request.

The parties agree that any terms and conditions inconsistent with, additional to, or different than this Contract that may be preprinted or attached to a quote, acknowledgement, Work Request, or any other document that the parties may use for the ordering of services hereunder shall not apply and each party hereby rejects all such terms and conditions.

The execution of this Contract does not constitute an exclusive relationship between the parties. Owner reserves the right, at any time, to use its own forces, equipment, tools, conveyances and materials or those of another contractor to perform the same or similar services.

**3. CONTRACT DOCUMENTS, INCORPORATION AND PRIORITY**

Contractor and Owner agree that Work will be performed in accordance with the following Contract documents, attached hereto unless otherwise noted, incorporated herein and listed in their order of priority in the event of a conflict between the documents:

- a. This Contract Letter;



- b. AEP General Terms and Conditions for Labor and Services, March 2009 Rev. 2 dated 7/12, as modified by the Agreed Exceptions dated 5/8/2014 ("General Terms"), AEP Supplementary Terms and Conditions for Forestry Contracts dated 06/24/2011, as modified by the Agreed Exceptions dated 5/8/2014, and AEP Security & Aviation Aircraft Deconfliction Policy and Procedures, Version 1.0 dated 07/15/2013, collectively designated as Exhibit A;
- c. Transmission Vegetation Management Program, Rev. 12 effective 07/31/2013 and AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations dated 05/14/2009, collectively designated as Exhibit B;
- d. Requirements and Position Descriptions for Forestry Support Services dated April 11, 2014, designated as Exhibit C;
- e. Contractor's Rates for AEP East and AEP West, collectively designated as Exhibit D;
- f. Work Request(s).

#### **4. TERM**

The term of this Contract shall commence on the Effective Date and shall remain in full force and effect through April 30, 2019, unless earlier terminated in accordance with this Contract. If this Contract is terminated or expires prior to services under a Work Request being completed, unless the parties agree otherwise in a signed writing, the services under such Work Request shall be completed pursuant to the terms of this Contract.

#### **5. PRICING AND PAYMENT TERMS**

The parties agree that Contractor shall be compensated for the satisfactory performance of services in accordance with the rates contained in Exhibit D.

Contractor's labor rates shall be held firm through April 30, 2016. Beginning May 1, 2016, and on May 1<sup>st</sup> each year thereafter, Contractor's labor rates will be adjusted using the Bureau of Labor Statistics, U.S. Department of Labor, Employment Cost Index (ECI) for Total Compensation (not seasonally adjusted), for Private Industry Workers, Construction, Extraction, Farming, Fishing and Forestry. The percent change for the 12-months ended in January of the year of the adjustment will be multiplied by the current labor rates to determine the adjusted labor rates.

Contractor's equipment rates shall be held firm through April 30, 2019.

#### **6. FUEL ADJUSTMENTS**

The base fuel price is \$4.00 per gallon ("Base Fuel Price"). The weekly fuel price is the state average for regular grade unleaded gasoline taken from the American Automobile Association's website ("Weekly Fuel Price"). When preparing the weekly invoices, if that week's Weekly Fuel Price differs from the Base Fuel Price by more than ten (10) cents, a fuel adjustment for each piece of equipment will be calculated by using the following formula:

Fuel adjustment = [(Weekly Fuel Price) – (Base Fuel Price)] x gallons/hour x Equipment hours billed



The gallons/hour figure is taken from the Contractor's Rate Sheets in Exhibit D. The sum of the fuel adjustments for each piece of equipment used that week shall be added to or subtracted from that week's invoice amount.

## 6. INVOICING REQUIREMENTS

Contractor shall create timesheets in Owner's Right-of-Way Management ("RWM") software system, or other applicable system as designated by Owner, weekly, in arrears. Retention will not be withheld on Contractor invoices.

## 7. NOTICES

In accordance with Article 33 of the General Terms, the representatives of the parties for receipt of notices are:

For Owner: Sonia Pickens, Contract Analyst  
 1 Riverside Plaza, 9<sup>th</sup> floor  
 Columbus, OH 43215  
 614-716-1357 / srvaughan@aep.com

For Contractor: Jack McCabe, Regional Operations Manager  
 1500 N. Mantua St.  
 Kent, OH 44240  
 330-673-5685 x8083 / jack.mccabe@davey.com

## 8. OPERATION CONTACTS

| Name          | Role                         | Email             | Phone        |
|---------------|------------------------------|-------------------|--------------|
| Sonia Pickens | Contract Analyst             | srvaughan@aep.com | 614-716-1357 |
| Walter Sherry | Manager, Forestry Operations | washerry@aep.com  | 614-716-2772 |

### DISTRIBUTION:

| Name            | Role  | Email               | Phone        |
|-----------------|---|---------------------|--------------|
| Phil Ross       | Appalachian Power Company (APCO) Supervisor             | ptross@aep.com      | 304-746-2795 |
| Marc Labrie     | Indiana-Michigan Power Company (I&M) Supervisor         | jmlabrie@aep.com    | 260-408-3435 |
| Mark Jackson    | Kentucky Power Company (KPCO) Supervisor                | mejackson@aep.com   | 606-437-3818 |
| Mike Chedester  | Ohio Power Company (OPCO) Supervisor                    | machedester@aep.com | 740-695-7545 |
| Richard Simpson | Ohio Power Company (OPCO) Supervisor                    | rasimpson@aep.com   | 740-774-7048 |
| Danny Salter    | Southwestern Electric Power Company (SWEPCO) Supervisor | dssalter@aep.com    | 318-673-3764 |





|                |  |                  |              |
|----------------|--|------------------|--------------|
| Richard Bewley | Public Service Company of Oklahoma (PSO) Supervisor                | rdbewley@aep.com | 918-599-2636 |
| Grant Ehlen    | Texas Central Company & Texas North Company (AEP Texas) Supervisor | gsehlen@aep.com  | 361-881-5641 |

**TRANSMISSION:**

| Name           | Role                             | Email             | Phone        |
|----------------|----------------------------------|-------------------|--------------|
| Richard Karber | East Supervisor (IN, MI, OH, WV) | rikarber@aep.com  | 260-897-8090 |
| Rick Mowbray   | East Supervisor (KY, TN, WV, VA) | drmowbray@aep.com | 540-427-3627 |
| Jim Crusier    | West Supervisor (TX, LA, OK, AR) | jgcruser@aep.com  | 361-881-5738 |

**9. MISCELLANEOUS**

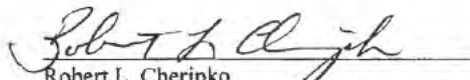
Contractor agrees:

- a. to maintain with Owner throughout the term of the Contract a current certificate of insurance (COI) in accordance with Article 16.0 of the General Terms. COI submittals should be either mailed or emailed to the Contract Analyst noted in Section 7;
- b. to provide Owner with notice in the event Contractor's Interstate Experience Modification Rating (EMR) exceeds 1.0 during the term of the Contract.

All capitalized terms not defined herein are as defined in the General Terms.


**IN WITNESS WHEREOF**, the parties hereto have caused this Contract to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Effective Date.

**American Electric Power Service Corporation**  
 as agent for the operating companies of the  
**American Electric Power System**

  
 Robert L. Cheripko  
 Managing Director Customer Operations

May 27, 2014  
 date

<sup>2014</sup>  
<sup>5/22/14</sup>  
 Davey Resource Group, A Division of  
**The Davey Tree Expert Company**

  
 Jack McCabe  
 Regional Operations Manager

May 22, 2014  
 date



## **Agreed Exceptions between AEPSC and Davey Resource Group May 8, 2014**

**The following sections of the General Terms are modified to read as follows:**

17.2 TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COST AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, TO THE EXTENT CAUSED BY THE NEGLIGENCE OF CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR BASED ON A BREACH OF THIS CONTRACT BY CONTRACTOR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO THE EXTENT ANY LIABILITIES ARISENG FROM OWNER'S SOLE NEGLIGENCE. ~~TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE CONSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.~~

17.4 CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT, IF OWNER IS THE PREVAILING PARTY IN SUCH ENFORCEMENT LITIGATION.

18.1 Add as an additional sentence:

Except for Contractor's indemnification obligations under this Contract or for claims based on gross negligence or willful misconduct, Contractor's liability to Owner arising from or related to Contractor's performance or non-performance under this Contract shall not exceed \$20 million per incident.

**The following section of the AEP Supplementary Terms and Conditions for Forestry Contracts is modified to read as follows:**

3.3.1 When Contractor has eleven (11) or more total employees on ~~various~~ any single projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews ~~weekly~~ at an appropriate frequency to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.



# ***AMERICAN ELECTRIC POWER***

## **AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES**

**March 2009 Rev. 2 dated 7/12**



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## AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES

### 1.0 DEFINITIONS

- 1.1 Business Day: "Business Day" means any calendar day, other than a Saturday or Sunday or a calendar day on which U.S. commercial banking institutions are authorized or required by law to close.
- 1.2 Change Order: "Change Order" means a written order as defined and issued in accordance with Article 12.0.
- 1.3 Contract: "Contract" means collectively the Contracting Instrument and all documents referenced in the Contracting Instrument and any Change Orders, amendments or addenda.
- 1.4 Contract Price: "Contract Price" means the price to be paid to the Contractor for the performance of Work as set forth in the Contracting Instrument.
- 1.5 Contracting Instrument: "Contracting Instrument" means the contractual document that identifies the parties, the nature of the Work, the Contract Price, documents to be included as part of a Contract, and other matters relating to a Contract. The Contracting Instrument may be in the form of a contract letter, blanket purchase order, purchase order or other similar documents.
- 1.6 Contractor: "Contractor" means the entity contracting with Owner for the performance of Work.
- 1.7 Direct Cost: "Direct Cost" means the actual costs and charges incurred and payments made by Contractor, its Subcontractors, for Site equipment, materials, services and labor (including payroll burden and expenses) which are directly attributable to the performance of Contractor's Work hereunder. Direct Cost includes Contractor's home office or Site labor to the extent Contractor's home office or Site labor is directly assignable to the Work which must be demonstrable under the circumstances. Direct Cost shall not include corporate, general and administrative costs including home office functions, sales, marketing, accounting, human resources, information technology, payroll, profit, research, development, quality assurance and control, purchasing, safety, management, administration, warranties, insurances, off-Site or other unabsorbed costs.
- 1.8 Final Acceptance: "Final Acceptance" means Owner's determination that the Work has been completed in accordance with the Contract requirements.
- 1.9 Initial Acceptance: "Initial Acceptance" means Owner's determination prior to final inspection and testing that the Work conforms to the Contract requirements for purposes of receipt.
- 1.10 Owner: "Owner" means any one or more of the companies of the American Electric Power System as may be specified in the Contract Instrument.
- 1.11 Site: "Site" means Owner's property or such other premises (including adjacent bodies of water and property owned or controlled by a third-party) upon which the Work is to be performed.
- 1.12 Subcontractor: "Subcontractor" means vendors, suppliers, consultants, and subcontractors of any tier, materialmen, professionals, laborers, and all other persons providing equipment, materials or services directly or indirectly to Contractor in connection with the Work.
- 1.13 Work: "Work" means all of Contractor's obligations under the Contract.





- 2.8 Contractor shall cooperate with Owner and others working at or near the Site. Contractor shall promptly report to Owner any defects in the work of others which affects the Work. Failure to report such defects constitutes acceptance of the conditions by Contractor. Contractor shall properly fit, connect and coordinate its Work with that of Owner and other contractors.
- 2.9 Contractor shall keep all of its work areas free from trash and debris, and keep its work areas "broom clean" on a continuous basis.
- 2.10 Contractor shall secure and protect its materials, tools, equipment and the Work, including Owner-provided materials and equipment.
- 2.11 Contractor is responsible for the proper execution of the Work with respect to any base lines and bench marks established by Owner.
- 2.12 If the Work is subject to prevailing wage requirements, Contractor agrees to comply with such requirements.
- 2.13 Contractor, its Subcontractors, and their respective employees and agents involved in the Work shall adhere to the provisions contained in Owner's Code of Business Conduct which can be found at Owner's website.

3.0 TERM AND EFFECTIVE DATE

- 3.1 The Contract shall commence as of the effective date and, unless earlier terminated as provided in Article 27.0, shall terminate on the termination date set forth in the Contract. Unless specified elsewhere in the Contract, the effective date of the Contract shall be the earlier of the date on which Contractor begins performance hereunder or the date of the latter signature on the Contract.

4.0 RELATIONSHIP OF THE PARTIES

- 4.1 Contractor and all of its employees and Subcontractors are, with respect to Owner, independent contractors. Contractor will be solely responsible for the supervision, direction, and control of its employees and Subcontractors. Contractor is responsible for the payment of all compensation, benefits, and employment taxes with respect to the Contractor's employees.

5.0 ASSIGNMENT AND SUBCONTRACTING

- 5.1 Contractor shall not assign or otherwise dispose of the Contract, or any obligations hereunder, without the written consent of Owner. Any assignment or disposal without the written consent of Owner shall be null and void.
- 5.2 Prior to entering into any subcontract, Contractor shall submit to Owner a subcontractor data sheet that includes the name and address of the Subcontractor and the scope of work proposed to be included under such subcontract. Within five (5) Business Days of receipt of a Subcontractor data sheet, Owner may reject such Subcontractor without cost or contract extension by giving written notice of such rejection to Contractor.
- 5.3 Contractor is responsible for the selection of any Subcontractor and for the Subcontractor's proper performance of the Work assigned to it. If the work of a Subcontractor is not in compliance with the Contract requirements, Contractor shall take immediate steps to bring the Subcontractor's work into compliance and, at Owner's written request, terminate its contractual relationship with the Subcontractor as it relates to the Work at no cost to Owner.

6.0 LABOR RELATIONS

- 6.1 Contractor shall comply with any project, national or local labor agreements that are applicable to the Work or Site. Contractor shall cooperate with Owner and other contractors in establishing and maintaining labor work rules and practices.
- 6.2 When the Work is performed by building and construction trades labor, a pre-job conference shall be held with local labor representatives prior to starting Work. Owner shall be afforded the opportunity to attend and participate in pre-job conferences.
- 6.3 Contractor shall provide immediate notice to Owner of any actual or potential labor dispute that may delay the timely, efficient and productive performance of the Work.
- 6.4 Contractor shall inform and cooperate with Owner on labor matters. Contractor shall consult with Owner prior to rendering its decision(s) on labor matters that may impact the timely, efficient and productive performance of the Work.
- 6.5 Contractor shall exercise its management rights contained in applicable labor agreements to establish, maintain, and enforce work rules conducive to timely, efficient, productive and harmonious work operation. Contractor shall take the necessary steps available to resolve grievances, jurisdictional disputes, or other violations of collective bargaining agreements.

7.0 SAFETY AND SECURITY

- 7.1 Contractor shall perform the Work in a safe and careful manner, provide first aid facilities and transportation, and use such safety devices and methods as are necessary to protect its employees, agents, Subcontractors, Owner's employees and agents, other contractors and the public from bodily injury and property damage.
- 7.2 Contractor shall comply with and enforce all laws, rules and regulations applicable to safety and health standards, including, but not limited to, the Occupational Safety and Health Act of 1970 (OSHA) and any revisions of OSHA or successor legislation.
- 7.3 Contractor shall comply with project and Site safety and security rules and all procedures issued by Owner, provided that such rules and procedures do not conflict with OSHA or other safety laws, rules or regulations. Contractor shall assign a competent person at all times to manage, coordinate and enforce its safety program during performance of the Work.
- 7.4 Contractor shall provide Owner with Material Safety Data Sheets (MSDS) for all applicable materials prior to delivery to Owner's Site.
- 7.5 Contractor shall obtain Site permits or approval from Owner for its vehicles, any excavation, use of explosives, access to restricted areas, use of Owner's Equipment, tools and facilities, and other similar activities.
- 7.6 Owner will arrange all necessary clearances on energized equipment, electrical and communications circuits, piping systems or other operational equipment. Contractor shall notify Owner requesting the clearances prior to the scheduling of such Work. Contractor shall comply with Owner's clearance permit system regarding tagout and lockout of electrical and mechanical systems and other equipment.
- 7.7 Contractor shall fully inform Owner in writing regarding the types, quantities and use of any hazardous materials brought on the Site; the types and quantities of hazardous wastes being generated from the Work; and Contractor's program for proper storing, handling and disposal of such materials in a safe and secure manner.

[The page contains multiple paragraphs of text that are almost entirely illegible due to extreme blurring and low resolution. The text appears to be a list or series of entries, possibly numbered, but the content cannot be discerned.]

its expense, must perform a background investigation that does meet Owner's certain specific requirements on each individual designated by Contractor to perform Work, or is performing Work on behalf of Contractor, for Owner (referred to herein for purposes of this Article, as an "individual"). Notwithstanding anything to the contrary stated herein, Owner reserves the right to conduct a background investigation on each individual at Contractor's expense.

- 7.15.2 Owner's certain specific requirements of background investigations include the following: (i) determination of whether an individual has been convicted of a felony crime in each state where the individual has resided during the past seven years; (ii) performance of the background investigation at the state level (in other words, to only search the records of the county in which the individual has resided during the past seven years is not a sufficient background investigation); and (iii) if the individual is to operate a motor vehicle while performing Work for Owner, then a state operator's license abstract must be completed in the states where the individual has been licensed as a vehicle operator during the past seven years.
- 7.15.3 If any background investigation reveals or indicates that an individual has been convicted of a felony crime, then the Contractor must notify the Owner prior to the individual commencing Work. Owner in its sole discretion shall have the option of barring from any Work Site any individual who has a reported felony conviction. Owner may audit or review specific Contractor screening files to ensure compliance with the Contract.
- 7.15.4 If an individual requires unescorted access to Owner's critical cyber assets, then Owner will conduct its own background investigation, which will include a Social Security Number verification. Additional specific provisions or requirements related to any Owner conducted background investigation pursuant to this Section 7.15.4 will be communicated to Contractor prior to implementation of such background investigation.
- 7.15.5 Contractor shall not perform any screening activities that violate the federal Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964 or any other applicable law in any circumstances. Contractor shall ensure that the substance and manner of any and all background investigations performed by Contractor conform fully to applicable law.
- 7.16 "Personally Identifiable Information" or "PII" means any information to which Contractor is provided access that could identify an individual either directly or indirectly including, without limitation to the individual's name, credit card numbers, social security number, biometric, bank account numbers, passport numbers, computer passwords or health, financial or employment information and other individual confidential information.
- 7.16.1 To the extent that Work under the Contract requires Contractor to be given access to PII gathered and/or maintained by or on behalf of Owner, or in the event Contractor acquires access to or encounters any PII during performance of the Work, Contractor shall after receipt thereof, treat such PII as confidential and safeguard such PII from unauthorized use and disclosure. Upon request of Owner, Contractor shall have its employees execute a confidentiality agreement protecting PII. Contractor agrees not to appropriate such PII for its own use or to disclose such PII to third parties unless specifically authorized by Owner in writing. Contractor shall ensure that its employees will not discuss, divulge or disclose any such PII to any person or entity except those persons directly concerned with and only to the extent necessary to complete the performance of the Work. Contractor shall access, use and process PII and other data on behalf of Owner only for the purposes specified in the Contract.

- 7.16.2 Contractor shall comply with (i) NERC Reliability Standards as applicable, including without limitation, those relating to Critical Infrastructure Protection, (ii) Owner's security standards, and (iii) such further instructions as Owner may provide regarding the processing of such PII. Contractor shall inform Owner promptly if it has reason to believe that applicable law (or changes in applicable law) prevents Contractor from fulfilling the obligations relating to treatment of PII or other data under Owner's security standards and/or the Contract.
- 7.16.3 To the extent permitted by law, Contractor shall notify Owner promptly and act only upon Owner's instruction concerning: (a) any request for disclosure of PII or other data by law enforcement or other governmental authority; (b) any request by law enforcement or other governmental authority for information concerning the processing of PII or other data in connection with the Contract; or (c) any request received directly from an individual concerning his/her PII.
- 7.16.4 Contractor may not store PII on computers, mobile devices, including but not limited to cellular telephones and/or personal digital assistants, servers and/or storage devices including removable media (any of which, hereinafter known as a "Computer"), unless required for the performance of Work. Any such information must be deleted from a Computer, in a manner that ensures that it cannot be accessed or read, as soon as such storage is no longer required for the performance of Work.
- 7.16.5 Upon termination of the Contract or upon Owner's request, Contractor must promptly (a) return all PII in written form to Owner, and (b) delete all PII in Contractor's possession or control (on computer or in whatever other form or media) in a manner that ensures that this information cannot be accessed or read.
- 7.16.6 Contractor shall administer a monitoring process to ensure compliance with Section 7.16 and the related subsections hereof, promptly report any breaches to Owner, and implement immediate, appropriate corrective actions to contain and prevent recurrence. Contractor shall report to Owner immediately upon discovery of a real or suspected loss of PII. In the event of a breach of this provision or the occurrence of any other event regarding PII that requires notification under applicable law, Contractor agrees to assume responsibility for informing all such individuals in accordance with applicable law.
- 7.16.7 In addition to any remedy available to Owner under the Contract, Contractor acknowledges that any breach of Section 7.16 or the related subsections hereof by Contractor or its Subcontractors may subject Contractor to civil and criminal penalties. Contractor shall include the full text of Section 7.16 and the related subsections 7.16.1 through 7.16.7 in all appropriate subcontracts. However, including such provision in the subcontracts shall not relieve Contractor of its obligation to ensure compliance with the provisions of Sections 7.16.1 through 7.16.7.

## 8.0 MATERIALS

- 8.1 All Contractor-furnished materials, equipment and related products (referred to in this Article 8.0 as "Materials"), which are to be installed shall be new and meet the requirements of all applicable codes. Materials which will not become a part of the permanent installation are not required to be new. Owner reserves the right to reject materials which have not been previously used but which have been in storage for an unreasonable period of time. Title to and risk of loss of the Materials shall pass to Owner upon Final Acceptance of the Work. Title to the Materials shall be free and clear of all liens and encumbrances.

- 8.2 Contractor shall not substitute Materials specified in the Contract unless authorized by Owner in writing. Unless substitution has been so authorized, Contractor shall, at its expense, remove and replace any improperly substituted material.
- 8.3 Upon Owner's request, Contractor shall, at its expense, submit to Owner samples of Contractor-furnished materials. Contractor must obtain Owner's written approval before performing Work involving the use of materials for which samples have been requested. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes. Materials used shall conform to the approved samples. Contractor shall remove and replace nonconforming materials at its expense.

9.0 INSPECTION AND ACCEPTANCE

- 9.1 Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed conforms to the Contract requirements. Owner reserves the right to review and approve the adequacy of Contractor's inspection system. Contractor shall provide all quality control and quality assurance program information requested by Owner.
- 9.2 Owner shall have free access to the Work for inspection purposes. Owner's inspection, receipt or Initial Acceptance of the Work shall not relieve Contractor of its obligation to comply with the terms of the Contract.
- 9.3 Each party shall bear its own expenses in performing inspections, except that (a) Owner may use Contractor's facilities, ladders and scaffolds to perform inspections of the Work; (b) Contractor shall pay Owner's expenses in re-inspecting Work which was rejected as non-conforming to the Contract requirements in an earlier inspection; (c) Contractor shall pay the costs of uncovering and re-covering Work for Owner's inspection if Contractor failed to give Owner reasonable notice that the Work was ready to be covered; and (d) prior to Final Acceptance, if Owner requests an inspection of Work already completed which requires removing and tearing out Work, and the Work is found to be materially defective, Contractor shall pay the expenses of inspection and reconstruction, but if the Work is found to be in conformance with the Contract requirements, Owner shall pay the expenses of inspection and reconstruction.
- 9.4 Owner will not pay for defective work. Contractor shall repair or replace all defective work at its expense. Contractor shall promptly remove from the Site any Contractor-furnished materials that do not comply with the requirements of the Contract. If Owner-furnished materials have been used in any defective work, the cost of such materials shall be backcharged to Contractor.
- 9.5 Owner shall have the right to take possession of or use any part of the Work. Owner's possession or use shall not constitute Initial Acceptance or Final Acceptance of the Work.
- 9.6 Unless otherwise provided in the Contract, Final Acceptance by Owner shall be made as soon as practicable after all Work has been completed and inspected. Any part of the Work not rejected by Owner following Final Inspection shall be deemed to have achieved Final Acceptance.

10.0 SCHEDULE

- 10.1 Contractor shall perform the Work to meet the schedule date(s) set forth in the Contract. Contractor shall not commence Work until authorized by Owner to do so.
- 10.2 In a format acceptable to Owner, Contractor shall develop, update, maintain and provide to Owner a written schedule for execution of the Work. The schedule shall be time scaled, complete, and accurate in detail depicting Contract milestone dates, work activities and durations. Upon review and approval by Owner, this schedule shall become the Contract schedule. Updates to the Contract schedule shall

be provided to Owner on at least a monthly basis. Updates shall depict actual progress measured against planned progress.

- 10.3 Contractor shall notify Owner within 24 hours of the first knowledge that any completion date(s) will not be met and shall, within five (5) Business Days thereafter, submit a detailed program depicting the plans and actions being taken to regain the lost time. The notice shall not limit any other rights or remedies afforded Owner under the Contract or by law.

11.0 TERMS OF PAYMENT

- 11.1 Except as otherwise provided in the Contract, the following terms of payment shall apply:

11.1.1 The Contract Price set forth in the Contract shall constitute full and complete payment for all Work.

11.1.2 Contractor shall submit invoices with proper documentation to Owner for the Work completed or for milestones achieved during the prior month. Owner may withhold all or any part of payment in an amount necessary to protect Owner from loss due to the occurrence, or imminent occurrence, of (i) Contractor's breach or failure to perform in accordance with the Contract, (ii) defective Work, (iii) Contractor's failure to pay any Subcontractor, (iv) other claims by Owner against Contractor, including indemnity claims, and (v) damages for delay or any agreed upon liquidated damages.

11.1.3 Owner shall pay 90% of each properly submitted and accepted invoice within forty five (45) days of receipt. The release of retention shall become due and payable forty five (45) days after the date of Final Acceptance of the Work.

11.1.4 Each invoice shall contain a statement that all bills for material and labor relating to the Work have been paid in full by Contractor, and there are no unpaid bills for which a lien could be filed. If requested by Owner, Contractor shall provide evidence of such payments. The final invoice for the Work shall be accompanied by a satisfactorily completed Affidavit of Completion in the form attached as Exhibit 1. Payment of the final invoice and retention constitutes a full and final release of Owner from all claims, damages, liabilities and obligations under the Contract.

- 11.2 Contractor shall promptly pay all of its Subcontractors.

12.0 CHANGES IN WORK AND EXTRA WORK

12.1 Change in Work

12.1.1 "Change Order" means a written order issued in accordance with this Article 12.0 documenting an addition to, deletion from, or other modification to the Work, including a change in the scope of Work, the Contract Price, the payment schedule, the completion dates, or the schedule for the Work.

12.1.2 Owner may issue a Change Order: (i) at Owner's option, or (ii) if requested by Contractor due to the occurrence of an event that entitles Contractor to a Change Order as determined by Owner.

12.1.3 If Owner issues a Change Order, Contractor shall perform the changed Work in accordance with the terms of the Contract and the issued Change Order.



- 12.1.4 No order, statement or other conduct of Owner shall be treated as a change in Work until such change is authorized in writing by Owner.
- 12.1.5 Contractor shall not be entitled to a Change Order for conditions such as, but not limited to, (i) work which is of such a nature as to be normally included in the Work or is reasonably inferable from the Contract; (ii) any errors, omissions, non-performance, negligence, deficiencies or improper or defective work on the part of Contractor (including miscalculations, incorrect estimates, or other errors in Contractor's proposal for the Work); (iii) changes relating to refinement, minor correction and detailing of the Work or any part of the Contract; or (iv) other unallowable claims such as cost impacts not due to Owner and cumulative impact claims.
- 12.1.6 With respect to Contractor claims for additional compensation, Owner shall pay only incremental Direct Costs associated with the proposed changes and only to the extent that Contractor can demonstrate that the changes actually increased its costs of performance. Any claims for additional compensation based on a change to the Work or extra work must be material in nature, and Contractor must provide full documentation supporting all elements of such claims. For a reduction in the scope of Work or a change which reduces Contractor's costs, the Contract Price shall be adjusted downward. The payment for changes to the Work shall be complete compensation to Contractor for performing such changes, including any schedule or cost impacts on the Work.
- 12.1.7 If Owner requests in writing that Contractor furnish materials or equipment to be permanently incorporated in changed work, extra work or cost-plus work, Owner shall reimburse Contractor for such materials or equipment its incremental Direct Cost plus a percentage mark-up to be agreed upon by the parties. Requests for payment for materials and equipment shall be accompanied by copies of receipted invoices. Owner has the right to audit Contractor's requests for changes and the financial basis therefor.
- 12.1.8 If Contractor and Owner disagree on whether any particular work is within the scope of Work and such work must be completed to insure timely progress, Owner will issue a disputed Change Order to cover the disputed work. Contractor shall diligently proceed with the disputed work. By noon on the work day following performance of the disputed work, Contractor shall submit to Owner for review timesheets itemizing all labor and equipment hours expended on the disputed work and an itemized listing of Contractor furnished materials. Such review is not an admission of liability by Owner. Prior to Final Acceptance, each disputed Change Order will be resolved to the mutual agreement of the parties.
- 12.2 Extra Work
- 12.2.1 "Extra work" is work which is beyond Contractor's scope of Work. At Owner's request, Contractor shall perform extra work at the applicable prices set forth in the Contract. If the Contract prices are not applicable to the type of extra work to be performed, Contractor shall promptly submit a proposal to perform the extra work, which proposal shall become an amendment to the Contract upon acceptance by Owner. If Owner directs Contractor to perform extra work on an overtime basis, Owner shall reimburse Contractor the actual payroll cost of premium time for direct job labor. Contractor shall invoice and maintain separate cost records for each extra work authorization issued by Owner.
- 12.2.2 If Owner elects, Contractor shall perform extra work on a cost-plus basis. Cost-plus extra work shall be paid in accordance with Article 13.0.
- 12.3 Contractor waives all claims for additional compensation for changes in work and extra work not made strictly in accordance with the terms of this Article 12.0.

13.0 REIMBURSEMENT FOR COST-PLUS WORK

- 13.1 Direct labor costs will be reimbursed at the actual payroll costs of direct labor wages, fringe benefits, payroll taxes and insurance required by collective bargaining agreements or by law, plus an agreed wage mark-up. Copies of certified payrolls and time sheets shall be provided to Owner for review and approval. Contractor shall not invoice Owner for social security, unemployment, workers' compensation, or other federal, state or local taxes or insurance at rates which exceed Contractor's actual costs.
- 13.2 Owner will pay Contractor actual invoice costs for subcontracted work, provided Owner has approved payment terms in advance of performing the work, plus an agreed mark-up.
- 13.3 Contractor-furnished permanent materials and equipment costs will be reimbursed at actual invoice costs plus an agreed mark-up.
- 13.4 Construction equipment costs will be reimbursed based on actual usage time during the performance of Work and established rental rates not to exceed monthly rates set forth in the "Rental Rate Blue Book for Construction Equipment" adjusted for geographical region as published by Dataquest or other basis acceptable to Owner. Hourly rates shall be established by taking the monthly rate divided by 176 hours per month.
- 13.5 Small tools and consumables costs will be reimbursed based on agreed rates.
- 13.6 Field supervision, clerical, safety and other non-direct labor costs will be reimbursed at agreed billing rates, except that reimbursement for these costs for cost plus extra work shall require the prior review and approval of Owner.

14.0 BACKCHARGES

- 14.1 Owner may impose backcharges against Contractor or deduct backcharges from monies owed to Contractor for performance or reperformance by Owner or others of Work, including but not limited to, costs associated with defective work, nonperformance by Contractor, termination for cause, clean-up and disposal of debris, damages to Owner's tools and equipment and warranty repairs. Contractor will be responsible for the cost of such performance or reperformance plus a fifteen percent (15%) administrative charge.

15.0 TAXES

- 15.1 The Contract Price shall include, and the Contractor shall pay, all taxes and assessments for unemployment insurance, workers' compensation, social security and disability benefits, and other taxes which are based upon the compensation paid to persons employed by Contractor or its Subcontractors for the performance of any Work under the Contract.
- 15.2 Except as provided below, the Contract Price shall include all applicable foreign, federal, state and local taxes payable by Contractor with respect to the Contract.
  - 15.2.1 Contractor Purchases. If Owner specifies that tangible personal property to be incorporated into real property as defined for sales and use tax purposes or taxable services to be purchased by Contractor from vendors or Subcontractors qualify for exemption from sales or use taxes, Contractor shall not include sales or use taxes on such exempt tangible personal property or services in the Contract Price. Unless otherwise specified: a) consumable materials and supplies or Contractor's tools and equipment that are not incorporated into the Work or the overall project are not eligible for exemption

and the Contract Price shall include, and Contractor shall pay, any sales or use taxes on such items; and b) Contractor will use its own properly-executed exemption or resale certificate, and not Owner's direct pay permit, to make exempt purchases of tangible personal property or services from vendors or Subcontractors.

15.2.2 Owner Purchases from Contractor. With respect to any Owner purchases from Contractor of tangible personal property not incorporated into real property as defined for sales and use tax purposes or taxable services, Owner shall provide to Contractor its direct pay permit (if Owner has been issued a direct pay permit) or an appropriate exemption certificate required to relieve the Contractor of its responsibility to collect sales or use tax from the Owner. If Owner provides Contractor such direct pay permit or exemption certificate, sales or use taxes on Owner purchases from Contractor of tangible personal property or taxable services shall not be collected from Owner or included in the Contract Price. Unless otherwise approved or directed by Owner in writing, Contractor shall not use Owner's direct pay permit to make exempt purchases of tangible personal property or taxable services from vendors or Subcontractors.

15.2.3 Contractor Cooperation. Contractor shall take all steps reasonably necessary to ensure that Contractor's purchases from vendors or Subcontractors of items of tangible personal property or services are exempt from sales and use tax pursuant to any applicable exemption pursuant to the law of any U.S. jurisdiction or its political subdivisions.

## 16.0 INSURANCE

16.1 Contractor shall at its sole expense, procure and maintain, and shall cause its Subcontractors to procure and maintain, throughout the term of this agreement except as set forth in Section 16.5, the following types of insurance with the following, minimum limits:

16.1.1 Workers' compensation insurance in accordance with all jurisdictions where Contractor has operations including where the Work is to be performed. If Contractor is a non-subscriber to workers' compensation evidence of insurance equivalent to workers' compensation must be provided.

16.1.2 Employer's liability in an amount not less than \$1,000,000.

16.1.3 Business automobile insurance covering all Owned, Non-owned and Hired Autos in an amount not less than \$5,000,000 per occurrence.

16.1.4 Commercial general liability insurance covering claims of bodily injury and property damage in an amount not less than \$5,000,000 per occurrence.

16.1.5 Aircraft liability insurance with a combined limit of not less than \$10,000,000. Such insurance shall be required only if the Contractor or its Subcontractors shall utilize an aircraft in the performance of the Work.

16.1.6 If Contractor (or any of its Subcontractors) are engaged in operations which use marine vessels or floating equipment, or which are subject to maritime jurisdiction, the following insurance shall be required: Marine Liability insurance (including Jones Act and maritime employer's liability if operations are subject to federal jurisdiction) and pollution liability (under terms equivalent to current W.Q.I.S. policy provisions if operations are subject to federal jurisdiction) in amounts not less than \$10,000,000 per occurrence.

- 16.1.7 Professional liability insurance and/or Errors and Omissions insurance in an amount not less than \$5,000,000. Such insurance shall be required only if the Work includes professional liability exposures.
- 16.1.8 "All risk" property insurance covering the full replacement cost of Contractor's personal property.
- 16.2 To the extent permitted by law, Contractor shall waive, and shall cause each of its insurers to waive, any and all rights of recovery, by subrogation or otherwise, against Owner and its affiliates, officers, directors, employees, agents and assigns of any type. Each of Contractor's insurance policies shall be primary to and non-contributory with any insurance or self-insurance of Owner.
- 16.3 The Commercial General Liability, the Business Automobile, and (if applicable) the Aircraft Liability and Marine Liability insurance shall include Owner as an additional insured with respect to Owner's liability arising out of the operations of Contractor. Such coverage shall also include blanket contractual coverage and contain no exclusion for explosion, collapse, or underground property damage (XCU coverage).
- 16.4 The insurance required by this Article 16.0 is in addition to and separate from any other obligations contained in the Contract.
- 16.5 Products and/or completed operations coverage shall be maintained for a period of five (5) years after the completion of the Work. If any of the policies indicated above are placed on a "claims-made" basis, such coverage shall be maintained for a period of not less than five (5) years following the completion of the Work.
- 16.6 Any deductibles or retentions on any of the policies required herein shall be the sole responsibility of the Contractor.
- 16.7 The above referenced limit requirements may be met by any combination of umbrella or excess and primary policies so long as the total limit of insurance requirement is met. The required coverages referred to herein shall in no way affect, nor are they intended as a limitation of, Contractor's liability with respect to its performance of the Work. The limits of insurance indicated herein are minimum requirements and are in no way intended to limit Contractor's liability.
- 16.8 In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special, or statutory employees) are covered by the Louisiana Worker's Compensation Act, La. Rev. Stat. Ann. 23:1021 et seq., Owner and Contractor agree that pursuant to Section 23:1061 (A) (1) all Work performed by Contractor and its employees under the terms and conditions of the Contract is an integral part of Owner's operations and is essential to Owner's ability to generate its goods, products and services. Additionally, Owner and Contractor agree that for purposes of Section 23:1061 (A) (3) Owner is the principal or statutory employer of Contractor's employees. Irrespective of Owner's status as the statutory employer or special employer of Contractor's employees, pursuant to Section 23:1031 (C), Contractor shall remain primarily responsible for the payment of Louisiana Worker's Compensation benefits to its employees, shall indemnify Owner from any and all claims of Contractor's employees or its Subcontractor's employees and shall not be entitled to seek contribution for any such payments from Owner.
- 16.9 Upon inception of the Contract and prior to commencement of Work, Contractor shall provide Owner with an acceptable certificate of insurance evidencing the insurance required under Article 16. Contractor will not be permitted to bring its employees, materials or equipment onto the Site until Owner receives from such evidence of insurance. Contractor also must provide an updated certificate of insurance at any time during the Contract term upon Owner's request. Contractor

shall immediately notify Owner of cancellation or of any material changes in the insurance policies required herein. If such insurance policies are subject to any exceptions to the terms specified herein, such exceptions shall be explained in full in such certificates. Owner may, at its discretion, require Contractor to obtain insurance policies that are not subject to non-standard exceptions.

- 16.10 In lieu of Sections 16.1 thru 16.9, the Owner may elect to implement an Owner Controlled Insurance Program ("OCIP"). If an OCIP is implemented, all Contractor(s) and Subcontractor(s) of any tier and such other persons or entities as the Owner may designate as enrolled parties, may, at Owner's option, be required to enroll and participate. Owner shall procure and maintain at its own expense during the performance of this Contract and a stipulated completed operations period, such insurance coverage as Owner deems appropriate on behalf of enrolled parties. Eligible Contractor(s) and Subcontractor(s) must submit all necessary enrollment forms for acceptance into the OCIP, and agree to the terms of the Owner's project safety standards. Owner and Contractor agree that the terms of the OCIP as contained in amendments to this Contract and the OCIP Contractor Manual shall control. The OCIP does not relieve any Contractor or Subcontractor from its obligations to procure coverage for offsite operations or coverages not included in the OCIP. In the event an OCIP is implemented, amended insurance requirements for enrolled parties will be provided.
- 16.11 The furnishing of insurance by Owner through an OCIP will in no way relieve or limit any enrolled party of any responsibility, liability, or obligation imposed by the contract documents or by law, including without limitation any indemnification obligations which any enrolled party has to the Owner thereunder.

17.0 INDEMNIFICATION

- 17.1 The laws of the state where the Work giving rise to the claim is performed shall apply to this Article 17.0.
- 17.2 **TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENCE OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.**
- 17.3 **WITH RESPECT TO CLAIMS AGAINST OWNER BY CONTRACTOR'S EMPLOYEES, CONTRACTOR UNDERSTANDS AND AGREES THAT THIS INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY, AND CONTRACTOR EXPRESSLY WAIVES, ITS IMMUNITY AS A COMPLYING EMPLOYER UNDER ANY**

**APPLICABLE WORKERS' COMPENSATION LAW, BUT ONLY TO THE EXTENT THAT SUCH IMMUNITY WOULD BAR OR AFFECT RECOVERY UNDER OR ENFORCEMENT OF THIS INDEMNIFICATION OBLIGATION.** With respect to the State of Ohio, this waiver applies to Section 35, Article II of the Ohio Constitution and Ohio Rev. Code Section 4123.74.

17.4 **CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT.**

18.0 LIMITATION OF LIABILITY

18.1 Except as expressly provided herein, neither party shall be liable to the other for any incidental, indirect, special, punitive or consequential damages. Contractor must bring any cause of action arising under the Contract within one year from the time the cause of action accrues.

19.0 LIENS

19.1 To the extent permitted by law, Contractor shall not file or permit to be filed any lien with respect to the Work and hereby expressly waives any right to file or cause to be filed a lien. Contractor, in its subcontracts, shall require all Subcontractors to expressly waive the right to file any liens against Owner's property, and, if requested, provide Owner with copies of such waivers.

19.2 In the event any claim is asserted or any lien filed against Owner or its property, or notice of lien is provided to Owner in violation of this provision, further payment to Contractor shall not become due under the Contract until the claim is satisfied or the lien released without cost to Owner and Contractor shall provide Owner with evidence of payment relating to such claim or lien. If Contractor fails to settle any claim or secure the release of any lien, Owner may take whatever steps it deems necessary to settle the claim or release the lien, including bonding off the lien. Owner may deduct its costs and expenses for settling any claim or securing the release of any lien filed by Contractor or its Subcontractors from any money due or to become due to Contractor under the Contract. If final payment has been made, Contractor shall reimburse to Owner its costs to settle any claim or secure the release of any lien arising out of the Contract.

20.0 INTELLECTUAL PROPERTY

20.1 Contractor warrants that its performance of the Work will not infringe upon or violate any trademarks, patents, copyrights, trade secrets or other third party property rights. If the performance of Work is held in any action to constitute infringement, or the use of the Work is enjoined, Contractor, at its expense, shall procure for Owner the right to continue use of the Work, or replace the Work with non-infringing materials or methods satisfactory to Owner, or modify the Work in a manner satisfactory to Owner so that the Work becomes non-infringing. Contractor agrees to indemnify and save Owner harmless from and against any liability or damages, including attorneys' fees, arising out of any alleged infringement or violation.

20.2 All inventions, discoveries, documents, works of authorship, methods, and the derivative works thereof, resulting from the Work, including patents, patent applications, copyrights, trade secrets and other intellectual property (collectively "Intellectual Property"), shall be the sole and exclusive property of Owner. Contractor shall promptly inform Owner of the development of any such Intellectual Property and does hereby assign and transfer the entire right, title and interest, together with all rights of priority in and to such Intellectual Property to Owner. Contractor shall promptly cooperate with Owner in signing any additional documentation necessary to assign and perfect ownership of such Intellectual Property in Owner or to allow Owner to register its property rights therein. Contractor warrants that it has obtained written agreements from its employees and

agents as necessary to effectuate the purpose of this Section. The Intellectual Property assigned and transferred to Owner shall be the Confidential Information of Owner.

- 20.3 Contractor grants Owner a nonexclusive, nonrevocable, perpetual, fully paid license to utilize Contractor's intellectual property existing separate from the Contract, including inventions, discoveries, works or authorship, methods, and trade secrets, regardless of whether such are the subject of patents, copyrights or other intellectual property protection, to the extent necessary for Owner to achieve the full benefit of the Work.
- 20.4 Contractor shall not use Owner's name or logo in marketing, endorsements, or other business purposes without prior written consent from Owner.

#### 21.0 DRAWINGS AND DATA

- 21.1 Contractor shall furnish for Owner's review, prior to commencement of Equipment manufacture or fabrication, general and detailed drawings of the Equipment in the format requested. Such drawings shall be certified as to accuracy and completeness and shall show information adequate to enable Owner to design and provide suitable clearances. If required by the Contract or any code, law or agency, Contractor will provide professional engineer or architect sealed drawings and reports for the state where the Equipment is to be finally installed. Figures shall take precedence in all cases over scaled measurements on drawings. Where obvious discrepancies exist, Contractor shall consult with and follow the instructions of Owner. Owner's approval of Contractor's drawings shall not relieve Contractor of its obligation to comply with the Contract requirements.
- 21.2 All written data, such as drawings, plans, reports, designs and specifications, prepared by Contractor for Owner during the performance of Work shall become the property of Owner. Such data, together with all data furnished by Owner and lent to Contractor for return, shall be delivered to Owner upon request, or upon completion of the Work or termination of the Contract. For clarification purposes, Owner shall have the unrestricted right to use, release, disclose, copy and reproduce such data for purposes of operation, maintenance, analysis, testing, cleaning, erection, improvement or modification of any facilities owned or operated by Owner. Contractor shall cooperate with Owner by executing such documents as are necessary to assign and perfect ownership in Contractor provided data to Owner.

#### 22.0 CONFIDENTIALITY

- 22.1 "Confidential Information" means any confidential or proprietary information, whether written, oral, or visual, whether or not it constitutes a trade secret under applicable law. "Confidential Information" includes, but is not limited to, business plans and methods; customer information; engineering, operating and technical data; and the dates of Owner's outage schedule, information concerning the Work, and Owner's activities. "Confidential Information" does not include information that (a) has become part of the public domain other than by acts or omissions of the recipient; (b) has been furnished or made known to the recipient by a third person as a matter of legal right and without restriction on use; (c) was in the recipient's possession prior to disclosure by the disclosing party without restriction on use; or (d) is independently developed by the recipient without access to the Confidential Information.
- 22.2 Subject to Section 22.5, each party agrees (a) to protect the Confidential Information of the other with at least the same degree of care used to protect its own Confidential Information; (b) not to use (except for the purpose described herein), publish or disclose to third parties such Confidential Information; and (c) upon the request of the disclosing party, to promptly deliver to the disclosing party all written copies of its Confidential Information. Notwithstanding the foregoing, a recipient shall be entitled to disclose Confidential Information to its officers, employees, affiliates (including any joint ventures of which Owner or any of its affiliates are a member and the other

members of such joint ventures), agents, lenders, attorneys and other advisors (collectively, "Representatives"), provided that the Representatives shall be informed of the confidentiality obligations provided herein.

- 22.3 If either party is required pursuant to applicable law or otherwise becomes legally compelled to disclose any of the Confidential Information, such party shall promptly advise the disclosing party in order that the disclosing party may seek a protective order or such other remedy as the disclosing party may consider appropriate in the circumstances. In any event, the compelled party may disclose only that portion of the Confidential Information which such party is legally required to disclose in the judgment of the party's legal counsel without any liability to the disclosing party hereunder and such disclosure shall not be a breach of this Section.
- 22.4 Contractor shall require its Subcontractors, if any, to expressly comply with the confidentiality provisions as set forth herein.
- 22.5 All documents prepared by Contractor for Owner during the performance of Work that incorporate, in whole or in part, information owned or provided by Owner shall not be marked or designated in any way as the confidential or proprietary information of Contractor without also stating that Owner has rights in such documents. Owner shall have the right to question the designation of Confidential Information by Contractor and Contractor agrees to provide Owner with reasonable cooperation in explaining such designation. Contractor agrees that Owner's acceptance of documents containing the Confidential Information of Contractor shall not be construed as a restriction on Owner's rights to use, release, disclose, distribute, copy or reproduce the documents.

### 23.0 DEFAULT

- 23.1 The occurrence of any of the following shall constitute an "Event of Default":
- 23.1.1 Contractor files a petition in bankruptcy, or if its creditors file an involuntary petition in bankruptcy, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency.
- 23.1.2 Contractor (a) fails to maintain the schedule set forth in the Contract, or (b) fails to promptly pay Subcontractors for material or labor, or (c) commits repeated or substantial violations of laws, rules, regulations or policies, or (d) fails to perform in accordance with the Contract, and Contractor fails to take corrective action or submit an acceptable plan within two (2) Business Days after the receipt of a notice of non-conformance from Owner.
- 23.2 Upon an Event of Default, Owner may take any or all of the following actions without affecting the Contract Price or schedule:
- (a) Owner may direct Contractor to cease performance on all or part of the Contract until satisfactory corrective action has been taken;
  - (b) Owner may have others take corrective action necessary to achieve compliance with the Contract. Owner may deduct the cost of such corrective action by others from any monies due to Contractor. Corrective action by others shall be taken when, in the judgment of Owner, the noncompliance threatens safety, unreasonably interferes with or delays the work of others, or otherwise creates a situation the resolution of which cannot be delayed without adversely impacting quality, cost or timely completion;
  - (c) Owner may pursue damages for delay under the terms of Article 24.0;



(d) Owner may suspend the Contract under Article 26.0; and/or

(d) Owner may terminate the Contract under the terms of Section 27.1

23.3 Each of Owner's rights set forth above shall be cumulative and additional to any other rights or remedies provide in law or equity or otherwise.

#### 24.0 DAMAGES FOR DELAY

24.1 Contractor shall be liable for any direct damages incurred by Owner arising out of Contractor's failure to perform on time.

24.2 In lieu of Section 24.1, if the parties have agreed to liquidate the amount of direct damages resulting from Contractor's delay, the parties agree that such damages which might be incurred by Owner as a result of Contractor's delay in performance are uncertain and would be difficult to calculate. The parties agree that the liquidated damages contained in the Contract would be reasonable and fair compensation for late performance. Contractor commits to pay and Owner agrees to accept such sum as liquidated damages and not as a penalty in the event of late performance.

#### 25.0 FORCE MAJEURE

25.1 Neither party shall be in breach of the Contract to the extent that any delay or default in performance is due to a Force Majeure Event. The term, "Force Majeure Event", shall mean any cause beyond the reasonable control of the delayed or defaulting party, including, but not limited to, acts of God including unusually adverse weather, fire, and epidemic; acts of public enemy including war, acts of terrorism, riot, and civil disturbance; and national labor strikes, which by exercise of due foresight such party could not have been expected to avoid or overcome. Contractor's inability to obtain adequate and sufficient labor in order to maintain progress of the Work shall not constitute a Force Majeure Event. No delay in performance resulting from a Force Majeure Event shall result in any liability on the part of Owner. Notwithstanding the preceding sentence, in the event of a delay caused by any act or failure to act on the part of Owner, Contractor's sole remedy shall be as set forth in Article 12.0.

25.2 The delaying party shall immediately notify the other party of the beginning of a delaying event, and shall confirm the notice in writing within ten (10) Business Days of the beginning of the event. The notice shall contain a detailed account of the delay, including the cause of the delay, an estimate of the duration of the delay, an estimate of the delay's impact to the schedule, and the plan to mitigate the effects of the delay.

25.3 If Contractor is the delaying party, and the delay is a Force Majeure Event as defined in Section 25.1, Owner shall grant Contractor an extension of the time for performance, to be mutually agreed upon by Contractor and Owner. The extension of time granted as a result of a Force Majeure Event shall in no case exceed the length of the delay and such extension may be withheld or reduced to the extent Contractor does not provide notice in accordance with Section 25.2. If Owner so requests, Contractor shall expedite its schedule to mitigate the effects of the excusable delay. Owner shall pay incremental, Direct Costs incurred by Contractor for expediting at Owner's request.

#### 26.0 SUSPENSION

26.1 Owner may at any time suspend all or any part of the Work. Owner shall provide Contractor written notice verifying the suspension date. Immediately upon receipt of the suspension notice, Contractor shall take the necessary actions to comply with the suspension notice.



form of Exhibit I. Owner shall not be responsible for Contractor's lost profit on the terminated portion of the Contract.

28.0 MATERIALS AND WORKMANSHIP WARRANTY

- 28.1 Beginning upon Final Acceptance and for a period of one year thereafter, or for such period as may be specified elsewhere in the Contract, Contractor warrants that (a) it will perform the Work in accordance with the accepted standards of care and competence found in the applicable profession as such standards relate to and are commonly used in the electric utility industry and (b) all Contractor furnished materials and workmanship shall be free of any and all defects and shall be in conformity with the requirements of the Contract.
- 28.2 Subject to the provisions of Section 28.3, in the event that the material or workmanship does not comply with the warranty, Contractor shall, at no cost to Owner, promptly repair or replace such nonconforming material or workmanship with as little disruption to Owner's operations as practicable. Contractor shall be responsible for the total cost of correcting any defects, including but not limited to, the costs of materials, labor, any necessary equipment removal, disassembly, shipping, reinstallation and retesting of the installation. Owner shall give Contractor notice of observed defects with reasonable promptness. If nonconforming material or workmanship causes an outage or other delay of operations, Contractor shall make the repair or replacement on an overtime, maximum effort basis, at Contractor's expense.
- 28.3 If Owner directs Contractor to repair or replace any defect and Contractor fails to do so within a reasonable time, or if an emergency exists rendering it impracticable for Contractor to perform the repair or replacement, Owner may make or cause to be made such repair or replacement without affecting the validity of the warranty. Owner's cost for making the repair or replacement shall be deducted from the Contract Price or any unpaid portion thereof. If the unpaid portion of the Contract Price is insufficient to cover such cost, Contractor shall reimburse Owner.
- 28.4 Owner will not pay for any defective portion of the materials or workmanship until remedied by Contractor at Contractor's expense in accordance with the Contract requirements.
- 28.5 Owner must approve any proposed correction or alteration by Contractor of the materials or workmanship, or parts thereof, made at any time or at any location, before such correction or alteration is undertaken. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes.
- 28.6 Any materials or workmanship which are repaired or replaced pursuant to this Article 28.0 shall be warranted for a period of one year from the date of completion and acceptance of such repair or replacement, or for the remainder of the original warranty period, whichever is longer.
- 28.7 Contractor shall obtain, for the benefit of Owner, all available warranties from Subcontractors, vendors and suppliers of Contractor. Such warranties shall be in addition to the warranties set forth in this Article. If such warranties are in written form, Contractor shall provide Owner with the original warranties.

29.0 REPORTING OF COMPLAINTS

- 29.1 Contractor shall immediately report to Owner, in accordance with Article 33.0, the complete details of all complaints, including any OSHA violations and complaints received from governmental authorities, Subcontractors, laborers, other third parties or members of the public relating to the Work.

30.0 RETENTION AND EXAMINATION OF INFORMATION, BOOKS AND RECORDS

- 30.1 Owner reserves the right to audit records necessary to permit evaluation and verification of (i) claims submitted, (ii) Change Orders, and related overhead and general and administrative costs, and (iii) Contractor's compliance, in the performance of the Contract and its dealings with Owner, with (a) the Contract requirements; and (b) Owner's Code of Business Conduct governing business ethics. Owner's right to audit shall not extend to fixed, lump-sum or unit pricing.
- 30.2 Contractor shall cooperate with Owner and provide Owner with information and records ("information") pertaining to the Work as requested by governmental agencies, Owner, or courts of law.
- 30.3 Contractor shall retain for a period of three (3) years after Contract termination or expiration all information relating to the Work. Owner may audit and copy such information at Contractor's premises during regular business hours. If requested by Owner, Contractor shall submit to Owner a copy of each of its subcontracts. Contractor shall include in its subcontracts a provision granting Owner the rights against Subcontractors contained in this Article 30.0.

31.0 COMPLIANCE WITH LAWS

- 31.1 Contractor warrants that all materials and equipment supplied and all Work performed will comply with, and be manufactured, priced, sold and labeled in compliance with, all applicable federal, state and local laws, rules, regulations, orders and ordinances, including, without limitation, environmental protection, energy, safety and health, and labor laws and regulations and applicable industry codes and standards.
- 31.2 Unless exempted, Contractor shall comply with the equal employment opportunity clause in Section 202 of Executive Order 11246 and all applicable rules, regulations, and relevant orders pertaining to Executive Order 11246, Section 503 of the Rehabilitation Act of 1973, and Section 4212 of the Vietnam Era Readjustment Assistance Act of 1974, as amended. Contractor represents that it does not, and shall not for the term of the Contract, provide or maintain for its employees facilities that are segregated on the basis of race, color, religion, sex or national origin. Contractor represents that it will not assign its employees to perform any work related to the Contract at a location where facilities are segregated on the basis of race, color, religion, sex or national origin. Contractor agrees that it will not enter into any agreement to obtain goods or services relating to the Contract with any entity that provides, maintains or assigns its employees to work at locations where facilities are segregated on the basis of race, color, religion, sex or national origin. As used herein, "facility" means waiting rooms; work areas; restaurants and other eating areas; time clocks; locker rooms and other storage or sleeping areas, except as necessary to ensure privacy between male and female employees; parking lots, drinking fountains; recreation or entertainment areas; and transportation. If not otherwise exempted by Title 48 and to the extent applicable, Contractor will comply with 48 CFR §52.219-8, Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns, and 48 CFR §52.219-9, Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan. If not otherwise exempted by 41 CFR §60-1.5, Contractor represents that it will file all reports or other required information specified in 41 CFR §60-1.7.
- 31.3 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of any violations of such laws, ordinances and regulations.

32.0 PERMITS AND LICENSES

- 32.1 Contractor shall obtain all permits and licenses required by any regulatory authority for the performance of any portion of the Work, except that Owner shall obtain permits and licenses for all structures which are to become a permanent part of the Site. Before starting Work, Contractor shall submit to Owner a copy of all permits and licenses required by any such regulatory authority.
- 32.2 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of the failure of Contractor to obtain such permits and licenses.

33.0 NOTICES

- 33.1 Each party shall designate in writing a representative to receive any and all notices required under the Contract. Notices shall be in writing and shall be given to the representative designated to receive them, either by personal delivery, certified mail, facsimile, e-mail or any similar means, properly addressed to such representative. All notices shall be effective upon receipt, or upon such later date following receipt as set forth in the notice. Either party may, by written notice to the other, change the representative or the address to which such notices are to be sent. Contract shall be strictly construed and Contractor expressly waives any claims which do not strictly comply with the written notice requirements of the Contract.

34.0 SEVERABILITY

- 34.1 In the event that any of the provisions, or portions thereof, of the Contract are held to be unenforceable or invalid by any court, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

35.0 WAIVER

- 35.1 Either party's waiver of any breach of the Contract shall not be deemed to be a waiver of any other breach of the same or a different term of the Contract. Contractor agrees not to claim any waiver by Owner of such notice requirements based upon Owner's conduct or Owner having actual, verbal, implied, or constructive notice.

36.0 NON-DISCLOSURE

- 36.1 Except as required by law, regulation, or judicial or administrative order, neither party shall disclose the terms of the Contract without the consent of the other party. Notwithstanding the foregoing, Owner may disclose the terms of the Contract without the consent of Contractor (a) to any of its affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures); and (b) to any prospective transferee or purchaser of assets of Owner or any of affiliates.

37.0 HEADINGS

- 37.1 Headings are provided for the convenience of the parties, and shall not affect the interpretation of any provision.

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EXHIBIT 1  
Page 1 of 1

AFFIDAVIT OF COMPLETION

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, states that:  
(Name of Affiant)

1. S/He is the \_\_\_\_\_ of  
(Office held by Affiant)

\_\_\_\_\_  
(Legal Name of Contractor) (Contractor)

that has a contract with \_\_\_\_\_  
(Legal Name of Owner)

(Owner) dated \_\_\_\_\_ (Owner's Contract No. \_\_\_\_\_)  
(Contract Date) (Contract No.)

involving work on the Owner's property at \_\_\_\_\_  
(Project Name)

located near \_\_\_\_\_  
(City, State)

2. All of the Work required to be performed by the Contractor under said Contract has been performed. All bills and claims for material, labor and services to employees, Subcontractors, material suppliers, and others, covering the Work required to be performed under the Contract, have been paid in full by the Contractor. There are no unpaid amounts on the basis of which a lien has been filed, or can be filed, in connection with the Work performed under the Contract.

\_\_\_\_\_  
Signature of Affiant

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary







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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Prepared by:

Contract Services  
American Electric Power  
Service Corporation  
1 Riverside Plaza  
Columbus, OH 43215

June 24, 2011





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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

The following Supplementary Terms and Conditions for Forestry Contracts ("Supplementary Terms") shall supplement any of the American Electric Power Service Corporation ("Owner" or "AEP") General Terms and Conditions utilized in any Contract under which Contractor is authorized to perform Services. These Supplementary Terms shall not replace the safety or operational provisions in the applicable AEP General Terms and Conditions and are intended to support and reinforce other Contract documents.

All of the provisions of these Supplementary Terms shall also apply to Contractor's subcontractors. Contractor is responsible for ensuring that its subcontractors comply with these Supplementary Terms.

Contractor's and any of its subcontractors' failure to comply with these Supplementary Terms is cause for the Contract to be terminated and may prevent eligibility for the consideration of providing Services in the future (i.e., removal from AEP's qualified bidders list).





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## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

### 1.4 Electrical Clearances

- 1.4.1 Owner will arrange for all necessary clearances on energized equipment or circuits required to be taken out of service for the performance of Services. When an outage is required, Contractor shall notify Owner prior to scheduling such Services, allowing sufficient time for scheduling with system operators.

### 1.5 Permits and Easements

- 1.5.1 Owner will secure all right-of-way easements. Owner will also secure certain permits requiring Owner's signature (i.e., DOT permits, siting permits, building permits). Location specific and construction specific permits not already obtained by Owner are the responsibility of Contractor. Local vehicle registration/operation permits (i.e., frost law permit in Michigan) shall be the responsibility of Contractor.

### 1.6 Protection of Property

- 1.6.1 Contractor shall use all possible care not to damage any existing buildings, structures, pipes, sewers, conduits, manholes or other property, or to interfere therewith without the consent of Owner's authorized representative. Such structures and other objects shall be properly supported, braced and secured in place to prevent damage thereto. They shall not be relocated or reconstructed except as authorized by Owner. Contractor shall be responsible for all damage claims due to this negligence, including the cost of all material and labor required to replace or repair any property damaged.
- 1.6.2 Contractor shall immediately report the complete details of all damage claims to Owner. If Owner determines the claim is valid and is a result of Contractor's negligence, Owner will present the claim to Contractor for settlement. Contractor is to settle all valid claims within 30 days. Contractor is to provide Owner with documentation specific to a settlement process for any claim not settled within 30 days, or the claim will be handled by Owner and the damage amount billed to Contractor. All such damage claims settled by Contractor are to be reported to Owner in writing.
- 1.6.3 Contractor shall be responsible for notifying appropriate state one-call systems, as well as any other utility company not a member of the systems, prior to performing Services involving excavation, boring, stump grinding and/or other activities that may affect underground facilities.

### 1.7 Work on Private Property

- 1.7.1 Whenever any Services are to be completed on private property, Contractor shall attempt to notify owner and/or the tenants thereof and make arrangements with them so that Services will be completed with the least practicable inconvenience to them. Work on private property shall be done as expeditiously as possible and the premises restored immediately.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**1.8 Access and Construction Roads**

- 1.8.1 It is Contractor's responsibility to ensure that all property owners' roads traveled by Contractor are in the same condition as the roads were before Contractor elected to use the route. Should Contractor cause any damage to any such road, Contractor is obligated to restore the road to like or better condition than the road existed prior to Contractor's use. Such work shall be completed in a timely manner with proper written documentation of the damage/remedy supplied to property owner and Owner alike. Where Owner deems it necessary to maintain access roads on private property, crushed stone will be furnished or paid for by Owner, and Contractor shall provide labor and equipment to haul and place crushed stone as required. When approved in advanced writing by Owner, Owner shall pay for normal damage to fields or loss of crops resulting from necessary travel by Contractor.
- 1.8.2 Contractor shall keep fences in a sufficient state of repair to satisfactorily confine livestock and shall keep gates closed when not in immediate use. Before Services are considered to be completed, all temporary gates shall be removed and all fences cut or damaged shall be restored to original condition. Fencing damaged by Contractor shall be repaired at Contractor's expense.
- 1.8.3 When it is necessary to gain access to right-of-way over private roads, yards, pastures and cultivated fields, and it is impractical to restrict ingress and egress to the right-of-way, Contractor shall use the route agreed upon by the property owner, Contractor and Owner. Contractor shall notify the property owner prior to the use of these routes.

**1.9 Emergency Assistance**

- 1.9.1 In the event of extensive damage to Owners' facilities as a result of severe storms, flooding or other catastrophes, Owner may request assistance from Contractor in the repair of damages and restoration of service to customers. Under such circumstances, the "Forestry Policies and Procedures for Emergency Assistance" in Section 2 shall be followed.



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**SECTION 2**

**FORESTRY POLICIES AND PROCEDURES FOR EMERGENCY ASSISTANCE**

In the case of emergencies, during which Contractor is called upon by Owner for storm assistance to restore service following catastrophic damage ("Emergency Assistance"), the following policies and procedures shall apply.

- 2.1 Contractor will provide Owner with emergency contacts, including 24-hour telephone numbers for requesting assistance.
- 2.2 Upon request for Emergency Assistance, Contractor shall provide Owner with a list of available personnel and their classification, labor rates, crew make up, equipment to be used and an estimated time of arrival.
- 2.3 Owner will specify the number of physical full time employees and any special equipment required and will notify Contractor as to where the crews are to be assigned and to whom they will report. Owner will check-in each crew upon arrival.
- 2.4 Contractor shall be responsible to make contact with the appropriate State officials concerning commercial driver's licenses and other transportation issues.
- 2.5 Contractor's crews shall arrive prepared to work and be equipped with PPE, PPI, tools, foul weather gear, lights and batteries to perform the assigned Services. Any crews arriving without the proper tools or equipment to perform the assigned Services may be released at Contractor's expense.
- 2.6 Owner shall determine the work hours for responding crews, including start time (at assigned crew headquarters) and duration. Contractor shall check in with Owner daily at the requested starting time for assignment of Services.
- 2.7 After working sixteen (16) consecutive hours up to a maximum of twenty-four (24) consecutive hours, Contractor's employees shall be released from providing Services for a minimum eight (8) hour rest period, which shall commence upon release by Owner.
- 2.8 Owner will allow a meal break every six (6) hours, or as near as practicable, while Contractor performs Emergency Assistance. Contractor's personnel will be off the clock for all meal breaks taken away from the work site.
- 2.9 Time sheets of Contractor employees shall be kept by Contractor. These time sheets shall be turned in daily to Owner for verification and approval.
- 2.10 Contractor shall be responsible for relaying all Owner communications to its crews.
- 2.11 Contractor shall be responsible for the safety of its crews. Contractor will provide safety statistical reporting of all hours worked on AEP property. This report format will be provided by the AEP Safety Coordinator.





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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**SECTION 3**

**SUPPLEMENTARY ENVIRONMENTAL, SAFETY AND HEALTH TERMS AND CONDITIONS FOR  
FORESTRY CONTRACTS**

**3.1 General**

- 3.1.1 Contractor shall comply with AEP's Contractor Oversight program. Contractor's safety performance will be monitored and evaluated during performance of the Contract by Owner's representative.
- 3.1.2 Contractor shall adhere to all pertinent local, state and federal regulations and all rules and policies set forth in Contractor's own safety manual. Any shortcoming brought to the attention of Contractor by Owner shall be immediately corrected by Contractor. Repeated and/or severe safety violations, incidents or accidents may be cause for the Contract to be terminated, prevent eligibility for providing future Services and result in the potential removal from AEP's qualified bidders list.
- 3.1.3 Owner has the authority to immediately stop Contractor's Service performance indefinitely for practices, procedures and operations, which, in the opinion of Owner, constitute a safety concern. It is Contractor's responsibility to adequately satisfy Owner with any remediation necessary to provide a safe and healthful workplace.
- 3.1.4 Contractor shall have qualified and competent supervision on the job at all times to direct and observe the Work.
- 3.1.5 If Contractor in good faith believes that any rule or procedure set forth in these Supplementary Terms will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

**3.2 General Safety Requirements**

- 3.2.1 Owner, or Owner's representative, shall conduct random Forestry Contract crew safety audits and Contractor shall cooperate fully with Owner's representatives during this audit. The audit is defined in Appendix A.
- 3.2.2 Contractor shall promptly notify Owner if Contractor's or its subcontractors' Experience Modification Rate for workers compensation exceeds 1.0.
- 3.2.3 Contractor shall remain solely responsible for the proper and safe use of all tools, and for conducting safe work practices or procedures. Contractor shall provide information necessary for the job briefing identified in Section 3.6 below, Job Briefings.
- 3.2.4 Contractor shall provide Owner a list of all tools, practices or procedures if or its subcontractors will use in performing assigned Services with fabricated or modified tools ("Specialty Tooling"). Specialty Tooling includes all tooling fabricated, developed by or modified by Contractor. Contractor shall notify Owner of any Specialty Tooling if develops or modifies on site. Contractor shall also notify Owner, prior to use, if it intends to use standard tooling in ways other



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## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

than those for which the tooling was designed. All such Specialty Tooling is subject to review by Owner. Specialty Tooling shall have design plans, engineered diagrams, etc. with a Professional Engineer's stamp of approval. Contractor shall also inspect Specialty Tooling prior to each use. At its sole discretion, Owner may prohibit or restrict the Contractor's use of Specialty Tooling on Owner's site.

3.2.5 Contractor shall immediately cleanup all spills from Contractors' equipment and vehicles.

### **3.3 Contractor Safety Representative**

3.3.1 When Contractor has eleven (11) or more total employees on various projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

3.3.2 Qualifications of the aforementioned safety professional may be subject to Owner's review and approval.

3.3.3 Owner may require Contractor to assign additional safety professionals if Owner determines the scope of Services justifies additional safety oversight.

3.3.4 Owner may require Contractor to supply additional safety professionals if Owner has determined geographical Service locations justify additional safety oversight.

### **3.4 Monthly Reporting**

3.4.1 Contractor shall report various safety related statistics, using the most current revision of the AEP supplied form, AEP Contractor Performance Report in Appendix B. Reported statistics will include those of Contractor's subcontractors and will represent Services performed on AEP projects/Contracts only.

3.4.2 The above requirements must be reported by the tenth (10<sup>th</sup>) day of the following month to the following e-mail address: [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com). A copy of the AEP Contractor Performance Report will be supplied to Contractor for reporting this required data. The data will be used by Owner to evaluate Contractor's safety effectiveness and performance.

### **3.5 Event Reporting**

3.5.1 When performing Services for AEP and a safety event occurs, Contractor shall notify Owner about the event immediately (verbal reporting is sufficient). Contractor shall also submit a written preliminary notification (no later than 8:00 a.m. the following working day of the event) to the Forestry Supervisor, Region Support Manager and/or designee, Forestry Operations Manager, and shall also e-mail a copy to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com), listing any and all safety events occurring during the performance of Services. A separate report is required for each event. Reported events include near miss events, first aid and minor events, OSHA recordable injuries,



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## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

flash/outage events, vehicle accidents, spills/release, underground utility strikes and OSHA/EPA citations/visits. The written report should include sufficient detail to identify the nature of occurrence, the extent of injury (if any) and contact name and number of the person leading the investigation. Within seven (7) business days, Contractor shall submit an in depth report to the e-mail address listed above, along with a copy to the Forestry Supervisor, Region Support Manager and/or designee and Forestry Operations Manager. This report must include the time and date of event, location of event, name of injured employee, the injured employee's on the job experience, description of event, factors that may have caused or contributed to the event, corrective actions taken and/or planned and the person(s) responsible for corrective actions.

### 3.6 Job Briefings

3.6.1 Prior to the commencement of Services in any location and before any changes in procedures or activities are made, Contractor shall perform a Job Briefing in written report/form to identify all potential work site risks. Each member of the crew must sign his/her name to this form in order to affirm their presence at the time the information was presented during the Job Briefing. The report shall include, at a minimum: 1) applicable hazards present during the course of performing the specific assignment 2) Service procedures involved 3) special precautions 4) energy source controls and 5) personal protective equipment requirements. Should Contractor not have its own Job Briefing requirements/forms, then Contractor shall use the AEP Supplied Job Briefing Form in Appendix C.

3.6.2 Contractor shall make its Job Briefing Forms available to Owner upon request.

### 3.7 Personal Protective Equipment Requirements

3.7.1 Contractor is responsible for requiring the use of appropriate personal protective equipment ("PPE") in all operations where there is an exposure to hazardous conditions.

3.7.2 Owner requires Contractor and Subcontractor employees to wear the following PPE, at a minimum, while on/in any construction site and/or work area:

- Safety glasses or safety prescription glasses with side shields
- Hardhat
- Work gloves that provide protection for the type of work
- Approved hearing protection devices when required
- Shoes with a defined heel (employees that climb structures)

3.7.3 Open-toed, open-heeled, athletic footwear and tennis shoes are strictly prohibited. Additional foot protection and/or PPE may be required based on Contractor's PPE assessment or special environmental conditions.



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### SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

- 3.10.2 Post event drug and alcohol testing shall be performed, at Owner's discretion, on all Contractor and subcontractor employees involved in any safety related event. Testing results shall be shared with Owner upon request.
- 3.10.3 Contractor shall incur all costs associated with the required drug and alcohol testing as required in these Supplementary Terms.

#### 3.11 Language Requirements

- 3.11.1 Contractor's and its subcontractor's employees shall be capable of communicating in English. At least one copy of all documents and reports, including Job Briefings, shall be prepared in English.

#### 3.12 Job Site Auditing

- 3.12.1 Contractor representatives, at a minimum, shall perform and document a Job Site Observation based on the following table:

| Representative Level   | Frequency |
|------------------------|-----------|
| Senior Management      | 1/Quarter |
| Operational Management | 1/Month   |
| General Foreman        | 2/Week    |
| Safety Professional    | 2/Week    |

- 3.12.2 If Contractor does not meet the requirements of Safety Section 3.3.1 [less than eleven (11) employees], then the lowest representative level of the table in 3.12.1 above (safety professional) shall be followed by a company representative.
- 3.12.3 Contractor shall make documentation of such job site observations available to Owner upon request.

#### 3.13 Emergency Planning

- 3.13.1 All job sites must have an Emergency Action Plan that has been communicated and documented to all employees. The Job Site Emergency Action Plan shall be documented on each job briefing conducted. This plan shall include, at a minimum:
- Emergency contacts
  - Location and name of local emergency services
  - Location of closest communication method
  - Location of closest medical facility
  - Procedure to follow in the event of an emergency

#### 3.14 Traffic Control

- 3.14.1 All Services performed on or adjacent to existing public road or rights-of-way and/or job site roadways shall be performed in conformance to the requirements of the Manual on Uniform Traffic Control Devices (current revision), state and local jurisdiction.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX A**  
**AEP FORESTRY CONTRACT CREW AUDIT FORM**







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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX C**

**AEP SUPPLIED JOB BRIEFING FORM  
(ONLY FOR CONTRACTORS THAT DO NOT HAVE THEIR OWN DOCUMENT)**



Security & Aviation Aircraft Deconfliction Guidelines

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# **AEP Aircraft Deconfliction Policy and Procedures**

## **Version 1.0**

### **AEP Security & Aviation**

#### **07.15.13**

Security & Aviation Aircraft Deconfliction Guidelines


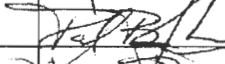
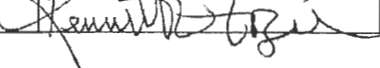
### Revision History

| Date    | Revision Number | Description/Section Changed | Author(s)             |
|---------|-----------------|-----------------------------|-----------------------|
| 4.15.13 | 1.0             | Initial Policy              | S. Partlow, S. Queeno |

### Review History

| Date of Review | Revision Number | Subject Matter Experts Involved   |
|----------------|-----------------|---|
| 06/5/13        | 1.0             | P.B. Johnson, E.G. Schnell, D.E. Guill, D.K. Kunkel, C.D. Moses, D.L. Milford, S Partlow, S. Queeno |

### Approval

| ACTION       | NAME(S)            | TITLE                                     |  |
|--------------|--------------------|---|--|
| Approved by: | Stanley E. Partlow | Managing Director Security and Aviation   |  7/26/13 |
| Approved by: | Paul B. Johnson    | Managing Director Transmission Operations |          |
| Approved by: | Kenneth R. Frazier | VP Safety & Health                        |          |



Security & Aviation Aircraft Deconfliction Guidelines

|                          |  |                            |                     |
|--------------------------|--|----------------------------|---------------------|
| <b>Title:</b>            | AEP Aircraft Deconfliction Guidelines                                | <b>Revision Date:</b>      | 4.15.13             |
| <b>Owners:</b>           | Stanley Parlow, Managing Director Security, Aviation and Procurement | <b>Sponsoring Area(s):</b> | Security & Aviation |
| <b>Policy Statement:</b> |  |                            |                     |

No aspect of operations is more important than the health and safety of people. These guidelines are written with this single point in mind and adherence to these guidelines shows that commitment to safety.

AEP business units that utilize fixed wing or rotor aircrafts, referred to throughout this document as aircraft to perform aerial surveillance functions on behalf of AEP must follow the attached guidelines to ensure the safety and security of our personnel, facilities, and the general public.

A periodic review of this document may be conducted to ensure accurate information. This document may be updated as conditions and requirements change.

**Detail:**

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1.2 Scope & Applicability.....4

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### 1.1 PURPOSE

The objective of these guidelines is to provide AEP business units, contracted aircraft companies and key stakeholders with information related to aircraft safety while performing work for AEP. These guidelines provide direction to business units, aircraft companies, the Security Operations Center (SOC) and the Managing Director of Security and Aviation. This document will assist in the deconfliction of Aircrafts that may be contracted by AEP and flying in the same area on the same day.

### 1.2 SCOPE & APPLICABILITY

This document applies to any aircraft such as helicopters or fixed wing used by AEP for any purpose. This document applies to the safety of the aircraft crew, AEP personnel and the general public as it relates to tracking of flights in the same state quadrant. Transmission who oversees the nation's largest electricity transmission system has a vested interested in knowing the exact lines flown and has included a TOPs Aerial Notification Procedure Matrix within this guideline that all business units will use to communicate flights.

### 1.3 DECONFLICTION

Many AEP Business units contract with various aircraft companies to perform services around AEP assets. These business units and aircrafts have no way of knowing each other's flight path on a particular day. Also, AEP facilities are most often not aware of a aircraft that maybe performing aerial patrols over their facility. Deconfliction is designed to ensure that two or more aircrafts are not in the same area at the same time, unless they are aware of each other's presence. In order to achieve this, the Security Operations Center (SOC) will serve as the central point to ensure that all flights are tracked for safety purposes. The SOC will ensure that the aircraft companies are aware of each other's presence and follow up with each to ensure contact has been made.

A safety issue arises when two or more aircrafts are flying in the same area at the same time without knowledge of each other's presence. The SOC is in a position to track such occurrences and notify each company and provide contact information to both and require they communicate with each other while flying for AEP. The SOC will alert aircraft companies when two are more aircrafts are flying in the same state, on the same date, in the same quadrant. The SOC does not need the exact location of the flight plan but does require the state quadrant the aircraft will be over-flying. In addition the SOC requires information related to any AEP facilities that will be overflown.

State Quadrant Example





#### **1.4 AEP BUSINESS UNIT RESPONSIBILITIES**

It will be the responsibility of the AEP business unit contracting with the aircraft companies to advise the vendors of these guidelines. Business units contracting for this service must follow this policy. Appendix I shows the Transmission Aerial Notification Procedure matrix to be followed by all AEP business units for notification purposes.

#### **1.5 AIRCRAFT COMPANIES**

Aircraft companies contracted by AEP are required to follow these guidelines. The aircraft company will be notified by the SOC of any other AEP contracted aircraft operating in the same state quadrant during the same time frame. The SOC will provide all aircraft companies with each other's 24x7 phone number and advise all parties to contact each other so they can provide specific flight information. Daily the SOC will review any open flights in the same quadrant and contact each aircraft company to remind them that there is another aircraft operating in the same region.

#### **1.6 INFORMATION REQUIRED FOR FLIGHT TRACKING**

The SOC will require the following information to effectively track and deconflict all aircrafts flying for AEP.

- Name of Person providing flight information
- Name and telephone number of AEP Contact and Business Unit
- Name of Aircraft Company and 24x7 Phone number
- Aircraft Color and Tail Number (provide photo if available)
- Date and Time flight will occur (If scheduled for a week provide that information)
- State in which the flight occur
- Quadrant of the State where the flight will occur (NE, SE, NW, SW)
- Name of any AEP facility that will be overflown
- Flight Plan if involving Transmission or Generation assets

Any changes in dates, times or flight location must be communicated to the SOC and TDC either by phone call or using the Aerial Notification procedure matrix.

#### **1.7 SECURITY OPERATIONS CENTER**

The Security Operations Center is the alarm and communication center for AEP Physical Security. The SOC focuses on safety, compliance and reliability. The SOC is in a unique position to track and evaluate each flight to determine if a potential conflict exists with multiple aircrafts contracted by different business units flying in the same state quadrant.

The SOC will receive notifications from the Aircraft Company or AEP Business units regarding a flight taking place. The SOC operator on duty will launch an Aircraft Deconfliction Flight Tracking incident in the Situator™ program and obtain the specific information regarding the flight. If there is another flight already scheduled for the same day and same state quadrant, the SOC will notify the aircraft companies flying in the same quadrant and provide contact information to both. It will be the responsibility of the aircraft companies to communicate with each other and provide specific details of their flight location.

Daily, the SOC will review all flights that are scheduled for that day. At this time the TDC can also override a request if there is a system reliability concern. Aircraft vendors who are scheduled to operate in the same state quadrant will receive a call from the SOC reminding them that another aircraft company is scheduled to fly in the same area on that day.



## Security & Aviation Aircraft Deconfliction Guidelines

The SOC will provide daily the date, time, state quadrant, and aircraft description to the following business units via email:

Transmission  
Distribution  
Generation Dispatch  
Physical Security

If a flight plan includes the over flight of a Generation facility the SOC will provide pertinent details to the Plant Manager or designee.

The SOC will document all calls and information received in the NICE Situater program. The TDC will log all related activities on the Dispatcher Operating Log (DOL).

### 1.8 COMMUNICATION

Communication is the key to the success of this program and safety of all involved. Aircraft vendors or an AEP representative flying with the aircraft vendor will contact the SOC and TDC using emailing depending on their geographic location. For a detailed list see (Appendix 1)

East - [aerial\\_patrol\\_notification\\_t\\_east@aep.com](mailto:aerial_patrol_notification_t_east@aep.com)

West [aerial\\_patrol\\_notification\\_t\\_west@aep.com](mailto:aerial_patrol_notification_t_west@aep.com)

When email is used to communicate the flight information, the SOC will contact the company via telephone **if a conflict is present based on the information received**

### 1.9 STORM MODE

When a storm mode is declared by an operating company or an unscheduled forced outage assessment flight is needed, it will be the responsibility of the AEP Business unit contracting aircraft companies to call **both the SOC and TDC** to report flight information and not use the email notification. Usually during storms there is an increased amount of aircrafts used by AEP surveying the storm area. The possibility of an aircraft flying in the same general area is greater than during normal operating conditions, it will be important that deconfliction is accomplished rapidly by the SOC. The SOC will also communicate the flight information they receive during storm mode to the appropriate e-mail group listed in section 1.8.

### 2.0 AUDIT

The Managing Director of Security and Aviation will audit this program and ensure all business units are following these guidelines. Periodically the Managing Director of Security and Aviation will require the SOC to provide reports of n flights that are logged by the SOC. The Managing Director will contact business units and ask for information on flights contracted by AEP, and both reports will be compared. If a discrepancy is found that there is an aircraft flight and no call was received by the SOC, the Managing Director will provide that information to the business unit.

### CONTACT NUMBERS

Security Operations Center – 1-866-747-5845

Security Operations Center Manager – 614-716-3347

Managing Director Security and Aviation – 614-716-3020

Transmission Dispatch – (TDC desk phone numbers to be provided only to AEP Representatives. These are internal numbers and should not be shared with the aircraft vendors.)



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# Transmission Vegetation Management Program

Effective July 31, 2013



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## Transmission Vegetation Management Program



Responsible Forester:  
K. B. Patton

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American Electric Power

Rev. 12

TVMD-001

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## Revision History

| Version | Description  | Prepared By                       | Reviewed By | Approved By  | Effective Date |
|---------|--|-----------------------------------|-------------|--|----------------|
| 1       | Added Appendixes A and B.  | H.R. Jones,<br>Principal Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset Engineering | 01/16/2006     |
| 2       | Added Appendix C.  | H.R. Jones,<br>Principal Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset Engineering | 10/02/2006     |
| 3       | Added Revision History.  | H.R. Jones,<br>Principal Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset Engineering | 03/12/2007     |
| 3       | Revised Appendix C from Version 2. Clarified video text associated with aerial patrols, page 8.  | H.R. Jones,<br>Principal Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset Engineering | 03/22/2007     |
| 4       | Revised Maintenance Clearances in Table I, page 11. Removed Appendix A from Revision 0 and inserted a new Appendix A. Removed Appendix B from Revision 0 and renamed Appendix C from Revision 0 to Appendix B. | H.R. Jones,<br>Principal Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset Engineering | 11/09/2007     |
| 5       | Revised Maintenance Clearances text page 10. Revised Appendix B.   | H.R. Jones,<br>Principal Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset Engineering | 05/06/2008     |




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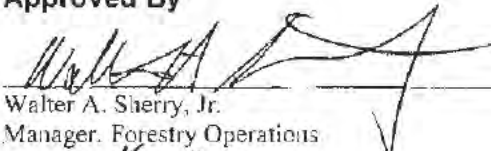
## Signatures

### Prepared By

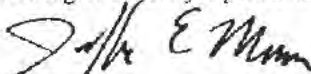
  
\_\_\_\_\_  
Kevin B. Patton  
System Forestry Coordinator, Forestry Operations

7/15/2013  
Date

### Approved By

  
\_\_\_\_\_  
Walter A. Sherry, Jr.  
Manager, Forestry Operations


15 Jul 13  
Date

  
\_\_\_\_\_  
Jeffrey E. Momme, P.E.  
Director, Transmission Line Engineering


7/19/13  
Date

  
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Daniel J. Recker, P.E.  
Managing Director, Transmission Projects Engineering

7/19/13  
Date

  
\_\_\_\_\_  
Scott Moore, P.E.  
Vice President, Transmission Engineering & Project Services

7/25/13  
Date

  
\_\_\_\_\_  
Scott N. Smith  
Senior Vice President, Transmission Grid Development & Portfolio Services

7/25/13  
Date



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## II. The Transmission Vegetation Management Program (TVMP)

### A. Introduction and Purpose

The American Electric Power (AEP) Transmission Vegetation Management Program (TVMP) has been developed and implemented to ensure compliance with the North American Electric Reliability Corporation (NERC) reliability standard FAC-003-1.

- This program is intended to improve the reliability of the electric transmission system by preventing outages from vegetation located on transmission rights-of-way (ROW) and minimizing outages from vegetation located adjacent to ROW.
- Maintaining clearances between transmission lines and vegetation on and along transmission ROW.
- Report vegetation-related outages of the transmission systems to the appropriate Regional Entity (RE) and NERC.

This program applies to AEP's transmission system operated as 200 kV and above (>200kV) and other lower-voltage transmission circuits that have been designated as critical by the Reliability Coordinator (PJM, SPP RTO, ERCOT). For this document, transmission circuits meeting that criterion are referred to as NERC-reportable. NERC-reportable circuits are those transmission circuits that are within the scope of FAC-003-1.

AEP's Transmission Forestry Operations group manages and executes the program for vegetation along approximately 8,600 miles of NERC-reportable transmission rights-of-way in portions of eleven states. This is accomplished through the implementation and oversight of a comprehensive, systematic, vegetation management program.

### B. Vegetation Management Objective


The TVMP is an integral part of providing for the safe, reliable operation of the AEP transmission system. The key measure of success is zero reportable vegetation-related outages on NERC-reportable circuits.

For NERC-reportable circuits, AEP's intent is to clear the right-of-way to the maximum appropriate width, removing all woody-stemmed vegetation within the right-of-way<sup>1</sup>. Danger trees (those trees considered a hazard to AEP's facilities) that are outside the right-of-way will be addressed with the landowner and removed or made safe.

AEP conducts inspections, aerial and as needed ground inspections, and develops annual vegetation management work plans to ensure the program objective is achieved in the most efficient, environmentally sound, and economical manner practical.

AEP strives to manage its rights-of-way in accordance with its Environmental, Safety and Health (ES&H) Philosophy of, "No aspect of operations is more important than the health and safety of people. Our customer's needs are met in harmony with environmental protection."

<sup>1</sup> Upon completion of vegetation maintenance.

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Other considerations include:

- Minimizing adverse environmental impacts.
- Complying with laws and regulations.
- Achieving cost efficiency.
- Maintaining a positive relationship with landowners and the public.

## 1. Philosophy of the AEP Vegetation Management Program

Vegetation on AEP's transmission system is managed on a prescriptive basis. Ongoing evaluation of the system through ground and aerial inspections by System Forestry personnel, together with guidance from the program objective, provides the basic information used by Forestry Operations to develop its annual work plan. Circuit criticality, historical data, circuit voltage, location, vegetative inventory information, and land use are among the items considered when developing the annual vegetation management work plan. These plans are dynamic during the year and adjusted for changing conditions.

As succession occurs within the plant communities along the rights-of-way, these annual work prescriptions will change based on the sizes and types of vegetation present. Forestry Operations staff and their contractors continuously work to ensure the appropriate prescription is utilized to maximize effectiveness and efficiency.


Forestry Operations is a centralized organization in both reporting and budgeting. It primarily employs or contracts degreed foresters. Qualified utility line clearance contractors, as defined by ANSI Z133.1 2012, provide the labor force for the ground-based clearing and herbicide applications. FAA-licensed aerial contractors provide patrol, side trimming, and herbicide application services. Contract work is designated and inspected by AEP foresters to ensure that the work is complete, performed in a timely manner, to AEP and industry standards, at reasonable cost, and with courtesy to property owners and to the public. Foresters travel throughout their assigned regions of the AEP companies to accomplish these tasks.

## 2. Landowner Relationships

AEP Transmission Forestry and contract personnel utilize face-to-face communication and door cards to notify resident landowners before routine line clearance work is initiated. Great efforts are made to strike a balance between service reliability and the landowner's landscaped vegetation.

AEP has invested time and resources into public education concerning proper tree care and sound environmental practices. Forestry Operations participates in many organizations such as the National Arbor Day Foundation, the Utility Arborist Association, the International Society of Arboriculture, and various state and local vegetation management organizations.

AEP Corporate Communications, in cooperation with Transmission Management, has produced a brochure, *Transmission Right of Way Clearing and Maintenance, A Balanced Approach to Vegetation Management*, which is given to landowners and other community groups, outlining general policies for AEP's Transmission vegetation program.

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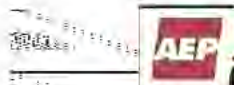
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- (3) Helicopters shall be used for aerial observations. Fixed-wing aircraft may only be used in extenuating circumstances with the approval of Manager, Forestry Operations or Director, Transmission Line Engineering.
- (4) Forestry personnel investigate observed and reported concerns and take appropriate action to remediate any threat to safety or reliability.
- (5) Forestry personnel should be the observers in all patrols. Forestry observers must have at least one year experience in aerial patrol work and completed the annual Transmission Forestry Aerial Patrol Procedures training. Lacking that experience, an additional qualified observer must be in the helicopter during aerial patrol. A qualified observer may substitute for the forester when approved by Transmission Forestry supervision.
- (6) All areas requiring immediate remediation, i.e., A1 conditions (defined in section II.C.5.a, "A1 Condition" on page 16), will be documented with GPS readings and locations on the line. These areas shall be remediated within 24 hours of confirmation.
- (7) Remediation of P1 conditions (defined in section II.C.5.b, "P1 Condition" on page 16) detected in the Spring Patrol on NERC-reportable circuits are scheduled to be completed by May 30. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 14. Reports on the progress of remediation shall be included with the Aerial Patrol Log.
- (8) Remediation of P1 conditions (defined in section II.C.5.b, "P1 Condition" on page 16) detected in the Fall Patrol on NERC-reportable circuits are scheduled to be completed by March 1 of the following year. Reports on the progress of remediation shall be included with the Aerial Patrol Log.
- (9) Documentation of the aerial patrol is considered complete when a) scheduled circuits have been flown (and restricted locations have been inspected), b) conditions have been documented, and c) Patrol Logs have been submitted.
- (10) In prohibited areas, alternate methods, including but not limited to ground patrol, will be used. Photography, GPS, map locations, or other means of archiving points of interest are used.



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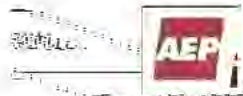
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Original Way with the Restrictions:

| <u>Original Way with the Restrictions:</u>                               |
|--|
| <u>100% Written Dispute Between Contributor at Maximum Budget Bound:</u> |
| 1. The number of vegetables to be planted.                               |
| 2. The number of vegetables to be planted in each plot.                  |
| 3. The type of fertilizer to be used in each plot.                       |

| <u>Original Way with the Restrictions:</u>                               |
|--|
| <u>100% Written Dispute Between Contributor at Maximum Budget Bound:</u> |
| 1. The number of vegetables to be planted in each plot.                  |
| 2. The number of vegetables to be planted in each plot.                  |
| 3. The type of fertilizer to be used in each plot.                       |

| <u>100% Written Dispute Between Contributor at Maximum Budget Bound:</u> |
|--|
| 1. The number of vegetables to be planted in each plot.                  |
| 2. The number of vegetables to be planted in each plot.                  |
| 3. The type of fertilizer to be used in each plot.                       |


| <u>100% Written Dispute Between Contributor at Maximum Budget Bound:</u> |
|--|
| 1. The number of vegetables to be planted in each plot.                  |
| 2. The number of vegetables to be planted in each plot.                  |
| 3. The type of fertilizer to be used in each plot.                       |

20. Restrictions:

The original way with the restrictions is a 100% written dispute between contributor at maximum budget bound. The number of vegetables to be planted in each plot, the number of vegetables to be planted in each plot, and the type of fertilizer to be used in each plot are all determined in advance of the request. The number of vegetables to be planted in each plot, the number of vegetables to be planted in each plot, and the type of fertilizer to be used in each plot are all determined in advance of the request.

The original way with the restrictions is a 100% written dispute between contributor at maximum budget bound. The number of vegetables to be planted in each plot, the number of vegetables to be planted in each plot, and the type of fertilizer to be used in each plot are all determined in advance of the request. The number of vegetables to be planted in each plot, the number of vegetables to be planted in each plot, and the type of fertilizer to be used in each plot are all determined in advance of the request.

Original Way with the Restrictions:

|   |  |  |  |
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|  | <u>Original Way with the Restrictions:</u> | <u>Original Way with the Restrictions:</u> | <u>Original Way with the Restrictions:</u> |
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## E. Personnel Qualifications

AEP's TVMP is designed and implemented by personnel qualified and experienced to perform their job responsibilities and/or provide oversight. These personnel, through ongoing training, maintain certifications and licenses as applicable to their roles and responsibilities.

Qualifications of personnel implementing the TVMP may include:

- Physical capability of inspecting lines that are difficult to access.
- Ability to identify:
  - Compatible versus incompatible species.
  - Hazard and danger trees.
  - Vegetation conditions that pose a threat to transmission system reliability.
  - Vegetation growth patterns.
  - Line construction and voltage types.
- Familiarity with vegetation control equipment and techniques, including capabilities and limitations.
- Proficiency in recording data with sufficient accuracy and completeness for further follow-up on inspection findings and results.
- Ecology, including:
  - Vegetation succession in the right-of-way environment.
  - Compatible species and practices that promote their establishment.

Utility line clearance contractors shall be qualified and in compliance with applicable industry standards (e.g., OSHA, ANSI, NESC).

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## IV. Reporting

Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Entities or their designees. The supporting document AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system, the Transmission Outage Report (TOR) system. TOR reports list vegetation-related outages by Regional Entities. The report lists the names of circuits where outages occurred; operated voltages; the date, time, and duration of the outage; and a description of the cause of the outage.

### A. Recording Outages Caused by Vegetation

#### 1. Outage information

All outages determined to be caused by vegetation are investigated by a qualified transmission vegetation management employee and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained. NERC's outage categories are defined as follows:


- Category 1—Grow-ins: Outages caused by vegetation growing into lines from vegetation inside and/or outside of the ROW.
- Category 2—Fall-ins: Outages caused by vegetation falling into lines from inside the ROW.
- Category 3—Fall-ins: Outages caused by vegetation falling into lines from outside the ROW.

#### 2. Reports

A standard report format is used to document the outages caused by vegetation with the information specific for each outage and pictures included when practical.

### B. Reporting Outages Caused by Vegetation

Outages caused by vegetation on NERC critical facilities are reported on a quarterly basis (or more frequently if required) to the Regional Entity.

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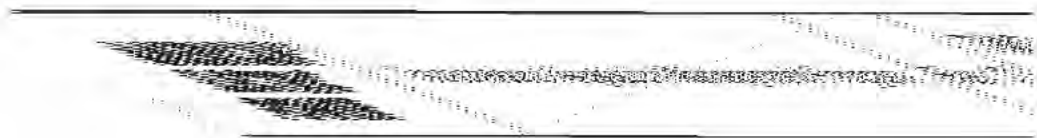
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The completed Forestry Vegetation Imminent Threat Incident Report contains the documentation of actions taken because of reported conditions where vegetation may imminently cause an outage. Reports are to be kept on file.

**Vegetation Imminent Threat Incident Report** Rev. 7/2/2013

Forester: \_\_\_\_\_  
 TDC Case #: \_\_\_\_\_

**Part I – Basic Information**

Line Name: \_\_\_\_\_  
 Circuit Name: \_\_\_\_\_  
 Structure #: \_\_\_\_\_ In \_\_\_\_\_ Right-of-Way \_\_\_\_\_ Out \_\_\_\_\_  
 Operating Voltage: (e.g. 245kV) \_\_\_\_\_  
 Date and Time of Confirmation: \_\_\_\_\_  
 Location Information: (provide as much information as possible): \_\_\_\_\_  
 Property Owner: \_\_\_\_\_  
 County/Parish: \_\_\_\_\_  
 State: \_\_\_\_\_

**Part II – Vegetation Information** (provide as much information as possible)

Species: \_\_\_\_\_  
 Estimated Height: \_\_\_\_\_  
 Estimated Age: \_\_\_\_\_  
 DBH: \_\_\_\_\_

**Part III – Circuit Parameters at Time of Discovery/Notification**

(on Time of Discovery/Notification Time)

Conductor Height: \_\_\_\_\_  
 Circuit Electrical Load: \_\_\_\_\_  
 Estimated Ambient Air Temperature: \_\_\_\_\_  
 Estimated Wind Speed: \_\_\_\_\_  
 Weather Conditions: \_\_\_\_\_  
 Conductor Size and Type: \_\_\_\_\_  
 Percent Loading: \_\_\_\_\_

**Part IV – Action Taken:**

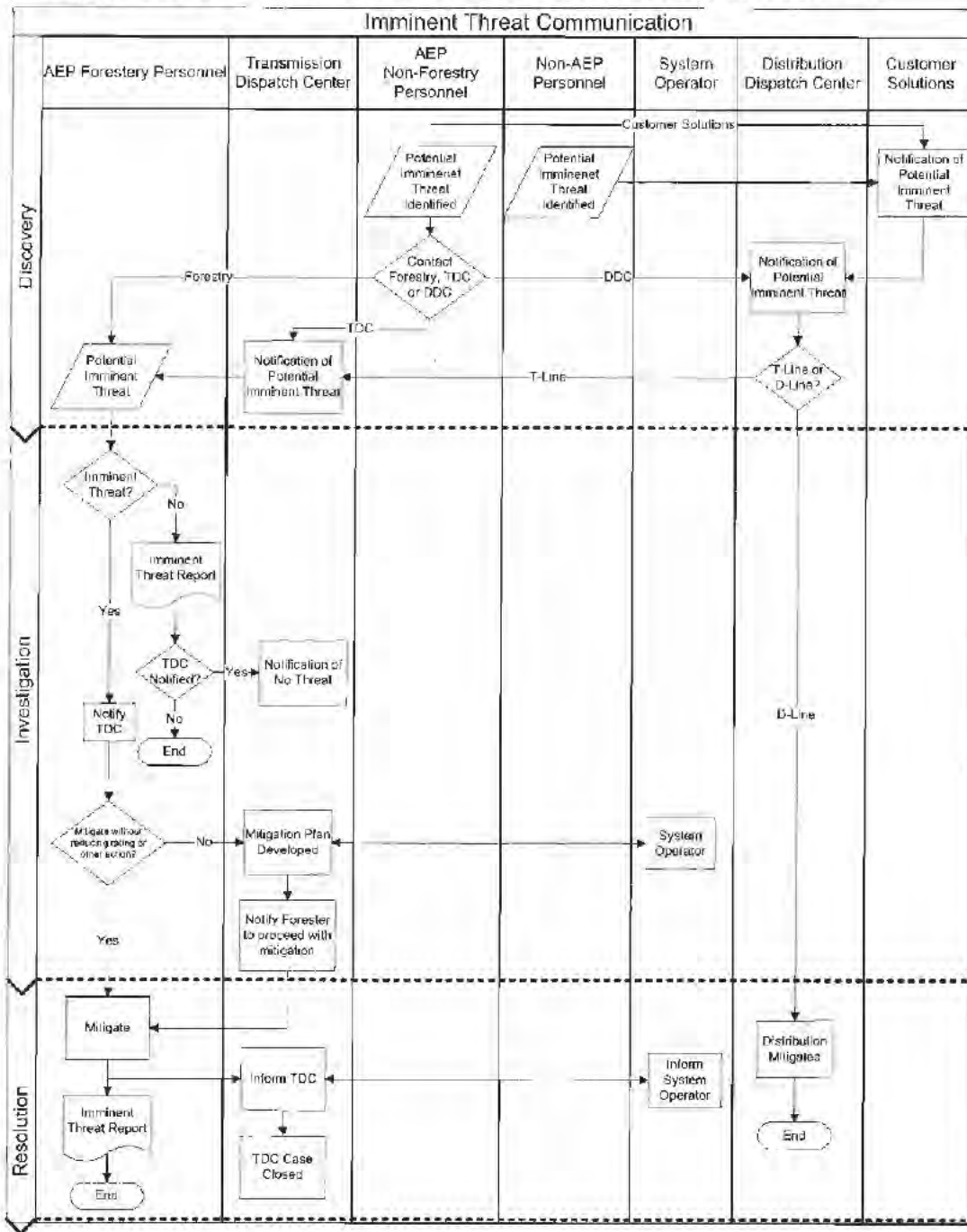
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| <b>Transmission Operations Reduced Loading</b> |                               | <b>Returned to Normal Load</b> |
| _____ (yes or no)                              | _____ (date and time)         | _____ (date and time)          |
| <b>Operations-Out of Service:</b>              |                               | <b>Returned / In-Service:</b>  |
| _____ (yes or no)                              | _____ (date and time)         | _____ (date and time)          |
| <b>Circuit/Section Removed from Service:</b>   |                               | <b>Returned / In-Service:</b>  |
| _____ (yes or no)                              | _____ (date and time)         | _____ (date and time)          |
| <b>Vegetation Condition Rectified:</b>         |                               |                                |
| _____ (yes or no)                              | _____ (if yes, date and time) |                                |

**Comments:**

(Describe the circumstances of the event)

Forestry Supervisor Approval: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix B: Imminent Threat Communication





## Appendix C: Subject Matter Experts

| FAC-003-1 Requirement | Description  | Preparer   | SME   | Reviewer  |
|-----------------------|--|--|---|---|
| R1. M1.               | TVMP document  | Kevin B. Patton<br>System Forestry Coordinator<br>614 716 1231<br>kbpatton@aep.com | E. K. Engdahl<br>Staff Engineer<br>614-552 1676<br>ekengdahl@aep.com              | J.E. Momme<br>Director, Trans. Line Engineering<br>614-552-1180<br>jemomme@aep.com        |
| R1.1. M1.1.           | Inspection schedule                                  | Kevin B. Patton<br>System Forestry Coordinator<br>614 716 1231<br>kbpatton@aep.com |   | J. E. Schechter,<br>Manager, P&C Asset Engineering<br>614-552 1908<br>jeschechter@aep.com |
| R1.2. M1.2.           | Clearance document                                   | Jacqueline M. Rich<br>Engineer III<br>614 552 1391<br>jmrich@aep.com               | E. K. Engdahl,<br>Staff Engineer<br>614 552 1676<br>ekengdahl@aep.com             |   |
| R1.2.1.               | Clearance 1  |  |   |   |
| R1.2.2.               | Clearance 2  |  |   |   |
| R1.2.2.1              | Unknown transient overvoltage                        | Barrett Thomas<br>Engineer I<br>918 599 2386<br>bathomas@aep.com                   |   |   |
| R1.2.2.2              | Known transient overvoltage                          | R. J. Whitaker<br>Engineer I<br>540 562 7054<br>rjwhitaker@aep.com                 |   |   |
| R1.3.-M1.3.           | Personnel qualifications                             | Kevin B. Patton<br>System Forestry Coordinator<br>614-716-1231<br>kbpatton@aep.com |   |   |
| R1.4.-M1.4.           | Vegetation Restrictions                              |  |   |   |
| R1.5. M1.5.           | Imminent threat                                      | Lynn E. Hayward<br>Lead Engineer<br>614 552 7244<br>lehayward@aep.com              | E. K. Engdahl<br>Staff Engineer<br>614 552 1676,<br>ekengdahl@aep.com             |   |
| R2. M2.               | Annual Veg. Mgt. plan                                | Kevin B. Patton<br>System Forestry Coordinator<br>614 716 1231<br>kbpatton@aep.com |   |   |
| R3. M3.               | Quarterly Outage Reports                             | Lynn E. Hayward<br>Lead Engineer<br>614 552 7244<br>lehayward@aep.com              | J.E. Momme<br>Director Trans. Line Engineering<br>614 552-1180<br>jemomme@aep.com |   |
| R3.1.                 | Multiple Outages in 24 Hrs.                          |  |   |   |
| R3.2.                 | Reporting Exemptions                                 |  |   |   |
| R3.3.                 | Outage circuit, date, time, description, cause, etc. |  |   |   |
| R3.4.                 | Outage Categories                                    |  |   |   |
| R3.4.1.               | Category 1 - Grow ins:                               |  |   |   |
| R3.4.2.               | Category 2 - Fall ins:                               |  |   |   |
| R3.4.3.               | Category 3 Fall ins:                                 |  |   |   |

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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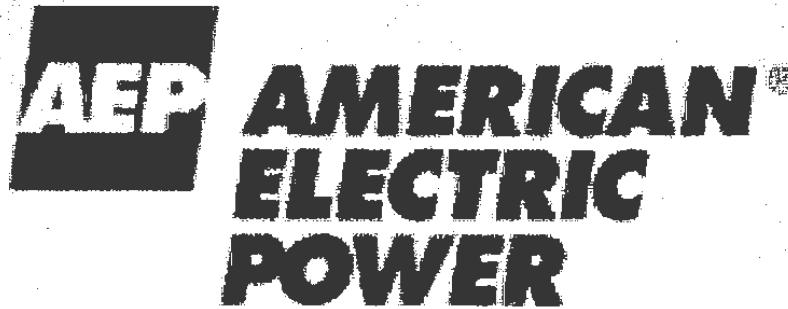


[REDACTED]



| <b>Name/Lotus Notes Group</b> | <b>Department</b>                    | <b>Title</b>                  | <b>Role</b> |
|-------------------------------|--------------------------------------|-------------------------------|-------------|
| Matthews, Charles D           | Transmission Field Services          | Mng. Dir. Transmission West   | S           |
| Rogier, Daniel J              | Transmission Field Services          | Mng. Dir. Transmission East   | S           |
| Boezio, Daniel R              | Transmission Field Services          | Dir Trans Region Tech Support | S           |
| Cook, James K                 | Transmission Field Construction East | Dir Trans Region Construction | S           |
| McCord, Natalie J             | Trans Field Construction West        | Dir Trans Region Construction | S           |
| Workman, Mark A               | Trans Construction Mgmt              | Mng Dir Trans Constr Mgmt     | S           |
| Colvin, Kenneth A             | Trans Construction Mgmt – Gahana     | Mgr – Trans Construction II   | S           |
| Galyean, Rue F                | Trans Construction Mgmt – Tulsa      | Mgr – Trans Construction II   | S           |





## **AEP Forestry**

# **Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations**

May 14, 2009





**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

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## AEP System Forestry Guidelines

### Foreword

#### A. Introduction

The purpose of these AEP Forestry Guidelines is to document and inform AEP employees and its contractors of important criteria, practices and procedures pertaining to initial vegetation clearing for construction projects and the maintenance of rights of way. AEP incorporates these guidelines into each tree service contract; a copy shall be kept in all vegetation management contractor's vehicles. These guidelines are for the sole and exclusive use of the contractor and are to be read consistently with other contract documents by and between AEP and the Contractor.

#### B. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation within the right of way.

**DBH:** (Diameter at Breast Height). The diameter of a tree measured at the height of 4-1/2 feet above the ground on the uphill side.

**Danger Tree:** A tree considered a potential hazard to AEP's facilities positioned outside of the normally cleared right-of-way.

**Debris:** Non-vegetative material such as pop bottles, cans, wire, paper and old tires.

**Directional Pruning:** The reduction of a tree's crown in a manner that provides increased conductor clearance by pruning to direct growth of the upper crown away from the conductors.

**Fallen Tree:** A tree lying on the ground not cut by the Contractor.

**Hanger:** A limb cut from a parent stem or bole of a tree as part of the line clearance pruning procedure left aloft caught and held by the other branches of the tree.

**Hazard Tree:** A tree considered a potential threat to the safety and reliability of AEP's facilities growing within the normally maintained right-of-way.

**Log:** The merchantable portion of a tree as designated by AEP.

**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Mowing:** The mechanical cutting of woody stem vegetation within the right-of-way.

**Prescription:** The plan prepared for each circuit or unit of work. It designates the vegetation to be maintained, the method(s) of maintenance, and who will perform the work.

**Removal:** The complete cutting down of trees at or near the ground line. AEP shall specify the disposal method.

**Slash:** The un-merchantable portion of a tree as designated by AEP.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

## **I. Contractor Guidelines**

### **A. Safety**

1. Protecting the safety of the public is of utmost importance to AEP. Contractors shall regard safety as their first priority. Contractors and their employees will recognize and follow all laws, rules and regulations regarding public and worker safety. Any safety related incidents (e.g., personal injury, vehicle accident, outages, flashes, near miss, customer issues, etc.) that occur on the job must be reported to the appropriate AEP personnel as soon as possible.
2. All contact incidents outages or operations caused by contract crews shall be reported to the appropriate AEP Dispatch center and Forestry immediately.

### **B. Personnel**

1. If required by state or local laws and regulations the contractor shall have an ISA Certified Arborist available.
2. No private work may be solicited or worked by Contractor employees while on AEP time. Contractors shall not receive compensation from anyone except AEP for tree work that is a part of AEP's Forestry program. The consequences will be crew and/or contractor disciplinary action.

### **C. Equipment**

1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chain saws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.

The use of spurs/climbers/hooks should be avoided. Where their use is necessary (as in the removal of some trees or in climbing trees, which do not provide a notch in which to tie in) only qualified persons shall be permitted to use them.

#### **D. Overtime**

Overtime is billable for work performed outside the scope of the normal work schedule.

#### **E. Work Procedures**

1. Contractor practices shall be compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Changes in the workweek due to inclement weather, equipment breakdowns or other circumstances must have prior approval by AEP Forestry personnel.
3. The contractor will be responsible for the development of a plan to complete the assigned tasks. The assigned tasks must be performed in a systematic way that follows this plan. Some examples are: beginning work at substations, working between protection devices, or other methods to prevent inefficiency and/or skipped work. The plan must meet AEP approval before work begins.
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractor shall provide daily work locations to AEP, including changes to these locations throughout the workday.
6. Each crew shall have a planned worksheet at all times, except in the case of emergency work.
7. The Contractor's daily association with their crews and customers will allow planned outages and refusals to be worked on a progressive basis. A written list of such areas that have not been worked, including reasons, shall be supplied to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work shall be inspected on an ongoing basis. When an assigned task is complete, the Contractor must notify AEP Forestry for final inspection.
9. The Contractor will notify AEP of any hazardous conditions found during the performance of work under this contract. This is to include danger trees, soil erosion, and any attachment to AEP's facilities,

deteriorated, damaged or broken facilities and any other abnormal conditions.

#### **F. Public Relations**

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise. Advanced notification provides the property owner/resident with an opportunity to voice concerns.

1. Where required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor will document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the contractor should be on each card.

#### **G. Refusals**

1. A "refusal" is considered any property owner/resident refusing to allow or permit the contractor to manage vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits and easements.
2. The contractor shall fill out a refusal/complaint form with all pertinent information for all refusals.
3. If the contractor is unable to resolve the refusal within one week, the refusal shall be turned over to the appropriate AEP Forester.
4. Undocumented refusals or those left unaddressed for more than one week by the contractor may be worked at the Contractor's expense.

## **H. Damage Claims and Complaints**

1. The contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.
2. An on-site investigation with the resident/ property owner shall be made as soon as possible. This meeting, or telephone arrangements for the investigation, shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during this initial investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.
7. Costs to restore outages or repair the Owner's facilities due to negligence may be billed to Contractor as determined by AEP Forestry.

## **II. Performance Guidelines**

### **A. Removals**

1. Stumps shall be flush cut (three (3) inch maximum height) and treated with an approved herbicide, unless designated otherwise by AEP Forestry.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect yards, fences, houses, electric lines and other facilities.

3. Targets for removal are:

- All trees with the potential of growing into the conductors.
- Trees where adequate clearance cannot be obtained using proper pruning practices.
- Trees that will take less than three times the amount of time to remove as they would take to prune.
- Trees within five (5) feet of poles.
- Mature trees where more than 50% of the crown must be removed to obtain clearance.
- Young vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
- Palm species.

4. Trees that may be less suitable candidates for removal are:

- Those that would take more than three times longer to remove than to prune for proper clearance and at least 50% of the crown would be left intact.
- Species that will not reach a height that would affect the conductors.
- Slow-growing tree species.

5. Deciduous stumps shall be flush cut (three (3) in. maximum height) and shall be treated with an appropriate herbicide to prevent re-growth unless the situation prevents application according to label instructions, there is a documented customer refusal or an AEP forester directs otherwise.

6. At the request of the property owner/resident diseased, dying, or dead trees which could threaten AEP facilities will be "made safe", allowing for removal by the customer or private arborist. Generally, all brush and wood generated by this activity should be left on site, unless otherwise directed by AEP Forestry.

## **B. Pruning**

1. Contractor practices should be compliance with all applicable industry standards (i.e., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development.
3. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth in Tables I and II.



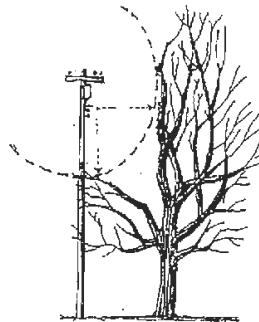
4. Reasonable care should be exercised to prevent the spreading of insects or diseases from one tree to another.
5. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut or damaged by the contractor's activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner.

### C. Clearances - Distribution

Variations to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/ or easements.

Minimum clearance for distribution system lines is that distance that will prevent re-growth into any AEP conductors for a minimum of three (3) years (see Table I in the appendix). The species, site, limb and conductor sag and sway during windy conditions and the effect of electrical load should all be considered when determining the clearance requirement.

**1. Primary Conductors-** Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the appropriate AEP Forestry representative.



**2. Open Wire Secondary Conductors- Limbs** should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.

[The main body of the page contains multiple paragraphs of text that have been almost entirely obscured by heavy black redaction marks. Only faint, illegible fragments of text are visible through the redaction.]

more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

### Clearance Table Guidelines

| Right of Way No Restrictions   | Right of Way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove All Woody Stemmed Vegetation *   | 1) Trim or Remove Vegetation to Meet Column C *                                  |
| 2) Do Not Allow Vegetation Closer than Column E                                  | 2) Do Not Allow Vegetation Closer than Column E                                  |
| 3) Trigger Distance to Schedule Maintenance per Column D                         | 3) Trigger Distance to Schedule Maintenance per Column D                         |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or Remove Vegetation to meet Column B *                                  | 1) Trim or Remove Vegetation to Meet Column C *                                  |
| 2) Do Not Allow Vegetation Closer than Column E                                  | 2) Do Not Allow Vegetation Closer than Column E                                  |
| 3) Trigger Distance to Schedule Maintenance per Column D                         | 3) Trigger Distance to Schedule Maintenance per Column D                         |

\* Upon Completion

**1. Restrictions** - When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in -Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**2. Minimum Approach** - Additional maintenance should be scheduled when vegetation will encroach within the minimum approach distances from energized conductors for *qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and D). In areas where easement or other legal agreements, or regulations restrict vegetation management practices, the maximum allowable amount of vegetation will be removed or otherwise controlled. AEP will annually monitor locations where these clearances cannot be achieved. The monitoring will determine whether maintenance that is more frequent may be required in order to assure the safe, reliable operation of the circuit.

#### E. Hangers and Clean Up

1. All hangers should be removed from the pruned tree before leaving the job site.

2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of clean up work should be performed, especially when a property owner requests a tree be removed. Unless otherwise designated by AEP Forestry, wood shall not be cut up or hauled away. Where designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum clean up that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the contractor. Any cut debris that inadvertently falls into such an area, or any debris left in an area that may be prone to regular flooding, shall be moved/removed in an appropriate manner (chipped, stacked on top of ditch bank, etc.)

#### **F. Clearing and Re-clearing**

1. AEP Forestry will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into the lines should be controlled, either by removal, herbicide treatment or a combination of both. On distribution lines and areas approved by Transmission Forestry on transmission lines those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities, should be left undisturbed in the right-of-way whenever possible. Variances to this recommendation may be applied due to specific operating company guidelines.
3. During scheduled maintenance operations, prune or remove any vegetation within the rights-of-way of station entrances or exits that may affect the safe operation of AEP facilities, including station fences and equipment.
4. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the appropriate AEP personnel.
5. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practicable, but not to exceed three (3) inches in height above the ground line. Where possible, the cut shall be parallel to the slope and promptly treated with an approved herbicide, unless otherwise directed by AEP Forestry.
6. Trees shall be felled to avoid damage to crops, fences and other facilities. Any trees felled into crops, ditches, streams, roads or

across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP's facilities or the property of third parties, or hinder access along the right-of-way.

7. Tree, brush and slash shall be lopped as designated by AEP Forestry.
8. Danger trees are identified and addressed / worked at the discretion of the individual operating companies or regions. Consideration for danger tree removal shall be made for those trees that are an imminent hazard or threat to AEP facilities. Danger trees may include, but are not limited to, trees that have severe lean or sweep, are dead, or have visible defect or damage. When cut, danger trees shall be cut as low as possible.
8. Stumps of trees growing in fences may be cut at fence post height, as approved by AEP Forestry.
9. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
10. In remote areas, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
11. Brush should not be left in managed agricultural areas or other maintained areas unless designated by AEP Forestry.

#### **G. Herbicide Applications**

1. All woody plants that have the potential of growing into the lines, should be controlled. Those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities should be left untreated in the right-of-way whenever practical.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made and are required to abide by all Federal, State, and local laws concerning licensing, record keeping, and product handling.
3. Contractors shall attain 100% coverage and 95% control of treated vegetation.
4. AEP Forestry will make vegetation management prescriptions in consultation with contractors.

5. Where required, landowners should be notified before any herbicide treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps should be treated with an appropriate herbicide treatment.

#### **H. Tree Growth Regulator Application**

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (TGR) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in an excessive state of decline shall not be treated unless directed by AEP Forestry.
3. As designated by AEP Forestry, landowners should be notified before any TGR treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX I**

**Distribution Line Clearance Guidelines**

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as **minimum clearance** requirements unless designated otherwise by AEP Forestry. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that during maintenance intervals, trees may encroach into these minimum clearance zones. The guidelines are meant to be used as a guide for trimming those trees currently being maintained.

**MINIMUM CLEARANCE FROM CONDUCTORS**

- **Species with Fast Re-growth Rates:** Prune for a *minimum* clearance of 20 feet from conductors

|                |           |
|----------------|-----------|
| Cottonwood     | Willow    |
| Poplar species | Ailanthus |
| Silver maple   | Box Elder |
| Sycamore       |           |

- **Species with Medium Re-growth Rates:** Prune for a *minimum* clearance of 15 feet from conductors

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Locust                          | Hackberry                             |
| Red maple species               | Hickory                               |
| Ornamental pear species         | Crabapple                             |
| Fruit trees (apple, pear, etc.) | Red oak                               |
| Elm species                     | Ash species                           |
| Pine, Spruce & Hemlock species  | Mulberry                              |
| Sweet gum                       | Bois d'arc (Osage orange, hedge tree) |
| Catalpa                         |                                       |

- **Species with Slow Re-growth Rates:** Prune for a *minimum* clearance of 10 feet from conductors

|                           |                         |
|---------------------------|-------------------------|
| Cedar                     | Persimmon               |
| Chinaberry                | White oak (round lobes) |
| Magnolia                  | (Redbud, dogwood, etc.) |
| Any small variety species |                         |

- **Possible Exceptions:**

- When the entire trunk of a tree falls within the minimum clearance specifications.
- When due to the branching structure of the tree less trimming would lend itself to an overall healthier tree, yet with acceptable clearance.
- Isolated instances approved by AEP Forestry representative.



**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX II**

**Transmission Line Clearance Guidelines<sup>(7)</sup>**

| Column A<br>Nominal Voltage<br>(kV phase to<br>phase) | Column B <sup>(5)</sup><br>NERC Clearance 1<br>(no restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)(2)</sup> and<br>Vegetation | Column C <sup>(3)(5)</sup><br>NERC Clearance 1<br>(with restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column D <sup>(3)</sup><br>ANSI Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column E <sup>(4)</sup><br>NERC<br>Clearance 2<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation |
|---|---|---|--|---|
| 765 kV  | 45'   | 35' 00"   | 27' 04"  | 14' 0"  |
| 500 kV  | 45'   | 26' 08"   | 19' 00"  | 10' 0"  |
| 345 kV  | 30'   | 20' 05"   | 13' 02"  | 7' 6"   |
| 230 kV  | 30'   | 16' 05"   | 7' 11"   | 5' 2"   |
| 161 kV  | 25'   | 14' 00"   | 6' 00"   | 3' 5"   |
| 138 kV  | 25'   | 13' 02"   | 5' 02"   | 2' 11"  |
| 88 kV & 115kV   | 25'   | 12' 04"   | 4' 06"   | 2' 6"   |
| 69 kV   | 25'   | 10' 09"   | 3' 09"   | 2' 6"   |
| 46kV, 40kV, 34.5<br>kV & 23 kV                        | 20'   | 10' 00"   | 2' 09"   | 2' 6"   |

<sup>(1)</sup> Conductor at maximum sag condition<sup>(6)</sup>

<sup>(2)</sup> Desired clearance to maintain reasonable clearing cycles

<sup>(3)</sup> ANSI Z133.1 rev. 10/2000

<sup>(4)</sup> IEEE Standard 516-2003, Section 4.2.2.3, Tables 5 and 7, calculated clearances  
(Clearance 2)

<sup>(5)</sup> Application of herbicides will be considered as meeting these guidelines, as long as all treated vegetation meets or exceeds the desired clearance from maximum sag (Table AEP1.2, Columns A and C).

<sup>(6)</sup> AEP Guideline for Determining Maximum Conductor Sag and Blowout for Vegetation Management is to be used to adjust the conductor's found field condition to the maximum sag condition taking into account the conductor size, span length, elevation, and current temperature.

<sup>(7)</sup> (Columns A, B, C, and D) distances exceed clearances for NERC operationally significant circuits noted in NERC Standard FAC-003-1, which gives clearances (Columns A and E) to be maintained between vegetation and conductors under all rated electrical operating conditions, per IEEE Standard 516-2003 (Guide for Maintenance Methods on Energized Power Lines) and as specified in its Section 4.2.2.3, Minimum Air Insulation Distances without Tools in the Air Gap.



**AMERICAN ELECTRIC POWER  
REQUIREMENTS & POSITION DESCRIPTIONS FOR  
FORESTRY SUPPORT SERVICES  
April 11, 2014**

**1.0 DESCRIPTION OF SERVICES & REQUIREMENTS**

Contractor shall furnish all necessary supervision, labor, equipment and materials for contract forestry employees to perform duties which include but are not limited to landowner/customer contacts (work planning) for vegetation clearing and herbicide programs, inspection of work areas and vegetation contract crew and forestry program oversight. Contractor shall supply adequate supervision and training, at no additional cost to AEP, to direct and control their employees to insure high productivity and to improve and maintain AEP's image in all contacts with landowners and the public. All Contractor employees shall be neat, clean and appropriately dressed to present a favorable impression to landowners.

Work will be performed as requested by each AEP operating company and/or transmission entity within the operating company.

Contractor shall furnish AEP with a qualified Forestry Inspector, Forestry Work Planner or Utility Forester within thirty (30) days of receipt of a request for same. AEP reserves the right of final approval of all new hires.

Contractors will be expected to keep and retain or transfer work plans to designated AEP operating companies in an electronic format; as shape files that would be compatible with a GIS system as designated by the AEP operating company.

Contractor will provide basic training of all new Forestry positions before starting work on AEP's property. Such basic training will include information such as tree species and growth characteristics, electrical hardware, voltages, types of line construction, utility vegetation management principals, safety, OSHA, ANSI requirements, first aid and CPR etc.

AEP will provide location specific training regarding the Forestry Program in each operating company area.

In designated operating company areas contractor shall provide Forestry employees that are bilingual to clearly communicate with customers and contract vegetation clearing crews.

During the first month of employment, each Contract Forestry employee will be evaluated by AEP to determine if he/she is qualified and capable of performing the required duties. If he/she does not satisfactorily perform, Contractor shall correct the problem or fill the position with a new person within thirty (30) days of receiving written notification of the deficiency. Unsatisfactory performance by Contractor's employee shall constitute a default under this agreement. If Contractor fails to correct such defaults, AEP may immediately terminate this Agreement.

Contractor and AEP's representative will review Contract Forestry employee performance on an annual basis. Retention or advancement of employees will be made with AEP's approval. If the Contractor advances an employee into a position for which AEP does not believe he/she is qualified, AEP will pay for this employee at the lower rate even though the Contractor may compensate the contract employee at a higher rate.

Forestry Inspector, Forestry Work Planner and Contract Utility Foresters are three distinct positions with specific qualifications and responsibilities. There is no guarantee of advancement from a Forestry Inspector to a Utility Forester Senior. Contract Utility Forester positions will only be filled at the request and approval of AEP.

Safety is of utmost importance to AEP and Contractor employees must work in a safe manner, expect others to work safely and provide for the safety of the public. The Contractor is responsible to insure employees comply with all appropriate laws and regulations. A poor safety record will seriously affect the continuance of the contract.

Contractor shall provide a serviceable and presentable vehicle for each employee. As required by specific operating areas Contractor may be required to provide for each vehicle a clear display of the Contractor's name and "Under Contract to American Electric Power".

The Contractor shall supply each employee with appropriate personal protective equipment (PPE) a personal voltage detector and first aid /CPR training. AEP will supply each Contractor employee with an AEP contractor photo identification card. The contractor must return these cards to AEP for any of their employees who are not actively working for AEP.

In designated operating areas AEP will not provide an office for Contract Forestry Inspectors or Forestry Work Planners. However, when necessary, AEP will provide working space for them to use for the preparation of maps and notification forms. Office space will be provided for Contract Utility Foresters.

Contract Forestry Inspectors and Contract Utility Foresters will be required to enter vegetation clearing crew inspections and/ or contract crew audit reports into the AEP CAMPS system thru the AEP web portal.

AEP will supply specialized and location specific equipment such as clipboards, DBH tapes, circuit/line maps, tree marking paint, pens, pencils, etc. Contractor employees should utilize AEP's telephones, copying and fax machines. In designated areas contractor will be required to provide a computer or similar electronic device capable of collecting and recording vegetation work plan data in the field.

Contractor must obtain advanced approval for reimbursement of any expenses: copying, purchased maps, phone calls, materials, tools and equipment, travel expenses, etc. All approved expenses will be reimbursed at actual cost with no mark-up.

## **2.0 WORK SCHEDULE**

AEP shall designate the days and hours to be worked for each contract employee and reserves the right to reschedule the normal working hours with two (2) weeks prior notice. All overtime must be approved in advance by AEP.

In the event of an extended absence (2-weeks or longer or at AEP's request) a substitute Forestry Employee shall be provided at a cost not to exceed the hourly rate of the absentee.

The following days are considered to be Holidays (or the normal work day not worked because of the Holiday) and will not be considered normal work days for Contractor employees: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving and the following Friday, Christmas Eve and Christmas Day.

### 3.0 INVOICING

The Contractor will be required to submit a hard copy weekly timesheet(s) to the Owner that accurately details the crew labor personnel and labor classifications, equipment utilized, man-hours, volume of work completed and any materials used. Those documents shall be entered into the Owners data base, and Owner shall arrange the Contractor to perform this task thru a web site link. Owner shall make payment electronically using the invoicing program. Owner will not withhold retention.

AEP will pay for travel time when Contractor's employee is required to work outside of the agreed upon area. If overnight stays are required, these will be reimbursed at actual motel cost (receipt required) and quoted per diem rates for meals. Conservative, mid-priced motels must be used.

### 4.0 POSITION DESCRIPTIONS

#### 4.1 CONTRACT UTILITY FORESTER POSITION DESCRIPTIONS

##### 1) Contract Utility Forester III:

###### **Qualifications:**

1. Degree in Forestry, Arboriculture, or equivalent education, or related utility experience.
2. Valid driver license
3. Knowledge of pesticide use, particularly herbicides.
4. Knowledge of electric utility facilities and hardware
5. Basic familiarity of and ability to learn computer systems.
6. Good verbal and written communication skills.
7. Positive professional attitude and neat professional appearance.
8. Demonstrated ability to work outside in a safe, productive manner in all conditions which include and are not limited to terrain weather and seasonal changes.

###### **Responsibilities:**

Patrol electric utility rights of way as assigned for identification of vegetation to meet applicable line clearance specifications or guidelines. Record this work on appropriate forms, maps, documents or other data collection systems. To investigate, recommend, and resolve solutions for property owner and customer concerns as assigned. Assist in the inspection and cost estimate of vegetation line clearance work. Assist in the inspection and auditing of contractor crews performing line clearance work for compliance to applicable clearance guidelines or specifications, accounting classification of the work performed, safety compliance, OSHA / ANSI compliance, overall time reporting accuracy and recommend acceptance or corrective action. Assisting in the inspection and training of work planners. Assist in monitoring all work including herbicide applications for contract compliance. Assist in processing contractor time sheets; operate system forestry computer and record systems. Work in a safe manner; promote good safe work practices for both AEP and contractor employees. Perform all duties in a manner that promotes and maintains good public relations. Assist in storm and emergency service restoration. Assume other duties and responsibilities as assigned.

**2) Contract Utility Forester II:**

**Qualifications:**

1. Meet qualifications of a Contract Utility Forester III.
2. One year experience as a Contract Utility Forester III or two years related electric utility experience.
3. Must work toward an appropriate pesticide license and / or ISA certification if requested by owner or if required by law.

**Responsibilities:**

Perform all the duties of a Contract Utility Forester III. Keep informed of line clearance and work planning provisions. Patrol lines for necessary line clearance and as required record work on maps or other data collection system, make appropriate arrangements with property owners and assign to line clearance contractors, or assign to work planners. Inspect and audit work of line clearance contractors and work planners to assure contract compliance and recommend acceptance or corrective action. Investigate and resolve property owner or customer concerns. Recommend work plans, priorities, work schedules and budgets to meet forestry program goals and assume responsibility of same. Determine line clearance requirements for short and long term plans; provide cost estimates for maintenance activities or new construction. Contact governmental agencies, tree commissions, special interest groups, other utilities, property owners, customers and others to arrange and coordinate right of way maintenance activities. Maintain records and files of all work activities for contractor crews and maintenance activities. Prepare reports on budget, crew production, work cost, work quality and effectiveness. Assume other duties and responsibilities as assigned.

**3) Contract Utility Forester I:**

**Qualifications:**

1. Meet qualifications of Contract Utility Forester II.
2. One year experience as a Contract Utility Forester II or three years related electric utility experience.
3. Demonstrated ability in teamwork, leadership, organization, decision-making, problem solving and proficiency at planning, scheduling, directing, and estimating work.
4. Possess a thorough knowledge of right-of-way maintenance or IVM practices.
5. Must possess a herbicide license and ISA certification

**Responsibilities:**

Perform all the duties of Contract Utility Forester II and III. Train and direct others in pre planning line clearance work activities. Assign and inspect line clearance work, consult with contractor supervision to assure contract compliance and timely job progress. Assist with the development of work plans, priorities, work schedules, budgets and assume responsibility for the accomplishment of same. Assist in guiding and training others involved in the forestry program in proper work practices and procedures. Keep informed in vegetation management practices, procedures and proactively test and develop new tools, techniques and methods. Assume other duties and responsibilities as assigned.

**4) Contract Utility Forester Senior:**

**Qualifications:**

1. Meet all qualifications of Contract Utility Forester I.
2. Four years' experience as a Contract Utility Forester I.

**Responsibilities:**

Capably perform all the duties of Utility Forester at a level that demonstrates a thorough understanding of the position requirements and expectations of AEP Forestry. The employee demonstrates an ability to plan, monitor budgets to spending, and monitor forestry work plans to achieve and complete an operating company's line clearance forestry program specific to the contract employee's area(s) forestry work plan goals, with little guidance from forestry management. Assume other duties and responsibilities as assigned.

**4.2 FORESTRY PROGRAM COMPLIANCE INSPECTOR POSITION DESCRIPTION**

**Qualifications:**

1. Degree in Forestry or related field and /or related work experience in utility line clearance.
2. Valid driver's license
3. A familiarity in the operation of and use of computer systems
4. Good verbal and written communication skills
5. Professional attitude and neat appearance
6. Good understanding of electrical utility hardware and the ability to interpret associated electrical line / circuit maps
7. Self-motivated and efficient
8. Demonstrated ability to capably work safely in the field under adverse conditions which include and are not limited to terrain, weather and seasonal changes.

**Responsibilities:**

The primary responsibility of the Contractor will be the field inspection and review of work locations. This inspection may be necessary to survey vegetation management prior to or for the purpose of reviewing work performed in order to assure compliance to applicable guidelines and / or standards for vegetation clearances and work quality. This work shall require the Contractor to work alone under adverse field conditions. Extensive driving time is required as well as overnight stays. The Contractor will be required to complete inspections on AEP form 33060C1106 or similar document and/ or enter the inspections electronically into the CAMPS database via AEP's web access.

The Contractor may be assigned additional tasks or alternative work which may include but is not limited to inspection of line clearance contractor crews for OSHA and safety compliance, work unit accuracy reporting, accounting accuracy, or other compliance issues. Assistance may be required during major storms or other related duties as assigned.

#### 4.3 FORESTRY WORK PLANNER POSITION DESCRIPTIONS

##### 1) Work Planner C:

###### **Qualifications:**

1. Degree in Forestry, Arboriculture, or related field, or related utility experience is desirable.
2. Valid driver's license.
3. A basic familiarity in the operation of and ability to learn computer systems.
4. Good verbal and written communications skills.
5. Professional attitude and neat appearance.
6. Self-motivated and efficient.
7. Demonstrated ability to capably work safely in the field under adverse conditions which include and are not limited to terrain, weather and seasonal changes.

###### **Responsibilities:**

As directed; patrol electric utility rights of way and identify vegetation requiring periodic line clearance maintenance to meet applicable specifications or guidelines. Locate property owners and inform them of the work to be performed to provide the required line clearance. Identify and mark vegetation in the field, record this work on applicable forms, documents, maps or other data collection systems. Communicate work to be conducted to tree crews. Assist in inspection and auditing of work in progress and completed work. Under direction apply herbicides or TGR's. Assume other duties and responsibilities as assigned.

##### 2) Work Planner B:

###### **Qualifications:**

1. Meet all qualifications of Work planner C
2. Six months experience as a Work planner C or two years related utility line clearance experience.
3. Has a good understanding of electrical facilities and hardware
4. If required by owner or by law obtain appropriate pesticide license.
5. Demonstrates initiative and pro-actively looks for ways to do work cost effectively.
6. Demonstrated ability to work safely and efficiently with minimal supervision
7. Willing to travel and stay away from home overnight.

###### **Responsibilities:**

With little or no direct supervision perform all the duties and responsibilities of a Work planner C. Assist in training and mentoring Work planner C personnel. Assist in monitoring the performance of other Work planners. Respond to storm or other emergency situations as directed by AEP. Assist in preparing legally required notification to public agencies, news media etc. Capably investigates customer calls; requests for work, complaints etc. Assume other duties and responsibilities as assigned.

##### 3) Work Planner A:

###### **Qualifications:**

1. Meet all qualifications of Work planner B
2. One year's experience as a Work planner B or three years related utility line clearance experience.
3. If required by owner or by law obtain appropriate pesticide license.
4. Consistent work planning accuracy greater than or equal to 95%.



5. Demonstrates initiative and pro-actively looks for ways to do work cost effectively.
6. Demonstrated abilities in teamwork, leadership and problem solving.
7. Willing to travel and stay away from home overnight.

**Responsibilities:**

With little or no direct supervision perform all the duties and responsibilities of a Work planner B. Train and mentor Work planner B or C personnel. Assist in monitoring the performance of other Work planners. Assume other duties and responsibilities as assigned.



**DAVEY RESOURCE GROUP - RATES FOR AEP EAST**

**CUF/Work Planner Rate Sheet**

| Labor Description | Labor Code | Labor Rate | Billing Rate |  | RT & 1/2 | DT |
|-------------------|------------|------------|--------------|--|----------|----|
|                   |            |            | \$/hr        |  |          |    |
|                   |            |            |              |  |          |    |

| STORM Labor Description | Labor Code | STORM LOADED RATES |    |    |
|-------------------------|------------|--------------------|----|----|
|                         |            | ST                 | RR | DT |
|                         |            |                    |    |    |

| Equipment*<br>Equipment Description | Equipment Code | Equipment Rate | Fuel Per Hour | Notes |
|-------------------------------------|----------------|----------------|---------------|-------|
|                                     |                |                |               |       |

**DAVEY RESOURCE GROUP - RATES FOR AEP WEST**

CUF/Work Planner Rate Sheet

| Labor Description | Billing Rate |            |            |            | DT (N/A -SWEPCO Distribution) |
|-------------------|--------------|------------|------------|------------|-------------------------------|
|                   | Labor Code   | Labor Rate | ST         | RT & 1/2   |                               |
| [REDACTED]        | [REDACTED]   | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED]                    |

| STORM Labor Description | Labor Code | STORM LOADED RATES |            |            | DT (N/A -SWEPCO Distribution) |
|-------------------------|------------|--------------------|------------|------------|-------------------------------|
|                         |            | ST                 | RH         |            |                               |
| [REDACTED]              | [REDACTED] | [REDACTED]         | [REDACTED] | [REDACTED] | [REDACTED]                    |

| Equipment* Description | Equipment Code | Equipment Rate | Fuel Per Hour | Notes      |
|------------------------|----------------|----------------|---------------|------------|
| [REDACTED]             | [REDACTED]     | [REDACTED]     | [REDACTED]    | [REDACTED] |

| Expense Description | Expense Code | Expense Rate (\$/unit) |
|---------------------|--------------|------------------------|
| [REDACTED]          | [REDACTED]   | [REDACTED]             |

7% markup to cover admin and overheads.  
 sum of meal and lodging rates. Alternative per diem rates can be discussed.

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**SECOND AMENDMENT TO CONTRACT NO. 026987430000X103**

This Second Amendment to Contract No. 026987430000X103 (“**Second Amendment**”), executed to be effective as of the 1<sup>st</sup> day of October, 2015 (“**Second Amendment Effective Date**”), is entered into by and between **American Electric Power Service Corporation**, a New York corporation, **for itself and as agent for the operating companies of the American Electric Power System** (“Owner”) and **The Davey Tree Expert Company**, (“Contractor”).

**WHEREAS**, Contractor and Owner entered into Contract No. 026987430000X103 with the Effective Date of May 1, 2014 (“**Contract**”) whereby Contractor is to provide certain Services as defined in the Contract; and

**WHEREAS**, on October 1, 2015 for administrative purposes due to a change of the Contractor’s vendor number, Contractor and Owner entered into the First Amendment to Contract No. 026987430000X103 to change the Contract number of the Contract from Contract No. 026987430000X103 to Contract No. 028449130000X103; and

**WHEREAS**, the parties agree that the change of the Contract number of the Contract from Contract No. 026987430000X103 to Contract No. 028449130000X103 was not and is no longer necessary;

**NOW THEREFORE**, parties hereto, hereby agree as follows:

1. The First Amendment for this agreement is hereby rescinded, and all references to Contract No. 028449130000X103 shall be deleted and returned to Contract No. 026987430000X103, the Contract’s original Contract Number.
2. Any terms, conditions, or provisions not specifically addressed or modified by this Second Amendment shall remain in full force and effect as agreed to in the Contract.

**IN WITNESS WHEREOF**, the parties hereto have caused this Second Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Second Amendment Effective Date.

**American Electric Power Service Corporation, a New York corporation, for itself and as agent for the operating companies of the**

Am  
DocuSigned by:  
Thomas Kirkpatrick  
By: Thomas Kirkpatrick  
E4EE4BC0A56E477...  
Name: Thomas Kirkpatrick

Title: Vice President Customer Service, Marketing and Distribution Services

Date: 5/10/2016 | 7:47 AM ET

**The Davey Tree Expert Company**

DocuSigned by:  
Jack McCabe  
By: Jack McCabe  
BC5012C7D08E4AE...  
Name: Jack McCabe

Title: President, Distribution Services

Date: 5/13/2016 | 11:34 AM ET

DocuSign Envelope ID: DB0E99F6-F099-45DC-9093-2B6F2B3D10B2



## CONFIDENTIAL

### Contract Routing Slip

| ROUTING         | Purpose              | Initials             | Date Signed            |
|-----------------|----------------------|----------------------|------------------------|
| Sonia Pickens   | For your review      | <sup>DS</sup><br>SP  | 5/9/2016   5:25 PM ET  |
| Matt Curtis     | For your review      | <sup>DS</sup><br>MC  | 5/9/2016   5:28 PM ET  |
| Terri Stiltner  | For your review      | <sup>DS</sup><br>TS  | 5/10/2016   7:06 AM ET |
| Walter Sherry   | For your review      | <sup>DS</sup><br>WAS | 5/10/2016   7:44 AM ET |
| Tom Kirkpatrick | Agreement Signature  | <sup>DS</sup><br>TK  | 5/10/2016   7:47 AM ET |
| AEP Audit       | Copy                 |                      |                        |
| Gina Crabtree   | Document in File     | NR                   | NR                     |
| Jack McCabe     | Contractor signatory | NR                   | NR                     |

**Date:** May 9, 2016

**Company:** AEPSC

**Contractor Name:** Davey's Tree Expert Company

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 028449130000X103 Amd #2

**Term:** May 1, 2014, – April 30, 2019

**Price/Cost Model:** hours

**Type:** Service

**Estimated Spend:** no change

**Does Docusign routing match routing slip:** Yes

**Description of Amendment:** To rescind the previous amendment







## Certificate Of Completion

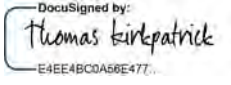
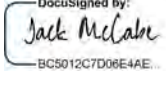
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Subject: AEP Contract No. 028449130000X103 Davey's Tree Expert Company Amd #2  
Source Envelope:  
Document Pages: 2 Signatures: 2 Envelope Originator:  
Certificate Pages: 3 Initials: 5 Gina Crabtree  
AutoNav: Enabled 1 Riverside Plz FL 1  
Envelopeld Stamping: Enabled Columbus, OH 43215-2373  
Time Zone: (UTC-05:00) Eastern Time (US & Canada) gmcrabtree@aep.com  
IP Address: 167.239.221.80

## Record Tracking

Status: Original Holder: Gina Crabtree Location: DocuSign  
5/9/2016 2:46:01 PM gmcrabtree@aep.com

## Signer Events

| Signer Events  | Signature   | Timestamp  |
|--|---|--|
| Sonia Pickens<br>srvaughan@aep.com<br>Category Mgr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:                                | <br>Using IP Address: 167.239.221.85   | Sent: 5/9/2016 2:51:16 PM<br>Viewed: 5/9/2016 5:25:11 PM<br>Signed: 5/9/2016 5:25:57 PM    |
| Matthew Curtis<br>mpcurtis@aep.com<br>Mgr, T & D Contracts<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:    | <br>Using IP Address: 167.239.221.86 | Sent: 5/9/2016 5:25:59 PM<br>Viewed: 5/9/2016 5:27:36 PM<br>Signed: 5/9/2016 5:28:05 PM    |
| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/18/2015 3:27:15 PM<br>ID: 592a4afd-f450-4104-bdeb-635cbde989d5                              | <br>Using IP Address: 167.239.221.86 | Sent: 5/9/2016 5:28:06 PM<br>Viewed: 5/10/2016 7:05:51 AM<br>Signed: 5/10/2016 7:06:04 AM  |
| Walter A. Sherry<br>washerry@aep.com<br>Forestry Operation Manager<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 7/1/2014 7:08:14 PM<br>ID: ca043d9b-aaab-40e4-bee5-8c449d93d309 | <br>Using IP Address: 167.239.221.80 | Sent: 5/10/2016 7:06:05 AM<br>Viewed: 5/10/2016 7:43:11 AM<br>Signed: 5/10/2016 7:44:12 AM |

| Signer Events  | Signature   | Timestamp   |
|--|---|---|
| Thomas Kirkpatrick<br>tlkirkpatrick@aep.com<br>Vice President Customer Service, Marketing and<br>Distribution Services<br>Security Level: Email, Account Authentication<br>(None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/11/2014 7:22:30 AM<br>ID: 293b8fdf-68e0-46e9-b110-269f4199cb39 | <br>Using IP Address: 167.239.221.85 | Sent: 5/10/2016 7:44:14 AM<br>Viewed: 5/10/2016 7:47:00 AM<br>Signed: 5/10/2016 7:47:24 AM  |
| Jack McCabe<br>jack.mccabe@davey.com<br>Vice President, Utility Operations<br>Security Level: Email, Account Authentication<br>(None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:  | <br>Using IP Address: 71.72.59.203   | Sent: 5/10/2016 7:47:25 AM<br>Viewed: 5/12/2016 3:39:49 PM<br>Signed: 5/13/2016 11:34:22 AM |

| In Person Signer Events | Signature | Timestamp |
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| Editor Delivery Events | Status | Timestamp |
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| Agent Delivery Events | Status | Timestamp |
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| Intermediary Delivery Events | Status | Timestamp |
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| Certified Delivery Events | Status | Timestamp |
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| Carbon Copy Events | Status | Timestamp |
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| AEP Audit<br>gbscontractassessments@aep.com<br>Security Level: Email, Account Authentication<br>(None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID: |  | Sent: 5/13/2016 11:34:24 AM |
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|  |   |                             |
|--|---|-----------------------------|
| Denise Tolliver<br>dtolliver@aep.com<br>Contract Analyst<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication<br>(None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID: |  | Sent: 5/13/2016 11:34:24 AM |
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| Notary Events | Timestamp |
|---------------|-----------|
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| Envelope Summary Events | Status | Timestamps |
|-------------------------|--------|------------|
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|---------------------|------------------|-----------------------|
| Envelope Sent       | Hashed/Encrypted | 5/13/2016 11:34:24 AM |
| Certified Delivered | Security Checked | 5/13/2016 11:34:24 AM |
| Signing Complete    | Security Checked | 5/13/2016 11:34:24 AM |
| Completed           | Security Checked | 5/13/2016 11:34:24 AM |

| Electronic Record and Signature Disclosure |
|--|
|--|



Electronic Record and Signature Disclosure created on: 5/30/2014 1:32:06 PM  
Parties agreed to: Terri Stiltner, Walter A. Sherry, Thomas Kirkpatrick

**ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

Policy Title: AEP Procurement Policy



**AEP PROCUREMENT POLICY ATTACHMENT B  
JUSTIFICATION FOR SOLE SOURCE, SINGLE SOURCE OR OTHER THAN LOW BID ACQUISITION**

I certify the statements enclosed and the information provided is complete and correct to the best of my knowledge. I understand that the processing of a justification form precludes the use of full and open competition in accordance with American Electric Power's Procurement Policy dated July 1, 2013. Section 5 requires that all purchases in excess of the Competitive Bid threshold of \$100,000 require competitive bidding unless justified by a Sole Source or Single Source Justification. I understand further that Awards to Other than Low Bidder must be similarly justified. Requisitioners are required to justify a Sole Source, Single Source or Other than Low Bid selection of a supplier in accordance with the instructions in the policy. This form must be completed and forwarded with the Contract and/or Purchase Requisition to proceed with the acquisition process.

At a minimum, the Justification Statement shall include, but not be limited to: 1) Business Unit; 2) description of the Goods and/or Services being acquired; 3) dollar value; 4) detailed description of why only this suggested source can furnish the requirements 5) signature of the individual(s) writing and approving the Justification Statement.

Purpose of Form: Sole Source  Single Source  Other than Low Bid Acquisition

The preliminary estimated dollar expenditure for this material, software and/or services is: [REDACTED]

Requisitioner:

Signature  
Name  
Title  
Date

DocuSigned by:  
*Walter A. Sherry*  
320F2FBB3E224DB...  
Walter Sherry  
Forestry Operations Mgr  
9/22/2016 | 1:42 PM EDT

Item(s) or service(s): Distribution/Transmission vegetation management services.

Suggested source/supplier: The Davey Tree Expert Inc.

Contract/PO number (if known): 026987430000X103

Describe in detail why only this suggested source can furnish the requirements to the exclusion of other sources: Forestry is requesting that we amend an agreement with The Davey's Tree Expert to provide forestry clearing activities on our transmission right of ways to the end of the year in support of improving risk profile. By adding this service provider AEP will increase its pool of pre-approved contractors which will improve the competitive nature and cost control for this type of work. Further, this activity supports our new supplier development program as outlined in the procurement forestry business plan. Root justification for this request is that there is a significant need for crews in AEP OH and our current contractors cannot supply the needed resources. The rates have been vetted and are competitive in nature.

Approver:

Signature  
Name  
Title  
Date

DocuSigned by:  
*Tom Kirkpatrick*  
E4EE49C0A58E477...  
Tom Kirkpatrick  
VP Cust Svcs, Mktg & Dist Svcs  
9/22/2016 | 1:43 PM EDT

Procurement Review:

Initials  
Name Matthew Curtis

DS  
*MC*

### FIRST AMENDMENT TO CONTRACT NO. 026987430000X103

This First Amendment to Contract No. 026987430000X103 ("First Amendment"), executed to be effective September 25, 2016 ("First Amendment Effective Date"), is by and between **American Electric Power Service Corporation**, a New York corporation, as agent for the operating companies of the **American Electric Power System** ("Owner") and **The Davey Tree Expert Company**, an Ohio corporation ("Contractor").

**WHEREAS**, Contractor and Owner entered into Contract No. 026987430000X103 with an Effective Date of May 1, 2014 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the parties hereby agree as follows:

1. In order to update Section 1 Description of Services, remove the section in its entirety and replace with:

"Subject to the terms and conditions hereof, Contractor agrees to furnish to Owner, on an as-needed basis, all supervision, labor, equipment and specified materials necessary to perform transmission and distribution vegetation management services, as delineated below, within Owner's service areas ("Work").

Vegetation management services may include but not be limited to the following:

Emergency- Local emergency restoration tree work on an on-call basis.

Herbicide and Tree Growth Regulator (TGR)- Application of appropriate herbicides and/or TGR in service areas as directed by Owner.

Mowing- Provide mowing services in Owner service areas where easements restrict the ability to use any other method for vegetation control and Owner has determined that mowing is the preferred maintenance method.

Removals- Hazard tree removals performed outside of Owner's routinely maintained right-of-ways.

Right-of-Way Maintenance- Tree and brush work on and off-road and/or cross-country on transmission and distribution lines, based upon Owner's specifications.

Side Trimming- Tree trimming along the edges of right-of-ways using either aerial lifts, climbing crews, aerial saw, chemicals and/or mechanical side trim equipment.

Storm Restoration- Emergency restoration in areas affected by storm damage without debris cleanup unless otherwise specified.

Work Planning- Perform inspection and planning services and develop plans, strategies and administrative work for various methods of vegetation management to be performed in Owner's service areas. Work planning services shall be performed using qualified transmission and distribution Contract Utility Foresters, Work Planners, Inspectors, Pesticide Applicators and TGR Pre-Notifiers as described in the documents attached in Exhibit B.

This Contract covers only such Work as may be authorized by Owner and shall not constitute an exclusive agreement between Owner and Contractor. Owner reserves the right to use its own forces,

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equipment, tools, conveyances and materials or those of another vendor to perform the same or similar Work. Parties agree this Contract does not authorize Contractor to begin performance of any Work, nor does it guarantee Contractor any minimum volume of Work.”

2. In order to update Section 3 Contract Documents, Incorporation and Priority to include guidelines and terms for additional scope as well as revising the Terms other documents, remove Section 3 in its entirety and replace with the following:

Contractor and Owner agree that the Work shall be performed in accordance with the following Exhibits:

**Exhibit A –General and Supplementary Terms**, consisting of the following documents, which are attached hereto and made a part hereof;

1. AEP General Terms and Conditions for Labor and Services, dated March 2009 Rev 3 dtd 6/14 (“AEP General Terms and Conditions”); and
2. Supplementary Terms and Conditions for Forestry Contracts, dated June 1, 2015 (“Supplementary Terms”).

**Exhibit B –Forestry Terms and Instructions**, consisting of the following documents, which are attached hereto and made a part hereof;

3. AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated June 1, 2015;
4. AEP Forestry Instructions for Forestry Contract Crew Audits, dated January 2007, including its Sample Audit Form (“Audit Instructions”);
5. Transmission Vegetation Management Program (“TVMP”), dated July 31, 2015; and
6. AEP Transmission Forestry Specs for ROW Maintenance, dated October 25, 2010.
7. Addesso

**Exhibit C –Rates**, consisting of the following documents, which are attached hereto and made a part hereof;

8. AEP Transmission Forestry Rate Clarifications for ROW Maintenance, dated September 21, 2016;
9. Labor Descriptions, dated August 1, 2011;
10. Contractor’s Rates (individually or collectively, the “Rates”);
11. A sample Work Request for Unit Price/Time and Materials Work, a sample Work Request for Lump Sum Work, and all applicable subsequently executed Work Requests; and
12. A sample Pricing Change Order Request Form and all applicable subsequently executed Pricing Change Orders.

3. In order to update Section 5 Pricing and Payment Terms, remove the section in its entirety and replace with:

“The parties agree that all Work performed under this Contract shall be completed on a Lump Sum, Unit Price, and/or Time and Materials basis priced in accordance with Contractor’s Rate Sheets in Exhibit C of the Contract.

Contractor’s Rates shall be held firm thru 4/30/19.

Pricing Change Order Process: If Contractor has unforeseen changes to Contractor’s Rate Sheets that do not conform to the Annual Rate Adjustment process described above, these changes may be made, upon Owner discretion, in accordance with the following procedures:

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- Changes to Contractor's Rate Sheets shall be made using the Pricing Change Order Request Form ("Pricing Change Order") included in Exhibit C and must be presented in the authorized pricing format designated by Owner.
- Each Pricing Change Order must be submitted to the AEP Manager, Forestry Operations, as listed in Section 9 below and submitted at least 30 days before the desired effective date for the new rates. If Contractor fails to submit its proposed Pricing Change Order at least 30 days prior to the desired effective date, the proposed Pricing Change Order will not be considered and existing Contractor's Rate Sheets shall remain in effect.
- If Contractor's Pricing Change Order is accepted by Owner, the revised Contractor's Rate Sheets shall be incorporated into Exhibit C of the Contract upon the authorized signature of the parties and shall become effective as of the date of the latter signature of the Pricing Change Order.

Lump Sum Work: The parties agree to designate the specific pricing for Work performed on a Lump Sum basis in the Work Request. In the event the Contractor is assigned additional Work that was not included in the original Work Request, that Work will be priced utilizing the Contractor's Rate Sheets included in Exhibit C."

4. In order to update the pricing in Exhibit C (formerly Exhibit D), add the ROW Vegetation Management Rate Sheet, attached hereto and incorporated within.
5. In order to update Notices and Operation Contacts replace Sonia Pickens with Gina Crabtree, Contract Analyst, [gmcraabtree@aep.com](mailto:gmcraabtree@aep.com), 614.716.1261, 1 Riverside Plz, 9<sup>th</sup> fl., Columbus, OH 43215.
6. In order to update Section 9 Miscellaneous, add the following:  
  
"Contractor shall, at no additional cost to Owner, register with ISNetworld, either online by going to [www.isnetworld.com](http://www.isnetworld.com) and clicking on "Become A Member" or by contacting ISN at (214) 303-4900 or (800) 976-1303 to establish their company's subscription. Contractor must acquire and maintain a passing ISN AEP Dashboard Grade. If during the Contract term, Contractor's grade falls below AEP's minimal requirements, Owner has the right to (1) apply a probationary period where all work performed by Contractor is temporarily stopped until an investigation is performed; (2) suspend the contract; (3) terminate the Contract for cause, in accordance with Section 27.1 of the AEP General Terms and Conditions, if, in AEP sole opinion, the grade cannot be improved to a passing level within reasonable time."
7. Except as amended by this First Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**{SIGNATURES ON FOLLOWING PAGE}**

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**IN WITNESS WHEREOF**, the parties hereto have caused this First Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the First Amendment Effective Date.

**American Electric Power Service Corporation, as agent for the operating companies of the American Electric**

DocuSigned by:  
*Tom Kirkpatrick*  
By: E4EE4BC0A56E477...  
Name: Tom Kirkpatrick  
Title: Vice President Customer Service, Marketing and Distribution Services  
Date: 9/22/2016 | 1:43 PM EDT

**The Davey Tree Expert Company**

DocuSigned by:  
*Jack McCabe*  
By: BC5012C7D06E4AE...  
Name: Jack McCabe  
Title: Vice President, Utility Operations  
Date: 9/27/2016 | 8:13 AM EDT

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# Exhibit A

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# ***AMERICAN ELECTRIC POWER***

## **AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES**

**March 2009 Rev. 3 dated 6/14**



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**AFFIDAVIT OF COMPLETION**

**Exhibit 1**

## **AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES**

### **1.0 DEFINITIONS**

- 1.1 Business Day: "Business Day" means any calendar day, other than a Saturday or Sunday or a calendar day on which U.S. commercial banking institutions are authorized or required by law to close.
- 1.2 Change Order: "Change Order" means a written order as defined and issued in accordance with Article 12.0.
- 1.3 Contract: "Contract" means collectively the Contracting Instrument and all documents referenced in the Contracting Instrument and any Change Orders, amendments or addenda.
- 1.4 Contract Price: "Contract Price" means the price to be paid to the Contractor for the performance of Work as set forth in the Contracting Instrument.
- 1.5 Contracting Instrument: "Contracting Instrument" means the contractual document that identifies the parties, the nature of the Work, the Contract Price, documents to be included as part of a Contract, and other matters relating to a Contract. The Contracting Instrument may be in the form of a contract letter, blanket purchase order, purchase order or other similar documents.
- 1.6 Contractor: "Contractor" means the entity contracting with Owner for the performance of Work.
- 1.7 Direct Cost: "Direct Cost" means the actual costs and charges incurred and payments made by Contractor, its Subcontractors, for Site equipment, materials, services and labor (including payroll burden and expenses) which are directly attributable to the performance of Contractor's Work hereunder. Direct Cost includes Contractor's home office or Site labor to the extent Contractor's home office or Site labor is directly assignable to the Work which must be demonstrable under the circumstances. Direct Cost shall not include corporate, general and administrative costs including home office functions, sales, marketing, accounting, human resources, information technology, payroll, profit, research, development, quality assurance and control, purchasing, safety, management, administration, warranties, insurances, off-Site or other unabsorbed costs.
- 1.8 Final Acceptance: "Final Acceptance" means Owner's determination that the Work has been completed in accordance with the Contract requirements.
- 1.9 Initial Acceptance: "Initial Acceptance" means Owner's determination prior to final inspection and testing that the Work conforms to the Contract requirements for purposes of receipt.
- 1.10 Owner: "Owner" means any one or more of the companies of the American Electric Power System as may be specified in the Contract Instrument.
- 1.11 Site: "Site" means Owner's property or such other premises (including adjacent bodies of water and property owned or controlled by a third-party) upon which the Work is to be performed.
- 1.12 Subcontractor: "Subcontractor" means vendors, suppliers, consultants, and subcontractors of any tier, materialmen, professionals, laborers, and all other persons providing equipment, materials or services directly or indirectly to Contractor in connection with the Work.
- 1.13 Work: "Work" means all of Contractor's obligations under the Contract.

2.0 CONTRACTOR'S OBLIGATIONS

- 2.1 Contractor shall at its expense provide everything necessary for the complete, proper and timely execution of the Work including, but not limited to, home office support, supervision, labor, tools, transportation, safety equipment, construction equipment, temporary utilities and facilities, equipment to be installed, materials and supplies, unless explicitly excluded in the Contract. Contractor's performance of the Work shall include everything requisite and necessary to comply with prudent electric utility industry standards and to complete its Work, notwithstanding the fact that every item necessarily involved may not be specifically mentioned. Details and items not indicated by the Contract documents shall be adequately and properly performed by Contractor at no extra cost if such details and items are necessary to complete the intent of the Contract or otherwise to complete the Work.
- 2.2 Contractor is responsible for considering the conditions affecting the Work including, but not limited to, conditions affecting the transportation, disposal, handling and storage of materials; the availability and cost of labor, water, electric power, utilities and roads; the uncertainties of weather, river stages, and similar physical conditions at the Site; the conformation and condition of the ground; and the character of equipment and facilities needed. Contractor shall take into account the character, quality and quantity of surface and subsurface materials or obstacles to be encountered to the extent this information is reasonably ascertainable from the contract documents or an inspection of the Site.
- 2.3 Contractor shall immediately and before such conditions are disturbed notify Owner of: (a) subsurface or latent physical conditions at the Site which differ materially from those indicated in the Contract; (b) unusual geologic conditions at the Site which differ materially from conditions ordinarily encountered or from conditions addressed in the Contract; or (c) artifacts or articles which appear to have archaeological or historical significance. Owner shall promptly investigate such conditions and, if such conditions do materially differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of the Work, the parties shall agree to amend the Contract. No claim of Contractor under this clause shall be allowed unless Contractor has given immediate notice as required above and confirmed such notice in writing within ten (10) days of discovery.
- 2.4 Contractor shall have an authorized representative at the Site to whom Owner may give instructions at all times when Work is being performed.
- 2.5 Contractor shall assign qualified and competent personnel to perform the Work and have qualified and competent supervision at the Site at all times to direct and observe the Work. Key personnel shall not be removed from the Work without prior notice to, and consent by Owner which shall not be unreasonably withheld. Contractor will investigate and take appropriate action with respect to any personnel problems brought to its attention by Owner.
- 2.6 Contractor shall confine all of its operations and personnel to those areas of the Site to which Owner authorizes access.
- 2.7 Contractor's personnel may not operate Owner's tools, vehicles, materials or equipment ("Owner's Equipment") without Owner's prior authorization. If Contractor borrows Owner's Equipment, Contractor (a) agrees that Owner has provided Owner's Equipment AS IS, with no representations or warranties; (b) assumes full responsibility for the protection of the borrowed Owner's Equipment; (c) assumes all liability for injuries or damages resulting from the use of the borrowed Owner's Equipment; and (d) agrees to return the borrowed Owner's Equipment to Owner in the same condition as when it was borrowed, or, if repairs are necessary, to cause such repairs to be performed promptly at Contractor's expense before the Owner's Equipment is returned to Owner. Owner has no obligation to lend Owner's Equipment to Contractor.

- 2.8 Contractor shall cooperate with Owner and others working at or near the Site. Contractor shall promptly report to Owner any defects in the work of others which affects the Work. Failure to report such defects constitutes acceptance of the conditions by Contractor. Contractor shall properly fit, connect and coordinate its Work with that of Owner and other contractors.
- 2.9 Contractor shall keep all of its work areas free from trash and debris, and keep its work areas "broom clean" on a continuous basis.
- 2.10 Contractor shall secure and protect its materials, tools, equipment and the Work, including Owner-provided materials and equipment.
- 2.11 Contractor is responsible for the proper execution of the Work with respect to any base lines and bench marks established by Owner.
- 2.12 If the Work is subject to prevailing wage requirements, Contractor agrees to comply with such requirements.
- 2.13 Contractor, its Subcontractors, and their respective employees and agents involved in the Work shall adhere to the provisions contained in Owner's Code of Business Conduct which can be found at Owner's website.

### 3.0 TERM AND EFFECTIVE DATE

- 3.1 The Contract shall commence as of the effective date and, unless earlier terminated as provided in Article 27.0, shall terminate on the termination date set forth in the Contract. Unless specified elsewhere in the Contract, the effective date of the Contract shall be the earlier of the date on which Contractor begins performance hereunder or the date of the latter signature on the Contract.

### 4.0 RELATIONSHIP OF THE PARTIES

- 4.1 Contractor and all of its employees and Subcontractors are, with respect to Owner, independent contractors. Contractor will be solely responsible for the supervision, direction, and control of its employees and Subcontractors. Contractor is responsible for the payment of all compensation, benefits, and employment taxes with respect to the Contractor's employees.

### 5.0 ASSIGNMENT AND SUBCONTRACTING

- 5.1 Contractor shall not assign or otherwise dispose of the Contract, or any obligations hereunder, without the written consent of Owner. Any assignment or disposal without the written consent of Owner shall be null and void.
- 5.2 Prior to entering into any subcontract, Contractor shall submit to Owner a subcontractor data sheet that includes the name and address of the Subcontractor and the scope of work proposed to be included under such subcontract. Within five (5) Business Days of receipt of a Subcontractor data sheet, Owner may reject such Subcontractor without cost or contract extension by giving written notice of such rejection to Contractor.
- 5.3 Contractor is responsible for the selection of any Subcontractor and for the Subcontractor's proper performance of the Work assigned to it. If the work of a Subcontractor is not in compliance with the Contract requirements, Contractor shall take immediate steps to bring the Subcontractor's work into compliance and, at Owner's written request, terminate its contractual relationship with the Subcontractor as it relates to the Work at no cost to Owner.

6.0 LABOR RELATIONS

- 6.1 Contractor shall comply with any project, national or local labor agreements that are applicable to the Work or Site. Contractor shall cooperate with Owner and other contractors in establishing and maintaining labor work rules and practices.
- 6.2 When the Work is performed by building and construction trades labor, a pre-job conference shall be held with local labor representatives prior to starting Work. Owner shall be afforded the opportunity to attend and participate in pre-job conferences.
- 6.3 Contractor shall provide immediate notice to Owner of any actual or potential labor dispute that may delay the timely, efficient and productive performance of the Work.
- 6.4 Contractor shall inform and cooperate with Owner on labor matters. Contractor shall consult with Owner prior to rendering its decision(s) on labor matters that may impact the timely, efficient and productive performance of the Work.
- 6.5 Contractor shall exercise its management rights contained in applicable labor agreements to establish, maintain, and enforce work rules conducive to timely, efficient, productive and harmonious work operation. Contractor shall take the necessary steps available to resolve grievances, jurisdictional disputes, or other violations of collective bargaining agreements.

7.0 SAFETY AND SECURITY

- 7.1 Contractor shall perform the Work in a safe and careful manner, provide first aid facilities and transportation, and use such safety devices and methods as are necessary to protect its employees, agents, Subcontractors, Owner's employees and agents, other contractors and the public from bodily injury and property damage.
- 7.2 Contractor shall comply with and enforce all laws, rules and regulations applicable to safety and health standards, including, but not limited to, the Occupational Safety and Health Act of 1970 (OSHA) and any revisions of OSHA or successor legislation.
- 7.3 Contractor shall comply with project and Site safety and security rules and all procedures issued by Owner, provided that such rules and procedures do not conflict with OSHA or other safety laws, rules or regulations. Contractor shall assign a competent person at all times to manage, coordinate and enforce its safety program during performance of the Work.
- 7.4 Contractor shall provide Owner with Material Safety Data Sheets (MSDS) for all applicable materials prior to delivery to Owner's Site.
- 7.5 Contractor shall obtain Site permits or approval from Owner for its vehicles, any excavation, use of explosives, access to restricted areas, use of Owner's Equipment, tools and facilities, and other similar activities.
- 7.6 Owner will arrange all necessary clearances on energized equipment, electrical and communications circuits, piping systems or other operational equipment. Contractor shall notify Owner requesting the clearances prior to the scheduling of such Work. Contractor shall comply with Owner's clearance permit system regarding tagout and lockout of electrical and mechanical systems and other equipment.
- 7.7 Contractor shall fully inform Owner in writing regarding the types, quantities and use of any hazardous materials brought on the Site; the types and quantities of hazardous wastes being generated from the Work; and Contractor's program for proper storing, handling and disposal of such materials in a safe and secure manner.

- 7.8 Contractor shall immediately inform Owner of all regulatory safety, health and environmental inspections, citations and penalties associated with the Work. Contractor shall provide Owner with written reports and copies of all documents submitted to or by regulatory agencies and insurance companies.
- 7.9 Contractor shall promptly inform Owner of any injuries to its employees, agents, Subcontractors, or other persons arising out of the Work that require medical treatment.
- 7.10 Contractor shall obtain, maintain, and properly complete all record keeping required by regulatory agencies. Upon request, Contractor shall provide Owner with copies of all logs, reports and other records.
- 7.11 Contractor shall investigate all accidents resulting in personal injury, property damage, or near misses to determine root cause(s) and corrective action(s). Upon request, Contractor shall provide Owner with a copy of investigative reports, including all documents submitted to insurance companies.
- 7.12 All of Contractor's employees, agents, Subcontractors, vehicles, trailers, etc. entering or leaving the Site are subject to inspection at any time by Owner.
- 7.13 If a safety violation or other unsafe condition causes imminent danger, Owner may immediately shut down the Work involved without advance written notice.
- 7.14 Contractor and all Subcontractors performing Work at Site must have a substance abuse program. This program must apply to all personnel. Minimum requirements of this program shall include pre-hire testing, testing for cause and if requested, random testing. Screening substances and their associated cut-off limits are listed below.

| <u>Drug Classes</u> | <u>Screening Cut-Off Limit (ng/ml)</u> | <u>Confirmation Cut-Off Limit (ng/ml)</u> |
|---------------------|--|---|
| Amphetamines        | 1,000                                  | 500                                       |
| Benzoyllecgonine    | 300                                    | 150                                       |
| Cannabinoids        | 50                                     | 15  |
| Opiates             | 2,000                                  | 2,000                                     |
| Phencyclidine       | 25                                     | 25  |

Blood & Breath alcohol content : .02% per Department of Transportation.

Testing shall be performed by a testing facility certified by Department of Health & Human Services. Personnel must have evidence of having tested negative within a year prior to employment. Owner will accept conditional employment predicated upon (a) employee(s) furnishing evidence that they have submitted to testing within forty-eight (48) hours of initial employment and (b) employee(s) furnishing evidence of negative test results within five (5) work days of initial employment. Contractor shall ensure personnel are "drug free". Owner reserves the right to examine evidence outlined herein. Contractor's program shall incorporate reciprocity on "drug free" employee verification to minimize Owner's economic impact and employee recertification while maintaining the program's intent.

- 7.15 If required by Owner, Contractor must meet certain security criteria set forth herein.
  - 7.15.1 Contractor shall submit to Owner a copy of its background investigation process for Owner's review and file. If Owner, in its sole discretion, determines that Contractor's background investigations do not meet certain specific requirements, then Contractor, at

its expense, must perform a background investigation that does meet Owner's certain specific requirements on each individual designated by Contractor to perform Work, or is performing Work on behalf of Contractor, for Owner (referred to herein for purposes of this Article, as an "individual"). Notwithstanding anything to the contrary stated herein, Owner reserves the right to conduct a background investigation on each individual at Contractor's expense.

- 7.15.2 Owner's certain specific requirements of background investigations include the following: (i) determination of whether an individual has been convicted of a felony crime in each state where the individual has resided during the past seven years; (ii) performance of the background investigation at the state level (in other words, to only search the records of the county in which the individual has resided during the past seven years is not a sufficient background investigation); and (iii) if the individual is to operate a motor vehicle while performing Work for Owner, then a state operator's license abstract must be completed in the states where the individual has been licensed as a vehicle operator during the past seven years.
- 7.15.3 If any background investigation reveals or indicates that an individual has been convicted of a felony crime, then the Contractor must notify the Owner prior to the individual commencing Work. Owner in its sole discretion shall have the option of barring from any Work Site any individual who has a reported felony conviction. Owner may audit or review specific Contractor screening files to ensure compliance with the Contract.
- 7.15.4 If an individual requires unescorted access to Owner's critical cyber assets, then Owner will conduct its own background investigation, which will include a Social Security Number verification. Additional specific provisions or requirements related to any Owner conducted background investigation pursuant to this Section 7.15.4 will be communicated to Contractor prior to implementation of such background investigation.
- 7.15.5 Contractor shall not perform any screening activities that violate the federal Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964 or any other applicable law in any circumstances. Contractor shall ensure that the substance and manner of any and all background investigations performed by Contractor conform fully to applicable law.
- 7.16 "Personally Identifiable Information" or "PII" means any information to which Contractor is provided access that could identify an individual either directly or indirectly including, without limitation to the individual's name, credit card numbers, social security number, biometric, bank account numbers, passport numbers, computer passwords or health, financial or employment information and other individual confidential information.
- 7.16.1 To the extent that Work under the Contract requires Contractor to be given access to PII gathered and/or maintained by or on behalf of Owner, or in the event Contractor acquires access to or encounters any PII during performance of the Work, Contractor shall after receipt thereof, treat such PII as confidential and safeguard such PII from unauthorized use and disclosure. Upon request of Owner, Contractor shall have its employees execute a confidentiality agreement protecting PII. Contractor agrees not to appropriate such PII for its own use or to disclose such PII to third parties unless specifically authorized by Owner in writing. Contractor shall ensure that its employees will not discuss, divulge or disclose any such PII to any person or entity except those persons directly concerned with and only to the extent necessary to complete the performance of the Work. Contractor shall access, use and process PII and other data on behalf of Owner only for the purposes specified in the Contract.

- 7.16.2 Contractor shall comply with (i) NERC Reliability Standards as applicable, including without limitation, those relating to Critical Infrastructure Protection, (ii) Owner's security standards, and (iii) such further instructions as Owner may provide regarding the processing of such PII. Contractor shall inform Owner promptly if it has reason to believe that applicable law (or changes in applicable law) prevents Contractor from fulfilling the obligations relating to treatment of PII or other data under Owner's security standards and/or the Contract.
- 7.16.3 To the extent permitted by law, Contractor shall notify Owner promptly and act only upon Owner's instruction concerning: (a) any request for disclosure of PII or other data by law enforcement or other governmental authority; (b) any request by law enforcement or other governmental authority for information concerning the processing of PII or other data in connection with the Contract; or (c) any request received directly from an individual concerning his/her PII.
- 7.16.4 Contractor may not store PII on computers, mobile devices, including but not limited to cellular telephones and/or personal digital assistants, servers and/or storage devices including removable media (any of which, hereinafter known as a "Computer"), unless required for the performance of Work. Any such information must be deleted from a Computer, in a manner that ensures that it cannot be accessed or read, as soon as such storage is no longer required for the performance of Work.
- 7.16.5 Upon termination of the Contract or upon Owner's request, Contractor must promptly (a) return all PII in written form to Owner, and (b) delete all PII in Contractor's possession or control (on computer or in whatever other form or media) in a manner that ensures that this information cannot be accessed or read.
- 7.16.6 Contractor shall administer a monitoring process to ensure compliance with Section 7.16 and the related subsections hereof, promptly report any breaches to Owner, and implement immediate, appropriate corrective actions to contain and prevent recurrence. Contractor shall report to Owner immediately upon discovery of a real or suspected loss of PII. In the event of a breach of this provision or the occurrence of any other event regarding PII that requires notification under applicable law, Contractor agrees to assume responsibility for informing all such individuals in accordance with applicable law.
- 7.16.7 In addition to any remedy available to Owner under the Contract, Contractor acknowledges that any breach of Section 7.16 or the related subsections hereof by Contractor or its Subcontractors may subject Contractor to civil and criminal penalties. Contractor shall include the full text of Section 7.16 and the related subsections 7.16.1 through 7.16.7 in all appropriate subcontracts. However, including such provision in the subcontracts shall not relieve Contractor of its obligation to ensure compliance with the provisions of Sections 7.16.1 through 7.16.7.

## 8.0 MATERIALS

- 8.1 All Contractor-furnished materials, equipment and related products (referred to in this Article 8.0 as "Materials"), which are to be installed shall be new and meet the requirements of all applicable codes. Materials which will not become a part of the permanent installation are not required to be new. Owner reserves the right to reject materials which have not been previously used but which have been in storage for an unreasonable period of time. Title to and risk of loss of the Materials shall pass to Owner upon Final Acceptance of the Work. Title to the Materials shall be free and clear of all liens and encumbrances.



- 8.2 Contractor shall not substitute Materials specified in the Contract unless authorized by Owner in writing. Unless substitution has been so authorized, Contractor shall, at its expense, remove and replace any improperly substituted material.
- 8.3 Upon Owner's request, Contractor shall, at its expense, submit to Owner samples of Contractor-furnished materials. Contractor must obtain Owner's written approval before performing Work involving the use of materials for which samples have been requested. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes. Materials used shall conform to the approved samples. Contractor shall remove and replace nonconforming materials at its expense.

9.0 INSPECTION AND ACCEPTANCE

- 9.1 Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed conforms to the Contract requirements. Owner reserves the right to review and approve the adequacy of Contractor's inspection system. Contractor shall provide all quality control and quality assurance program information requested by Owner.
- 9.2 Owner shall have free access to the Work for inspection purposes. Owner's inspection, receipt or Initial Acceptance of the Work shall not relieve Contractor of its obligation to comply with the terms of the Contract.
- 9.3 Each party shall bear its own expenses in performing inspections, except that (a) Owner may use Contractor's facilities, ladders and scaffolds to perform inspections of the Work; (b) Contractor shall pay Owner's expenses in re-inspecting Work which was rejected as non-conforming to the Contract requirements in an earlier inspection; (c) Contractor shall pay the costs of uncovering and re-covering Work for Owner's inspection if Contractor failed to give Owner reasonable notice that the Work was ready to be covered; and (d) prior to Final Acceptance, if Owner requests an inspection of Work already completed which requires removing and tearing out Work, and the Work is found to be materially defective, Contractor shall pay the expenses of inspection and reconstruction, but if the Work is found to be in conformance with the Contract requirements, Owner shall pay the expenses of inspection and reconstruction.
- 9.4 Owner will not pay for defective work. Contractor shall repair or replace all defective work at its expense. Contractor shall promptly remove from the Site any Contractor-furnished materials that do not comply with the requirements of the Contract. If Owner-furnished materials have been used in any defective work, the cost of such materials shall be backcharged to Contractor.
- 9.5 Owner shall have the right to take possession of or use any part of the Work. Owner's possession or use shall not constitute Initial Acceptance or Final Acceptance of the Work.
- 9.6 Unless otherwise provided in the Contract, Final Acceptance by Owner shall be made as soon as practicable after all Work has been completed and inspected. Any part of the Work not rejected by Owner following Final Inspection shall be deemed to have achieved Final Acceptance.

10.0 SCHEDULE

- 10.1 Contractor shall perform the Work to meet the schedule date(s) set forth in the Contract. Contractor shall not commence Work until authorized by Owner to do so.
- 10.2 In a format acceptable to Owner, Contractor shall develop, update, maintain and provide to Owner a written schedule for execution of the Work. The schedule shall be time scaled, complete, and accurate in detail depicting Contract milestone dates, work activities and durations. Upon review and approval by Owner, this schedule shall become the Contract schedule. Updates to the Contract schedule shall

be provided to Owner on at least a monthly basis. Updates shall depict actual progress measured against planned progress.

- 10.3 Contractor shall notify Owner within 24 hours of the first knowledge that any completion date(s) will not be met and shall, within five (5) Business Days thereafter, submit a detailed program depicting the plans and actions being taken to regain the lost time. The notice shall not limit any other rights or remedies afforded Owner under the Contract or by law.

11.0 TERMS OF PAYMENT

- 11.1 Except as otherwise provided in the Contract, the following terms of payment shall apply:

11.1.1 The Contract Price set forth in the Contract shall constitute full and complete payment for all Work.

11.1.2 Contractor shall submit invoices with proper documentation to Owner for the Work completed or for milestones achieved during the prior month. Owner may withhold all or any part of payment in an amount necessary to protect Owner from loss due to the occurrence, or imminent occurrence, of (i) Contractor's breach or failure to perform in accordance with the Contract, (ii) defective Work, (iii) Contractor's failure to pay any Subcontractor, (iv) other claims by Owner against Contractor, including indemnity claims, and (v) damages for delay or any agreed upon liquidated damages.

11.1.3 Owner shall pay 90% of each properly submitted and accepted invoice within forty five (45) days of receipt. The release of retention shall become due and payable forty five (45) days after the date of Final Acceptance of the Work.

11.1.4 Each invoice shall contain a statement that all bills for material and labor relating to the Work have been paid in full by Contractor, and there are no unpaid bills for which a lien could be filed. If requested by Owner, Contractor shall provide evidence of such payments. The final invoice for the Work shall be accompanied by a satisfactorily completed Affidavit of Completion in the form attached as Exhibit 1. Payment of the final invoice and retention constitutes a full and final release of Owner from all claims, damages, liabilities and obligations under the Contract.

- 11.2 Contractor shall promptly pay all of its Subcontractors.

12.0 CHANGES IN WORK AND EXTRA WORK

12.1 Change in Work

12.1.1 "Change Order" means a written order issued in accordance with this Article 12.0 documenting an addition to, deletion from, or other modification to the Work, including a change in the scope of Work, the Contract Price, the payment schedule, the completion dates, or the schedule for the Work.

12.1.2 Owner may issue a Change Order: (i) at Owner's option, or (ii) if requested by Contractor due to the occurrence of an event that entitles Contractor to a Change Order as determined by Owner.

12.1.3 If Owner issues a Change Order, Contractor shall perform the changed Work in accordance with the terms of the Contract and the issued Change Order.

- 12.1.4 No order, statement or other conduct of Owner shall be treated as a change in Work until such change is authorized in writing by Owner.
- 12.1.5 Contractor shall not be entitled to a Change Order for conditions such as, but not limited to, (i) work which is of such a nature as to be normally included in the Work or is reasonably inferable from the Contract; (ii) any errors, omissions, non-performance, negligence, deficiencies or improper or defective work on the part of Contractor (including miscalculations, incorrect estimates, or other errors in Contractor's proposal for the Work); (iii) changes relating to refinement, minor correction and detailing of the Work or any part of the Contract; or (iv) other unallowable claims such as cost impacts not due to Owner and cumulative impact claims.
- 12.1.6 With respect to Contractor claims for additional compensation, Owner shall pay only incremental Direct Costs associated with the proposed changes and only to the extent that Contractor can demonstrate that the changes actually increased its costs of performance. Any claims for additional compensation based on a change to the Work or extra work must be material in nature, and Contractor must provide full documentation supporting all elements of such claims. For a reduction in the scope of Work or a change which reduces Contractor's costs, the Contract Price shall be adjusted downward. The payment for changes to the Work shall be complete compensation to Contractor for performing such changes, including any schedule or cost impacts on the Work.
- 12.1.7 If Owner requests in writing that Contractor furnish materials or equipment to be permanently incorporated in changed work, extra work or cost-plus work, Owner shall reimburse Contractor for such materials or equipment its incremental Direct Cost plus a percentage mark-up to be agreed upon by the parties. Requests for payment for materials and equipment shall be accompanied by copies of receipted invoices. Owner has the right to audit Contractor's requests for changes and the financial basis therefor.
- 12.1.8 If Contractor and Owner disagree on whether any particular work is within the scope of Work and such work must be completed to insure timely progress, Owner will issue a disputed Change Order to cover the disputed work. Contractor shall diligently proceed with the disputed work. By noon on the work day following performance of the disputed work, Contractor shall submit to Owner for review timesheets itemizing all labor and equipment hours expended on the disputed work and an itemized listing of Contractor furnished materials. Such review is not an admission of liability by Owner. Prior to Final Acceptance, each disputed Change Order will be resolved to the mutual agreement of the parties.
- 12.2 Extra Work
- 12.2.1 "Extra work" is work which is beyond Contractor's scope of Work. At Owner's request, Contractor shall perform extra work at the applicable prices set forth in the Contract. If the Contract prices are not applicable to the type of extra work to be performed, Contractor shall promptly submit a proposal to perform the extra work, which proposal shall become an amendment to the Contract upon acceptance by Owner. If Owner directs Contractor to perform extra work on an overtime basis, Owner shall reimburse Contractor the actual payroll cost of premium time for direct job labor. Contractor shall invoice and maintain separate cost records for each extra work authorization issued by Owner.
- 12.2.2 If Owner elects, Contractor shall perform extra work on a cost-plus basis. Cost-plus extra work shall be paid in accordance with Article 13.0.
- 12.3 Contractor waives all claims for additional compensation for changes in work and extra work not made strictly in accordance with the terms of this Article 12.0.

13.0 REIMBURSEMENT FOR COST-PLUS WORK

- 13.1 Direct labor costs will be reimbursed at the actual payroll costs of direct labor wages, fringe benefits, payroll taxes and insurance required by collective bargaining agreements or by law, plus an agreed wage mark-up. Copies of certified payrolls and time sheets shall be provided to Owner for review and approval. Contractor shall not invoice Owner for social security, unemployment, workers' compensation, or other federal, state or local taxes or insurance at rates which exceed Contractor's actual costs.
- 13.2 Owner will pay Contractor actual invoice costs for subcontracted work, provided Owner has approved payment terms in advance of performing the work, plus an agreed mark-up.
- 13.3 Contractor-furnished permanent materials and equipment costs will be reimbursed at actual invoice costs plus an agreed mark-up.
- 13.4 Construction equipment costs will be reimbursed based on actual usage time during the performance of Work and established rental rates not to exceed monthly rates set forth in the "Rental Rate Blue Book for Construction Equipment" adjusted for geographical region as published by Dataquest or other basis acceptable to Owner. Hourly rates shall be established by taking the monthly rate divided by 176 hours per month.
- 13.5 Small tools and consumables costs will be reimbursed based on agreed rates.
- 13.6 Field supervision, clerical, safety and other non-direct labor costs will be reimbursed at agreed billing rates, except that reimbursement for these costs for cost plus extra work shall require the prior review and approval of Owner.

14.0 BACKCHARGES

- 14.1 Owner may impose backcharges against Contractor or deduct backcharges from monies owed to Contractor for performance or reperformance by Owner or others of Work, including but not limited to, costs associated with defective work, nonperformance by Contractor, termination for cause, clean-up and disposal of debris, damages to Owner's tools and equipment and warranty repairs. Contractor will be responsible for the cost of such performance or reperformance plus a fifteen percent (15%) administrative charge.

15.0 TAXES

- 15.1 The Contract Price shall include, and the Contractor shall pay, all taxes and assessments for unemployment insurance, workers' compensation, social security and disability benefits, and other taxes which are based upon the compensation paid to persons employed by Contractor or its Subcontractors for the performance of any Work under the Contract.
- 15.2 Except as provided below, the Contract Price shall include all applicable foreign, federal, state and local taxes payable by Contractor with respect to the Contract.
  - 15.2.1 Contractor Purchases. If Owner specifies that tangible personal property to be incorporated into real property as defined for sales and use tax purposes or taxable services to be purchased by Contractor from vendors or Subcontractors qualify for exemption from sales or use taxes, Contractor shall not include sales or use taxes on such exempt tangible personal property or services in the Contract Price. Unless otherwise specified: a) consumable materials and supplies or Contractor's tools and equipment that are not incorporated into the Work or the overall project are not eligible for exemption

and the Contract Price shall include, and Contractor shall pay, any sales or use taxes on such items; and b) Contractor will use its own properly-executed exemption or resale certificate, and not Owner's direct pay permit, to make exempt purchases of tangible personal property or services from vendors or Subcontractors.

15.2.2 Owner Purchases from Contractor. With respect to any Owner purchases from Contractor of tangible personal property not incorporated into real property as defined for sales and use tax purposes or taxable services, Owner shall provide to Contractor its direct pay permit (if Owner has been issued a direct pay permit) or an appropriate exemption certificate required to relieve the Contractor of its responsibility to collect sales or use tax from the Owner. If Owner provides Contractor such direct pay permit or exemption certificate, sales or use taxes on Owner purchases from Contractor of tangible personal property or taxable services shall not be collected from Owner or included in the Contract Price. Unless otherwise approved or directed by Owner in writing, Contractor shall not use Owner's direct pay permit to make exempt purchases of tangible personal property or taxable services from vendors or Subcontractors.

15.2.3 Contractor Cooperation. Contractor shall take all steps reasonably necessary to ensure that Contractor's purchases from vendors or Subcontractors of items of tangible personal property or services are exempt from sales and use tax pursuant to any applicable exemption pursuant to the law of any U.S. jurisdiction or its political subdivisions.

## 16.0 INSURANCE

16.1 Contractor shall at its sole expense, procure and maintain, and shall cause its Subcontractors to procure and maintain, throughout the term of this agreement except as set forth in Section 16.5, the following types of insurance with the following, minimum limits:

16.1.1 Workers' compensation insurance in accordance with all jurisdictions where Contractor has operations including where the Work is to be performed. If Contractor is a non-subscriber to workers' compensation evidence of insurance equivalent to workers' compensation must be provided.

16.1.2 Employer's liability in an amount not less than \$1,000,000.

16.1.3 Business automobile insurance covering all Owned, Non-owned and Hired Autos in an amount not less than \$5,000,000 per occurrence.

16.1.4 Commercial general liability insurance covering claims of bodily injury and property damage in an amount not less than \$5,000,000 per occurrence.

16.1.5 Aircraft liability insurance with a combined limit of not less than \$10,000,000. Such insurance shall be required only if the Contractor or its Subcontractors shall utilize an aircraft in the performance of the Work.

16.1.6 If Contractor (or any of its Subcontractors) are engaged in operations which use marine vessels or floating equipment, or which are subject to maritime jurisdiction, the following insurance shall be required: Marine Liability insurance (including Jones Act and maritime employer's liability if operations are subject to federal jurisdiction) and pollution liability (under terms equivalent to current W.Q.I.S. policy provisions if operations are subject to federal jurisdiction) in amounts not less than \$10,000,000 per occurrence.

- 16.1.7 Professional liability insurance and/or Errors and Omissions insurance in an amount not less than \$5,000,000. Such insurance shall be required only if the Work includes professional liability exposures.
- 16.1.8 "All risk" property insurance covering the full replacement cost of Contractor's personal property.
- 16.2 To the extent permitted by law, Contractor shall waive, and shall cause each of its insurers to waive, any and all rights of recovery, by subrogation or otherwise, against Owner and its affiliates, officers, directors, employees, agents and assigns of any type. Each of Contractor's insurance policies shall be primary to and non-contributory with any insurance or self-insurance of Owner.
- 16.3 The Commercial General Liability, the Business Automobile, and (if applicable) the Aircraft Liability and Marine Liability insurance shall include Owner as an additional insured with respect to Owner's liability arising out of the operations of Contractor. Such coverage shall also include blanket contractual coverage and contain no exclusion for explosion, collapse, or underground property damage (XCU coverage).
- 16.4 The insurance required by this Article 16.0 is in addition to and separate from any other obligations contained in the Contract.
- 16.5 Products and/or completed operations coverage shall be maintained for a period of five (5) years after the completion of the Work. If any of the policies indicated above are placed on a "claims-made" basis, such coverage shall be maintained for a period of not less than five (5) years following the completion of the Work.
- 16.6 Any deductibles or retentions on any of the policies required herein shall be the sole responsibility of the Contractor.
- 16.7 The above referenced limit requirements may be met by any combination of umbrella or excess and primary policies so long as the total limit of insurance requirement is met. The required coverages referred to herein shall in no way affect, nor are they intended as a limitation of, Contractor's liability with respect to its performance of the Work. The limits of insurance indicated herein are minimum requirements and are in no way intended to limit Contractor's liability.
- 16.8 In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special, or statutory employees) are covered by the Louisiana Worker's Compensation Act, La. Rev. Stat. Ann. 23:1021 et seq., Owner and Contractor agree that pursuant to Section 23:1061 (A) (1) all Work performed by Contractor and its employees under the terms and conditions of the Contract is an integral part of Owner's operations and is essential to Owner's ability to generate its goods, products and services. Additionally, Owner and Contractor agree that for purposes of Section 23:1061 (A) (3) Owner is the principal or statutory employer of Contractor's employees. Irrespective of Owner's status as the statutory employer or special employer of Contractor's employees, pursuant to Section 23:1031 (C), Contractor shall remain primarily responsible for the payment of Louisiana Worker's Compensation benefits to its employees, shall indemnify Owner from any and all claims of Contractor's employees or its Subcontractor's employees and shall not be entitled to seek contribution for any such payments from Owner.
- 16.9 Upon inception of the Contract and prior to commencement of Work, Contractor shall provide Owner with an acceptable certificate of insurance evidencing the insurance required under Article 16. Contractor will not be permitted to bring its employees, materials or equipment onto the Site until Owner receives from such evidence of insurance. Contractor also must provide an updated certificate of insurance at any time during the Contract term upon Owner's request. Contractor

shall immediately notify Owner of cancellation or of any material changes in the insurance policies required herein. If such insurance policies are subject to any exceptions to the terms specified herein, such exceptions shall be explained in full in such certificates. Owner may, at its discretion, require Contractor to obtain insurance policies that are not subject to non-standard exceptions.

- 16.10 In lieu of Sections 16.1 thru 16.9, the Owner may elect to implement an Owner Controlled Insurance Program ("OCIP"). If an OCIP is implemented, all Contractor(s) and Subcontractor(s) of any tier and such other persons or entities as the Owner may designate as enrolled parties, may, at Owner's option, be required to enroll and participate. Owner shall procure and maintain at its own expense during the performance of this Contract and a stipulated completed operations period, such insurance coverage as Owner deems appropriate on behalf of enrolled parties. Eligible Contractor(s) and Subcontractor(s) must submit all necessary enrollment forms for acceptance into the OCIP, and agree to the terms of the Owner's project safety standards. Owner and Contractor agree that the terms of the OCIP as contained in amendments to this Contract and the OCIP Contractor Manual shall control. The OCIP does not relieve any Contractor or Subcontractor from its obligations to procure coverage for offsite operations or coverages not included in the OCIP. In the event an OCIP is implemented, amended insurance requirements for enrolled parties will be provided.
- 16.11 The furnishing of insurance by Owner through an OCIP will in no way relieve or limit any enrolled party of any responsibility, liability, or obligation imposed by the contract documents or by law, including without limitation any indemnification obligations which any enrolled party has to the Owner thereunder.

17.0 INDEMNIFICATION

- 17.1 The laws of the state where the Work giving rise to the claim is performed shall apply to this Article 17.0.
- 17.2 **TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.**
- 17.3 **WITH RESPECT TO CLAIMS AGAINST OWNER BY CONTRACTOR'S EMPLOYEES, CONTRACTOR UNDERSTANDS AND AGREES THAT THIS INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY, AND CONTRACTOR EXPRESSLY WAIVES, ITS IMMUNITY AS A COMPLYING EMPLOYER UNDER ANY**

**APPLICABLE WORKERS' COMPENSATION LAW, BUT ONLY TO THE EXTENT THAT SUCH IMMUNITY WOULD BAR OR AFFECT RECOVERY UNDER OR ENFORCEMENT OF THIS INDEMNIFICATION OBLIGATION.** With respect to the State of Ohio, this waiver applies to Section 35, Article II of the Ohio Constitution and Ohio Rev. Code Section 4123.74.

17.4 **CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT.**

18.0 LIMITATION OF LIABILITY

18.1 Except as expressly provided herein, neither party shall be liable to the other for any incidental, indirect, special, punitive or consequential damages. Contractor must bring any cause of action arising under the Contract within one year from the time the cause of action accrues.

19.0 LIENS

19.1 To the extent permitted by law, Contractor shall not file or permit to be filed any lien with respect to the Work and hereby expressly waives any right to file or cause to be filed a lien. Contractor, in its subcontracts, shall require all Subcontractors to expressly waive the right to file any liens against Owner's property, and, if requested, provide Owner with copies of such waivers.

19.2 In the event any claim is asserted or any lien filed against Owner or its property, or notice of lien is provided to Owner in violation of this provision, further payment to Contractor shall not become due under the Contract until the claim is satisfied or the lien released without cost to Owner and Contractor shall provide Owner with evidence of payment relating to such claim or lien. If Contractor fails to settle any claim or secure the release of any lien, Owner may take whatever steps it deems necessary to settle the claim or release the lien, including bonding off the lien. Owner may deduct its costs and expenses for settling any claim or securing the release of any lien filed by Contractor or its Subcontractors from any money due or to become due to Contractor under the Contract. If final payment has been made, Contractor shall reimburse to Owner its costs to settle any claim or secure the release of any lien arising out of the Contract.

20.0 INTELLECTUAL PROPERTY

20.1 Contractor warrants that its performance of the Work will not infringe upon or violate any trademarks, patents, copyrights, trade secrets or other third party property rights. If the performance of Work is held in any action to constitute infringement, or the use of the Work is enjoined, Contractor, at its expense, shall procure for Owner the right to continue use of the Work, or replace the Work with non-infringing materials or methods satisfactory to Owner, or modify the Work in a manner satisfactory to Owner so that the Work becomes non-infringing. Contractor agrees to indemnify and save Owner harmless from and against any liability or damages, including attorneys' fees, arising out of any alleged infringement or violation.

20.2 All inventions, discoveries, documents, works of authorship, methods, and the derivative works thereof, resulting from the Work, including patents, patent applications, copyrights, trade secrets and other intellectual property (collectively "Intellectual Property"), shall be the sole and exclusive property of Owner. Contractor shall promptly inform Owner of the development of any such Intellectual Property and does hereby assign and transfer the entire right, title and interest, together with all rights of priority in and to such Intellectual Property to Owner. Contractor shall promptly cooperate with Owner in signing any additional documentation necessary to assign and perfect ownership of such Intellectual Property in Owner or to allow Owner to register its property rights therein. Contractor warrants that it has obtained written agreements from its employees and



agents as necessary to effectuate the purpose of this Section. The Intellectual Property assigned and transferred to Owner shall be the Confidential Information of Owner.

20.3 Contractor grants Owner a nonexclusive, nonrevocable, perpetual, fully paid license to utilize Contractor's intellectual property existing separate from the Contract, including inventions, discoveries, works or authorship, methods, and trade secrets, regardless of whether such are the subject of patents, copyrights or other intellectual property protection, to the extent necessary for Owner to achieve the full benefit of the Work.

20.4 Contractor shall not use Owner's name or logo in marketing, endorsements, or other business purposes without prior written consent from Owner.

#### 21.0 DRAWINGS AND DATA

21.1 Contractor shall furnish for Owner's review, prior to commencement of Equipment manufacture or fabrication, general and detailed drawings of the Equipment in the format requested. Such drawings shall be certified as to accuracy and completeness and shall show information adequate to enable Owner to design and provide suitable clearances. If required by the Contract or any code, law or agency, Contractor will provide professional engineer or architect sealed drawings and reports for the state where the Equipment is to be finally installed. Figures shall take precedence in all cases over scaled measurements on drawings. Where obvious discrepancies exist, Contractor shall consult with and follow the instructions of Owner. Owner's approval of Contractor's drawings shall not relieve Contractor of its obligation to comply with the Contract requirements.

21.2 All written data, such as drawings, plans, reports, designs and specifications, prepared by Contractor for Owner during the performance of Work shall become the property of Owner. Such data, together with all data furnished by Owner and lent to Contractor for return, shall be delivered to Owner upon request, or upon completion of the Work or termination of the Contract. For clarification purposes, Owner shall have the unrestricted right to use, release, disclose, copy and reproduce such data for purposes of operation, maintenance, analysis, testing, cleaning, erection, improvement or modification of any facilities owned or operated by Owner. Contractor shall cooperate with Owner by executing such documents as are necessary to assign and perfect ownership in Contractor provided data to Owner.

#### 22.0 CONFIDENTIALITY

22.1 "Confidential Information" means any confidential or proprietary information, whether written, oral, or visual, whether or not it constitutes a trade secret under applicable law. "Confidential Information" includes, but is not limited to, business plans and methods; customer information; engineering, operating and technical data; and the dates of Owner's outage schedule, information concerning the Work, and Owner's activities. "Confidential Information" does not include information that (a) has become part of the public domain other than by acts or omissions of the recipient; (b) has been furnished or made known to the recipient by a third person as a matter of legal right and without restriction on use; (c) was in the recipient's possession prior to disclosure by the disclosing party without restriction on use; or (d) is independently developed by the recipient without access to the Confidential Information.

22.2 Subject to Section 22.5, each party agrees (a) to protect the Confidential Information of the other with at least the same degree of care used to protect its own Confidential Information; (b) not to use (except for the purpose described herein), publish or disclose to third parties such Confidential Information; and (c) upon the request of the disclosing party, to promptly deliver to the disclosing party all written copies of its Confidential Information. Notwithstanding the foregoing, a recipient shall be entitled to disclose Confidential Information to its officers, employees, affiliates (including any joint ventures of which Owner or any of its affiliates are a member and the other

members of such joint ventures), agents, lenders, attorneys and other advisors (collectively, "Representatives"), provided that the Representatives shall be informed of the confidentiality obligations provided herein.

- 22.3 If either party is required pursuant to applicable law or otherwise becomes legally compelled to disclose any of the Confidential Information, such party shall promptly advise the disclosing party in order that the disclosing party may seek a protective order or such other remedy as the disclosing party may consider appropriate in the circumstances. In any event, the compelled party may disclose only that portion of the Confidential Information which such party is legally required to disclose in the judgment of the party's legal counsel without any liability to the disclosing party hereunder and such disclosure shall not be a breach of this Section.
- 22.4 Contractor shall require its Subcontractors, if any, to expressly comply with the confidentiality provisions as set forth herein.
- 22.5 All documents prepared by Contractor for Owner during the performance of Work that incorporate, in whole or in part, information owned or provided by Owner shall not be marked or designated in any way as the confidential or proprietary information of Contractor without also stating that Owner has rights in such documents. Owner shall have the right to question the designation of Confidential Information by Contractor and Contractor agrees to provide Owner with reasonable cooperation in explaining such designation. Contractor agrees that Owner's acceptance of documents containing the Confidential Information of Contractor shall not be construed as a restriction on Owner's rights to use, release, disclose, distribute, copy or reproduce the documents.

23.0 DEFAULT

- 23.1 The occurrence of any of the following shall constitute an "Event of Default":
- 23.1.1 Contractor files a petition in bankruptcy, or if its creditors file an involuntary petition in bankruptcy, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency.
- 23.1.2 Contractor (a) fails to maintain the schedule set forth in the Contract, or (b) fails to promptly pay Subcontractors for material or labor, or (c) commits repeated or substantial violations of laws, rules, regulations or policies, or (d) fails to perform in accordance with the Contract, and Contractor fails to take corrective action or submit an acceptable plan within two (2) Business Days after the receipt of a notice of non-conformance from Owner.
- 23.2 Upon an Event of Default, Owner may take any or all of the following actions without affecting the Contract Price or schedule:
- (a) Owner may direct Contractor to cease performance on all or part of the Contract until satisfactory corrective action has been taken;
- (b) Owner may have others take corrective action necessary to achieve compliance with the Contract. Owner may deduct the cost of such corrective action by others from any monies due to Contractor. Corrective action by others shall be taken when, in the judgment of Owner, the noncompliance threatens safety, unreasonably interferes with or delays the work of others, or otherwise creates a situation the resolution of which cannot be delayed without adversely impacting quality, cost or timely completion;
- (c) Owner may pursue damages for delay under the terms of Article 24.0;

(d) Owner may suspend the Contract under Article 26.0; and/or

(d) Owner may terminate the Contract under the terms of Section 27.1

23.3 Each of Owner's rights set forth above shall be cumulative and additional to any other rights or remedies provide in law or equity or otherwise.

24.0 DAMAGES FOR DELAY

24.1 Contractor shall be liable for any direct damages incurred by Owner arising out of Contractor's failure to perform on time.

24.2 In lieu of Section 24.1, if the parties have agreed to liquidate the amount of direct damages resulting from Contractor's delay, the parties agree that such damages which might be incurred by Owner as a result of Contractor's delay in performance are uncertain and would be difficult to calculate. The parties agree that the liquidated damages contained in the Contract would be reasonable and fair compensation for late performance. Contractor commits to pay and Owner agrees to accept such sum as liquidated damages and not as a penalty in the event of late performance.

25.0 FORCE MAJEURE

25.1 Neither party shall be in breach of the Contract to the extent that any delay or default in performance is due to a Force Majeure Event. The term, "Force Majeure Event", shall mean any cause beyond the reasonable control of the delayed or defaulting party, including, but not limited to, acts of God including unusually adverse weather, fire, and epidemic; acts of public enemy including war, acts of terrorism, riot, and civil disturbance; and national labor strikes, which by exercise of due foresight such party could not have been expected to avoid or overcome. Contractor's inability to obtain adequate and sufficient labor in order to maintain progress of the Work shall not constitute a Force Majeure Event. No delay in performance resulting from a Force Majeure Event shall result in any liability on the part of Owner. Notwithstanding the preceding sentence, in the event of a delay caused by any act or failure to act on the part of Owner, Contractor's sole remedy shall be as set forth in Article 12.0.

25.2 The delaying party shall immediately notify the other party of the beginning of a delaying event, and shall confirm the notice in writing within ten (10) Business Days of the beginning of the event. The notice shall contain a detailed account of the delay, including the cause of the delay, an estimate of the duration of the delay, an estimate of the delay's impact to the schedule, and the plan to mitigate the effects of the delay.

25.3 If Contractor is the delaying party, and the delay is a Force Majeure Event as defined in Section 25.1, Owner shall grant Contractor an extension of the time for performance, to be mutually agreed upon by Contractor and Owner. The extension of time granted as a result of a Force Majeure Event shall in no case exceed the length of the delay and such extension may be withheld or reduced to the extent Contractor does not provide notice in accordance with Section 25.2. If Owner so requests, Contractor shall expedite its schedule to mitigate the effects of the excusable delay. Owner shall pay incremental, Direct Costs incurred by Contractor for expediting at Owner's request.

26.0 SUSPENSION

26.1 Owner may at any time suspend all or any part of the Work. Owner shall provide Contractor written notice verifying the suspension date. Immediately upon receipt of the suspension notice, Contractor shall take the necessary actions to comply with the suspension notice.

- 26.2 Owner shall pay Contractor in accordance with the terms of payment set forth in the Contract for the Work completed prior to the time of suspension and for the incremental, Direct Costs that result from Contractor's compliance with the suspension notice.
- 26.3 Owner may, at any time during the suspension period, either terminate the Contract in accordance with Section 27.2, or authorize the Work or any portion thereof to be restarted. Owner shall pay Contractor the incremental, Direct Costs associated with the restart of the Work and shall resume payments to Contractor in accordance with the terms of payment under the Contract thirty (30) days after the restart of Work.
- 26.4 The schedule shall be adjusted to provide for a reasonable extension of time for Contractor's performance.

27.0 TERMINATION

27.1 Termination for Cause

- 27.1.1 Upon an Event of Default, Owner may terminate the Contract upon written notice to Contractor.
- 27.1.2 In the event of such termination, Contractor shall immediately prepare and submit to Owner an itemization of the Work completed by Contractor. Owner may require Contractor to leave the Site. Owner may take over such Work and complete it, or have the Work completed by others. Owner may take possession of and utilize in completing the Work Contractor's materials, Equipment to be installed, supplies, tools and equipment at the Site.
- 27.1.3 Contractor shall not be entitled to further payment until all of the Work is completed in its entirety and Final Acceptance has been achieved. If the cost of completion exceeds the unpaid balance under the Contract, Contractor shall pay the difference to Owner within thirty (30) calendar days of demand.
- 27.1.4 In the event that a court determines that the termination was not properly a termination for cause, pursuant to Section 27.1.1, Contractor's remedy shall be limited to the payments permitted in accordance with Section 27.2.

27.2 Termination for Convenience

- 27.2.1 Owner may terminate the Contract, in whole or in part, for its convenience. Owner will give Contractor written notice of termination specifying the extent to which the Contract is terminated and the date, immediately or otherwise, on which termination becomes effective.
- 27.2.2 Upon termination for convenience, Contractor will comply with instructions in the notice of termination regarding delivery to Owner of all Work in progress and all completed Work, which shall become the property of Owner upon delivery.
- 27.2.3 In the event of such termination, Contractor shall receive payment, including the retained percentage, for the Work satisfactorily performed up to the time of such termination. In addition, Owner shall reimburse Contractor for incremental, Direct Costs resulting from the termination, provided that compensation was not otherwise made for such costs. Final payment shall be made upon the parties' agreement of the amount of the final invoice and Owner's receipt of an Affidavit of Completion in the

form of Exhibit 1. Owner shall not be responsible for Contractor's lost profit on the terminated portion of the Contract.

28.0 MATERIALS AND WORKMANSHIP WARRANTY

- 28.1 Beginning upon Final Acceptance and for a period of one year thereafter, or for such period as may be specified elsewhere in the Contract, Contractor warrants that (a) it will perform the Work in accordance with the accepted standards of care and competence found in the applicable profession as such standards relate to and are commonly used in the electric utility industry and (b) all Contractor furnished materials and workmanship shall be free of any and all defects and shall be in conformity with the requirements of the Contract.
- 28.2 Subject to the provisions of Section 28.3, in the event that the material or workmanship does not comply with the warranty, Contractor shall, at no cost to Owner, promptly repair or replace such nonconforming material or workmanship with as little disruption to Owner's operations as practicable. Contractor shall be responsible for the total cost of correcting any defects, including but not limited to, the costs of materials, labor, any necessary equipment removal, disassembly, shipping, reinstallation and retesting of the installation. Owner shall give Contractor notice of observed defects with reasonable promptness. If nonconforming material or workmanship causes an outage or other delay of operations, Contractor shall make the repair or replacement on an overtime, maximum effort basis, at Contractor's expense.
- 28.3 If Owner directs Contractor to repair or replace any defect and Contractor fails to do so within a reasonable time, or if an emergency exists rendering it impracticable for Contractor to perform the repair or replacement, Owner may make or cause to be made such repair or replacement without affecting the validity of the warranty. Owner's cost for making the repair or replacement shall be deducted from the Contract Price or any unpaid portion thereof. If the unpaid portion of the Contract Price is insufficient to cover such cost, Contractor shall reimburse Owner.
- 28.4 Owner will not pay for any defective portion of the materials or workmanship until remedied by Contractor at Contractor's expense in accordance with the Contract requirements.
- 28.5 Owner must approve any proposed correction or alteration by Contractor of the materials or workmanship, or parts thereof, made at any time or at any location, before such correction or alteration is undertaken. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes.
- 28.6 Any materials or workmanship which are repaired or replaced pursuant to this Article 28.0 shall be warranted for a period of one year from the date of completion and acceptance of such repair or replacement, or for the remainder of the original warranty period, whichever is longer.
- 28.7 Contractor shall obtain, for the benefit of Owner, all available warranties from Subcontractors, vendors and suppliers of Contractor. Such warranties shall be in addition to the warranties set forth in this Article. If such warranties are in written form, Contractor shall provide Owner with the original warranties.

29.0 REPORTING OF COMPLAINTS

- 29.1 Contractor shall immediately report to Owner, in accordance with Article 33.0, the complete details of all complaints, including any OSHA violations and complaints received from governmental authorities, Subcontractors, laborers, other third parties or members of the public relating to the Work.

30.0 RETENTION AND EXAMINATION OF INFORMATION, BOOKS AND RECORDS

- 30.1 Owner reserves the right to audit records necessary to permit evaluation and verification of (i) claims submitted, (ii) Change Orders, and related overhead and general and administrative costs, and (iii) Contractor's compliance, in the performance of the Contract and its dealings with Owner, with (a) the Contract requirements; and (b) Owner's Code of Business Conduct governing business ethics. Owner's right to audit shall not extend to fixed, lump-sum or unit pricing.
- 30.2 Contractor shall cooperate with Owner and provide Owner with information and records ("information") pertaining to the Work as requested by governmental agencies, Owner, or courts of law.
- 30.3 Contractor shall retain for a period of three (3) years after Contract termination or expiration all information relating to the Work. Owner may audit and copy such information at Contractor's premises during regular business hours. If requested by Owner, Contractor shall submit to Owner a copy of each of its subcontracts. Contractor shall include in its subcontracts a provision granting Owner the rights against Subcontractors contained in this Article 30.0.

31.0 COMPLIANCE WITH LAWS

- 31.1 Contractor warrants that all materials and equipment supplied and all Work performed will comply with, and be manufactured, priced, sold and labeled in compliance with, all applicable federal, state and local laws, rules, regulations, orders and ordinances, including, without limitation, environmental protection, energy, safety and health, and labor laws and regulations and applicable industry codes and standards.
- 31.2 Unless exempted, **Contractor shall abide by the requirements of 41 C.F.R. § 60-1.4(a)(7), 41 C.F.R. § 60-300.5(a), and 41 C.F.R. § 60-741.5(a). These regulations prohibit discrimination against minorities, females, qualified protected veterans, and qualified individuals on the basis of disability and require affirmative action by covered prime contractors and subcontractors to employ and advance in employment minorities, females, qualified protected veterans, and qualified individuals with disabilities.** Contractor represents that it does not, and shall not for the term of the Contract, provide or maintain for its employees facilities that are segregated on the basis of race, color, religion, sex, national origin, veteran status or disability status. Contractor represents that it will not assign its employees to perform any work related to the Contract at a location where facilities are segregated on the basis of race, color, religion, sex, national origin, veteran status or disability status. Contractor agrees that it will not enter into any agreement to obtain goods or services relating to the Contract with any entity that provides, maintains or assigns its employees to work at locations where facilities are segregated on the basis of race, color, religion, sex or national origin. As used herein, "facility" means waiting rooms; work areas; restaurants and other eating areas; time clocks; locker rooms and other storage or sleeping areas, except as necessary to ensure privacy between male and female employees; parking lots, drinking fountains; recreation or entertainment areas; and transportation. If not otherwise exempted by Title 48 and to the extent applicable, Contractor will comply with 48 CFR §52.219-8, Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns, and 48 CFR §52.219-9, Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan. If not otherwise exempted by 41 CFR §60-1.5, Contractor represents that it will file all reports or other required information specified in 41 CFR §60-1.7. Contractor shall also abide by the requirements of 29 CFR Part 471, Appendix A to Subpart A, which is incorporated by reference, as applicable.
- 31.3 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of any violations of such laws, ordinances and regulations.

32.0 PERMITS AND LICENSES

32.1 Contractor shall obtain all permits and licenses required by any regulatory authority for the performance of any portion of the Work, except that Owner shall obtain permits and licenses for all structures which are to become a permanent part of the Site. Before starting Work, Contractor shall submit to Owner a copy of all permits and licenses required by any such regulatory authority.

32.2 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of the failure of Contractor to obtain such permits and licenses.

33.0 NOTICES

33.1 Each party shall designate in writing a representative to receive any and all notices required under the Contract. Notices shall be in writing and shall be given to the representative designated to receive them, either by personal delivery, certified mail, facsimile, e-mail or any similar means, properly addressed to such representative. All notices shall be effective upon receipt, or upon such later date following receipt as set forth in the notice. Either party may, by written notice to the other, change the representative or the address to which such notices are to be sent. Contract shall be strictly construed and Contractor expressly waives any claims which do not strictly comply with the written notice requirements of the Contract.

34.0 SEVERABILITY

34.1 In the event that any of the provisions, or portions thereof, of the Contract are held to be unenforceable or invalid by any court, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

35.0 WAIVER

35.1 Either party's waiver of any breach of the Contract shall not be deemed to be a waiver of any other breach of the same or a different term of the Contract. Contractor agrees not to claim any waiver by Owner of such notice requirements based upon Owner's conduct or Owner having actual, verbal, implied, or constructive notice.

36.0 NON-DISCLOSURE

36.1 Except as required by law, regulation, or judicial or administrative order, neither party shall disclose the terms of the Contract without the consent of the other party. Notwithstanding the foregoing, Owner may disclose the terms of the Contract without the consent of Contractor (a) to any of its affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures); and (b) to any prospective transferee or purchaser of assets of Owner or any of affiliates.

37.0 HEADINGS

37.1 Headings are provided for the convenience of the parties, and shall not affect the interpretation of any provision.

38.0 AFFILIATED COMPANIES

38.1 Any indemnification of Owner or any limitation of Owner's or Contractor's liability under the Contract shall to the same extent apply to Owner's or Contractor's directors, officers, employees, agents, and affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), including any directors, officers, employees and agents thereof.

38.2 The affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures) of the American Electric Power System are severally and not jointly liable for obligations arising hereunder.

39.0 APPLICABLE LAWS AND JURISDICTION

39.1 Except for Article 17.0, the rights and obligations of the parties arising out of the Contract shall be governed in all respects by the laws of the State of Ohio. Any reference herein to the laws of other states is made only to the extent that the laws of that state might apply, notwithstanding the intent of the parties that the laws of the State of Ohio should apply.

39.2 Contractor agrees that all actions and proceedings brought by Owner against Contractor may be litigated in courts located in the State of Ohio or the state where the work was performed. Contractor agrees that such courts are convenient forums and irrevocably submits to the personal jurisdiction of such courts. Contractor waives personal service of process and consents to service of process by certified or registered mail at the address designated for receiving notices under the Contract.

40.0 ENTIRE AGREEMENT

40.1 The Contract constitutes the entire agreement between the parties and supersedes all previous and collateral agreements or understandings with respect to the subject matter of the Contract. No waiver, alteration, amendment or modification of any of the provisions of the Contract shall be binding unless in writing and signed by duly authorized representatives of the parties.

41.0 BINDING EFFECT; NO THIRD-PARTY BENEFICIARIES

41.1 Subject to the restrictions on assignment in Section 5.1, the Contract shall be binding upon and shall inure to the benefit of the parties of their respective successors and permitted assigns.

41.2 No provision of the Contract is intended or shall be construed to be for the benefit of third party other than as set forth in Article 36.0.

42.0 EXECUTION; COUNTERPARTS; ELECTRONIC SIGNATURES

42.1 The Contract shall not be binding or effective until properly executed by each of the parties hereto. The Contract may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which, taken together, shall constitute but one and the same Contract, which may be sufficiently evidenced by one counterpart.

42.2 Each party agrees that any electronic signatures, whether digital or encrypted, of the parties included in this Contract are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.



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43.0 SURVIVAL

- 43.1 All of the terms of the Contract which by their nature extend beyond the expiration or termination of the Contract, including indemnification obligations, confidentiality obligations, limitations of liability, shall survive expiration or termination of the Contract and remain in full force and effect.

**END OF DOCUMENT**

AFFIDAVIT OF COMPLETION

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, states that:

(Name of Affiant)

1. S/He is the \_\_\_\_\_ of

(Office held by Affiant)

\_\_\_\_\_(Contractor)

(Legal Name of Contractor)

that has a contract with \_\_\_\_\_

(Legal Name of Owner)

(Owner) dated \_\_\_\_\_ (Owner's Contract No. \_\_\_\_\_)

(Contract Date)

(Contract No.)

involving work on the Owner's property at \_\_\_\_\_

(Project Name)

located near \_\_\_\_\_.

(City, State)

2. All of the Work required to be performed by the Contractor under said Contract has been performed. All bills and claims for material, labor and services to employees, Subcontractors, material suppliers, and others, covering the Work required to be performed under the Contract, have been paid in full by the Contractor. There are no unpaid amounts on the basis of which a lien has been filed, or can be filed, in connection with the Work performed under the Contract.

\_\_\_\_\_  
Signature of Affiant

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary

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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Prepared by:

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June 1, 2015



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

The following Supplementary Terms and Conditions for Forestry Contracts (“Supplementary Terms”) shall supplement any of the American Electric Power Service Corporation (“Owner” or “AEP”) General Terms and Conditions utilized in any Contract under which Contractor is authorized to perform Services. These Supplementary Terms shall not replace the safety or operational provisions in the applicable AEP General Terms and Conditions and are intended to support and reinforce other Contract documents.

All of the provisions of these Supplementary Terms shall also apply to Contractor’s subcontractors. Contractor is responsible for ensuring that its subcontractors comply with these Supplementary Terms.

Contractor’s and any of its subcontractors’ failure to comply with these Supplementary Terms is cause for the Contract to be terminated and may prevent eligibility for the consideration of providing Services in the future (i.e., removal from AEP’s qualified bidders list).



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **SECTION 1**

#### **GENERAL SUPPLEMENTARY TERMS AND CONDITIONS**

##### **1.1 Protection of Services**

- 1.1.1 Contractor shall use care and diligence so that performed Services and all materials, installed equipment and tools are thoroughly protected from the weather, loss and any and all damage. Contractor shall furnish and pay for all such protection.
- 1.1.2 Contractor shall provide and pay for the removal of snow, ice and water from its storage or work areas.
- 1.1.3 Contractor shall be liable for any loss or damage caused by carelessness, negligence or any act or failure to act on the part of Contractor, its subcontractors or employees. Such loss or damage includes, but is not limited to, losses and damages to performed Services, materials, equipment to be installed, private property, construction equipment and other property belonging to Owner or other contractors.

##### **1.2 Cleanup and Disposal of Non-Vegetative Debris**

- 1.2.1 Contractor shall keep its work areas, storage areas, parking areas and other areas of operations clean and safe.
- 1.2.2 Contractor shall promptly remove trash and other non-vegetative debris from these areas and properly dispose of all trash and other debris resulting from Services.
- 1.2.3 Upon completion of Services, Contractor shall remove from the site and dispose of its surplus material, chemicals, equipment, tools and, unless otherwise directed in writing by Owner, all temporary structures per all applicable laws.
- 1.2.4 Contractor shall bear the cost of providing the cleanup and removal, including the cost of all labor, supplies, tools, construction equipment and transportation.

##### **1.3 Material Storage and Handling**

- 1.3.1 Owner may designate a material storage location that can be used by Contractor.
- 1.3.2 Unless provided by Owner, Contractor is responsible for the purchase and proper handling and storage of material used during the course of providing Services. Contractor shall abide by all applicable laws.
- 1.3.3 Contractor shall be responsible for the impact of all shortages resulting from missing or damaged material issued to Contractor but not applied. Contractor shall replace such material at its own expense. Substitutions will not be allowed unless approved by Owner in writing.
- 1.3.4 All unused material furnished by Owner or provided by Contractor, and paid for by Owner, shall be returned by Contractor to Owner's designated storerooms or storage points upon notification from Owner.



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **1.4 Electrical Clearances**

- 1.4.1 Owner will arrange for all necessary clearances on energized equipment or circuits required to be taken out of service for the performance of Services. When an outage is required, Contractor shall notify Owner prior to scheduling such Services, allowing sufficient time for scheduling with system operators.

### **1.5 Permits and Easements**

- 1.5.1 Owner will secure all right-of-way easements. Owner will also secure certain permits requiring Owner's signature (i.e., DOT permits, siting permits, building permits). Location specific and construction specific permits not already obtained by Owner are the responsibility of Contractor. Local vehicle registration/operation permits (i.e., frost law permit in Michigan) shall be the responsibility of Contractor.

### **1.6 Protection of Property**

- 1.6.1 Contractor shall use all possible care not to damage any existing buildings, structures, pipes, sewers, conduits, manholes or other property, or to interfere therewith without the consent of Owner's authorized representative. Such structures and other objects shall be properly supported, braced and secured in place to prevent damage thereto. They shall not be relocated or reconstructed except as authorized by Owner. Contractor shall be responsible for all damage claims due to this negligence, including the cost of all material and labor required to replace or repair any property damaged.
- 1.6.2 Contractor shall immediately report the complete details of all damage claims to Owner. If Owner determines the claim is valid and is a result of Contractor's negligence, Owner will present the claim to Contractor for settlement. Contractor is to settle all valid claims within 30 days. Contractor is to provide Owner with documentation specific to a settlement process for any claim not settled within 30 days, or the claim will be handled by Owner and the damage amount billed to Contractor. All such damage claims settled by Contractor are to be reported to Owner in writing.
- 1.6.3 Contractor shall be responsible for notifying appropriate state one-call systems, as well as any other utility company not a member of the systems, prior to performing Services involving excavation, boring, stump grinding and/or other activities that may affect underground facilities.

### **1.7 Work on Private Property**

- 1.7.1 Whenever any Services are to be completed on private property, Contractor shall attempt to notify owner and/or the tenants thereof and make arrangements with them so that Services will be completed with the least practicable inconvenience to them. Work on private property shall be done as expeditiously as possible and the premises restored immediately.



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **1.8 Access and Construction Roads**

- 1.8.1 It is Contractor's responsibility to ensure that all property owners' roads traveled by Contractor are in the same condition as the roads were before Contractor elected to use the route. Should Contractor cause any damage to any such road, Contractor is obligated to restore the road to like or better condition than the road existed prior to Contractor's use. Such work shall be completed in a timely manner with proper written documentation of the damage/remedy supplied to property owner and Owner alike. Where Owner deems it necessary to maintain access roads on private property, crushed stone will be furnished or paid for by Owner, and Contractor shall provide labor and equipment to haul and place crushed stone as required. When approved in advanced writing by Owner, Owner shall pay for normal damage to fields or loss of crops resulting from necessary travel by Contractor.
- 1.8.2 Contractor shall keep fences in a sufficient state of repair to satisfactorily confine livestock and shall keep gates closed when not in immediate use. Before Services are considered to be completed, all temporary gates shall be removed and all fences cut or damaged shall be restored to original condition. Fencing damaged by Contractor shall be repaired at Contractor's expense.
- 1.8.3 When it is necessary to gain access to right-of-way over private roads, yards, pastures and cultivated fields, and it is impractical to restrict ingress and egress to the right-of-way, Contractor shall use the route agreed upon by the property owner, Contractor and Owner. Contractor shall notify the property owner prior to the use of these routes.

### **1.9 Emergency Assistance**

- 1.9.1 In the event of extensive damage to Owners' facilities as a result of severe storms, flooding or other catastrophes, Owner may request assistance from Contractor in the repair of damages and restoration of service to customers. Under such circumstances, the "Forestry Policies and Procedures for Emergency Assistance" in Section 2 shall be followed.





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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **SECTION 2 FORESTRY POLICIES AND PROCEDURES FOR EMERGENCY ASSISTANCE**

In the case of emergencies, during which Contractor is called upon by Owner for storm assistance to restore service following catastrophic damage ("Emergency Assistance"), the following policies and procedures shall apply.

- 2.1 Contractor will provide Owner with emergency contacts, including 24-hour telephone numbers for requesting assistance.
- 2.2 Upon request for Emergency Assistance, Contractor shall provide Owner with a list of available personnel and their classification, labor rates, crew make up, equipment to be used and an estimated time of arrival.
- 2.3 Owner will specify the number of physical full time employees and any special equipment required and will notify Contractor as to where the crews are to be assigned and to whom they will report. Owner will check-in each crew upon arrival.
- 2.4 Contractor shall be responsible to make contact with the appropriate State officials concerning commercial driver's licenses and other transportation issues.
- 2.5 Contractor's crews shall arrive prepared to work and be equipped with PPE, PPI, tools, foul weather gear, lights and batteries to perform the assigned Services. Any crews arriving without the proper tools or equipment to perform the assigned Services may be released at Contractor's expense.
- 2.6 Owner shall determine the work hours for responding crews, including start time (at assigned crew headquarters) and duration. Contractor shall check in with Owner daily at the requested starting time for assignment of Services.
- 2.7 After working sixteen (16) consecutive hours up to a maximum of twenty-four (24) consecutive hours, Contractor's employees shall be released from providing Services for a minimum eight (8) hour rest period, which shall commence upon release by Owner.
- 2.8 Owner will allow a meal break every six hours, or as near as practicable, while Contractor performs Emergency Assistance. Contractor's personnel will be off the clock for all meal breaks taken away from the work site.
- 2.9 Time sheets of Contractor employees shall be kept by Contractor. These time sheets shall be completed daily and when requested by Owner is available for verification and approval.
- 2.10 Contractor shall be responsible for relaying all Owner communications to its crews.
- 2.11 Contractor shall be responsible for the safety of its crews. Contractor will provide safety statistical reporting of all hours worked on AEP property. This report format will be provided by AEP.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

- 2.12 Owner shall reimburse Contractor for Emergency Assistance at the current contracted rate of the classification for each of Contractor employees utilized plus the applicable mark up percentage for straight and/or premium time. When responding from areas with existing AEP Contracts, Contractor's employees shall be paid at the rates incorporated in the Contract for the area from which they are responding. When Contractor responds from locations without an existing AEP contract, billing rates will be negotiated when the agreement to send crews is finalized.
- 2.13 Overtime pay for Emergency Assistance shall be paid based on provisions submitted by Contractor and approved in advance by Owner.
- 2.14 Owner will reimburse Contractor for lodging and meals (dollar amount for meals/lodging shall be predetermined by Owner) for the crew(s) requested. Owner may elect to supply meals and/or lodging to Contractor, in which case there will be no reimbursement. All other expenses: (i.e., personal phone calls, alcoholic beverages, tobacco, entertainment, etc.) will not be reimbursed by Owner.
- 2.15 If Owner requests Contractor to provide an employee whose classification falls outside the standard Contractual labor billing rates, Owner shall provide the request in writing and will reimburse Contractor for said employee's labor, vehicle, lodging and meals.



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **SECTION 3**

#### **SUPPLEMENTARY ENVIRONMENTAL, SAFETY AND HEALTH TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

##### **3.1 General**

- 3.1.1 Contractor shall comply with AEP's Contractor Oversight program. Contractor's safety performance will be monitored and evaluated during performance of the Contract by Owners' representative.
- 3.1.2 Contractor shall adhere to all pertinent local, state and federal regulations and all rules and policies set forth in Contractor's own safety manual. Any shortcoming brought to the attention of Contractor by Owner shall be immediately corrected by Contractor. Repeated and/or severe safety violations, incidents or accidents may be cause for the Contract to be terminated, prevent eligibility for providing future Services and result in the potential removal from AEP's qualified bidders list.
- 3.1.3 Owner has the authority to immediately stop Contractor's Service performance indefinitely for practices, procedures and operations, which, in the opinion of Owner, constitute a safety concern. It is Contractor's responsibility to adequately satisfy Owner with any remediation necessary to provide a safe and healthful workplace.
- 3.1.4 Contractor shall have qualified and competent supervision on the job at all times to direct and observe the Work.
- 3.1.5 If Contractor in good faith believes that any rule or procedure set forth in these Supplementary Terms will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

##### **3.2 General Safety Requirements**

- 3.2.1 Owner, or Owner's representative, shall conduct random Forestry Contract crew safety audits and Contractor shall cooperate fully with Owner's representatives during this audit. The audit is defined in Appendix A.
- 3.2.2 Contractor shall promptly notify Owner if Contractor's or its subcontractors' Experience Modification Rate for workers compensation exceeds 1.0.
- 3.2.3 Contractor shall remain solely responsible for the proper and safe use of all tools, and for conducting safe work practices or procedures. Contractor shall provide information necessary for the job briefing identified in Section 3.6 below, Job Briefings.
- 3.2.4 Contractor shall provide Owner a list of all tools, practices or procedures it or its subcontractors will use in performing assigned Services with fabricated or modified tools ("Specialty Tooling"). Specialty Tooling includes all tooling fabricated, developed by or modified by Contractor. Contractor shall notify Owner of any Specialty Tooling it develops or modifies on site. Contractor shall also notify Owner, prior to use, if it intends to use standard tooling in ways other



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than those for which the tooling was designed. All such Specialty Tooling is subject to review by Owner. Specialty Tooling shall have design plans, engineered diagrams, etc. with a Professional Engineer's stamp of approval. Contractor shall also inspect Specialty Tooling prior to each use. At its sole discretion, Owner may prohibit or restrict the Contractor's use of Specialty Tooling on Owner's site.

3.2.5 Contractor shall immediately cleanup all spills from Contractors' equipment and vehicles.

### **3.3 Contractor Safety Representative**

3.3.1 When Contractor has eleven (11) or more total employees on various projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

3.3.2 Qualifications of the aforementioned safety professional may be subject to Owner's review and approval.

3.3.3 Owner may require Contractor to assign additional safety professionals if Owner determines the scope of Services justifies additional safety oversight.

3.3.4 Owner may require Contractor to supply additional safety professionals if Owner has determined geographical Service locations justify additional safety oversight.

### **3.4 Monthly Reporting**

3.4.1 Contractor shall report various safety related statistics, using the Owner's authorized website (<http://www.terrine.net/AEPscoreCard>). Reported statistics will include subcontractor(s) and will represent Work being performed on Owner's Distribution projects/Contracts only.

3.4.2 Contractor must report the following: monthly man-hours worked, OSHA recordables, OSHA lost time and restricted recordables, lost time and restricted days, first aid injuries, flashes/outages, preventable vehicle accidents, and fatalities.

3.4.3 The above requirements must be reported by the 10th day of the following month in which Contractor is creating events and supplying hours within the Owner's safety website (<http://www.terrine.net/AEPscoreCard>). A copy of the Contractor Guide for Distribution Events Scorecard System is included in Appendix B. This information will be used by Owner to evaluate Contractor's safety effectiveness and performance.

### **3.5 Event Reporting**

3.5.1 When performing Services for AEP and a safety event occurs, Contractor shall notify Owner about the event immediately (verbal reporting is sufficient). Contractor shall also submit a written preliminary notification (no later than 8:00 a.m. the following working day of the event) to the



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Forestry Supervisor, Region Support Manager and/or designee, Forestry Operations Manager, and shall also e-mail a copy to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com), listing any and all safety events occurring during the performance of Services. A separate report is required for each event. Reported events include near miss events, first aid and minor events, OSHA recordable injuries, flash/outage events, vehicle accidents, spills/release, underground utility strikes and OSHA/EPA citations/visits. The written report should include sufficient detail to identify the nature of occurrence, the extent of injury (if any) and contact name and number of the person leading the investigation. Within seven (7) business days, Contractor shall submit an in depth report to the e-mail address listed above, along with a copy to the Forestry Supervisor, Region Support Manager and/or designee and Forestry Operations Manager. This report must include the time and date of event, location of event, name of injured employee, the injured employee's on the job experience, description of event, factors that may have caused or contributed to the event, corrective actions taken and/or planned and the person(s) responsible for corrective actions.

### **3.6 Job Briefings**

3.6.1 Prior to the commencement of Services in any location and before any changes in procedures or activities are made, Contractor shall perform a Job Briefing in written report/form to identify all potential work site risks. Each member of the crew must sign or initial this form in order to affirm their presence at the time the information was presented during the Job Briefing. The report shall include, at a minimum: 1) applicable hazards present during the course of performing the specific assignment 2) Service procedures involved 3) special precautions 4) energy source controls and 5) personal protective equipment requirements. Should Contractor not have its own Job Briefing requirements/forms, then Contractor shall use the AEP Supplied Job Briefing Form in Appendix C.

3.6.2 Contractor shall make its Job Briefing Forms available to Owner upon request.

### **3.7 Personal Protective Equipment Requirements**

3.7.1 Contractor is responsible for requiring the use of appropriate personal protective equipment ("PPE") in all operations where there is an exposure to hazardous conditions.

3.7.2 Owner requires Contractor and Subcontractor employees to wear the following PPE, at a minimum, while on/in any construction site and/or work area:

- Safety glasses or safety prescription glasses with side shields
- Hardhat
- Work gloves that provide protection for the type of work
- Approved hearing protection devices when required
- Supportive work boot with a defined heel

3.7.3 Open-toed, open-heeled, athletic footwear and tennis shoes are strictly prohibited. Additional foot protection and/or PPE may be required based on Contractor's PPE assessment or specific site requirements.



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### **3.8 Substations/Switchyards**

- 3.8.1 OSHA requires personnel working within an electrical station be qualified to recognize equipment and hazards unless escorted by a qualified person. Employees not OSHA station qualified shall be under direct supervision of qualified personnel.
- 3.8.2 Gates to station fences shall remain closed and locked when they are not under the direct observation of an attendant.

### **3.9 Firearms, Alcohol and Drugs**

- 3.9.1 Firearms, alcohol, illegal drugs or drugs taken for non-medicinal purposes are prohibited on all Owner Sites.
- 3.9.2 Contractor shall be responsible for all Contractor and Subcontractor(s) employees who are under the care of a physician and are taking prescribed medicine, which may alter the employee's physical or mental ability. Contractor shall determine the necessity to modify the employee's job assignment while undergoing treatment.
- 3.9.3 If firearms or suspected illegal drugs are discovered on any AEP property or Work Site/area, the following guidelines should be followed by whoever discovers the firearms or suspected illegal drugs:
- First, if possible without putting themselves or others in harms way, attempt to secure the location and ensure that others cannot come in contact with the firearms or suspected illegal drugs. Do not handle or move firearms or suspected illegal drugs from their discovered location.
  - Second, immediately contact the Owner's Contract Supervisor or Distribution Line Representative and together make a decision whether or not the situation requires a call to the local law enforcement authorities. Immediately call the local law enforcement authorities and report the discovered item(s) if (a) neither the Owner's Contract Supervisor nor the Distribution Line Representative is available; (b) there is a threat of harm to any person; or (c) there is a risk of improper removal or disposal of the firearms or illegal drugs.
  - Third, call local Owner's security personnel or call the Owner's general Security hotline at 1-866-747-5845.
  - Fourth, for incidents involving Contractor personnel, Contractors shall submit reports according to Section 3.5, Event Reporting.

### **3.10 Drug/Alcohol Testing**

- 3.10.1 All Contractor and subcontractor employees performing Services under this Contract must complete and pass a pre-employment drug/alcohol screening. Screening substances and their associated cut-off limits are the same as listed in the applicable AEP General Terms and Conditions.



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3.10.2 Post event drug and alcohol testing shall be performed, at Owner's discretion, on all Contractor and subcontractor employees involved in any safety related event. Testing results shall be shared with Owner upon request.

3.10.3 Contractor shall incur all costs associated with the required drug and alcohol testing as required in these Supplementary Terms.

#### 3.11 Language Requirements

3.11.1 Contractor's and its subcontractor's shall be capable of communicating in English. Contractor shall provide one (1) bilingual employee for each non-English-speaking crew.

#### 3.12 Job Site Auditing

3.12.1 Contractor representatives, at a minimum, shall perform and document a Job Site Observation based on the following table:

| Representative Level   | Frequency |
|------------------------|-----------|
| Senior Management      | 1/Quarter |
| Operational Management | 1/Month   |
| General Foreman        | 2/Week    |
| Safety Professional    | 2/Week    |

3.12.2 If Contractor does not meet the requirements of Safety Section 3.3.1 [less than eleven (11) employees], then the lowest representative level of the table in 3.12.1 above (safety professional) shall be followed by a company representative.

3.12.3 Contractor shall make documentation of such job site observations available to Owner upon request.

#### 3.13 Emergency Planning

3.13.1 All job sites must have an Emergency Action Plan that has been communicated and documented to all employees. The Job Site Emergency Action Plan shall be documented on each job briefing conducted. This plan shall include, at a minimum:

- Emergency contacts
- Location and name of local emergency services
- Location of closest communication method
- Location of closest medical facility
- Procedure to follow in the event of an emergency

#### 3.14 Traffic Control

3.14.1 All Services performed on or adjacent to existing public road or rights-of-way and/or job site roadways shall be performed in conformance to the requirements of the Manual on Uniform Traffic Control Devices (current revision), state and local jurisdiction.



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### **3.15 Individuals Restricted from Access to AEP Sites**

3.15.1 Owner may deny access to its facilities by any person who fails to comply with the safety provisions set forth in the applicable AEP General Terms and Conditions or these Supplementary Terms or any person who, in Owner's sole judgment, otherwise demonstrates a lack of safety performance. Examples of a lack of safety performance include, but are not limited to, the following:

- Unsafe job performance
- Failure to pass drug/alcohol test
- Displaying incompetence in performing their job
- Employees that are determined to be unfit for project employment
- Playing of pranks, horseplay or practical jokes
- Failure to report injuries and/or accidents
- Fighting or acts of aggression
- Theft or vandalism
- Convicted Sexual Offenders

3.15.2 Prior to the commencement of Services and during the term of the Contract, Contractor shall provide Owner with a list of all individuals, including Contractor and subcontractor employees, whom Contractor intends to perform Services at Owner's sites upon request. The list shall identify the individuals by their name and the last three digits of their Social Security number.

3.15.3 Owner may, at its sole discretion, deny access to any individual who has been previously removed from a project by Owner or any of its affiliates for safety reasons.

3.15.4 Contractor may request a restricted Contractor employee to be cleared for the performance of Services. A letter addressing the original safety violation(s) or reason(s) for removal and any documentation supporting the request shall be sent to Owner for approval. Contractor's employee shall not perform Services at any of Owner's sites until approved by Owner. Said approval may be granted or withheld at Owner's sole discretion.

### **3.16 Housekeeping**

3.16.1 Contractor shall ensure that debris, materials, scrap, trash, etc. is contained and removed daily.



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**APPENDIX A  
AEP FORESTRY CONTRACT CREW AUDIT FORM**

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**APPENDIX B  
AEP CONTRACTOR PERFORMANCE REPORT**

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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**APPENDIX C**

**AEP SUPPLIED JOB BRIEFING FORM**

**(ONLY FOR CONTRACTORS THAT DO NOT HAVE THEIR OWN DOCUMENT)**

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# Exhibit B

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# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010**

Effective Date: May 1, 2016

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| AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations  |                        |  |        |              |
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## I. Purpose

The purpose of these American Electric Power (“AEP”) Forestry Vegetation Management Guidelines is to document and inform AEP employees and its contractors of important criteria, practices, and procedures pertaining to initial vegetation clearing for construction projects and the management of vegetation within rights-of-way. AEP incorporates these guidelines into each vegetation management contract; a copy shall be kept in all vegetation management Contractor’s vehicles. These guidelines are to be read consistently with other contract documents by and between AEP and the Contractor. Variances and/or clarifications to these guidelines may be necessary and applied to specific operating companies.

These guidelines contain references to national industry standards; government regulations; and AEP standards and practices. Upon approval of this document, any editions referenced are valid. All standards, regulations and practices are subject to revision. AEP and the Contractor are encouraged to investigate the possibility of applying the most recent editions.

## II. Definitions

**Brush**: Woody stem vegetation less than four (4) inches DBH.

**Clearing**: The physical cutting and/or removal of woody stem vegetation.

**Control**: 100% defoliation with no viable buds one year after application; or, on species that require a number of years to achieve control, significant signs of herbicidal activity.

**Danger Tree**: A tree on or off the right-of-way with the potential to contact electric supply lines.<sup>i</sup>

**DBH**: (Diameter at Breast Height) The diameter of a tree measured at the height of 4 ½ feet above the ground on the uphill side.

**Debris**: Vegetative and non-vegetative material such as bottles; cans; wires; paper; branches; or other residue from clearing operations.

**Directional Pruning**: The removal of limbs in a manner that provides increased conductor clearance and directs growth away from the conductors.<sup>ii</sup>

**Hanger**: A cut limb left hanging in a tree or on other facilities.

**Hazard Tree**: A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electric supply lines.<sup>iii</sup>

**Log**: The merchantable portion of a tree as designated by AEP.


**Lopping**: The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Refusal**: A property owner/resident prohibiting the Contractor from managing vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits, and easements.

**Removal**: The cutting of trees/brush at or near ground line.

**Slash**: The un-merchantable portion of a tree.

**Tree**: Woody stem vegetation greater than four (4) inches DBH.

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### III. Contractor Guidelines

#### A. Safety

Protecting the safety of all people (Contractors, public, and AEP employees) is of utmost importance to AEP. Contractors shall regard safety as a priority core value; their employees will recognize and follow all laws, rules, and regulations of public and worker safety. Any safety related incidents (e.g. personal injuries, vehicle accidents, outages, flashes, near misses, customer issues, etc.) that occur on the job shall be reported to the proper AEP personnel as specified by AEP management.<sup>iv</sup>

#### B. Personnel

1. Contractors shall comply with all federal, state and local laws for permits, certifications and licensing requirements necessary to perform vegetation management in specified operating areas.<sup>v</sup>
2. No private work may be solicited or performed by the Contractor or its employees while on AEP time. Contractors shall not seek nor receive compensation from anyone except AEP for any work that is a part of AEP's Forestry Vegetation Management program. The consequences will be crew and/or Contractor disciplinary actions.

#### C. Equipment


1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chainsaws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.
4. The use of spurs/climbers/hooks should be avoided.

#### D. Overtime

Overtime is billable as designated by each operating company.

#### E. Work Procedures

1. Contractor practices shall be compliant with applicable industry standards (e.g., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>vi</sup>
2. Changes in the work schedule due to inclement weather, equipment breakdowns, or other circumstances must have prior approval by AEP Forestry personnel.
3. The Contractor will be responsible for the development of a plan to complete the assigned tasks. The plan must meet AEP approval before work begins.<sup>vii</sup>
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.

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5. Contractors shall provide daily work locations to AEP, including changes to these locations throughout the day.
6. Prior to work in any location and before any changes in procedures or activities are made, the Contractor shall perform a job briefing in written/report form to identify all potential work site risks. At least one copy of all documents and reports, including job briefings, shall be prepared in English.<sup>viii</sup>
7. An ongoing list of refusals, scheduled outages, or areas that have not been worked, including reasons, shall be provided to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work should be inspected for clearance and quality compliance on an ongoing basis by the Contractor and AEP Forestry. When an assigned task is complete, the Contractor shall notify AEP Forestry for final inspection.
9. The Contractor shall notify AEP of any hazardous conditions found during the performance of work under this contract.

## F. Public Relations

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise.


1. When required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, the Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor shall document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the Contractor shall be on the door card.

## G. Refusals

1. The Contractor shall notify the proper AEP Forester with all pertinent information for all refusals.
2. If the Contractor is unable to resolve the refusal, the refusal shall be turned over to AEP Forestry.
3. Undocumented refusals may be worked at the Contractor's expense.

## H. Damage Claims and Complaints

1. The Contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.<sup>ix</sup>
2. An on-site investigation with the resident/property owner shall be made as soon as possible. A documented attempt to contact the complainant shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during the investigation.


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3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.<sup>x</sup>
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.<sup>xi</sup> The Contractor shall provide a copy of all supporting documentation to AEP.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.<sup>xii</sup>
7. Costs to restore outages or repair AEP's facilities due to negligence may be billed to the Contractor as determined by AEP.

## IV. Performance Guidelines

### A. Removals

1. Stumps shall be cut as close to the ground as practical, but not to exceed a three inch maximum height and treated with approved herbicide, unless the situation prevents application according to label instructions; there is a documented customer refusal; or an AEP Forester directs otherwise.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect electric lines, yards, fences, houses, and other facilities.
3. Targets for removal are:
  - a. All trees with the potential of growing into the conductor.
  - b. Trees where adequate clearance cannot be obtained using proper pruning practices.
  - c. Trees that will take less than three times the amount of time to remove as they would take to prune.
  - d. Trees within five (5) feet of poles.
  - e. Mature trees where more than 50% of the crown must be removed to obtain clearance.
  - f. Young, vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
  - g. Palm species.
4. At property owner's request, any tree situated such that the location of AEP's facilities impede, or add significantly to the cost of, the safe removal of the tree and an additional burden is placed upon the property owner, AEP should take the steps necessary to mitigate the impediment or to relieve the additional burden placed upon the property owner. AEP

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actions may include, but not be limited to, moving or protecting its facilities, removing portions of the tree to provide the clearances required by ANSI, OSHA, or any other regulatory authority, to allow removal by “non-line clearance” qualified arborists or non-professionals. Except in case of emergency, AEP must evaluate the property owner’s request and prioritize any necessary work according to its benefit to the provision of electric service to all customers. At property owner’s request, debris will be left for disposal by the property owner.

5. State and local ordinances shall be obeyed during the disposal of debris.

## B. Pruning


1. Contractor practices should be compliant with all applicable industry standards (i.e., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>xiii</sup>
2. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth below in Section V. Distribution Clearances or Section VI.C. Transmission Clearances or as designated by the operating company.
3. Reasonable care should be exercised to help prevent the spread of insects and pathogens.
4. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut, treated with herbicide, or damaged by the Contractor’s activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner in writing.
5. State and local ordinances shall be obeyed during the disposal of debris.

## C. Hangers and Cleanup

1. All hangers shall be removed from the pruned tree before leaving the job site.
2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of cleanup work should be performed. Unless otherwise designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum cleanup that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the Contractor.

## D. Clearing and Re-clearing

1. AEP will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into and interfere with service reliability; restoration; patrolling; or other maintenance operations of AEP facilities should be controlled by the operating company guidelines.
3. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the proper AEP personnel.


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4. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practical, but not to exceed three inches in maximum height above the ground line. Where possible, the cut shall be parallel to the slope.
5. Trees shall be felled to avoid damage to crops, fences, and other facilities. Any trees felled into crops, ditches, streams, roads, or across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP facilities or the property of third parties, or hinder access along the right-of-way.
6. Trees, brush, and slash shall be lopped as designated by AEP Forestry.
7. Hazard Trees are identified and addressed/worked at the discretion of the individual operating companies or regions. Consideration for hazard tree removal shall be made for those trees that are an immediate threat to AEP facilities. Hazard Trees may include, but are not limited to, trees that have severe lean or sweep; are dead; or have visible defect or damage.
8. Stumps of trees growing in fences may be cut at fence post height. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
9. As designated by AEP Forestry, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
10. Brush and debris from vegetation clearing shall not be left in managed agricultural areas or other maintained areas. Piled and/or windrowed materials shall not be left on or interfere with fences or other facilities of the landowner or AEP unless designated by AEP Forestry.

## E. Herbicide Application

1. All woody plants that have the potential of growing into the lines or impair access should be controlled, as designated by AEP Forestry.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made as required by all Federal, State, and local laws.
3. The Contractor shall be required to control at least 90% or a percentage as designated by operating company of the targeted vegetation. Any areas not meeting the control requirements shall be retreated at the Contractor's expense.<sup>xiv</sup>
4. AEP Forestry may make vegetation management prescriptions in consultation with Contractors.
5. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xv</sup>
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps shall be treated with an appropriate herbicide treatment.

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## F. Tree Growth Regulator Application

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (“TGR”) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in excessive state of decline shall not be treated unless directed by AEP Forestry.
3. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xvi</sup>

## G. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.

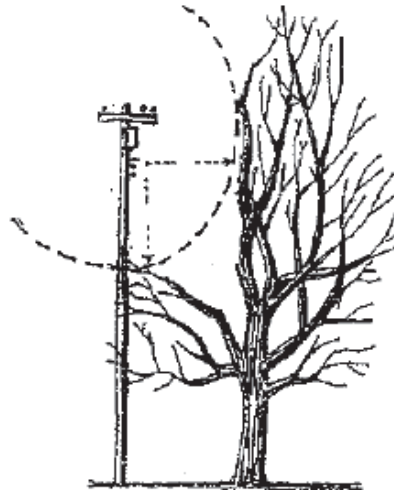
## V. Distribution Clearances


Variances to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/or easements.

Minimum clearance for distribution lines is that distance that will prevent regrowth into any AEP conductors for a minimum of three (3) years. (See **Error! Reference source not found.**, pg.**Error! Bookmark not defined.**) The species, site, limb, conductor sag and sway during windy conditions; and the effect of electrical load should all be considered when determining the clearance requirement.

## A. Primary Conductors

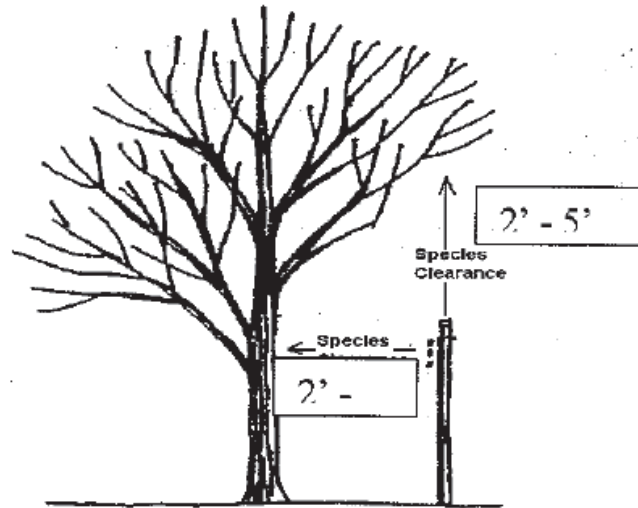
Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the proper AEP Forestry representative.



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## B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



## C. Service Drops and Street Light Conductors


Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.

## D. Poles and Guys

1. Heavy limbs applying pressure on the span guy should be pruned or removed at the specific direction of the proper AEP Forestry representative.
2. Trees, brush, and slash should be cleared to obtain a minimum of a five (5) foot radius of clearance around the pole or guy unless otherwise specified by an AEP Forestry representative.

## E. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.

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## VI. Transmission

### A. Hazard Trees

Trees may exhibit potential threats to AEP facilities due to disease, damage, physical location, growth characteristics or environmental problems. Where these trees exist, AEP considers them high priority risks that need to be addressed and remediated.<sup>xvii</sup>

#### 1. Visual Assessment

While performing work on a circuit, contract crews shall conduct a visual assessment to identify trees with imminent<sup>1</sup> and/or probable<sup>2</sup> likelihood of failure inside and outside the right-of-way. The tree should be viewed from some distance away, if possible, to consider crown shape and surroundings.

Any tree identified to be a potential imminent threat to an AEP Transmission line shall be reported to the responsible transmission forester.

#### 2. Ground Evaluation

If a Hazard Tree is identified during the visual assessment, a 360° ground evaluation shall be required. The evaluations should include an inspection of:

- Tree crown
- Trunk
- Trunk flare
- Above-ground roots
- Site conditions around the tree in relation to targets.

The Contractor shall report risk and mitigation options to the responsible transmission forester.

### B. Tree Felling


Before beginning any tree felling operation, the Contractor shall consider relevant factors<sup>3</sup> pertaining to the tree and site and shall take appropriate actions to ensure a safe removal operation.<sup>xviii</sup>

1. When there is a danger that the tree pieces or tree being removed may fall in the wrong direction and contact utility facilities or damage other property, appropriate methods shall be used to control the direction of fall.<sup>xix</sup>
2. All limbs shall be removed to a height and width sufficient to allow the tree parts or tree to fall clear of hazards.<sup>xx</sup>
3. Notches shall be used on all trees and trunks greater than five inches DBH.<sup>xxi</sup>

<sup>1</sup> Imminent – failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. (Tree Risk Assessment Manual, pg. 100)

<sup>2</sup> Probable – failure may be expected under normal weather conditions within the specified time frame. (Tree Risk Assessment Manual, pg. 100)

<sup>3</sup> ANSI Z133-2012 Annex C.3, Manual Tree Felling Procedures contains a list of relevant factors to be considered during tree felling.

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4. Contractors shall provide evidence of training to employees related to tree felling upon request.

## C. Clearances

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| Right-of-way No Restrictions   | Right-of-way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2.</b>                   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |

<sup>4</sup> Upon completion of maintenance

**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |


## D. Transmission Dispatch Communication Procedures

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

## E. Transmission Forestry Construction Guidelines

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

<sup>5</sup>ANSI Z133-2012.

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All removals/trimming shall be done in accordance with the best recognized and approved principles of modern arboriculture and tree surgery, with balanced emphasis on current tree health and clearance.

The full width of the right-of-way, as determined by easement agreements, shall be cleared unless otherwise indicated on the Special Condition List.

Right-of-Way service will provide a contact list and will be handling damages for the construction work. Property owners who were notified of the construction work will receive a follow-up notification from the Contractor tree days before starting work on that property.

## 1. Contractor Qualifications

Contractor practices shall be in compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.

## 2. Clearing

The right-of-way shall not be cleared with a bulldozer, maintainer, or any other method that will disturb surface or sub-surface conditions unless specified in the right-of-way Special Conditions List. Reduction of disturbance of the surface or sub-surface soils reduces the risks of soil erosion and invasive species.

Contractor will take whatever measures necessary as specified in the SWPPP and elsewhere in the specification to prevent the erosion of soil from the right-of-way. The corrective measures may be in the form of grading, terracing, construction of sediment barriers, reseeding, mulching, or steps necessary to prevent erosions and must be approved by AEP.


Mowed right-of-ways shall be left with no stumps higher than three inches and no large chunks of debris left. Examples of preferred mowing equipment to be used on the right-of-ways will be equipped with, but not limited to, "FECON", "SEPPI" or equivalent type mowing heads.

## 3. Tree and Brush Removal

1. Trees and brush designated for cutting or mowing on the rights-of-way shall be cut as close to the ground as practicable, but not to exceed three inches in height above the ground line. All trees and brush cut shall be stump-treated with an approved herbicide as instructed on the label. All spraying procedures are to be fully explained to property owners if requested by landowner. If requested by landowner that no herbicides be used, their request is to be referred to Company. Certain state laws and regulations may require consent of the property owner to apply herbicides.

2. On portions of the right of way where the conductor to ground clearance is 100 feet, or less, all woody stemmed vegetation will be cut, limbed and lopped. No vegetation will be permitted to obstruct roads, lanes, trails, fences and streams. The brush shall also be cut and compacted. Additional requirements are:

- Stump surfaces shall be cut parallel to and within three inches of the ground.
- Brush and logs shall not be placed within 25 feet of improved roads, or river and stream banks.
- Brush and logs shall not be piled in flood plains.
- Brush and logs shall not be placed in fields unless authorized by the property owner.

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- Brush and logs shall not be placed where it will obstruct ingress or egress on other rights-of-way such as roadways or trails.
- Trees will be felled where possible to protect crops, fences and other facilities.

3. No clearing will be done where the line crosses valleys or ravines when the conductor profile indicates a height of 100 feet or greater above the ground at maximum sag; hence, impacts on streams and woody vegetation in valleys can be avoided or minimized. The exceptions to this are as follows:

- Trees that do not have at least 50' of clearance between conductors and tree under maximum sag conditions will be removed.
- Where a conductor stringing path is specified
- Wire set-up areas
- Work areas, etc.

4. For trees in yards, grind stumps to six inches below grade and restore the ground to match the existing grade and vegetation in the surrounding yard.

5. Low-growing species can be left except in tower locations. All woody stem vegetation within the cleared right-of-way shall be removed on NERC-applicable lines.

6. Any required buffer zones/screens shall be selectively treated in areas designated by AEP. Only tall-growing species (i.e. those trees that will grow taller than 15 feet at maturity) will be cut or treated in these areas.


#### 4. Tree Pruning

Tree pruning will generally be limited to trees on the edge of the right-of-way or in locations designated as environmentally-sensitive; tree pruning will ensure that required clearances are achieved. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development. Manual pruning operations will utilize qualified line clearance arborists, as defined by ANSI Z133.1-2012, and seek to prune trees according to standards set by the International Society of Arboriculture, the American National Standards Institute and the Tree Care Industry Association. Trees will be pruned in accordance with the American National Standard Institute guidelines for “Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning), ANSI A300 (Part 1) – Pruning”

#### 5. Debris Disposal

Debris from construction clearing operations is left on the right-of-way to decompose and return nutrients to the soil and to reduce the possibility of soil erosion. Limbs are reduced in size to maintain a low profile, and both the main stem and brush left on the right-of-way.

1. All woody vegetation that falls into roadways, waterways, fences, lawns, or pastures shall be moved to a wooded area of the right-of-way or may, at times, be chipped and/or otherwise removed.

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2. Logs may be left in tree lengths or as designated. The merchantable value of the logs will be preserved as much as possible.
3. Alternatives to the debris disposal standard are the following:
  - Cut and Compact: Brush may be reduced in height by cutting and by compacting piles with crawler-type equipment at selected locations (depressions in topography) on the right-of-way outside of the conductor path.
  - Cut and Scatter: Brush may be reduced in height by cutting or scattering on the right-of-way outside of the conductor path or roadway, but as close to the edge of the right-of-way as possible.
  - Cut and Pile: Where required by right-of-way agreement, brush shall be piled or scattered off the right-of-way.
  - Chipping/Shredding: Chipping/shredding or other viable methods may be utilized where accessible by equipment.
  - Burning: brush burning shall only be done if it is specified in the right-of-way agreement and is in accordance with applicable regulations. This method requires formal approval by the Manager of Forestry Operations.

## F. Hazard Trees


Hazard trees (outside of right-of-way) will be cut or trimmed and the logs and laps will be left as felled. When the conductor to ground clearance is over 100 feet, only those trees that do not have the required clearance will be cut. Refer to Section VI.A on page 13 for additional information.

## G. Herbicide

Application of all herbicides shall be performed as required by federal, state, and local laws. The contractor will furnish and be responsible for all pesticides, including proper disposal of their containers, and insure their use in accordance with the label instructions. All work will be done as defined in Herbicide Application on page 10.

## H. Fences and Crops

1. No fences shall be cut unless contractor is authorized to do so by AEP, if fences are cut or broken by the contractor without prior AEP authorization, the Contractor, at their expense, shall promptly repair.
2. Contractor is responsible for the right-of-way clearing needed to perform the job, however, the Contractor agrees to not do unnecessary damage to growing crops or other properties and agrees to pay the tenant and/or landowner involved for any unnecessary damage to growing crops and other properties. AEP shall be the sole judge of what constitutes “necessary” and “unnecessary” damage under the terms hereof.

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## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species   |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d'arc (Osage orange, hedge tree) |

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| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |

### 1. Exceptions


1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.



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## **B. Distribution Operating Company Specific Guidelines**

- 1. AEP Ohio**
- 2. AEP Texas**
- 3. Appalachian Power**
- 4. Indiana Michigan Power**
- 5. Kentucky Power**
- 6. Public Service of Oklahoma**
- 7. Southwestern Electric Power Company**
- 8. Wheeling Power**


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## C. Referenced Documents and Specifications

| Title  | Year | Version                  | Pages |
|--|------|--------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2               | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                          | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                 |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI® Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI® A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI® A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI® A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition           | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008            | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition            | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                 |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                 |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                 |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                 |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                 |       |


<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

- <sup>i</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH
- <sup>ii</sup> *Best Management Practices – Utility Pruning of Trees.* International Society of Arboriculture. Champaign, IL
- <sup>iii</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH
- <sup>iv</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>v</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>vi</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>vii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>viii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>ix</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>x</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xi</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xiii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>xiv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xvi</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xvii</sup> *Managing Hazard Trees on FAC-003 Applicable Circuits.* American Electric Power
- <sup>xviii</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xix</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xx</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xxi</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

|   |  |        |               |
|---|--|--------|---------------|
|  | AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations | Rev. 3 | TVMD-0        |
|   |  |        | Page 23 of 23 |

# AEP FORESTRY

## *Instructions*

### *For*

## **Forestry Contract Crew Audits**

**January 2007**

**The Forestry Contract Crew Safety and Forestry Contract Crew Audits** are tools that AEP Foresters can use to record a tree crew's compliance with safety regulations, contract guidelines and work performance. A crew, or the completed work, is rated as pass or fail and acceptable or unacceptable. Acceptable or pass means a crew meets contract guideline expectations. Unacceptable or fail means a crew, or the completed work, does not meet contract guideline expectations. An unacceptable or fail rating for any single item in the Crew Safety, Forestry Clearance or Forestry Work Quality audit sections will result in a failure rating for the audit section receiving the unacceptable or fail rating.

Each topic found on the Forestry Contract Crew Safety Audit and Forestry Contract Crew Audit is defined in this document. The 10 topics listed under Safety are forestry specific relating to the AEP Contractor Oversight program. The remaining five topics – Clearance, Work Quality, Equipment, Personnel and Reporting Accuracy relate to contract/guideline compliance and work performance.

Definitions of terms used in this document and more detailed explanations of right of way Forestry work compliance standards are supported by and provided in the document "AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations".

One copy of each completed crew audit is to be given to the audited tree crew foreman, one copy to the contractor general foreman/ supervisor responsible for the crew, and one copy kept on file at the responsible/ local AEP forester's office.

All audit information, including comments, should be entered into RWM

**Audit Frequency** – The expectation of AEP Forestry management is that contract crew audits are to be conducted on a regular basis.

**Fail or Unacceptable** - Any item marked 'Fail' or 'Unacceptable' must be explained. Use the comments sections on the audit forms to explain why an item was marked 'Fail' or 'Unacceptable'.

## Safety Audit

**Personal Protective Equipment** - Shall be worn as required by OSHA and ANSI specifications. Such PPE includes and is not limited to:

**Hard Hats** - Shall be worn when entering the job site. Visual inspection of hard hats should be made to insure they are not cracked, broken, or otherwise altered.

**Safety Glasses** - ANSI approved Z87.1 eye protection shall be worn on job site at all times. Safety glasses are required for all jobs.

**Ear Protection** - Shall be worn when running chippers or chainsaws. Exception- not required when using a chainsaw while working in tree.

**Proper Footwear** - Proper work boots that go above the ankle. Footwear should support the foot and ankle area.

**Chain Saw Chaps** - Are to be worn, according to ANSI guidelines, while operating chain saws.

**High Visibility Garments** – Are to be worn when exposed to vehicular traffic.

**Fall Protection Equipment** – Proper fall protection equipment shall be used while working in an aerial lift device or manually climbing. All such equipment shall be inspected on a daily basis for safe working condition.

**Properly Maintained Safety Equipment** - Each truck is required to have a fully stocked, removable first aid kit; fire extinguisher with current fire safety inspection; and wheel chocks.

**Traffic Control Devices** – Approved cones, signs and flagging personnel need to be properly placed in compliance with State and/or Federal DOT regulations (MUTCD). Be sure all vehicles are properly parked adhering to all city and state laws and regulations including OSHA regulations.

**Proper Fall Protection Procedures** – All climbing practices must be in accordance with OSHA and ANSI Z133 standards.

**Properly Barricade Work Area** – Public should be kept away from work area. Safety cones shall be used to isolate work area from public area. Any person not wearing proper PPE shall be escorted out of work area. Unattended equipment should not be left on the ground where it could jeopardize the public or worker safety.

**Properly Maintain and Store Work Tools** – All tools such as chain saws, pole pruners, ladders, etc. that are kept on a work vehicle are to be safely secured and stored away from public availability. Saws with blade scabbards should be stored with scabbard on. Tools should be in good working order and repair.

**Follow Proper Approach Distances** – All tree trimmers are required to follow OSHA 1910.269 minimum clearances for A.C. Live – Line Work Minimum Approach Distances.

**Properly Store and Mark Hazardous Material** – All herbicide sprayers and storage containers shall be properly labeled and kept in a secured location. Flammable liquids shall be stored in approved containers.

**MSDS and Labels Information Available** - Material Safety Data Sheets for all chemicals shall be readily available on each vehicle. State and federal pesticide regulations also require each vehicle to have labels for each herbicide being used by the crew or stored on the vehicle.

**Good Job Site Housekeeping** – Job site shall be kept orderly at all times. Equipment, trimmings and debris need to be contained to allow safe working operations and provide public safety.

### **Clearance Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Tree Pruning- Conductor Clearance** – All tree pruning shall be governed by approved principles of arboriculture and shall adhere to Tree Care Industry Association (TCIA) and International Society of Arboriculture (ISA) standards.

**Primary Conductors- Conductor Clearance** - It is AEP's practice to prune trees in a manner that will direct growth away from the electrical conductors. Growth should be removed to a lateral or parent stem and vertical growth rolled back away from the conductor.

Minimum clearance for distribution system lines should be established by each Operating Company. Overhanging limbs should be removed unless otherwise directed by the appropriate AEP System Forestry representative.

**Secondary Conductors – Conductor Clearance** – Minimum clearance for open wire secondary should be established by each Operating Company. Overhanging limbs should not be removed unless otherwise directed by the appropriate AEP System Forestry representative.

Insulated, Twisted, or Cabled Secondary Conductor Clearance – Will not be pruned unless limbs are applying pressure to the line or unless directed by the appropriate AEP System Forestry representative.

**Tree Removal** – Tree removal is an important part of the AEP line clearance program. Targeted tree removals are all trees with the potential to grow into the conductors., Dead, diseased, fast growing tree species, and trees that cannot be properly pruned to obtain proper clearance for the AEP conductors are removal targets.

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Stumps shall be flush cut and treated with an approved herbicide as designated by the appropriate AEP System Forestry representative.

**ROW Width** - AEP forestry will provide the width of the right of way. This area will vary depending on facilities. The full width of the R/W area or easement should be cleared of all tall growing or non-compatible woody plant species unless otherwise instructed by the appropriate AEP System Forestry representative.

**Danger Trees** - Danger trees shall be removed or pruned to eliminate the hazard. When cut, danger trees shall be cut as low as practicable, but not to exceed eight inches in height above the ground line. The logs and slash shall be left as felled, unless otherwise designated by AEP System Forestry.

### **Work Quality Audit**

"AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations" is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Clearance for Species** - The clearance for a species may be defined as the distance between the tree and conductors after pruning. It is the responsibility of each crew to adhere to the appropriate clearances specified in the AEP guidelines. No exceptions should be made unless otherwise instructed by the appropriate AEP System Forestry representative.

**Hangers Removed** – Any cut or broken limbs left in the tree after pruning shall be removed before leaving work site.

**Collar Cuts** - Collar cuts are important in order to reduce a tree's sprouting. Collar cuts shall be consistently made according to proper arboriculture standards (ANSI A300).

**Directional Pruning** – A pruning practice used to remove branches growing toward conductors; leaving branches growing away from conductors.

**Drop Crotch Selection** – Pruning cuts are to be made, whenever possible, to lateral branches that are at least 1/3 the diameter of the branch being removed.

**Peels / Tears** – Pruning cuts resulting in bark tearing or stripping below a cut shall be avoided.

**Clean Up / Brush Disposal** – All appropriate cleanup work shall be done before leaving a job site unless arrangements have been made with the property owner or AEP forestry personnel. This could include: Chipping or piling brush; removing trash/debris; raking the yard and sweeping driveway, sidewalk or street when appropriate.

**Regard for Property** - All line clearance personnel shall respect the property of the landowner at all times. The crew should take extra effort not to drop limbs on landscaped beds, gardens, yard decorations, fences, roofs, gas meters, cars, etc. The crew should take care not to damage property when walking across or dragging brush.

Ruts or other damage shall be brought to the land owner's attention and addressed accordingly.

**Stump Height** – Stumps should be cut as low to the ground as practical.

**Clearing Around Pole Locations** - A radius of five feet shall be cleared to provide a safe work area free of obstruction from vegetation around each pole location.

**Herbicide Application** – Herbicide applications shall be done in accordance with all Federal, State, and local laws. Contractors shall obtain 100% coverage and at least 95% control of all targeted woody plants.

**Tree Growth Regulator** – Trees designated for Tree Growth Regulators (TGR) shall be treated with an approved product in accordance with the label instructions.

### **Reporting Accuracy Audit**

**Number of trees trimmed** – Record timesheet data. Count the number of trees trimmed by a crew and record on audit sheet.

**Number of trees removed** – Record timesheet data. Count the number of trees removed by a crew and record on audit sheet.

**Footage/Units/Acres Re-cleared** - Record timesheet data. Field count the work completed by a crew.

**Footage/Units/Acres Ground Sprayed** - Record timesheet data. Field count the work completed by a crew.

### **Non-KPI Audit Items**

**Truck Appearance / ID** - Name of contractor clearly displayed with DOT numbers properly displayed. No personal bumper stickers. No long-standing, visible spills.

**Number of Working Saws** – Determined per contract specifications based on type of crew. These saws start and idle without assistance and have a maintained bar and chain.

**R/W Equipment/Chipper** - The proper vehicle, mower, or trimmer unit shall be used based on work location and tree/brush conditions. Chipper starts when key is turned on. Chips are of small size (2"-6"), and not stringy. Brush feeds correctly into chipper and chute deposits chips as directed.

**Crew Properly Equipped** –Each crew shall be equipped according to AEP contract specifications. Crews shall have all necessary tools, on a daily basis, to complete



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assigned work productively. For example; ropes, saddles, saws, pruner poles, herbicide sprayer, etc...

**Herbicide Equipment** - Each crew shall have all necessary tools, sprayers and product to ensure safe, productive herbicide applications. Equipment must be in good working condition. All crews shall have all necessary PPE, sprayers etc. to apply according to label instructions.

**AEP Guidelines** - A complete, legible and current set of the AEP Forestry Guidelines and clearance specs is kept in the vehicle (English or Spanish).

**Professional Appearance** - All contract employees will conduct themselves and dress themselves in a manner that positively represents AEP. If required by AEP contract specifications, contract employees must be wearing contractor uniform (i.e. appropriate color T-shirt). Crew must be neat in personal appearance - no excessive holes in clothes and facial hair neat in appearance.

**Manpower Utilization** - All contract employees and equipment shall be used in a fashion that is conducive to maintaining safe work practices and production goals. Look to see if crews are working in efficient manner (i.e. standing around doing nothing, trees that should be treated with herbicide should not be cut then sprayed). Everyone on a crew must be working as a team. If workflow is disjointed with no organization, it is unacceptable. A job briefing should be held each morning to ensure that everyone knows their responsibilities and can perform their tasks in a safe and productive manner.

**Customer Relations** - All contractors will respect the needs and concerns of the customer or landowner. Demonstrate, on an ongoing basis, effective, courteous communication with AEP customers (both internal and external) and landowners and the general public.

**Tree Knowledge** - All members of a crew shall be able to identify and distinguish growth characteristics of trees common to their geographical work area. Ask crews to identify trees in their surrounding area.

**Planning** - The crew should work in a systematic and organized fashion on a daily basis (i.e. not skipping around). The crew supervisor should have a plan for the day and be prepared to discuss that plan with the property owner and any utility employee. It is the responsibility of each crew member to inform their supervisor of any equipment needs that may stand in the way of production or safety.

**Use of Forms** - Forms such as time sheets and production logs, herbicide records, refusal forms, removal cards etc. are filled out completely and accurately and kept up-to-date with all important information. Items such as tree count can be written in daily dairies before being transferred to the correct form; however they must be in a coherent and ordered format.

### Sample Audit Form

#### AEP FORESTRY CONTRACT (KPI) CREW AUDITS

No. \_\_\_\_\_

Audit Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Audit Quarter: 1 2 3 4 (circle one) Operating Co.: \_\_\_\_\_  
 Auditor Name: \_\_\_\_\_ State: \_\_\_\_\_  
 Crew Number: \_\_\_\_\_ District: \_\_\_\_\_ Forestry Region Number: \_\_\_\_\_  
 Circuit #: \_\_\_\_\_ Foreman/ General Foreman: \_\_\_\_\_  
 Circuit Name: \_\_\_\_\_ Pole Number: \_\_\_\_\_

#### Forestry Contract Crew Safety (KPI) Audit CHECK ONE: PASS FAIL

- Failure ratings for any single item will result in failure of this audit.
- Failure must be documented in comments fields and will require random periodic follow up observation.

|  | PASS                     | FAIL                     | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Personal Protective Equipment-<br>Shall be worn as required. Includes but not limited to hard hats, safety glasses, ear protection, proper footwear. | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 Property Maintained Safety Equipment-<br>Fully stocked, removable first aid kit, fire extinguisher and wheel chocks.                                 | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Traffic Control Devices-<br>Approved and placed in accordance with applicable State and Federal regulations.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 4 Proper Fall Protection Procedures-<br>All climbing practices must be in accordance with OSHA and ANSI Z -133 standards.                              | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 5 Properly Barricade Work Areas-<br>Barricade material available and used in accordance with safety rules.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 6 Properly Maintain and Store Work Tools   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 7 Follow Proper Approach Distances-<br>Follow OSHA 1910.269 minimum clearances for AC Live Work Minimum Approach Distances.                            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Acceptable/Unacceptable on items below

- An Unacceptable ratings may result in failure of this audit dependent on magnitude and frequency of the violation.
- Any item found to be Unacceptable must be documented in the comments fields and will require random, periodic follow up observation.

|  | ACCEPTABLE               | UNACCEPTABLE             | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Hazardous material properly stored, labeled and documented | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 MSDS and Herbicide Label information available             | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Jobsite Housekeeping                                       | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Forestry Clearance (KPI) Audit CHECK ONE: PASS FAIL

| Pass / Fail         | PASS                     | FAIL                     | COMMENTS |
|---------------------|--------------------------|--------------------------|----------|
| Conductor Clearance | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Danger Trees        | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| ROW Width           | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Forestry Work Quality (KPI) Audits CHECK ONE: PASS FAIL

|                       | PASS                     | FAIL                     |                       | PASS                     | FAIL                     |                        | PASS                     | FAIL                     | COMMENTS |
|-----------------------|--------------------------|--------------------------|-----------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------|
| Collar Cuts           | <input type="checkbox"/> | <input type="checkbox"/> | Stump Height          | <input type="checkbox"/> | <input type="checkbox"/> | Peels/Tears            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Directional Pruning   | <input type="checkbox"/> | <input type="checkbox"/> | Hangers               | <input type="checkbox"/> | <input type="checkbox"/> | Cleanup/Brush Disposal | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Drop Crotch Selection | <input type="checkbox"/> | <input type="checkbox"/> | Clearing around poles | <input type="checkbox"/> | <input type="checkbox"/> | Regard for property    | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Reporting Accuracy (KPI) Audit

| Week ending date: ____/____/____                                     | Timesheet Data |       | Audit Data |       | Variance |       |
|--|----------------|-------|------------|-------|----------|-------|
|  | Cap            | O&M   | Cap        | O&M   | Cap      | O&M   |
| Number of trees trimmed  | _____          | _____ | _____      | _____ | _____    | _____ |
| Number of trees removed  | _____          | _____ | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acres Re-cleared                                     | _____          | _____ | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acres Ground Sprayed                                 | _____          | _____ | _____      | _____ | _____    | _____ |
| YES NO<br>Widening <input type="checkbox"/> <input type="checkbox"/> |                |       |            |       |          |       |

#### Non - KPI Crew Audit Items

|                        | PASS                     | FAIL                     |                         | PASS                     | FAIL                     |                        | PASS                     | FAIL                     |                | PASS                     | FAIL                     |
|------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------------|--------------------------|--------------------------|
| Equipment & Personnel  | <input type="checkbox"/> | <input type="checkbox"/> | Professional appearance | <input type="checkbox"/> | <input type="checkbox"/> | Crew Properly Equipped | <input type="checkbox"/> | <input type="checkbox"/> | Tree Knowledge | <input type="checkbox"/> | <input type="checkbox"/> |
| Truck Appearance/ID    | <input type="checkbox"/> | <input type="checkbox"/> | Manpower utilization    | <input type="checkbox"/> | <input type="checkbox"/> | Herbicide Equipment    | <input type="checkbox"/> | <input type="checkbox"/> | Planning       | <input type="checkbox"/> | <input type="checkbox"/> |
| Number of Working Saws | <input type="checkbox"/> | <input type="checkbox"/> | Customer Relations      | <input type="checkbox"/> | <input type="checkbox"/> | AEP Guidelines         | <input type="checkbox"/> | <input type="checkbox"/> | Use of Forms   | <input type="checkbox"/> | <input type="checkbox"/> |
| ROW Equipment/Chipper  | <input type="checkbox"/> | <input type="checkbox"/> |                         |                          |                          |                        |                          |                          |                |                          |                          |

ADDITIONAL COMMENTS: \_\_\_\_\_

AEP REPRESENTATIVE: \_\_\_\_\_ CONTRACTOR REPRESENTATIVE: \_\_\_\_\_

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# Transmission Vegetation Management Program (TVMP)


## Document # TVMD-001

Effective July 31, 2015



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### Transmission Vegetation Management Program (TVMP)

|   |                                       |   |         |              |
|---|---------------------------------------|---|---------|--------------|
|  | Responsible Engineer:<br>Lynn Hayward | Copyright 2015<br>American Electric Power | Rev. 14 | TVMD-001     |
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## Review Cycle

| Version | Description                                | Review Cycle | Retention Period | Review Date |
|---------|--|--------------|------------------|-------------|
| 1       | Reviewed with Changes to Ver. 0.           | Annual       | 3 Yrs            | 01/16/2006  |
| 2       | Reviewed with Changes to Ver. 1 and 2.     | Annual       | 3 Yrs            | 03/12/2007  |
| 5       | Reviewed with Changes to Ver. 3, 4, and 5. | Annual       | 3 Yrs            | 05/06/2008  |
| 8       | Reviewed with Changes to Ver. 6.           | Annual       | 5 Yrs            | 05/26/2009  |
| 9       | Reviewed with Changes to Ver. 8.           | Annual       | 5 Yrs            | 07/27/2010  |
| 10      | Reviewed with Changes to Ver. 9.           | Annual       | 5 Yrs            | 07/21/2011  |
| 11      | Reviewed with Changes to Ver. 10.          | Annual       | 5 Yrs            | 07/12/2012  |
| 12      | Reviewed with Changes to Ver. 11.          | Annual       | 5 Yrs            | 07/15/2013  |
| 13      | Reviewed with Changes to Ver. 12.          | Annual       | 5 Yrs            | 07/18/2014  |
| 14      | Reviewed with Changes to Ver. 13           | Annual       | 5 Yrs            | 07/17/2015  |

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## Revision History

| Version | Description  | Prepared By                          | Reviewed By | Approved By   | Effective Date |
|---------|--|--------------------------------------|-------------|---|----------------|
| 1       | Added Appendixes A and B.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 01/16/2006     |
| 2       | Added Appendix C.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 10/02/2006     |
| 3       | Added Revision History.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 03/12/2007     |
| 3       | Revised Appendix C from<br>Version 2. Clarified video<br>text associated with aerial<br>patrols, page 8.   | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 03/22/2007     |
| 4       | Revised Maintenance<br>Clearances in Table I, page<br>11. Removed Appendix A<br>from Revision 0 and inserted<br>a new Appendix A. Removed<br>Appendix B from Revision 0<br>and renamed Appendix C<br>from Revision 0 to Appendix<br>B. | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 11/09/2007     |
| 5       | Revised Maintenance<br>Clearances text page 10.<br>Revised Appendix B.   | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 05/06/2008     |

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| Version | Description   | Prepared By   | Reviewed By   | Approved By   | Effective Date |
|---------|---|---|---|---|----------------|
| 6       | Added third level of review/approval. Added Internal Mailing list. Added Standard mapped to TVMP. Revised Contents and page numbers. Revised Maintenance Clearances, pages 13 and 14. Revised Imminent Threat, pages 10 and 11. Revised Appendix A. Added new Appendix C. Added new Appendix D. Added hyperlinks. | S .J. Reaves,<br>Forestry<br>Program<br>Coordinator I | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | D. R. Boezio,<br>Dir., Trans.<br>Asset<br>Engineering             | 06/15/2009     |
| 8       | Revised Version History. Revised Personnel Qualifications, Appendix D. Included References on Contents Page. Revised Subject Matter Experts (SMEs).   | S .J. Reaves,<br>Forestry<br>Program<br>Coordinator I | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | D. R. Boezio,<br>Dir.,<br>Transmission<br>Asset<br>Engineering    | 07/31/2009     |
| 9       | Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Landowner and Community Relations section to Land Owner Relationships and Environmental Sustainability. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved.   | D.K.<br>Killingsworth,<br>Engineer I                  | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering  | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 07/30/2010     |
| 10      | Reformatted Document to match Transmission Forum Model TVMP.  | D.K.<br>Killingsworth,<br>Engineer I                  | J. E. Momme,<br>Dir. Trans.<br>Line Projects<br>Engineering   | D. J. Recker,<br>Managing Dir.<br>Trans. Projects<br>Engineering  | 7/30/2011      |

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| Version | Description  | Prepared By  | Reviewed By  | Approved By   | Effective Date |
|---------|--|--|--|---|----------------|
| 11      | Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Land Owner Relationships and Environmental Sustainability to Land Owner Relationships and revised. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved. Removed Appendix C. Revised Personnel Qualifications. Revised New Construction Clearing. Added Document Team. | K. B. Patton,<br>Utility<br>Forester II            | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 7/31/2012      |
| 12      | Revised Document Team. Revised Subject Matter Experts (SMEs). Revised Appendix A Imminent Threat Communication and Procedures. Revised Appendix B Imminent Threat Communication. Revised Appendix C TVMP Internal Mailing List. Revised Forestry Patrol Procedures. Revised Imminent Threat Report Form.   | K. B. Patton,<br>System<br>Forestry<br>Coordinator | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 7/30/2013      |
| 13      | Revised Document Team. Revised Signature page. Updated References. Revised entire document to align with changes to NERC Standard FAC-003-3. Revised Personnel Directly Involved. Moved Right-of-Way Clearance Guidelines to Appendix A. Updated Appendix C: Subject Matter Experts. Revised Appendix D TVMP Internal Mailing List.  | Lynn<br>Hayward<br>Lead Engineer                   | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering      | 7/31/2014      |

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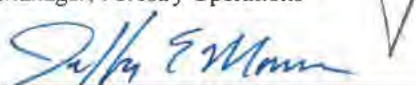
| Version | Description   | Prepared By                     | Reviewed By  | Approved By  | Effective Date |
|---------|---|---------------------------------|--|--|----------------|
| 14      | Revised Document Team. Updated References. Removed Imminent Threat Procedure. Updated MVCD distances. | Lynn Hayward<br>Senior Engineer | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | 7/31/2015      |



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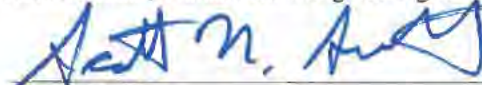
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## I. Referenced Specifications

| Title  | Date | Version            | Pages |
|--|------|--------------------|-------|
| <i>AEP Forestry Goals, Procedures &amp; Guidelines for Distribution and Transmission Line Clearance Operations</i>   | 2015 |                    |       |
| American Electric Power (AEP). <i>Transmission Right of Way Clearing and Maintenance: A Balanced Approach to Vegetation Management</i> . American Electric Power, Columbus, OH 43215.  | 2008 |                    |       |
| American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning)</i> . Tree Care Industry Association, Inc. Londonderry, NH 03053.   | 2008 | A300 (Part 1)-2008 | 1-13  |
| American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices Part 7 – Integrated Vegetation Management a. Electric Utility Rights-of-way</i> . Tree Care Industry Association, Inc. Londonderry, NH 03053. | 2012 | A300 (Part 7)-2012 | 1-15  |
| American National Standard Institute. <i>American National Standards for Arboriculture Operations – Safety Requirements</i> . International Society of Arboriculture (ISA). Champaign, IL 61826.   | 2012 | Z133.1-2012        | 1-71  |
| <i>AEP Guideline Accounting for Maximum Conductor and Sag Blowout for Vegetation Management</i>  | 2014 |                    |       |
| <i>AEP Transmission Forestry Aerial Patrol Procedures for NERC-Reportable Circuits</i>   | 2013 |                    |       |
| <i>AEP Risk Assessment &amp; Procedures</i>  | 2014 |                    |       |
| <i>TVMD-009 Imminent Thread Communication and Procedures</i>   | 2015 |                    |       |

## II. The Transmission Vegetation Management Program (TVMP)

### A. Scope

The American Electric Power (AEP) Transmission Vegetation Management Program (TVMP) has been developed and implemented to ensure compliance with the North American Electric Reliability Corporation (NERC) reliability standard FAC-003-3. This program is intended to maintain a reliable electric transmission system by using a defense-in-depth strategy to manage vegetation located on transmission rights-of-way (ROW) and minimize encroachments from vegetation located adjacent to the ROW, thus preventing the risk of those vegetation-related outages that could lead to Cascading.

This program applies to AEP's transmission and generation facilities as defined in FAC-003-3. Facilities referred to as NERC-applicable are:

- Transmission lines operated at 200 kV and above ( $\geq 200\text{kV}$ );
- Other lower-voltage transmission or generation lines that have been designated as an Interconnection Reliability Operating Limit (IROL);
- Each overhead transmission line identified above, located outside the fenced area of the switchyard, station or substation, and any portion of the span of the transmission line that is crossing the substation fence;
- Overhead generation lines that extend greater than one mile beyond the fenced area of the generating station switchyard to the point of interconnection with a transmission facility or do not have a clear line of sight, and are operated at 200 kV and above ( $\geq 200\text{kV}$ ).

AEP's Transmission Forestry Operations group manages and executes the program for vegetation along approximately 8,700 miles of NERC-applicable transmission rights-of-way in portions of eleven states. This is accomplished through the implementation and oversight of a comprehensive, systematic, vegetation management program.


### B. Vegetation Management Objectives

The TVMP is an integral part of providing for the safe, reliable operation of the AEP transmission system. The key measure of success is zero reportable vegetation-related outages on NERC-applicable facilities.

For NERC-applicable facilities, AEP's intent is to clear the right-of-way to the maximum appropriate width by removing all woody-stemmed vegetation within the right-of-way<sup>1</sup> and potential hazard trees.

AEP conducts inspections, aerial and as-needed ground inspections, and develops annual vegetation management work plans to ensure the program objective is achieved in the most efficient, environmentally sound, and economical manner practical.

<sup>1</sup>Upon completion of vegetation maintenance.

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AEP strives to manage its rights-of-way in accordance with its Environmental, Safety and Health (ES&H) Philosophy: “No aspect of operations is more important than the health and safety of people. Our customer’s needs are met in harmony with environmental protection.”

Additional considerations include:

- Minimizing adverse environmental impacts.
- Complying with laws and regulations.
- Achieving cost efficiency.
- Maintaining a positive relationship with landowners and the public.

### C. Definitions

**Cascading:** “The uncontrolled successive loss of system elements triggered by an incident at any location. Cascading results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.”<sup>2</sup>

**Hazard trees:** Those trees that are structurally unsound and could strike a target (such as electric facilities) when they fail.<sup>3</sup>

**Interconnection Reliability Operating Limit (IROL):** “A system Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Bulk Electric System.”<sup>2</sup>

**Inspector:** Individual assigned with the responsibility of evaluating clearances in the Transmission Right-of-Way and minimizing encroachments into the ROW from vegetation located adjacent to the ROW.

**Minimum Vegetation Clearance Distance (MVCD):** “The calculated minimum distance stated in feet (meters) to prevent flash-over between conductors and vegetation, for various altitudes and operating voltages.”<sup>2</sup>


**Remediation:** The evaluation of a point of interest, and if necessary, taking action to resolve the identified vegetative issues.

**Right-of-Way (ROW):** “The corridor of land under a transmission line(s) needed to operate the line(s). The width of the corridor is established by engineering or construction standards as documented in either construction documents, pre-2007 vegetation maintenance records, or by the blowout standard in effect when the line was built. The ROW width in no case exceeds the applicable Transmission Owner’s or applicable Generator Owner’s legal rights but may be less based on the aforementioned criteria.”<sup>2</sup>

**Sustained Outage:** “The deenergized condition of a transmission line resulting from a fault or disturbance following an unsuccessful automatic reclosing sequence and/or unsuccessful manual reclosing procedure.”<sup>2</sup>

<sup>2</sup>North American Electric Reliability Corporation, *Glossary of Terms Used in NERC Reliability Standards* (Atlanta, GA: North American Electric Reliability Corporation, 2014), accessed July 18, 2014, [http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf).

<sup>3</sup>American National Standard Institute, “Part 7 – Integrated Vegetation Management,” “a. Electric Utility Rights-of-way” in *for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices*, (Londonderry, NH: 2006), 58.

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**Vegetation Inspection:** “The systematic examination of vegetation conditions on a Right-of-Way and those vegetation conditions under the applicable Transmission Owner’s or applicable Generator Owner’s control that are likely to pose a hazard to the line(s) prior to the next planned maintenance or inspection.”<sup>4</sup>

**WECC Transfer Path:** The transmission paths monitored by the WECC (Western Electric Coordinating Council) regional Reliability coordinators.<sup>4</sup> Note: AEP does not operate in the WECC region.

### III. FAC-003-3 Requirements


#### A. Requirement 1 (Applicable Lines That are an Element of an IROL or Major WECC Transfer Path)

AEP maintains records of sustained outages from all causes. All outages determined to be caused by vegetation are investigated by appointed AEP employees, and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained. Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Entities or their designees. The supporting document AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system. The report lists vegetation-related outages by Regional Entities. The report lists the names of circuits where outages occurred; operated voltages; the date, time, and duration of the outage; and a description of the cause of the outage.

AEP conducts bi-annual vegetation inspections of all applicable facilities. During this inspection AEP inspects the vegetation-to-conductor clearances and identifies vegetation on and along transmission ROWs that could pose a reliability risk to the facility. Aerial patrols, except where the FAA or other ordinance prohibits flight, cover substantial portions of the transmission system to identify areas where remediation may be needed to prevent vegetation from interfering with circuit operation. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted.

A confirmed encroachment into the MVCD as identified in NERC Advisory FAC-003-3 Minimum Vegetation Clearance Distances (MVCD) May 14, 2015, observed in Real time during the inspection, is reported to the transmission forestry manager. Appropriate data and photographs are taken and submitted to the manager. These events are reported to the Regional Entity in accordance with NERC policy.

<sup>4</sup>North American Electric Reliability Corporation, Glossary of Terms Used in NERC Reliability Standards (Atlanta, GA: North American Electric Reliability Corporation, 2014), accessed July 18, 2014, [http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf).

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## B. Requirement 2 (Applicable Lines That are Not an Element of an IROL or Major WECC Transfer Path)

AEP maintains records of sustained outages from all causes. All outages determined to be caused by vegetation are investigated by appointed AEP employees, and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained. Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Entities or their designees. The supporting document AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system. The report lists vegetation-related outages by Regional Entities. The report lists the names of circuits where outages occurred; operated voltages; the date, time, and duration of the outage; and a description of the cause of the outage.

AEP conducts bi-annual vegetation inspections of all applicable facilities. During this inspection AEP inspects the vegetation-to-conductor clearances and identifies vegetation on and along transmission ROWs that could pose a reliability risk to the facility. Aerial patrols, except where the FAA or other ordinance prohibits flight, cover substantial portions of the transmission system to identify areas where remediation may be needed to prevent vegetation from interfering with circuit operation. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted.

A confirmed encroachment into the MVCD as shown in identified in NERC Advisory FAC-003-3 Minimum Vegetation Clearance Distances (MVCD) May 14, 2015, observed in real time during the inspection, is reported to the transmission forestry manager. Appropriate data and photographs are taken and submitted to the manager. These events are reported to the Regional Entity in accordance with NERC policy.

## C. Requirement 3 (Maintenance Strategy)


For NERC-applicable facilities, AEP's fundamental strategy is to clear the right-of-way to the maximum appropriate width by removing all woody-stemmed vegetation within the right-of-way<sup>5</sup> and potential hazard trees.

AEP considers conductor locations, the MVCD, and vegetation growth between maintenance activities when developing its maintenance plan. Maintenance does not occur on a rigid "cycle" basis; rather, the maintenance technique and schedule are driven by the condition of the vegetation observed during bi-annual inspections. Vegetation-to-conductor distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons other than qualified line-clearance arborists and qualified line-clearance arborist trainees (Columns A and C in Table 3: Transmission Line Clearance Guidelines in Appendix A on page 20).

AEP Transmission Forestry's goal is to convert the vegetative cover types on its transmission rights-of-way to low growing grass-forbs-herb covers that inhibit the germination, establishment, and growth of most incompatible vegetative species.

The AEP transmission vegetation management program emphasizes tree removal to promote long-term vegetation control and to minimize future maintenance expenditures. Additionally, AEP foresters and contractor personnel inspect for hazard trees during scheduled maintenance. Hazard trees are addressed on a case-by-case basis by the responsible forester.

<sup>5</sup>Upon completion of vegetation maintenance.

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Manual clearing is employed where the terrain is too steep or rough for mechanized equipment, where the vegetation is too tall for herbicide applications and aerial application is not possible, or where the immediate removal of vegetation is necessary. Contract employees use chainsaws or brush saws to selectively remove vegetation from the rights-of-way.

Mechanical clearing may be employed where terrain and access allow and where the vegetation is not too large for mechanical equipment to handle, where the vegetation is too tall for herbicide applications, where aerial application is not possible, or where the immediate removal of vegetation is necessary.

When tree removal or clearing is not practical or feasible, tree pruning may be employed. Fast-growing trees, where removal permission is not obtained, are pruned to yield greater clearance distances than slower-growing varieties. AEP Transmission Forestry may employ tree growth regulators (TGRs) to reduce the frequency and amount that trees must be pruned.

Mechanical pruning operations employ a variety of boom-mounted saws on vehicles capable of traversing the rights-of-way. Access, terrain, and tree heights influence the type of equipment used. When applicable, rights-of-way may be maintained with an aerial saw. These rights-of-way possess one or more of the following characteristics: steep, mountainous terrain; limited access; or prohibitive costs to prune by conventional means.

Manual and mechanical clearing without follow-up herbicide applications does not control the root systems of incompatible vegetation and could increase the future maintenance requirements in the areas where it is employed. Aerial, high-volume foliar, low-volume foliar, ultra-low-volume foliar, cut stubble, stump, basal, and granular applications may be employed. United States EPA-registered herbicides are applied by licensed pesticide application businesses contracted by AEP.

#### **D. Requirement 4 (Vegetation Condition That is Likely to Cause a Fault at any Moment)**

A vegetation condition that is likely to cause a fault at any moment is considered an imminent threat to the reliable operation of a NERC- or an IROL-applicable facility. An imminent threat must be mitigated within 24 hours of confirmation. This condition may be characterized by either vegetation or hazard trees; that are approaching or threatening to approach the MVCD to the conductor. For locations found during patrols, routine work, or other observations, where a potential imminent threat condition is confirmed by transmission forestry, an immediate notification<sup>6</sup> to the local dispatching authority is required. This will allow for mitigating actions, such as removal of the vegetation, temporary reduction in circuit rating, or switching the circuit out of service, until the imminent threat is relieved.

Refer to TVMD-009 *Imminent Thread Communication and Procedures*.

<sup>6</sup>NOPR RM-12-4-000, page 50, #85 (10/18/2012)—NERC explains that the obligation to notify without intentional delay generally “can be understood to include an immediate (within 1 hour of observation) communication notwithstanding a safety issue to personnel, other immediate priority maintenance functions to ensure reliability or system stability, or communication equipment failures that precludes immediate communication.”

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## **E. Requirement 5 (Vegetation Constraint May Lead to an Encroachment Into the MVCD)**

Restrictions on scheduled work may include refusals by property owners to access or perform work, orders to stop work by local authorities, or restrictions by federal and/or state agencies. The maintenance strategy in section III.C defines the expected extent of clearing. If the clearance specifications cannot be achieved at the time of scheduled maintenance, AEP shall implement corrective action. This corrective action may include more-frequent maintenance or more-frequent inspections to monitor the risk to the system and is documented in AEP's restriction log.

AEP has implemented procedures for achieving sufficient clearances in those locations on its rights-of-way where AEP is restricted from attaining the clearance listed in Column C of Table 3: Transmission Line Clearance Guidelines to prevent encroachment into the MVCD. This is described in AEP's Right-of-Way Clearance Guidelines; see "Appendix A: Right-of-Way Clearance Guidelines," which starts on page 19.

During bi-annual patrols, AEP monitors locations where these clearances cannot be achieved and determines if more-frequent maintenance is required in order to assure the safe, reliable operation of the circuit.

## **F. Requirement 6 (Annual Inspections)**


### **1. Vegetation Inspections and Patrols**

Aerial patrols are conducted to identify areas of the transmission system where remediation may be needed to prevent vegetation from interfering with circuit operation except where the FAA or other ordinance prohibits flight. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted. Aerial and ground patrol inspections aid in the development of the vegetation maintenance work plan.

### **2. Forestry Patrol Procedures**

#### **a. Patrol of the AEP Transmission System**

AEP shall perform bi-annual inspections on 100% of all transmission facilities subject to FAC-003-3. Patrols provide Transmission Foresters a view of right-of-way conditions and the effectiveness of the vegetation management program.

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### b. Patrol Schedule

Patrol schedules are summarized in the table below.

**Table 1: Patrol Schedule**

|             | Fall Patrol  | Spring Patrol  |
|-------------|--|--|
| Patrol      | <ul style="list-style-type: none"> <li>Aug 15–Nov 15.</li> </ul>   | <ul style="list-style-type: none"> <li>By May 21.</li> <li>In areas at higher elevation or with later vegetation emergence, this date may be extended to June 4.</li> </ul>  |
| Remediation | <ul style="list-style-type: none"> <li>A1 Condition: addressed within 24 hours of confirmation.</li> <li>P1 Condition: complete by March 1 of the following year.</li> </ul> | <ul style="list-style-type: none"> <li>A1 Condition: addressed within 24 hours of confirmation.</li> <li>P1 Condition: complete by May 30. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 14.</li> </ul> |

### 3. Exceptions

Aerial patrols may be interrupted by force majeure, such as severe storms or floods. If patrols are interrupted, the time extension to complete the inspection shall not exceed the duration of the time AEP was prevented from performing the vegetation inspection.

## G. Requirement 7 (Annual Work Plan)


AEP shall complete 100% of its annual vegetation work plan miles on NERC-applicable facilities to ensure no vegetation encroachments occur within the MVCD. Modifications to the work plan in response to changing conditions or to findings from vegetation inspections may be made (provided they do not allow encroachment of vegetation into the MVCD) and must be documented. The work plan starts on January 1 and ends on December 31.

AEP has a process for documenting the vegetation management activities to ensure the following:

- Scheduled work is properly identified and listed in the work plan.
- Adjustments to the work plan are properly noted and recorded. This plan may be modified for the following reasons:
  - Change in expected growth rate/environmental factors
  - Circumstances that are beyond the control of an applicable Transmission Owner or applicable Generator Owner
  - Rescheduling work between growing seasons
  - Crew or contractor availability/mutual assistance agreements
  - Identified unanticipated high-priority work
  - Weather conditions/accessibility
  - Permitting delays

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- Land ownership changes/change in land use by the landowner
- Emerging technologies
- Timesheets and maintenance methods employed are noted for each type of work on each project listed in the work plan.
- Work quality inspections are performed and work completed meets company specifications.

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## Appendix A: Right-of-Way Clearance Guidelines

When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width<sup>7</sup>, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall. Actively maintained trees that could be considered a crop such as in nurseries or orchards will be maintained in accordance with the clearance table guidelines specified in Table 2: Clearance Table Guidelines below. Table 3: Transmission Line Clearance Guidelines on page 20 shows Transmission Line Clearance Guidelines.

**Table 2: Clearance Table Guidelines**

| <b>Right-of-Way with No Restrictions</b>   | <b>Right-of-Way With Restrictions</b>  |
|--|--|
| <b>&lt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   | <b>&lt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   |
| <ol style="list-style-type: none"> <li>1. Remove all woody stemmed vegetation.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol>                 | <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column C, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> |
| <b>&gt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   | <b>&gt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   |
| <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column B, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> | <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column C, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> |

<sup>7</sup>Upon completion of vegetation maintenance.

**Table 3: Transmission Line Clearance Guidelines<sup>8</sup>**

| Column A                                   | Column B  | Column C  | Column D  | Column E  | MVCD <sup>9</sup>                    |
|--|---|---|---|---|--------------------------------------|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance (with restrictions) Desired Clearance between Conductor &amp; Vegetation</b> | <b>ANSI<sup>10</sup> Clearance between Conductor &amp; Vegetation</b> | <b>AEP Clearance between Conductor &amp; Vegetation</b> | <b>Over sea level up to 5,000 ft</b> |
| 765kV                                      | 45'   | 35'00"  | 27'04"  | 14'00"  | 12'04"                               |
| 500kV                                      | 45'   | 26'08"  | 19'00"  | 10'00"  | 7'06"                                |
| 345kV                                      | 30'   | 20'05"  | 13'02"  | 7'06"   | 4'07"                                |
| 230kV                                      | 30'   | 16'05"  | 7'11"   | 5'02"   | 4'04"                                |
| 161kV <sup>11</sup>                        | 25'   | 14'00"  | 6'00"   | 3'05"   | 3'00"                                |
| 138kV <sup>11</sup>                        | 25'   | 13'02"  | 5'02"   | 2'11"   | 2'05"                                |
| 115kV <sup>11</sup>                        | 25'   | 12'04"  | 4'06"   | 2'06"   | 2'01"                                |
| 88kV <sup>11</sup>                         | 25'   | 12'04"  | 4'06"   | 2'06"   | 1'07"                                |
| 69kV <sup>11</sup>                         | 25'   | 10'09"  | 4'02"   | 2'06"   | 1'02"                                |

<sup>8</sup>Conductor at maximum sag and movement.

<sup>9</sup>The distances in this Table are the minimums required by FAC-003-3 Industry Advisory Minimum Vegetation Clearance Distances (MVCD) May 14, 2015 to prevent Flash-over; however, prudent vegetation maintenance practices dictate that substantially greater distances will be achieved at time of vegetation maintenance.

<sup>10</sup>ANSI Z133-2012.

<sup>11</sup>Such lines are applicable to this standard only if Planning Coordinator has determined such per FAC-014.

## Appendix B: Subject Matter Experts

| FAC-003-3 Requirement | Description   | Preparer   | SME   | Reviewer   |
|-----------------------|---|--|---|--|
| R1.-M1.               | Manage vegetation to prevent encroachment into MVCD for IROL lines                        | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a>  | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpattson@aep.com">kbpattson@aep.com</a>   | J.E. Momme<br>Director, Trans.<br>Line Engineering<br>614-552-1180<br><a href="mailto:jemomme@aep.com">jemomme@aep.com</a> |
| R2.-M2.               | Manage vegetation to prevent encroachment into MVCD for non- IROL lines                   | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a>  | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpattson@aep.com">kbpattson@aep.com</a>   |  |
| R3.-M3.               | Documented maintenance strategies   | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a><br><br>Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpattson@aep.com">kbpattson@aep.com</a> | E. K. Engdahl,<br>Staff Engineer<br>614-552-1676<br><a href="mailto:ekengdahl@aep.com">ekengdahl@aep.com</a><br><br>Jacqueline M. Rich<br>Engineer<br>614-552-1391<br><a href="mailto:jmrich@aep.com">jmrich@aep.com</a><br><br>Barrett Thomas<br>Principal Engineer<br>918-599-2386<br><a href="mailto:bathomas@aep.com">bathomas@aep.com</a><br><br>R. J. Whitaker<br>Senior Engineer<br>540-562-7054<br><a href="mailto:rjwhitaker@aep.com">rjwhitaker@aep.com</a> |  |
| R4.-M4.               | Notify the control center holding switching authority of a confirmed vegetation condition | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpattson@aep.com">kbpattson@aep.com</a>  | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a>   |  |

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| <b>FAC-003-3 Requirement</b> | <b>Description</b>  | <b>Preparer</b>   | <b>SME</b>  | <b>Reviewer</b> |
|------------------------------|---|---|---|-----------------|
| R5.-M5.                      | Constrained from performing vegetation work                   | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a> | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a> |                 |
| R6.-M6.                      | Complete inspections on 100% of applicable transmission lines | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a> | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a> |                 |
| R7.-M7.                      | Complete 100% of annual plan                                  | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a> | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a> |                 |



## Appendix C: TVMP Internal Mailing List<sup>12</sup>

| Name/E-mail Group     | Department                          | Title                                 | Role |
|-----------------------|-------------------------------------|---------------------------------------|------|
| Smith, Scott N        | Transmission Strat & Bus Dev        | SVP Trans Grid Dev & Portfolio Svcs   | A    |
| Moore, Scott P        | Trans Eng & Proj Svcs               | VP Trans Eng & Proj Svcs              | A    |
| Kirkpatrick, Thomas L | Customer and Distr Services         | VP Cust Svcs, Mktg & Dist Svcs        | A    |
| Crowder, J Calvin     | Electric Transmission Texas         | Exec. Dir. Elec. Trans TX             | A    |
| Recker, Daniel J      | Transmission Engineering            | Mng Dir Trans Projects Engrg          | A    |
| Momme, Jeffrey E      | Transmission Line Engineering       | Dir. Trans. Line Projects Engineering | A    |
| Johnson, Paul B       | Transmission Operations             | Mng. Dir. Transmission Ops            | A    |
| Fecho, Thomas R       | New Gen./Major Proj Oversight       | Mgr-Gen & Elec Intrcnctn Plnng        | C    |
| Parrish, T. David     | Trans Line Standards                | Mgr. Trans. Line Design Standards     | C    |
| Wagner, Robert C      | Transmission Field Services         | VP Trans Field Services               | I    |
| TRELCOMP              | Transmission Reliability Compliance | Group Mailing List                    | I    |
| Schaffer, Thomas O    | Trans Line Engrg Right-of-Way       | Mgr Trans Right of Way                | I    |
| Curiel III, Nicolas   | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Bergeret, Rene J      | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Jones, Paul R         | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Merrifield, Ned O     | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Smith, Matthew J      | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Nguyen, Thuy P        | Trans Tech Svcs Wrk Plan            | Mgr. Trans Work Planning              | I    |
| Rappach, James A      | GET ENG VP Eng Services             | Mgr-Regional Eng Svcs                 | I    |
| Fuller, Terry A       | New Gen./Major Proj Oversight       | Principal Engineer                    | I    |
| Daniels, David        | GET ENG VP Eng Services             | Principal Engineer                    | I    |
| Carlson, John P       | ESH Management Systems              | Mgr ESH Mngmnt System                 | I    |
| Liebrecht, John J     | Trans Tech Svcs Wrk Plan Line       | Supv Planning & Engineering           | I    |
| Ordner, Lance         | Trans Tech Svcs Wrk Plan Line       | Senior Engineer                       | I    |
| Cotant, Ronald D      | Trans Tech Svcs Wrk Plan Line       | Senior Engineer                       | I    |
| Robinson, Kip         | Trans Tech Svcs Wrk Plan Line       | Senior Engineer                       | I    |

<sup>12</sup> Role definitions: A—Accountable; C—Consult; I—Informed; R—Responsible; S—Support

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| <b>Name/E-mail Group</b> | <b>Department</b>                        | <b>Title</b>                   | <b>Role</b> |
|--------------------------|--|--------------------------------|-------------|
| Martin, Amanda           | Trans Tech Svcs Wrk Plan Line            | Assoc Engineering Technologist | I           |
| York, Leo                | Electric Transmission Texas              | Mgr Transmission Bus Dev Sr    | I           |
| Macias, Michael M        | Electric Transmission Texas              | ETT Technical Project Lead Sr  | I           |
| Garrett, James G         | Trans Reliability Compliance             | Trans Relblty Complc Spec      | R           |
| Shepard, Darren A.       | Distribution Services                    | Dir Meter Sys & Repair Svcs    | A           |
| Sherry, Walter A         | System Forestry                          | Mgr. Forestry Operations       | R           |
| T Forestry               | Trans. Foresters and Forestry Management | Group Mailing List             | R           |
| Schnell, Edward G        | Transmission Dispatch                    | Dir. Transmission Dispatching  | R           |
| Kunkel, Dennis K         | Trans Dispatch Corpus Christi            | Mgr. Transmission Dispatching  | R           |
| Milford, David L         | Trans Dispatch Shreveport                | Mgr. Transmission Dispatching  | R           |
| Moses, Clinton D         | Trans Dispatch Columbus                  | Mgr. Transmission Dispatching  | R           |
| Guill, Darrell E         | Trans Dispatch Roanoke                   | Mgr. Transmission Dispatching  | R           |
| Wagner, Billy W          | Roanoke Dist Dispatch                    | Mgr. Distribution Dispatching  | R           |
| Ivinkas, Robert J        | AEP Ohio Distr Dispatch                  | Mgr. Distribution Dispatching  | R           |
| Sturtz, Robert D         | Ft Wayne Distrib Dispatch                | Mgr. Distribution Dispatching  | R           |
| Apple, Dwayne L          | PSO Distribution Dispatch                | Mgr. Distribution Dispatching  | R           |
| Guin, Gary A             | SWEPSCO Distrib Dispatch                 | Mgr. Distribution Dispatching  | R           |
| Dunlap IV, Hauge         | C Christi Distrib Dispatch               | Mgr. Distribution Dispatching  | R           |
| Williams, Michael A      | Kentucky Distribution Dispatch           | Distribution Dispatch Supv.    | R           |
| Patton, Kevin B          | System Forestry                          | Senior Business Analyst        | R           |
| Engdahl, Eric K          | Trans Line Engrg Design Standards        | Staff Engineer                 | R           |
| Rich, Jacqueline M       | Trans Line Eng Gahanna-Roanoke           | Engineer                       | R           |
| Thomas, Barret A         | Trans Line Engrg Tulsa Group             | Principal Engineer             | R           |
| Whitaker, Robert         | Trans Line Eng Gahanna-Roanoke           | Senior Engineer                | R           |
| Hayward, Lynn E          | Transmission Line Engrg                  | Senior Engineer                | R           |
| Krause, Stan A           | Trans Line Engrg Tulsa Group             | Mgr. Trans. Line Engineering   | S           |
| Grawe, Rob               | Trans Line Eng Gahanna                   | Mgr. Trans. Line Engineering   | S           |
| Bledsoe, James K.        | Trans Line Eng Roanoke                   | Mgr. Trans. Line Engineering   | S           |

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| <b>Name/E-mail Group</b> | <b>Department</b>                     | <b>Title</b>                  | <b>Role</b> |
|--------------------------|---------------------------------------|-------------------------------|-------------|
| TLPE All                 | Transmission Line Project Engineering | Group Mailing List            | S           |
| TCI PM ALL               | Transmission Project Mgt. & Control   | Group Mailing List            | S           |
| Hostetler, Timothy A     | Transmission Operations Engineering   | Mgr. Operations Engineering   | S           |
| Sauriol, Dennis R        | Transmission Real Time Operations     | Mgr. Trans Ops. Reliability   | S           |
| Matthews, Charles D      | Transmission Field Services           | Mng. Dir. Transmission West   | S           |
| Pugh, Archie D           | Transmission Field Services           | Mng. Dir. Transmission East   | S           |
| Boezio, Daniel R         | Transmission Field Services           | Dir Trans Region Tech Support | S           |
| Cook, James K            | Trans Field Construction East         | Dir Trans Region Construction | S           |
| McCord, Natalie J        | Trans Field Construction West         | Dir Trans Region Construction | S           |
| Workman, Mark A          | Trans Construction Mgmt               | Mng Dir Trans Constr Mgmt     | S           |
| Colvin, Kenneth A        | Trans Const Mgmt – Gahanna            | Mgr – Trans Construction      | S           |
| Galyean, Rue F           | Trans Construction Mgmt – Tulsa       | Mgr – Trans Construction      | S           |
| Emberger, Joseph H       | Trans Const Mgmt – Gahanna            | Mgr – Trans Construction      | S           |



# Contractor Guide for Distribution Events Scorecard System



## General Information

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- If you do not have a user name and password to log into the online portal, you will need to request them from Vicki Conner.
- If a company is not available in the system, you will need to request that it be added by Vicki Conner.
- If you have any questions or require technical support, contact Vicki Conner at [vaconner@aep.com](mailto:vaconner@aep.com) or to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com).



# Log In to the Web Application

Go to <https://terraineterraine.net/AEPScoreCard/welcome.htm>

**AMERICAN ELECTRIC POWER** Distribution Events Scorecard System

User Name : jpotterfield@terraineterraine.com  
Password : .....  
 Remember Me  
**Sign-In**

Click here to have your browser remember your login information

Click here to sign in

Log in using the User Name and Password provided to you by admin

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Powered By TERRAINE

# Add Contractor Hour Data

From the **HOME** screen, go to **CONTRACTOR HOURS DATA INPUT GRID**.

Go here to enter contractor hours



# Add Contractor Hour Data

You can add data as a single input record, multiple input records, or as an annual total entered ONCE PER YEAR.

The screenshot shows the 'Distribution Events Scorecard System' interface. At the top left is the AEP logo and the text 'AMERICAN ELECTRIC POWER'. A navigation bar contains links for HOME, CONTRACTOR HOURS DATA INPUT GRID, DATA Q&A APPROVAL, CONTRACTOR HOURS, EVENTS, REPORTS, and ANNUAL CONTRACTOR DATA. A 'Logout' link is in the top right. The main content area is divided into 'Monthly Data' and 'Annual Data' sections. The 'Monthly Data' section has two buttons: '+Add a Single Input Record' and 'Use Wizard to Create Multiple Input Records'. The 'Annual Data' section has a '+Add Annual Data' button. A note below the buttons states: 'Note: Annual Data is to be entered ONCE PER YEAR, and is to be include total hours, number of incidents, number of severity days, incident rate, and severity rate for the company as a whole, not just AEP projects'.



# Add a Single Input Record

AMERICAN ELECTRIC POWER

Log out

HOME CONTRACTOR HOURS DATA INPUT GRID DATA Q&A/PROVAL CONTRACTOR HOURS EVENTS REPORTS ANNUAL CONTRACTOR DATA

Distribution Events Scorecard System

Monthly Data

+Add a Single Input Record

Use Wizard to Create Multiple Input Records

Annual Data

+Add Annual Data

Click here to begin

**Add a Single Input Record**

Year: 2013 Month: January Entered Date: 01/02/13

Operating Company Contractors Function Entered By: jporterfield@terrine.com

Hours: Man Hours

\* Fields are mandatory.

Save Cancel

Press ESC, Click on X (right-top) or Click Out from the popup to close the popup.

# Add a Single Input Record

Select a year and month.

**Note:** The third dropdown will automatically populate with the final day of the chosen month.

Use these dropdowns to select an Operating Company, Contractor (only your Contractor name will be available), and Function.

The screenshot shows a web form titled "Add a Single Input Record". It contains several fields and controls:

- Year:** A dropdown menu with "2013" selected.
- Month:** A dropdown menu with "January" selected.
- Operating Company:** A dropdown menu.
- Contractors:** A dropdown menu.
- Function:** A dropdown menu.
- Hours:** A text input field with "Man Hours" written inside.
- Entered Date:** A text input field with "01/02/13" entered.
- Entered By:** A text input field with "jporterfield@terraire.com" entered.
- Buttons:** "Save" and "Cancel" buttons.
- Footer:** "Press ESC (Click on X (right-top)) or Click Out from..."

Annotations on the form:

- A red box points to the Year and Month dropdowns with the text: "Select a year and month."
- A red box points to the Operating Company, Contractors, and Function dropdowns with the text: "Use these dropdowns to select an Operating Company, Contractor (only your Contractor name will be available), and Function."
- A red box points to the Hours field with the text: "Enter Man Hours (numerical value only) here."
- A red box points to the Save button with the text: "After filling out all required fields, click here to Save."
- A red box points to the Entered Date and Entered By fields with the text: "These fields are populated automatically and are not editable."

After filling out all required fields, click here to Save.

Enter Man Hours (numerical value only) here.

These fields are populated automatically and are not editable.

# Add a Single Input Record

Click here to add another record

Once you have selected a record (see below), you can use these buttons to copy or delete the record.

Click here to select a record

The screenshot shows a web application interface for managing contractor data. At the top, there is a header labeled "CONTRACTOR DATA". Below the header is a table with the following columns: "Date", "Operating Company", "Contractor", "Function", "Hours", and "Entered By". The table contains one record with the following values: "1/31/2013", "Appalachian Power", "ABB, Inc", "Transmission Forestry", "5", and "jporterfield@terrine.com".

Below the table, there are several buttons: "+ Add Another Input Record", "Copy Selected", and "- Delete Selected". To the right of the table, there is a "Save to Database" button. At the bottom right, there is a "Total: 5.00" display.

Red boxes and arrows highlight the following elements:

- The "+ Add Another Input Record" button.
- The "Date" field, which contains "1/31/2013".
- The "Hours" field, which contains "5".
- The "Save to Database" button.
- The "Total: 5.00" display.

Add/update man hours here. No changes will be saved until you Save to Database.

Click here to save all records to the database.  
**Note:** None of the new records will be saved to the database until you click this button.

Click here to refresh total hours as you add / copy / delete records.

# Add Multiple Input Records

# Add Multiple Input Records

Select a year and month.  
**Note:** The third dropdown will automatically populate with the final day of the chosen month.

Use the dropdown to select an Operating Company.

Check this box.

**Add Multiple Input Records Wizard**

Year: 2013 | Month: January | 1/31/2013

Select Operating Company: [Dropdown]

Contractor: Antriff's Lawn Sensations

| Function   |
|--|
| <input type="checkbox"/> Distribution Forestry         |
| <input type="checkbox"/> Distribution Line - Primary   |
| <input type="checkbox"/> Distribution Line - Specialty |
| <input type="checkbox"/> Transmission Forestry         |

\* Fields are mandatory.

**Create Input Records** | Cancel

Press ESC, Click on X (right-top) or Click Out from the popup to close the popup.

The input wizard will create 6 new input records, which you will be able to edit before saving to the database.

Proceed? | **OK** | Cancel

Select function(s) here. You can select more than one.

When finished, click here to create the records and add man hours.

After clicking to create input records, you will receive this message. Click OK to proceed.

# Add Multiple Input Records

Click here to add another record

Once you have selected a record (see below), you can use these buttons to copy or delete the record.

| Date  | Operating Company | Contractor                | Function                      | Hours | Entered By           | Enter Date |
|---|-------------------|---------------------------|-------------------------------|-------|----------------------|------------|
| <input type="checkbox"/> 1/31/2013            | Appalachian Power | Antritt's Lawn Sensations | Distribution Forestry         |       | jporte0519@yahoo.com | 01/14      |
| <input type="checkbox"/> 1/31/2013            | Appalachian Power | Antritt's Lawn Sensations | Distribution Line - Primary   |       | jporte0519@yahoo.com | 01/14      |
| <input type="checkbox"/> 1/31/2013            | Appalachian Power | Antritt's Lawn Sensations | Distribution Line - Specialty |       | jporte0519@yahoo.com | 01/14      |
| <input checked="" type="checkbox"/> 1/31/2013 | Appalachian Power | Antritt's Lawn Sensations | Transmission Forestry         |       | jporte0519@yahoo.com | 01/14      |

+ Add Another Input Record   Copy Selected   - Delete Selected

Save to Database

Total: 0.00

Click here to select a record

Add/update man hours here. No changes will be saved until you Save to Database.

Click here to save all records to the database.  
**Note:** None of the new records will be saved to the database until you click this button.

Click here to refresh total hours as you add / copy / delete records.



# Add Annual Data Record

The screenshot shows a web form titled "Add Annual Data Record". The form contains the following fields and annotations:

- Select Year:** A dropdown menu with "2013" selected. A red box contains the text "Select the applicable year." with an arrow pointing to the dropdown.
- Contractor:** A text field containing "Abatement Services". A red box contains the text "This will be set to your Contractor name." with an arrow pointing to the field.
- Total Corporate Hours:** An empty text field. A red box contains the text "Enter the TOTAL corporate hours, number of incidents, number of severity days, incident rate, and severity rate for the ENTIRE year." with an arrow pointing to this field.
- # of Incidents:** An empty text field.
- # of Severity Days:** An empty text field.
- Incident Rate:** An empty text field.
- Severity Rate:** An empty text field.
- Entered Date:** A text field containing "01/02/2013". A red box contains the text "These fields will pre-populate." with an arrow pointing to this field.
- Entered By:** A text field containing "jporterfield@terrine.com".
- Buttons:** "Ok" and "Cancel" buttons. A red box contains the text "Click Ok when you are finished." with an arrow pointing to the "Ok" button.

At the bottom of the form, there is a note: "Press ESC, to close the pup".



# Add Annual Data Record

Your new record should now be viewable in this screen.

HOME
CONTRACTOR HOURS DATA INPUT GRID
DATA Q&A APPROVAL
CONTRACTOR HOURS
EVENTS
REPORTS
ANNUAL CONTRACTOR DATA

2012

To

2013

Contractor  
 Antritt's Lawn Sensations

| Year | Contractor                | Total Hours | # of Incidents | # of severity Days | Incident Rate | Severity Rate | View                 |
|------|---------------------------|-------------|----------------|--------------------|---------------|---------------|----------------------|
| 2012 | Antritt's Lawn Sensations | 1           | 1              | 1                  | 1.00          | 1.00          | <a href="#">View</a> |
| 2012 | Antritt's Lawn Sensations | 24          | 33             | 3                  | 3.00          | 3.00          | <a href="#">View</a> |
| 2012 | Antritt's Lawn Sensations | 1           | 2              | 2                  | 1.00          | 2.00          | <a href="#">View</a> |

3 items found, displaying all items. page 1

# Add an Event

---

From the **HOME** screen, go to **EVENTS**.  
(\*Note: you may not have all of the links displayed below in your menu navigation)

Go here to enter an event



# Add an Event

Click here to add an event.

HOME CONTRACTOR HOURS DATA INPUT GRID DATA APPROVAL CONTRACTOR HOURS EVENTS REPORTS ANNUAL CONTRACTOR DATA

12/15/2012 To 01/15/2013  Citation issued  At Fault Total Lost Days: 0

**+ Add an Event**  **Edit Selected** **Approve Selected** **Delete Selected**

**Date** **Operating Company** **Contractor** **Function** **Work Type** **Event Type** **Job Classification** **Lost Days** **Restricted Days** **Severity** **Days** **Approved**

Event

Update

Contractor: [ ] Event Date: 01/02/13

**Gen Info** **Description** **QA/Signatures** **Notes** **Print**

|                     |           |
|---------------------|-----------|
| Operating Company:  | [ ]       |
| Contractor:         | [ ]       |
| Function:           | [ ]       |
| Employee:           | [ ]       |
| Foreman:            | [ ]       |
| Event Date:         | 01/02/13  |
| Event Time:         | [ ]       |
| Day of Week:        | Wednesday |
| City:               | [ ]       |
| State:              | [ ]       |
| Work Type:          | [ ]       |
| Storm/Non-Storm:    | [ ]       |
| Job Classification: | [ ]       |
| Event Type:         | [ ]       |

**Lost Days**  
Days Away From Work: [ ]

Close



# Add an Event

The screenshot shows a software window titled "Event" with a tabbed interface. The "Gen Info" tab is active. At the top left, there is an "Update" button. Below it, the "Contractor:" field is empty and the "Event Date:" field contains "01/02/13". A red box highlights the "Operating Company:" dropdown menu, with a red arrow pointing to it and the text "Start by selecting an Operating Company." written inside the box. Other fields include "Contractor:", "Function:", "Employee:", "Foreman:", "Event Date:" (01/02/13), "Event Time:" (Wednesday), "Day of Week:" (Wednesday), "City:", "State:", "Work Type:", "Storm/Non-Storm:", "Job Classification:", and "Event Type:". A "Lost Days" section at the bottom right includes a "Days Away From Work:" field and a "Close" button.

# Add an Event

Click here to add description and injured body part (if relevant).

The screenshot shows a web form for adding an event. The form is titled 'Event' and has a 'Close' button at the bottom right. The form is divided into several sections: 'Gen Info', 'Description', 'QA/Signatures', 'Notes', and 'Print'. The 'Description' tab is selected. The form contains the following fields:

- Operating Company: Appalachian Power
- Contractor: [Dropdown]
- Function: [Dropdown]
- Employee: [Dropdown]
- Foreman: [Dropdown]
- Event Date: 01/02/13
- Event Time: [Dropdown]
- Day of Week: Wednesday
- City: [Dropdown]
- State: [Dropdown]
- Work Type: [Dropdown]
- Storm/Non-Storm: [Dropdown]
- Job Classification: [Dropdown]
- Event Type: [Dropdown]
- Lost Days: [Dropdown]
- Days Away From Work: [Dropdown]
- Job Transfer/Restricted Days: [Dropdown]
- Severity Days: [Dropdown]
- Citation Issued?: [Dropdown]
- At Fault?: [Dropdown]

Red annotations highlight specific fields:

- A red box around the 'Description' tab with an arrow pointing to it, containing the text: 'Click here to add description and injured body part (if relevant).'.
- A red box around the 'Function' dropdown with an arrow pointing to it, containing the text: 'Select a function.'.
- A red box around the 'At Fault?' dropdown with an arrow pointing to it, containing the text: 'Select if person was at fault or not.'.
- A red box around the 'At Fault?' dropdown with an arrow pointing to it, containing the text: 'These red arrows will appear to indicate required fields. All other fields are optional.'

# Add an Event

The screenshot shows a software interface for adding an event. The main window is titled "Event" and has a date of "01/02/13". It features several tabs: "Gen Info", "Description", "QA/Signatures", "Notes", and "Print". The "Description" tab is active, showing a large text area for "Work Description". Below this, there is a section for "Injured Body Part(s)" with a "No Records" message and a "[Need] [Refresh]" button. A red box highlights the text area with the instruction "Add description (if relevant) here." and an arrow pointing to it. Another red box highlights the "Injured Body Part(s)" section with the instruction "Scroll down to add an injured body part (if relevant)." and an arrow pointing to it. A third red box highlights a "+ Add Body Part" button in a sub-window, with the instruction "Click here to add a body part." and an arrow pointing to it. The sub-window also shows a table with columns for "person", "body\_part", "left\_right", and "injury\_type", and a "No Records" message. A "Close" button is visible in the bottom right corner of the sub-window.

# Add an Event

**Event**

Update Cancel New Recalc

**Body Parts**

Contractor:

Body Part: Ankle

Left / Right: Right

Injury Type: Abrasion

Update Cancel New Recalc

**Body Part Involved in Event**

Close

Fill out body part information using the dropdowns.

Click Update when you are finished to save the body part record.

# Add an Event

When you are finished adding event data, click here.

**Event**

Update

Contractor: [ ]  
Event Date: 01/02/13

**Event**

|            |                                   |                               |                              |          |
|------------|-----------------------------------|-------------------------------|------------------------------|----------|
| [open] [X] | D667E6B5411249328A9F41208482DB47  | Appalachian Power             | AC<br>Dellvade               | 12/20/12 |
| [open] [X] | 73627757232041469F06447717A5932E  | Indiana Michigan<br>Power     | Acuren                       | 12/04/12 |
| [open] [X] | 488CF42EFD24F7D8CAE4721B37EB7FE   | Kentucky Power                | AEP                          | 12/12/12 |
| [open] [X] | 92D8646DFC6B4DE44D460E1242E6920   | AEP-OH                        | Accu<br>Pro-Cut              | 12/04/12 |
| [open] [X] | 911CECDF38754CB28206533910A82607  | Appalachian Power             | Adesta                       | 12/18/12 |
| [open] [X] | EE60D629B4204A4A6804E59839B8D168E | Indiana Michigan<br>Power     | Acuren                       | 12/18/12 |
| [open] [X] | 4089BC165570483787D7645F9D03F433  | Appalachian Power             | Appalachian Power            | 01/02/13 |
| [open] [X] | 3B407CC08AFA4D119BBE65E4824E2C9B  | AEP-OH                        | American<br>Refractory<br>Co | 12/17/12 |
| [open] [X] | 4832DB2FB64E4FB99E963D4CE2C8C1    | Public Service of<br>Oklahoma | AC<br>Dellvade               | 12/18/12 |
| [open] [X] | F126A4FCFE4C79A0F4B7F12E4488E     | AEP-TX                        | Adesta                       | 12/18/12 |

Close



# Add an Event

**Event**

|            |                                   |                               |                              |          |
|------------|-----------------------------------|-------------------------------|------------------------------|----------|
| [open] [X] | D667E5B5411249328A9F41208A82DB47  | Appalachian Power             | AC<br>Dellvade               | 12/20/12 |
| [open] [X] | 73B27757232041469F06447717A5932E  | Indiana Michigan<br>Power     | Acuren                       | 12/04/12 |
| [open] [X] | 48BCF42EF0E24F7D8CAE4721B37EB7FE  | Kentucky Power                | AEP                          | 12/12/12 |
| [open] [X] | 460E1242E6620                     | AEP-OH                        | Accu<br>Pro-Cut              | 12/04/12 |
| [open] [X] | 5533910A82697                     | Appalachian Power             | Adesta                       | 12/18/12 |
| [open] [X] | EE60D629B4204AA8804E59839B8D168E  | Indiana Michigan<br>Power     | Acuren                       | 12/18/12 |
| [open] [X] | 4089BC1656704837B7D7645F9003F433  | Appalachian Power             |                              | 01/02/13 |
| [open] [X] | 3B407CC8AFA4D119B8B8E65E4824E2C9B | AEP-OH                        | American<br>Refractory<br>Co | 12/17/12 |
| [open] [X] | 4832DB2FB94E4FBFB99E663D4CE2C8C1  | Public Service of<br>Oklahoma | AC<br>Dellvade               | 12/18/12 |
| [open] [X] | F125A4F5CFEB4C79A6F46B7F12E4A88E  | AEP-TX                        | Adesta                       | 12/18/12 |

Close

While in this screen, you can open the record to make edits or click on the red 'X' to delete it

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# Exhibit C

DocuSign Envelope ID: 74757D3B-16D8-4E51-ADC2-FC0B20C5DE2D



## **AEP Transmission Forestry**

### **Rate Clarifications for Right-of-Way Maintenance Contracts**

**September 21, 2016**

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**Per Diem (Specific to Davey Tree Expert)**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 50 miles or greater (one way) from that individual's legal home address.
2. Per Diem will not be paid if lodging and meals are provided by Owner.
3. Contractor shall submit documentation with their invoice specifying the distance between home address of record or reporting site and work site for each individual claiming Per Diem on each submitted invoice. Contractor will submit to OPCO the employees due per diem using the template within this document.
4. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
5. The Per Diem rate is defined in the applicable contract rate sheets and includes lodging and meals.
6. Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.
7. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

**Definitions**

**Per Diem** – Daily allowance for expenses that include housing and meals to cover expenses when traveling for work and agreed upon by the Contractor and the Owner's Designated Representative.

**Work Site** - The day's starting location for the performance of services ex, work site should be associated with vegetation management activities on the Company's rights-of-way.

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**Owner's Designated Representative** – Owner Designated Representative for daily forestry operations will be the OPCO/transmission region forester or OPCO/transmission forestry supervisor.

**Reporting Site** – A Contractor designated location acceptable to the Owner's Designated Representative where the Contractor's trucks/equipment is parked and the employees go to get the trucks/equipment to travel to the work site. (In some regions called a show up location.) If a crew is starting its billable time at a reporting site, travel time to the work site shall not be more than thirty (30) minutes, via the most direct route, unless authorized by Owner's Designated Representative.

**Emergency Assistance** – Owner's Designated Representative will have the authority to hold Contractor crews in an area during storm or other situations deemed an emergency when the mileage is less than in Bullet #1. If held in the an area the Contractor employee affected will be eligible for Per Diem if such charges would normally be incurred. All parties should understand this action is auditable and the time sheet and invoice must have the words Emergency Assistance and the forester's name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to Owner.

**Work Flow Driven(LEAN)** – Owner Designated Representative will have the authority to instruct crews to stay overnight when the mileage is less than in Bullet #1. There are times when it is cost effective to have the crews stay overnight instead of returning to the home address of record or reporting site. For example, crew is working 45 miles from the reporting site and the next work location is in the same direction but is 85 miles from the reporting site. In this situation the forester will have the authority to authorize an overnight stay that would require a Per Diem payment since staying overnight is more productive than to return to the reporting site or home address of record. All parties should understand this action is auditable for work efficiencies and productivity and the time sheet and invoice must have the words Work Flow Driven(LEAN) and the foresters name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to owner.

**Outsource or Off System** – Contractor employees that do not normally or exclusively work on the Owner's property and whose home address of record is 80 miles or more from the reporting site and is acceptable to Owner's Designated Representative.

**Home Address** – The legal address of record for tax purposes.

**Equipment**

1. Contractor agrees to notify Owner when any equipment is not operable. They jointly will determine if work can continue in an efficient manner.
2. If no suitable work is available, the crew will be idled until the equipment is operable.

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3. If for any reason, Contractor fails to notify Owner of inoperable equipment, it shall be assumed the crew was not working for at least eight hours prior to Owner's becoming aware of the problem. Invoices will be adjusted accordingly.
4. Equipment Fuel Costs are based on fuel costs as follows: Base Fuel Rate = \$2.90 per gallon.
5. Equipment rates will be adjusted in accordance with the current AAA Average Fuel Price Gauge Report. The rates will be adjusted automatically through AEP's RWM invoicing system.

**Materials**

1. Materials and rental equipment furnished by the Contractor and authorized by the Owner will be invoiced at cost plus five percent (5%).
2. Contractor must obtain three bids for materials and provide copies of these bids to the Owner.
  - a. While the Contractor may purchase from any material vendor, AEP's material pricing shall be based on the lowest price submitted.

**Pay During Training**

Unless otherwise agreed to by Owner in writing, no billing relating to attendance at training or certification will be paid.

**Overtime Calculations and examples**

1. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week at Owner's request.
2. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
3. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday, when approved by Owner in advance.
4. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in items 1 and 2 above. The 40 hours pay shall include any holiday compensation paid by Contractor to the employee.
5. Calculation examples are provided below.
  - Straight Time Rate = Taken from table
  - Overtime Rate = Straight Time Rate x 1.5
  - Sunday/Holiday Rate = Straight Time Rate x 2
  
  - Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)
  - Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

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- Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)
- Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)
- Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) = \$30.72$

Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) = \$33.40$

Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) = \$40.94$

Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) = \$44.52$

**Major Storm Events**

When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.

| Labor Description                          | Labor Code | Comments  | August 1, 2011 |
|--|------------|---|----------------|
| Equipment Operator                         | EO         | An equipment operator shall be able to operate and perform minor maintenance on a ROW brush mower or bulldozer.   |                |
| General Foreman A/<br>General Foreperson A | GFA        | The primary contact with AEP Forestry field representatives. Has worked a minimum of 12 months as an Assistant General Foreperson and should be ISA certified. Individuals are responsible for all aspects of the contractor's local field operation including and not limited to employee safety, equipment maintenance, work planning effect (if applicable), and emergency response.   |                |
| Foreman A/Foreperson A                     | FA         | Meet all the qualifications of a Foreperson B. Has worked a minimum of 12 months as a Foreperson B and should meet all state required herbicide qualifications. Is able to competently work and lead others with no direct supervision.   |                |
| Foreman B/Foreperson B                     | FB         | Meet all the qualifications of a Trimmer A. Individuals have completed all line clearance foreperson certification training programs as required. Must be able to work and lead others with limited supervision. Has worked a minimum of 18 months in the line clearance industry. Must be able to effectively communicate with AEP representatives and landowners. Must be able to prepare required record documents, read and follow instructions on maps and notification records. Must possess a CDL and pesticide certification as required.   |                |
| Work Planner A                             | WPA        | Meet all qualifications of Work Planner B and be ISA certified. Two years experience as a Work Planner B or three years related utility experience. Consistent work planning accuracy greater than or equal to 95%. Demonstrates initiative and pro-actively looks for ways to do work more effectively. Demonstrated abilities in teamwork, leadership and problem solving. Willing to travel and stay away from home overnight.   |                |
| Work Planner B                             | WPB        | Meet all qualifications of Work Planner C and working towards ISA certification. Six months satisfactory performance as a Work Planner C or related utility experience. Thorough knowledge of species and growth characteristics of trees located in assigned work area. Good understanding of electrical facilities and hardware and associated line/circuit maps. Understanding of electric utility vegetation management and ability to communicate such to property owners. Work effectively with people (utility, contractors, customers, etc.). Demonstrated ability to work safely and efficiently with minimal supervision and have the ability to travel and stay overnight. |                |
| Work Planner C                             | WPC        | Two-year Degree in Forestry, Arboriculture, etc., or related utility experience is desirable. Good verbal and written communications skills. Positive attendance/professional appearance. Able to work outside in a safe, productive manner in all weather conditions. Valid drivers license.   |                |
| General Foreman B/<br>General Foreperson B | GFB        | Individuals shall be able to communicate effectively with utility representatives, the public and their direct reports. Determine the most effective manner within established guidelines of how to treat vegetation conditions and coordinate and instruct crew activities to safely and effectively complete an assigned task. Must possess a pesticide license and where required strive to become a certified arborist.   |                |
| Trimmer A                                  | TA         | Meet all qualifications of Trimmer B. Individuals have completed all climbing trimmer and bucket (where require d) certifications. Individual has worked a minimum of 12 months in the line clearance industry. Is able to perform all aspects of tree trimming and tree removal including and not limited to rigging ropes, and pulling overhang, and any other assigned duties in a safe, consistent, competent manner. Individuals should be capable of filling in for a crew foreperson on a limited basis and have started foreperson training as required by the employer.  |                |
| Trimmer B                                  | TB         | Meet all qualifications of Trimmer C. Individual have completed climbing trimmer training. Individual has worked a minimum of 6 months in the line clearance industry.  |                |
| Trimmer C                                  | TC         | Individuals shall be able to perform all duties that requires the individual passes screening criteria as established by employer. A Trimmer C shall be able to perform all duties in a safe and efficient manner. Must be able to perform all aspects of tree trimming and tree removal including and not limited to chain saw maintenance, operate a brush chipper, and apply herbicides, clear and cut trees and brush. They shall be gain climbing trimmer training. Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification.  |                |





## Unit Price Model

April 30, 2012

Services may be paid under the following Unit Price model.

### 1. Unit Price Model Overview

Unit Price is a model where a Unit Price hourly rate is paid to Contractor for all work units completed in an assigned Circuit. The Unit Price hourly rate includes all costs, including but not limited to, wages, supervision, overheads, profit, equipment and materials required to complete the assigned Work. While the Unit Price hourly rate includes the labor required to apply herbicides, it does not include the cost of the herbicides. The Unit Price hourly rate is multiplied by the assigned work hour per unit, a rate that is assigned for each specific work unit (tree trim, tree removal, brush cut, etc.). This is a rate that has been determined to complete a unit of Work on the assigned Circuit, as agreed by the Owner and Contractor. All Unit Price Work issued to Contractor shall be completed by the agreed upon completion date.

### 2. Unit Price Calculation

#### a. Man Hours per Unit Calculation

Unit Price uses historical average times, or other method agreed to by Owner and Contractor, required to perform a specific type of Work (tree trim, tree removal, brush cutting, brush spraying) ("Work Unit") and includes all time necessary to complete that Work, including but not limited to travel, actual job site time, debris disposal, landowner contacts, immediate crew supervision and appropriate non-productive time (such as time lost to inclement weather and minor on-the-job equipment breakdown).

- I. Owner shall explain the method of calculation and the information used in a Circuit to Contractor's supervision and management prior to authorizing Work.
- II. The average times used to calculate hours per unit can be collected by distribution circuit, portions of a given circuit (sub-circuit), or other defined geographic area within the Contract region (e.g. "Circuit" or "Area.")
- III. The historical average times are developed by accumulating data for vegetation management Work performed on the Circuit during the last three calendar years or other time period as agreed by Owner and Contractor. Each time a Circuit is scheduled for maintenance, a new three-year average is calculated by replacing the earliest year's data with the most recent or next successive year's data. This rolling three year average is given in hours per unit.
- IV. If there are inconsistencies in the three-year data based on disparity in the actual work within a specific Contract region, the Owner and Contractor may agree to use another method to generate the hours per unit. This method shall be documented in the Work Request authorizing the Work.

#### b. Unit Price Calculation

Contractor has submitted a Unit Price hourly rate that shall be used for all units of Work performed, regardless of the Work Unit type. The cost for a given unit of Work (e.g. for a given Circuit) is established by multiplying the Contractor's Unit Price hourly rate for

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that Work Unit by its hours per unit. If the Unit Price hourly rate is \$20.00 and the hours per unit is 1.25 hours, Contractor earns 1.25 hours x \$20.00 – \$25.00 for each unit of that Work Unit.

### **3. Job Assignment**

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned; prepare a Unit Price Sheet (sample attached); include any exceptions to the hours per unit; and shall schedule a field review with the Contractor to discuss the Work assignment, including how the hours per unit were developed. An exception to the hours per unit might be a tree removal where the location and size of the tree and its proximity to structures cause a substantial increase in the hours per unit required for the removal. These exceptions must be agreed to by both Parties and are not to include those deviations that are normally encountered in performing a Work Unit.

At the field review, Owner and Contractor shall review all the Work, agree to the exceptions to the hours per unit, agree to the Unit Price Sheet and determine a start date for the Work. A Work Request (“WR”), similar to the sample attached, shall be signed by both Parties and constitutes the written authority for Contractor to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Unit Price Sheet, the map, a list of exceptions to the hours per unit, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date, but subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor’s work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. The work planners, per current practice, shall be paid on a time and material basis and will not be included within the stated Unit Price or Unit Price calculation. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor’s employees are unable to resolve their concerns quickly, Contractor’s employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

## Lump Sum Price Model

April 30, 2012

Services may be paid under the following Lump Sum Price model.

### **1. Authorizing Work**

Owner and Contractor may agree to perform work based on a Lump Sum price for the specified Circuit.

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned, complete a Lump Sum Price Sheet; and schedule a field review with the Contractor to discuss the Work assignment.

At the field review, Owner and Contractor shall review all the Work, agree to the Lump Sum Price and determine a start and end date for the Work. A Work Request ("WR") for Lump Sum Price Work, similar to the sample attached, shall be signed by both Parties and constitutes the Contractor's written authority to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Lump Sum Price, the map, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date but is subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor's work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor's employees are unable to resolve their concerns quickly, Contractor's employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

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**WORK REQUEST  
For  
Lump Sum Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Lump Sum Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

Work shall be performed in accordance with the attached Request For Quote (“RFQ”) attached hereto.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

Unless otherwise stated in the Work Request, Contractor shall be paid the total cost for the Circuit upon completion of all Work and subsequent acceptance by Owner. Contractor shall perform all Work for the lump sum amount of \$ \_\_\_\_\_.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

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**Work Request  
For  
Unit Price/Time and Materials Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Unit Price/Time and Materials Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

If no map is attached, identify the circuit, sub-circuit, or the specific geographic area identifying the Work to be performed.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

**Unit Price** --- Contractor’s weekly billing shall be calculated using the number of units completed during the week being billed multiplied by the cost per unit from the Rates as found in the Contract.

**Time and Materials** – Contractor’s weekly billing shall be calculated using the following formula: (labor classification X number of hours worked during billable period) + (equipment rate X number of hours used during billable period). The labor classifications and equipment rates used will be in accordance to the Rates as found in Exhibit C of the Contract

Unless otherwise stated in this Work Request or the attached map, pricing will be per the price model as selected above and in accordance with the Rates as found in Exhibit C of the Contract.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_









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## CONFIDENTIAL

### Contract Routing Slip

| ROUTING            | Purpose                                    | Initials                            | Date Signed              |
|--------------------|--|-------------------------------------|--------------------------|
| Sonia Pickens      | For your review                            | <sup>DS</sup><br>SP                 | 9/22/2016   12:54 PM EDT |
| Matt Curtis        | For your review                            | <sup>DS</sup><br>MC                 | 9/22/2016   1:27 PM EDT  |
| Kevin Patton       | For your review                            | <sup>DS</sup><br>KBP                | 9/22/2016   1:06 PM EDT  |
| Walter Sherry      | For your review & signature on sole source | <sup>DS</sup><br>WAS                | 9/22/2016   1:42 PM EDT  |
| Thomas Kirkpatrick | Signature on amendment & sole source       | <sup>DS</sup><br>Thomas Kirkpatrick | 9/22/2016   1:43 PM EDT  |
| Jack McCabe        | Contractor Signatory                       |                                     |                          |
| Terri Stiltner     | Copy                                       |                                     |                          |
| AEP Audit          | Copy                                       |                                     |                          |
| Gina Crabtree      | Document in File                           | NR                                  | NR                       |

**Date:** September 21, 2016

**Company:** AEPSC

**Contractor Name:** Davey's Tree Expert

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 026987430000X103 Amd #1

**Term:** May 1, 2014 – April 30, 2019

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** adding [REDACTED] (total [REDACTED])

**Description of Service/Work:** Adding additional scope and rates, updating General T&C's, Forestry Terms and Instructions, adding ISNetworkworld



## Certificate Of Completion

|   |                   |                            |
|---|-------------------|----------------------------|
| Envelope Id: 74757D3B16D84E51ADC2FC0B20C5DE2D                     | Status: Completed |                            |
| Subject: AEP Contract 026987430000X103; Davey'sTree Expert; Amd#1 |                   |                            |
| Source Envelope:  |                   |                            |
| Document Pages: 145   | Signatures: 4     | Envelope Originator:       |
| Certificate Pages: 3  | Initials: 6       | Gina Crabtree              |
| AutoNav: Enabled  |                   | 1 Riverside Plz FL 1       |
| Envelopeld Stamping: Enabled                                      |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                 |                   | gmcrabtree@aep.com         |
|   |                   | IP Address: 167.239.221.80 |




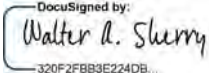
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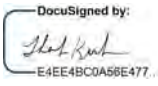
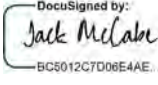


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| 9/21/2016 11:06:21 AM | gmcrabtree@aep.com    |                    |

## Signer Events

## Signature

## Timestamp

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| <p>Sonia Pickens<br/>srvaughan@aep.com<br/>Category Mgr<br/>American Electric Power<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Not Offered via DocuSign<br/>ID:</p>   |  <p>Using IP Address: 167.239.221.82</p>  | <p>Sent: 9/21/2016 3:45:52 PM<br/>Viewed: 9/21/2016 5:09:00 PM<br/>Signed: 9/22/2016 12:54:50 PM</p> |
| <p>Kevin Patton<br/>kbpatt@ae.com<br/>Business Analyst Sr<br/>American Electric Power<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 8/5/2014 2:08:35 PM<br/>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409</p> |  <p>Using IP Address: 167.239.221.87</p>  | <p>Sent: 9/22/2016 12:54:54 PM<br/>Viewed: 9/22/2016 1:00:42 PM<br/>Signed: 9/22/2016 1:06:49 PM</p> |
| <p>Matt Curtis<br/>mpcurtis@aep.com<br/>Director, T&amp;D Services<br/>American Electric Power Service Corporation<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Not Offered via DocuSign<br/>ID:</p>              |  <p>Using IP Address: 12.111.104.128<br/>Signed using mobile</p>                          | <p>Sent: 9/22/2016 1:06:54 PM<br/>Viewed: 9/22/2016 1:27:14 PM<br/>Signed: 9/22/2016 1:27:44 PM</p>  |
| <p>Walter A. Sherry<br/>washerry@aep.com<br/>Forestry Operation Manager<br/>Security Level: Email, Account Authentication (None)<br/>Electronic Record and Signature Disclosure:<br/>Accepted: 7/1/2014 7:08:14 PM<br/>ID: ca043d9b-aaab-40e4-bee5-8c449d93d309</p>               | <p>DocuSigned by:<br/><br/>320F2FBB9E224DB...</p> <p>Using IP Address: 167.239.221.85</p> | <p>Sent: 9/22/2016 1:27:50 PM<br/>Viewed: 9/22/2016 1:38:13 PM<br/>Signed: 9/22/2016 1:42:27 PM</p>  |

| Signer Events  |   |   |
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| Signature  | Timestamp   |   |
| <p>Tom Kirkpatrick<br/>           tlkirkpatrick@aep.com<br/>           Vice President Customer Service, Marketing and Distribution Services<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>           Accepted: 8/11/2014 7:22:30 AM<br/>           ID: 293b8fdf-68e0-46e9-b110-269f4199cb39</p> | <br>Using IP Address: 167.239.221.82 | <p>Sent: 9/22/2016 1:42:32 PM<br/>           Viewed: 9/22/2016 1:42:56 PM<br/>           Signed: 9/22/2016 1:43:32 PM</p> |
| <p>Jack McCabe<br/>           jack.mccabe@davey.com<br/>           Vice President, Utility Operations<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>           Accepted: 9/26/2016 9:17:46 AM<br/>           ID: db814585-9f3f-492f-82c6-1f36854823ce</p>                                       | <br>Using IP Address: 50.127.199.147 | <p>Sent: 9/22/2016 1:43:36 PM<br/>           Viewed: 9/26/2016 9:17:46 AM<br/>           Signed: 9/27/2016 8:13:05 AM</p> |
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| Signature  | Timestamp   |   |
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| Intermediary Delivery Events   |   |   |
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| Carbon Copy Events   |   |   |
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| <p>Terri Stiltner<br/>           tastiltner@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>           Accepted: 6/18/2015 3:27:15 PM<br/>           ID: 592a4afd-f450-4104-bdeb-635cbde989d5</p>   |                                    | <p>Sent: 9/27/2016 8:13:10 AM<br/>           Viewed: 9/27/2016 1:05:31 PM</p>   |
| <p>AEP Audit<br/>           gbscontractassessments@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>           Not Offered via DocuSign<br/>           ID:</p>   |                                    | <p>Sent: 9/27/2016 8:13:12 AM</p>   |
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| Timestamp  |   |   |
| Envelope Summary Events  |   |   |
| Status   | Timestamps  |   |
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| Certified Delivered  | Security Checked  | 9/27/2016 8:13:12 AM  |
| Signing Complete   | Security Checked  | 9/27/2016 8:13:12 AM  |
| Completed  | Security Checked  | 9/27/2016 8:13:12 AM  |
| Electronic Record and Signature Disclosure   |   |   |

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Kevin Patton, Walter A. Sherry, Tom Kirkpatrick, Jack McCabe, Terri Stiltner

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

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## SECOND AMENDMENT TO CONTRACT NO. 026987430000X103

This Second Amendment to Contract No. 026987430000X103 ("Second Amendment"), executed to be effective September 25, 2016 ("Second Amendment Effective Date"), is by and between **American Electric Power Service Corporation**, a New York corporation, as agent for the operating companies of the American Electric Power System ("Owner") and **The Davey Tree Expert Company**, an Ohio corporation ("Contractor").

**WHEREAS**, Contractor and Owner entered into Contract No. 026987430000X103 with an Effective Date of May 1, 2014 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

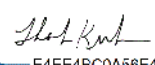
**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the parties hereby agree as follows:

1. Incorporate into Exhibit A -General and Supplementary Terms, the previously agreed to Exceptions between AEPSC and Davey Resource Group May 8, 2014.
2. In order to update item 6 in Exhibit B, remove AEP Transmission Forestry Specs for ROW Maintenance dated October 25, 2010, and replace with AEP Transmission Forestry Specs for ROW Maintenance dated September 21, 2016.
3. In order to update item 6 Fuel Adjustments, the base fuel price amount should be removed and replaced with a base fuel price of \$2.25.
4. Except as amended by this Second Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the parties hereto have caused this Second Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Second Amendment Effective Date.

**American Electric Power Service Corporation, as agent for the operating companies of the American Electric**

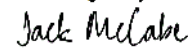
DocuSigned by:  
  
By: E4EE4BC0A58E477...

Name: Tom Kirkpatrick

Title: Vice President Customer Service, Marketing and Distribution Services

Date: 10/1/2016 | 9:06 AM EDT

**The Davey Tree Expert Company**

DocuSigned by:  
  
By: BC5012C7D06E4AE...

Name: Jack McCabe

Title: President, Operations

Date: 10/3/2016 | 4:21 PM EDT

## **Agreed Exceptions between AEPSC and Davey Resource Group May 8, 2014**

**The following sections of the General Terms are modified to read as follows:**

17.2 TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COST AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, TO THE EXTENT CAUSED BY THE NEGLIGENCE OF CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR BASED ON A BREACH OF THIS CONTRACT BY CONTRACTOR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO THE EXTENT ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE CONSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.

17.4 CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT, IF OWNER IS THE PREVAILING PARTY IN SUCH ENFORCEMENT LITIGATION.

18.1 Add as an additional sentence:

Except for Contractor's indemnification obligations under this Contract or for claims based on gross negligence or willful misconduct, Contractor's liability to Owner arising from or related to Contractor's performance or non-performance under this Contract shall not exceed \$20 million per incident.

**The following section of the AEP Supplementary Terms and Conditions for Forestry Contracts is modified to read as follows:**

3.3.1 When Contractor has eleven (11) or more total employees on ~~various~~ any single projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly at an appropriate frequency to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

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## **AEP Transmission Forestry**

### **Rate Clarifications for Right-of-Way Maintenance Contracts**

**September 21, 2016**



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**Per Diem (Specific to Davey Tree Expert)**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 50 miles or greater (one way) from that individual's legal home address.
2. Per Diem will not be paid if lodging and meals are provided by Owner.
3. Contractor shall submit documentation with their invoice specifying the distance between home address of record or reporting site and work site for each individual claiming Per Diem on each submitted invoice. Contractor will submit to OPCO the employees due per diem using the template within this document.
4. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
5. The Per Diem rate is defined in the applicable contract rate sheets and includes lodging and meals.
6. Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.
7. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

**Definitions**

**Per Diem** – Daily allowance for expenses that include housing and meals to cover expenses when traveling for work and agreed upon by the Contractor and the Owner's Designated Representative.

**Work Site** - The day's starting location for the performance of services ex, work site should be associated with vegetation management activities on the Company's rights-of-way.

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**Owner's Designated Representative** – Owner Designated Representative for daily forestry operations will be the OPCO/transmission region forester or OPCO/transmission forestry supervisor.

**Reporting Site** – A Contractor designated location acceptable to the Owner's Designated Representative where the Contractor's trucks/equipment is parked and the employees go to get the trucks/equipment to travel to the work site. (In some regions called a show up location.) If a crew is starting its billable time at a reporting site, travel time to the work site shall not be more than thirty (30) minutes, via the most direct route, unless authorized by Owner's Designated Representative.

**Emergency Assistance** – Owner's Designated Representative will have the authority to hold Contractor crews in an area during storm or other situations deemed an emergency when the mileage is less than in Bullet #1. If held in the an area the Contractor employee affected will be eligible for Per Diem if such charges would normally be incurred. All parties should understand this action is auditable and the time sheet and invoice must have the words Emergency Assistance and the forester's name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to Owner.

**Work Flow Driven(LEAN)** – Owner Designated Representative will have the authority to instruct crews to stay overnight when the mileage is less than in Bullet #1. There are times when it is cost effective to have the crews stay overnight instead of returning to the home address of record or reporting site. For example, crew is working 45 miles from the reporting site and the next work location is in the same direction but is 85 miles from the reporting site. In this situation the forester will have the authority to authorize an overnight stay that would require a Per Diem payment since staying overnight is more productive than to return to the reporting site or home address of record. All parties should understand this action is auditable for work efficiencies and productivity and the time sheet and invoice must have the words Work Flow Driven(LEAN) and the foresters name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to owner.

**Outsource or Off System** – Contractor employees that do not normally or exclusively work on the Owner's property and whose home address of record is 80 miles or more from the reporting site and is acceptable to Owner's Designated Representative.

**Home Address** – The legal address of record for tax purposes.

**Equipment**

1. Contractor agrees to notify Owner when any equipment is not operable. They jointly will determine if work can continue in an efficient manner.
2. If no suitable work is available, the crew will be idled until the equipment is operable.

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3. If for any reason, Contractor fails to notify Owner of inoperable equipment, it shall be assumed the crew was not working for at least eight hours prior to Owner's becoming aware of the problem. Invoices will be adjusted accordingly.
4. Equipment Fuel Costs are based on fuel costs as follows: Base Fuel Rate = \$2.25 per gallon.
5. Equipment rates will be adjusted in accordance with the current AAA Average Fuel Price Gauge Report. The rates will be adjusted automatically through AEP's RWM invoicing system.

**Materials**

1. Materials and rental equipment furnished by the Contractor and authorized by the Owner will be invoiced at cost plus five percent (5%).
2. Contractor must obtain three bids for materials and provide copies of these bids to the Owner.
  - a. While the Contractor may purchase from any material vendor, AEP's material pricing shall be based on the lowest price submitted.

**Pay During Training**

Unless otherwise agreed to by Owner in writing, no billing relating to attendance at training or certification will be paid.

**Overtime Calculations and examples**

1. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week at Owner's request.
2. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
3. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday, when approved by Owner in advance.
4. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in items 1 and 2 above. The 40 hours pay shall include any holiday compensation paid by Contractor to the employee.
5. Calculation examples are provided below.
  - Straight Time Rate = Taken from table
  - Overtime Rate = Straight Time Rate x 1.5
  - Sunday/Holiday Rate = Straight Time Rate x 2
  
  - Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)
  - Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

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- Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)
- Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)
- Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) = \$30.72$

Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) = \$33.40$

Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) = \$40.94$

Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) = \$44.52$

**Major Storm Events**

When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.

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## CONFIDENTIAL

### Contract Routing Slip

| ROUTING            | Purpose                | Initials                                   | Date Signed             |
|--------------------|------------------------|--|-------------------------|
| Sonia Pickens      | For your review        | <sup>DS</sup><br>SP                        | 9/28/2016   2:10 PM EDT |
| Matt Curtis        | For your review        | <sup>DS</sup><br>MC                        | 6:15 AM EDT             |
| Kevin Patton       | For your review        | <sup>DS</sup><br>KBP                       | 9/29/2016   7:18 AM EDT |
| Walter Sherry      | For your review        | <sup>DS</sup><br>WAS                       | 10/1/2016   8:19 AM EDT |
| Thomas Kirkpatrick | Signature on amendment | <sup>DS</sup><br><i>Thomas Kirkpatrick</i> | 10/1/2016   9:06 AM EDT |
| Jack McCabe        | Contractor Signatory   |  |                         |
| Terri Stiltner     | Copy                   |  |                         |
| AEP Audit          | Copy                   |  |                         |
| Gina Crabtree      | Document in File       | NR   | NR                      |

**Date:** September 28, 2016

**Company:** AEPSC

**Contractor Name:** Davey's Tree Expert

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 026987430000X103 Amd#2

**Term:** May 1, 2014 – April 30, 2019

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** ████████ – no change

**Description of Service/Work:** Incorporating exceptions to T&C's previously agreed to, updating fuel rate and updating rate clarifications







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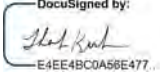

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| Document Pages: 8   | Signatures: 2     | Envelope Originator:       |
| Certificate Pages: 3  | Initials: 5       | Gina Crabtree              |
| AutoNav: Enabled  |                   | 1 Riverside Plz FL 1       |
| Envelopeld Stamping: Enabled                                      |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                 |                   | gmcrabtree@aep.com         |
|   |                   | IP Address: 167.239.221.81 |

## Record Tracking

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| Status: Original<br>9/28/2016 1:22:38 PM | Holder: Gina Crabtree<br>gmcrabtree@aep.com | Location: DocuSign |
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## Signer Events

| Signer Events   | Signature  | Timestamp  |
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| Sonia Pickens<br>srvaughan@aep.com<br>Category Mgr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:   | <br>Using IP Address: 167.239.221.84                          | Sent: 9/28/2016 1:27:23 PM<br>Viewed: 9/28/2016 1:49:40 PM<br>Signed: 9/28/2016 2:10:33 PM |
| Kevin Patton<br>kbpatt@ae.com<br>Business Analyst Sr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/5/2014 2:08:35 PM<br>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409 | <br>Using IP Address: 12.111.104.128<br>Signed using mobile | Sent: 9/28/2016 2:10:34 PM<br>Viewed: 9/29/2016 7:17:42 AM<br>Signed: 9/29/2016 7:18:10 AM |
| Matt Curtis<br>mpcurtis@aep.com<br>Director, T&D Services<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:                  | <br>Using IP Address: 24.210.58.237<br>Signed using mobile  | Sent: 9/29/2016 7:18:11 AM<br>Viewed: 9/29/2016 9:57:48 AM<br>Signed: 10/1/2016 6:15:17 AM |
| Walter A. Sherry<br>washerry@aep.com<br>Forestry Operation Manager<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 7/1/2014 7:08:14 PM<br>ID: ca043d9b-aaab-40e4-bee5-8c449d93d309              | <br>Using IP Address: 167.239.221.84                        | Sent: 10/1/2016 6:15:19 AM<br>Viewed: 10/1/2016 8:18:59 AM<br>Signed: 10/1/2016 8:19:39 AM |

| Signer Events  | Signature   | Timestamp  |
|--|---|--|
| <p>Tom Kirkpatrick<br/>           tlkirkpatrick@aep.com<br/>           Vice President Customer Service, Marketing and Distribution Services<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>           Accepted: 8/11/2014 7:22:30 AM<br/>           ID: 293b8fdf-68e0-46e9-b110-269f4199cb39</p> | <p>DocuSigned by:<br/> <br/>           E4EE4BC0A68E477...</p> <p>Using IP Address: 166.137.97.116<br/>           Signed using mobile</p> | <p>Sent: 10/1/2016 8:19:41 AM<br/>           Viewed: 10/1/2016 9:06:44 AM<br/>           Signed: 10/1/2016 9:06:58 AM</p>  |
| <p>Jack McCabe<br/>           jack.mccabe@davey.com<br/>           Vice President, Utility Operations<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>           Accepted: 10/3/2016 10:31:05 AM<br/>           ID: 7f92d80a-03bd-4349-a345-660e88eef6f2</p>                                      | <p>DocuSigned by:<br/> <br/>           BC5012C7D08E4AE...</p> <p>Using IP Address: 10.102.101.11</p>                                     | <p>Sent: 10/1/2016 9:07:00 AM<br/>           Viewed: 10/3/2016 10:31:05 AM<br/>           Signed: 10/3/2016 4:21:02 PM</p> |
| In Person Signer Events  | Signature   | Timestamp  |
| Editor Delivery Events   | Status  | Timestamp  |
| Agent Delivery Events  | Status  | Timestamp  |
| Intermediary Delivery Events   | Status  | Timestamp  |
| Certified Delivery Events  | Status  | Timestamp  |
| Carbon Copy Events   | Status  | Timestamp  |
| <p>Terri Stiltner<br/>           tastiltner@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>           Accepted: 6/18/2015 3:27:15 PM<br/>           ID: 592a4afd-f450-4104-bdeb-635cbde989d5</p>   | <p><b>COPIED</b></p>  | <p>Sent: 10/3/2016 4:21:05 PM<br/>           Viewed: 10/4/2016 7:09:55 AM</p>  |
| <p>AEP Audit<br/>           gbscontractassessments@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Electronic Record and Signature Disclosure:<br/>           Not Offered via DocuSign<br/>           ID:</p>   | <p><b>COPIED</b></p>  | <p>Sent: 10/3/2016 4:21:06 PM</p>  |
| Notary Events  |   | Timestamp  |
| Envelope Summary Events  | Status  | Timestamps   |
| Envelope Sent  | Hashed/Encrypted  | 10/3/2016 4:21:06 PM   |
| Certified Delivered  | Security Checked  | 10/3/2016 4:21:06 PM   |
| Signing Complete   | Security Checked  | 10/3/2016 4:21:06 PM   |
| Completed  | Security Checked  | 10/3/2016 4:21:06 PM   |
| Electronic Record and Signature Disclosure   |   |  |

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Kevin Patton, Walter A. Sherry, Tom Kirkpatrick, Jack McCabe, Terri Stiltner

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.



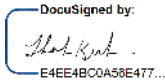
DocuSign Envelope ID: CBD2A1A0-0213-4466-9FA3-6D4F9C54DA9C

**AMERICAN ELECTRIC POWER SYSTEM  
 ENERGY DELIVERY  
 TOTAL EVALUATED COST**

**COMPANY:** AEPS **REGION:** All  
**TYPE OF CONTRACT:** Blanket Contract **CONTRACT #:** 026987430000X103  
**CONTRACTOR:** Davey's Tree Expert  
**SCOPE OF WORK:** \_\_\_\_\_  
Contractor to provide various vegetation management services  
**CONTRACT DATES:** 9/5/12 - 5/26/18

| SUMMARY OF PROJECTED COSTS:     | ORIGINAL*  | REVISION 1 | REVISION 2 | REVISION 3 |
|---------------------------------|------------|------------|------------|------------|
| Blanket Contract Value          | ██████████ | _____      | _____      | _____      |
| Increase Blanket Contract Value | _____      | ██████████ | _____      | _____      |
| <b>TOTAL FROM ABOVE</b>         | ██████████ | ██████████ | \$0        | \$0        |

**REVISED TOTAL EVALUATED COST:** ██████████

**APPROVED BY:**  
**Signature:**   
**Name:** Tom Kirkpatrick  
**Title:** VP Cust Svcs, Mktg & Dist Svcs  
**Date:** 1/11/2017 | 3:17 PM EST

**PREPARED BY:**  
**Name:** Gina Crabtree  
**Organization:** Procurement  
**Date:** 1/11/2017

DocuSign Envelope ID: CBD2A1A0-0213-4466-9FA3-6D4F9C54DA9C



## CONFIDENTIAL

### Contract Routing Slip

| ROUTING            | Purpose          | Initials           | Date Signed              |
|--------------------|------------------|--------------------|--------------------------|
| Sonia Pickens      | For your review  | SP                 | 1/11/2017   9:40 AM EST  |
| Matt Curtis        | For your review  | MC                 | 1/11/2017   11:01 AM EST |
| Kevin Patton       | For your review  | KBP                | 1/11/2017   10:13 AM EST |
| Walter Sherry      | For your review  | WAS                | 1/11/2017   2:20 PM EST  |
| Thomas Kirkpatrick | Signature on TEC | Thomas Kirkpatrick | 1/11/2017   3:17 PM EST  |
| Terri Stiltner     | Copy             |                    |                          |
| AEP Audit          | Copy             |                    |                          |
| Gina Crabtree      | Document in File | NR                 | NR                       |

**Date:** January 11, 2017

**Company:** AEPSC

**Contractor Name:** Davey's Tree Expert

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 026987430000X103 TEC Rev 1

**Term:** May 1, 2014 – April 30, 2019

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** adding [REDACTED] (total [REDACTED])

**Description of Service/Work:** Adding funds via TEC rev 1







## Certificate Of Completion

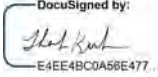


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|---|-------------------|----------------------------|
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| Subject: AEP Contract 026987430000X103; Davey'sTree Expert; TEC Rev 1 |                   |                            |
| Source Envelope:  |                   |                            |
| Document Pages: 2   | Signatures: 1     | Envelope Originator:       |
| Supplemental Document Pages: 0  | Initials: 5       | Gina Crabtree              |
| Certificate Pages: 3  |                   |                            |
| AutoNav: Enabled  | Payments: 0       | 1 Riverside Plz FL 1       |
| Envelopeld Stamping: Enabled  |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                     |                   | gmcrabtree@aep.com         |
|   |                   | IP Address: 167.239.221.86 |

## Record Tracking

|                      |                       |                    |
|----------------------|-----------------------|--------------------|
| Status: Original     | Holder: Gina Crabtree | Location: DocuSign |
| 1/11/2017 9:23:05 AM | gmcrabtree@aep.com    |                    |

## Signer Events

| Signer Events  | Signature   | Timestamp   |
|--|---|---|
| Sonia Pickens<br>srvaughan@aep.com<br>Category Mgr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:  | <br>Using IP Address: 167.239.79.45    | Sent: 1/11/2017 9:39:21 AM<br>Viewed: 1/11/2017 9:40:07 AM<br>Signed: 1/11/2017 9:40:57 AM    |
| Kevin Patton<br>kbpatt@ae.com<br>Business Analyst Principal<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/5/2014 2:08:35 PM<br>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409 | <br>Using IP Address: 167.239.221.88 | Sent: 1/11/2017 9:40:58 AM<br>Viewed: 1/11/2017 10:13:12 AM<br>Signed: 1/11/2017 10:13:45 AM  |
| Matt Curtis<br>mpcurtis@aep.com<br>Director, T&D Services<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 11/2/2016 5:32:00 PM<br>ID: 5721ec11-5e5a-41d9-b30b-e29f9a2624bb                             | <br>Using IP Address: 167.239.221.83 | Sent: 1/11/2017 10:13:46 AM<br>Viewed: 1/11/2017 11:01:47 AM<br>Signed: 1/11/2017 11:01:53 AM |
| Walter A. Sherry<br>washerry@aep.com<br>Forestry Operation Manager<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 7/1/2014 7:08:14 PM<br>ID: ca043d9b-aaab-40e4-bee5-8c449d93d309                     | <br>Using IP Address: 167.239.221.87 | Sent: 1/11/2017 11:01:55 AM<br>Viewed: 1/11/2017 2:20:00 PM<br>Signed: 1/11/2017 2:20:49 PM   |

| Signer Events   | Signature  | Timestamp  |
|---|--|--|
| Tom Kirkpatrick<br>tlkirkpatrick@aep.com<br>Vice President Customer Service, Marketing and<br>Distribution Services<br>Security Level: Email, Account Authentication<br>(None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/11/2014 7:22:30 AM<br>ID: 293b8fdf-68e0-46e9-b110-269f4199cb39 | <br>Using IP Address: 107.77.194.151<br>Signed using mobile | Sent: 1/11/2017 2:20:51 PM<br>Viewed: 1/11/2017 3:16:59 PM<br>Signed: 1/11/2017 3:17:09 PM |
| In Person Signer Events   | Signature  | Timestamp  |
| Editor Delivery Events  | Status   | Timestamp  |
| Agent Delivery Events   | Status   | Timestamp  |
| Intermediary Delivery Events  | Status   | Timestamp  |
| Certified Delivery Events   | Status   | Timestamp  |
| Carbon Copy Events  | Status   | Timestamp  |
| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication<br>(None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/18/2015 3:27:15 PM<br>ID: 592a4afd-f450-4104-bdeb-635cbde989d5  |   | Sent: 1/11/2017 3:17:11 PM<br>Viewed: 1/11/2017 3:24:44 PM                                 |
| AEP Audit<br>gbscontractassessments@aep.com<br>Security Level: Email, Account Authentication<br>(None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:  |   | Sent: 1/11/2017 3:17:11 PM   |
| Notary Events   |  | Timestamp  |
| Envelope Summary Events   | Status   | Timestamps   |
| Envelope Sent   | Hashed/Encrypted   | 1/11/2017 3:17:11 PM   |
| Certified Delivered   | Security Checked   | 1/11/2017 3:17:11 PM   |
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| Completed   | Security Checked   | 1/11/2017 3:17:11 PM   |
| Payment Events  | Status   | Timestamps   |
| Electronic Record and Signature Disclosure  |  |  |

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Kevin Patton, Matt Curtis, Walter A. Sherry, Tom Kirkpatrick, Terri Stiltner

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

DocuSign Envelope ID: A0AB0093-FE88-4A16-AF36-7A79E5ABE43B

## Pricing Change Order

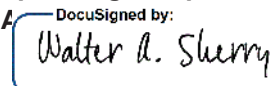
Contract No.: 026987430000X103  
 Owner: Chad Tinkle  
 Reviewer: Walter Sherry

Request Date: 1/11/2017  
 Effective Date: 1/11/2017  
 Contractor: Davey's Resource Group

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

| Reason | Labor           | CAMPS Code | Labor Rate | ST       | RH       | DT |
|--------|-----------------|------------|------------|----------|----------|----|
| Add    | Project Manager | PM         |            | \$ 44.01 | \$ 59.97 |    |
|        |                 |            |            |          |          |    |
|        |                 |            |            |          |          |    |
|        |                 |            |            |          |          |    |

**American Electric Power Service Corporation, as agent for as agent for the operating companies of the**

DocuSigned by:  
  
 320F2FBB3E224DB...  
 Signature

walter A. Sherry

Name

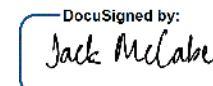
Forestry Operation Manager

Title

1/12/2017 | 3:02 PM EST

Date

**Davey Tree Expert Company**

DocuSigned by:  
  
 BC5012C7D06E4AE...  
 Signature

Jack McCabe

Name

Vice President, Utility Operations

Title

1/12/2017 | 6:03 PM EST

Date



## Certificate Of Completion

|  |   |
|--|---|
| Envelope Id: A0AB0093FE884A16AF367A79E5ABE43B  | Status: Completed   |
| Subject: AEP Contract 026987430000X103; Davey'sTree Expert; Pricing Change Order 1/11/17 |   |
| Source Envelope:   |   |
| Document Pages: 1  | Signatures: 2   |
| Supplemental Document Pages: 0   | Initials: 0   |
| Certificate Pages: 3   |   |
| AutoNav: Enabled   | Payments: 0   |
| Enveloped Stamping: Enabled  |   |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)  |   |
|  | Envelope Originator:<br>Gina Crabtree   |
|  | 1 Riverside Plz FL 1<br>Columbus, OH 43215-2373<br>gmcrabtree@aep.com<br>IP Address: 167.239.221.86 |

## Record Tracking

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| Status: Original<br>1/11/2017 9:03:46 AM | Holder: Gina Crabtree<br>gmcrabtree@aep.com | Location: DocuSign |
|--|---|--------------------|

## Signer Events

Kevin Patton  
 kbpatt@ae.com  
 Business Analyst Principal  
 American Electric Power  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Accepted: 8/5/2014 2:08:35 PM  
 ID: 20140880-36ee-4e18-bfad-d47f5e6a2409

## Signature

**Completed**  
 Using IP Address: 167.239.221.88

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 Signed: 1/11/2017 10:14:07 AM

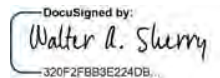
Chad Tinkel  
 cetinkel@aep.com  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Accepted: 10/17/2016 9:52:08 AM  
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 Viewed: 1/11/2017 10:22:44 AM  
 Signed: 1/11/2017 10:23:10 AM

Walter A. Sherry  
 washerry@aep.com  
 Forestry Operation Manager  
 Security Level: Email, Account Authentication (None)

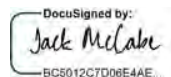


Using IP Address: 167.239.221.88

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 Viewed: 1/12/2017 3:02:41 PM  
 Signed: 1/12/2017 3:02:57 PM

Electronic Record and Signature Disclosure:  
 Accepted: 7/1/2014 7:08:14 PM  
 ID: ca043d9b-aaab-40e4-bee5-8c449d93d309

Jack McCabe  
 jack.mccabe@davey.com  
 Vice President, Utility Operations  
 Security Level: Email, Account Authentication (None)



Using IP Address: 10.102.101.12

Sent: 1/12/2017 3:02:58 PM  
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 Signed: 1/12/2017 6:03:26 PM

Electronic Record and Signature Disclosure:  
 Accepted: 1/12/2017 6:02:30 PM  
 ID: c05d8e92-69fd-40d5-ae1c-cd0988072804

## In Person Signer Events

## Signature

## Timestamp

## Editor Delivery Events

## Status

## Timestamp

| Agent Delivery Events   | Status   | Timestamp  |
|---|--|--|
| <b>Intermediary Delivery Events</b>   | <b>Status</b>  | <b>Timestamp</b>   |
| <b>Certified Delivery Events</b>  | <b>Status</b>  | <b>Timestamp</b>   |
| <b>Carbon Copy Events</b>   | <b>Status</b>  | <b>Timestamp</b>   |
| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/18/2015 3:27:15 PM<br>ID: 592a4afd-f450-4104-bdeb-635cbde989d5 | <div style="border: 1px solid blue; padding: 5px; display: inline-block; color: blue; font-weight: bold; font-size: 1.2em;">COPIED</div> | Sent: 1/12/2017 6:03:27 PM<br>Viewed: 1/13/2017 8:05:30 AM |
| AEP Audit<br>gbscontractassessments@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:                                     | <div style="border: 1px solid blue; padding: 5px; display: inline-block; color: blue; font-weight: bold; font-size: 1.2em;">COPIED</div> | Sent: 1/12/2017 6:03:28 PM                                 |
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| <b>Payment Events</b>   | <b>Status</b>  | <b>Timestamps</b>  |
| <b>Electronic Record and Signature Disclosure</b>   |  |  |



Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Kevin Patton, Chad Tinkel, Walter A. Sherry, Jack McCabe, Terri Stiltner

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

DocuSign Envelope ID: BA5FBC8E-DA6B-4630-80A5-B1C37F2E2CE8



## CONFIDENTIAL

### Contract Routing Slip

| ROUTING            | Purpose            | DS                                       | Date Signed             |
|--------------------|--------------------|--|-------------------------|
| Kevin Patton       | For your review    |  | 2/9/2017   3:09 PM EST  |
| Charles Talley     | For your review    |  | 2/10/2017   2:28 PM EST |
| Thomas Kirkpatrick | Approval signature | DocuSigned by:<br><br>E4EE4BC0A56E477... | 2/10/2017   5:05 PM EST |
| Terri Stiltner     | Copy               |  |                         |
| AEP Audit          | Copy               |  |                         |
| Gina Crabtree      | Document in File   | NR                                       | NR                      |

**Date:** February 8, 2017

**Company:** AEPSC

**Contractor Name:** Davey's Tree Expert

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 026987430000X103 Funding increase

**Term:** May 1, 2014 – April 30, 2019

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** adding [REDACTED] (total [REDACTED])

**Description of Service/Work:** Contract No. 026987430000X103 with Davey Resource Group is nearing its current spend limit. We are requesting approval of an additional [REDACTED], for a revised total spend limit of [REDACTED].



### Certificate Of Completion

|  |               |                            |
|--|---------------|----------------------------|
| Envelope Id: BA5FBC8EDA6B463080A5B1C37F2E2CE8                                |               | Status: Completed          |
| Subject: AEP Contract 026987430000X103; Davey'sTree Expert; Funding Increase |               |                            |
| Source Envelope:   |               |                            |
| Document Pages: 1  | Signatures: 1 | Envelope Originator:       |
| Supplemental Document Pages: 0   | Initials: 2   | Gina Crabtree              |
| Certificate Pages: 3   |               |                            |
| AutoNav: Enabled   | Payments: 0   | 1 Riverside Plz FL 1       |
| Envelopeld Stamping: Enabled   |               | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                            |               | gmcrabtree@aep.com         |
|  |               | IP Address: 167.239.221.85 |

### Record Tracking

|   |   |                    |
|---|---|--------------------|
| Status: Original<br>2/8/2017 2:48:47 PM | Holder: Gina Crabtree<br>gmcrabtree@aep.com | Location: DocuSign |
|---|---|--------------------|

### Signer Events

Kevin Patton  
 kbpatton@aep.com  
 Business Analyst Principal  
 American Electric Power  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Accepted: 8/5/2014 2:08:35 PM  
 ID: 20140880-36ee-4e18-bfad-d47f5e6a2409

### Signature



Using IP Address: 12.111.104.128  
 Signed using mobile

### Timestamp

Sent: 2/8/2017 2:51:55 PM  
 Viewed: 2/9/2017 2:54:54 PM  
 Signed: 2/9/2017 3:09:12 PM

Charles V Talley  
 cvtalley@aep.com  
 Manager Distribution Engineering Services  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Accepted: 2/10/2017 2:28:03 PM  
 ID: f1d5b051-2256-4927-a221-24397619b7bc



Using IP Address: 167.239.221.85

Sent: 2/9/2017 3:09:13 PM  
 Viewed: 2/10/2017 2:28:03 PM  
 Signed: 2/10/2017 2:28:25 PM

Tom Kirkpatrick  
 tkirkpatrick@aep.com  
 Vice President Customer Service, Marketing and Distribution Services  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Accepted: 8/11/2014 7:22:30 AM  
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 Signed using mobile

Sent: 2/10/2017 2:28:26 PM  
 Viewed: 2/10/2017 5:05:12 PM  
 Signed: 2/10/2017 5:05:25 PM

### In Person Signer Events

### Signature

### Timestamp

### Editor Delivery Events

### Status

### Timestamp

### Agent Delivery Events

### Status

### Timestamp

### Intermediary Delivery Events

### Status

### Timestamp

### Certified Delivery Events

### Status

### Timestamp

| Carbon Copy Events | Status | Timestamp |
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| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/18/2015 3:27:15 PM<br>ID: 592a4afd-f450-4104-bdeb-635cbde989d5 | <b>COPIED</b> | Sent: 2/10/2017 5:05:26 PM<br>Viewed: 2/13/2017 7:00:19 AM |
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| Notary Events | Timestamp |
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| Electronic Record and Signature Disclosure |
|--|
|--|

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM  
Parties agreed to: Kevin Patton, Charles V Talley, Tom Kirkpatrick, Terri Stiltner

**ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

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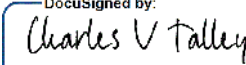
## Pricing Change Order

Contract No.: 026987430000X103 Request Date: 2/9/2017  
 Owner: Richard Simpson Effective Date: 2/9/2017  
 Authorized Reviewer: Charles Talley Contractor: Davey's Resource Group

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

| Material |   |               |                         |                     |
|----------|---|---------------|-------------------------|---------------------|
| Reason   | Material Description  | Material Code | Material Rate (\$/unit) | Material Markup (%) |
| Add      | 20% Garlon 4 Ultra, 1% Polaris, 1% Milestone, 78% Hy-Grade, Dye | MPG           | 38.15                   | 10%                 |
|          |   |               |                         |                     |
|          |   |               |                         |                     |

**American Electric Power Service Corporation as agent for the operating companies of the American Electric Power System**

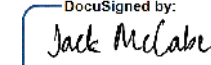
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 8B720D87F19F46B...  
 Signature

Charles V Talley  
 Name

Manager Distribution Engineering Services  
 Title

2/10/2017 | 2:36 PM EST  
 Date

**The Davey Tree Expert Company**

DocuSigned by:  
  
 BC5012C7D08E4AE...  
 Signature

Jack McCabe  
 Name

Vice President, Utility Operations  
 Title

2/14/2017 | 10:00 AM EST  
 Date

DocuSign Envelope ID: BF96E38D-B63E-40B0-BC7C-417523576E07

## THE DAVEY TREE EXPERT COMPANY

CORPORATE OFFICE, 1500 N. MANTUA ST., P.O. BOX 5193, KENT, OHIO 44240-5193  
TEL. 330-673-9511



KARL J. WARNKE, CHAIRMAN & CEO  
PATRICK M. COVEY, PRESIDENT & COO

February 9, 2017

Mr. Stephen Wengerd  
AEP Ohio – Forestry  
VIA E-Mail

**RE: Material Mix Rate Addition**

Mr. Wengerd:

The Davey Tree Expert Company is requesting the addition of a billing rate for the use of materials on the AEP property associated with our existing contract. A rate of \$38.15 per gallon is requested for the following material mix:

- 20% Garlon 4 Ultra, 1% Polaris, 1% Milestone, 78% Hy-Grade, Dye

We appreciate your consideration and await your acceptance of this rate. If you have any questions, please contact Regional Vice President, Jeff Parson, at 330-807-3121.

Sincerely,

Scott M. Deevers  
Operations Vice President

C: J. Parson  
K. Lovejoy



## Certificate Of Completion

|  |   |
|--|---|
| Envelope Id: BF96E38DB63E40B0BC7C417523576E07  | Status: Completed   |
| Subject: AEP Contract 02698743000X103; Davey'sTree Expert; Pricing Change Order 2/9/17 |   |
| Source Envelope:   |   |
| Document Pages: 2  | Signatures: 2   |
| Supplemental Document Pages: 0   | Initials: 0   |
| Certificate Pages: 3   |   |
| AutoNav: Enabled   | Payments: 0   |
| Enveloped Stamping: Enabled  |   |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                                      |   |
|  | Envelope Originator:<br>Gina Crabtree   |
|  | 1 Riverside Plz FL 1<br>Columbus, OH 43215-2373<br>gmcrabtree@aep.com<br>IP Address: 167.239.221.83 |

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## Signer Events

Kevin Patton  
 kbpatt@ae.com  
 Business Analyst Principal  
 American Electric Power  
 Security Level: Email, Account Authentication (None)  
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## Signature

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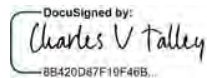
Richard Simpson  
 rasimpson@aep.com  
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 Electronic Record and Signature Disclosure:  
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 Signed: 2/10/2017 6:37:41 AM

Charles V Talley  
 cvtalley@aep.com  
 Manager Distribution Engineering Services  
 Security Level: Email, Account Authentication (None)

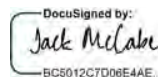


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Electronic Record and Signature Disclosure:  
 Accepted: 2/10/2017 2:35:55 PM  
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Jack McCabe  
 jack.mccabe@davey.com  
 Vice President, Utility Operations  
 Security Level: Email, Account Authentication (None)



Using IP Address: 174.228.8.123

Sent: 2/10/2017 2:36:32 PM  
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Electronic Record and Signature Disclosure:  
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## In Person Signer Events

## Signature

## Timestamp

## Editor Delivery Events

## Status

## Timestamp



| Agent Delivery Events   | Status   | Timestamp  |
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| <b>Certified Delivery Events</b>  | <b>Status</b>  | <b>Timestamp</b>   |
| <b>Carbon Copy Events</b>   | <b>Status</b>  | <b>Timestamp</b>   |
| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/18/2015 3:27:15 PM<br>ID: 592a4afd-f450-4104-bdeb-635cbde989d5 | <div style="border: 1px solid blue; padding: 5px; display: inline-block; color: blue; font-weight: bold; font-size: 1.2em;">COPIED</div> | Sent: 2/14/2017 10:00:55 AM<br>Viewed: 2/14/2017 10:03:43 AM |
| AEP Audit<br>gbscontractassessments@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:                                     | <div style="border: 1px solid blue; padding: 5px; display: inline-block; color: blue; font-weight: bold; font-size: 1.2em;">COPIED</div> | Sent: 2/14/2017 10:00:55 AM                                  |
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| <b>Payment Events</b>   | <b>Status</b>  | <b>Timestamps</b>  |
| <b>Electronic Record and Signature Disclosure</b>   |  |  |

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Kevin Patton, Richard Simpson, Charles V Talley, Jack McCabe, Terri Stiltner

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.



Policy Title: AEP Procurement Policy

**AEP PROCUREMENT POLICY ATTACHMENT B  
JUSTIFICATION FOR SOLE SOURCE, SINGLE SOURCE OR OTHER THAN LOW BID ACQUISITION**

I certify the statements enclosed and the information provided is complete and correct to the best of my knowledge. I understand that the processing of a justification form precludes the use of full and open competition in accordance with American Electric Power's Procurement Policy dated July 1, 2013. Section 5 requires that all purchases in excess of the Competitive Bid threshold of \$100,000 require competitive bidding unless justified by a Sole Source or Single Source Justification. I understand further that Awards to Other than Low Bidder must be similarly justified. Requisitioners are required to justify a Sole Source, Single Source or Other than Low Bid selection of a supplier in accordance with the instructions in the policy. This form must be completed and forwarded with the Contract and/or Purchase Requisition to proceed with the acquisition process.

At a minimum, the Justification Statement shall include, but not be limited to: 1) Business Unit; 2) description of the Goods and/or Services being acquired; 3) dollar value; 4) detailed description of why only this suggested source can furnish the requirements 5) signature of the individual(s) writing and approving the Justification Statement.

Purpose of Form: Sole Source  Single Source  Other than Low Bid Acquisition

The preliminary estimated dollar expenditure for this material, software and/or services is: [REDACTED]

Requisitioner:   
Signature *Walter A. Sherry*  
Name Walter Sherry  
Title Forestry Operations Mgr  
Date 9/22/2016 | 1:42 PM EDT

Item(s) or service(s): Distribution/Transmission vegetation management services.

Suggested source/supplier: The Davey Tree Expert Inc.

Contract/PO number (if known): 026987430000X103

Describe in detail why only this suggested source can furnish the requirements to the exclusion of other sources: Forestry is requesting that we amend an agreement with The Davey's Tree Expert to provide forestry clearing activities on our transmission right of ways to the end of the year in support of improving risk profile. By adding this service provider AEP will increase its pool of pre-approved contractors which will improve the competitive nature and cost control for this type of work. Further, this activity supports our new supplier development program as outlined in the procurement forestry business plan. Root justification for this request is that there is a significant need for crews in AEP OH and our current contractors cannot supply the needed resources. The rates have been vetted and are competitive in nature.

Approver:   
Signature *Tom Kirkpatrick*  
Name Tom Kirkpatrick  
Title VP Cust Svcs, Mktg & Dist Svcs  
Date 9/22/2016 | 1:43 PM EDT

Procurement Review:   
Initials *MC*  
Name Matthew Curtis

### FIRST AMENDMENT TO CONTRACT NO. 026987430000X103

This First Amendment to Contract No. 026987430000X103 ("First Amendment"), executed to be effective September 25, 2016 ("First Amendment Effective Date"), is by and between **American Electric Power Service Corporation**, a New York corporation, as agent for the operating companies of the **American Electric Power System** ("Owner") and **The Davey Tree Expert Company**, an Ohio corporation ("Contractor").

**WHEREAS**, Contractor and Owner entered into Contract No. 026987430000X103 with an Effective Date of May 1, 2014 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the parties hereby agree as follows:

1. In order to update Section 1 Description of Services, remove the section in its entirety and replace with:

"Subject to the terms and conditions hereof, Contractor agrees to furnish to Owner, on an as-needed basis, all supervision, labor, equipment and specified materials necessary to perform transmission and distribution vegetation management services, as delineated below, within Owner's service areas ("Work").

Vegetation management services may include but not be limited to the following:

Emergency- Local emergency restoration tree work on an on-call basis.

Herbicide and Tree Growth Regulator (TGR)- Application of appropriate herbicides and/or TGR in service areas as directed by Owner.

Mowing- Provide mowing services in Owner service areas where easements restrict the ability to use any other method for vegetation control and Owner has determined that mowing is the preferred maintenance method.

Removals- Hazard tree removals performed outside of Owner's routinely maintained right-of-ways.

Right-of-Way Maintenance- Tree and brush work on and off-road and/or cross-country on transmission and distribution lines, based upon Owner's specifications.

Side Trimming- Tree trimming along the edges of right-of-ways using either aerial lifts, climbing crews, aerial saw, chemicals and/or mechanical side trim equipment.

Storm Restoration- Emergency restoration in areas affected by storm damage without debris cleanup unless otherwise specified.

Work Planning- Perform inspection and planning services and develop plans, strategies and administrative work for various methods of vegetation management to be performed in Owner's service areas. Work planning services shall be performed using qualified transmission and distribution Contract Utility Foresters, Work Planners, Inspectors, Pesticide Applicators and TGR Pre-Notifiers as described in the documents attached in Exhibit B.

This Contract covers only such Work as may be authorized by Owner and shall not constitute an exclusive agreement between Owner and Contractor. Owner reserves the right to use its own forces,

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equipment, tools, conveyances and materials or those of another vendor to perform the same or similar Work. Parties agree this Contract does not authorize Contractor to begin performance of any Work, nor does it guarantee Contractor any minimum volume of Work.”

2. In order to update Section 3 Contract Documents, Incorporation and Priority to include guidelines and terms for additional scope as well as revising the Terms other documents, remove Section 3 in its entirety and replace with the following:

Contractor and Owner agree that the Work shall be performed in accordance with the following Exhibits:

**Exhibit A –General and Supplementary Terms**, consisting of the following documents, which are attached hereto and made a part hereof;

1. AEP General Terms and Conditions for Labor and Services, dated March 2009 Rev 3 dtd 6/14 (“AEP General Terms and Conditions”); and
2. Supplementary Terms and Conditions for Forestry Contracts, dated June 1, 2015 (“Supplementary Terms”).

**Exhibit B –Forestry Terms and Instructions**, consisting of the following documents, which are attached hereto and made a part hereof;

3. AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated June 1, 2015;
4. AEP Forestry Instructions for Forestry Contract Crew Audits, dated January 2007, including its Sample Audit Form (“Audit Instructions”);
5. Transmission Vegetation Management Program (“TVMP”), dated July 31, 2015; and
6. AEP Transmission Forestry Specs for ROW Maintenance, dated October 25, 2010.
7. Addesso

**Exhibit C –Rates**, consisting of the following documents, which are attached hereto and made a part hereof;

8. AEP Transmission Forestry Rate Clarifications for ROW Maintenance, dated September 21, 2016;
9. Labor Descriptions, dated August 1, 2011;
10. Contractor’s Rates (individually or collectively, the “Rates”);
11. A sample Work Request for Unit Price/Time and Materials Work, a sample Work Request for Lump Sum Work, and all applicable subsequently executed Work Requests; and
12. A sample Pricing Change Order Request Form and all applicable subsequently executed Pricing Change Orders.

3. In order to update Section 5 Pricing and Payment Terms, remove the section in its entirety and replace with:

“The parties agree that all Work performed under this Contract shall be completed on a Lump Sum, Unit Price, and/or Time and Materials basis priced in accordance with Contractor’s Rate Sheets in Exhibit C of the Contract.

Contractor’s Rates shall be held firm thru 4/30/19.

Pricing Change Order Process: If Contractor has unforeseen changes to Contractor’s Rate Sheets that do not conform to the Annual Rate Adjustment process described above, these changes may be made, upon Owner discretion, in accordance with the following procedures:

- Changes to Contractor's Rate Sheets shall be made using the Pricing Change Order Request Form ("Pricing Change Order") included in Exhibit C and must be presented in the authorized pricing format designated by Owner.
- Each Pricing Change Order must be submitted to the AEP Manager, Forestry Operations, as listed in Section 9 below and submitted at least 30 days before the desired effective date for the new rates. If Contractor fails to submit its proposed Pricing Change Order at least 30 days prior to the desired effective date, the proposed Pricing Change Order will not be considered and existing Contractor's Rate Sheets shall remain in effect.
- If Contractor's Pricing Change Order is accepted by Owner, the revised Contractor's Rate Sheets shall be incorporated into Exhibit C of the Contract upon the authorized signature of the parties and shall become effective as of the date of the latter signature of the Pricing Change Order.

Lump Sum Work: The parties agree to designate the specific pricing for Work performed on a Lump Sum basis in the Work Request. In the event the Contractor is assigned additional Work that was not included in the original Work Request, that Work will be priced utilizing the Contractor's Rate Sheets included in Exhibit C."

4. In order to update the pricing in Exhibit C (formerly Exhibit D), add the ROW Vegetation Management Rate Sheet, attached hereto and incorporated within.
5. In order to update Notices and Operation Contacts replace Sonia Pickens with Gina Crabtree, Contract Analyst, [gmcraabtree@aep.com](mailto:gmcraabtree@aep.com), 614.716.1261, 1 Riverside Plz, 9<sup>th</sup> fl., Columbus, OH 43215.
6. In order to update Section 9 Miscellaneous, add the following:  
  
"Contractor shall, at no additional cost to Owner, register with ISNetworld, either online by going to [www.isnetworld.com](http://www.isnetworld.com) and clicking on "Become A Member" or by contacting ISN at (214) 303-4900 or (800) 976-1303 to establish their company's subscription. Contractor must acquire and maintain a passing ISN AEP Dashboard Grade. If during the Contract term, Contractor's grade falls below AEP's minimal requirements, Owner has the right to (1) apply a probationary period where all work performed by Contractor is temporarily stopped until an investigation is performed; (2) suspend the contract; (3) terminate the Contract for cause, in accordance with Section 27.1 of the AEP General Terms and Conditions, if, in AEP sole opinion, the grade cannot be improved to a passing level within reasonable time."
7. Except as amended by this First Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**{SIGNATURES ON FOLLOWING PAGE}**

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**IN WITNESS WHEREOF**, the parties hereto have caused this First Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the First Amendment Effective Date.

**American Electric Power Service Corporation, as agent for the operating companies of the American Electric**

DocuSigned by:  
*Tom Kirkpatrick*  
By: E4EE4BC0A56E477...  
Name: Tom Kirkpatrick  
Title: Vice President Customer Service, Marketing and Distribution Services  
Date: 9/22/2016 | 1:43 PM EDT

**The Davey Tree Expert Company**

DocuSigned by:  
*Jack McCabe*  
By: BC5012C7D06E4AE...  
Name: Jack McCabe  
Title: Vice President, Utility Operations  
Date: 9/27/2016 | 8:13 AM EDT

DocuSign Envelope ID: 74757D3B-16D8-4E51-ADC2-FC0B20C5DE2D

# Exhibit A



DocuSign Envelope ID: 74757D3B-16D8-4E51-ADC2-FC0B20C5DE2D

# ***AMERICAN ELECTRIC POWER***

## **AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES**

**March 2009 Rev. 3 dated 6/14**

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**AFFIDAVIT OF COMPLETION**

**Exhibit 1**

## **AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES**

### **1.0 DEFINITIONS**

- 1.1 Business Day: "Business Day" means any calendar day, other than a Saturday or Sunday or a calendar day on which U.S. commercial banking institutions are authorized or required by law to close.
- 1.2 Change Order: "Change Order" means a written order as defined and issued in accordance with Article 12.0.
- 1.3 Contract: "Contract" means collectively the Contracting Instrument and all documents referenced in the Contracting Instrument and any Change Orders, amendments or addenda.
- 1.4 Contract Price: "Contract Price" means the price to be paid to the Contractor for the performance of Work as set forth in the Contracting Instrument.
- 1.5 Contracting Instrument: "Contracting Instrument" means the contractual document that identifies the parties, the nature of the Work, the Contract Price, documents to be included as part of a Contract, and other matters relating to a Contract. The Contracting Instrument may be in the form of a contract letter, blanket purchase order, purchase order or other similar documents.
- 1.6 Contractor: "Contractor" means the entity contracting with Owner for the performance of Work.
- 1.7 Direct Cost: "Direct Cost" means the actual costs and charges incurred and payments made by Contractor, its Subcontractors, for Site equipment, materials, services and labor (including payroll burden and expenses) which are directly attributable to the performance of Contractor's Work hereunder. Direct Cost includes Contractor's home office or Site labor to the extent Contractor's home office or Site labor is directly assignable to the Work which must be demonstrable under the circumstances. Direct Cost shall not include corporate, general and administrative costs including home office functions, sales, marketing, accounting, human resources, information technology, payroll, profit, research, development, quality assurance and control, purchasing, safety, management, administration, warranties, insurances, off-Site or other unabsorbed costs.
- 1.8 Final Acceptance: "Final Acceptance" means Owner's determination that the Work has been completed in accordance with the Contract requirements.
- 1.9 Initial Acceptance: "Initial Acceptance" means Owner's determination prior to final inspection and testing that the Work conforms to the Contract requirements for purposes of receipt.
- 1.10 Owner: "Owner" means any one or more of the companies of the American Electric Power System as may be specified in the Contract Instrument.
- 1.11 Site: "Site" means Owner's property or such other premises (including adjacent bodies of water and property owned or controlled by a third-party) upon which the Work is to be performed.
- 1.12 Subcontractor: "Subcontractor" means vendors, suppliers, consultants, and subcontractors of any tier, materialmen, professionals, laborers, and all other persons providing equipment, materials or services directly or indirectly to Contractor in connection with the Work.
- 1.13 Work: "Work" means all of Contractor's obligations under the Contract.

2.0 CONTRACTOR'S OBLIGATIONS

- 2.1 Contractor shall at its expense provide everything necessary for the complete, proper and timely execution of the Work including, but not limited to, home office support, supervision, labor, tools, transportation, safety equipment, construction equipment, temporary utilities and facilities, equipment to be installed, materials and supplies, unless explicitly excluded in the Contract. Contractor's performance of the Work shall include everything requisite and necessary to comply with prudent electric utility industry standards and to complete its Work, notwithstanding the fact that every item necessarily involved may not be specifically mentioned. Details and items not indicated by the Contract documents shall be adequately and properly performed by Contractor at no extra cost if such details and items are necessary to complete the intent of the Contract or otherwise to complete the Work.
- 2.2 Contractor is responsible for considering the conditions affecting the Work including, but not limited to, conditions affecting the transportation, disposal, handling and storage of materials; the availability and cost of labor, water, electric power, utilities and roads; the uncertainties of weather, river stages, and similar physical conditions at the Site; the conformation and condition of the ground; and the character of equipment and facilities needed. Contractor shall take into account the character, quality and quantity of surface and subsurface materials or obstacles to be encountered to the extent this information is reasonably ascertainable from the contract documents or an inspection of the Site.
- 2.3 Contractor shall immediately and before such conditions are disturbed notify Owner of: (a) subsurface or latent physical conditions at the Site which differ materially from those indicated in the Contract; (b) unusual geologic conditions at the Site which differ materially from conditions ordinarily encountered or from conditions addressed in the Contract; or (c) artifacts or articles which appear to have archaeological or historical significance. Owner shall promptly investigate such conditions and, if such conditions do materially differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of the Work, the parties shall agree to amend the Contract. No claim of Contractor under this clause shall be allowed unless Contractor has given immediate notice as required above and confirmed such notice in writing within ten (10) days of discovery.
- 2.4 Contractor shall have an authorized representative at the Site to whom Owner may give instructions at all times when Work is being performed.
- 2.5 Contractor shall assign qualified and competent personnel to perform the Work and have qualified and competent supervision at the Site at all times to direct and observe the Work. Key personnel shall not be removed from the Work without prior notice to, and consent by Owner which shall not be unreasonably withheld. Contractor will investigate and take appropriate action with respect to any personnel problems brought to its attention by Owner.
- 2.6 Contractor shall confine all of its operations and personnel to those areas of the Site to which Owner authorizes access.
- 2.7 Contractor's personnel may not operate Owner's tools, vehicles, materials or equipment ("Owner's Equipment") without Owner's prior authorization. If Contractor borrows Owner's Equipment, Contractor (a) agrees that Owner has provided Owner's Equipment AS IS, with no representations or warranties; (b) assumes full responsibility for the protection of the borrowed Owner's Equipment; (c) assumes all liability for injuries or damages resulting from the use of the borrowed Owner's Equipment; and (d) agrees to return the borrowed Owner's Equipment to Owner in the same condition as when it was borrowed, or, if repairs are necessary, to cause such repairs to be performed promptly at Contractor's expense before the Owner's Equipment is returned to Owner. Owner has no obligation to lend Owner's Equipment to Contractor.

- 2.8 Contractor shall cooperate with Owner and others working at or near the Site. Contractor shall promptly report to Owner any defects in the work of others which affects the Work. Failure to report such defects constitutes acceptance of the conditions by Contractor. Contractor shall properly fit, connect and coordinate its Work with that of Owner and other contractors.
- 2.9 Contractor shall keep all of its work areas free from trash and debris, and keep its work areas "broom clean" on a continuous basis.
- 2.10 Contractor shall secure and protect its materials, tools, equipment and the Work, including Owner-provided materials and equipment.
- 2.11 Contractor is responsible for the proper execution of the Work with respect to any base lines and bench marks established by Owner.
- 2.12 If the Work is subject to prevailing wage requirements, Contractor agrees to comply with such requirements.
- 2.13 Contractor, its Subcontractors, and their respective employees and agents involved in the Work shall adhere to the provisions contained in Owner's Code of Business Conduct which can be found at Owner's website.

### 3.0 TERM AND EFFECTIVE DATE

- 3.1 The Contract shall commence as of the effective date and, unless earlier terminated as provided in Article 27.0, shall terminate on the termination date set forth in the Contract. Unless specified elsewhere in the Contract, the effective date of the Contract shall be the earlier of the date on which Contractor begins performance hereunder or the date of the latter signature on the Contract.

### 4.0 RELATIONSHIP OF THE PARTIES

- 4.1 Contractor and all of its employees and Subcontractors are, with respect to Owner, independent contractors. Contractor will be solely responsible for the supervision, direction, and control of its employees and Subcontractors. Contractor is responsible for the payment of all compensation, benefits, and employment taxes with respect to the Contractor's employees.

### 5.0 ASSIGNMENT AND SUBCONTRACTING

- 5.1 Contractor shall not assign or otherwise dispose of the Contract, or any obligations hereunder, without the written consent of Owner. Any assignment or disposal without the written consent of Owner shall be null and void.
- 5.2 Prior to entering into any subcontract, Contractor shall submit to Owner a subcontractor data sheet that includes the name and address of the Subcontractor and the scope of work proposed to be included under such subcontract. Within five (5) Business Days of receipt of a Subcontractor data sheet, Owner may reject such Subcontractor without cost or contract extension by giving written notice of such rejection to Contractor.
- 5.3 Contractor is responsible for the selection of any Subcontractor and for the Subcontractor's proper performance of the Work assigned to it. If the work of a Subcontractor is not in compliance with the Contract requirements, Contractor shall take immediate steps to bring the Subcontractor's work into compliance and, at Owner's written request, terminate its contractual relationship with the Subcontractor as it relates to the Work at no cost to Owner.

6.0 LABOR RELATIONS

- 6.1 Contractor shall comply with any project, national or local labor agreements that are applicable to the Work or Site. Contractor shall cooperate with Owner and other contractors in establishing and maintaining labor work rules and practices.
- 6.2 When the Work is performed by building and construction trades labor, a pre-job conference shall be held with local labor representatives prior to starting Work. Owner shall be afforded the opportunity to attend and participate in pre-job conferences.
- 6.3 Contractor shall provide immediate notice to Owner of any actual or potential labor dispute that may delay the timely, efficient and productive performance of the Work.
- 6.4 Contractor shall inform and cooperate with Owner on labor matters. Contractor shall consult with Owner prior to rendering its decision(s) on labor matters that may impact the timely, efficient and productive performance of the Work.
- 6.5 Contractor shall exercise its management rights contained in applicable labor agreements to establish, maintain, and enforce work rules conducive to timely, efficient, productive and harmonious work operation. Contractor shall take the necessary steps available to resolve grievances, jurisdictional disputes, or other violations of collective bargaining agreements.

7.0 SAFETY AND SECURITY

- 7.1 Contractor shall perform the Work in a safe and careful manner, provide first aid facilities and transportation, and use such safety devices and methods as are necessary to protect its employees, agents, Subcontractors, Owner's employees and agents, other contractors and the public from bodily injury and property damage.
- 7.2 Contractor shall comply with and enforce all laws, rules and regulations applicable to safety and health standards, including, but not limited to, the Occupational Safety and Health Act of 1970 (OSHA) and any revisions of OSHA or successor legislation.
- 7.3 Contractor shall comply with project and Site safety and security rules and all procedures issued by Owner, provided that such rules and procedures do not conflict with OSHA or other safety laws, rules or regulations. Contractor shall assign a competent person at all times to manage, coordinate and enforce its safety program during performance of the Work.
- 7.4 Contractor shall provide Owner with Material Safety Data Sheets (MSDS) for all applicable materials prior to delivery to Owner's Site.
- 7.5 Contractor shall obtain Site permits or approval from Owner for its vehicles, any excavation, use of explosives, access to restricted areas, use of Owner's Equipment, tools and facilities, and other similar activities.
- 7.6 Owner will arrange all necessary clearances on energized equipment, electrical and communications circuits, piping systems or other operational equipment. Contractor shall notify Owner requesting the clearances prior to the scheduling of such Work. Contractor shall comply with Owner's clearance permit system regarding tagout and lockout of electrical and mechanical systems and other equipment.
- 7.7 Contractor shall fully inform Owner in writing regarding the types, quantities and use of any hazardous materials brought on the Site; the types and quantities of hazardous wastes being generated from the Work; and Contractor's program for proper storing, handling and disposal of such materials in a safe and secure manner.

- 7.8 Contractor shall immediately inform Owner of all regulatory safety, health and environmental inspections, citations and penalties associated with the Work. Contractor shall provide Owner with written reports and copies of all documents submitted to or by regulatory agencies and insurance companies.
- 7.9 Contractor shall promptly inform Owner of any injuries to its employees, agents, Subcontractors, or other persons arising out of the Work that require medical treatment.
- 7.10 Contractor shall obtain, maintain, and properly complete all record keeping required by regulatory agencies. Upon request, Contractor shall provide Owner with copies of all logs, reports and other records.
- 7.11 Contractor shall investigate all accidents resulting in personal injury, property damage, or near misses to determine root cause(s) and corrective action(s). Upon request, Contractor shall provide Owner with a copy of investigative reports, including all documents submitted to insurance companies.
- 7.12 All of Contractor's employees, agents, Subcontractors, vehicles, trailers, etc. entering or leaving the Site are subject to inspection at any time by Owner.
- 7.13 If a safety violation or other unsafe condition causes imminent danger, Owner may immediately shut down the Work involved without advance written notice.
- 7.14 Contractor and all Subcontractors performing Work at Site must have a substance abuse program. This program must apply to all personnel. Minimum requirements of this program shall include pre-hire testing, testing for cause and if requested, random testing. Screening substances and their associated cut-off limits are listed below.

| <u>Drug Classes</u> | <u>Screening Cut-Off Limit (ng/ml)</u> | <u>Confirmation Cut-Off Limit (ng/ml)</u> |
|---------------------|--|---|
| Amphetamines        | 1,000                                  | 500                                       |
| Benzoyllecgonine    | 300                                    | 150                                       |
| Cannabinoids        | 50                                     | 15  |
| Opiates             | 2,000                                  | 2,000                                     |
| Phencyclidine       | 25                                     | 25  |

Blood & Breath alcohol content : .02% per Department of Transportation.

Testing shall be performed by a testing facility certified by Department of Health & Human Services. Personnel must have evidence of having tested negative within a year prior to employment. Owner will accept conditional employment predicated upon (a) employee(s) furnishing evidence that they have submitted to testing within forty-eight (48) hours of initial employment and (b) employee(s) furnishing evidence of negative test results within five (5) work days of initial employment. Contractor shall ensure personnel are "drug free". Owner reserves the right to examine evidence outlined herein. Contractor's program shall incorporate reciprocity on "drug free" employee verification to minimize Owner's economic impact and employee recertification while maintaining the program's intent.

- 7.15 If required by Owner, Contractor must meet certain security criteria set forth herein.
  - 7.15.1 Contractor shall submit to Owner a copy of its background investigation process for Owner's review and file. If Owner, in its sole discretion, determines that Contractor's background investigations do not meet certain specific requirements, then Contractor, at

its expense, must perform a background investigation that does meet Owner's certain specific requirements on each individual designated by Contractor to perform Work, or is performing Work on behalf of Contractor, for Owner (referred to herein for purposes of this Article, as an "individual"). Notwithstanding anything to the contrary stated herein, Owner reserves the right to conduct a background investigation on each individual at Contractor's expense.

- 7.15.2 Owner's certain specific requirements of background investigations include the following: (i) determination of whether an individual has been convicted of a felony crime in each state where the individual has resided during the past seven years; (ii) performance of the background investigation at the state level (in other words, to only search the records of the county in which the individual has resided during the past seven years is not a sufficient background investigation); and (iii) if the individual is to operate a motor vehicle while performing Work for Owner, then a state operator's license abstract must be completed in the states where the individual has been licensed as a vehicle operator during the past seven years.
- 7.15.3 If any background investigation reveals or indicates that an individual has been convicted of a felony crime, then the Contractor must notify the Owner prior to the individual commencing Work. Owner in its sole discretion shall have the option of barring from any Work Site any individual who has a reported felony conviction. Owner may audit or review specific Contractor screening files to ensure compliance with the Contract.
- 7.15.4 If an individual requires unescorted access to Owner's critical cyber assets, then Owner will conduct its own background investigation, which will include a Social Security Number verification. Additional specific provisions or requirements related to any Owner conducted background investigation pursuant to this Section 7.15.4 will be communicated to Contractor prior to implementation of such background investigation.
- 7.15.5 Contractor shall not perform any screening activities that violate the federal Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964 or any other applicable law in any circumstances. Contractor shall ensure that the substance and manner of any and all background investigations performed by Contractor conform fully to applicable law.
- 7.16 "Personally Identifiable Information" or "PII" means any information to which Contractor is provided access that could identify an individual either directly or indirectly including, without limitation to the individual's name, credit card numbers, social security number, biometric, bank account numbers, passport numbers, computer passwords or health, financial or employment information and other individual confidential information.
- 7.16.1 To the extent that Work under the Contract requires Contractor to be given access to PII gathered and/or maintained by or on behalf of Owner, or in the event Contractor acquires access to or encounters any PII during performance of the Work, Contractor shall after receipt thereof, treat such PII as confidential and safeguard such PII from unauthorized use and disclosure. Upon request of Owner, Contractor shall have its employees execute a confidentiality agreement protecting PII. Contractor agrees not to appropriate such PII for its own use or to disclose such PII to third parties unless specifically authorized by Owner in writing. Contractor shall ensure that its employees will not discuss, divulge or disclose any such PII to any person or entity except those persons directly concerned with and only to the extent necessary to complete the performance of the Work. Contractor shall access, use and process PII and other data on behalf of Owner only for the purposes specified in the Contract.



- 7.16.2 Contractor shall comply with (i) NERC Reliability Standards as applicable, including without limitation, those relating to Critical Infrastructure Protection, (ii) Owner's security standards, and (iii) such further instructions as Owner may provide regarding the processing of such PII. Contractor shall inform Owner promptly if it has reason to believe that applicable law (or changes in applicable law) prevents Contractor from fulfilling the obligations relating to treatment of PII or other data under Owner's security standards and/or the Contract.
- 7.16.3 To the extent permitted by law, Contractor shall notify Owner promptly and act only upon Owner's instruction concerning: (a) any request for disclosure of PII or other data by law enforcement or other governmental authority; (b) any request by law enforcement or other governmental authority for information concerning the processing of PII or other data in connection with the Contract; or (c) any request received directly from an individual concerning his/her PII.
- 7.16.4 Contractor may not store PII on computers, mobile devices, including but not limited to cellular telephones and/or personal digital assistants, servers and/or storage devices including removable media (any of which, hereinafter known as a "Computer"), unless required for the performance of Work. Any such information must be deleted from a Computer, in a manner that ensures that it cannot be accessed or read, as soon as such storage is no longer required for the performance of Work.
- 7.16.5 Upon termination of the Contract or upon Owner's request, Contractor must promptly (a) return all PII in written form to Owner, and (b) delete all PII in Contractor's possession or control (on computer or in whatever other form or media) in a manner that ensures that this information cannot be accessed or read.
- 7.16.6 Contractor shall administer a monitoring process to ensure compliance with Section 7.16 and the related subsections hereof, promptly report any breaches to Owner, and implement immediate, appropriate corrective actions to contain and prevent recurrence. Contractor shall report to Owner immediately upon discovery of a real or suspected loss of PII. In the event of a breach of this provision or the occurrence of any other event regarding PII that requires notification under applicable law, Contractor agrees to assume responsibility for informing all such individuals in accordance with applicable law.
- 7.16.7 In addition to any remedy available to Owner under the Contract, Contractor acknowledges that any breach of Section 7.16 or the related subsections hereof by Contractor or its Subcontractors may subject Contractor to civil and criminal penalties. Contractor shall include the full text of Section 7.16 and the related subsections 7.16.1 through 7.16.7 in all appropriate subcontracts. However, including such provision in the subcontracts shall not relieve Contractor of its obligation to ensure compliance with the provisions of Sections 7.16.1 through 7.16.7.

## 8.0 MATERIALS

- 8.1 All Contractor-furnished materials, equipment and related products (referred to in this Article 8.0 as "Materials"), which are to be installed shall be new and meet the requirements of all applicable codes. Materials which will not become a part of the permanent installation are not required to be new. Owner reserves the right to reject materials which have not been previously used but which have been in storage for an unreasonable period of time. Title to and risk of loss of the Materials shall pass to Owner upon Final Acceptance of the Work. Title to the Materials shall be free and clear of all liens and encumbrances.

- 8.2 Contractor shall not substitute Materials specified in the Contract unless authorized by Owner in writing. Unless substitution has been so authorized, Contractor shall, at its expense, remove and replace any improperly substituted material.
- 8.3 Upon Owner's request, Contractor shall, at its expense, submit to Owner samples of Contractor-furnished materials. Contractor must obtain Owner's written approval before performing Work involving the use of materials for which samples have been requested. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes. Materials used shall conform to the approved samples. Contractor shall remove and replace nonconforming materials at its expense.

9.0 INSPECTION AND ACCEPTANCE

- 9.1 Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed conforms to the Contract requirements. Owner reserves the right to review and approve the adequacy of Contractor's inspection system. Contractor shall provide all quality control and quality assurance program information requested by Owner.
- 9.2 Owner shall have free access to the Work for inspection purposes. Owner's inspection, receipt or Initial Acceptance of the Work shall not relieve Contractor of its obligation to comply with the terms of the Contract.
- 9.3 Each party shall bear its own expenses in performing inspections, except that (a) Owner may use Contractor's facilities, ladders and scaffolds to perform inspections of the Work; (b) Contractor shall pay Owner's expenses in re-inspecting Work which was rejected as non-conforming to the Contract requirements in an earlier inspection; (c) Contractor shall pay the costs of uncovering and re-covering Work for Owner's inspection if Contractor failed to give Owner reasonable notice that the Work was ready to be covered; and (d) prior to Final Acceptance, if Owner requests an inspection of Work already completed which requires removing and tearing out Work, and the Work is found to be materially defective, Contractor shall pay the expenses of inspection and reconstruction, but if the Work is found to be in conformance with the Contract requirements, Owner shall pay the expenses of inspection and reconstruction.
- 9.4 Owner will not pay for defective work. Contractor shall repair or replace all defective work at its expense. Contractor shall promptly remove from the Site any Contractor-furnished materials that do not comply with the requirements of the Contract. If Owner-furnished materials have been used in any defective work, the cost of such materials shall be backcharged to Contractor.
- 9.5 Owner shall have the right to take possession of or use any part of the Work. Owner's possession or use shall not constitute Initial Acceptance or Final Acceptance of the Work.
- 9.6 Unless otherwise provided in the Contract, Final Acceptance by Owner shall be made as soon as practicable after all Work has been completed and inspected. Any part of the Work not rejected by Owner following Final Inspection shall be deemed to have achieved Final Acceptance.

10.0 SCHEDULE

- 10.1 Contractor shall perform the Work to meet the schedule date(s) set forth in the Contract. Contractor shall not commence Work until authorized by Owner to do so.
- 10.2 In a format acceptable to Owner, Contractor shall develop, update, maintain and provide to Owner a written schedule for execution of the Work. The schedule shall be time scaled, complete, and accurate in detail depicting Contract milestone dates, work activities and durations. Upon review and approval by Owner, this schedule shall become the Contract schedule. Updates to the Contract schedule shall

be provided to Owner on at least a monthly basis. Updates shall depict actual progress measured against planned progress.

- 10.3 Contractor shall notify Owner within 24 hours of the first knowledge that any completion date(s) will not be met and shall, within five (5) Business Days thereafter, submit a detailed program depicting the plans and actions being taken to regain the lost time. The notice shall not limit any other rights or remedies afforded Owner under the Contract or by law.

11.0 TERMS OF PAYMENT

- 11.1 Except as otherwise provided in the Contract, the following terms of payment shall apply:

11.1.1 The Contract Price set forth in the Contract shall constitute full and complete payment for all Work.

11.1.2 Contractor shall submit invoices with proper documentation to Owner for the Work completed or for milestones achieved during the prior month. Owner may withhold all or any part of payment in an amount necessary to protect Owner from loss due to the occurrence, or imminent occurrence, of (i) Contractor's breach or failure to perform in accordance with the Contract, (ii) defective Work, (iii) Contractor's failure to pay any Subcontractor, (iv) other claims by Owner against Contractor, including indemnity claims, and (v) damages for delay or any agreed upon liquidated damages.

11.1.3 Owner shall pay 90% of each properly submitted and accepted invoice within forty five (45) days of receipt. The release of retention shall become due and payable forty five (45) days after the date of Final Acceptance of the Work.

11.1.4 Each invoice shall contain a statement that all bills for material and labor relating to the Work have been paid in full by Contractor, and there are no unpaid bills for which a lien could be filed. If requested by Owner, Contractor shall provide evidence of such payments. The final invoice for the Work shall be accompanied by a satisfactorily completed Affidavit of Completion in the form attached as Exhibit 1. Payment of the final invoice and retention constitutes a full and final release of Owner from all claims, damages, liabilities and obligations under the Contract.

- 11.2 Contractor shall promptly pay all of its Subcontractors.

12.0 CHANGES IN WORK AND EXTRA WORK

12.1 Change in Work

12.1.1 "Change Order" means a written order issued in accordance with this Article 12.0 documenting an addition to, deletion from, or other modification to the Work, including a change in the scope of Work, the Contract Price, the payment schedule, the completion dates, or the schedule for the Work.

12.1.2 Owner may issue a Change Order: (i) at Owner's option, or (ii) if requested by Contractor due to the occurrence of an event that entitles Contractor to a Change Order as determined by Owner.

12.1.3 If Owner issues a Change Order, Contractor shall perform the changed Work in accordance with the terms of the Contract and the issued Change Order.

- 12.1.4 No order, statement or other conduct of Owner shall be treated as a change in Work until such change is authorized in writing by Owner.
- 12.1.5 Contractor shall not be entitled to a Change Order for conditions such as, but not limited to, (i) work which is of such a nature as to be normally included in the Work or is reasonably inferable from the Contract; (ii) any errors, omissions, non-performance, negligence, deficiencies or improper or defective work on the part of Contractor (including miscalculations, incorrect estimates, or other errors in Contractor's proposal for the Work); (iii) changes relating to refinement, minor correction and detailing of the Work or any part of the Contract; or (iv) other unallowable claims such as cost impacts not due to Owner and cumulative impact claims.
- 12.1.6 With respect to Contractor claims for additional compensation, Owner shall pay only incremental Direct Costs associated with the proposed changes and only to the extent that Contractor can demonstrate that the changes actually increased its costs of performance. Any claims for additional compensation based on a change to the Work or extra work must be material in nature, and Contractor must provide full documentation supporting all elements of such claims. For a reduction in the scope of Work or a change which reduces Contractor's costs, the Contract Price shall be adjusted downward. The payment for changes to the Work shall be complete compensation to Contractor for performing such changes, including any schedule or cost impacts on the Work.
- 12.1.7 If Owner requests in writing that Contractor furnish materials or equipment to be permanently incorporated in changed work, extra work or cost-plus work, Owner shall reimburse Contractor for such materials or equipment its incremental Direct Cost plus a percentage mark-up to be agreed upon by the parties. Requests for payment for materials and equipment shall be accompanied by copies of receipted invoices. Owner has the right to audit Contractor's requests for changes and the financial basis therefor.
- 12.1.8 If Contractor and Owner disagree on whether any particular work is within the scope of Work and such work must be completed to insure timely progress, Owner will issue a disputed Change Order to cover the disputed work. Contractor shall diligently proceed with the disputed work. By noon on the work day following performance of the disputed work, Contractor shall submit to Owner for review timesheets itemizing all labor and equipment hours expended on the disputed work and an itemized listing of Contractor furnished materials. Such review is not an admission of liability by Owner. Prior to Final Acceptance, each disputed Change Order will be resolved to the mutual agreement of the parties.
- 12.2 Extra Work
- 12.2.1 "Extra work" is work which is beyond Contractor's scope of Work. At Owner's request, Contractor shall perform extra work at the applicable prices set forth in the Contract. If the Contract prices are not applicable to the type of extra work to be performed, Contractor shall promptly submit a proposal to perform the extra work, which proposal shall become an amendment to the Contract upon acceptance by Owner. If Owner directs Contractor to perform extra work on an overtime basis, Owner shall reimburse Contractor the actual payroll cost of premium time for direct job labor. Contractor shall invoice and maintain separate cost records for each extra work authorization issued by Owner.
- 12.2.2 If Owner elects, Contractor shall perform extra work on a cost-plus basis. Cost-plus extra work shall be paid in accordance with Article 13.0.
- 12.3 Contractor waives all claims for additional compensation for changes in work and extra work not made strictly in accordance with the terms of this Article 12.0.

13.0 REIMBURSEMENT FOR COST-PLUS WORK

- 13.1 Direct labor costs will be reimbursed at the actual payroll costs of direct labor wages, fringe benefits, payroll taxes and insurance required by collective bargaining agreements or by law, plus an agreed wage mark-up. Copies of certified payrolls and time sheets shall be provided to Owner for review and approval. Contractor shall not invoice Owner for social security, unemployment, workers' compensation, or other federal, state or local taxes or insurance at rates which exceed Contractor's actual costs.
- 13.2 Owner will pay Contractor actual invoice costs for subcontracted work, provided Owner has approved payment terms in advance of performing the work, plus an agreed mark-up.
- 13.3 Contractor-furnished permanent materials and equipment costs will be reimbursed at actual invoice costs plus an agreed mark-up.
- 13.4 Construction equipment costs will be reimbursed based on actual usage time during the performance of Work and established rental rates not to exceed monthly rates set forth in the "Rental Rate Blue Book for Construction Equipment" adjusted for geographical region as published by Dataquest or other basis acceptable to Owner. Hourly rates shall be established by taking the monthly rate divided by 176 hours per month.
- 13.5 Small tools and consumables costs will be reimbursed based on agreed rates.
- 13.6 Field supervision, clerical, safety and other non-direct labor costs will be reimbursed at agreed billing rates, except that reimbursement for these costs for cost plus extra work shall require the prior review and approval of Owner.

14.0 BACKCHARGES

- 14.1 Owner may impose backcharges against Contractor or deduct backcharges from monies owed to Contractor for performance or reperformance by Owner or others of Work, including but not limited to, costs associated with defective work, nonperformance by Contractor, termination for cause, clean-up and disposal of debris, damages to Owner's tools and equipment and warranty repairs. Contractor will be responsible for the cost of such performance or reperformance plus a fifteen percent (15%) administrative charge.

15.0 TAXES

- 15.1 The Contract Price shall include, and the Contractor shall pay, all taxes and assessments for unemployment insurance, workers' compensation, social security and disability benefits, and other taxes which are based upon the compensation paid to persons employed by Contractor or its Subcontractors for the performance of any Work under the Contract.
- 15.2 Except as provided below, the Contract Price shall include all applicable foreign, federal, state and local taxes payable by Contractor with respect to the Contract.
  - 15.2.1 Contractor Purchases. If Owner specifies that tangible personal property to be incorporated into real property as defined for sales and use tax purposes or taxable services to be purchased by Contractor from vendors or Subcontractors qualify for exemption from sales or use taxes, Contractor shall not include sales or use taxes on such exempt tangible personal property or services in the Contract Price. Unless otherwise specified: a) consumable materials and supplies or Contractor's tools and equipment that are not incorporated into the Work or the overall project are not eligible for exemption

and the Contract Price shall include, and Contractor shall pay, any sales or use taxes on such items; and b) Contractor will use its own properly-executed exemption or resale certificate, and not Owner's direct pay permit, to make exempt purchases of tangible personal property or services from vendors or Subcontractors.

15.2.2 Owner Purchases from Contractor. With respect to any Owner purchases from Contractor of tangible personal property not incorporated into real property as defined for sales and use tax purposes or taxable services, Owner shall provide to Contractor its direct pay permit (if Owner has been issued a direct pay permit) or an appropriate exemption certificate required to relieve the Contractor of its responsibility to collect sales or use tax from the Owner. If Owner provides Contractor such direct pay permit or exemption certificate, sales or use taxes on Owner purchases from Contractor of tangible personal property or taxable services shall not be collected from Owner or included in the Contract Price. Unless otherwise approved or directed by Owner in writing, Contractor shall not use Owner's direct pay permit to make exempt purchases of tangible personal property or taxable services from vendors or Subcontractors.

15.2.3 Contractor Cooperation. Contractor shall take all steps reasonably necessary to ensure that Contractor's purchases from vendors or Subcontractors of items of tangible personal property or services are exempt from sales and use tax pursuant to any applicable exemption pursuant to the law of any U.S. jurisdiction or its political subdivisions.

## 16.0 INSURANCE

16.1 Contractor shall at its sole expense, procure and maintain, and shall cause its Subcontractors to procure and maintain, throughout the term of this agreement except as set forth in Section 16.5, the following types of insurance with the following, minimum limits:

16.1.1 Workers' compensation insurance in accordance with all jurisdictions where Contractor has operations including where the Work is to be performed. If Contractor is a non-subscriber to workers' compensation evidence of insurance equivalent to workers' compensation must be provided.

16.1.2 Employer's liability in an amount not less than \$1,000,000.

16.1.3 Business automobile insurance covering all Owned, Non-owned and Hired Autos in an amount not less than \$5,000,000 per occurrence.

16.1.4 Commercial general liability insurance covering claims of bodily injury and property damage in an amount not less than \$5,000,000 per occurrence.

16.1.5 Aircraft liability insurance with a combined limit of not less than \$10,000,000. Such insurance shall be required only if the Contractor or its Subcontractors shall utilize an aircraft in the performance of the Work.

16.1.6 If Contractor (or any of its Subcontractors) are engaged in operations which use marine vessels or floating equipment, or which are subject to maritime jurisdiction, the following insurance shall be required: Marine Liability insurance (including Jones Act and maritime employer's liability if operations are subject to federal jurisdiction) and pollution liability (under terms equivalent to current W.Q.I.S. policy provisions if operations are subject to federal jurisdiction) in amounts not less than \$10,000,000 per occurrence.

- 16.1.7 Professional liability insurance and/or Errors and Omissions insurance in an amount not less than \$5,000,000. Such insurance shall be required only if the Work includes professional liability exposures.
- 16.1.8 "All risk" property insurance covering the full replacement cost of Contractor's personal property.
- 16.2 To the extent permitted by law, Contractor shall waive, and shall cause each of its insurers to waive, any and all rights of recovery, by subrogation or otherwise, against Owner and its affiliates, officers, directors, employees, agents and assigns of any type. Each of Contractor's insurance policies shall be primary to and non-contributory with any insurance or self-insurance of Owner.
- 16.3 The Commercial General Liability, the Business Automobile, and (if applicable) the Aircraft Liability and Marine Liability insurance shall include Owner as an additional insured with respect to Owner's liability arising out of the operations of Contractor. Such coverage shall also include blanket contractual coverage and contain no exclusion for explosion, collapse, or underground property damage (XCU coverage).
- 16.4 The insurance required by this Article 16.0 is in addition to and separate from any other obligations contained in the Contract.
- 16.5 Products and/or completed operations coverage shall be maintained for a period of five (5) years after the completion of the Work. If any of the policies indicated above are placed on a "claims-made" basis, such coverage shall be maintained for a period of not less than five (5) years following the completion of the Work.
- 16.6 Any deductibles or retentions on any of the policies required herein shall be the sole responsibility of the Contractor.
- 16.7 The above referenced limit requirements may be met by any combination of umbrella or excess and primary policies so long as the total limit of insurance requirement is met. The required coverages referred to herein shall in no way affect, nor are they intended as a limitation of, Contractor's liability with respect to its performance of the Work. The limits of insurance indicated herein are minimum requirements and are in no way intended to limit Contractor's liability.
- 16.8 In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special, or statutory employees) are covered by the Louisiana Worker's Compensation Act, La. Rev. Stat. Ann. 23:1021 et seq., Owner and Contractor agree that pursuant to Section 23:1061 (A) (1) all Work performed by Contractor and its employees under the terms and conditions of the Contract is an integral part of Owner's operations and is essential to Owner's ability to generate its goods, products and services. Additionally, Owner and Contractor agree that for purposes of Section 23:1061 (A) (3) Owner is the principal or statutory employer of Contractor's employees. Irrespective of Owner's status as the statutory employer or special employer of Contractor's employees, pursuant to Section 23:1031 (C), Contractor shall remain primarily responsible for the payment of Louisiana Worker's Compensation benefits to its employees, shall indemnify Owner from any and all claims of Contractor's employees or its Subcontractor's employees and shall not be entitled to seek contribution for any such payments from Owner.
- 16.9 Upon inception of the Contract and prior to commencement of Work, Contractor shall provide Owner with an acceptable certificate of insurance evidencing the insurance required under Article 16. Contractor will not be permitted to bring its employees, materials or equipment onto the Site until Owner receives from such evidence of insurance. Contractor also must provide an updated certificate of insurance at any time during the Contract term upon Owner's request. Contractor

shall immediately notify Owner of cancellation or of any material changes in the insurance policies required herein. If such insurance policies are subject to any exceptions to the terms specified herein, such exceptions shall be explained in full in such certificates. Owner may, at its discretion, require Contractor to obtain insurance policies that are not subject to non-standard exceptions.

- 16.10 In lieu of Sections 16.1 thru 16.9, the Owner may elect to implement an Owner Controlled Insurance Program ("OCIP"). If an OCIP is implemented, all Contractor(s) and Subcontractor(s) of any tier and such other persons or entities as the Owner may designate as enrolled parties, may, at Owner's option, be required to enroll and participate. Owner shall procure and maintain at its own expense during the performance of this Contract and a stipulated completed operations period, such insurance coverage as Owner deems appropriate on behalf of enrolled parties. Eligible Contractor(s) and Subcontractor(s) must submit all necessary enrollment forms for acceptance into the OCIP, and agree to the terms of the Owner's project safety standards. Owner and Contractor agree that the terms of the OCIP as contained in amendments to this Contract and the OCIP Contractor Manual shall control. The OCIP does not relieve any Contractor or Subcontractor from its obligations to procure coverage for offsite operations or coverages not included in the OCIP. In the event an OCIP is implemented, amended insurance requirements for enrolled parties will be provided.
- 16.11 The furnishing of insurance by Owner through an OCIP will in no way relieve or limit any enrolled party of any responsibility, liability, or obligation imposed by the contract documents or by law, including without limitation any indemnification obligations which any enrolled party has to the Owner thereunder.

17.0 INDEMNIFICATION

- 17.1 The laws of the state where the Work giving rise to the claim is performed shall apply to this Article 17.0.
- 17.2 **TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.**
- 17.3 **WITH RESPECT TO CLAIMS AGAINST OWNER BY CONTRACTOR'S EMPLOYEES, CONTRACTOR UNDERSTANDS AND AGREES THAT THIS INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY, AND CONTRACTOR EXPRESSLY WAIVES, ITS IMMUNITY AS A COMPLYING EMPLOYER UNDER ANY**



**APPLICABLE WORKERS' COMPENSATION LAW, BUT ONLY TO THE EXTENT THAT SUCH IMMUNITY WOULD BAR OR AFFECT RECOVERY UNDER OR ENFORCEMENT OF THIS INDEMNIFICATION OBLIGATION.** With respect to the State of Ohio, this waiver applies to Section 35, Article II of the Ohio Constitution and Ohio Rev. Code Section 4123.74.

17.4 **CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT.**

18.0 LIMITATION OF LIABILITY

18.1 Except as expressly provided herein, neither party shall be liable to the other for any incidental, indirect, special, punitive or consequential damages. Contractor must bring any cause of action arising under the Contract within one year from the time the cause of action accrues.

19.0 LIENS

19.1 To the extent permitted by law, Contractor shall not file or permit to be filed any lien with respect to the Work and hereby expressly waives any right to file or cause to be filed a lien. Contractor, in its subcontracts, shall require all Subcontractors to expressly waive the right to file any liens against Owner's property, and, if requested, provide Owner with copies of such waivers.

19.2 In the event any claim is asserted or any lien filed against Owner or its property, or notice of lien is provided to Owner in violation of this provision, further payment to Contractor shall not become due under the Contract until the claim is satisfied or the lien released without cost to Owner and Contractor shall provide Owner with evidence of payment relating to such claim or lien. If Contractor fails to settle any claim or secure the release of any lien, Owner may take whatever steps it deems necessary to settle the claim or release the lien, including bonding off the lien. Owner may deduct its costs and expenses for settling any claim or securing the release of any lien filed by Contractor or its Subcontractors from any money due or to become due to Contractor under the Contract. If final payment has been made, Contractor shall reimburse to Owner its costs to settle any claim or secure the release of any lien arising out of the Contract.

20.0 INTELLECTUAL PROPERTY

20.1 Contractor warrants that its performance of the Work will not infringe upon or violate any trademarks, patents, copyrights, trade secrets or other third party property rights. If the performance of Work is held in any action to constitute infringement, or the use of the Work is enjoined, Contractor, at its expense, shall procure for Owner the right to continue use of the Work, or replace the Work with non-infringing materials or methods satisfactory to Owner, or modify the Work in a manner satisfactory to Owner so that the Work becomes non-infringing. Contractor agrees to indemnify and save Owner harmless from and against any liability or damages, including attorneys' fees, arising out of any alleged infringement or violation.

20.2 All inventions, discoveries, documents, works of authorship, methods, and the derivative works thereof, resulting from the Work, including patents, patent applications, copyrights, trade secrets and other intellectual property (collectively "Intellectual Property"), shall be the sole and exclusive property of Owner. Contractor shall promptly inform Owner of the development of any such Intellectual Property and does hereby assign and transfer the entire right, title and interest, together with all rights of priority in and to such Intellectual Property to Owner. Contractor shall promptly cooperate with Owner in signing any additional documentation necessary to assign and perfect ownership of such Intellectual Property in Owner or to allow Owner to register its property rights therein. Contractor warrants that it has obtained written agreements from its employees and

agents as necessary to effectuate the purpose of this Section. The Intellectual Property assigned and transferred to Owner shall be the Confidential Information of Owner.

20.3 Contractor grants Owner a nonexclusive, nonrevocable, perpetual, fully paid license to utilize Contractor's intellectual property existing separate from the Contract, including inventions, discoveries, works or authorship, methods, and trade secrets, regardless of whether such are the subject of patents, copyrights or other intellectual property protection, to the extent necessary for Owner to achieve the full benefit of the Work.

20.4 Contractor shall not use Owner's name or logo in marketing, endorsements, or other business purposes without prior written consent from Owner.

#### 21.0 DRAWINGS AND DATA

21.1 Contractor shall furnish for Owner's review, prior to commencement of Equipment manufacture or fabrication, general and detailed drawings of the Equipment in the format requested. Such drawings shall be certified as to accuracy and completeness and shall show information adequate to enable Owner to design and provide suitable clearances. If required by the Contract or any code, law or agency, Contractor will provide professional engineer or architect sealed drawings and reports for the state where the Equipment is to be finally installed. Figures shall take precedence in all cases over scaled measurements on drawings. Where obvious discrepancies exist, Contractor shall consult with and follow the instructions of Owner. Owner's approval of Contractor's drawings shall not relieve Contractor of its obligation to comply with the Contract requirements.

21.2 All written data, such as drawings, plans, reports, designs and specifications, prepared by Contractor for Owner during the performance of Work shall become the property of Owner. Such data, together with all data furnished by Owner and lent to Contractor for return, shall be delivered to Owner upon request, or upon completion of the Work or termination of the Contract. For clarification purposes, Owner shall have the unrestricted right to use, release, disclose, copy and reproduce such data for purposes of operation, maintenance, analysis, testing, cleaning, erection, improvement or modification of any facilities owned or operated by Owner. Contractor shall cooperate with Owner by executing such documents as are necessary to assign and perfect ownership in Contractor provided data to Owner.

#### 22.0 CONFIDENTIALITY

22.1 "Confidential Information" means any confidential or proprietary information, whether written, oral, or visual, whether or not it constitutes a trade secret under applicable law. "Confidential Information" includes, but is not limited to, business plans and methods; customer information; engineering, operating and technical data; and the dates of Owner's outage schedule, information concerning the Work, and Owner's activities. "Confidential Information" does not include information that (a) has become part of the public domain other than by acts or omissions of the recipient; (b) has been furnished or made known to the recipient by a third person as a matter of legal right and without restriction on use; (c) was in the recipient's possession prior to disclosure by the disclosing party without restriction on use; or (d) is independently developed by the recipient without access to the Confidential Information.

22.2 Subject to Section 22.5, each party agrees (a) to protect the Confidential Information of the other with at least the same degree of care used to protect its own Confidential Information; (b) not to use (except for the purpose described herein), publish or disclose to third parties such Confidential Information; and (c) upon the request of the disclosing party, to promptly deliver to the disclosing party all written copies of its Confidential Information. Notwithstanding the foregoing, a recipient shall be entitled to disclose Confidential Information to its officers, employees, affiliates (including any joint ventures of which Owner or any of its affiliates are a member and the other

members of such joint ventures), agents, lenders, attorneys and other advisors (collectively, "Representatives"), provided that the Representatives shall be informed of the confidentiality obligations provided herein.

- 22.3 If either party is required pursuant to applicable law or otherwise becomes legally compelled to disclose any of the Confidential Information, such party shall promptly advise the disclosing party in order that the disclosing party may seek a protective order or such other remedy as the disclosing party may consider appropriate in the circumstances. In any event, the compelled party may disclose only that portion of the Confidential Information which such party is legally required to disclose in the judgment of the party's legal counsel without any liability to the disclosing party hereunder and such disclosure shall not be a breach of this Section.
- 22.4 Contractor shall require its Subcontractors, if any, to expressly comply with the confidentiality provisions as set forth herein.
- 22.5 All documents prepared by Contractor for Owner during the performance of Work that incorporate, in whole or in part, information owned or provided by Owner shall not be marked or designated in any way as the confidential or proprietary information of Contractor without also stating that Owner has rights in such documents. Owner shall have the right to question the designation of Confidential Information by Contractor and Contractor agrees to provide Owner with reasonable cooperation in explaining such designation. Contractor agrees that Owner's acceptance of documents containing the Confidential Information of Contractor shall not be construed as a restriction on Owner's rights to use, release, disclose, distribute, copy or reproduce the documents.

23.0 DEFAULT

- 23.1 The occurrence of any of the following shall constitute an "Event of Default":
- 23.1.1 Contractor files a petition in bankruptcy, or if its creditors file an involuntary petition in bankruptcy, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency.
- 23.1.2 Contractor (a) fails to maintain the schedule set forth in the Contract, or (b) fails to promptly pay Subcontractors for material or labor, or (c) commits repeated or substantial violations of laws, rules, regulations or policies, or (d) fails to perform in accordance with the Contract, and Contractor fails to take corrective action or submit an acceptable plan within two (2) Business Days after the receipt of a notice of non-conformance from Owner.
- 23.2 Upon an Event of Default, Owner may take any or all of the following actions without affecting the Contract Price or schedule:
- (a) Owner may direct Contractor to cease performance on all or part of the Contract until satisfactory corrective action has been taken;
  - (b) Owner may have others take corrective action necessary to achieve compliance with the Contract. Owner may deduct the cost of such corrective action by others from any monies due to Contractor. Corrective action by others shall be taken when, in the judgment of Owner, the noncompliance threatens safety, unreasonably interferes with or delays the work of others, or otherwise creates a situation the resolution of which cannot be delayed without adversely impacting quality, cost or timely completion;
  - (c) Owner may pursue damages for delay under the terms of Article 24.0;

(d) Owner may suspend the Contract under Article 26.0; and/or

(d) Owner may terminate the Contract under the terms of Section 27.1

23.3 Each of Owner's rights set forth above shall be cumulative and additional to any other rights or remedies provide in law or equity or otherwise.

24.0 DAMAGES FOR DELAY

24.1 Contractor shall be liable for any direct damages incurred by Owner arising out of Contractor's failure to perform on time.

24.2 In lieu of Section 24.1, if the parties have agreed to liquidate the amount of direct damages resulting from Contractor's delay, the parties agree that such damages which might be incurred by Owner as a result of Contractor's delay in performance are uncertain and would be difficult to calculate. The parties agree that the liquidated damages contained in the Contract would be reasonable and fair compensation for late performance. Contractor commits to pay and Owner agrees to accept such sum as liquidated damages and not as a penalty in the event of late performance.

25.0 FORCE MAJEURE

25.1 Neither party shall be in breach of the Contract to the extent that any delay or default in performance is due to a Force Majeure Event. The term, "Force Majeure Event", shall mean any cause beyond the reasonable control of the delayed or defaulting party, including, but not limited to, acts of God including unusually adverse weather, fire, and epidemic; acts of public enemy including war, acts of terrorism, riot, and civil disturbance; and national labor strikes, which by exercise of due foresight such party could not have been expected to avoid or overcome. Contractor's inability to obtain adequate and sufficient labor in order to maintain progress of the Work shall not constitute a Force Majeure Event. No delay in performance resulting from a Force Majeure Event shall result in any liability on the part of Owner. Notwithstanding the preceding sentence, in the event of a delay caused by any act or failure to act on the part of Owner, Contractor's sole remedy shall be as set forth in Article 12.0.

25.2 The delaying party shall immediately notify the other party of the beginning of a delaying event, and shall confirm the notice in writing within ten (10) Business Days of the beginning of the event. The notice shall contain a detailed account of the delay, including the cause of the delay, an estimate of the duration of the delay, an estimate of the delay's impact to the schedule, and the plan to mitigate the effects of the delay.

25.3 If Contractor is the delaying party, and the delay is a Force Majeure Event as defined in Section 25.1, Owner shall grant Contractor an extension of the time for performance, to be mutually agreed upon by Contractor and Owner. The extension of time granted as a result of a Force Majeure Event shall in no case exceed the length of the delay and such extension may be withheld or reduced to the extent Contractor does not provide notice in accordance with Section 25.2. If Owner so requests, Contractor shall expedite its schedule to mitigate the effects of the excusable delay. Owner shall pay incremental, Direct Costs incurred by Contractor for expediting at Owner's request.

26.0 SUSPENSION

26.1 Owner may at any time suspend all or any part of the Work. Owner shall provide Contractor written notice verifying the suspension date. Immediately upon receipt of the suspension notice, Contractor shall take the necessary actions to comply with the suspension notice.

- 26.2 Owner shall pay Contractor in accordance with the terms of payment set forth in the Contract for the Work completed prior to the time of suspension and for the incremental, Direct Costs that result from Contractor's compliance with the suspension notice.
- 26.3 Owner may, at any time during the suspension period, either terminate the Contract in accordance with Section 27.2, or authorize the Work or any portion thereof to be restarted. Owner shall pay Contractor the incremental, Direct Costs associated with the restart of the Work and shall resume payments to Contractor in accordance with the terms of payment under the Contract thirty (30) days after the restart of Work.
- 26.4 The schedule shall be adjusted to provide for a reasonable extension of time for Contractor's performance.

27.0 TERMINATION

27.1 Termination for Cause

- 27.1.1 Upon an Event of Default, Owner may terminate the Contract upon written notice to Contractor.
- 27.1.2 In the event of such termination, Contractor shall immediately prepare and submit to Owner an itemization of the Work completed by Contractor. Owner may require Contractor to leave the Site. Owner may take over such Work and complete it, or have the Work completed by others. Owner may take possession of and utilize in completing the Work Contractor's materials, Equipment to be installed, supplies, tools and equipment at the Site.
- 27.1.3 Contractor shall not be entitled to further payment until all of the Work is completed in its entirety and Final Acceptance has been achieved. If the cost of completion exceeds the unpaid balance under the Contract, Contractor shall pay the difference to Owner within thirty (30) calendar days of demand.
- 27.1.4 In the event that a court determines that the termination was not properly a termination for cause, pursuant to Section 27.1.1, Contractor's remedy shall be limited to the payments permitted in accordance with Section 27.2.

27.2 Termination for Convenience

- 27.2.1 Owner may terminate the Contract, in whole or in part, for its convenience. Owner will give Contractor written notice of termination specifying the extent to which the Contract is terminated and the date, immediately or otherwise, on which termination becomes effective.
- 27.2.2 Upon termination for convenience, Contractor will comply with instructions in the notice of termination regarding delivery to Owner of all Work in progress and all completed Work, which shall become the property of Owner upon delivery.
- 27.2.3 In the event of such termination, Contractor shall receive payment, including the retained percentage, for the Work satisfactorily performed up to the time of such termination. In addition, Owner shall reimburse Contractor for incremental, Direct Costs resulting from the termination, provided that compensation was not otherwise made for such costs. Final payment shall be made upon the parties' agreement of the amount of the final invoice and Owner's receipt of an Affidavit of Completion in the

form of Exhibit 1. Owner shall not be responsible for Contractor's lost profit on the terminated portion of the Contract.

28.0 MATERIALS AND WORKMANSHIP WARRANTY

- 28.1 Beginning upon Final Acceptance and for a period of one year thereafter, or for such period as may be specified elsewhere in the Contract, Contractor warrants that (a) it will perform the Work in accordance with the accepted standards of care and competence found in the applicable profession as such standards relate to and are commonly used in the electric utility industry and (b) all Contractor furnished materials and workmanship shall be free of any and all defects and shall be in conformity with the requirements of the Contract.
- 28.2 Subject to the provisions of Section 28.3, in the event that the material or workmanship does not comply with the warranty, Contractor shall, at no cost to Owner, promptly repair or replace such nonconforming material or workmanship with as little disruption to Owner's operations as practicable. Contractor shall be responsible for the total cost of correcting any defects, including but not limited to, the costs of materials, labor, any necessary equipment removal, disassembly, shipping, reinstallation and retesting of the installation. Owner shall give Contractor notice of observed defects with reasonable promptness. If nonconforming material or workmanship causes an outage or other delay of operations, Contractor shall make the repair or replacement on an overtime, maximum effort basis, at Contractor's expense.
- 28.3 If Owner directs Contractor to repair or replace any defect and Contractor fails to do so within a reasonable time, or if an emergency exists rendering it impracticable for Contractor to perform the repair or replacement, Owner may make or cause to be made such repair or replacement without affecting the validity of the warranty. Owner's cost for making the repair or replacement shall be deducted from the Contract Price or any unpaid portion thereof. If the unpaid portion of the Contract Price is insufficient to cover such cost, Contractor shall reimburse Owner.
- 28.4 Owner will not pay for any defective portion of the materials or workmanship until remedied by Contractor at Contractor's expense in accordance with the Contract requirements.
- 28.5 Owner must approve any proposed correction or alteration by Contractor of the materials or workmanship, or parts thereof, made at any time or at any location, before such correction or alteration is undertaken. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes.
- 28.6 Any materials or workmanship which are repaired or replaced pursuant to this Article 28.0 shall be warranted for a period of one year from the date of completion and acceptance of such repair or replacement, or for the remainder of the original warranty period, whichever is longer.
- 28.7 Contractor shall obtain, for the benefit of Owner, all available warranties from Subcontractors, vendors and suppliers of Contractor. Such warranties shall be in addition to the warranties set forth in this Article. If such warranties are in written form, Contractor shall provide Owner with the original warranties.

29.0 REPORTING OF COMPLAINTS

- 29.1 Contractor shall immediately report to Owner, in accordance with Article 33.0, the complete details of all complaints, including any OSHA violations and complaints received from governmental authorities, Subcontractors, laborers, other third parties or members of the public relating to the Work.

30.0 RETENTION AND EXAMINATION OF INFORMATION, BOOKS AND RECORDS

- 30.1 Owner reserves the right to audit records necessary to permit evaluation and verification of (i) claims submitted, (ii) Change Orders, and related overhead and general and administrative costs, and (iii) Contractor's compliance, in the performance of the Contract and its dealings with Owner, with (a) the Contract requirements; and (b) Owner's Code of Business Conduct governing business ethics. Owner's right to audit shall not extend to fixed, lump-sum or unit pricing.
- 30.2 Contractor shall cooperate with Owner and provide Owner with information and records ("information") pertaining to the Work as requested by governmental agencies, Owner, or courts of law.
- 30.3 Contractor shall retain for a period of three (3) years after Contract termination or expiration all information relating to the Work. Owner may audit and copy such information at Contractor's premises during regular business hours. If requested by Owner, Contractor shall submit to Owner a copy of each of its subcontracts. Contractor shall include in its subcontracts a provision granting Owner the rights against Subcontractors contained in this Article 30.0.

31.0 COMPLIANCE WITH LAWS

- 31.1 Contractor warrants that all materials and equipment supplied and all Work performed will comply with, and be manufactured, priced, sold and labeled in compliance with, all applicable federal, state and local laws, rules, regulations, orders and ordinances, including, without limitation, environmental protection, energy, safety and health, and labor laws and regulations and applicable industry codes and standards.
- 31.2 Unless exempted, **Contractor shall abide by the requirements of 41 C.F.R. § 60-1.4(a)(7), 41 C.F.R. § 60-300.5(a), and 41 C.F.R. § 60-741.5(a). These regulations prohibit discrimination against minorities, females, qualified protected veterans, and qualified individuals on the basis of disability and require affirmative action by covered prime contractors and subcontractors to employ and advance in employment minorities, females, qualified protected veterans, and qualified individuals with disabilities.** Contractor represents that it does not, and shall not for the term of the Contract, provide or maintain for its employees facilities that are segregated on the basis of race, color, religion, sex, national origin, veteran status or disability status. Contractor represents that it will not assign its employees to perform any work related to the Contract at a location where facilities are segregated on the basis of race, color, religion, sex, national origin, veteran status or disability status. Contractor agrees that it will not enter into any agreement to obtain goods or services relating to the Contract with any entity that provides, maintains or assigns its employees to work at locations where facilities are segregated on the basis of race, color, religion, sex or national origin. As used herein, "facility" means waiting rooms; work areas; restaurants and other eating areas; time clocks; locker rooms and other storage or sleeping areas, except as necessary to ensure privacy between male and female employees; parking lots, drinking fountains; recreation or entertainment areas; and transportation. If not otherwise exempted by Title 48 and to the extent applicable, Contractor will comply with 48 CFR §52.219-8, Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns, and 48 CFR §52.219-9, Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan. If not otherwise exempted by 41 CFR §60-1.5, Contractor represents that it will file all reports or other required information specified in 41 CFR §60-1.7. Contractor shall also abide by the requirements of 29 CFR Part 471, Appendix A to Subpart A, which is incorporated by reference, as applicable.
- 31.3 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of any violations of such laws, ordinances and regulations.

32.0 PERMITS AND LICENSES

32.1 Contractor shall obtain all permits and licenses required by any regulatory authority for the performance of any portion of the Work, except that Owner shall obtain permits and licenses for all structures which are to become a permanent part of the Site. Before starting Work, Contractor shall submit to Owner a copy of all permits and licenses required by any such regulatory authority.

32.2 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of the failure of Contractor to obtain such permits and licenses.

33.0 NOTICES

33.1 Each party shall designate in writing a representative to receive any and all notices required under the Contract. Notices shall be in writing and shall be given to the representative designated to receive them, either by personal delivery, certified mail, facsimile, e-mail or any similar means, properly addressed to such representative. All notices shall be effective upon receipt, or upon such later date following receipt as set forth in the notice. Either party may, by written notice to the other, change the representative or the address to which such notices are to be sent. Contract shall be strictly construed and Contractor expressly waives any claims which do not strictly comply with the written notice requirements of the Contract.

34.0 SEVERABILITY

34.1 In the event that any of the provisions, or portions thereof, of the Contract are held to be unenforceable or invalid by any court, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

35.0 WAIVER

35.1 Either party's waiver of any breach of the Contract shall not be deemed to be a waiver of any other breach of the same or a different term of the Contract. Contractor agrees not to claim any waiver by Owner of such notice requirements based upon Owner's conduct or Owner having actual, verbal, implied, or constructive notice.

36.0 NON-DISCLOSURE

36.1 Except as required by law, regulation, or judicial or administrative order, neither party shall disclose the terms of the Contract without the consent of the other party. Notwithstanding the foregoing, Owner may disclose the terms of the Contract without the consent of Contractor (a) to any of its affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures); and (b) to any prospective transferee or purchaser of assets of Owner or any of affiliates.

37.0 HEADINGS

37.1 Headings are provided for the convenience of the parties, and shall not affect the interpretation of any provision.



38.0 AFFILIATED COMPANIES

38.1 Any indemnification of Owner or any limitation of Owner's or Contractor's liability under the Contract shall to the same extent apply to Owner's or Contractor's directors, officers, employees, agents, and affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), including any directors, officers, employees and agents thereof.

38.2 The affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures) of the American Electric Power System are severally and not jointly liable for obligations arising hereunder.

39.0 APPLICABLE LAWS AND JURISDICTION

39.1 Except for Article 17.0, the rights and obligations of the parties arising out of the Contract shall be governed in all respects by the laws of the State of Ohio. Any reference herein to the laws of other states is made only to the extent that the laws of that state might apply, notwithstanding the intent of the parties that the laws of the State of Ohio should apply.

39.2 Contractor agrees that all actions and proceedings brought by Owner against Contractor may be litigated in courts located in the State of Ohio or the state where the work was performed. Contractor agrees that such courts are convenient forums and irrevocably submits to the personal jurisdiction of such courts. Contractor waives personal service of process and consents to service of process by certified or registered mail at the address designated for receiving notices under the Contract.

40.0 ENTIRE AGREEMENT

40.1 The Contract constitutes the entire agreement between the parties and supersedes all previous and collateral agreements or understandings with respect to the subject matter of the Contract. No waiver, alteration, amendment or modification of any of the provisions of the Contract shall be binding unless in writing and signed by duly authorized representatives of the parties.

41.0 BINDING EFFECT; NO THIRD-PARTY BENEFICIARIES

41.1 Subject to the restrictions on assignment in Section 5.1, the Contract shall be binding upon and shall inure to the benefit of the parties of their respective successors and permitted assigns.

41.2 No provision of the Contract is intended or shall be construed to be for the benefit of third party other than as set forth in Article 36.0.

42.0 EXECUTION; COUNTERPARTS; ELECTRONIC SIGNATURES

42.1 The Contract shall not be binding or effective until properly executed by each of the parties hereto. The Contract may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which, taken together, shall constitute but one and the same Contract, which may be sufficiently evidenced by one counterpart.

42.2 Each party agrees that any electronic signatures, whether digital or encrypted, of the parties included in this Contract are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

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43.0 SURVIVAL

- 43.1 All of the terms of the Contract which by their nature extend beyond the expiration or termination of the Contract, including indemnification obligations, confidentiality obligations, limitations of liability, shall survive expiration or termination of the Contract and remain in full force and effect.

**END OF DOCUMENT**

AFFIDAVIT OF COMPLETION

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, states that:  
(Name of Affiant)

1. S/He is the \_\_\_\_\_ of  
(Office held by Affiant)

\_\_\_\_\_(Contractor)  
(Legal Name of Contractor)

that has a contract with \_\_\_\_\_  
(Legal Name of Owner)

(Owner) dated \_\_\_\_\_ (Owner's Contract No. \_\_\_\_\_)  
(Contract Date) (Contract No.)

involving work on the Owner's property at \_\_\_\_\_  
(Project Name)

located near \_\_\_\_\_.  
(City, State)

2. All of the Work required to be performed by the Contractor under said Contract has been performed. All bills and claims for material, labor and services to employees, Subcontractors, material suppliers, and others, covering the Work required to be performed under the Contract, have been paid in full by the Contractor. There are no unpaid amounts on the basis of which a lien has been filed, or can be filed, in connection with the Work performed under the Contract.

\_\_\_\_\_  
Signature of Affiant

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary

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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Prepared by:

Contract Services  
American Electric Power  
Service Corporation  
1 Riverside Plaza  
Columbus, OH 43215

June 1, 2015



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

The following Supplementary Terms and Conditions for Forestry Contracts (“Supplementary Terms”) shall supplement any of the American Electric Power Service Corporation (“Owner” or “AEP”) General Terms and Conditions utilized in any Contract under which Contractor is authorized to perform Services. These Supplementary Terms shall not replace the safety or operational provisions in the applicable AEP General Terms and Conditions and are intended to support and reinforce other Contract documents.

All of the provisions of these Supplementary Terms shall also apply to Contractor’s subcontractors. Contractor is responsible for ensuring that its subcontractors comply with these Supplementary Terms.

Contractor’s and any of its subcontractors’ failure to comply with these Supplementary Terms is cause for the Contract to be terminated and may prevent eligibility for the consideration of providing Services in the future (i.e., removal from AEP’s qualified bidders list).



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **SECTION 1**

#### **GENERAL SUPPLEMENTARY TERMS AND CONDITIONS**

##### **1.1 Protection of Services**

- 1.1.1 Contractor shall use care and diligence so that performed Services and all materials, installed equipment and tools are thoroughly protected from the weather, loss and any and all damage. Contractor shall furnish and pay for all such protection.
- 1.1.2 Contractor shall provide and pay for the removal of snow, ice and water from its storage or work areas.
- 1.1.3 Contractor shall be liable for any loss or damage caused by carelessness, negligence or any act or failure to act on the part of Contractor, its subcontractors or employees. Such loss or damage includes, but is not limited to, losses and damages to performed Services, materials, equipment to be installed, private property, construction equipment and other property belonging to Owner or other contractors.

##### **1.2 Cleanup and Disposal of Non-Vegetative Debris**

- 1.2.1 Contractor shall keep its work areas, storage areas, parking areas and other areas of operations clean and safe.
- 1.2.2 Contractor shall promptly remove trash and other non-vegetative debris from these areas and properly dispose of all trash and other debris resulting from Services.
- 1.2.3 Upon completion of Services, Contractor shall remove from the site and dispose of its surplus material, chemicals, equipment, tools and, unless otherwise directed in writing by Owner, all temporary structures per all applicable laws.
- 1.2.4 Contractor shall bear the cost of providing the cleanup and removal, including the cost of all labor, supplies, tools, construction equipment and transportation.

##### **1.3 Material Storage and Handling**

- 1.3.1 Owner may designate a material storage location that can be used by Contractor.
- 1.3.2 Unless provided by Owner, Contractor is responsible for the purchase and proper handling and storage of material used during the course of providing Services. Contractor shall abide by all applicable laws.
- 1.3.3 Contractor shall be responsible for the impact of all shortages resulting from missing or damaged material issued to Contractor but not applied. Contractor shall replace such material at its own expense. Substitutions will not be allowed unless approved by Owner in writing.
- 1.3.4 All unused material furnished by Owner or provided by Contractor, and paid for by Owner, shall be returned by Contractor to Owner's designated storerooms or storage points upon notification from Owner.



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **1.4 Electrical Clearances**

- 1.4.1 Owner will arrange for all necessary clearances on energized equipment or circuits required to be taken out of service for the performance of Services. When an outage is required, Contractor shall notify Owner prior to scheduling such Services, allowing sufficient time for scheduling with system operators.

### **1.5 Permits and Easements**

- 1.5.1 Owner will secure all right-of-way easements. Owner will also secure certain permits requiring Owner's signature (i.e., DOT permits, siting permits, building permits). Location specific and construction specific permits not already obtained by Owner are the responsibility of Contractor. Local vehicle registration/operation permits (i.e., frost law permit in Michigan) shall be the responsibility of Contractor.

### **1.6 Protection of Property**

- 1.6.1 Contractor shall use all possible care not to damage any existing buildings, structures, pipes, sewers, conduits, manholes or other property, or to interfere therewith without the consent of Owner's authorized representative. Such structures and other objects shall be properly supported, braced and secured in place to prevent damage thereto. They shall not be relocated or reconstructed except as authorized by Owner. Contractor shall be responsible for all damage claims due to this negligence, including the cost of all material and labor required to replace or repair any property damaged.
- 1.6.2 Contractor shall immediately report the complete details of all damage claims to Owner. If Owner determines the claim is valid and is a result of Contractor's negligence, Owner will present the claim to Contractor for settlement. Contractor is to settle all valid claims within 30 days. Contractor is to provide Owner with documentation specific to a settlement process for any claim not settled within 30 days, or the claim will be handled by Owner and the damage amount billed to Contractor. All such damage claims settled by Contractor are to be reported to Owner in writing.
- 1.6.3 Contractor shall be responsible for notifying appropriate state one-call systems, as well as any other utility company not a member of the systems, prior to performing Services involving excavation, boring, stump grinding and/or other activities that may affect underground facilities.

### **1.7 Work on Private Property**

- 1.7.1 Whenever any Services are to be completed on private property, Contractor shall attempt to notify owner and/or the tenants thereof and make arrangements with them so that Services will be completed with the least practicable inconvenience to them. Work on private property shall be done as expeditiously as possible and the premises restored immediately.





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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **1.8 Access and Construction Roads**

- 1.8.1 It is Contractor's responsibility to ensure that all property owners' roads traveled by Contractor are in the same condition as the roads were before Contractor elected to use the route. Should Contractor cause any damage to any such road, Contractor is obligated to restore the road to like or better condition than the road existed prior to Contractor's use. Such work shall be completed in a timely manner with proper written documentation of the damage/remedy supplied to property owner and Owner alike. Where Owner deems it necessary to maintain access roads on private property, crushed stone will be furnished or paid for by Owner, and Contractor shall provide labor and equipment to haul and place crushed stone as required. When approved in advanced writing by Owner, Owner shall pay for normal damage to fields or loss of crops resulting from necessary travel by Contractor.
- 1.8.2 Contractor shall keep fences in a sufficient state of repair to satisfactorily confine livestock and shall keep gates closed when not in immediate use. Before Services are considered to be completed, all temporary gates shall be removed and all fences cut or damaged shall be restored to original condition. Fencing damaged by Contractor shall be repaired at Contractor's expense.
- 1.8.3 When it is necessary to gain access to right-of-way over private roads, yards, pastures and cultivated fields, and it is impractical to restrict ingress and egress to the right-of-way, Contractor shall use the route agreed upon by the property owner, Contractor and Owner. Contractor shall notify the property owner prior to the use of these routes.

### **1.9 Emergency Assistance**

- 1.9.1 In the event of extensive damage to Owners' facilities as a result of severe storms, flooding or other catastrophes, Owner may request assistance from Contractor in the repair of damages and restoration of service to customers. Under such circumstances, the "Forestry Policies and Procedures for Emergency Assistance" in Section 2 shall be followed.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**SECTION 2  
FORESTRY POLICIES AND PROCEDURES FOR EMERGENCY ASSISTANCE**

In the case of emergencies, during which Contractor is called upon by Owner for storm assistance to restore service following catastrophic damage ("Emergency Assistance"), the following policies and procedures shall apply.

- 2.1 Contractor will provide Owner with emergency contacts, including 24-hour telephone numbers for requesting assistance.
- 2.2 Upon request for Emergency Assistance, Contractor shall provide Owner with a list of available personnel and their classification, labor rates, crew make up, equipment to be used and an estimated time of arrival.
- 2.3 Owner will specify the number of physical full time employees and any special equipment required and will notify Contractor as to where the crews are to be assigned and to whom they will report. Owner will check-in each crew upon arrival.
- 2.4 Contractor shall be responsible to make contact with the appropriate State officials concerning commercial driver's licenses and other transportation issues.
- 2.5 Contractor's crews shall arrive prepared to work and be equipped with PPE, PPI, tools, foul weather gear, lights and batteries to perform the assigned Services. Any crews arriving without the proper tools or equipment to perform the assigned Services may be released at Contractor's expense.
- 2.6 Owner shall determine the work hours for responding crews, including start time (at assigned crew headquarters) and duration. Contractor shall check in with Owner daily at the requested starting time for assignment of Services.
- 2.7 After working sixteen (16) consecutive hours up to a maximum of twenty-four (24) consecutive hours, Contractor's employees shall be released from providing Services for a minimum eight (8) hour rest period, which shall commence upon release by Owner.
- 2.8 Owner will allow a meal break every six hours, or as near as practicable, while Contractor performs Emergency Assistance. Contractor's personnel will be off the clock for all meal breaks taken away from the work site.
- 2.9 Time sheets of Contractor employees shall be kept by Contractor. These time sheets shall be completed daily and when requested by Owner is available for verification and approval.
- 2.10 Contractor shall be responsible for relaying all Owner communications to its crews.
- 2.11 Contractor shall be responsible for the safety of its crews. Contractor will provide safety statistical reporting of all hours worked on AEP property. This report format will be provided by AEP.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

- 2.12 Owner shall reimburse Contractor for Emergency Assistance at the current contracted rate of the classification for each of Contractor employees utilized plus the applicable mark up percentage for straight and/or premium time. When responding from areas with existing AEP Contracts, Contractor's employees shall be paid at the rates incorporated in the Contract for the area from which they are responding. When Contractor responds from locations without an existing AEP contract, billing rates will be negotiated when the agreement to send crews is finalized.
- 2.13 Overtime pay for Emergency Assistance shall be paid based on provisions submitted by Contractor and approved in advance by Owner.
- 2.14 Owner will reimburse Contractor for lodging and meals (dollar amount for meals/lodging shall be predetermined by Owner) for the crew(s) requested. Owner may elect to supply meals and/or lodging to Contractor, in which case there will be no reimbursement. All other expenses: (i.e., personal phone calls, alcoholic beverages, tobacco, entertainment, etc.) will not be reimbursed by Owner.
- 2.15 If Owner requests Contractor to provide an employee whose classification falls outside the standard Contractual labor billing rates, Owner shall provide the request in writing and will reimburse Contractor for said employee's labor, vehicle, lodging and meals.



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **SECTION 3**

#### **SUPPLEMENTARY ENVIRONMENTAL, SAFETY AND HEALTH TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

##### **3.1 General**

- 3.1.1 Contractor shall comply with AEP's Contractor Oversight program. Contractor's safety performance will be monitored and evaluated during performance of the Contract by Owners' representative.
- 3.1.2 Contractor shall adhere to all pertinent local, state and federal regulations and all rules and policies set forth in Contractor's own safety manual. Any shortcoming brought to the attention of Contractor by Owner shall be immediately corrected by Contractor. Repeated and/or severe safety violations, incidents or accidents may be cause for the Contract to be terminated, prevent eligibility for providing future Services and result in the potential removal from AEP's qualified bidders list.
- 3.1.3 Owner has the authority to immediately stop Contractor's Service performance indefinitely for practices, procedures and operations, which, in the opinion of Owner, constitute a safety concern. It is Contractor's responsibility to adequately satisfy Owner with any remediation necessary to provide a safe and healthful workplace.
- 3.1.4 Contractor shall have qualified and competent supervision on the job at all times to direct and observe the Work.
- 3.1.5 If Contractor in good faith believes that any rule or procedure set forth in these Supplementary Terms will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

##### **3.2 General Safety Requirements**

- 3.2.1 Owner, or Owner's representative, shall conduct random Forestry Contract crew safety audits and Contractor shall cooperate fully with Owner's representatives during this audit. The audit is defined in Appendix A.
- 3.2.2 Contractor shall promptly notify Owner if Contractor's or its subcontractors' Experience Modification Rate for workers compensation exceeds 1.0.
- 3.2.3 Contractor shall remain solely responsible for the proper and safe use of all tools, and for conducting safe work practices or procedures. Contractor shall provide information necessary for the job briefing identified in Section 3.6 below, Job Briefings.
- 3.2.4 Contractor shall provide Owner a list of all tools, practices or procedures it or its subcontractors will use in performing assigned Services with fabricated or modified tools ("Specialty Tooling"). Specialty Tooling includes all tooling fabricated, developed by or modified by Contractor. Contractor shall notify Owner of any Specialty Tooling it develops or modifies on site. Contractor shall also notify Owner, prior to use, if it intends to use standard tooling in ways other



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

than those for which the tooling was designed. All such Specialty Tooling is subject to review by Owner. Specialty Tooling shall have design plans, engineered diagrams, etc. with a Professional Engineer's stamp of approval. Contractor shall also inspect Specialty Tooling prior to each use. At its sole discretion, Owner may prohibit or restrict the Contractor's use of Specialty Tooling on Owner's site.

3.2.5 Contractor shall immediately cleanup all spills from Contractors' equipment and vehicles.

### **3.3 Contractor Safety Representative**

3.3.1 When Contractor has eleven (11) or more total employees on various projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

3.3.2 Qualifications of the aforementioned safety professional may be subject to Owner's review and approval.

3.3.3 Owner may require Contractor to assign additional safety professionals if Owner determines the scope of Services justifies additional safety oversight.

3.3.4 Owner may require Contractor to supply additional safety professionals if Owner has determined geographical Service locations justify additional safety oversight.

### **3.4 Monthly Reporting**

3.4.1 Contractor shall report various safety related statistics, using the Owner's authorized website (<http://www.terrine.net/AEPscoreCard>). Reported statistics will include subcontractor(s) and will represent Work being performed on Owner's Distribution projects/Contracts only.

3.4.2 Contractor must report the following: monthly man-hours worked, OSHA recordables, OSHA lost time and restricted recordables, lost time and restricted days, first aid injuries, flashes/outages, preventable vehicle accidents, and fatalities.

3.4.3 The above requirements must be reported by the 10th day of the following month in which Contractor is creating events and supplying hours within the Owner's safety website (<http://www.terrine.net/AEPscoreCard>). A copy of the Contractor Guide for Distribution Events Scorecard System is included in Appendix B. This information will be used by Owner to evaluate Contractor's safety effectiveness and performance.

### **3.5 Event Reporting**

3.5.1 When performing Services for AEP and a safety event occurs, Contractor shall notify Owner about the event immediately (verbal reporting is sufficient). Contractor shall also submit a written preliminary notification (no later than 8:00 a.m. the following working day of the event) to the



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Forestry Supervisor, Region Support Manager and/or designee, Forestry Operations Manager, and shall also e-mail a copy to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com), listing any and all safety events occurring during the performance of Services. A separate report is required for each event. Reported events include near miss events, first aid and minor events, OSHA recordable injuries, flash/outage events, vehicle accidents, spills/release, underground utility strikes and OSHA/EPA citations/visits. The written report should include sufficient detail to identify the nature of occurrence, the extent of injury (if any) and contact name and number of the person leading the investigation. Within seven (7) business days, Contractor shall submit an in depth report to the e-mail address listed above, along with a copy to the Forestry Supervisor, Region Support Manager and/or designee and Forestry Operations Manager. This report must include the time and date of event, location of event, name of injured employee, the injured employee's on the job experience, description of event, factors that may have caused or contributed to the event, corrective actions taken and/or planned and the person(s) responsible for corrective actions.

### **3.6 Job Briefings**

3.6.1 Prior to the commencement of Services in any location and before any changes in procedures or activities are made, Contractor shall perform a Job Briefing in written report/form to identify all potential work site risks. Each member of the crew must sign or initial this form in order to affirm their presence at the time the information was presented during the Job Briefing. The report shall include, at a minimum: 1) applicable hazards present during the course of performing the specific assignment 2) Service procedures involved 3) special precautions 4) energy source controls and 5) personal protective equipment requirements. Should Contractor not have its own Job Briefing requirements/forms, then Contractor shall use the AEP Supplied Job Briefing Form in Appendix C.

3.6.2 Contractor shall make its Job Briefing Forms available to Owner upon request.

### **3.7 Personal Protective Equipment Requirements**

3.7.1 Contractor is responsible for requiring the use of appropriate personal protective equipment ("PPE") in all operations where there is an exposure to hazardous conditions.

3.7.2 Owner requires Contractor and Subcontractor employees to wear the following PPE, at a minimum, while on/in any construction site and/or work area:

- Safety glasses or safety prescription glasses with side shields
- Hardhat
- Work gloves that provide protection for the type of work
- Approved hearing protection devices when required
- Supportive work boot with a defined heel

3.7.3 Open-toed, open-heeled, athletic footwear and tennis shoes are strictly prohibited. Additional foot protection and/or PPE may be required based on Contractor's PPE assessment or specific site requirements.



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **3.8 Substations/Switchyards**

- 3.8.1 OSHA requires personnel working within an electrical station be qualified to recognize equipment and hazards unless escorted by a qualified person. Employees not OSHA station qualified shall be under direct supervision of qualified personnel.
- 3.8.2 Gates to station fences shall remain closed and locked when they are not under the direct observation of an attendant.

### **3.9 Firearms, Alcohol and Drugs**

- 3.9.1 Firearms, alcohol, illegal drugs or drugs taken for non-medicinal purposes are prohibited on all Owner Sites.
- 3.9.2 Contractor shall be responsible for all Contractor and Subcontractor(s) employees who are under the care of a physician and are taking prescribed medicine, which may alter the employee's physical or mental ability. Contractor shall determine the necessity to modify the employee's job assignment while undergoing treatment.
- 3.9.3 If firearms or suspected illegal drugs are discovered on any AEP property or Work Site/area, the following guidelines should be followed by whoever discovers the firearms or suspected illegal drugs:
- First, if possible without putting themselves or others in harms way, attempt to secure the location and ensure that others cannot come in contact with the firearms or suspected illegal drugs. Do not handle or move firearms or suspected illegal drugs from their discovered location.
  - Second, immediately contact the Owner's Contract Supervisor or Distribution Line Representative and together make a decision whether or not the situation requires a call to the local law enforcement authorities. Immediately call the local law enforcement authorities and report the discovered item(s) if (a) neither the Owner's Contract Supervisor nor the Distribution Line Representative is available; (b) there is a threat of harm to any person; or (c) there is a risk of improper removal or disposal of the firearms or illegal drugs.
  - Third, call local Owner's security personnel or call the Owner's general Security hotline at 1-866-747-5845.
  - Fourth, for incidents involving Contractor personnel, Contractors shall submit reports according to Section 3.5, Event Reporting.

### **3.10 Drug/Alcohol Testing**

- 3.10.1 All Contractor and subcontractor employees performing Services under this Contract must complete and pass a pre-employment drug/alcohol screening. Screening substances and their associated cut-off limits are the same as listed in the applicable AEP General Terms and Conditions.



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### SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

3.10.2 Post event drug and alcohol testing shall be performed, at Owner's discretion, on all Contractor and subcontractor employees involved in any safety related event. Testing results shall be shared with Owner upon request.

3.10.3 Contractor shall incur all costs associated with the required drug and alcohol testing as required in these Supplementary Terms.

#### 3.11 Language Requirements

3.11.1 Contractor's and its subcontractor's shall be capable of communicating in English. Contractor shall provide one (1) bilingual employee for each non-English-speaking crew.

#### 3.12 Job Site Auditing

3.12.1 Contractor representatives, at a minimum, shall perform and document a Job Site Observation based on the following table:

| Representative Level   | Frequency |
|------------------------|-----------|
| Senior Management      | 1/Quarter |
| Operational Management | 1/Month   |
| General Foreman        | 2/Week    |
| Safety Professional    | 2/Week    |

3.12.2 If Contractor does not meet the requirements of Safety Section 3.3.1 [less than eleven (11) employees], then the lowest representative level of the table in 3.12.1 above (safety professional) shall be followed by a company representative.

3.12.3 Contractor shall make documentation of such job site observations available to Owner upon request.

#### 3.13 Emergency Planning

3.13.1 All job sites must have an Emergency Action Plan that has been communicated and documented to all employees. The Job Site Emergency Action Plan shall be documented on each job briefing conducted. This plan shall include, at a minimum:

- Emergency contacts
- Location and name of local emergency services
- Location of closest communication method
- Location of closest medical facility
- Procedure to follow in the event of an emergency

#### 3.14 Traffic Control

3.14.1 All Services performed on or adjacent to existing public road or rights-of-way and/or job site roadways shall be performed in conformance to the requirements of the Manual on Uniform Traffic Control Devices (current revision), state and local jurisdiction.





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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **3.15 Individuals Restricted from Access to AEP Sites**

3.15.1 Owner may deny access to its facilities by any person who fails to comply with the safety provisions set forth in the applicable AEP General Terms and Conditions or these Supplementary Terms or any person who, in Owner's sole judgment, otherwise demonstrates a lack of safety performance. Examples of a lack of safety performance include, but are not limited to, the following:

- Unsafe job performance
- Failure to pass drug/alcohol test
- Displaying incompetence in performing their job
- Employees that are determined to be unfit for project employment
- Playing of pranks, horseplay or practical jokes
- Failure to report injuries and/or accidents
- Fighting or acts of aggression
- Theft or vandalism
- Convicted Sexual Offenders

3.15.2 Prior to the commencement of Services and during the term of the Contract, Contractor shall provide Owner with a list of all individuals, including Contractor and subcontractor employees, whom Contractor intends to perform Services at Owner's sites upon request. The list shall identify the individuals by their name and the last three digits of their Social Security number.

3.15.3 Owner may, at its sole discretion, deny access to any individual who has been previously removed from a project by Owner or any of its affiliates for safety reasons.

3.15.4 Contractor may request a restricted Contractor employee to be cleared for the performance of Services. A letter addressing the original safety violation(s) or reason(s) for removal and any documentation supporting the request shall be sent to Owner for approval. Contractor's employee shall not perform Services at any of Owner's sites until approved by Owner. Said approval may be granted or withheld at Owner's sole discretion.

### **3.16 Housekeeping**

3.16.1 Contractor shall ensure that debris, materials, scrap, trash, etc. is contained and removed daily.

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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**APPENDIX A  
AEP FORESTRY CONTRACT CREW AUDIT FORM**

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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX B  
AEP CONTRACTOR PERFORMANCE REPORT**

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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX C**

**AEP SUPPLIED JOB BRIEFING FORM**

**(ONLY FOR CONTRACTORS THAT DO NOT HAVE THEIR OWN DOCUMENT)**

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# Exhibit B

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File:

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# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010**

Effective Date: May 1, 2016

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| AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations  |                        |  |        |              |
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## I. Purpose

The purpose of these American Electric Power (“AEP”) Forestry Vegetation Management Guidelines is to document and inform AEP employees and its contractors of important criteria, practices, and procedures pertaining to initial vegetation clearing for construction projects and the management of vegetation within rights-of-way. AEP incorporates these guidelines into each vegetation management contract; a copy shall be kept in all vegetation management Contractor’s vehicles. These guidelines are to be read consistently with other contract documents by and between AEP and the Contractor. Variances and/or clarifications to these guidelines may be necessary and applied to specific operating companies.

These guidelines contain references to national industry standards; government regulations; and AEP standards and practices. Upon approval of this document, any editions referenced are valid. All standards, regulations and practices are subject to revision. AEP and the Contractor are encouraged to investigate the possibility of applying the most recent editions.

## II. Definitions

**Brush**: Woody stem vegetation less than four (4) inches DBH.

**Clearing**: The physical cutting and/or removal of woody stem vegetation.

**Control**: 100% defoliation with no viable buds one year after application; or, on species that require a number of years to achieve control, significant signs of herbicidal activity.

**Danger Tree**: A tree on or off the right-of-way with the potential to contact electric supply lines.<sup>i</sup>

**DBH**: (Diameter at Breast Height) The diameter of a tree measured at the height of 4 ½ feet above the ground on the uphill side.

**Debris**: Vegetative and non-vegetative material such as bottles; cans; wires; paper; branches; or other residue from clearing operations.

**Directional Pruning**: The removal of limbs in a manner that provides increased conductor clearance and directs growth away from the conductors.<sup>ii</sup>

**Hanger**: A cut limb left hanging in a tree or on other facilities.

**Hazard Tree**: A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electric supply lines.<sup>iii</sup>

**Log**: The merchantable portion of a tree as designated by AEP.


**Lopping**: The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Refusal**: A property owner/resident prohibiting the Contractor from managing vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits, and easements.

**Removal**: The cutting of trees/brush at or near ground line.

**Slash**: The un-merchantable portion of a tree.

**Tree**: Woody stem vegetation greater than four (4) inches DBH.

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### III. Contractor Guidelines

#### A. Safety

Protecting the safety of all people (Contractors, public, and AEP employees) is of utmost importance to AEP. Contractors shall regard safety as a priority core value; their employees will recognize and follow all laws, rules, and regulations of public and worker safety. Any safety related incidents (e.g. personal injuries, vehicle accidents, outages, flashes, near misses, customer issues, etc.) that occur on the job shall be reported to the proper AEP personnel as specified by AEP management.<sup>iv</sup>

#### B. Personnel

1. Contractors shall comply with all federal, state and local laws for permits, certifications and licensing requirements necessary to perform vegetation management in specified operating areas.<sup>v</sup>
2. No private work may be solicited or performed by the Contractor or its employees while on AEP time. Contractors shall not seek nor receive compensation from anyone except AEP for any work that is a part of AEP's Forestry Vegetation Management program. The consequences will be crew and/or Contractor disciplinary actions.

#### C. Equipment


1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chainsaws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.
4. The use of spurs/climbers/hooks should be avoided.

#### D. Overtime

Overtime is billable as designated by each operating company.

#### E. Work Procedures

1. Contractor practices shall be compliant with applicable industry standards (e.g., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>vi</sup>
2. Changes in the work schedule due to inclement weather, equipment breakdowns, or other circumstances must have prior approval by AEP Forestry personnel.
3. The Contractor will be responsible for the development of a plan to complete the assigned tasks. The plan must meet AEP approval before work begins.<sup>vii</sup>
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.

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5. Contractors shall provide daily work locations to AEP, including changes to these locations throughout the day.
6. Prior to work in any location and before any changes in procedures or activities are made, the Contractor shall perform a job briefing in written/report form to identify all potential work site risks. At least one copy of all documents and reports, including job briefings, shall be prepared in English.<sup>viii</sup>
7. An ongoing list of refusals, scheduled outages, or areas that have not been worked, including reasons, shall be provided to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work should be inspected for clearance and quality compliance on an ongoing basis by the Contractor and AEP Forestry. When an assigned task is complete, the Contractor shall notify AEP Forestry for final inspection.
9. The Contractor shall notify AEP of any hazardous conditions found during the performance of work under this contract.

## F. Public Relations

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise.


1. When required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, the Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor shall document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the Contractor shall be on the door card.

## G. Refusals

1. The Contractor shall notify the proper AEP Forester with all pertinent information for all refusals.
2. If the Contractor is unable to resolve the refusal, the refusal shall be turned over to AEP Forestry.
3. Undocumented refusals may be worked at the Contractor's expense.

## H. Damage Claims and Complaints

1. The Contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.<sup>ix</sup>
2. An on-site investigation with the resident/property owner shall be made as soon as possible. A documented attempt to contact the complainant shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during the investigation.


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3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.<sup>x</sup>
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.<sup>xi</sup> The Contractor shall provide a copy of all supporting documentation to AEP.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.<sup>xii</sup>
7. Costs to restore outages or repair AEP's facilities due to negligence may be billed to the Contractor as determined by AEP.

## IV. Performance Guidelines

### A. Removals

1. Stumps shall be cut as close to the ground as practical, but not to exceed a three inch maximum height and treated with approved herbicide, unless the situation prevents application according to label instructions; there is a documented customer refusal; or an AEP Forester directs otherwise.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect electric lines, yards, fences, houses, and other facilities.
3. Targets for removal are:
  - a. All trees with the potential of growing into the conductor.
  - b. Trees where adequate clearance cannot be obtained using proper pruning practices.
  - c. Trees that will take less than three times the amount of time to remove as they would take to prune.
  - d. Trees within five (5) feet of poles.
  - e. Mature trees where more than 50% of the crown must be removed to obtain clearance.
  - f. Young, vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
  - g. Palm species.
4. At property owner's request, any tree situated such that the location of AEP's facilities impede, or add significantly to the cost of, the safe removal of the tree and an additional burden is placed upon the property owner, AEP should take the steps necessary to mitigate the impediment or to relieve the additional burden placed upon the property owner. AEP

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actions may include, but not be limited to, moving or protecting its facilities, removing portions of the tree to provide the clearances required by ANSI, OSHA, or any other regulatory authority, to allow removal by “non-line clearance” qualified arborists or non-professionals. Except in case of emergency, AEP must evaluate the property owner’s request and prioritize any necessary work according to its benefit to the provision of electric service to all customers. At property owner’s request, debris will be left for disposal by the property owner.

5. State and local ordinances shall be obeyed during the disposal of debris.

## B. Pruning


1. Contractor practices should be compliant with all applicable industry standards (i.e., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>xiii</sup>
2. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth below in Section V. Distribution Clearances or Section VI.C. Transmission Clearances or as designated by the operating company.
3. Reasonable care should be exercised to help prevent the spread of insects and pathogens.
4. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut, treated with herbicide, or damaged by the Contractor’s activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner in writing.
5. State and local ordinances shall be obeyed during the disposal of debris.

## C. Hangers and Cleanup

1. All hangers shall be removed from the pruned tree before leaving the job site.
2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of cleanup work should be performed. Unless otherwise designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum cleanup that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the Contractor.

## D. Clearing and Re-clearing


1. AEP will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into and interfere with service reliability; restoration; patrolling; or other maintenance operations of AEP facilities should be controlled by the operating company guidelines.
3. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the proper AEP personnel.

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4. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practical, but not to exceed three inches in maximum height above the ground line. Where possible, the cut shall be parallel to the slope.
5. Trees shall be felled to avoid damage to crops, fences, and other facilities. Any trees felled into crops, ditches, streams, roads, or across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP facilities or the property of third parties, or hinder access along the right-of-way.
6. Trees, brush, and slash shall be lopped as designated by AEP Forestry.
7. Hazard Trees are identified and addressed/worked at the discretion of the individual operating companies or regions. Consideration for hazard tree removal shall be made for those trees that are an immediate threat to AEP facilities. Hazard Trees may include, but are not limited to, trees that have severe lean or sweep; are dead; or have visible defect or damage.
8. Stumps of trees growing in fences may be cut at fence post height. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
9. As designated by AEP Forestry, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
10. Brush and debris from vegetation clearing shall not be left in managed agricultural areas or other maintained areas. Piled and/or windrowed materials shall not be left on or interfere with fences or other facilities of the landowner or AEP unless designated by AEP Forestry.

## E. Herbicide Application

1. All woody plants that have the potential of growing into the lines or impair access should be controlled, as designated by AEP Forestry.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made as required by all Federal, State, and local laws.
3. The Contractor shall be required to control at least 90% or a percentage as designated by operating company of the targeted vegetation. Any areas not meeting the control requirements shall be retreated at the Contractor's expense.<sup>xiv</sup>
4. AEP Forestry may make vegetation management prescriptions in consultation with Contractors.
5. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xv</sup>
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps shall be treated with an appropriate herbicide treatment.

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## F. Tree Growth Regulator Application

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (“TGR”) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in excessive state of decline shall not be treated unless directed by AEP Forestry.
3. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xvi</sup>

## G. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.

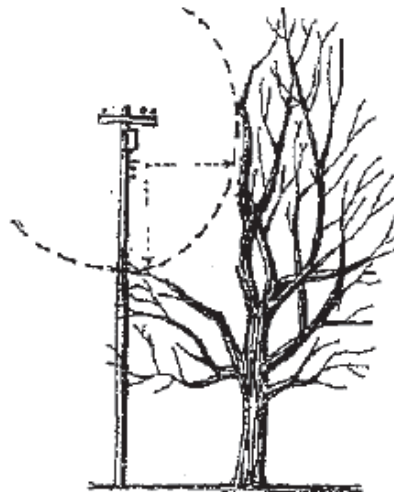
## V. Distribution Clearances


Variances to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/or easements.

Minimum clearance for distribution lines is that distance that will prevent regrowth into any AEP conductors for a minimum of three (3) years. (See **Error! Reference source not found.**, pg.**Error! Bookmark not defined.**) The species, site, limb, conductor sag and sway during windy conditions; and the effect of electrical load should all be considered when determining the clearance requirement.

## A. Primary Conductors

Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the proper AEP Forestry representative.

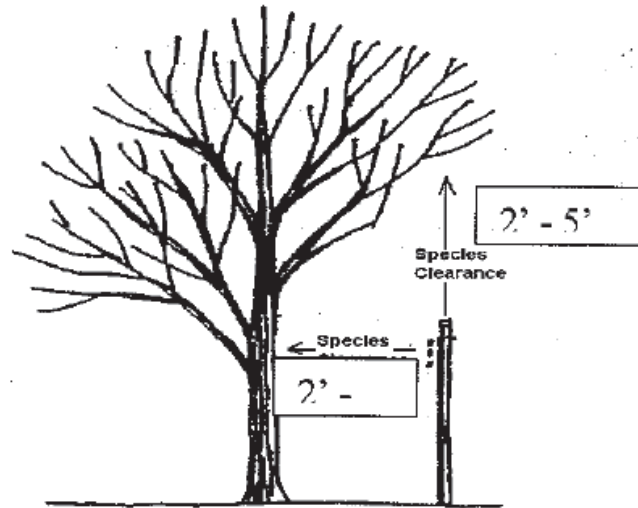


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## B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



## C. Service Drops and Street Light Conductors


Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.

## D. Poles and Guys

1. Heavy limbs applying pressure on the span guy should be pruned or removed at the specific direction of the proper AEP Forestry representative.
2. Trees, brush, and slash should be cleared to obtain a minimum of a five (5) foot radius of clearance around the pole or guy unless otherwise specified by an AEP Forestry representative.

## E. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.

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## VI. Transmission

### A. Hazard Trees

Trees may exhibit potential threats to AEP facilities due to disease, damage, physical location, growth characteristics or environmental problems. Where these trees exist, AEP considers them high priority risks that need to be addressed and remediated.<sup>xvii</sup>

#### 1. Visual Assessment

While performing work on a circuit, contract crews shall conduct a visual assessment to identify trees with imminent<sup>1</sup> and/or probable<sup>2</sup> likelihood of failure inside and outside the right-of-way. The tree should be viewed from some distance away, if possible, to consider crown shape and surroundings.

Any tree identified to be a potential imminent threat to an AEP Transmission line shall be reported to the responsible transmission forester.

#### 2. Ground Evaluation

If a Hazard Tree is identified during the visual assessment, a 360° ground evaluation shall be required. The evaluations should include an inspection of:

- Tree crown
- Trunk
- Trunk flare
- Above-ground roots
- Site conditions around the tree in relation to targets.

The Contractor shall report risk and mitigation options to the responsible transmission forester.

### B. Tree Felling


Before beginning any tree felling operation, the Contractor shall consider relevant factors<sup>3</sup> pertaining to the tree and site and shall take appropriate actions to ensure a safe removal operation.<sup>xviii</sup>

1. When there is a danger that the tree pieces or tree being removed may fall in the wrong direction and contact utility facilities or damage other property, appropriate methods shall be used to control the direction of fall.<sup>xix</sup>
2. All limbs shall be removed to a height and width sufficient to allow the tree parts or tree to fall clear of hazards.<sup>xx</sup>
3. Notches shall be used on all trees and trunks greater than five inches DBH.<sup>xxi</sup>

<sup>1</sup> Imminent – failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. (Tree Risk Assessment Manual, pg. 100)

<sup>2</sup> Probable – failure may be expected under normal weather conditions within the specified time frame. (Tree Risk Assessment Manual, pg. 100)

<sup>3</sup> ANSI Z133-2012 Annex C.3, Manual Tree Felling Procedures contains a list of relevant factors to be considered during tree felling.

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4. Contractors shall provide evidence of training to employees related to tree felling upon request.

## C. Clearances

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| Right-of-way No Restrictions   | Right-of-way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2.</b>                   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |

<sup>4</sup> Upon completion of maintenance

**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |


## D. Transmission Dispatch Communication Procedures

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

## E. Transmission Forestry Construction Guidelines

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

<sup>5</sup>ANSI Z133-2012.

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All removals/trimming shall be done in accordance with the best recognized and approved principles of modern arboriculture and tree surgery, with balanced emphasis on current tree health and clearance.

The full width of the right-of-way, as determined by easement agreements, shall be cleared unless otherwise indicated on the Special Condition List.

Right-of-Way service will provide a contact list and will be handling damages for the construction work. Property owners who were notified of the construction work will receive a follow-up notification from the Contractor tree days before starting work on that property.

### 1. Contractor Qualifications

Contractor practices shall be in compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.

### 2. Clearing

The right-of-way shall not be cleared with a bulldozer, maintainer, or any other method that will disturb surface or sub-surface conditions unless specified in the right-of-way Special Conditions List. Reduction of disturbance of the surface or sub-surface soils reduces the risks of soil erosion and invasive species.

Contractor will take whatever measures necessary as specified in the SWPPP and elsewhere in the specification to prevent the erosion of soil from the right-of-way. The corrective measures may be in the form of grading, terracing, construction of sediment barriers, reseeding, mulching, or steps necessary to prevent erosions and must be approved by AEP.


Mowed right-of-ways shall be left with no stumps higher than three inches and no large chunks of debris left. Examples of preferred mowing equipment to be used on the right-of-ways will be equipped with, but not limited to, "FECON", "SEPPI" or equivalent type mowing heads.

### 3. Tree and Brush Removal

1. Trees and brush designated for cutting or mowing on the rights-of-way shall be cut as close to the ground as practicable, but not to exceed three inches in height above the ground line. All trees and brush cut shall be stump-treated with an approved herbicide as instructed on the label. All spraying procedures are to be fully explained to property owners if requested by landowner. If requested by landowner that no herbicides be used, their request is to be referred to Company. Certain state laws and regulations may require consent of the property owner to apply herbicides.

2. On portions of the right of way where the conductor to ground clearance is 100 feet, or less, all woody stemmed vegetation will be cut, limbed and lopped. No vegetation will be permitted to obstruct roads, lanes, trails, fences and streams. The brush shall also be cut and compacted. Additional requirements are:

- Stump surfaces shall be cut parallel to and within three inches of the ground.
- Brush and logs shall not be placed within 25 feet of improved roads, or river and stream banks.
- Brush and logs shall not be piled in flood plains.
- Brush and logs shall not be placed in fields unless authorized by the property owner.

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- Brush and logs shall not be placed where it will obstruct ingress or egress on other rights-of-way such as roadways or trails.
- Trees will be felled where possible to protect crops, fences and other facilities.

3. No clearing will be done where the line crosses valleys or ravines when the conductor profile indicates a height of 100 feet or greater above the ground at maximum sag; hence, impacts on streams and woody vegetation in valleys can be avoided or minimized. The exceptions to this are as follows:

- Trees that do not have at least 50' of clearance between conductors and tree under maximum sag conditions will be removed.
- Where a conductor stringing path is specified
- Wire set-up areas
- Work areas, etc.

4. For trees in yards, grind stumps to six inches below grade and restore the ground to match the existing grade and vegetation in the surrounding yard.

5. Low-growing species can be left except in tower locations. All woody stem vegetation within the cleared right-of-way shall be removed on NERC-applicable lines.

6. Any required buffer zones/screens shall be selectively treated in areas designated by AEP. Only tall-growing species (i.e. those trees that will grow taller than 15 feet at maturity) will be cut or treated in these areas.


#### 4. Tree Pruning

Tree pruning will generally be limited to trees on the edge of the right-of-way or in locations designated as environmentally-sensitive; tree pruning will ensure that required clearances are achieved. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development. Manual pruning operations will utilize qualified line clearance arborists, as defined by ANSI Z133.1-2012, and seek to prune trees according to standards set by the International Society of Arboriculture, the American National Standards Institute and the Tree Care Industry Association. Trees will be pruned in accordance with the American National Standard Institute guidelines for "Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning), ANSI A300 (Part 1) – Pruning"

#### 5. Debris Disposal

Debris from construction clearing operations is left on the right-of-way to decompose and return nutrients to the soil and to reduce the possibility of soil erosion. Limbs are reduced in size to maintain a low profile, and both the main stem and brush left on the right-of-way.

1. All woody vegetation that falls into roadways, waterways, fences, lawns, or pastures shall be moved to a wooded area of the right-of-way or may, at times, be chipped and/or otherwise removed.

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2. Logs may be left in tree lengths or as designated. The merchantable value of the logs will be preserved as much as possible.
3. Alternatives to the debris disposal standard are the following:
  - Cut and Compact: Brush may be reduced in height by cutting and by compacting piles with crawler-type equipment at selected locations (depressions in topography) on the right-of-way outside of the conductor path.
  - Cut and Scatter: Brush may be reduced in height by cutting or scattering on the right-of-way outside of the conductor path or roadway, but as close to the edge of the right-of-way as possible.
  - Cut and Pile: Where required by right-of-way agreement, brush shall be piled or scattered off the right-of-way.
  - Chipping/Shredding: Chipping/shredding or other viable methods may be utilized where accessible by equipment.
  - Burning: brush burning shall only be done if it is specified in the right-of-way agreement and is in accordance with applicable regulations. This method requires formal approval by the Manager of Forestry Operations.

## F. Hazard Trees


Hazard trees (outside of right-of-way) will be cut or trimmed and the logs and laps will be left as felled. When the conductor to ground clearance is over 100 feet, only those trees that do not have the required clearance will be cut. Refer to Section VI.A on page 13 for additional information.

## G. Herbicide

Application of all herbicides shall be performed as required by federal, state, and local laws. The contractor will furnish and be responsible for all pesticides, including proper disposal of their containers, and insure their use in accordance with the label instructions. All work will be done as defined in Herbicide Application on page 10.

## H. Fences and Crops

1. No fences shall be cut unless contractor is authorized to do so by AEP, if fences are cut or broken by the contractor without prior AEP authorization, the Contractor, at their expense, shall promptly repair.
2. Contractor is responsible for the right-of-way clearing needed to perform the job, however, the Contractor agrees to not do unnecessary damage to growing crops or other properties and agrees to pay the tenant and/or landowner involved for any unnecessary damage to growing crops and other properties. AEP shall be the sole judge of what constitutes “necessary” and “unnecessary” damage under the terms hereof.

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## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species   |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d'arc (Osage orange, hedge tree) |



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| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |


### 1. Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

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## **B. Distribution Operating Company Specific Guidelines**

- 1. AEP Ohio**
- 2. AEP Texas**
- 3. Appalachian Power**
- 4. Indiana Michigan Power**
- 5. Kentucky Power**
- 6. Public Service of Oklahoma**
- 7. Southwestern Electric Power Company**
- 8. Wheeling Power**


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## C. Referenced Documents and Specifications

| Title  | Year | Version                  | Pages |
|--|------|--------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2               | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                          | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                 |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI® Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI® A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI® A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI® A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition           | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008            | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition            | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                 |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                 |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                 |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                 |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                 |       |


<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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|   |      |               |       |
|---|------|---------------|-------|
| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

- <sup>i</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH
- <sup>ii</sup> *Best Management Practices – Utility Pruning of Trees.* International Society of Arboriculture. Champaign, IL
- <sup>iii</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH
- <sup>iv</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>v</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>vi</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>vii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>viii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>ix</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>x</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xi</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power
- <sup>xiii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power
- <sup>xiv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xvi</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power
- <sup>xvii</sup> *Managing Hazard Trees on FAC-003 Applicable Circuits.* American Electric Power
- <sup>xviii</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xix</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xx</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL
- <sup>xxi</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

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# AEP FORESTRY

## *Instructions*

### *For*

## **Forestry Contract Crew Audits**

**January 2007**

**The Forestry Contract Crew Safety and Forestry Contract Crew Audits** are tools that AEP Foresters can use to record a tree crew's compliance with safety regulations, contract guidelines and work performance. A crew, or the completed work, is rated as pass or fail and acceptable or unacceptable. Acceptable or pass means a crew meets contract guideline expectations. Unacceptable or fail means a crew, or the completed work, does not meet contract guideline expectations. An unacceptable or fail rating for any single item in the Crew Safety, Forestry Clearance or Forestry Work Quality audit sections will result in a failure rating for the audit section receiving the unacceptable or fail rating.

Each topic found on the Forestry Contract Crew Safety Audit and Forestry Contract Crew Audit is defined in this document. The 10 topics listed under Safety are forestry specific relating to the AEP Contractor Oversight program. The remaining five topics – Clearance, Work Quality, Equipment, Personnel and Reporting Accuracy relate to contract/guideline compliance and work performance.

Definitions of terms used in this document and more detailed explanations of right of way Forestry work compliance standards are supported by and provided in the document "AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations".

One copy of each completed crew audit is to be given to the audited tree crew foreman, one copy to the contractor general foreman/ supervisor responsible for the crew, and one copy kept on file at the responsible/ local AEP forester's office.

All audit information, including comments, should be entered into RWM

**Audit Frequency** – The expectation of AEP Forestry management is that contract crew audits are to be conducted on a regular basis.

**Fail or Unacceptable** - Any item marked 'Fail' or 'Unacceptable' must be explained. Use the comments sections on the audit forms to explain why an item was marked 'Fail' or 'Unacceptable'.

## Safety Audit

**Personal Protective Equipment** - Shall be worn as required by OSHA and ANSI specifications. Such PPE includes and is not limited to:

**Hard Hats** - Shall be worn when entering the job site. Visual inspection of hard hats should be made to insure they are not cracked, broken, or otherwise altered.

**Safety Glasses** - ANSI approved Z87.1 eye protection shall be worn on job site at all times. Safety glasses are required for all jobs.

**Ear Protection** - Shall be worn when running chippers or chainsaws. Exception- not required when using a chainsaw while working in tree.

**Proper Footwear** - Proper work boots that go above the ankle. Footwear should support the foot and ankle area.

**Chain Saw Chaps** - Are to be worn, according to ANSI guidelines, while operating chain saws.

**High Visibility Garments** – Are to be worn when exposed to vehicular traffic.

**Fall Protection Equipment** – Proper fall protection equipment shall be used while working in an aerial lift device or manually climbing. All such equipment shall be inspected on a daily basis for safe working condition.

**Properly Maintained Safety Equipment** - Each truck is required to have a fully stocked, removable first aid kit; fire extinguisher with current fire safety inspection; and wheel chocks.

**Traffic Control Devices** – Approved cones, signs and flagging personnel need to be properly placed in compliance with State and/or Federal DOT regulations (MUTCD). Be sure all vehicles are properly parked adhering to all city and state laws and regulations including OSHA regulations.

**Proper Fall Protection Procedures** – All climbing practices must be in accordance with OSHA and ANSI Z133 standards.

**Properly Barricade Work Area** – Public should be kept away from work area. Safety cones shall be used to isolate work area from public area. Any person not wearing proper PPE shall be escorted out of work area. Unattended equipment should not be left on the ground where it could jeopardize the public or worker safety.

**Properly Maintain and Store Work Tools** – All tools such as chain saws, pole pruners, ladders, etc. that are kept on a work vehicle are to be safely secured and stored away from public availability. Saws with blade scabbards should be stored with scabbard on. Tools should be in good working order and repair.

**Follow Proper Approach Distances** – All tree trimmers are required to follow OSHA 1910.269 minimum clearances for A.C. Live – Line Work Minimum Approach Distances.

**Properly Store and Mark Hazardous Material** – All herbicide sprayers and storage containers shall be properly labeled and kept in a secured location. Flammable liquids shall be stored in approved containers.

**MSDS and Labels Information Available** - Material Safety Data Sheets for all chemicals shall be readily available on each vehicle. State and federal pesticide regulations also require each vehicle to have labels for each herbicide being used by the crew or stored on the vehicle.

**Good Job Site Housekeeping** – Job site shall be kept orderly at all times. Equipment, trimmings and debris need to be contained to allow safe working operations and provide public safety.

### **Clearance Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Tree Pruning- Conductor Clearance** – All tree pruning shall be governed by approved principles of arboriculture and shall adhere to Tree Care Industry Association (TCIA) and International Society of Arboriculture (ISA) standards.

**Primary Conductors- Conductor Clearance** - It is AEP's practice to prune trees in a manner that will direct growth away from the electrical conductors. Growth should be removed to a lateral or parent stem and vertical growth rolled back away from the conductor.

Minimum clearance for distribution system lines should be established by each Operating Company. Overhanging limbs should be removed unless otherwise directed by the appropriate AEP System Forestry representative.

**Secondary Conductors – Conductor Clearance** – Minimum clearance for open wire secondary should be established by each Operating Company. Overhanging limbs should not be removed unless otherwise directed by the appropriate AEP System Forestry representative.

Insulated, Twisted, or Cabled Secondary Conductor Clearance – Will not be pruned unless limbs are applying pressure to the line or unless directed by the appropriate AEP System Forestry representative.

**Tree Removal** – Tree removal is an important part of the AEP line clearance program. Targeted tree removals are all trees with the potential to grow into the conductors., Dead, diseased, fast growing tree species, and trees that cannot be properly pruned to obtain proper clearance for the AEP conductors are removal targets.

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Stumps shall be flush cut and treated with an approved herbicide as designated by the appropriate AEP System Forestry representative.

**ROW Width** - AEP forestry will provide the width of the right of way. This area will vary depending on facilities. The full width of the R/W area or easement should be cleared of all tall growing or non-compatible woody plant species unless otherwise instructed by the appropriate AEP System Forestry representative.

**Danger Trees** - Danger trees shall be removed or pruned to eliminate the hazard. When cut, danger trees shall be cut as low as practicable, but not to exceed eight inches in height above the ground line. The logs and slash shall be left as felled, unless otherwise designated by AEP System Forestry.

### **Work Quality Audit**

"AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations" is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Clearance for Species** - The clearance for a species may be defined as the distance between the tree and conductors after pruning. It is the responsibility of each crew to adhere to the appropriate clearances specified in the AEP guidelines. No exceptions should be made unless otherwise instructed by the appropriate AEP System Forestry representative.

**Hangers Removed** – Any cut or broken limbs left in the tree after pruning shall be removed before leaving work site.

**Collar Cuts** - Collar cuts are important in order to reduce a tree's sprouting. Collar cuts shall be consistently made according to proper arboriculture standards (ANSI A300).

**Directional Pruning** – A pruning practice used to remove branches growing toward conductors; leaving branches growing away from conductors.

**Drop Crotch Selection** – Pruning cuts are to be made, whenever possible, to lateral branches that are at least 1/3 the diameter of the branch being removed.

**Peels / Tears** – Pruning cuts resulting in bark tearing or stripping below a cut shall be avoided.

**Clean Up / Brush Disposal** – All appropriate cleanup work shall be done before leaving a job site unless arrangements have been made with the property owner or AEP forestry personnel. This could include: Chipping or piling brush; removing trash/debris; raking the yard and sweeping driveway, sidewalk or street when appropriate.

**Regard for Property** - All line clearance personnel shall respect the property of the landowner at all times. The crew should take extra effort not to drop limbs on landscaped beds, gardens, yard decorations, fences, roofs, gas meters, cars, etc. The crew should take care not to damage property when walking across or dragging brush.



Ruts or other damage shall be brought to the land owner's attention and addressed accordingly.

**Stump Height** – Stumps should be cut as low to the ground as practical.

**Clearing Around Pole Locations** - A radius of five feet shall be cleared to provide a safe work area free of obstruction from vegetation around each pole location.

**Herbicide Application** – Herbicide applications shall be done in accordance with all Federal, State, and local laws. Contractors shall obtain 100% coverage and at least 95% control of all targeted woody plants.

**Tree Growth Regulator** – Trees designated for Tree Growth Regulators (TGR) shall be treated with an approved product in accordance with the label instructions.

### **Reporting Accuracy Audit**

**Number of trees trimmed** – Record timesheet data. Count the number of trees trimmed by a crew and record on audit sheet.

**Number of trees removed** – Record timesheet data. Count the number of trees removed by a crew and record on audit sheet.

**Footage/Units/Acres Re-cleared** - Record timesheet data. Field count the work completed by a crew.

**Footage/Units/Acres Ground Sprayed** - Record timesheet data. Field count the work completed by a crew.

### **Non-KPI Audit Items**

**Truck Appearance / ID** - Name of contractor clearly displayed with DOT numbers properly displayed. No personal bumper stickers. No long-standing, visible spills.

**Number of Working Saws** – Determined per contract specifications based on type of crew. These saws start and idle without assistance and have a maintained bar and chain.

**R/W Equipment/Chipper** - The proper vehicle, mower, or trimmer unit shall be used based on work location and tree/brush conditions. Chipper starts when key is turned on. Chips are of small size (2"-6"), and not stringy. Brush feeds correctly into chipper and chute deposits chips as directed.

**Crew Properly Equipped** –Each crew shall be equipped according to AEP contract specifications. Crews shall have all necessary tools, on a daily basis, to complete

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assigned work productively. For example; ropes, saddles, saws, pruner poles, herbicide sprayer, etc...

**Herbicide Equipment** - Each crew shall have all necessary tools, sprayers and product to ensure safe, productive herbicide applications. Equipment must be in good working condition. All crews shall have all necessary PPE, sprayers etc. to apply according to label instructions.

**AEP Guidelines** - A complete, legible and current set of the AEP Forestry Guidelines and clearance specs is kept in the vehicle (English or Spanish).

**Professional Appearance** - All contract employees will conduct themselves and dress themselves in a manner that positively represents AEP. If required by AEP contract specifications, contract employees must be wearing contractor uniform (i.e. appropriate color T-shirt). Crew must be neat in personal appearance - no excessive holes in clothes and facial hair neat in appearance.

**Manpower Utilization** - All contract employees and equipment shall be used in a fashion that is conducive to maintaining safe work practices and production goals. Look to see if crews are working in efficient manner (i.e. standing around doing nothing, trees that should be treated with herbicide should not be cut then sprayed). Everyone on a crew must be working as a team. If workflow is disjointed with no organization, it is unacceptable. A job briefing should be held each morning to ensure that everyone knows their responsibilities and can perform their tasks in a safe and productive manner.

**Customer Relations** - All contractors will respect the needs and concerns of the customer or landowner. Demonstrate, on an ongoing basis, effective, courteous communication with AEP customers (both internal and external) and landowners and the general public.

**Tree Knowledge** - All members of a crew shall be able to identify and distinguish growth characteristics of trees common to their geographical work area. Ask crews to identify trees in their surrounding area.

**Planning** - The crew should work in a systematic and organized fashion on a daily basis (i.e. not skipping around). The crew supervisor should have a plan for the day and be prepared to discuss that plan with the property owner and any utility employee. It is the responsibility of each crew member to inform their supervisor of any equipment needs that may stand in the way of production or safety.

**Use of Forms** - Forms such as time sheets and production logs, herbicide records, refusal forms, removal cards etc. are filled out completely and accurately and kept up-to-date with all important information. Items such as tree count can be written in daily dairies before being transferred to the correct form; however they must be in a coherent and ordered format.

### Sample Audit Form

#### AEP FORESTRY CONTRACT (KPI) CREW AUDITS

No. \_\_\_\_\_

Audit Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Audit Quarter: 1 2 3 4 (circle one) Operating Co.: \_\_\_\_\_  
 Auditor Name: \_\_\_\_\_ State: \_\_\_\_\_  
 Crew Number: \_\_\_\_\_ District: \_\_\_\_\_ Forestry Region Number: \_\_\_\_\_  
 Circuit #: \_\_\_\_\_ Foreman/ General Foreman: \_\_\_\_\_  
 Circuit Name: \_\_\_\_\_ Pole Number: \_\_\_\_\_

#### Forestry Contract Crew Safety (KPI) Audit CHECK ONE: PASS FAIL

- Failure ratings for any single item will result in failure of this audit.
- Failure must be documented in comments fields and will require random periodic follow up observation.

|  | PASS                     | FAIL                     | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Personal Protective Equipment-<br>Shall be worn as required. Includes but not limited to hard hats, safety glasses, ear protection, proper footwear. | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 Property Maintained Safety Equipment-<br>Fully stocked, removable first aid kit, fire extinguisher and wheel chocks.                                 | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Traffic Control Devices-<br>Approved and placed in accordance with applicable State and Federal regulations.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 4 Proper Fall Protection Procedures-<br>All climbing practices must be in accordance with OSHA and ANSI Z -133 standards.                              | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 5 Properly Barricade Work Areas-<br>Barricade material available and used in accordance with safety rules.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 6 Properly Maintain and Store Work Tools   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 7 Follow Proper Approach Distances-<br>Follow OSHA 1910.269 minimum clearances for AC Live Work Minimum Approach Distances.                            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Acceptable/Unacceptable on items below

- An Unacceptable ratings may result in failure of this audit dependent on magnitude and frequency of the violation.
- Any item found to be Unacceptable must be documented in the comments fields and will require random, periodic follow up observation.

|  | ACCEPTABLE               | UNACCEPTABLE             | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Hazardous material properly stored, labeled and documented | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 MSDS and Herbicide Label information available             | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Jobsite Housekeeping                                       | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Forestry Clearance (KPI) Audit CHECK ONE: PASS FAIL

| Pass / Fail         | PASS                     | FAIL                     | COMMENTS |
|---------------------|--------------------------|--------------------------|----------|
| Conductor Clearance | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Danger Trees        | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| ROW Width           | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Forestry Work Quality (KPI) Audits CHECK ONE: PASS FAIL

|                       | PASS                     | FAIL                     |                       | PASS                     | FAIL                     |                        | PASS                     | FAIL                     | COMMENTS |
|-----------------------|--------------------------|--------------------------|-----------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------|
| Collar Cuts           | <input type="checkbox"/> | <input type="checkbox"/> | Stump Height          | <input type="checkbox"/> | <input type="checkbox"/> | Peels/Tears            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Directional Pruning   | <input type="checkbox"/> | <input type="checkbox"/> | Hangers               | <input type="checkbox"/> | <input type="checkbox"/> | Cleanup/Brush Disposal | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Drop Crotch Selection | <input type="checkbox"/> | <input type="checkbox"/> | Clearing around poles | <input type="checkbox"/> | <input type="checkbox"/> | Regard for property    | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Reporting Accuracy (KPI) Audit

| Week ending date: ____/____/____                                     | Timesheet Data |       | Audit Data |       | Variance |       |
|--|----------------|-------|------------|-------|----------|-------|
|  | Cap            | O&M   | Cap        | O&M   | Cap      | O&M   |
| Number of trees trimmed  | _____          | _____ | _____      | _____ | _____    | _____ |
| Number of trees removed  | _____          | _____ | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acres Re-cleared                                     | _____          | _____ | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acres Ground Sprayed                                 | _____          | _____ | _____      | _____ | _____    | _____ |
| YES NO<br>Widening <input type="checkbox"/> <input type="checkbox"/> |                |       |            |       |          |       |

#### Non - KPI Crew Audit Items

|                        | PASS                     | FAIL                     |                         | PASS                     | FAIL                     |                        | PASS                     | FAIL                     |                | PASS                     | FAIL                     |
|------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------------|--------------------------|--------------------------|
| Equipment & Personnel  | <input type="checkbox"/> | <input type="checkbox"/> | Professional appearance | <input type="checkbox"/> | <input type="checkbox"/> | Crew Properly Equipped | <input type="checkbox"/> | <input type="checkbox"/> | Tree Knowledge | <input type="checkbox"/> | <input type="checkbox"/> |
| Truck Appearance/ID    | <input type="checkbox"/> | <input type="checkbox"/> | Manpower utilization    | <input type="checkbox"/> | <input type="checkbox"/> | Herbicide Equipment    | <input type="checkbox"/> | <input type="checkbox"/> | Planning       | <input type="checkbox"/> | <input type="checkbox"/> |
| Number of Working Saws | <input type="checkbox"/> | <input type="checkbox"/> | Customer Relations      | <input type="checkbox"/> | <input type="checkbox"/> | AEP Guidelines         | <input type="checkbox"/> | <input type="checkbox"/> | Use of Forms   | <input type="checkbox"/> | <input type="checkbox"/> |
| ROW Equipment/Chipper  | <input type="checkbox"/> | <input type="checkbox"/> |                         |                          |                          |                        |                          |                          |                |                          |                          |

ADDITIONAL COMMENTS: \_\_\_\_\_

AEP REPRESENTATIVE: \_\_\_\_\_ CONTRACTOR REPRESENTATIVE: \_\_\_\_\_

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# Transmission Vegetation Management Program (TVMP)


## Document # TVMD-001

Effective July 31, 2015



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### Transmission Vegetation Management Program (TVMP)

|   |                                       |   |         |              |
|---|---------------------------------------|---|---------|--------------|
|  | Responsible Engineer:<br>Lynn Hayward | Copyright 2015<br>American Electric Power | Rev. 14 | TVMD-001     |
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## Review Cycle

| Version | Description                                | Review Cycle | Retention Period | Review Date |
|---------|--|--------------|------------------|-------------|
| 1       | Reviewed with Changes to Ver. 0.           | Annual       | 3 Yrs            | 01/16/2006  |
| 2       | Reviewed with Changes to Ver. 1 and 2.     | Annual       | 3 Yrs            | 03/12/2007  |
| 5       | Reviewed with Changes to Ver. 3, 4, and 5. | Annual       | 3 Yrs            | 05/06/2008  |
| 8       | Reviewed with Changes to Ver. 6.           | Annual       | 5 Yrs            | 05/26/2009  |
| 9       | Reviewed with Changes to Ver. 8.           | Annual       | 5 Yrs            | 07/27/2010  |
| 10      | Reviewed with Changes to Ver. 9.           | Annual       | 5 Yrs            | 07/21/2011  |
| 11      | Reviewed with Changes to Ver. 10.          | Annual       | 5 Yrs            | 07/12/2012  |
| 12      | Reviewed with Changes to Ver. 11.          | Annual       | 5 Yrs            | 07/15/2013  |
| 13      | Reviewed with Changes to Ver. 12.          | Annual       | 5 Yrs            | 07/18/2014  |
| 14      | Reviewed with Changes to Ver. 13           | Annual       | 5 Yrs            | 07/17/2015  |

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## Revision History

| Version | Description  | Prepared By                          | Reviewed By | Approved By   | Effective Date |
|---------|--|--------------------------------------|-------------|---|----------------|
| 1       | Added Appendixes A and B.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 01/16/2006     |
| 2       | Added Appendix C.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 10/02/2006     |
| 3       | Added Revision History.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 03/12/2007     |
| 3       | Revised Appendix C from<br>Version 2. Clarified video<br>text associated with aerial<br>patrols, page 8.   | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 03/22/2007     |
| 4       | Revised Maintenance<br>Clearances in Table I, page<br>11. Removed Appendix A<br>from Revision 0 and inserted<br>a new Appendix A. Removed<br>Appendix B from Revision 0<br>and renamed Appendix C<br>from Revision 0 to Appendix<br>B. | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 11/09/2007     |
| 5       | Revised Maintenance<br>Clearances text page 10.<br>Revised Appendix B.   | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 05/06/2008     |

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| Version | Description   | Prepared By   | Reviewed By   | Approved By   | Effective Date |
|---------|---|---|---|---|----------------|
| 6       | Added third level of review/approval. Added Internal Mailing list. Added Standard mapped to TVMP. Revised Contents and page numbers. Revised Maintenance Clearances, pages 13 and 14. Revised Imminent Threat, pages 10 and 11. Revised Appendix A. Added new Appendix C. Added new Appendix D. Added hyperlinks. | S .J. Reaves,<br>Forestry<br>Program<br>Coordinator I | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | D. R. Boezio,<br>Dir., Trans.<br>Asset<br>Engineering             | 06/15/2009     |
| 8       | Revised Version History. Revised Personnel Qualifications, Appendix D. Included References on Contents Page. Revised Subject Matter Experts (SMEs).   | S .J. Reaves,<br>Forestry<br>Program<br>Coordinator I | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | D. R. Boezio,<br>Dir.,<br>Transmission<br>Asset<br>Engineering    | 07/31/2009     |
| 9       | Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Landowner and Community Relations section to Land Owner Relationships and Environmental Sustainability. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved.   | D.K.<br>Killingsworth,<br>Engineer I                  | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering  | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 07/30/2010     |
| 10      | Reformatted Document to match Transmission Forum Model TVMP.  | D.K.<br>Killingsworth,<br>Engineer I                  | J. E. Momme,<br>Dir. Trans.<br>Line Projects<br>Engineering   | D. J. Recker,<br>Managing Dir.<br>Trans. Projects<br>Engineering  | 7/30/2011      |

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|---------|--|--|--|---|----------------|
| 11      | Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Land Owner Relationships and Environmental Sustainability to Land Owner Relationships and revised. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved. Removed Appendix C. Revised Personnel Qualifications. Revised New Construction Clearing. Added Document Team. | K. B. Patton,<br>Utility<br>Forester II            | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 7/31/2012      |
| 12      | Revised Document Team. Revised Subject Matter Experts (SMEs). Revised Appendix A Imminent Threat Communication and Procedures. Revised Appendix B Imminent Threat Communication. Revised Appendix C TVMP Internal Mailing List. Revised Forestry Patrol Procedures. Revised Imminent Threat Report Form.   | K. B. Patton,<br>System<br>Forestry<br>Coordinator | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 7/30/2013      |
| 13      | Revised Document Team. Revised Signature page. Updated References. Revised entire document to align with changes to NERC Standard FAC-003-3. Revised Personnel Directly Involved. Moved Right-of-Way Clearance Guidelines to Appendix A. Updated Appendix C: Subject Matter Experts. Revised Appendix D TVMP Internal Mailing List.  | Lynn<br>Hayward<br>Lead Engineer                   | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering      | 7/31/2014      |




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| 14      | Revised Document Team.<br>Updated References.<br>Removed Imminent Threat<br>Procedure. Updated MVCD<br>distances. | Lynn<br>Hayward<br><br>Senior<br>Engineer | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | 7/31/2015      |

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Senior Engineer, Transmission Line E

7-28-15

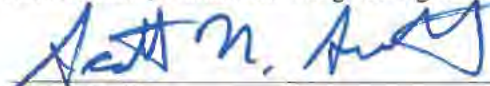
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Date



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|   |  |         |              |
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## I. Referenced Specifications

| Title  | Date | Version            | Pages |
|--|------|--------------------|-------|
| <i>AEP Forestry Goals, Procedures &amp; Guidelines for Distribution and Transmission Line Clearance Operations</i>   | 2015 |                    |       |
| American Electric Power (AEP). <i>Transmission Right of Way Clearing and Maintenance: A Balanced Approach to Vegetation Management</i> . American Electric Power, Columbus, OH 43215.  | 2008 |                    |       |
| American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning)</i> . Tree Care Industry Association, Inc. Londonderry, NH 03053.   | 2008 | A300 (Part 1)-2008 | 1-13  |
| American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices Part 7 – Integrated Vegetation Management a. Electric Utility Rights-of-way</i> . Tree Care Industry Association, Inc. Londonderry, NH 03053. | 2012 | A300 (Part 7)-2012 | 1-15  |
| American National Standard Institute. <i>American National Standards for Arboriculture Operations – Safety Requirements</i> . International Society of Arboriculture (ISA). Champaign, IL 61826.   | 2012 | Z133.1-2012        | 1-71  |
| <i>AEP Guideline Accounting for Maximum Conductor and Sag Blowout for Vegetation Management</i>  | 2014 |                    |       |
| <i>AEP Transmission Forestry Aerial Patrol Procedures for NERC-Reportable Circuits</i>   | 2013 |                    |       |
| <i>AEP Risk Assessment &amp; Procedures</i>  | 2014 |                    |       |
| <i>TVMD-009 Imminent Thread Communication and Procedures</i>   | 2015 |                    |       |

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## II. The Transmission Vegetation Management Program (TVMP)

### A. Scope

The American Electric Power (AEP) Transmission Vegetation Management Program (TVMP) has been developed and implemented to ensure compliance with the North American Electric Reliability Corporation (NERC) reliability standard FAC-003-3. This program is intended to maintain a reliable electric transmission system by using a defense-in-depth strategy to manage vegetation located on transmission rights-of-way (ROW) and minimize encroachments from vegetation located adjacent to the ROW, thus preventing the risk of those vegetation-related outages that could lead to Cascading.

This program applies to AEP's transmission and generation facilities as defined in FAC-003-3. Facilities referred to as NERC-applicable are:

- Transmission lines operated at 200 kV and above ( $\geq 200\text{kV}$ );
- Other lower-voltage transmission or generation lines that have been designated as an Interconnection Reliability Operating Limit (IROL);
- Each overhead transmission line identified above, located outside the fenced area of the switchyard, station or substation, and any portion of the span of the transmission line that is crossing the substation fence;
- Overhead generation lines that extend greater than one mile beyond the fenced area of the generating station switchyard to the point of interconnection with a transmission facility or do not have a clear line of sight, and are operated at 200 kV and above ( $\geq 200\text{kV}$ ).

AEP's Transmission Forestry Operations group manages and executes the program for vegetation along approximately 8,700 miles of NERC-applicable transmission rights-of-way in portions of eleven states. This is accomplished through the implementation and oversight of a comprehensive, systematic, vegetation management program.


### B. Vegetation Management Objectives

The TVMP is an integral part of providing for the safe, reliable operation of the AEP transmission system. The key measure of success is zero reportable vegetation-related outages on NERC-applicable facilities.

For NERC-applicable facilities, AEP's intent is to clear the right-of-way to the maximum appropriate width by removing all woody-stemmed vegetation within the right-of-way<sup>1</sup> and potential hazard trees.

AEP conducts inspections, aerial and as-needed ground inspections, and develops annual vegetation management work plans to ensure the program objective is achieved in the most efficient, environmentally sound, and economical manner practical.

<sup>1</sup>Upon completion of vegetation maintenance.

|   |   |         |               |
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AEP strives to manage its rights-of-way in accordance with its Environmental, Safety and Health (ES&H) Philosophy: “No aspect of operations is more important than the health and safety of people. Our customer’s needs are met in harmony with environmental protection.”

Additional considerations include:

- Minimizing adverse environmental impacts.
- Complying with laws and regulations.
- Achieving cost efficiency.
- Maintaining a positive relationship with landowners and the public.

## C. Definitions

**Cascading:** “The uncontrolled successive loss of system elements triggered by an incident at any location. Cascading results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.”<sup>2</sup>

**Hazard trees:** Those trees that are structurally unsound and could strike a target (such as electric facilities) when they fail.<sup>3</sup>

**Interconnection Reliability Operating Limit (IROL):** “A system Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Bulk Electric System.”<sup>2</sup>

**Inspector:** Individual assigned with the responsibility of evaluating clearances in the Transmission Right-of-Way and minimizing encroachments into the ROW from vegetation located adjacent to the ROW.

**Minimum Vegetation Clearance Distance (MVCD):** “The calculated minimum distance stated in feet (meters) to prevent flash-over between conductors and vegetation, for various altitudes and operating voltages.”<sup>2</sup>


**Remediation:** The evaluation of a point of interest, and if necessary, taking action to resolve the identified vegetative issues.

**Right-of-Way (ROW):** “The corridor of land under a transmission line(s) needed to operate the line(s). The width of the corridor is established by engineering or construction standards as documented in either construction documents, pre-2007 vegetation maintenance records, or by the blowout standard in effect when the line was built. The ROW width in no case exceeds the applicable Transmission Owner’s or applicable Generator Owner’s legal rights but may be less based on the aforementioned criteria.”<sup>2</sup>

**Sustained Outage:** “The deenergized condition of a transmission line resulting from a fault or disturbance following an unsuccessful automatic reclosing sequence and/or unsuccessful manual reclosing procedure.”<sup>2</sup>

<sup>2</sup>North American Electric Reliability Corporation, *Glossary of Terms Used in NERC Reliability Standards* (Atlanta, GA: North American Electric Reliability Corporation, 2014), accessed July 18, 2014, [http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf).

<sup>3</sup>American National Standard Institute, “Part 7 – Integrated Vegetation Management,” “a. Electric Utility Rights-of-way” in *for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices*, (Londonderry, NH: 2006), 58.

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**Vegetation Inspection:** “The systematic examination of vegetation conditions on a Right-of-Way and those vegetation conditions under the applicable Transmission Owner’s or applicable Generator Owner’s control that are likely to pose a hazard to the line(s) prior to the next planned maintenance or inspection.”<sup>4</sup>

**WECC Transfer Path:** The transmission paths monitored by the WECC (Western Electric Coordinating Council) regional Reliability coordinators.<sup>4</sup> Note: AEP does not operate in the WECC region.

### III. FAC-003-3 Requirements


#### A. Requirement 1 (Applicable Lines That are an Element of an IROL or Major WECC Transfer Path)

AEP maintains records of sustained outages from all causes. All outages determined to be caused by vegetation are investigated by appointed AEP employees, and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained. Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Entities or their designees. The supporting document AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system. The report lists vegetation-related outages by Regional Entities. The report lists the names of circuits where outages occurred; operated voltages; the date, time, and duration of the outage; and a description of the cause of the outage.

AEP conducts bi-annual vegetation inspections of all applicable facilities. During this inspection AEP inspects the vegetation-to-conductor clearances and identifies vegetation on and along transmission ROWs that could pose a reliability risk to the facility. Aerial patrols, except where the FAA or other ordinance prohibits flight, cover substantial portions of the transmission system to identify areas where remediation may be needed to prevent vegetation from interfering with circuit operation. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted.

A confirmed encroachment into the MVCD as identified in NERC Advisory FAC-003-3 Minimum Vegetation Clearance Distances (MVCD) May 14, 2015, observed in Real time during the inspection, is reported to the transmission forestry manager. Appropriate data and photographs are taken and submitted to the manager. These events are reported to the Regional Entity in accordance with NERC policy.

<sup>4</sup>North American Electric Reliability Corporation, Glossary of Terms Used in NERC Reliability Standards (Atlanta, GA: North American Electric Reliability Corporation, 2014), accessed July 18, 2014, [http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf).

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## B. Requirement 2 (Applicable Lines That are Not an Element of an IROL or Major WECC Transfer Path)

AEP maintains records of sustained outages from all causes. All outages determined to be caused by vegetation are investigated by appointed AEP employees, and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained. Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Entities or their designees. The supporting document AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system. The report lists vegetation-related outages by Regional Entities. The report lists the names of circuits where outages occurred; operated voltages; the date, time, and duration of the outage; and a description of the cause of the outage.

AEP conducts bi-annual vegetation inspections of all applicable facilities. During this inspection AEP inspects the vegetation-to-conductor clearances and identifies vegetation on and along transmission ROWs that could pose a reliability risk to the facility. Aerial patrols, except where the FAA or other ordinance prohibits flight, cover substantial portions of the transmission system to identify areas where remediation may be needed to prevent vegetation from interfering with circuit operation. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted.

A confirmed encroachment into the MVCD as shown in identified in NERC Advisory FAC-003-3 Minimum Vegetation Clearance Distances (MVCD) May 14, 2015, observed in real time during the inspection, is reported to the transmission forestry manager. Appropriate data and photographs are taken and submitted to the manager. These events are reported to the Regional Entity in accordance with NERC policy.

## C. Requirement 3 (Maintenance Strategy)


For NERC-applicable facilities, AEP's fundamental strategy is to clear the right-of-way to the maximum appropriate width by removing all woody-stemmed vegetation within the right-of-way<sup>5</sup> and potential hazard trees.

AEP considers conductor locations, the MVCD, and vegetation growth between maintenance activities when developing its maintenance plan. Maintenance does not occur on a rigid "cycle" basis; rather, the maintenance technique and schedule are driven by the condition of the vegetation observed during bi-annual inspections. Vegetation-to-conductor distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons other than qualified line-clearance arborists and qualified line-clearance arborist trainees (Columns A and C in Table 3: Transmission Line Clearance Guidelines in Appendix A on page 20).

AEP Transmission Forestry's goal is to convert the vegetative cover types on its transmission rights-of-way to low growing grass-forbs-herb covers that inhibit the germination, establishment, and growth of most incompatible vegetative species.

The AEP transmission vegetation management program emphasizes tree removal to promote long-term vegetation control and to minimize future maintenance expenditures. Additionally, AEP foresters and contractor personnel inspect for hazard trees during scheduled maintenance. Hazard trees are addressed on a case-by-case basis by the responsible forester.

<sup>5</sup>Upon completion of vegetation maintenance.

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Manual clearing is employed where the terrain is too steep or rough for mechanized equipment, where the vegetation is too tall for herbicide applications and aerial application is not possible, or where the immediate removal of vegetation is necessary. Contract employees use chainsaws or brush saws to selectively remove vegetation from the rights-of-way.

Mechanical clearing may be employed where terrain and access allow and where the vegetation is not too large for mechanical equipment to handle, where the vegetation is too tall for herbicide applications, where aerial application is not possible, or where the immediate removal of vegetation is necessary.

When tree removal or clearing is not practical or feasible, tree pruning may be employed. Fast-growing trees, where removal permission is not obtained, are pruned to yield greater clearance distances than slower-growing varieties. AEP Transmission Forestry may employ tree growth regulators (TGRs) to reduce the frequency and amount that trees must be pruned.

Mechanical pruning operations employ a variety of boom-mounted saws on vehicles capable of traversing the rights-of-way. Access, terrain, and tree heights influence the type of equipment used. When applicable, rights-of-way may be maintained with an aerial saw. These rights-of-way possess one or more of the following characteristics: steep, mountainous terrain; limited access; or prohibitive costs to prune by conventional means.


Manual and mechanical clearing without follow-up herbicide applications does not control the root systems of incompatible vegetation and could increase the future maintenance requirements in the areas where it is employed. Aerial, high-volume foliar, low-volume foliar, ultra-low-volume foliar, cut stubble, stump, basal, and granular applications may be employed. United States EPA-registered herbicides are applied by licensed pesticide application businesses contracted by AEP.

#### **D. Requirement 4 (Vegetation Condition That is Likely to Cause a Fault at any Moment)**

A vegetation condition that is likely to cause a fault at any moment is considered an imminent threat to the reliable operation of a NERC- or an IROL-applicable facility. An imminent threat must be mitigated within 24 hours of confirmation. This condition may be characterized by either vegetation or hazard trees; that are approaching or threatening to approach the MVCD to the conductor. For locations found during patrols, routine work, or other observations, where a potential imminent threat condition is confirmed by transmission forestry, an immediate notification<sup>6</sup> to the local dispatching authority is required. This will allow for mitigating actions, such as removal of the vegetation, temporary reduction in circuit rating, or switching the circuit out of service, until the imminent threat is relieved.

Refer to TVMD-009 *Imminent Thread Communication and Procedures*.

<sup>6</sup>NOPR RM-12-4-000, page 50, #85 (10/18/2012)—NERC explains that the obligation to notify without intentional delay generally “can be understood to include an immediate (within 1 hour of observation) communication notwithstanding a safety issue to personnel, other immediate priority maintenance functions to ensure reliability or system stability, or communication equipment failures that precludes immediate communication.”

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## **E. Requirement 5 (Vegetation Constraint May Lead to an Encroachment Into the MVCD)**

Restrictions on scheduled work may include refusals by property owners to access or perform work, orders to stop work by local authorities, or restrictions by federal and/or state agencies. The maintenance strategy in section III.C defines the expected extent of clearing. If the clearance specifications cannot be achieved at the time of scheduled maintenance, AEP shall implement corrective action. This corrective action may include more-frequent maintenance or more-frequent inspections to monitor the risk to the system and is documented in AEP's restriction log.

AEP has implemented procedures for achieving sufficient clearances in those locations on its rights-of-way where AEP is restricted from attaining the clearance listed in Column C of Table 3: Transmission Line Clearance Guidelines to prevent encroachment into the MVCD. This is described in AEP's Right-of-Way Clearance Guidelines; see "Appendix A: Right-of-Way Clearance Guidelines," which starts on page 19.

During bi-annual patrols, AEP monitors locations where these clearances cannot be achieved and determines if more-frequent maintenance is required in order to assure the safe, reliable operation of the circuit.

## **F. Requirement 6 (Annual Inspections)**


### **1. Vegetation Inspections and Patrols**

Aerial patrols are conducted to identify areas of the transmission system where remediation may be needed to prevent vegetation from interfering with circuit operation except where the FAA or other ordinance prohibits flight. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted. Aerial and ground patrol inspections aid in the development of the vegetation maintenance work plan.

### **2. Forestry Patrol Procedures**

#### **a. Patrol of the AEP Transmission System**

AEP shall perform bi-annual inspections on 100% of all transmission facilities subject to FAC-003-3. Patrols provide Transmission Foresters a view of right-of-way conditions and the effectiveness of the vegetation management program.

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**b. Patrol Schedule**

Patrol schedules are summarized in the table below.

**Table 1: Patrol Schedule**

|             | <b>Fall Patrol</b>   | <b>Spring Patrol</b>   |
|-------------|--|--|
| Patrol      | <ul style="list-style-type: none"> <li>Aug 15–Nov 15.</li> </ul>   | <ul style="list-style-type: none"> <li>By May 21.</li> <li>In areas at higher elevation or with later vegetation emergence, this date may be extended to June 4.</li> </ul>  |
| Remediation | <ul style="list-style-type: none"> <li>A1 Condition: addressed within 24 hours of confirmation.</li> <li>P1 Condition: complete by March 1 of the following year.</li> </ul> | <ul style="list-style-type: none"> <li>A1 Condition: addressed within 24 hours of confirmation.</li> <li>P1 Condition: complete by May 30. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 14.</li> </ul> |

**3. Exceptions**

Aerial patrols may be interrupted by force majeure, such as severe storms or floods. If patrols are interrupted, the time extension to complete the inspection shall not exceed the duration of the time AEP was prevented from performing the vegetation inspection.

**G. Requirement 7 (Annual Work Plan)**


AEP shall complete 100% of its annual vegetation work plan miles on NERC-applicable facilities to ensure no vegetation encroachments occur within the MVCD. Modifications to the work plan in response to changing conditions or to findings from vegetation inspections may be made (provided they do not allow encroachment of vegetation into the MVCD) and must be documented. The work plan starts on January 1 and ends on December 31.

AEP has a process for documenting the vegetation management activities to ensure the following:

- Scheduled work is properly identified and listed in the work plan.
- Adjustments to the work plan are properly noted and recorded. This plan may be modified for the following reasons:
  - Change in expected growth rate/environmental factors
  - Circumstances that are beyond the control of an applicable Transmission Owner or applicable Generator Owner
  - Rescheduling work between growing seasons
  - Crew or contractor availability/mutual assistance agreements
  - Identified unanticipated high-priority work
  - Weather conditions/accessibility
  - Permitting delays

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- Land ownership changes/change in land use by the landowner
- Emerging technologies
- Timesheets and maintenance methods employed are noted for each type of work on each project listed in the work plan.
- Work quality inspections are performed and work completed meets company specifications.

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## Appendix A: Right-of-Way Clearance Guidelines

When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width<sup>7</sup>, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall. Actively maintained trees that could be considered a crop such as in nurseries or orchards will be maintained in accordance with the clearance table guidelines specified in Table 2: Clearance Table Guidelines below. Table 3: Transmission Line Clearance Guidelines on page 20 shows Transmission Line Clearance Guidelines.

**Table 2: Clearance Table Guidelines**

| <b>Right-of-Way with No Restrictions</b>   | <b>Right-of-Way With Restrictions</b>  |
|--|--|
| <b>&lt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   | <b>&lt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   |
| <ol style="list-style-type: none"> <li>1. Remove all woody stemmed vegetation.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol>                 | <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column C, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> |
| <b>&gt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   | <b>&gt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   |
| <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column B, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> | <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column C, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> |

<sup>7</sup>Upon completion of vegetation maintenance.

**Table 3: Transmission Line Clearance Guidelines<sup>8</sup>**

| Column A                                   | Column B  | Column C  | Column D  | Column E  | MVCD <sup>9</sup>                    |
|--|---|---|---|---|--------------------------------------|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance (with restrictions) Desired Clearance between Conductor &amp; Vegetation</b> | <b>ANSI<sup>10</sup> Clearance between Conductor &amp; Vegetation</b> | <b>AEP Clearance between Conductor &amp; Vegetation</b> | <b>Over sea level up to 5,000 ft</b> |
| 765kV                                      | 45'   | 35'00"  | 27'04"  | 14'00"  | 12'04"                               |
| 500kV                                      | 45'   | 26'08"  | 19'00"  | 10'00"  | 7'06"                                |
| 345kV                                      | 30'   | 20'05"  | 13'02"  | 7'06"   | 4'07"                                |
| 230kV                                      | 30'   | 16'05"  | 7'11"   | 5'02"   | 4'04"                                |
| 161kV <sup>11</sup>                        | 25'   | 14'00"  | 6'00"   | 3'05"   | 3'00"                                |
| 138kV <sup>11</sup>                        | 25'   | 13'02"  | 5'02"   | 2'11"   | 2'05"                                |
| 115kV <sup>11</sup>                        | 25'   | 12'04"  | 4'06"   | 2'06"   | 2'01"                                |
| 88kV <sup>11</sup>                         | 25'   | 12'04"  | 4'06"   | 2'06"   | 1'07"                                |
| 69kV <sup>11</sup>                         | 25'   | 10'09"  | 4'02"   | 2'06"   | 1'02"                                |

<sup>8</sup>Conductor at maximum sag and movement.

<sup>9</sup>The distances in this Table are the minimums required by FAC-003-3 Industry Advisory Minimum Vegetation Clearance Distances (MVCD) May 14, 2015 to prevent Flash-over; however, prudent vegetation maintenance practices dictate that substantially greater distances will be achieved at time of vegetation maintenance.

<sup>10</sup>ANSI Z133-2012.

<sup>11</sup>Such lines are applicable to this standard only if Planning Coordinator has determined such per FAC-014.

## Appendix B: Subject Matter Experts

| FAC-003-3 Requirement | Description   | Preparer   | SME   | Reviewer   |
|-----------------------|---|--|---|--|
| R1.-M1.               | Manage vegetation to prevent encroachment into MVCD for IROL lines                        | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a>  | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpattton@aep.com">kbpattton@aep.com</a>   | J.E. Momme<br>Director, Trans.<br>Line Engineering<br>614-552-1180<br><a href="mailto:jemomme@aep.com">jemomme@aep.com</a> |
| R2.-M2.               | Manage vegetation to prevent encroachment into MVCD for non- IROL lines                   | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a>  | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpattton@aep.com">kbpattton@aep.com</a>   |  |
| R3.-M3.               | Documented maintenance strategies   | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a><br><br>Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpattton@aep.com">kbpattton@aep.com</a> | E. K. Engdahl,<br>Staff Engineer<br>614-552-1676<br><a href="mailto:ekengdahl@aep.com">ekengdahl@aep.com</a><br><br>Jacqueline M. Rich<br>Engineer<br>614-552-1391<br><a href="mailto:jmrich@aep.com">jmrich@aep.com</a><br><br>Barrett Thomas<br>Principal Engineer<br>918-599-2386<br><a href="mailto:bathomas@aep.com">bathomas@aep.com</a><br><br>R. J. Whitaker<br>Senior Engineer<br>540-562-7054<br><a href="mailto:rjwhitaker@aep.com">rjwhitaker@aep.com</a> |  |
| R4.-M4.               | Notify the control center holding switching authority of a confirmed vegetation condition | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpattton@aep.com">kbpattton@aep.com</a>  | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a>   |  |



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| <b>FAC-003-3 Requirement</b> | <b>Description</b>  | <b>Preparer</b>   | <b>SME</b>  | <b>Reviewer</b> |
|------------------------------|---|---|---|-----------------|
| R5.-M5.                      | Constrained from performing vegetation work                   | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a> | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a> |                 |
| R6.-M6.                      | Complete inspections on 100% of applicable transmission lines | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a> | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a> |                 |
| R7.-M7.                      | Complete 100% of annual plan                                  | Kevin Patton<br>Senior Business Analyst<br>614-716-1231<br><a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a> | Lynn Hayward<br>Senior Engineer<br>614-883-7244<br><a href="mailto:lehayward@aep.com">lehayward@aep.com</a> |                 |

## Appendix C: TVMP Internal Mailing List<sup>12</sup>

| Name/E-mail Group     | Department                          | Title                                 | Role |
|-----------------------|-------------------------------------|---------------------------------------|------|
| Smith, Scott N        | Transmission Strat & Bus Dev        | SVP Trans Grid Dev & Portfolio Svcs   | A    |
| Moore, Scott P        | Trans Eng & Proj Svcs               | VP Trans Eng & Proj Svcs              | A    |
| Kirkpatrick, Thomas L | Customer and Distr Services         | VP Cust Svcs, Mktg & Dist Svcs        | A    |
| Crowder, J Calvin     | Electric Transmission Texas         | Exec. Dir. Elec. Trans TX             | A    |
| Recker, Daniel J      | Transmission Engineering            | Mng Dir Trans Projects Engrg          | A    |
| Momme, Jeffrey E      | Transmission Line Engineering       | Dir. Trans. Line Projects Engineering | A    |
| Johnson, Paul B       | Transmission Operations             | Mng. Dir. Transmission Ops            | A    |
| Fecho, Thomas R       | New Gen./Major Proj Oversight       | Mgr-Gen & Elec Intrcnctn Plnng        | C    |
| Parrish, T. David     | Trans Line Standards                | Mgr. Trans. Line Design Standards     | C    |
| Wagner, Robert C      | Transmission Field Services         | VP Trans Field Services               | I    |
| TRELCOMP              | Transmission Reliability Compliance | Group Mailing List                    | I    |
| Schaffer, Thomas O    | Trans Line Engrg Right-of-Way       | Mgr Trans Right of Way                | I    |
| Curiel III, Nicolas   | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Bergeret, Rene J      | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Jones, Paul R         | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Merrifield, Ned O     | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Smith, Matthew J      | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Nguyen, Thuy P        | Trans Tech Svcs Wrk Plan            | Mgr. Trans Work Planning              | I    |
| Rappach, James A      | GET ENG VP Eng Services             | Mgr-Regional Eng Svcs                 | I    |
| Fuller, Terry A       | New Gen./Major Proj Oversight       | Principal Engineer                    | I    |
| Daniels, David        | GET ENG VP Eng Services             | Principal Engineer                    | I    |
| Carlson, John P       | ESH Management Systems              | Mgr ESH Mngmnt System                 | I    |
| Liebrecht, John J     | Trans Tech Svcs Wrk Plan Line       | Supv Planning & Engineering           | I    |
| Ordner, Lance         | Trans Tech Svcs Wrk Plan Line       | Senior Engineer                       | I    |
| Cotant, Ronald D      | Trans Tech Svcs Wrk Plan Line       | Senior Engineer                       | I    |
| Robinson, Kip         | Trans Tech Svcs Wrk Plan Line       | Senior Engineer                       | I    |

<sup>12</sup> Role definitions: A—Accountable; C—Consult; I—Informed; R—Responsible; S—Support

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| <b>Name/E-mail Group</b> | <b>Department</b>                        | <b>Title</b>                   | <b>Role</b> |
|--------------------------|--|--------------------------------|-------------|
| Martin, Amanda           | Trans Tech Svcs Wrk Plan Line            | Assoc Engineering Technologist | I           |
| York, Leo                | Electric Transmission Texas              | Mgr Transmission Bus Dev Sr    | I           |
| Macias, Michael M        | Electric Transmission Texas              | ETT Technical Project Lead Sr  | I           |
| Garrett, James G         | Trans Reliability Compliance             | Trans Relblty Complc Spec      | R           |
| Shepard, Darren A.       | Distribution Services                    | Dir Meter Sys & Repair Svcs    | A           |
| Sherry, Walter A         | System Forestry                          | Mgr. Forestry Operations       | R           |
| T Forestry               | Trans. Foresters and Forestry Management | Group Mailing List             | R           |
| Schnell, Edward G        | Transmission Dispatch                    | Dir. Transmission Dispatching  | R           |
| Kunkel, Dennis K         | Trans Dispatch Corpus Christi            | Mgr. Transmission Dispatching  | R           |
| Milford, David L         | Trans Dispatch Shreveport                | Mgr. Transmission Dispatching  | R           |
| Moses, Clinton D         | Trans Dispatch Columbus                  | Mgr. Transmission Dispatching  | R           |
| Guill, Darrell E         | Trans Dispatch Roanoke                   | Mgr. Transmission Dispatching  | R           |
| Wagner, Billy W          | Roanoke Dist Dispatch                    | Mgr. Distribution Dispatching  | R           |
| Ivinkas, Robert J        | AEP Ohio Distr Dispatch                  | Mgr. Distribution Dispatching  | R           |
| Sturtz, Robert D         | Ft Wayne Distrib Dispatch                | Mgr. Distribution Dispatching  | R           |
| Apple, Dwayne L          | PSO Distribution Dispatch                | Mgr. Distribution Dispatching  | R           |
| Guin, Gary A             | SWEPSCO Distrib Dispatch                 | Mgr. Distribution Dispatching  | R           |
| Dunlap IV, Hauge         | C Christi Distrib Dispatch               | Mgr. Distribution Dispatching  | R           |
| Williams, Michael A      | Kentucky Distribution Dispatch           | Distribution Dispatch Supv.    | R           |
| Patton, Kevin B          | System Forestry                          | Senior Business Analyst        | R           |
| Engdahl, Eric K          | Trans Line Engrg Design Standards        | Staff Engineer                 | R           |
| Rich, Jacqueline M       | Trans Line Eng Gahanna-Roanoke           | Engineer                       | R           |
| Thomas, Barret A         | Trans Line Engrg Tulsa Group             | Principal Engineer             | R           |
| Whitaker, Robert         | Trans Line Eng Gahanna-Roanoke           | Senior Engineer                | R           |
| Hayward, Lynn E          | Transmission Line Engrg                  | Senior Engineer                | R           |
| Krause, Stan A           | Trans Line Engrg Tulsa Group             | Mgr. Trans. Line Engineering   | S           |
| Grawe, Rob               | Trans Line Eng Gahanna                   | Mgr. Trans. Line Engineering   | S           |
| Bledsoe, James K.        | Trans Line Eng Roanoke                   | Mgr. Trans. Line Engineering   | S           |

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| <b>Name/E-mail Group</b> | <b>Department</b>                     | <b>Title</b>                  | <b>Role</b> |
|--------------------------|---------------------------------------|-------------------------------|-------------|
| TLPE All                 | Transmission Line Project Engineering | Group Mailing List            | S           |
| TCI PM ALL               | Transmission Project Mgt. & Control   | Group Mailing List            | S           |
| Hostetler, Timothy A     | Transmission Operations Engineering   | Mgr. Operations Engineering   | S           |
| Sauriol, Dennis R        | Transmission Real Time Operations     | Mgr. Trans Ops. Reliability   | S           |
| Matthews, Charles D      | Transmission Field Services           | Mng. Dir. Transmission West   | S           |
| Pugh, Archie D           | Transmission Field Services           | Mng. Dir. Transmission East   | S           |
| Boezio, Daniel R         | Transmission Field Services           | Dir Trans Region Tech Support | S           |
| Cook, James K            | Trans Field Construction East         | Dir Trans Region Construction | S           |
| McCord, Natalie J        | Trans Field Construction West         | Dir Trans Region Construction | S           |
| Workman, Mark A          | Trans Construction Mgmt               | Mng Dir Trans Constr Mgmt     | S           |
| Colvin, Kenneth A        | Trans Const Mgmt – Gahanna            | Mgr – Trans Construction      | S           |
| Galyean, Rue F           | Trans Construction Mgmt – Tulsa       | Mgr – Trans Construction      | S           |
| Emberger, Joseph H       | Trans Const Mgmt – Gahanna            | Mgr – Trans Construction      | S           |



# Contractor Guide for Distribution Events Scorecard System



## General Information

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- If you do not have a user name and password to log into the online portal, you will need to request them from Vicki Conner.
- If a company is not available in the system, you will need to request that it be added by Vicki Conner.
- If you have any questions or require technical support, contact Vicki Conner at [vaconner@aep.com](mailto:vaconner@aep.com) or to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com).



# Log In to the Web Application

Go to <https://terraine.net/AEPScoreCard/welcome.htm>

**AMERICAN ELECTRIC POWER** Distribution Events Scorecard System

User Name : lporterfield@terraine.com  
Password : .....  
 Remember Me  
**Sign-In**

Click here to have your browser remember your login information

Click here to sign in

Log in using the User Name and Password provided to you by admin

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Powered By TERRAINE

# Add Contractor Hour Data

From the **HOME** screen, go to **CONTRACTOR HOURS DATA INPUT GRID**.

Go here to enter contractor hours





# Add Contractor Hour Data

You can add data as a single input record, multiple input records, or as an annual total entered ONCE PER YEAR.

The screenshot shows the 'Distribution Events Scorecard System' interface. At the top left is the AEP logo, followed by 'AMERICAN ELECTRIC POWER' and 'Distribution Events Scorecard System'. A navigation bar contains links: HOME, CONTRACTOR HOURS DATA INPUT GRID, DATA Q&A APPROVAL, CONTRACTOR HOURS, EVENTS, REPORTS, and ANNUAL CONTRACTOR DATA. A 'Logout' link is in the top right. The main content area is divided into 'Monthly Data' and 'Annual Data' sections. The 'Monthly Data' section has two buttons: '+Add a Single Input Record' and 'Use Wizard to Create Multiple Input Records'. The 'Annual Data' section has a '+Add Annual Data' button. A note below the buttons states: 'Note: Annual Data is to be entered ONCE PER YEAR, and is to be include total hours, number of incidents, number of severity days, incident rate, and severity rate for the company as a whole, not just AEP projects'.

# Add a Single Input Record

LogOut

**AMERICAN ELECTRIC POWER** Distribution Events Scorecard System

HOME CONTRACTOR HOURS DATA INPUT GRID DATA Q&A/PROVAL CONTRACTOR HOURS EVENTS REPORTS ANNUAL CONTRACTOR DATA

Monthly Data

+Add a Single Input Record

Use Wizard to Create Multiple Input Records

Annual Data

+Add Annual Data

Click here to begin

**Add a Single Input Record**

Year: 2013 Month: January 1/31/2013

Operating Company: Contractors Function: Hours: Man Hours

Entered Date: 01/02/13 Entered By: jporterfield@terrine.com

\* Fields are mandatory.

Save Cancel

Press ESC, Click on X (right-top) or Click Out from the popup to close the popup.

# Add a Single Input Record

Select a year and month.  
**Note:** The third dropdown will automatically populate with the final day of the chosen month.  
Use these dropdowns to select an Operating Company, Contractor (only your Contractor name will be available), and Function.

The screenshot shows a web form titled "Add a Single Input Record". It contains several input fields and dropdown menus. At the top, there are "Entered Date:" and "Entered By:" fields. Below these are dropdowns for "Year" (set to 2013), "Month" (set to January), and "1/31/2013". There are three dropdown menus for "Operating Company", "Contractors", and "Function", each with an asterisk next to it. A "Hours:" field is labeled "Man Hours" and has an asterisk next to it. At the bottom right, there are "Save" and "Cancel" buttons. A red box highlights the "Save" button with the text "After filling out all required fields, click here to Save." Another red box highlights the "Hours:" field with the text "Enter Man Hours (numerical value only) here." A third red box highlights the "Entered Date:" and "Entered By:" fields with the text "These fields are populated automatically and are not editable." A fourth red box highlights the asterisks next to the dropdown menus with the text "\* Fields are mandatory." At the bottom left, a red box highlights the "Year" and "Month" dropdowns with the text "Select a year and month. Note: The third dropdown will automatically populate with the final day of the chosen month." A fifth red box highlights the "Operating Company", "Contractors", and "Function" dropdowns with the text "Use these dropdowns to select an Operating Company, Contractor (only your Contractor name will be available), and Function."

After filling out all required fields, click here to Save.

Enter Man Hours (numerical value only) here.

These fields are populated automatically and are not editable.

\* Fields are mandatory.

# Add a Single Input Record

Click here to add another record

Once you have selected a record (see below), you can use these buttons to copy or delete the record.

Click here to select a record

| Date                               | Operating Company | Contractor | Function              | Hours                          | Entered By               | Enter Date |
|------------------------------------|-------------------|------------|-----------------------|--------------------------------|--------------------------|------------|
| <input type="checkbox"/> 1/31/2013 | Appalachian Power | ABB, Inc   | Transmission Forestry | <input type="text" value="5"/> | jporterfield@terrine.com | 01/01/2013 |

**Total:** 5.00

Add/update man hours here. No changes will be saved until you Save to Database.

Click here to save all records to the database.  
**Note:** None of the new records will be saved to the database until you click this button.

Click here to refresh total hours as you add / copy / delete records.

# Add Multiple Input Records

# Add Multiple Input Records

Select a year and month.  
**Note:** The third dropdown will automatically populate with the final day of the chosen month.

Use the dropdown to select an Operating Company.

Check this box.

The screenshot shows the 'Add Multiple Input Records Wizard' window. At the top, it has 'Year' (2013) and 'Month' (January) dropdowns, followed by a date dropdown showing '1/31/2013'. Below these is a 'Select Operating Company' dropdown menu. To the right, there is a 'Contractor' section with a checked checkbox and the text 'Antriff's Lawn Sensations'. Further right is a table of functions:

| Function   |
|--|
| <input type="checkbox"/> Distribution Forestry         |
| <input type="checkbox"/> Distribution Line - Primary   |
| <input type="checkbox"/> Distribution Line - Specialty |
| <input type="checkbox"/> Transmission Forestry         |

At the bottom left, there is a red asterisk note: '\* Fields are mandatory.' Below that are 'Create Input Records' and 'Cancel' buttons. A red callout box points to the 'Create Input Records' button with the text: 'When finished, click here to create the records and add man hours.'

A second red callout box points to the 'Function' column of the table with the text: 'Select function(s) here. You can select more than one.'

A third red callout box points to the 'Contractor' checkbox with the text: 'Check this box.'

A fourth red callout box points to the 'OK' button in a smaller dialog box that appears over the main wizard. The smaller dialog box contains the text: 'The input wizard will create 6 new input records, which you will be able to edit before saving to the database.' Below this text are 'Proceed?' and 'Cancel' buttons. The 'OK' button is highlighted by the callout box with the text: 'After clicking to create input records, you will receive this message. Click OK to proceed.'

# Add Multiple Input Records

Click here to add another record

Once you have selected a record (see below), you can use these buttons to copy or delete the record.

| Date  | Operating Company | Contractor                | Function                      | Hours | Entered By           | Enter Date |
|---|-------------------|---------------------------|-------------------------------|-------|----------------------|------------|
| <input type="checkbox"/> 1/31/2013            | Appalachian Power | Antritt's Lawn Sensations | Distribution Forestry         |       | jporte0519@yahoo.com | 01/14      |
| <input type="checkbox"/> 1/31/2013            | Appalachian Power | Antritt's Lawn Sensations | Distribution Line - Primary   |       | jporte0519@yahoo.com | 01/14      |
| <input type="checkbox"/> 1/31/2013            | Appalachian Power | Antritt's Lawn Sensations | Distribution Line - Specialty |       | jporte0519@yahoo.com | 01/14      |
| <input checked="" type="checkbox"/> 1/31/2013 | Appalachian Power | Antritt's Lawn Sensations | Transmission Forestry         |       | jporte0519@yahoo.com | 01/14      |

**+ Add Another Input Record**   **Copy Selected**   **Delete Selected**

**Save to Database**   **Total: 0.00**

Click here to select a record

Add/update man hours here. No changes will be saved until you Save to Database.

Click here to save all records to the database.  
**Note:** None of the new records will be saved to the database until you click this button.

Click here to refresh total hours as you add / copy / delete records.

# Add Annual Data Record

**AMERICAN ELECTRIC POWER**

**Distribution Events Scorecard System**

Logout

HOME | CONTRACTOR HOURS DATA INPUT GRID | DATA Q&A/PROVAL | CONTRACTOR HOURS | EVENTS | REPORTS | ANNUAL CONTRACTOR DATA

Monthly Data | Annual Data

+Add a Single Input Record

**Click here to begin**

+Add Annual Data

Note: Annual Data is to be entered in units. Annual Data is to be entered in units. Annual Data is to be entered in units. Annual Data is to be entered in units.

Use Wizard to Create Multiple Input Records

**Add Annual Data Record**

- \* Select Year: 2013 (dropdown)
- \* Contractor: Abatement Services
- \* Total Corporate Hours:
- \* # of Incidents:
- \* # of Severity Days:
- \* Incident Rate:
- \* Severity Rate:

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Entered Date: 01/02/2013

Entered By: jporterfield@letrane.com

Please ESC. Click on X (right-top) or Click Out from the popup to close the popup.





# Add Annual Data Record

The screenshot shows a web form titled "Add Annual Data Record". The form contains the following fields and callouts:

- Select Year:** A dropdown menu with "2013" selected. Callout: "Select the applicable year."
- Contractor:** A text field containing "Abatement Services". Callout: "This will be set to your Contractor name."
- Total Corporate Hours:** An empty text field. Callout: "Enter the TOTAL corporate hours, number of incidents, number of severity days, incident rate, and severity rate for the ENTIRE year."
- # of Incidents:** An empty text field.
- # of Severity Days:** An empty text field.
- Incident Rate:** An empty text field.
- Severity Rate:** An empty text field.
- Entered Date:** A text field containing "01/02/2013". Callout: "These fields will pre-populate."
- Entered By:** A text field containing "jporterfield@terrine.com".
- Buttons:** "Ok" and "Cancel" buttons. Callout: "Click Ok when you are finished."

At the bottom of the form, there is a note: "Press ESC, to close the pup".

# Add Annual Data Record

Your new record should now be viewable in this screen.

HOME
CONTRACTOR HOURS DATA INPUT GRID
DATA Q&A APPROVAL
CONTRACTOR HOURS
EVENTS
REPORTS
ANNUAL CONTRACTOR DATA

2012 To 2013

Contractor

Antritt's Lawn Sensations

| Year | Contractor                | Total Hours | # of Incidents | # of severity Days | Incident Rate | Severity Rate | View                 |
|------|---------------------------|-------------|----------------|--------------------|---------------|---------------|----------------------|
| 2012 | Antritt's Lawn Sensations | 1           | 1              | 1                  | 1.00          | 1.00          | <a href="#">View</a> |
| 2012 | Antritt's Lawn Sensations | 24          | 33             | 3                  | 3.00          | 3.00          | <a href="#">View</a> |
| 2012 | Antritt's Lawn Sensations | 1           | 2              | 2                  | 1.00          | 2.00          | <a href="#">View</a> |

3 items found, displaying all items. page 1

# Add an Event

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From the **HOME** screen, go to **EVENTS**.  
(\*Note: you may not have all of the links displayed below in your menu navigation)

Go here to enter an event



# Add an Event

Click here to add an event.

HOME CONTRACTOR HOURS DATA INPUT GRID DATA APPROVAL CONTRACTOR HOURS EVENTS REPORTS ANNUAL CONTRACTOR DATA

12/15/2012 To 01/15/2013  Citation issued  At Fault Total Lost Days: 0

**+ Add an Event**  Date  Operating Company  Contractor  Function  Work Type  Event Type  Job Classification  Lost Days  Restricted Days  Severity Days  Approved

Edit Selected Approve Selected Delete Selected

Event

Update

Contractor: [ ] Event Date: 01/02/13

Gen Info Description QA/Signatures Notes Print

Operating Company: [ ] Contractor: [ ] Function: [ ] Employee: [ ] Foreman: [ ] Event Date: 01/02/13 Event Time: [ ] Day of Week: Wednesday City: [ ] State: [ ] Work Type: [ ] Storm/Non-Storm: [ ] Job Classification: [ ] Event Type: [ ]

Lost Days Days Away From Work: [ ]

Close

# Add an Event

The screenshot shows a software window titled "Event" with a grey border. At the top left is an "Update" button. Below it, the "Event" title is displayed in a blue bar. To the right of the title are two fields: "Contractor:" and "Event Date:" with the value "01/02/13". Below these are four buttons: "Description", "QA/Signatures", "Notes", and "Print". The main area of the form contains several fields with dropdown menus and text boxes. A red box highlights the "Operating Company:" dropdown menu, with a red arrow pointing to it. The text "Start by selecting an Operating Company." is written inside the red box. Other fields include "Contractor:", "Function:", "Employee:", "Foreman:", "Event Date:" (with value "01/02/13"), "Event Time:", "Day of Week:" (with value "Wednesday"), "City:", "State:", "Work Type:", "Storm/Non-Storm:", "Job Classification:", and "Event Type:". At the bottom right, there is a "Lost Days" section with a "Days Away From Work:" field and a "Close" button.

Start by selecting an Operating Company.

# Add an Event

Click here to add description and injured body part (if relevant).

The screenshot shows a web-based form for adding an event. The form is titled 'Event' and has a 'Close' button at the bottom right. The form is divided into several sections: 'Gen Info', 'Description', 'QA/Signatures', 'Notes', and 'Print'. The 'Description' tab is selected. The form contains the following fields:

- Operating Company: Appalachian Power
- Contractor: [Dropdown]
- Function: [Dropdown]
- Employee: [Dropdown]
- Foreman: [Dropdown]
- Event Date: 01/02/13
- Event Time: [Dropdown]
- Day of Week: Wednesday
- City: [Dropdown]
- State: [Dropdown]
- Work Type: [Dropdown]
- Storm/Non-Storm: [Dropdown]
- Job Classification: [Dropdown]
- Event Type: [Dropdown]
- Lost Days: [Dropdown]
- Days Away From Work: [Dropdown]
- Job Transfer/Restricted Days: [Dropdown]
- Severity Days: [Dropdown]
- Citation Issued?: [Dropdown]
- At Fault?: [Dropdown]

Red annotations highlight specific fields:

- A red box around the 'Description' tab with an arrow pointing to it, containing the text: 'Click here to add description and injured body part (if relevant).'.
- A red box around the 'Function' dropdown with an arrow pointing to it, containing the text: 'Select a function.'.
- A red box around the 'At Fault?' dropdown with an arrow pointing to it, containing the text: 'Select if person was at fault or not.'.
- A red box around the 'At Fault?' dropdown with an arrow pointing to it, containing the text: 'These red arrows will appear to indicate required fields. All other fields are optional.'

# Add an Event

The screenshot shows a software window titled "Event" with a "Work Description" tab. The "Work Description" field is empty. Below it is a table titled "Injured Body Part(s)" with columns: "person", "body\_part", "left\_right", and "injury\_type". The table currently contains no records. A red box highlights the "Add description (if relevant) here." text, with an arrow pointing to the "Work Description" field. Another red box highlights the text "Scroll down to add an injured body part (if relevant).", with an arrow pointing to the table. A third red box highlights the text "Click here to add a body part.", with an arrow pointing to the "+ Add Body Part" button at the bottom of the table. The interface also includes buttons for "Gen Info", "Description", "QA/Signatures", "Notes", and "Print".

# Add an Event

**Event**

Update Cancel New Recalc

**Body Parts**

Contractor:

Body Part: Ankle

Left / Right: Right

Injury Type: Abrasion

Update Cancel New Recalc

New Record

Click Update when you are finished to save the body part record.

Fill out body part information using the dropdowns.

Close



# Add an Event

When you are finished adding event data, click here.

**Event**

Update

Contractor: [ ]  
Event Date: 01/02/13

**Event**

|            |                                  |                               |                              |          |
|------------|----------------------------------|-------------------------------|------------------------------|----------|
| [open] [X] | D667E6B5411249328A9F41208482DB47 | Appalachian Power             | AC<br>Dellvade               | 12/20/12 |
| [open] [X] | 73627757232041469F06447717A5932E | Indiana Michigan<br>Power     | Acuren                       | 12/04/12 |
| [open] [X] | 488CF42EFD24F7D8CAE4721B37EB7FE  | Kentucky Power                | AEP                          | 12/12/12 |
| [open] [X] | 92D8646DFC6B4DE44D460E1242E6920  | AEP-OH                        | Accu<br>Pro-Cut              | 12/04/12 |
| [open] [X] | 911CECDF38754CB28206533910A82607 | Appalachian Power             | Adesta                       | 12/18/12 |
| [open] [X] | EE60D629B4204AA6804E59839B8D168E | Indiana Michigan<br>Power     | Acuren                       | 12/18/12 |
| [open] [X] | 4089BC1655704837B7D7645F9D03F433 | Appalachian Power             |                              | 01/02/13 |
| [open] [X] | 3B407CC08AFA4D119BBE65E4824E2C9B | AEP-OH                        | American<br>Refractory<br>Co | 12/17/12 |
| [open] [X] | 4832DB2FB64E4FB99E963D4CE2C8C1   | Public Service of<br>Oklahoma | AC<br>Dellvade               | 12/18/12 |
| [open] [X] | F126A4FCFE4C79A0F4B7F12E4488E    | AEP-TX                        | Adesta                       | 12/18/12 |

Close

# Add an Event

**Event**

|            |                                   |                               |                              |          |
|------------|-----------------------------------|-------------------------------|------------------------------|----------|
| [open] [X] | D667E5B5411249328A9F41208A82DB47  | Appalachian Power             | AC<br>Dellvade               | 12/20/12 |
| [open] [X] | 73B27757232041469F06447717A5932E  | Indiana Michigan<br>Power     | Acuren                       | 12/04/12 |
| [open] [X] | 48BCF42EF0E24F7D8CAE4721B37EB7FE  | Kentucky Power                | AEP                          | 12/12/12 |
| [open] [X] | 460E1242E6620                     | AEP-OH                        | Accu<br>Pro-Cut              | 12/04/12 |
| [open] [X] | 5533910A82697                     | Appalachian Power             | Adesta                       | 12/18/12 |
| [open] [X] | EE60D629B4204AA8804E59839B8D168E  | Indiana Michigan<br>Power     | Acuren                       | 12/18/12 |
| [open] [X] | 4089BC1656704837B7D7645F9003F433  | Appalachian Power             |                              | 01/02/13 |
| [open] [X] | 3B407CC8AFA4D119B8B8E65E4824E2C9B | AEP-OH                        | American<br>Refractory<br>Co | 12/17/12 |
| [open] [X] | 4832DB2FB94E4FBFB99E663D4CE2C8C1  | Public Service of<br>Oklahoma | AC<br>Dellvade               | 12/18/12 |
| [open] [X] | F125A4F5CFEB4C79A6F46B7F12E4A88E  | AEP-TX                        | Adesta                       | 12/18/12 |

Close

While in this screen, you can open the record to make edits or click on the red 'X' to delete it

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# Exhibit C

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## **AEP Transmission Forestry**

### **Rate Clarifications for Right-of-Way Maintenance Contracts**

**September 21, 2016**

**Per Diem (Specific to Davey Tree Expert)**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 50 miles or greater (one way) from that individual's legal home address.
2. Per Diem will not be paid if lodging and meals are provided by Owner.
3. Contractor shall submit documentation with their invoice specifying the distance between home address of record or reporting site and work site for each individual claiming Per Diem on each submitted invoice. Contractor will submit to OPCO the employees due per diem using the template within this document.
4. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
5. The Per Diem rate is defined in the applicable contract rate sheets and includes lodging and meals.
6. Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.
7. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

**Definitions**

**Per Diem** – Daily allowance for expenses that include housing and meals to cover expenses when traveling for work and agreed upon by the Contractor and the Owner's Designated Representative.

**Work Site** - The day's starting location for the performance of services ex, work site should be associated with vegetation management activities on the Company's rights-of-way.

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**Owner's Designated Representative** – Owner Designated Representative for daily forestry operations will be the OPCO/transmission region forester or OPCO/transmission forestry supervisor.

**Reporting Site** – A Contractor designated location acceptable to the Owner's Designated Representative where the Contractor's trucks/equipment is parked and the employees go to get the trucks/equipment to travel to the work site. (In some regions called a show up location.) If a crew is starting its billable time at a reporting site, travel time to the work site shall not be more than thirty (30) minutes, via the most direct route, unless authorized by Owner's Designated Representative.

**Emergency Assistance** – Owner's Designated Representative will have the authority to hold Contractor crews in an area during storm or other situations deemed an emergency when the mileage is less than in Bullet #1. If held in the an area the Contractor employee affected will be eligible for Per Diem if such charges would normally be incurred. All parties should understand this action is auditable and the time sheet and invoice must have the words Emergency Assistance and the forester's name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to Owner.

**Work Flow Driven(LEAN)** – Owner Designated Representative will have the authority to instruct crews to stay overnight when the mileage is less than in Bullet #1. There are times when it is cost effective to have the crews stay overnight instead of returning to the home address of record or reporting site. For example, crew is working 45 miles from the reporting site and the next work location is in the same direction but is 85 miles from the reporting site. In this situation the forester will have the authority to authorize an overnight stay that would require a Per Diem payment since staying overnight is more productive than to return to the reporting site or home address of record. All parties should understand this action is auditable for work efficiencies and productivity and the time sheet and invoice must have the words Work Flow Driven(LEAN) and the foresters name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to owner.

**Outsource or Off System** – Contractor employees that do not normally or exclusively work on the Owner's property and whose home address of record is 80 miles or more from the reporting site and is acceptable to Owner's Designated Representative.

**Home Address** – The legal address of record for tax purposes.

**Equipment**

1. Contractor agrees to notify Owner when any equipment is not operable. They jointly will determine if work can continue in an efficient manner.
2. If no suitable work is available, the crew will be idled until the equipment is operable.

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3. If for any reason, Contractor fails to notify Owner of inoperable equipment, it shall be assumed the crew was not working for at least eight hours prior to Owner's becoming aware of the problem. Invoices will be adjusted accordingly.
4. Equipment Fuel Costs are based on fuel costs as follows: Base Fuel Rate = \$2.90 per gallon.
5. Equipment rates will be adjusted in accordance with the current AAA Average Fuel Price Gauge Report. The rates will be adjusted automatically through AEP's RWM invoicing system.

**Materials**

1. Materials and rental equipment furnished by the Contractor and authorized by the Owner will be invoiced at cost plus five percent (5%).
2. Contractor must obtain three bids for materials and provide copies of these bids to the Owner.
  - a. While the Contractor may purchase from any material vendor, AEP's material pricing shall be based on the lowest price submitted.

**Pay During Training**

Unless otherwise agreed to by Owner in writing, no billing relating to attendance at training or certification will be paid.

**Overtime Calculations and examples**

1. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week at Owner's request.
2. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
3. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday, when approved by Owner in advance.
4. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in items 1 and 2 above. The 40 hours pay shall include any holiday compensation paid by Contractor to the employee.
5. Calculation examples are provided below.
  - Straight Time Rate = Taken from table
  - Overtime Rate = Straight Time Rate x 1.5
  - Sunday/Holiday Rate = Straight Time Rate x 2
  
  - Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)
  - Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

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- Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)
- Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)
- Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) = \$30.72$

Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) = \$33.40$

Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) = \$40.94$

Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) = \$44.52$

**Major Storm Events**

When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.



| Labor Description                          | Labor Code | Comments  | August 1, 2011 |
|--|------------|---|----------------|
| Equipment Operator                         | EO         | An equipment operator shall be able to operate and perform minor maintenance on a ROW brush mower or bulldozer. The primary contact with AEP Forestry field representatives. Has worked a minimum of 12 months as an Assistant General Foreperson and should be ISA certified. Individuals are responsible for all aspects of the contractor's local field operation including and not limited to employee safety, equipment maintenance, work planning effect (if applicable), and emergency response.   |                |
| General Foreman A/<br>General Foreperson A | GFA        | Meet all the qualifications of a Foreperson B. Has worked a minimum of 12 months as a Foreperson B and should meet all state required herbicide qualifications. Is able to competently work and lead others with no direct supervision.   |                |
| Foreman A/Foreperson A                     | FA         | Meet all the qualifications of a Trimmer A. Individuals have completed all line clearance foreperson certification training programs as required. Must be able to work and lead others with limited supervision. Has worked a minimum of 18 months in the line clearance industry. Must be able to effectively communicate with AEP representatives and landowners. Must be able to prepare required record documents, read and follow instructions on maps and notification records. Must possess a CDL and pesticide certification as required.   |                |
| Foreman B/Foreperson B                     | FB         | Meet all qualifications of Work Planner B and be ISA certified. Two years experience as a Work Planner B or three years related utility experience. Consistent work planning accuracy greater than or equal to 95%. Demonstrates initiative and pro-actively looks for ways to do work more effectively. Demonstrated abilities in teamwork, leadership and problem solving. Willing to travel and stay away from home overnight.   |                |
| Work Planner A                             | WPA        | Meet all qualifications of Work Planner C and working towards ISA certification. Six months satisfactory performance as a Work Planner C or related utility experience. Thorough knowledge of species and growth characteristics of trees located in assigned work area. Good understanding of electrical facilities and hardware and associated line/circuit maps. Understanding of electric utility vegetation management and ability to communicate such to property owners. Work effectively with people (utility, contractors, customers, etc.). Demonstrated ability to work safely and efficiently with minimal supervision and have the ability to travel and stay overnight. |                |
| Work Planner B                             | WPB        | Two-year Degree in Forestry, Arboriculture, etc., or related utility experience is desirable. Good verbal and written communications skills. Positive attendance/professional appearance. Able to work outside in a safe, productive manner in all weather conditions. Valid drivers license.   |                |
| Work Planner C                             | WPC        | Individuals shall be able to communicate effectively with utility representatives, the public and their direct reports. Determine the most effective manner within established guidelines of how to treat vegetation conditions and coordinate and instruct crew activities to safely and effectively complete an assigned task. Must possess a pesticide license and where required strive to become a certified arborist.   |                |
| General Foreman B/<br>General Foreperson B | GFB        | Meet all qualifications of Trimmer B. Individuals have completed all climbing trimmer and bucket (where require d) certifications. Individual has worked a minimum of 12 months in the line clearance industry. Is able to perform all aspects of tree trimming and tree removal including and not limited to rigging ropes, and pulling overhang, and any other assigned duties in a safe, consistent, competent manner. Individuals should be capable of filling in for a crew foreperson on a limited basis and have started foreperson training as required by the employer.  |                |
| Trimmer A                                  | TA         | Meet all qualifications of Trimmer C. Individual have completed climbing trimmer training. Individual has worked a minimum of 6 months in the line clearance industry.  |                |
| Trimmer B                                  | TB         | Individuals shall be able to perform the individual passes screening criteria as established by employer. A Trimmer C shall be able to perform the individual passes screening criteria as established by employer. Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification.   |                |
| Trimmer C                                  | TC         | Individuals shall be able to perform a variety of job duties including and not limited to chain saw maintenance, operate a brush chipper, and apply herbicides, clear and cut trees and brush. They shall be gain climbing trimmer training. Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification.  |                |



## Unit Price Model

April 30, 2012

Services may be paid under the following Unit Price model.

### 1. Unit Price Model Overview

Unit Price is a model where a Unit Price hourly rate is paid to Contractor for all work units completed in an assigned Circuit. The Unit Price hourly rate includes all costs, including but not limited to, wages, supervision, overheads, profit, equipment and materials required to complete the assigned Work. While the Unit Price hourly rate includes the labor required to apply herbicides, it does not include the cost of the herbicides. The Unit Price hourly rate is multiplied by the assigned work hour per unit, a rate that is assigned for each specific work unit (tree trim, tree removal, brush cut, etc.). This is a rate that has been determined to complete a unit of Work on the assigned Circuit, as agreed by the Owner and Contractor. All Unit Price Work issued to Contractor shall be completed by the agreed upon completion date.

### 2. Unit Price Calculation

#### a. Man Hours per Unit Calculation

Unit Price uses historical average times, or other method agreed to by Owner and Contractor, required to perform a specific type of Work (tree trim, tree removal, brush cutting, brush spraying) ("Work Unit") and includes all time necessary to complete that Work, including but not limited to travel, actual job site time, debris disposal, landowner contacts, immediate crew supervision and appropriate non-productive time (such as time lost to inclement weather and minor on-the-job equipment breakdown).

- I. Owner shall explain the method of calculation and the information used in a Circuit to Contractor's supervision and management prior to authorizing Work.
- II. The average times used to calculate hours per unit can be collected by distribution circuit, portions of a given circuit (sub-circuit), or other defined geographic area within the Contract region (e.g. "Circuit" or "Area.")
- III. The historical average times are developed by accumulating data for vegetation management Work performed on the Circuit during the last three calendar years or other time period as agreed by Owner and Contractor. Each time a Circuit is scheduled for maintenance, a new three-year average is calculated by replacing the earliest year's data with the most recent or next successive year's data. This rolling three year average is given in hours per unit.
- IV. If there are inconsistencies in the three-year data based on disparity in the actual work within a specific Contract region, the Owner and Contractor may agree to use another method to generate the hours per unit. This method shall be documented in the Work Request authorizing the Work.

#### b. Unit Price Calculation

Contractor has submitted a Unit Price hourly rate that shall be used for all units of Work performed, regardless of the Work Unit type. The cost for a given unit of Work (e.g. for a given Circuit) is established by multiplying the Contractor's Unit Price hourly rate for

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that Work Unit by its hours per unit. If the Unit Price hourly rate is \$20.00 and the hours per unit is 1.25 hours, Contractor earns 1.25 hours x \$20.00 – \$25.00 for each unit of that Work Unit.

### **3. Job Assignment**

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned; prepare a Unit Price Sheet (sample attached); include any exceptions to the hours per unit; and shall schedule a field review with the Contractor to discuss the Work assignment, including how the hours per unit were developed. An exception to the hours per unit might be a tree removal where the location and size of the tree and its proximity to structures cause a substantial increase in the hours per unit required for the removal. These exceptions must be agreed to by both Parties and are not to include those deviations that are normally encountered in performing a Work Unit.

At the field review, Owner and Contractor shall review all the Work, agree to the exceptions to the hours per unit, agree to the Unit Price Sheet and determine a start date for the Work. A Work Request (“WR”), similar to the sample attached, shall be signed by both Parties and constitutes the written authority for Contractor to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Unit Price Sheet, the map, a list of exceptions to the hours per unit, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date, but subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor’s work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. The work planners, per current practice, shall be paid on a time and material basis and will not be included within the stated Unit Price or Unit Price calculation. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor’s employees are unable to resolve their concerns quickly, Contractor’s employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

## Lump Sum Price Model

April 30, 2012

Services may be paid under the following Lump Sum Price model.

### **1. Authorizing Work**

Owner and Contractor may agree to perform work based on a Lump Sum price for the specified Circuit.

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned, complete a Lump Sum Price Sheet; and schedule a field review with the Contractor to discuss the Work assignment.

At the field review, Owner and Contractor shall review all the Work, agree to the Lump Sum Price and determine a start and end date for the Work. A Work Request ("WR") for Lump Sum Price Work, similar to the sample attached, shall be signed by both Parties and constitutes the Contractor's written authority to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Lump Sum Price, the map, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date but is subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor's work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor's employees are unable to resolve their concerns quickly, Contractor's employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

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**WORK REQUEST  
For  
Lump Sum Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Lump Sum Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

Work shall be performed in accordance with the attached Request For Quote (“RFQ”) attached hereto.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

Unless otherwise stated in the Work Request, Contractor shall be paid the total cost for the Circuit upon completion of all Work and subsequent acceptance by Owner. Contractor shall perform all Work for the lump sum amount of \$ \_\_\_\_\_.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

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## Work Request For Unit Price/Time and Materials Work

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Unit Price/Time and Materials Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

If no map is attached, identify the circuit, sub-circuit, or the specific geographic area identifying the Work to be performed.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

**Unit Price** --- Contractor’s weekly billing shall be calculated using the number of units completed during the week being billed multiplied by the cost per unit from the Rates as found in the Contract.

**Time and Materials** – Contractor’s weekly billing shall be calculated using the following formula: (labor classification X number of hours worked during billable period) + (equipment rate X number of hours used during billable period). The labor classifications and equipment rates used will be in accordance to the Rates as found in Exhibit C of the Contract

Unless otherwise stated in this Work Request or the attached map, pricing will be per the price model as selected above and in accordance with the Rates as found in Exhibit C of the Contract.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_









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## CONFIDENTIAL

### Contract Routing Slip

| ROUTING            | Purpose                                    | Initials           | Date Signed              |
|--------------------|--|--------------------|--------------------------|
| Sonia Pickens      | For your review                            | SP                 | 9/22/2016   12:54 PM EDT |
| Matt Curtis        | For your review                            | MC                 | 9/22/2016   1:27 PM EDT  |
| Kevin Patton       | For your review                            | KBP                | 9/22/2016   1:06 PM EDT  |
| Walter Sherry      | For your review & signature on sole source | WAS                | 9/22/2016   1:42 PM EDT  |
| Thomas Kirkpatrick | Signature on amendment & sole source       | Thomas Kirkpatrick | 9/22/2016   1:43 PM EDT  |
| Jack McCabe        | Contractor Signatory                       |                    |                          |
| Terri Stiltner     | Copy                                       |                    |                          |
| AEP Audit          | Copy                                       |                    |                          |
| Gina Crabtree      | Document in File                           | NR                 | NR                       |

**Date:** September 21, 2016

**Company:** AEPSC

**Contractor Name:** Davey's Tree Expert

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 026987430000X103 Amd #1

**Term:** May 1, 2014 – April 30, 2019

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** adding [REDACTED]

**Description of Service/Work:** Adding additional scope and rates, updating General T&C's, Forestry Terms and Instructions, adding ISNetworkworld

## CONTRACT NO. 02573444X110

This Contract No. 02573444X110 (“Contract”) is made between **Kentucky Power Company**, a Kentucky corporation (“Owner” or “KPCO”) and **Nelson Tree Service, Inc.**, an Ohio corporation (“Contractor”). Contractor and Owner may be referred to collectively as the “Parties” and individually as a “Party.”

### 1. DESCRIPTION OF SERVICES

Subject to the terms and conditions hereof, Contractor agrees to furnish to Owner, on an as-needed basis, all supervision, labor, equipment and specified materials necessary to perform distribution vegetation management services, as delineated below, within Owner’s service areas (“Work”).

Vegetation management services may include but not be limited to the following:

Emergency- Local emergency restoration tree work on an on-call basis.

Herbicide and Tree Growth Regulator (TGR)- Application of appropriate herbicides and/or TGR in service areas as directed by Owner.

Mowing- Provide mowing services in Owner service areas where easements restrict the ability to use any other method for vegetation control and Owner has determined that mowing is the preferred maintenance method.

Removals- Hazard tree removals performed outside of Owner’s routinely maintained right-of-ways.

Right-of-Way Maintenance- Tree and brush work on and off-road and/or cross-country on distribution lines, based upon Owner’s specifications.

Side Trimming- Tree trimming along the edges of right-of-ways using either aerial lifts, climbing crews, aerial saw, chemicals and/or mechanical side trim equipment.

Storm Restoration- Emergency restoration in areas affected by storm damage without debris cleanup unless otherwise specified.

Work Planning- Perform inspection and planning services and develop plans, strategies and administrative work for various methods of vegetation management to be performed in Owner’s service areas. Work planning services shall be performed using qualified Distribution Contract Utility Foresters, Work Planners, Inspectors, Pesticide Applicators and TGR Pre-Notifiers as described in the documents attached in Exhibit B.

This Contract covers only such Work as may be authorized by Owner and shall not constitute an exclusive agreement between Owner and Contractor. Owner reserves the right to use its own forces, equipment, tools, conveyances and materials or those of another vendor to perform the same or similar Work. Parties agree this Contract does not authorize Contractor to begin performance of any Work, nor does it guarantee Contractor any minimum volume of Work.

### 2. ENGAGEMENT PROCESS

All proposed Work will be discussed and assigned in periodic communications between Owner and Contractor, at which time Parties will agree upon the type of Work, the circuit in which Work will be performed and the pricing mechanism to be utilized. Owner shall authorize Work through the following process:

Work shall be requested by Owner via a written or electronic order request (individually or collectively referred to as "Work Request"). Each Work Request shall reference this Contract as governing the Work provided thereunder. The Work Request shall contain a scope of Work, the requested location, the term for which the Work shall be provided for that service area, any applicable specifications, this Contract number, any invoicing specifications, the pricing model utilized, and any other documents relevant to the Work.

Parties agree that any terms and conditions inconsistent with, additional to, or different than this Contract that may be preprinted or attached to a quote, acknowledgement, job authorization, Work Request, or any other written document that the Parties may use for the ordering or delivery of Work hereunder, shall not apply and each Party hereby rejects all such terms and conditions.

### 3. CONTRACT DOCUMENTS

Contractor and Owner agree that the Work shall be performed in accordance with the following Exhibits:

**Exhibit A –General and Supplementary Terms**, consisting of the following documents, which are attached hereto and made a part hereof;

1. AEP General Terms and Conditions for Labor and Services, dated March 2009 ("AEP General Terms and Conditions"); and
2. Supplementary Terms and Conditions for Forestry Contracts, dated June 24, 2011 ("Supplementary Terms").

**Exhibit B –Forestry Terms and Instructions**, consisting of the following documents, which are attached hereto and made a part hereof;

3. AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated May 14, 2009;
4. AEP Forestry Instructions for Forestry Contract Crew Audits dated January 2007, including its Sample Audit Form ("Audit Instructions"); and
5. AEP Kentucky Power Distribution Line Clearance Guidelines, dated July 2010.

**Exhibit C –Rates**, consisting of the following documents, which are attached hereto and made a part hereof;

6. Kentucky Power Rate Clarifications, dated May 15, 2012 ("Rate Clarifications");
7. Owner's Unit Price Model, dated April 30, 2012, and the Lump Sum Price Model, dated April 30, 2012;
8. Labor Descriptions, dated August 1, 2011;
9. Contractor's Rates – Standard Labor Rates, Major Storm Rates, Equipment Rates, Material Pricing, Unit Pricing, all dated April 1, 2012 (individually or collectively, the "Rate Sheets");
10. A sample Work Request for Unit Price/Time and Materials Work, a sample Work Request for Lump Sum Work, and all applicable subsequently executed Work Requests; and

11. A sample Pricing Change Order Request Form and all applicable subsequently executed Pricing Change Orders.

In the event of a conflict among any of the Contract documents, the conflict shall be resolved by interpreting the documents in the following order of priority:

- a. any executed amendment to the Contract;
- b. this Contract Letter;
- c. Exhibit A;
- d. Exhibit B;
- e. any executed Pricing Change Order;
- f. Exhibit C; and
- g. the applicable Work Request.

#### **4. TERM**

This Contract is made to be effective as of the date of Owner's signature below ("Effective Date") and shall terminate on May 31, 2017, unless terminated earlier in accordance with this Contract. If this Contract is terminated or expires prior to Work under a Work Request being completed, unless Parties agree otherwise in a signed writing, the Work under such Work Request shall be continued pursuant to the terms of this Contract.

#### **5. PRICING**

Parties agree that all Work performed under this Contract shall be completed on a Lump Sum, Unit Price, and/or Time and Materials basis priced in accordance with Contractor's Rate Sheets in Exhibit C of the Contract.

Labor rates as described in Contractor's Rate Sheets shall be held firm for the first six months of the Contract. It will be the sole discretion of the Owner to modify labor rates at that time, or to hold labor rates firm until one year after the Effective Date of this Contract. All other rates in Contractor's Rate Sheets shall be held firm until one year after the Effective Date of this Contract.

Annual Rate Adjustments: Contractor's Rate Sheets may be revised or updated during an annual Contract amendment process. Contractor must submit all proposed rates by February 15<sup>th</sup> of each year of the Contract starting in 2014. Approved annual rate adjustments shall become effective each year on June 1st beginning in 2014.

Pricing Change Order Process: If Contractor has unforeseen changes to Contractor's Rate Sheets that do not conform to the Annual Rate Adjustment process described above, these changes may be made, upon Owner discretion, in accordance with the following procedures:

- Changes to Contractor's Rate Sheets shall be made using the Pricing Change Order Request Form ("Pricing Change Order") included in Exhibit C and must be presented in the authorized pricing format designated by Owner.
- Each Pricing Change Order must be submitted to Owner's Representative and AEP Manager, Forestry Operations, as listed in Section 8 below and submitted at least 30 days before the desired effective date for the new rates. If Contractor fails to submit its proposed Pricing Change Order at least 30 days prior to the desired effective date, the proposed Pricing Change Order will not be considered and existing Contractor's Rate Sheets shall remain in effect.

- If Contractor's Pricing Change Order is accepted by Owner, the revised Contractor's Rate Sheets shall be incorporated into Exhibit C of the Contract upon the authorized signature of the Parties and shall become effective as of the date of the latter signature of the Pricing Change Order.

Lump Sum Work: Parties agree to designate the specific pricing for Work performed on a Lump Sum basis in the Work Request. In the event the Contractor is assigned additional Work that was not included in the original Work Request, that Work will be priced utilizing the Contractor's Rate Sheets included in Exhibit C.

## 6. FUEL ADJUSTMENTS

The base fuel price is \$4.00 per gallon ("Base Fuel Price"). The weekly fuel price is the state average for regular grade unleaded gasoline taken from the American Automobile Association's website ("Weekly Fuel Price"). When preparing the weekly invoices, if that week's Weekly Fuel Price differs from the Base Fuel Price by more than ten (10) cents, a fuel adjustment for each piece of equipment will be calculated by using the following formula:

Fuel adjustment = [(Weekly Fuel Price) – (Base Fuel Price)] x gallons/hour x Equipment hours billed

The gallons/hour figure is taken from the Contractor's Rate Sheets in Exhibit C. The sum of the fuel adjustments for each piece of equipment used that week shall be added to or subtracted from that week's invoice amount. If the Unit Price Model, as described in Exhibit C, is used and billing is done with a single invoice when all the Work is completed, the Weekly Fuel Price used shall be that for the week in which the invoice is being prepared.

During the first quarter of each year, beginning in 2014, the equipment rates shall be adjusted based on the average gas price for the last quarter of the previous year. The average gas price for the last quarter shall be determined by adding the Weekly Fuel Prices used to calculate the fuel adjustment for the weeks of October, November and December and then dividing that sum by the number of those weeks. The resulting average gas price for the last quarter will be the new Base Fuel Price. The old Base Fuel Price shall be subtracted from the new Base Fuel Price and the difference shall be added to the hourly rate for each item of equipment on the equipment rates that uses fuel. In accordance with the annual rate adjustment process detailed above in Section 5, the new Base Fuel Price shall be incorporated into Exhibit C - Contractor's Rates.

## 7. MARK-UP ADJUSTMENTS

The mark-up percentages in the Contractor's Rate Sheets are fixed for the duration of the Contract, except as specified herein. Owner and Contractor have reviewed the development of the mark-up percentages in Contractor's Rate Sheets and have agreed that they were reasonably developed and fairly reflect Contractor costs they represent. Accordingly, without restricting any of the audit rights in Article 29.0 of the AEP General Terms and Conditions and except as may be provided elsewhere herein, Parties' intent is that Contractor's actual costs for Workers' Compensation and Public Liability and Property Damage Insurance shall not be subject to audit.

## 8. NOTICES AND OPERATION CONTACTS

In accordance with Section 33.0 of the AEP General Terms and Conditions, the representatives of Parties for receipt of notices are:

**For Owner:**

| <b>Role</b>                      | <b>Name</b>        | <b>E-mail</b>     | <b>Phone</b>   | <b>Address</b>  |
|----------------------------------|--------------------|-------------------|----------------|---|
| AEP Contract Analyst             | Georgiana Sullivan | gsullivan@aep.com | (614) 716-6815 | 1 Riverside Plaza, 9 <sup>th</sup> Fl.<br>Columbus, OH 43215  |
| AEP Manager, Forestry Operations | Walter Sherry      | washerry@aep.com  | (614) 716-2772 | 1 Riverside Plaza, 12 <sup>th</sup> Fl.<br>Columbus, OH 43215 |
| KPCO Representative              | Mark Jackson       | mejackson@aep.com | (606) 437-3818 | 3249 North Mayo Trail,<br>Pikeville, KY 41501                 |

**For Contractor:**

|                           |            |                     |                |  |
|---------------------------|------------|---------------------|----------------|--|
| Contractor Representative | Jeff Jones | jeff@nelsontree.com | (937) 294-1313 | 3300 Office Park Drive<br>Dayton, OH 45439 |
|---------------------------|------------|---------------------|----------------|--|

**9. INVOICES**

Contractor shall create time sheets in Owner's Right-of-Way Management ("RWM") software system, or other applicable system as designated by Owner, weekly, in arrears. If necessary, paper invoices shall be sent to the Owner Representative as listed on the Work Request and must include this Contract number.

**10. MISCELLANEOUS**

All capitalized terms not defined herein are as defined in the applicable terms and conditions referenced herein.

*[SIGNATURES FOLLOW IMMEDIATELY HEREAFTER]*

**IN WITNESS WHEREOF**, Parties hereto have caused this Contract to be signed by their respective officers thereunto duly authorized on the dates set forth below to be effective as of the Effective Date.

**Kentucky Power Company**

**Nelson Tree Service, Inc.**



**IN WITNESS WHEREOF**, Parties hereto have caused this Contract to be signed by their respective officers thereunto duly authorized on the dates set forth below to be effective as of the Effective Date.

**Kentucky Power Company**

Everett Phillips  
signature

Everett Phillips  
print/type name

Managing Director, Distr Region Operations  
title

10/23/12  
date

**Nelson Tree Service, Inc.**

Jeffrey D. Jones  
signature

Jeffrey D. Jones  
print/type name

Executive Vice President  
title

October 8, 2012  
date

# EXHIBIT A



**GENERAL TERMS AND CONDITIONS FOR  
LABOR AND SERVICES**

**March 2009**

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**AFFIDAVIT OF COMPLETION**

**Exhibit 1**

## GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES

### 1.0 DEFINITIONS

- 1.1 Business Day: "Business Day" means any calendar day, other than a Saturday or Sunday or a calendar day on which U.S. commercial banking institutions are authorized or required by law to close.
- 1.2 Change Order: "Change Order" means a written order as defined and issued in accordance with Article 12.0.
- 1.3 Contract: "Contract" means collectively the Contracting Instrument and all documents referenced in the Contracting Instrument and any Change Orders, amendments or addenda.
- 1.4 Contract Price: "Contract Price" means the price to be paid to the Contractor for the performance of Work as set forth in the Contracting Instrument.
- 1.5 Contracting Instrument: "Contracting Instrument" means the contractual document that identifies the parties, the nature of the Work, the Contract Price, documents to be included as part of a Contract, and other matters relating to a Contract. The Contracting Instrument may be in the form of a contract letter, blanket purchase order, purchase order or other similar documents.
- 1.6 Contractor: "Contractor" means the entity contracting with Owner for the performance of Work.
- 1.7 Direct Cost: "Direct Cost" means the actual costs and charges incurred and payments made by Contractor, its Subcontractors, for Site equipment, materials, services and labor (including payroll burden and expenses) which are directly attributable to the performance of Contractor's Work hereunder. Direct Cost includes Contractor's home office or Site labor to the extent Contractor's home office or Site labor is directly assignable to the Work which must be demonstrable under the circumstances. Direct Cost shall not include corporate, general and administrative costs including home office functions, sales, marketing, accounting, human resources, information technology, payroll, profit, research, development, quality assurance and control, purchasing, safety, management, administration, warranties, insurances, off-Site or other unabsorbed costs.
- 1.8 Final Acceptance: "Final Acceptance" means Owner's determination that the Work has been completed in accordance with the Contract requirements.
- 1.9 Initial Acceptance: "Initial Acceptance" means Owner's determination prior to final inspection and testing that the Work conforms to the Contract requirements for purposes of receipt.
- 1.10 Owner: "Owner" means any one or more of the companies of the American Electric Power System as may be specified in the Contract Instrument.
- 1.11 Site: "Site" means Owner's property or such other premises (including adjacent bodies of water and property owned or controlled by a third-party) upon which the Work is to be performed.
- 1.12 Subcontractor: "Subcontractor" means vendors, suppliers, consultants, and subcontractors of any tier, materialmen, professionals, laborers, and all other persons providing equipment, materials or services directly or indirectly to Contractor in connection with the Work.
- 1.13 Work: "Work" means all of Contractor's obligations under the Contract.

## 2.0 CONTRACTOR'S OBLIGATIONS

- 2.1 Contractor shall at its expense provide everything necessary for the complete, proper and timely execution of the Work including, but not limited to, home office support, supervision, labor, tools, transportation, safety equipment, construction equipment, temporary utilities and facilities, equipment to be installed, materials and supplies, unless explicitly excluded in the Contract. Contractor's performance of the Work shall include everything requisite and necessary to comply with prudent electric utility industry standards and to complete its Work, notwithstanding the fact that every item necessarily involved may not be specifically mentioned. Details and items not indicated by the Contract documents shall be adequately and properly performed by Contractor at no extra cost if such details and items are necessary to complete the intent of the Contract or otherwise to complete the Work.
- 2.2 Contractor is responsible for considering the conditions affecting the Work including, but not limited to, conditions affecting the transportation, disposal, handling and storage of materials; the availability and cost of labor, water, electric power, utilities and roads; the uncertainties of weather, river stages, and similar physical conditions at the Site; the conformation and condition of the ground; and the character of equipment and facilities needed. Contractor shall take into account the character, quality and quantity of surface and subsurface materials or obstacles to be encountered to the extent this information is reasonably ascertainable from the contract documents or an inspection of the Site.
- 2.3 Contractor shall immediately and before such conditions are disturbed notify Owner of: (a) subsurface or latent physical conditions at the Site which differ materially from those indicated in the Contract; (b) unusual geologic conditions at the Site which differ materially from conditions ordinarily encountered or from conditions addressed in the Contract; or (c) artifacts or articles which appear to have archaeological or historical significance. Owner shall promptly investigate such conditions and, if such conditions do materially differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of the Work, the parties shall agree to amend the Contract. No claim of Contractor under this clause shall be allowed unless Contractor has given immediate notice as required above and confirmed such notice in writing within ten (10) days of discovery.
- 2.4 Contractor shall have an authorized representative at the Site to whom Owner may give instructions at all times when Work is being performed.
- 2.5 Contractor shall assign qualified and competent personnel to perform the Work and have qualified and competent supervision at the Site at all times to direct and observe the Work. Key personnel shall not be removed from the Work without prior notice to, and consent by Owner which shall not be unreasonably withheld. Contractor will investigate and take appropriate action with respect to any personnel problems brought to its attention by Owner.
- 2.6 Contractor shall confine all of its operations and personnel to those areas of the Site to which Owner authorizes access.
- 2.7 Contractor's personnel may not operate Owner's tools, vehicles, materials or equipment ("Owner's Equipment") without Owner's prior authorization. If Contractor borrows Owner's Equipment, Contractor (a) agrees that Owner has provided Owner's Equipment AS IS, with no representations or warranties; (b) assumes full responsibility for the protection of the borrowed Owner's Equipment; (c) assumes all liability for injuries or damages resulting from the use of the borrowed Owner's Equipment; and (d) agrees to return the borrowed Owner's Equipment to Owner in the same condition as when it was borrowed, or, if repairs are necessary, to cause such repairs to be performed promptly at Contractor's expense before the Owner's Equipment is returned to Owner. Owner has no obligation to lend Owner's Equipment to Contractor.

- 2.8 Contractor shall cooperate with Owner and others working at or near the Site. Contractor shall promptly report to Owner any defects in the work of others which affects the Work. Failure to report such defects constitutes acceptance of the conditions by Contractor. Contractor shall properly fit, connect and coordinate its Work with that of Owner and other contractors.
- 2.9 Contractor shall keep all of its work areas free from trash and debris, and keep its work areas "broom clean" on a continuous basis.
- 2.10 Contractor shall secure and protect its materials, tools, equipment and the Work, including Owner-provided materials and equipment.
- 2.11 Contractor is responsible for the proper execution of the Work with respect to any base lines and bench marks established by Owner.
- 2.12 If the Work is subject to prevailing wage requirements, Contractor agrees to comply with such requirements.
- 2.13 Contractor, its Subcontractors, and their respective employees and agents involved in the Work shall adhere to the provisions contained in Owner's Code of Business Conduct which can be found at Owner's website.

### 3.0 TERM AND EFFECTIVE DATE

- 3.1 The Contract shall commence as of the effective date and, unless earlier terminated as provided in Article 27.0, shall terminate on the termination date set forth in the Contract. Unless specified elsewhere in the Contract, the effective date of the Contract shall be the earlier of the date on which Contractor begins performance hereunder or the date of the latter signature on the Contract.

### 4.0 RELATIONSHIP OF THE PARTIES

- 4.1 Contractor and all of its employees and Subcontractors are, with respect to Owner, independent contractors. Contractor will be solely responsible for the supervision, direction, and control of its employees and Subcontractors. Contractor is responsible for the payment of all compensation, benefits, and employment taxes with respect to the Contractor's employees.

### 5.0 ASSIGNMENT AND SUBCONTRACTING

- 5.1 Contractor shall not assign or otherwise dispose of the Contract, or any obligations hereunder, without the written consent of Owner. Any assignment or disposal without the written consent of Owner shall be null and void.
- 5.2 Prior to entering into any subcontract, Contractor shall submit to Owner a subcontractor data sheet that includes the name and address of the Subcontractor and the scope of work proposed to be included under such subcontract. Within five (5) Business Days of receipt of a Subcontractor data sheet, Owner may reject such Subcontractor without cost or contract extension by giving written notice of such rejection to Contractor.
- 5.3 Contractor is responsible for the selection of any Subcontractor and for the Subcontractor's proper performance of the Work assigned to it. If the work of a Subcontractor is not in compliance with the Contract requirements, Contractor shall take immediate steps to bring the Subcontractor's work into compliance and, at Owner's written request, terminate its contractual relationship with the Subcontractor as it relates to the Work at no cost to Owner.

6.0 LABOR RELATIONS

- 6.1 Contractor shall comply with any project, national or local labor agreements that are applicable to the Work or Site. Contractor shall cooperate with Owner and other contractors in establishing and maintaining labor work rules and practices.
- 6.2 When the Work is performed by building and construction trades labor, a pre-job conference shall be held with local labor representatives prior to starting Work. Owner shall be afforded the opportunity to attend and participate in pre-job conferences.
- 6.3 Contractor shall provide immediate notice to Owner of any actual or potential labor dispute that may delay the timely, efficient and productive performance of the Work.
- 6.4 Contractor shall inform and cooperate with Owner on labor matters. Contractor shall consult with Owner prior to rendering its decision(s) on labor matters that may impact the timely, efficient and productive performance of the Work.
- 6.5 Contractor shall exercise its management rights contained in applicable labor agreements to establish, maintain, and enforce work rules conducive to timely, efficient, productive and harmonious work operation. Contractor shall take the necessary steps available to resolve grievances, jurisdictional disputes, or other violations of collective bargaining agreements.

7.0 SAFETY AND SECURITY

- 7.1 Contractor shall perform the Work in a safe and careful manner, provide first aid facilities and transportation, and use such safety devices and methods as are necessary to protect its employees, agents, Subcontractors, Owner's employees and agents, other contractors and the public from bodily injury and property damage.
- 7.2 Contractor shall comply with and enforce all laws, rules and regulations applicable to safety and health standards, including, but not limited to, the Occupational Safety and Health Act of 1970 (OSHA) and any revisions of OSHA or successor legislation.
- 7.3 Contractor shall comply with project and Site safety and security rules and all procedures issued by Owner, provided that such rules and procedures do not conflict with OSHA or other safety laws, rules or regulations. Contractor shall assign a competent person at all times to manage, coordinate and enforce its safety program during performance of the Work.
- 7.4 Contractor shall provide Owner with Material Safety Data Sheets (MSDS) for all applicable materials prior to delivery to Owner's Site.
- 7.5 Contractor shall obtain Site permits or approval from Owner for its vehicles, any excavation, use of explosives, access to restricted areas, use of Owner's Equipment, tools and facilities, and other similar activities.
- 7.6 Owner will arrange all necessary clearances on energized equipment, electrical and communications circuits, piping systems or other operational equipment. Contractor shall notify Owner requesting the clearances prior to the scheduling of such Work. Contractor shall comply with Owner's clearance permit system regarding tagout and lockout of electrical and mechanical systems and other equipment.
- 7.7 Contractor shall fully inform Owner in writing regarding the types, quantities and use of any hazardous materials brought on the Site; the types and quantities of hazardous wastes being generated from the Work; and Contractor's program for proper storing, handling and disposal of such materials in a safe and secure manner.



- 7.8 Contractor shall immediately inform Owner of all regulatory safety, health and environmental inspections, citations and penalties associated with the Work. Contractor shall provide Owner with written reports and copies of all documents submitted to or by regulatory agencies and insurance companies.
- 7.9 Contractor shall promptly inform Owner of any injuries to its employees, agents, Subcontractors, or other persons arising out of the Work that require medical treatment.
- 7.10 Contractor shall obtain, maintain, and properly complete all record keeping required by regulatory agencies. Upon request, Contractor shall provide Owner with copies of all logs, reports and other records.
- 7.11 Contractor shall investigate all accidents resulting in personal injury, property damage, or near misses to determine root cause(s) and corrective action(s). Upon request, Contractor shall provide Owner with a copy of investigative reports, including all documents submitted to insurance companies.
- 7.12 All of Contractor's employees, agents, Subcontractors, vehicles, trailers, etc. entering or leaving the Site are subject to inspection at any time by Owner.
- 7.13 If a safety violation or other unsafe condition causes imminent danger, Owner may immediately shut down the Work involved without advance written notice.
- 7.14 Contractor and all Subcontractors performing Work at Site must have a substance abuse program. This program must apply to all personnel. Minimum requirements of this program shall include pre-hire testing, testing for cause and if requested, random testing. Screening substances and their associated cut-off limits are listed below.

| Drug<br>Classes  | Screening Cut-Off<br>Limit (ng/ml) | Confirmation Cut-Off<br>Limit (ng/ml) |
|------------------|------------------------------------|---------------------------------------|
| Amphetamines     | 1,000                              | 500                                   |
| Benzoyllecgonine | 300                                | 150                                   |
| Cannabinoids     | 50                                 | 15                                    |
| Opiates          | 2,000                              | 2,000                                 |
| Phencyclidine    | 25                                 | 25                                    |

Blood & Breath alcohol content : .02% per Department of Transportation.

Testing shall be performed by a testing facility certified by Department of Health & Human Services. Personnel must have evidence of having tested negative within a year prior to employment. Owner will accept conditional employment predicated upon (a) employee(s) furnishing evidence that they have submitted to testing within forty-eight (48) hours of initial employment and (b) employee(s) furnishing evidence of negative test results within five (5) work days of initial employment. Contractor shall ensure personnel are "drug free". Owner reserves the right to examine evidence outlined herein. Contractor's program shall incorporate reciprocity on "drug free" employee verification to minimize Owner's economic impact and employee recertification while maintaining the program's intent.

- 7.15 If required by Owner, Contractor must meet certain security criteria set forth herein.
  - 7.15.1 Contractor shall submit to Owner a copy of its background investigation process for Owner's review and file. If Owner, in its sole discretion, determines that Contractor's background investigations do not meet certain specific requirements, then Contractor, at

its expense, must perform a background investigation that does meet Owner's certain specific requirements on each individual designated by Contractor to perform Work, or is performing Work on behalf of Contractor, for Owner (referred to herein for purposes of this Article, as an "individual"). Notwithstanding anything to the contrary stated herein, Owner reserves the right to conduct a background investigation on each individual at Contractor's expense.

- 7.15.2 Owner's certain specific requirements of background investigations include the following: (i) determination of whether an individual has been convicted of a felony crime in each state where the individual has resided during the past seven years; (ii) performance of the background investigation at the state level (in other words, to only search the records of the county in which the individual has resided during the past seven years is not a sufficient background investigation); and (iii) if the individual is to operate a motor vehicle while performing Work for Owner, then a state operator's license abstract must be completed in the states where the individual has been licensed as a vehicle operator during the past seven years.
- 7.15.3 If any background investigation reveals or indicates that an individual has been convicted of a felony crime, then the Contractor must notify the Owner prior to the individual commencing Work. Owner in its sole discretion shall have the option of barring from any Work Site any individual who has a reported felony conviction. Owner may audit or review specific Contractor screening files to ensure compliance with the Contract.
- 7.15.4 If an individual requires unescorted access to Owner's critical cyber assets, then Owner will conduct its own background investigation, which will include a Social Security Number verification. Additional specific provisions or requirements related to any Owner conducted background investigation pursuant to this Section 7.15.4 will be communicated to Contractor prior to implementation of such background investigation.
- 7.15.5 Contractor shall not perform any screening activities that violate the federal Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964 or any other applicable law in any circumstances. Contractor shall ensure that the substance and manner of any and all background investigations performed by Contractor conform fully to applicable law.
- 7.16 "Personally Identifiable Information" or "PII" means any information to which Contractor is provided access that could identify an individual either directly or indirectly including, without limitation to the individual's name, credit card numbers, social security number, biometric, bank account numbers, passport numbers, computer passwords or health, financial or employment information and other individual confidential information.
- 7.16.1 To the extent that Work under the Contract requires Contractor to be given access to PII gathered and/or maintained by or on behalf of Owner, or in the event Contractor acquires access to or encounters any PII during performance of the Work, Contractor shall after receipt thereof, treat such PII as confidential and safeguard such PII from unauthorized use and disclosure. Upon request of Owner, Contractor shall have its employees execute a confidentiality agreement protecting PII. Contractor agrees not to appropriate such PII for its own use or to disclose such PII to third parties unless specifically authorized by Owner in writing. Contractor shall ensure that its employees will not discuss, divulge or disclose any such PII to any person or entity except those persons directly concerned with and only to the extent necessary to complete the performance of the Work. Contractor shall access, use and process PII and other data on behalf of Owner only for the purposes specified in the Contract.

- 7.16.2 Contractor shall comply with (i) NERC Reliability Standards as applicable, including without limitation, those relating to Critical Infrastructure Protection, (ii) Owner's security standards, and (iii) such further instructions as Owner may provide regarding the processing of such PII. Contractor shall inform Owner promptly if it has reason to believe that applicable law (or changes in applicable law) prevents Contractor from fulfilling the obligations relating to treatment of PII or other data under Owner's security standards and/or the Contract.
- 7.16.3 To the extent permitted by law, Contractor shall notify Owner promptly and act only upon Owner's instruction concerning: (a) any request for disclosure of PII or other data by law enforcement or other governmental authority; (b) any request by law enforcement or other governmental authority for information concerning the processing of PII or other data in connection with the Contract; or (c) any request received directly from an individual concerning his/her PII.
- 7.16.4 Contractor may not store PII on computers, mobile devices, including but not limited to cellular telephones and/or personal digital assistants, servers and/or storage devices including removable media (any of which, hereinafter known as a "Computer"), unless required for the performance of Work. Any such information must be deleted from a Computer, in a manner that ensures that it cannot be accessed or read, as soon as such storage is no longer required for the performance of Work.
- 7.16.5 Upon termination of the Contract or upon Owner's request, Contractor must promptly (a) return all PII in written form to Owner, and (b) delete all PII in Contractor's possession or control (on computer or in whatever other form or media) in a manner that ensures that this information cannot be accessed or read.
- 7.16.6 Contractor shall administer a monitoring process to ensure compliance with Section 7.16 and the related subsections hereof, promptly report any breaches to Owner, and implement immediate, appropriate corrective actions to contain and prevent recurrence. Contractor shall report to Owner immediately upon discovery of a real or suspected loss of PII. In the event of a breach of this provision or the occurrence of any other event regarding PII that requires notification under applicable law, Contractor agrees to assume responsibility for informing all such individuals in accordance with applicable law.
- 7.16.7 In addition to any remedy available to Owner under the Contract, Contractor acknowledges that any breach of Section 7.16 or the related subsections hereof by Contractor or its Subcontractors may subject Contractor to civil and criminal penalties. Contractor shall include the full text of Section 7.16 and the related subsections 7.16.1 through 7.16.7 in all appropriate subcontracts. However, including such provision in the subcontracts shall not relieve Contractor of its obligation to ensure compliance with the provisions of Sections 7.16.1 through 7.17.7.

## 8.0 MATERIALS

- 8.1 All Contractor-furnished materials, equipment and related products (referred to in this Article 8.0 as "Materials"), which are to be installed shall be new and meet the requirements of all applicable codes. Materials which will not become a part of the permanent installation are not required to be new. Owner reserves the right to reject materials which have not been previously used but which have been in storage for an unreasonable period of time. Title to and risk of loss of the Materials shall pass to Owner upon Final Acceptance of the Work. Title to the Materials shall be free and clear of all liens and encumbrances.

- 8.2 Contractor shall not substitute Materials specified in the Contract unless authorized by Owner in writing. Unless substitution has been so authorized, Contractor shall, at its expense, remove and replace any improperly substituted material.
- 8.3 Upon Owner's request, Contractor shall, at its expense, submit to Owner samples of Contractor-furnished materials. Contractor must obtain Owner's written approval before performing Work involving the use of materials for which samples have been requested. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes. Materials used shall conform to the approved samples. Contractor shall remove and replace nonconforming materials at its expense.

#### 9.0 INSPECTION AND ACCEPTANCE

- 9.1 Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed conforms to the Contract requirements. Owner reserves the right to review and approve the adequacy of Contractor's inspection system. Contractor shall provide all quality control and quality assurance program information requested by Owner.
- 9.2 Owner shall have free access to the Work for inspection purposes. Owner's inspection, receipt or Initial Acceptance of the Work shall not relieve Contractor of its obligation to comply with the terms of the Contract.
- 9.3 Each party shall bear its own expenses in performing inspections, except that (a) Owner may use Contractor's facilities, ladders and scaffolds to perform inspections of the Work; (b) Contractor shall pay Owner's expenses in re-inspecting Work which was rejected as non-conforming to the Contract requirements in an earlier inspection; (c) Contractor shall pay the costs of uncovering and re-covering Work for Owner's inspection if Contractor failed to give Owner reasonable notice that the Work was ready to be covered; and (d) prior to Final Acceptance, if Owner requests an inspection of Work already completed which requires removing and tearing out Work, and the Work is found to be materially defective, Contractor shall pay the expenses of inspection and reconstruction, but if the Work is found to be in conformance with the Contract requirements, Owner shall pay the expenses of inspection and reconstruction.
- 9.4 Owner will not pay for defective work. Contractor shall repair or replace all defective work at its expense. Contractor shall promptly remove from the Site any Contractor-furnished materials that do not comply with the requirements of the Contract. If Owner-furnished materials have been used in any defective work, the cost of such materials shall be backcharged to Contractor.
- 9.5 Owner shall have the right to take possession of or use any part of the Work. Owner's possession or use shall not constitute Initial Acceptance or Final Acceptance of the Work.
- 9.6 Unless otherwise provided in the Contract, Final Acceptance by Owner shall be made as soon as practicable after all Work has been completed and inspected. Any part of the Work not rejected by Owner following Final Inspection shall be deemed to have achieved Final Acceptance.

#### 10.0 SCHEDULE

- 10.1 Contractor shall perform the Work to meet the schedule date(s) set forth in the Contract. Contractor shall not commence Work until authorized by Owner to do so.
- 10.2 In a format acceptable to Owner, Contractor shall develop, update, maintain and provide to Owner a written schedule for execution of the Work. The schedule shall be time scaled, complete, and accurate in detail depicting Contract milestone dates, work activities and durations. Upon review and approval by Owner, this schedule shall become the Contract schedule. Updates to the Contract schedule shall

be provided to Owner on at least a monthly basis. Updates shall depict actual progress measured against planned progress.

- 10.3 Contractor shall notify Owner within 24 hours of the first knowledge that any completion date(s) will not be met and shall, within five (5) Business Days thereafter, submit a detailed program depicting the plans and actions being taken to regain the lost time. The notice shall not limit any other rights or remedies afforded Owner under the Contract or by law.

## 11.0 TERMS OF PAYMENT

- 11.1 Except as otherwise provided in the Contract, the following terms of payment shall apply:

- 11.1.1 The Contract Price set forth in the Contract shall constitute full and complete payment for all Work.
- 11.1.2 Contractor shall submit invoices with proper documentation to Owner for the Work completed or for milestones achieved during the prior month. Owner may withhold all or any part of payment in an amount necessary to protect Owner from loss due to the occurrence, or imminent occurrence, of (i) Contractor's breach or failure to perform in accordance with the Contract, (ii) defective Work, (iii) Contractor's failure to pay any Subcontractor, (iv) other claims by Owner against Contractor, including indemnity claims, and (v) damages for delay or any agreed upon liquidated damages.
- 11.1.3 Owner shall pay 90% of each properly submitted and accepted invoice within thirty (30) days of receipt. The release of retention shall become due and payable thirty (30) days after the date of Final Acceptance of the Work.
- 11.1.4 Each invoice shall contain a statement that all bills for material and labor relating to the Work have been paid in full by Contractor, and there are no unpaid bills for which a lien could be filed. If requested by Owner, Contractor shall provide evidence of such payments. The final invoice for the Work shall be accompanied by a satisfactorily completed Affidavit of Completion in the form attached as Exhibit 1. Payment of the final invoice and retention constitutes a full and final release of Owner from all claims, damages, liabilities and obligations under the Contract.

- 11.2 Contractor shall promptly pay all of its Subcontractors.

## 12.0 CHANGES IN WORK AND EXTRA WORK

### 12.1 Change in Work

- 12.1.1 "Change Order" means a written order issued in accordance with this Article 12.0 documenting an addition to, deletion from, or other modification to the Work, including a change in the scope of Work, the Contract Price, the payment schedule, the completion dates, or the schedule for the Work.
- 12.1.2 Owner may issue a Change Order: (i) at Owner's option, or (ii) if requested by Contractor due to the occurrence of an event that entitles Contractor to a Change Order as determined by Owner.
- 12.1.3 If Owner issues a Change Order, Contractor shall perform the changed Work in accordance with the terms of the Contract and the issued Change Order.

- 12.1.4 No order, statement or other conduct of Owner shall be treated as a change in Work until such change is authorized in writing by Owner.
- 12.1.5 Contractor shall not be entitled to a Change Order for conditions such as, but not limited to, (i) work which is of such a nature as to be normally included in the Work or is reasonably inferable from the Contract; (ii) any errors, omissions, non-performance, negligence, deficiencies or improper or defective work on the part of Contractor (including miscalculations, incorrect estimates, or other errors in Contractor's proposal for the Work); (iii) changes relating to refinement, minor correction and detailing of the Work or any part of the Contract; or (iv) other unallowable claims such as cost impacts not due to Owner and cumulative impact claims.
- 12.1.6 With respect to Contractor claims for additional compensation, Owner shall pay only incremental Direct Costs associated with the proposed changes and only to the extent that Contractor can demonstrate that the changes actually increased its costs of performance. Any claims for additional compensation based on a change to the Work or extra work must be material in nature, and Contractor must provide full documentation supporting all elements of such claims. For a reduction in the scope of Work or a change which reduces Contractor's costs, the Contract Price shall be adjusted downward. The payment for changes to the Work shall be complete compensation to Contractor for performing such changes, including any schedule or cost impacts on the Work.
- 12.1.7 If Owner requests in writing that Contractor furnish materials or equipment to be permanently incorporated in changed work, extra work or cost-plus work, Owner shall reimburse Contractor for such materials or equipment its incremental Direct Cost plus a percentage mark-up to be agreed upon by the parties. Requests for payment for materials and equipment shall be accompanied by copies of receipted invoices. Owner has the right to audit Contractor's requests for changes and the financial basis therefor.
- 12.1.8 If Contractor and Owner disagree on whether any particular work is within the scope of Work and such work must be completed to insure timely progress, Owner will issue a disputed Change Order to cover the disputed work. Contractor shall diligently proceed with the disputed work. By noon on the work day following performance of the disputed work, Contractor shall submit to Owner for review timesheets itemizing all labor and equipment hours expended on the disputed work and an itemized listing of Contractor furnished materials. Such review is not an admission of liability by Owner. Prior to Final Acceptance, each disputed Change Order will be resolved to the mutual agreement of the parties.

## 12.2 Extra Work

- 12.2.1 "Extra work" is work which is beyond Contractor's scope of Work. At Owner's request, Contractor shall perform extra work at the applicable prices set forth in the Contract. If the Contract prices are not applicable to the type of extra work to be performed, Contractor shall promptly submit a proposal to perform the extra work, which proposal shall become an amendment to the Contract upon acceptance by Owner. If Owner directs Contractor to perform extra work on an overtime basis, Owner shall reimburse Contractor the actual payroll cost of premium time for direct job labor. Contractor shall invoice and maintain separate cost records for each extra work authorization issued by Owner.
- 12.2.2 If Owner elects, Contractor shall perform extra work on a cost-plus basis. Cost-plus extra work shall be paid in accordance with Article 13.0.

- 12.3 Contractor waives all claims for additional compensation for changes in work and extra work not made strictly in accordance with the terms of this Article 12.0.

13.0 REIMBURSEMENT FOR COST-PLUS WORK

- 13.1 Direct labor costs will be reimbursed at the actual payroll costs of direct labor wages, fringe benefits, payroll taxes and insurance required by collective bargaining agreements or by law, plus an agreed wage mark-up. Copies of certified payrolls and time sheets shall be provided to Owner for review and approval. Contractor shall not invoice Owner for social security, unemployment, workers' compensation, or other federal, state or local taxes or insurance at rates which exceed Contractor's actual costs.
- 13.2 Owner will pay Contractor actual invoice costs for subcontracted work, provided Owner has approved payment terms in advance of performing the work, plus an agreed mark-up.
- 13.3 Contractor-furnished permanent materials and equipment costs will be reimbursed at actual invoice costs plus an agreed mark-up.
- 13.4 Construction equipment costs will be reimbursed based on actual usage time during the performance of Work and established rental rates not to exceed monthly rates set forth in the "Rental Rate Blue Book for Construction Equipment" adjusted for geographical region as published by Dataquest or other basis acceptable to Owner. Hourly rates shall be established by taking the monthly rate divided by 176 hours per month.
- 13.5 Small tools and consumables costs will be reimbursed based on agreed rates.
- 13.6 Field supervision, clerical, safety and other non-direct labor costs will be reimbursed at agreed billing rates, except that reimbursement for these costs for cost plus extra work shall require the prior review and approval of Owner.

14.0 BACKCHARGES

- 14.1 Owner may impose backcharges against Contractor or deduct backcharges from monies owed to Contractor for performance or reperformance by Owner or others of Work, including but not limited to, costs associated with defective work, nonperformance by Contractor, termination for cause, clean-up and disposal of debris, damages to Owner's tools and equipment and warranty repairs. Contractor will be responsible for the cost of such performance or reperformance plus a fifteen percent (15%) administrative charge.

15.0 TAXES

- 15.1 The Contract Price shall include, and the Contractor shall pay, all taxes and assessments for unemployment insurance, workers' compensation, social security and disability benefits, and other taxes which are based upon the compensation paid to persons employed by Contractor or its Subcontractors for the performance of any Work under the Contract.
- 15.2 Except as provided below, the Contract Price shall include all applicable foreign, federal, state and local taxes payable by Contractor with respect to the Contract.
- 15.2.1 Contractor Purchases. If Owner specifies that tangible personal property to be incorporated into real property as defined for sales and use tax purposes or taxable services to be purchased by Contractor from vendors or Subcontractors qualify for exemption from sales or use taxes, Contractor shall not include sales or use taxes on such exempt tangible personal property or services in the Contract Price. Unless otherwise specified: a) consumable materials and supplies or Contractor's tools and equipment that are not incorporated into the Work or the overall project are not eligible for exemption

and the Contract Price shall include, and Contractor shall pay, any sales or use taxes on such items; and b) Contractor will use its own properly-executed exemption or resale certificate, and not Owner's direct pay permit, to make exempt purchases of tangible personal property or services from vendors or Subcontractors.

- 15.2.2 Owner Purchases from Contractor. With respect to any Owner purchases from Contractor of tangible personal property not incorporated into real property as defined for sales and use tax purposes or taxable services, Owner shall provide to Contractor its direct pay permit (if Owner has been issued a direct pay permit) or an appropriate exemption certificate required to relieve the Contractor of its responsibility to collect sales or use tax from the Owner. If Owner provides Contractor such direct pay permit or exemption certificate, sales or use taxes on Owner purchases from Contractor of tangible personal property or taxable services shall not be collected from Owner or included in the Contract Price. Unless otherwise approved or directed by Owner in writing, Contractor shall not use Owner's direct pay permit to make exempt purchases of tangible personal property or taxable services from vendors or Subcontractors.
- 15.2.3 Contractor Cooperation. Contractor shall take all steps reasonably necessary to ensure that Contractor's purchases from vendors or Subcontractors of items of tangible personal property or services are exempt from sales and use tax pursuant to any applicable exemption pursuant to the law of any U.S. jurisdiction or its political subdivisions.

## 16.0 INSURANCE

- 16.1 Contractor shall at its sole expense, procure or maintain, and shall cause its Subcontractors to procure or maintain, throughout the term of this agreement except as set forth in Section 16.5, the following types of insurance with the following, minimum limits:
- 16.1.1 Workers' compensation insurance in accordance with all jurisdictions where Contractor has operations including where the Work is to be performed.
- 16.1.2 Employer's liability in an amount not less than \$1,000,000.
- 16.1.3 Business automobile insurance covering all Owned, Non-owned and Hired Autos in an amount not less than \$5,000,000 per occurrence.
- 16.1.4 Commercial general liability insurance covering claims of bodily injury and property damage in an amount not less than \$5,000,000 per occurrence.
- 16.1.5 Aircraft liability insurance with a combined limit of not less than \$10,000,000. Such insurance shall be required only if the Contractor or its Subcontractors shall utilize an aircraft in the performance of the Work.
- 16.1.6 Protection and Indemnity insurance (including Jones Act liability) and pollution liability in an amount not less than \$10,000,000 per occurrence. Such insurance shall be required only if the Contractor or its Subcontractors shall use a marine vessel or floating equipment in the performance of the Work.
- 16.1.7 Professional liability insurance and/or Errors and Omissions insurance in an amount not less than \$5,000,000. Such insurance shall be required only if the Work includes professional liability exposures.
- 16.1.8 "All risk" property insurance covering the full replacement cost of Contractor's personal property.



- 16.2 To the extent permitted by law, Contractor shall waive, and shall cause each of its insurers to waive, any and all rights of recovery, by subrogation or otherwise, against Owner and its affiliates, officers, directors, employees, agents and assigns of any type. Each of the insurance policies indicated above shall be primary to and non-contributory with any insurance or self-insurance of Owner.
- 16.3 The Commercial General Liability, the Business Automobile, and the Aircraft Liability insurance shall include Owner as an additional insured with respect to Owner's liability arising out of the operations of Contractor. Such coverage shall also include blanket contractual coverage and contain no exclusion for explosion, collapse, or underground property damage (XCU coverage).
- 16.4 The insurance required by this Article 16.0 is in addition to and separate from any other obligations contained in the Contract.
- 16.5 If any of the policies indicated above are placed on a "claims-made" basis, such coverage shall be maintained for a period of not less than five (5) years following the completion of the Work. Products and/or completed operations coverage shall be maintained for a period of five (5) years after the completion of the Work.
- 16.6 Any deductibles or retentions on any of the policies required herein shall be the sole responsibility of the Contractor.
- 16.7 The above referenced limit requirements may be met by any combination of umbrella or excess and primary policies so long as the total limit of insurance requirement is met. The required coverages referred to herein shall in no way affect, nor are they intended as a limitation of, Contractor's liability with respect to its performance of the Work. The limits of insurance indicated herein are minimum requirements and are in no way intended to limit Contractor's liability.
- 16.8 In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special, or statutory employees) are covered by the Louisiana Worker's Compensation Act, La. Rev. Stat. Ann. 23:1021 et seq., Owner and Contractor agree that pursuant to Section 23:1061 (A) (1) all Work performed by Contractor and its employees under the terms and conditions of the Contract is an integral part of Owner's operations and is essential to Owner's ability to generate its goods, products and services. Additionally, Owner and Contractor agree that for purposes of Section 23:1061 (A) (3) Owner is the principal or statutory employer of Contractor's employees. Irrespective of Owner's status as the statutory employer or special employer of Contractor's employees, pursuant to Section 23:1031 (C), Contractor shall remain primarily responsible for the payment of Louisiana Worker's Compensation benefits to its employees, shall indemnify Owner from any and all claims of Contractor's employees or its Subcontractor's employees and shall not be entitled to seek contribution for any such payments from Owner.
- 16.9 Contractor will not be permitted to bring its employees, materials or equipment on the Site until Owner receives from Contractor two copies each of acceptable certificates of insurance covering the terms of Subsections 16.1.1 through 16.1.8. Such certificates shall state that the insurance carrier has issued the policies providing for the insurance specified above, that such policies are in force, that the additional insured requirements have been satisfied, and that the insurance carrier will give Owner thirty (30) days prior written notice of any material change in, or cancellation of, such policies. If such insurance policies are subject to any exceptions to the terms specified herein, such exceptions shall be explained in full in such certificates. Owner may, at its discretion, require Contractor to obtain insurance policies that are not subject to non-standard exceptions.

- 16.10 In lieu of Sections 16.1 thru 16.9, if Owner has elected in the Contract to implement an Owner Controlled Insurance Program ("OCIP"), Owner and Contractor agree that the terms of the OCIP as contained in the Contract shall control.

17.0 INDEMNIFICATION

- 17.1 The laws of the state where the Work giving rise to the claim is performed shall apply to this Article 17.0.

- 17.2 **TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.**

- 17.3 **WITH RESPECT TO CLAIMS AGAINST OWNER BY CONTRACTOR'S EMPLOYEES, CONTRACTOR UNDERSTANDS AND AGREES THAT THIS INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY, AND CONTRACTOR EXPRESSLY WAIVES, ITS IMMUNITY AS A COMPLYING EMPLOYER UNDER ANY APPLICABLE WORKERS' COMPENSATION LAW, BUT ONLY TO THE EXTENT THAT SUCH IMMUNITY WOULD BAR OR AFFECT RECOVERY UNDER OR ENFORCEMENT OF THIS INDEMNIFICATION OBLIGATION.** With respect to the State of Ohio, this waiver applies to Section 35, Article II of the Ohio Constitution and Ohio Rev. Code Section 4123.74.

- 17.4 **CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT.**

18.0 LIMITATION OF LIABILITY

- 18.1 Except as expressly provided herein, neither party shall be liable to the other for any incidental, indirect, special, punitive or consequential damages. Contractor must bring any cause of action arising under the Contract within one year from the time the cause of action accrues.

19.0 LIENS

- 19.1 To the extent permitted by law, Contractor shall not file or permit to be filed any lien with respect to the Work and hereby expressly waives any right to file or cause to be filed a lien. Contractor, in

its subcontracts, shall require all Subcontractors to expressly waive the right to file any liens against Owner's property, and, if requested, provide Owner with copies of such waivers.

- 19.2 In the event any claim is asserted or any lien filed against Owner or its property, or notice of lien is provided to Owner in violation of this provision, further payment to Contractor shall not become due under the Contract until the claim is satisfied or the lien released without cost to Owner and Contractor shall provide Owner with evidence of payment relating to such claim or lien. If Contractor fails to settle any claim or secure the release of any lien, Owner may take whatever steps it deems necessary to settle the claim or release the lien, including bonding off the lien. Owner may deduct its costs and expenses for settling any claim or securing the release of any lien filed by Contractor or its Subcontractors from any money due or to become due to Contractor under the Contract. If final payment has been made, Contractor shall reimburse to Owner its costs to settle any claim or secure the release of any lien arising out of the Contract.

## 20.0 INTELLECTUAL PROPERTY

- 20.1 Contractor warrants that its performance of the Work will not infringe upon or violate any trademarks, patents, copyrights, trade secrets or other third party property rights. If the performance of Work is held in any action to constitute infringement, or the use of the Work is enjoined, Contractor, at its expense, shall procure for Owner the right to continue use of the Work, or replace the Work with non-infringing materials or methods satisfactory to Owner, or modify the Work in a manner satisfactory to Owner so that the Work becomes non-infringing. Contractor agrees to indemnify and save Owner harmless from and against any liability or damages, including attorneys' fees, arising out of any alleged infringement or violation.
- 20.2 All inventions, discoveries, documents, works of authorship, methods, and the derivative works thereof, resulting from the Work, including patents, patent applications, copyrights, trade secrets and other intellectual property (collectively "Intellectual Property"), shall be the sole and exclusive property of Owner. Contractor shall promptly inform Owner of the development of any such Intellectual Property and does hereby assign and transfer the entire right, title and interest, together with all rights of priority in and to such Intellectual Property to Owner. Contractor shall promptly cooperate with Owner in signing any additional documentation necessary to assign and perfect ownership of such Intellectual Property in Owner or to allow Owner to register its property rights therein. Contractor warrants that it has obtained written agreements from its employees and agents as necessary to effectuate the purpose of this Section. The Intellectual Property assigned and transferred to Owner shall be the Confidential Information of Owner.
- 20.3 Contractor grants Owner a nonexclusive, nonrevocable, perpetual, fully paid license to utilize Contractor's intellectual property existing separate from the Contract, including inventions, discoveries, works or authorship, methods, and trade secrets, regardless of whether such are the subject of patents, copyrights or other intellectual property protection, to the extent necessary for Owner to achieve the full benefit of the Work.
- 20.4 Contractor shall not use Owner's name or logo in marketing, endorsements, or other business purposes without prior written consent from Owner.

## 21.0 DRAWINGS AND DATA

- 21.1 Contractor shall furnish for Owner's review, prior to commencement of Equipment manufacture or fabrication, general and detailed drawings of the Equipment in the format requested. Such drawings shall be certified as to accuracy and completeness and shall show information adequate to enable Owner to design and provide suitable clearances. If required by the Contract or any code, law or agency, Contractor will provide professional engineer or architect sealed drawings and reports for the state where the Equipment is to be finally installed. Figures shall take precedence in all cases over

scaled measurements on drawings. Where obvious discrepancies exist, Contractor shall consult with and follow the instructions of Owner. Owner's approval of Contractor's drawings shall not relieve Contractor of its obligation to comply with the Contract requirements.

- 21.2 All written data, such as drawings, plans, reports, designs and specifications, prepared by Contractor for Owner during the performance of Work shall become the property of Owner. Such data, together with all data furnished by Owner and lent to Contractor for return, shall be delivered to Owner upon request, or upon completion of the Work or termination of the Contract. For clarification purposes, Owner shall have the unrestricted right to use, release, disclose, copy and reproduce such data for purposes of operation, maintenance, analysis, testing, cleaning, erection, improvement or modification of any facilities owned or operated by Owner. Contractor shall cooperate with Owner by executing such documents as are necessary to assign and perfect ownership in Contractor provided data to Owner.

## 22.0 CONFIDENTIALITY

- 22.1 "Confidential Information" means any confidential or proprietary information, whether written, oral, or visual, whether or not it constitutes a trade secret under applicable law. "Confidential Information" includes, but is not limited to, business plans and methods; customer information; engineering, operating and technical data; and the dates of Owner's outage schedule, information concerning the Work, and Owner's activities. "Confidential Information" does not include information that (a) has become part of the public domain other than by acts or omissions of the recipient; (b) has been furnished or made known to the recipient by a third person as a matter of legal right and without restriction on use; (c) was in the recipient's possession prior to disclosure by the disclosing party without restriction on use; or (d) is independently developed by the recipient without access to the Confidential Information.
- 22.2 Subject to Section 22.5, each party agrees (a) to protect the Confidential Information of the other with at least the same degree of care used to protect its own Confidential Information; (b) not to use (except for the purpose described herein), publish or disclose to third parties such Confidential Information; and (c) upon the request of the disclosing party, to promptly deliver to the disclosing party all written copies of its Confidential Information. Notwithstanding the foregoing, a recipient shall be entitled to disclose Confidential Information to its officers, employees, affiliates (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), agents, lenders, attorneys and other advisors (collectively, "Representatives"), provided that the Representatives shall be informed of the confidentiality obligations provided herein.
- 22.3 If either party is required pursuant to applicable law or otherwise becomes legally compelled to disclose any of the Confidential Information, such party shall promptly advise the disclosing party in order that the disclosing party may seek a protective order or such other remedy as the disclosing party may consider appropriate in the circumstances. In any event, the compelled party may disclose only that portion of the Confidential Information which such party is legally required to disclose in the judgment of the party's legal counsel without any liability to the disclosing party hereunder and such disclosure shall not be a breach of this Section.
- 22.4 Contractor shall require its Subcontractors, if any, to expressly comply with the confidentiality provisions as set forth herein.
- 22.5 All documents prepared by Contractor for Owner during the performance of Work that incorporate, in whole or in part, information owned or provided by Owner shall not be marked or designated in any way as the confidential or proprietary information of Contractor without also stating that Owner has rights in such documents. Owner shall have the right to question the designation of Confidential Information by Contractor and Contractor agrees to provide Owner

with reasonable cooperation in explaining such designation. Contractor agrees that Owner's acceptance of documents containing the Confidential Information of Contractor shall not be construed as a restriction on Owner's rights to use, release, disclose, distribute, copy or reproduce the documents.

## 23.0 DEFAULT

23.1 The occurrence of any of the following shall constitute an "Event of Default":

23.1.1 Contractor files a petition in bankruptcy, or if its creditors file an involuntary petition in bankruptcy, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency.

23.1.2 Contractor (a) fails to maintain the schedule set forth in the Contract, or (b) fails to promptly pay Subcontractors for material or labor, or (c) commits repeated or substantial violations of laws, rules, regulations or policies, or (d) fails to perform in accordance with the Contract, and Contractor fails to take corrective action or submit an acceptable plan within two (2) Business Days after the receipt of a notice of non-conformance from Owner.

23.2 Upon an Event of Default, Owner may take any or all of the following actions without affecting the Contract Price or schedule:

- (a) Owner may direct Contractor to cease performance on all or part of the Contract until satisfactory corrective action has been taken;
- (b) Owner may have others take corrective action necessary to achieve compliance with the Contract. Owner may deduct the cost of such corrective action by others from any monies due to Contractor. Corrective action by others shall be taken when, in the judgment of Owner, the noncompliance threatens safety, unreasonably interferes with or delays the work of others, or otherwise creates a situation the resolution of which cannot be delayed without adversely impacting quality, cost or timely completion;
- (c) Owner may pursue damages for delay under the terms of Article 24.0;
- (d) Owner may suspend the Contract under Article 26.0; and/or
- (d) Owner may terminate the Contract under the terms of Section 27.1

25.3 Each of Owner's rights set forth above shall be cumulative and additional to any other rights or remedies provide in law or equity or otherwise.

## 24.0 DAMAGES FOR DELAY

24.1 Contractor shall be liable for any direct damages incurred by Owner arising out of Contractor's failure to perform on time.

24.2 In lieu of Section 24.1, if the parties have agreed to liquidate the amount of direct damages resulting from Contractor's delay, the parties agree that such damages which might be incurred by Owner as a result of Contractor's delay in performance are uncertain and would be difficult to calculate. The parties agree that the liquidated damages contained in the Contract would be reasonable and fair compensation for late performance. Contractor commits to pay and Owner agrees to accept such sum as liquidated damages and not as a penalty in the event of late performance.

25.0 FORCE MAJEURE

- 25.1 Neither party shall be in breach of the Contract to the extent that any delay or default in performance is due to a Force Majeure Event. The term, "Force Majeure Event", shall mean any cause beyond the reasonable control of the delayed or defaulting party, including, but not limited to, acts of God including unusually adverse weather, fire, and epidemic; acts of public enemy including war, acts of terrorism, riot, and civil disturbance; and national labor strikes, which by exercise of due foresight such party could not have been expected to avoid or overcome. Contractor's inability to obtain adequate and sufficient labor in order to maintain progress of the Work shall not constitute a Force Majeure Event. No delay in performance resulting from a Force Majeure Event shall result in any liability on the part of Owner. Notwithstanding the preceding sentence, in the event of a delay caused by any act or failure to act on the part of Owner, Contractor's sole remedy shall be as set forth in Article 12.0.
- 25.2 The delaying party shall immediately notify the other party of the beginning of a delaying event, and shall confirm the notice in writing within ten (10) Business Days of the beginning of the event. The notice shall contain a detailed account of the delay, including the cause of the delay, an estimate of the duration of the delay, an estimate of the delay's impact to the schedule, and the plan to mitigate the effects of the delay.
- 25.3 If Contractor is the delaying party, and the delay is a Force Majeure Event as defined in Section 25.1, Owner shall grant Contractor an extension of the time for performance, to be mutually agreed upon by Contractor and Owner. The extension of time granted as a result of a Force Majeure Event shall in no case exceed the length of the delay and such extension may be withheld or reduced to the extent Contractor does not provide notice in accordance with Section 25.2. If Owner so requests, Contractor shall expedite its schedule to mitigate the effects of the excusable delay. Owner shall pay incremental, Direct Costs incurred by Contractor for expediting at Owner's request.

26.0 SUSPENSION

- 26.1 Owner may at any time suspend all or any part of the Work. Owner shall provide Contractor written notice verifying the suspension date. Immediately upon receipt of the suspension notice, Contractor shall take the necessary actions to comply with the suspension notice.
- 26.2 Owner shall pay Contractor in accordance with the terms of payment set forth in the Contract for the Work completed prior to the time of suspension and for the incremental, Direct Costs that result from Contractor's compliance with the suspension notice.
- 26.3 Owner may, at any time during the suspension period, either terminate the Contract in accordance with Section 27.2, or authorize the Work or any portion thereof to be restarted. Owner shall pay Contractor the incremental, Direct Costs associated with the restart of the Work and shall resume payments to Contractor in accordance with the terms of payment under the Contract thirty (30) days after the restart of Work.
- 26.4 The schedule shall be adjusted to provide for a reasonable extension of time for Contractor's performance.

27.0 TERMINATION

27.1 Termination for Cause

- 27.1.1 Upon an Event of Default, Owner may terminate the Contract upon written notice to Contractor.

- 27.1.2 In the event of such termination, Contractor shall immediately prepare and submit to Owner an itemization of the Work completed by Contractor. Owner may require Contractor to leave the Site. Owner may take over such Work and complete it, or have the Work completed by others. Owner may take possession of and utilize in completing the Work Contractor's materials, Equipment to be installed, supplies, tools and equipment at the Site.
- 27.1.3 Contractor shall not be entitled to further payment until all of the Work is completed in its entirety and Final Acceptance has been achieved. If the cost of completion exceeds the unpaid balance under the Contract, Contractor shall pay the difference to Owner within thirty (30) calendar days of demand.
- 27.1.4 In the event that a court determines that the termination was not properly a termination for cause, pursuant to Section 27.1.1, Contractor's remedy shall be limited to the payments permitted in accordance with Section 27.2.

27.2 Termination for Convenience

- 27.2.1 Owner may terminate the Contract, in whole or in part, for its convenience. Owner will give Contractor written notice of termination specifying the extent to which the Contract is terminated and the date, immediately or otherwise, on which termination becomes effective.
- 27.2.2 Upon termination for convenience, Contractor will comply with instructions in the notice of termination regarding delivery to Owner of all Work in progress and all completed Work, which shall become the property of Owner upon delivery.
- 27.2.3 In the event of such termination, Contractor shall receive payment, including the retained percentage, for the Work satisfactorily performed up to the time of such termination. In addition, Owner shall reimburse Contractor for incremental, Direct Costs resulting from the termination, provided that compensation was not otherwise made for such costs. Final payment shall be made upon the parties' agreement of the amount of the final invoice and Owner's receipt of an Affidavit of Completion in the form of Exhibit 1. Owner shall not be responsible for Contractor's lost profit on the terminated portion of the Contract.

28.0 MATERIALS AND WORKMANSHIP WARRANTY

- 28.1 Beginning upon Final Acceptance and for a period of one year thereafter, or for such period as may be specified elsewhere in the Contract, Contractor warrants that (a) it will perform the Work in accordance with the accepted standards of care and competence found in the applicable profession as such standards relate to and are commonly used in the electric utility industry and (b) all Contractor furnished materials and workmanship shall be free of any and all defects and shall be in conformity with the requirements of the Contract.
- 28.2 Subject to the provisions of Section 28.3, in the event that the material or workmanship does not comply with the warranty, Contractor shall, at no cost to Owner, promptly repair or replace such nonconforming material or workmanship with as little disruption to Owner's operations as practicable. Contractor shall be responsible for the total cost of correcting any defects, including but not limited to, the costs of materials, labor, any necessary equipment removal, disassembly, shipping, reinstallation and retesting of the installation. Owner shall give Contractor notice of observed defects with reasonable promptness. If nonconforming material or workmanship causes an outage or other delay of operations, Contractor shall make the repair or replacement on an overtime, maximum effort basis, at Contractor's expense.

- 28.3 If Owner directs Contractor to repair or replace any defect and Contractor fails to do so within a reasonable time, or if an emergency exists rendering it impracticable for Contractor to perform the repair or replacement, Owner may make or cause to be made such repair or replacement without affecting the validity of the warranty. Owner's cost for making the repair or replacement shall be deducted from the Contract Price or any unpaid portion thereof. If the unpaid portion of the Contract Price is insufficient to cover such cost, Contractor shall reimburse Owner.
- 28.4 Owner will not pay for any defective portion of the materials or workmanship until remedied by Contractor at Contractor's expense in accordance with the Contract requirements.
- 28.5 Owner must approve any proposed correction or alteration by Contractor of the materials or workmanship, or parts thereof, made at any time or at any location, before such correction or alteration is undertaken. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes.
- 28.6 Any materials or workmanship which are repaired or replaced pursuant to this Article 28.0 shall be warranted for a period of one year from the date of completion and acceptance of such repair or replacement, or for the remainder of the original warranty period, whichever is longer.
- 28.7 Contractor shall obtain, for the benefit of Owner, all available warranties from Subcontractors, vendors and suppliers of Contractor. Such warranties shall be in addition to the warranties set forth in this Article. If such warranties are in written form, Contractor shall provide Owner with the original warranties.

29.0 REPORTING OF COMPLAINTS

- 29.1 Contractor shall immediately report to Owner, in accordance with Article 33.0, the complete details of all complaints, including any OSHA violations and complaints received from governmental authorities, Subcontractors, laborers, other third parties or members of the public relating to the Work.

30.0 RETENTION AND EXAMINATION OF INFORMATION, BOOKS AND RECORDS

- 30.1 Owner reserves the right to audit records necessary to permit evaluation and verification of (i) claims submitted, (ii) Change Orders, and related overhead and general and administrative costs, and (iii) Contractor's compliance, in the performance of the Contract and its dealings with Owner, with (a) the Contract requirements; and (b) Owner's Code of Business Conduct governing business ethics. Owner's right to audit shall not extend to fixed, lump-sum or unit pricing.
- 30.2 Contractor shall cooperate with Owner and provide Owner with information and records ("information") pertaining to the Work as requested by governmental agencies, Owner, or courts of law.
- 30.3 Contractor shall retain for a period of three (3) years after Contract termination or expiration all information relating to the Work. Owner may audit and copy such information at Contractor's premises during regular business hours. If requested by Owner, Contractor shall submit to Owner a copy of each of its subcontracts. Contractor shall include in its subcontracts a provision granting Owner the rights against Subcontractors contained in this Article 30.0.

31.0 COMPLIANCE WITH LAWS

- 31.1 Contractor warrants that all materials and equipment supplied and all Work performed will comply with, and be manufactured, priced, sold and labeled in compliance with, all applicable federal, state and local laws, rules, regulations, orders and ordinances, including, without limitation, environmental



protection, energy, safety and health, and labor laws and regulations and applicable industry codes and standards.

31.2 Unless exempted, Contractor shall comply with the equal employment opportunity clause in Section 202 of Executive Order 11246 and all applicable rules, regulations, and relevant orders pertaining to Executive Order 11246, Section 503 of the Rehabilitation Act of 1973, and Section 4212 of the Vietnam Era Readjustment Assistance Act of 1974, as amended. Contractor represents that it does not, and shall not for the term of the Contract, provide or maintain for its employees facilities that are segregated on the basis of race, color, religion, sex or national origin. Contractor represents that it will not assign its employees to perform any work related to the Contract at a location where facilities are segregated on the basis of race, color, religion, sex or national origin. Contractor agrees that it will not enter into any agreement to obtain goods or services relating to the Contract with any entity that provides, maintains or assigns its employees to work at locations where facilities are segregated on the basis of race, color, religion, sex or national origin. As used herein, "facility" means waiting rooms; work areas; restaurants and other eating areas; time clocks; locker rooms and other storage or sleeping areas, except as necessary to ensure privacy between male and female employees; parking lots, drinking fountains; recreation or entertainment areas; and transportation. If not otherwise exempted by Title 48 and to the extent applicable, Contractor will comply with 48 CFR §52.219-8, Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns, and 48 CFR §52.219-9, Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan. If not otherwise exempted by 41 CFR §60-1.5, Contractor represents that it will file all reports or other required information specified in 41 CFR §60-1.7.

31.3 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of any violations of such laws, ordinances and regulations.

#### 32.0 PERMITS AND LICENSES

32.1 Contractor shall obtain all permits and licenses required by any regulatory authority for the performance of any portion of the Work, except that Owner shall obtain permits and licenses for all structures which are to become a permanent part of the Site. Before starting Work, Contractor shall submit to Owner a copy of all permits and licenses required by any such regulatory authority.

32.2 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of the failure of Contractor to obtain such permits and licenses.

#### 33.0 NOTICES

33.1 Each party shall designate in writing a representative to receive any and all notices required under the Contract. Notices shall be in writing and shall be given to the representative designated to receive them, either by personal delivery, certified mail, facsimile, e-mail or any similar means, properly addressed to such representative. All notices shall be effective upon receipt, or upon such later date following receipt as set forth in the notice. Either party may, by written notice to the other, change the representative or the address to which such notices are to be sent. Contract shall be strictly construed and Contractor expressly waives any claims which do not strictly comply with the written notice requirements of the Contract.

#### 34.0 SEVERABILITY

34.1 In the event that any of the provisions, or portions thereof, of the Contract are held to be unenforceable or invalid by any court, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

35.0 WAIVER

35.1 Either party's waiver of any breach of the Contract shall not be deemed to be a waiver of any other breach of the same or a different term of the Contract. Contractor agrees not to claim any waiver by Owner of such notice requirements based upon Owner's conduct or Owner having actual, verbal, implied, or constructive notice.

36.0 NON-DISCLOSURE

36.1 Except as required by law, regulation, or judicial or administrative order, neither party shall disclose the terms of the Contract without the consent of the other party. Notwithstanding the foregoing, Owner may disclose the terms of the Contract without the consent of Contractor (a) to any of its affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures); and (b) to any prospective transferee or purchaser of assets of Owner or any of affiliates.

37.0 HEADINGS

37.1 Headings are provided for the convenience of the parties, and shall not affect the interpretation of any provision.

38.0 AFFILIATED COMPANIES

38.1 Any indemnification of Owner or any limitation of Owner's or Contractor's liability under the Contract shall to the same extent apply to Owner's or Contractor's directors, officers, employees, agents, and affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), including any directors, officers, employees and agents thereof.

38.2 The affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures) of the American Electric Power System are severally and not jointly liable for obligations arising hereunder.

39.0 APPLICABLE LAWS AND JURISDICTION

39.1 Except for Article 17.0, the rights and obligations of the parties arising out of the Contract shall be governed in all respects by the laws of the State of Ohio. Any reference herein to the laws of other states is made only to the extent that the laws of that state might apply, notwithstanding the intent of the parties that the laws of the State of Ohio should apply.

39.2 Contractor agrees that all actions and proceedings brought by Owner against Contractor may be litigated in courts located in the State of Ohio or the state where the work was performed. Contractor agrees that such courts are convenient forums and irrevocably submits to the personal jurisdiction of such courts. Contractor waives personal service of process and consents to service of process by certified or registered mail at the address designated for receiving notices under the Contract.

40.0 ENTIRE AGREEMENT

40.1 The Contract constitutes the entire agreement between the parties and supersedes all previous and collateral agreements or understandings with respect to the subject matter of the Contract. No waiver, alteration, amendment or modification of any of the provisions of the Contract shall be binding unless in writing and signed by duly authorized representatives of the parties.

41.0 BINDING EFFECT; NO THIRD-PARTY BENEFICIARIES

- 41.1 Subject to the restrictions on assignment in Section 5.1, the Contract shall be binding upon and shall inure to the benefit of the parties of their respective successors and permitted assigns.
- 41.2 No provision of the Contract is intended or shall be construed to be for the benefit of third party other than as set forth in Article 36.0.

42.0 EXECUTION; COUNTERPARTS

- 42.1 The Contract shall not be binding or effective until properly executed by each of the parties hereto. The Contract may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which, taken together, shall constitute but one and the same Contract, which may be sufficiently evidenced by one counterpart.

43.0 SURVIVAL

- 43.1 All of the terms of the Contract which by their nature extend beyond the expiration or termination of the Contract, including indemnification obligations, confidentiality obligations, limitations of liability, shall survive expiration or termination of the Contract and remain in full force and effect.

**END OF DOCUMENT**

EXHIBIT 1  
Page 1 of 1

AFFIDAVIT OF COMPLETION

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, states that:  
(Name of Affiant)

1. S/He is the \_\_\_\_\_ of  
(Office held by Affiant)  
\_\_\_\_\_(Contractor)  
(Legal Name of Contractor)

that has a contract with \_\_\_\_\_  
(Legal Name of Owner)

(Owner) dated \_\_\_\_\_ (Owner's Contract No. \_\_\_\_\_)  
(Contract Date) (Contract No.)

involving work on the Owner's property at \_\_\_\_\_  
(Project Name)

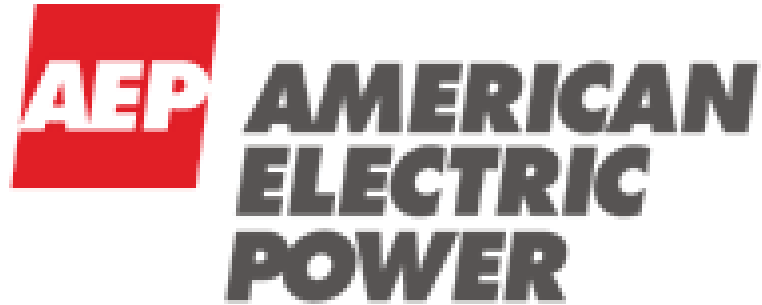
located near \_\_\_\_\_.  
(City, State)

2. All of the Work required to be performed by the Contractor under said Contract has been performed. All bills and claims for material, labor and services to employees, Subcontractors, material suppliers, and others, covering the Work required to be performed under the Contract, have been paid in full by the Contractor. There are no unpaid amounts on the basis of which a lien has been filed, or can be filed, in connection with the Work performed under the Contract.

\_\_\_\_\_  
Signature of Affiant

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Prepared by:

Contract Services  
American Electric Power  
Service Corporation  
1 Riverside Plaza  
Columbus, OH 43215

June 24, 2011



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## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

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**Appendix B – AEP Contractor Performance Report**

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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

The following Supplementary Terms and Conditions for Forestry Contracts ("Supplementary Terms") shall supplement any of the American Electric Power Service Corporation ("Owner" or "AEP") General Terms and Conditions utilized in any Contract under which Contractor is authorized to perform Services. These Supplementary Terms shall not replace the safety or operational provisions in the applicable AEP General Terms and Conditions and are intended to support and reinforce other Contract documents.

All of the provisions of these Supplementary Terms shall also apply to Contractor's subcontractors. Contractor is responsible for ensuring that its subcontractors comply with these Supplementary Terms.

Contractor's and any of its subcontractors' failure to comply with these Supplementary Terms is cause for the Contract to be terminated and may prevent eligibility for the consideration of providing Services in the future (i.e., removal from AEP's qualified bidders list).



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**SECTION 1  
GENERAL SUPPLEMENTARY TERMS AND CONDITIONS**

**1.1 Protection of Services**

- 1.1.1 Contractor shall use care and diligence so that performed Services and all materials, installed equipment and tools are thoroughly protected from the weather, loss and any and all damage. Contractor shall furnish and pay for all such protection.
- 1.1.2 Contractor shall provide and pay for the removal of snow, ice and water from its storage or work areas.
- 1.1.3 Contractor shall be liable for any loss or damage caused by carelessness, negligence or any act or failure to act on the part of Contractor, its subcontractors or employees. Such loss or damage includes, but is not limited to, losses and damages to performed Services, materials, equipment to be installed, private property, construction equipment and other property belonging to Owner or other contractors.

**1.2 Cleanup and Disposal of Non-Vegetative Debris**

- 1.2.1 Contractor shall keep its work areas, storage areas, parking areas and other areas of operations clean and safe.
- 1.2.2 Contractor shall promptly remove trash and other non-vegetative debris from these areas and properly dispose of all trash and other debris resulting from Services.
- 1.2.3 Upon completion of Services, Contractor shall remove from the site and dispose of its surplus material, chemicals, equipment, tools and, unless otherwise directed in writing by Owner, all temporary structures per all applicable laws.
- 1.2.4 Contractor shall bear the cost of providing the cleanup and removal, including the cost of all labor, supplies, tools, construction equipment and transportation.

**1.3 Material Storage and Handling**

- 1.3.1 Owner may designate a material storage location that can be used by Contractor.
- 1.3.2 Unless provided by Owner, Contractor is responsible for the purchase and proper handling and storage of material used during the course of providing Services. Contractor shall abide by all applicable laws.
- 1.3.3 Contractor shall be responsible for the impact of all shortages resulting from missing or damaged material issued to Contractor but not applied. Contractor shall replace such material at its own expense. Substitutions will not be allowed unless approved by Owner in writing.
- 1.3.4 All unused material furnished by Owner or provided by Contractor, and paid for by Owner, shall be returned by Contractor to Owner's designated storerooms or storage points upon notification from Owner.





**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**1.4 Electrical Clearances**

- 1.4.1 Owner will arrange for all necessary clearances on energized equipment or circuits required to be taken out of service for the performance of Services. When an outage is required, Contractor shall notify Owner prior to scheduling such Services, allowing sufficient time for scheduling with system operators.

**1.5 Permits and Easements**

- 1.5.1 Owner will secure all right-of-way easements. Owner will also secure certain permits requiring Owner's signature (i.e., DOT permits, siting permits, building permits). Location specific and construction specific permits not already obtained by Owner are the responsibility of Contractor. Local vehicle registration/operation permits (i.e., frost law permit in Michigan) shall be the responsibility of Contractor.

**1.6 Protection of Property**

- 1.6.1 Contractor shall use all possible care not to damage any existing buildings, structures, pipes, sewers, conduits, manholes or other property, or to interfere therewith without the consent of Owner's authorized representative. Such structures and other objects shall be properly supported, braced and secured in place to prevent damage thereto. They shall not be relocated or reconstructed except as authorized by Owner. Contractor shall be responsible for all damage claims due to this negligence, including the cost of all material and labor required to replace or repair any property damaged.
- 1.6.2 Contractor shall immediately report the complete details of all damage claims to Owner. If Owner determines the claim is valid and is a result of Contractor's negligence, Owner will present the claim to Contractor for settlement. Contractor is to settle all valid claims within 30 days. Contractor is to provide Owner with documentation specific to a settlement process for any claim not settled within 30 days, or the claim will be handled by Owner and the damage amount billed to Contractor. All such damage claims settled by Contractor are to be reported to Owner in writing.
- 1.6.3 Contractor shall be responsible for notifying appropriate state one-call systems, as well as any other utility company not a member of the systems, prior to performing Services involving excavation, boring, stump grinding and/or other activities that may affect underground facilities.

**1.7 Work on Private Property**

- 1.7.1 Whenever any Services are to be completed on private property, Contractor shall attempt to notify owner and/or the tenants thereof and make arrangements with them so that Services will be completed with the least practicable inconvenience to them. Work on private property shall be done as expeditiously as possible and the premises restored immediately.



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**1.8 Access and Construction Roads**

- 1.8.1 It is Contractor's responsibility to ensure that all property owners' roads traveled by Contractor are in the same condition as the roads were before Contractor elected to use the route. Should Contractor cause any damage to any such road, Contractor is obligated to restore the road to like or better condition than the road existed prior to Contractor's use. Such work shall be completed in a timely manner with proper written documentation of the damage/remedy supplied to property owner and Owner alike. Where Owner deems it necessary to maintain access roads on private property, crushed stone will be furnished or paid for by Owner, and Contractor shall provide labor and equipment to haul and place crushed stone as required. When approved in advanced writing by Owner, Owner shall pay for normal damage to fields or loss of crops resulting from necessary travel by Contractor.
- 1.8.2 Contractor shall keep fences in a sufficient state of repair to satisfactorily confine livestock and shall keep gates closed when not in immediate use. Before Services are considered to be completed, all temporary gates shall be removed and all fences cut or damaged shall be restored to original condition. Fencing damaged by Contractor shall be repaired at Contractor's expense.
- 1.8.3 When it is necessary to gain access to right-of-way over private roads, yards, pastures and cultivated fields, and it is impractical to restrict ingress and egress to the right-of-way, Contractor shall use the route agreed upon by the property owner, Contractor and Owner. Contractor shall notify the property owner prior to the use of these routes.

**1.9 Emergency Assistance**

- 1.9.1 In the event of extensive damage to Owners' facilities as a result of severe storms, flooding or other catastrophes, Owner may request assistance from Contractor in the repair of damages and restoration of service to customers. Under such circumstances, the "Forestry Policies and Procedures for Emergency Assistance" in Section 2 shall be followed.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**SECTION 2  
FORESTRY POLICIES AND PROCEDURES FOR EMERGENCY ASSISTANCE**

In the case of emergencies, during which Contractor is called upon by Owner for storm assistance to restore service following catastrophic damage (“Emergency Assistance”), the following policies and procedures shall apply.

- 2.1 Contractor will provide Owner with emergency contacts, including 24-hour telephone numbers for requesting assistance.
- 2.2 Upon request for Emergency Assistance, Contractor shall provide Owner with a list of available personnel and their classification, labor rates, crew make up, equipment to be used and an estimated time of arrival.
- 2.3 Owner will specify the number of physical full time employees and any special equipment required and will notify Contractor as to where the crews are to be assigned and to whom they will report. Owner will check-in each crew upon arrival.
- 2.4 Contractor shall be responsible to make contact with the appropriate State officials concerning commercial driver’s licenses and other transportation issues.
- 2.5 Contractor’s crews shall arrive prepared to work and be equipped with PPE, PPI, tools, foul weather gear, lights and batteries to perform the assigned Services. Any crews arriving without the proper tools or equipment to perform the assigned Services may be released at Contractor’s expense.
- 2.6 Owner shall determine the work hours for responding crews, including start time (at assigned crew headquarters) and duration. Contractor shall check in with Owner daily at the requested starting time for assignment of Services.
- 2.7 After working sixteen (16) consecutive hours up to a maximum of twenty-four (24) consecutive hours, Contractor’s employees shall be released from providing Services for a minimum eight (8) hour rest period, which shall commence upon release by Owner.
- 2.8 Owner will allow a meal break every six (6) hours, or as near as practicable, while Contractor performs Emergency Assistance. Contractor’s personnel will be off the clock for all meal breaks taken away from the work site.
- 2.9 Time sheets of Contractor employees shall be kept by Contractor. These time sheets shall be turned in daily to Owner for verification and approval.
- 2.10 Contractor shall be responsible for relaying all Owner communications to its crews.
- 2.11 Contractor shall be responsible for the safety of its crews. Contractor will provide safety statistical reporting of all hours worked on AEP property. This report format will be provided by the AEP Safety Coordinator.



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

- 2.12 Owner shall reimburse Contractor for Emergency Assistance at the current contracted rate of the classification for each of Contractor employees utilized plus the applicable mark up percentage for straight and/or premium time. When responding from areas with existing AEP Contracts, Contractor's employees shall be paid at the rates incorporated in the Contract for the area from which they are responding. When Contractor responds from locations without existing contracted AEP rates, billing rates will be negotiated when the agreement to send crews is finalized.
- 2.13 Overtime pay for Emergency Assistance shall be paid based on provisions submitted by Contractor and approved in advance by Owner.
- 2.14 Owner will reimburse Contractor for lodging and meals (dollar amount for meals shall be predetermined by Owner) for the crew(s) requested. Owner may elect to supply meals and/or lodging to Contractor, in which case there will be no reimbursement. All other expenses: (i.e., personal phone calls, alcoholic beverages, tobacco, entertainment, etc.) will not be reimbursed by Owner.
- 2.15 Contractor's employees must register in person at the assigned lodging.
- 2.16 If Owner requests Contractor to provide an employee whose classification falls outside the standard Contractual labor billing rates, Owner shall provide the request in writing and will reimburse Contractor for said employee's labor, vehicle, lodging and meals.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**SECTION 3  
SUPPLEMENTARY ENVIRONMENTAL, SAFETY AND HEALTH TERMS AND CONDITIONS FOR  
FORESTRY CONTRACTS**

**3.1 General**

- 3.1.1 Contractor shall comply with AEP's Contractor Oversight program. Contractor's safety performance will be monitored and evaluated during performance of the Contract by Owners' representative.
- 3.1.2 Contractor shall adhere to all pertinent local, state and federal regulations and all rules and policies set forth in Contractor's own safety manual. Any shortcoming brought to the attention of Contractor by Owner shall be immediately corrected by Contractor. Repeated and/or severe safety violations, incidents or accidents may be cause for the Contract to be terminated, prevent eligibility for providing future Services and result in the potential removal from AEP's qualified bidders list.
- 3.1.3 Owner has the authority to immediately stop Contractor's Service performance indefinitely for practices, procedures and operations, which, in the opinion of Owner, constitute a safety concern. It is Contractor's responsibility to adequately satisfy Owner with any remediation necessary to provide a safe and healthful workplace.
- 3.1.4 Contractor shall have qualified and competent supervision on the job at all times to direct and observe the Work.
- 3.1.5 If Contractor in good faith believes that any rule or procedure set forth in these Supplementary Terms will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

**3.2 General Safety Requirements**

- 3.2.1 Owner, or Owner's representative, shall conduct random Forestry Contract crew safety audits and Contractor shall cooperate fully with Owner's representatives during this audit. The audit is defined in Appendix A.
- 3.2.2 Contractor shall promptly notify Owner if Contractor's or its subcontractors' Experience Modification Rate for workers compensation exceeds 1.0.
- 3.2.3 Contractor shall remain solely responsible for the proper and safe use of all tools, and for conducting safe work practices or procedures. Contractor shall provide information necessary for the job briefing identified in Section 3.6 below, Job Briefings.
- 3.2.4 Contractor shall provide Owner a list of all tools, practices or procedures it or its subcontractors will use in performing assigned Services with fabricated or modified tools ("Specialty Tooling"). Specialty Tooling includes all tooling fabricated, developed by or modified by Contractor. Contractor shall notify Owner of any Specialty Tooling it develops or modifies on site. Contractor shall also notify Owner, prior to use, if it intends to use standard tooling in ways other



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

than those for which the tooling was designed. All such Specialty Tooling is subject to review by Owner. Specialty Tooling shall have design plans, engineered diagrams, etc. with a Professional Engineer's stamp of approval. Contractor shall also inspect Specialty Tooling prior to each use. At its sole discretion, Owner may prohibit or restrict the Contractor's use of Specialty Tooling on Owner's site.

3.2.5 Contractor shall immediately cleanup all spills from Contractors' equipment and vehicles.

### **3.3 Contractor Safety Representative**

3.3.1 When Contractor has eleven (11) or more total employees on various projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

3.3.2 Qualifications of the aforementioned safety professional may be subject to Owner's review and approval.

3.3.3 Owner may require Contractor to assign additional safety professionals if Owner determines the scope of Services justifies additional safety oversight.

3.3.4 Owner may require Contractor to supply additional safety professionals if Owner has determined geographical Service locations justify additional safety oversight.

### **3.4 Monthly Reporting**

3.4.1 Contractor shall report various safety related statistics, using the most current revision of the AEP supplied form, AEP Contractor Performance Report in Appendix B. Reported statistics will include those of Contractor's subcontractors and will represent Services performed on AEP projects/Contracts only.

3.4.2 The above requirements must be reported by the tenth (10<sup>th</sup>) day of the following month to the following e-mail address: [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com). A copy of the AEP Contractor Performance Report will be supplied to Contractor for reporting this required data. The data will be used by Owner to evaluate Contractor's safety effectiveness and performance.

### **3.5 Event Reporting**

3.5.1 When performing Services for AEP and a safety event occurs, Contractor shall notify Owner about the event immediately (verbal reporting is sufficient). Contractor shall also submit a written preliminary notification (no later than 8:00 a.m. the following working day of the event) to the Forestry Supervisor, Region Support Manager and/or designee, Forestry Operations Manager, and shall also e-mail a copy to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com), listing any and all safety events occurring during the performance of Services. A separate report is required for each event. Reported events include near miss events, first aid and minor events, OSHA recordable injuries,



## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

flash/outage events, vehicle accidents, spills/release, underground utility strikes and OSHA/EPA citations/visits. The written report should include sufficient detail to identify the nature of occurrence, the extent of injury (if any) and contact name and number of the person leading the investigation. Within seven (7) business days, Contractor shall submit an in depth report to the e-mail address listed above, along with a copy to the Forestry Supervisor, Region Support Manager and/or designee and Forestry Operations Manager. This report must include the time and date of event, location of event, name of injured employee, the injured employee's on the job experience, description of event, factors that may have caused or contributed to the event, corrective actions taken and/or planned and the person(s) responsible for corrective actions.

### **3.6 Job Briefings**

3.6.1 Prior to the commencement of Services in any location and before any changes in procedures or activities are made, Contractor shall perform a Job Briefing in written report/form to identify all potential work site risks. Each member of the crew must sign his/her name to this form in order to affirm their presence at the time the information was presented during the Job Briefing. The report shall include, at a minimum: 1) applicable hazards present during the course of performing the specific assignment 2) Service procedures involved 3) special precautions 4) energy source controls and 5) personal protective equipment requirements. Should Contractor not have its own Job Briefing requirements/forms, then Contractor shall use the AEP Supplied Job Briefing Form in Appendix C.

3.6.2 Contractor shall make its Job Briefing Forms available to Owner upon request.

### **3.7 Personal Protective Equipment Requirements**

3.7.1 Contractor is responsible for requiring the use of appropriate personal protective equipment ("PPE") in all operations where there is an exposure to hazardous conditions.

3.7.2 Owner requires Contractor and Subcontractor employees to wear the following PPE, at a minimum, while on/in any construction site and/or work area:

- Safety glasses or safety prescription glasses with side shields
- Hardhat
- Work gloves that provide protection for the type of work
- Approved hearing protection devices when required
- Shoes with a defined heel (employees that climb structures)

3.7.3 Open-toed, open-heeled, athletic footwear and tennis shoes are strictly prohibited. Additional foot protection and/or PPE may be required based on Contractor's PPE assessment or special environmental conditions.



**SUPPLEMENTARY TERMS AND CONDITIONS  
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**3.8 Substations/Switchyards**

- 3.8.1 OSHA requires personnel working within an electrical station be qualified to recognize equipment and hazards unless escorted by a qualified person. Employees not OSHA station qualified shall be under direct supervision of qualified personnel.
- 3.8.2 Gates to station fences shall remain closed and locked when they are not under the direct observation of an attendant.

**3.9 Firearms, Alcohol and Drugs**

- 3.9.1 Firearms, alcohol, illegal drugs or drugs taken for non-medicinal purposes are prohibited on all Owner Sites.
- 3.9.2 Contractor shall be responsible for all Contractor and Subcontractor(s) employees who are under the care of a physician and are taking prescribed medicine, which may alter the employee's physical or mental ability. Contractor shall determine the necessity to modify the employee's job assignment while undergoing treatment.
- 3.9.3 If firearms or suspected illegal drugs are discovered on any AEP property or Work Site/area, the following guidelines should be followed by whoever discovers the firearms or suspected illegal drugs:
- First, if possible without putting themselves or others in harms way, attempt to secure the location and ensure that others cannot come in contact with the firearms or suspected illegal drugs. Do not handle or move firearms or suspected illegal drugs from their discovered location.
  - Second, immediately contact the Owner's Contract Supervisor or Distribution Line Representative and together make a decision whether or not the situation requires a call to the local law enforcement authorities. Immediately call the local law enforcement authorities and report the discovered item(s) if (a) neither the Owner's Contract Supervisor nor the Distribution Line Representative is available; (b) there is a threat of harm to any person; or (c) there is a risk of improper removal or disposal of the firearms or illegal drugs.
  - Third, call local Owner's security personnel or call the Owner's general Security hotline at 1-866-747-5845.
  - Fourth, for incidents involving Contractor personnel, Contractors shall submit reports according to Section 3.5, Event Reporting.

**3.10 Drug/Alcohol Testing**

- 3.10.1 All Contractor and subcontractor employees performing Services under this Contract must complete and pass a pre-employment drug/alcohol screening. Screening substances and their associated cut-off limits are the same as listed in the applicable AEP General Terms and Conditions.





**SUPPLEMENTARY TERMS AND CONDITIONS  
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- 3.10.2 Post event drug and alcohol testing shall be performed, at Owner's discretion, on all Contractor and subcontractor employees involved in any safety related event. Testing results shall be shared with Owner upon request.
- 3.10.3 Contractor shall incur all costs associated with the required drug and alcohol testing as required in these Supplementary Terms.

**3.11 Language Requirements**

- 3.11.1 Contractor's and its subcontractor's employees shall be capable of communicating in English. At least one copy of all documents and reports, including Job Briefings, shall be prepared in English.

**3.12 Job Site Auditing**

- 3.12.1 Contractor representatives, at a minimum, shall perform and document a Job Site Observation based on the following table:

| <b>Representative Level</b> | <b>Frequency</b> |
|-----------------------------|------------------|
| Senior Management           | 1/Quarter        |
| Operational Management      | 1/Month          |
| General Foreman             | 2/Week           |
| Safety Professional         | 2/Week           |

- 3.12.2 If Contractor does not meet the requirements of Safety Section 3.3.1 [less than eleven (11) employees], then the lowest representative level of the table in 3.12.1 above (safety professional) shall be followed by a company representative.
- 3.12.3 Contractor shall make documentation of such job site observations available to Owner upon request.

**3.13 Emergency Planning**

- 3.13.1 All job sites must have an Emergency Action Plan that has been communicated and documented to all employees. The Job Site Emergency Action Plan shall be documented on each job briefing conducted. This plan shall include, at a minimum:
- Emergency contacts
  - Location and name of local emergency services
  - Location of closest communication method
  - Location of closest medical facility
  - Procedure to follow in the event of an emergency

**3.14 Traffic Control**

- 3.14.1 All Services performed on or adjacent to existing public road or rights-of-way and/or job site roadways shall be performed in conformance to the requirements of the Manual on Uniform Traffic Control Devices (current revision), state and local jurisdiction.



## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

### 3.15 Individuals Restricted from Access to AEP Sites

3.15.1 Owner may deny access to its facilities by any person who fails to comply with the safety provisions set forth in the applicable AEP General Terms and Conditions or these Supplementary Terms or any person who, in Owner's sole judgment, otherwise demonstrates a lack of safety performance. Examples of a lack of safety performance include, but are not limited to, the following:

- Unsafe job performance
- Failure to pass drug/alcohol test
- Displaying incompetence in performing their job
- Employees that are determined to be unfit for project employment
- Playing of pranks, horseplay or practical jokes
- Failure to report injuries and/or accidents
- Fighting or acts of aggression
- Theft or vandalism
- Convicted Sexual Offenders

3.15.2 Prior to the commencement of Services and during the term of the Contract, Contractor shall provide Owner with a list of all individuals, including Contractor and subcontractor employees, whom Contractor intends to perform Services at Owner's sites. The list shall identify the individuals by their name and the last three digits of their Social Security number.

3.15.3 Owner may, at its sole discretion, deny access to any individual who has been previously removed from a project by Owner or any of its affiliates for safety reasons.

3.15.4 Contractor may request a restricted Contractor employee to be cleared for the performance of Services. A letter addressing the original safety violation(s) or reason(s) for removal and any documentation supporting the request shall be sent to Owner for approval. Contractor's employee shall not perform Services at any of Owner's sites until approved by Owner. Said approval may be granted or withheld at Owner's sole discretion.

### 3.16 Housekeeping

3.16.1 Contractor shall ensure that debris, materials, scrap, trash, etc. is contained and removed daily in order to prevent it from interfering with the safety of any employee and/or general public.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**APPENDIX A  
AEP FORESTRY CONTRACT CREW AUDIT FORM**



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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**APPENDIX B  
AEP CONTRACTOR PERFORMANCE REPORT**



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX C**

**AEP SUPPLIED JOB BRIEFING FORM**

**(ONLY FOR CONTRACTORS THAT DO NOT HAVE THEIR OWN DOCUMENT)**

# EXHIBIT B



## **AEP Forestry**

# **Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations**

**May 14, 2009**

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

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## AEP System Forestry Guidelines

### Foreword

#### A. Introduction

The purpose of these AEP Forestry Guidelines is to document and inform AEP employees and its contractors of important criteria, practices and procedures pertaining to initial vegetation clearing for construction projects and the maintenance of rights of way. AEP incorporates these guidelines into each tree service contract; a copy shall be kept in all vegetation management contractor's vehicles. These guidelines are for the sole and exclusive use of the contractor and are to be read consistently with other contract documents by and between AEP and the Contractor.

#### B. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation within the right of way.

**DBH:** (Diameter at Breast Height). The diameter of a tree measured at the height of 4-1/2 feet above the ground on the uphill side.

**Danger Tree:** A tree considered a potential hazard to AEP's facilities positioned outside of the normally cleared right-of-way.

**Debris:** Non-vegetative material such as pop bottles, cans, wire, paper and old tires.

**Directional Pruning:** The reduction of a tree's crown in a manner that provides increased conductor clearance by pruning to direct growth of the upper crown away from the conductors.

**Fallen Tree:** A tree lying on the ground not cut by the Contractor.

**Hanger:** A limb cut from a parent stem or bole of a tree as part of the line clearance pruning procedure left aloft caught and held by the other branches of the tree.

**Hazard Tree:** A tree considered a potential threat to the safety and reliability of AEP's facilities growing within the normally maintained right-of-way.

**Log:** The merchantable portion of a tree as designated by AEP.

**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Mowing:** The mechanical cutting of woody stem vegetation within the right-of-way.

**Prescription:** The plan prepared for each circuit or unit of work. It designates the vegetation to be maintained, the method(s) of maintenance, and who will perform the work.

**Removal:** The complete cutting down of trees at or near the ground line. AEP shall specify the disposal method.

**Slash:** The un-merchantable portion of a tree as designated by AEP.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

## **I. Contractor Guidelines**

### **A. Safety**

1. Protecting the safety of the public is of utmost importance to AEP. Contractors shall regard safety as their first priority. Contractors and their employees will recognize and follow all laws, rules and regulations regarding public and worker safety. Any safety related incidents (e.g., personal injury, vehicle accident, outages, flashes, near miss, customer issues, etc.) that occur on the job must be reported to the appropriate AEP personnel as soon as possible.
2. All contact incidents outages or operations caused by contract crews shall be reported to the appropriate AEP Dispatch center and Forestry immediately.

### **B. Personnel**

1. If required by state or local laws and regulations the contractor shall have an ISA Certified Arborist available.
2. No private work may be solicited or worked by Contractor employees while on AEP time. Contractors shall not receive compensation from anyone except AEP for tree work that is a part of AEP's Forestry program. The consequences will be crew and/or contractor disciplinary action.

### **C. Equipment**

1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chain saws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.

The use of spurs/climbers/hooks should be avoided. Where their use is necessary (as in the removal of some trees or in climbing trees, which do not provide a notch in which to tie in) only qualified persons shall be permitted to use them.

#### **D. Overtime**

Overtime is billable for work performed outside the scope of the normal work schedule.

#### **E. Work Procedures**

1. Contractor practices shall be compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Changes in the workweek due to inclement weather, equipment breakdowns or other circumstances must have prior approval by AEP Forestry personnel.
3. The contractor will be responsible for the development of a plan to complete the assigned tasks. The assigned tasks must be performed in a systematic way that follows this plan. Some examples are: beginning work at substations, working between protection devices, or other methods to prevent inefficiency and/or skipped work. The plan must meet AEP approval before work begins.
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractor shall provide daily work locations to AEP, including changes to these locations throughout the workday.
6. Each crew shall have a planned worksheet at all times, except in the case of emergency work.
7. The Contractor's daily association with their crews and customers will allow planned outages and refusals to be worked on a progressive basis. A written list of such areas that have not been worked, including reasons, shall be supplied to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work shall be inspected on an ongoing basis. When an assigned task is complete, the Contractor must notify AEP Forestry for final inspection.
9. The Contractor will notify AEP of any hazardous conditions found during the performance of work under this contract. This is to include danger trees, soil erosion, and any attachment to AEP's facilities,

deteriorated, damaged or broken facilities and any other abnormal conditions.

#### **F. Public Relations**

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise. Advanced notification provides the property owner/resident with an opportunity to voice concerns.

1. Where required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor will document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the contractor should be on each card.

#### **G. Refusals**

1. A "refusal" is considered any property owner/resident refusing to allow or permit the contractor to manage vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits and easements.
2. The contractor shall fill out a refusal/complaint form with all pertinent information for all refusals.
3. If the contractor is unable to resolve the refusal within one week, the refusal shall be turned over to the appropriate AEP Forester.
4. Undocumented refusals or those left unaddressed for more than one week by the contractor may be worked at the Contractor's expense.

## **H. Damage Claims and Complaints**

1. The contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.
2. An on-site investigation with the resident/ property owner shall be made as soon as possible. This meeting, or telephone arrangements for the investigation, shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during this initial investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.
7. Costs to restore outages or repair the Owner's facilities due to negligence may be billed to Contractor as determined by AEP Forestry.

## **II. Performance Guidelines**

### **A. Removals**

1. Stumps shall be flush cut (three (3) inch maximum height) and treated with an approved herbicide, unless designated otherwise by AEP Forestry.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect yards, fences, houses, electric lines and other facilities.

3. Targets for removal are:

- All trees with the potential of growing into the conductors.
- Trees where adequate clearance cannot be obtained using proper pruning practices.
- Trees that will take less than three times the amount of time to remove as they would take to prune.
- Trees within five (5) feet of poles.
- Mature trees where more than 50% of the crown must be removed to obtain clearance.
- Young vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
- Palm species.

4. Trees that may be less suitable candidates for removal are:

- Those that would take more than three times longer to remove than to prune for proper clearance and at least 50% of the crown would be left intact.
- Species that will not reach a height that would affect the conductors.
- Slow-growing tree species.

5. Deciduous stumps shall be flush cut (three (3) in. maximum height) and shall be treated with an appropriate herbicide to prevent re-growth unless the situation prevents application according to label instructions, there is a documented customer refusal or an AEP forester directs otherwise.

6. At the request of the property owner/resident diseased, dying, or dead trees which could threaten AEP facilities will be "made safe", allowing for removal by the customer or private arborist. Generally, all brush and wood generated by this activity should be left on site, unless otherwise directed by AEP Forestry.

## **B. Pruning**

1. Contractor practices should be compliance with all applicable industry standards (i.e., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development.
3. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth in Tables I and II.

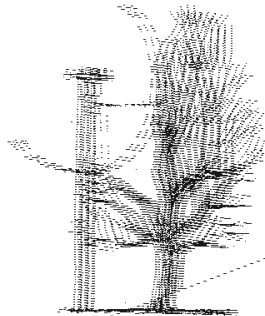
44. Reasonable care should be exercised to prevent the spreading of insect and diseases from one tree to another.
45. Portions of willow trees, which will not cut the vegetation back to livestock (i.e., winter feed material) that has been pruned, cut or damaged by the contractor's activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner.

### C. Clearance - Distribution

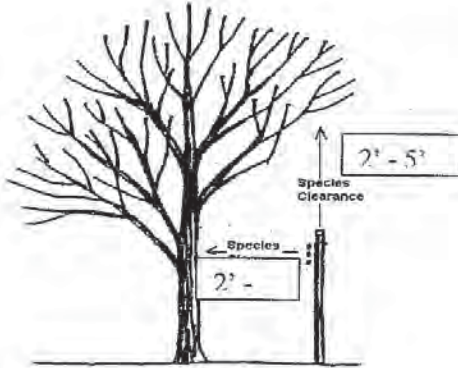
Variances to the recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/or covenants.

Minimum distance for distribution system lines shall be that distance that will prevent growth into any AEP conductor to a minimum of three (3) years (see Table 1 in the appendix). The species, site, limb and conductor sag and sway during windy conditions and the effect of electrical load should all be considered when determining the distance requirement.

11. Primary Conductors - Limbs should be pruned to a minimum of three (3) years distance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangement has been made with the appropriate AEP forestry representative.



12. Top Wire Secondary Conductors - Limbs should be pruned to two (2) to five (5) feet of distance without removing overhanging branches unless otherwise specified by an AEP forestry representative.



**3. Twisted, Cabled Secondary, Service Drops or Street Light Conductors -**

Trees near twisted or cabled secondary service drops and street light wires will not be pruned unless limbs are applying pressure to the line. Do not prune for street light illumination except under the specific direction of the appropriate AEP Forestry representative.

**4. Span Guy Wires** – Trees near span guys should only be pruned of heavy limbs applying pressure on the wires.

**5. Poles and down guys** - All poles and down guys will be cleared of all volunteer trees, brush, and slash to obtain a minimum of a five (5) foot radius of clearance around the pole or guy.

**6. Vines** - Should be cut, but not removed from AEP or other facilities, and treated with an herbicide to prevent re-growth. Pulling / removing vines may damage equipment and endanger the employee.

**D. Clearances - Transmission**

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right of way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right of way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no



more than 75% fall on actively maintained trees that could be considered the appropriate minimum approach distances.

**Clearance Table Guidelines**

| Right of Way with Restrictions                                       | Right of Way with Restrictions                                       |
|--|--|
| 100' Vertical Clearance between Conductors at Maximum Sag and Ground | 100' Vertical Clearance between Conductors at Maximum Sag and Ground |
| 1) Remove All Woody Stems of Vegetation*                             | 1) Timor/Remove Vegetation to Meet Column C**                        |
| 2) Do Not Allow Vegetation Clearer than Column E                     | 2) Do Not Allow Vegetation Clearer than Column E                     |
| 3) Trigger Distances to Schedule Maintenance per Column D            | 3) Trigger Distances to Schedule Maintenance per Column D            |
| 100' Vertical Clearance between Conductors at Maximum Sag and Ground | 100' Vertical Clearance between Conductors at Maximum Sag and Ground |
| 1) Timor/Remove Vegetation to Meet Column E*                         | 1) Timor/Remove Vegetation to Meet Column C**                        |
| 2) Do Not Allow Vegetation Clearer than Column E                     | 2) Do Not Allow Vegetation Clearer than Column E                     |
| 3) Trigger Distances to Schedule Maintenance per Column D            | 3) Trigger Distances to Schedule Maintenance per Column D            |

\* U.S. Dept. of Transportation

11. **Restrictions**—When removal of all woody stems of vegetation is not achievable (i.e. there are restrictions) AEP will continue to cut trim trees that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons other than qualified line clearance attendants and qualified line clearance arboreal trainees (Columns A and C).

22. **Minimum Approach**—Additional maintenance should be scheduled when vegetation will encroach within the minimum approach distances from energized conductors for qualified line clearance attendants and qualified line clearance arboreal trainees (Columns A and D). If these wires occur on either legal easements, or regulations restrict vegetation management practices, the maximum allowable amount of vegetation will be removed or otherwise controlled. AEP will annually monitor locations where these distances cannot be achieved. The monitoring will determine whether maintenance that is more frequent may be required in order to ensure the safe, reliable operation of the circuit.

**E. Hangers and Clean Up**

11. All hangers should be removed from the ground tree before using the job site.

2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of clean up work should be performed, especially when a property owner requests a tree be removed. Unless otherwise designated by AEP Forestry, wood shall not be cut up or hauled away. Where designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum clean up that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the contractor. Any cut debris that inadvertently falls into such an area, or any debris left in an area that may be prone to regular flooding, shall be moved/removed in an appropriate manner (chipped, stacked on top of ditch bank, etc.)

#### **F. Clearing and Re-clearing**

1. AEP Forestry will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into the lines should be controlled, either by removal, herbicide treatment or a combination of both. On distribution lines and areas approved by Transmission Forestry on transmission lines those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities, should be left undisturbed in the right-of-way whenever possible. Variances to this recommendation may be applied due to specific operating company guidelines.
3. During scheduled maintenance operations, prune or remove any vegetation within the rights-of-way of station entrances or exits that may affect the safe operation of AEP facilities, including station fences and equipment.
4. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the appropriate AEP personnel.
5. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practicable, but not to exceed three (3) inches in height above the ground line. Where possible, the cut shall be parallel to the slope and promptly treated with an approved herbicide, unless otherwise directed by AEP Forestry.
6. Trees shall be felled to avoid damage to crops, fences and other facilities. Any trees felled into crops, ditches, streams, roads or

across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP's facilities or the property of third parties, or hinder access along the right-of-way.

7. Tree, brush and slash shall be lopped as designated by AEP Forestry.
8. Danger trees are identified and addressed / worked at the discretion of the individual operating companies or regions. Consideration for danger tree removal shall be made for those trees that are an imminent hazard or threat to AEP facilities. Danger trees may include, but are not limited to, trees that have severe lean or sweep, are dead, or have visible defect or damage. When cut, danger trees shall be cut as low as possible.
8. Stumps of trees growing in fences may be cut at fence post height, as approved by AEP Forestry.
9. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
10. In remote areas, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
11. Brush should not be left in managed agricultural areas or other maintained areas unless designated by AEP Forestry.

#### **G. Herbicide Applications**

1. All woody plants that have the potential of growing into the lines, should be controlled. Those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities should be left untreated in the right-of-way whenever practical.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made and are required to abide by all Federal, State, and local laws concerning licensing, record keeping, and product handling.
3. Contractors shall attain 100% coverage and 95% control of treated vegetation.
4. AEP Forestry will make vegetation management prescriptions in consultation with contractors.

5. Where required, landowners should be notified before any herbicide treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps should be treated with an appropriate herbicide treatment.

#### **H. Tree Growth Regulator Application**

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (TGR) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in an excessive state of decline shall not be treated unless directed by AEP Forestry.
3. As designated by AEP Forestry, landowners should be notified before any TGR treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX I**

**Distribution Line Clearance Guidelines**

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as **minimum clearance** requirements unless designated otherwise by AEP Forestry. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that during maintenance intervals, trees may encroach into these minimum clearance zones. The guidelines are meant to be used as a guide for trimming those trees currently being maintained.

**MINIMUM CLEARANCE FROM CONDUCTORS**

- **Species with Fast Re-growth Rates:** Prune for a *minimum* clearance of 20 feet from conductors

|                |           |
|----------------|-----------|
| Cottonwood     | Willow    |
| Poplar species | Ailanthus |
| Silver maple   | Box Elder |
| Sycamore       |           |

- **Species with Medium Re-growth Rates:** Prune for a *minimum* clearance of 15 feet from conductors

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Locust                          | Hackberry                             |
| Red maple species               | Hickory                               |
| Ornamental pear species         | Crabapple                             |
| Fruit trees (apple, pear, etc.) | Red oak                               |
| Elm species                     | Ash species                           |
| Pine, Spruce & Hemlock species  | Mulberry                              |
| Sweet gum                       | Bois d'arc (Osage orange, hedge tree) |
| Catalpa                         |                                       |

- **Species with Slow Re-growth Rates:** Prune for a *minimum* clearance of 10 feet from conductors

|                           |                         |
|---------------------------|-------------------------|
| Cedar                     | Persimmon               |
| Chinaberry                | White oak (round lobes) |
| Magnolia                  | (Redbud, dogwood, etc.) |
| Any small variety species |                         |

- **Possible Exceptions:**

- When the entire trunk of a tree falls within the minimum distance specifications.
- When due to the branching structure of the tree, less trimming would result in a non-compliant tree, yet with acceptable clearance.
- Limited instances approved by ACP Forestry representative.

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX II**

**Transmission Line Clearance Guidelines<sup>(7)</sup>**

| Column A<br>Nominal Voltage<br>(kV phase to<br>phase) | Column B <sup>(5)</sup><br>NERC Clearance 1<br>(no restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)(2)</sup> and<br>Vegetation | Column C <sup>(3)(5)</sup><br>NERC Clearance 1<br>(with restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column D <sup>(3)</sup><br>ANSI Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column E <sup>(4)</sup><br>NERC<br>Clearance 2<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation |
|---|---|---|--|---|
| 765 kV  | 45'   | 35' 00"   | 27' 04"  | 14' 0"  |
| 500 kV  | 45'   | 26' 08"   | 19' 00"  | 10' 0"  |
| 345 kV  | 30'   | 20' 05"   | 13' 02"  | 7' 6"   |
| 230 kV  | 30'   | 16' 05"   | 7' 11"   | 5' 2"   |
| 161 kV  | 25'   | 14' 00"   | 6' 00"   | 3' 5"   |
| 138 kV  | 25'   | 13' 02"   | 5' 02"   | 2' 11"  |
| 88 kV & 115kV   | 25'   | 12' 04"   | 4' 06"   | 2' 6"   |
| 69 kV   | 25'   | 10' 09"   | 3' 09"   | 2' 6"   |
| 46kV, 40kV, 34.5<br>kV & 23 kV                        | 20'   | 10' 00"   | 2' 09"   | 2' 6"   |

<sup>(1)</sup> Conductor at maximum sag condition<sup>(6)</sup>

<sup>(2)</sup> Desired clearance to maintain reasonable clearing cycles

<sup>(3)</sup> ANSI Z133.1 rev. 10/2000

<sup>(4)</sup> IEEE Standard 516-2003, Section 4.2.2.3, Tables 5 and 7, calculated clearances (Clearance 2)

<sup>(5)</sup> Application of herbicides will be considered as meeting these guidelines, as long as all treated vegetation meets or exceeds the desired clearance from maximum sag (Table AEP1.2, Columns A and C).

<sup>(6)</sup> AEP Guideline for Determining Maximum Conductor Sag and Blowout for Vegetation Management is to be used to adjust the conductor's found field condition to the maximum sag condition taking into account the conductor size, span length, elevation, and current temperature.

<sup>(7)</sup> (Columns A, B, C, and D) distances exceed clearances for NERC operationally significant circuits noted in NERC Standard FAC-003-1, which gives clearances (Columns A and E) to be maintained between vegetation and conductors under all rated electrical operating conditions, per IEEE Standard 516-2003 (Guide for Maintenance Methods on Energized Power Lines) and as specified in its Section 4.2.2.3, Minimum Air Insulation Distances without Tools in the Air Gap.

# AEP FORESTRY

## *Instructions*

### *For*

## **Forestry Contract Crew Audits**

**January 2007**

**The Forestry Contract Crew Safety and Forestry Contract Crew Audits** are tools that AEP Foresters can use to record a tree crew's compliance with safety regulations, contract guidelines and work performance. A crew, or the completed work, is rated as pass or fail and acceptable or unacceptable. Acceptable or pass means a crew meets contract guideline expectations. Unacceptable or fail means a crew, or the completed work, does not meet contract guideline expectations. An unacceptable or fail rating for any single item in the Crew Safety, Forestry Clearance or Forestry Work Quality audit sections will result in a failure rating for the audit section receiving the unacceptable or fail rating.

Each topic found on the Forestry Contract Crew Safety Audit and Forestry Contract Crew Audit is defined in this document. The 10 topics listed under Safety are forestry specific relating to the AEP Contractor Oversight program. The remaining five topics – Clearance, Work Quality, Equipment, Personnel and Reporting Accuracy relate to contract/guideline compliance and work performance.

Definitions of terms used in this document and more detailed explanations of right of way Forestry work compliance standards are supported by and provided in the document "AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations".

One copy of each completed crew audit is to be given to the audited tree crew foreman, one copy to the contractor general foreman/ supervisor responsible for the crew, and one copy kept on file at the responsible/ local AEP forester's office.

All audit information, including comments, should be entered into RWM

**Audit Frequency** – The expectation of AEP Forestry management is that contract crew audits are to be conducted on a regular basis.

**Fail or Unacceptable** - Any item marked 'Fail' or 'Unacceptable' must be explained. Use the comments sections on the audit forms to explain why an item was marked 'Fail' or 'Unacceptable'.



## Safety Audit

**Personal Protective Equipment** - Shall be worn as required by OSHA and ANSI specifications. Such PPE includes and is not limited to:

**Hard Hats** - Shall be worn when entering the job site. Visual inspection of hard hats should be made to insure they are not cracked, broken, or otherwise altered.

**Safety Glasses** - ANSI approved Z87.1 eye protection shall be worn on job site at all times. Safety glasses are required for all jobs.

**Ear Protection** - Shall be worn when running chippers or chainsaws. Exception- not required when using a chainsaw while working in tree.

**Proper Footwear** - Proper work boots that go above the ankle. Footwear should support the foot and ankle area.

**Chain Saw Chaps** - Are to be worn, according to ANSI guidelines, while operating chain saws.

**High Visibility Garments** – Are to be worn when exposed to vehicular traffic.

**Fall Protection Equipment** – Proper fall protection equipment shall be used while working in an aerial lift device or manually climbing. All such equipment shall be inspected on a daily basis for safe working condition.

**Properly Maintained Safety Equipment** - Each truck is required to have a fully stocked, removable first aid kit; fire extinguisher with current fire safety inspection; and wheel chocks.

**Traffic Control Devices** – Approved cones, signs and flagging personnel need to be properly placed in compliance with State and/or Federal DOT regulations (MUTCD). Be sure all vehicles are properly parked adhering to all city and state laws and regulations including OSHA regulations.

**Proper Fall Protection Procedures** – All climbing practices must be in accordance with OSHA and ANSI Z133 standards.

**Properly Barricade Work Area** – Public should be kept away from work area. Safety cones shall be used to isolate work area from public area. Any person not wearing proper PPE shall be escorted out of work area. Unattended equipment should not be left on the ground where it could jeopardize the public or worker safety.

**Properly Maintain and Store Work Tools** – All tools such as chain saws, pole pruners, ladders, etc. that are kept on a work vehicle are to be safely secured and stored away from public availability. Saws with blade scabbards should be stored with scabbard on. Tools should be in good working order and repair.

**Follow Proper Approach Distances** – All tree trimmers are required to follow OSHA 1910.269 minimum clearances for A.C. Live – Line Work Minimum Approach Distances.

**Properly Store and Mark Hazardous Material** – All herbicide sprayers and storage containers shall be properly labeled and kept in a secured location. Flammable liquids shall be stored in approved containers.

**MSDS and Labels Information Available** - Material Safety Data Sheets for all chemicals shall be readily available on each vehicle. State and federal pesticide regulations also require each vehicle to have labels for each herbicide being used by the crew or stored on the vehicle.

**Good Job Site Housekeeping** – Job site shall be kept orderly at all times. Equipment, trimmings and debris need to be contained to allow safe working operations and provide public safety.

### **Clearance Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Tree Pruning- Conductor Clearance** – All tree pruning shall be governed by approved principles of arboriculture and shall adhere to Tree Care Industry Association (TCIA) and International Society of Arboriculture (ISA) standards.

**Primary Conductors- Conductor Clearance** - It is AEP's practice to prune trees in a manner that will direct growth away from the electrical conductors. Growth should be removed to a lateral or parent stem and vertical growth rolled back away from the conductor.

Minimum clearance for distribution system lines should be established by each Operating Company. Overhanging limbs should be removed unless otherwise directed by the appropriate AEP System Forestry representative.

**Secondary Conductors – Conductor Clearance** – Minimum clearance for open wire secondary should be established by each Operating Company. Overhanging limbs should not be removed unless otherwise directed by the appropriate AEP System Forestry representative.

Insulated, Twisted, or Cabled Secondary Conductor Clearance – Will not be pruned unless limbs are applying pressure to the line or unless directed by the appropriate AEP System Forestry representative.

**Tree Removal** – Tree removal is an important part of the AEP line clearance program. Targeted tree removals are all trees with the potential to grow into the conductors., Dead, diseased, fast growing tree species, and trees that cannot be properly pruned to obtain proper clearance for the AEP conductors are removal targets.

Stumps shall be flush cut and treated with an approved herbicide as designated by the appropriate AEP System Forestry representative.

**ROW Width** - AEP forestry will provide the width of the right of way. This area will vary depending on facilities. The full width of the R/W area or easement should be cleared of all tall growing or non-compatible woody plant species unless otherwise instructed by the appropriate AEP System Forestry representative.

**Danger Trees** - Danger trees shall be removed or pruned to eliminate the hazard. When cut, danger trees shall be cut as low as practicable, but not to exceed eight inches in height above the ground line. The logs and slash shall be left as felled, unless otherwise designated by AEP System Forestry.

### **Work Quality Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Clearance for Species** - The clearance for a species may be defined as the distance between the tree and conductors after pruning. It is the responsibility of each crew to adhere to the appropriate clearances specified in the AEP guidelines. No exceptions should be made unless otherwise instructed by the appropriate AEP System Forestry representative.

**Hangers Removed** – Any cut or broken limbs left in the tree after pruning shall be removed before leaving work site.

**Collar Cuts** - Collar cuts are important in order to reduce a tree's sprouting. Collar cuts shall be consistently made according to proper arboriculture standards (ANSI A300).

**Directional Pruning** – A pruning practice used to remove branches growing toward conductors; leaving branches growing away from conductors.

**Drop Crotch Selection** – Pruning cuts are to be made, whenever possible, to lateral branches that are at least 1/3 the diameter of the branch being removed.

**Peels / Tears** – Pruning cuts resulting in bark tearing or stripping below a cut shall be avoided.

**Clean Up / Brush Disposal** – All appropriate cleanup work shall be done before leaving a job site unless arrangements have been made with the property owner or AEP forestry personnel. This could include: Chipping or piling brush; removing trash/debris; raking the yard and sweeping driveway, sidewalk or street when appropriate.

**Regard for Property** - All line clearance personnel shall respect the property of the landowner at all times. The crew should take extra effort not to drop limbs on landscaped beds, gardens, yard decorations, fences, roofs, gas meters, cars, etc. The crew should take care not to damage property when walking across or dragging brush.

Ruts or other damage shall be brought to the land owner's attention and addressed accordingly.

**Stump Height** – Stumps should be cut as low to the ground as practical.

**Clearing Around Pole Locations** - A radius of five feet shall be cleared to provide a safe work area free of obstruction from vegetation around each pole location.

**Herbicide Application** – Herbicide applications shall be done in accordance with all Federal, State, and local laws. Contractors shall obtain 100% coverage and at least 95% control of all targeted woody plants.

**Tree Growth Regulator** – Trees designated for Tree Growth Regulators (TGR) shall be treated with an approved product in accordance with the label instructions.

### Reporting Accuracy Audit

**Number of trees trimmed** – Record timesheet data. Count the number of trees trimmed by a crew and record on audit sheet.

**Number of trees removed** – Record timesheet data. Count the number of trees removed by a crew and record on audit sheet.

**Footage/Units/Acres Re-cleared** - Record timesheet data. Field count the work completed by a crew.

**Footage/Units/Acres Ground Sprayed** - Record timesheet data. Field count the work completed by a crew.

### Non-KPI Audit Items

**Truck Appearance / ID** - Name of contractor clearly displayed with DOT numbers properly displayed. No personal bumper stickers. No long-standing, visible spills.

**Number of Working Saws** – Determined per contract specifications based on type of crew. These saws start and idle without assistance and have a maintained bar and chain.

**R/W Equipment/Chipper** - The proper vehicle, mower, or trimmer unit shall be used based on work location and tree/brush conditions. Chipper starts when key is turned on. Chips are of small size (2"-6"), and not stringy. Brush feeds correctly into chipper and chute deposits chips as directed.

**Crew Properly Equipped** –Each crew shall be equipped according to AEP contract specifications. Crews shall have all necessary tools, on a daily basis, to complete

assigned work productively. For example; ropes, saddles, saws, pruner poles, herbicide sprayer, etc...

**Herbicide Equipment** - Each crew shall have all necessary tools, sprayers and product to ensure safe, productive herbicide applications. Equipment must be in good working condition. All crews shall have all necessary PPE, sprayers etc. to apply according to label instructions.

**AEP Guidelines** - A complete, legible and current set of the AEP Forestry Guidelines and clearance specs is kept in the vehicle (English or Spanish).

**Professional Appearance** - All contract employees will conduct themselves and dress themselves in a manner that positively represents AEP. If required by AEP contract specifications, contract employees must be wearing contractor uniform (i.e. appropriate color T-shirt). Crew must be neat in personal appearance - no excessive holes in clothes and facial hair neat in appearance.

**Manpower Utilization** - All contract employees and equipment shall be used in a fashion that is conducive to maintaining safe work practices and production goals. Look to see if crews are working in efficient manner (i.e. standing around doing nothing, trees that should be treated with herbicide should not be cut then sprayed). Everyone on a crew must be working as a team. If workflow is disjointed with no organization, it is unacceptable. A job briefing should be held each morning to ensure that everyone knows their responsibilities and can perform their tasks in a safe and productive manner.

**Customer Relations** - All contractors will respect the needs and concerns of the customer or landowner. Demonstrate, on an ongoing basis, effective, courteous communication with AEP customers (both internal and external) and landowners and the general public.

**Tree Knowledge** - All members of a crew shall be able to identify and distinguish growth characteristics of trees common to their geographical work area. Ask crews to identify trees in their surrounding area.

**Planning** - The crew should work in a systematic and organized fashion on a daily basis (i.e. not skipping around). The crew supervisor should have a plan for the day and be prepared to discuss that plan with the property owner and any utility employee. It is the responsibility of each crew member to inform their supervisor of any equipment needs that may stand in the way of production or safety.

**Use of Forms** - Forms such as time sheets and production logs, herbicide records, refusal forms, removal cards etc. are filled out completely and accurately and kept up-to-date with all important information. Items such as tree count can be written in daily dairies before being transferred to the correct form; however they must be in a coherent and ordered format.

## Sample Audit Form

### AEP FORESTRY CONTRACT (KPI) CREW AUDITS

No. \_\_\_\_\_

Audit Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Audit Quarter: 1 2 3 4 (circle one) Operating Co.: \_\_\_\_\_  
 Auditor Name: \_\_\_\_\_ State: \_\_\_\_\_  
 Crew Number: \_\_\_\_\_ District: \_\_\_\_\_ Forestry Region Number: \_\_\_\_\_  
 Circuit #: \_\_\_\_\_ Foreman/ General Foreman: \_\_\_\_\_  
 Circuit Name: \_\_\_\_\_ Pole Number: \_\_\_\_\_

#### Forestry Contract Crew Safety (KPI) Audit

CHECK ONE: PASS  FAIL

- Failure ratings for any single item will result in failure of this audit.
- Failure must be documented in comments fields and will require random periodic follow up observation.

|   | Description  | PASS                     | FAIL                     | COMMENTS |
|---|--|--------------------------|--------------------------|----------|
| 1 | Personal Protective Equipment-<br>Shall be worn as required. Includes but not limited to hard hats, safety glasses, ear protection, proper footwear. | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 | Property Maintained Safety Equipment-<br>Fully stocked, removable first aid kit, fire extinguisher and wheel chocks.                                 | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 | Traffic Control Devices-<br>Approved and placed in accordance with applicable State and Federal regulations.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 4 | Proper Fall Protection Procedures-<br>All climbing practices must be in accordance with OSHA and ANSI Z -133 standards.                              | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 5 | Property Barricade Work Areas-<br>Barricade material available and used in accordance with safety rules.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 6 | Properly Maintain and Store Work Tools   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 7 | Follow Proper Approach Distances-<br>Follow OSHA 1910.269 minimum clearances for AC Live Work Minimum Approach Distances.                            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Acceptable/Unacceptable on items below

- An Unacceptable ratings may result in failure of this audit dependent on magnitude and frequency of the violation.
- Any item found to be Unacceptable must be documented in the comments fields and will require random, periodic follow up observation.

|   | Description  | ACCEPTABLE               | UNACCEPTABLE             | COMMENTS |
|---|--|--------------------------|--------------------------|----------|
| 1 | Hazardous material properly stored, labeled and documented | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 | MSDS and Herbicide Label information available             | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 | Jobsite Housekeeping                                       | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Forestry Clearance (KPI) Audit

CHECK ONE: PASS  FAIL

| Pass / Fail         | PASS                     | FAIL                     | Description  | PASS                     | FAIL                     | COMMENTS |
|---------------------|--------------------------|--------------------------|--------------|--------------------------|--------------------------|----------|
| Conductor Clearance | <input type="checkbox"/> | <input type="checkbox"/> | Danger Trees | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| ROW Width           | <input type="checkbox"/> | <input type="checkbox"/> |              |                          |                          | _____    |

#### Forestry Work Quality (KPI) Audits

CHECK ONE: PASS  FAIL

|                       | PASS                     | FAIL                     | Description           | PASS                     | FAIL                     | PASS                   | FAIL                     | COMMENTS                 |       |
|-----------------------|--------------------------|--------------------------|-----------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|-------|
| Collar Cuts           | <input type="checkbox"/> | <input type="checkbox"/> | Stump Height          | <input type="checkbox"/> | <input type="checkbox"/> | Peels/Tears            | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Directional Pruning   | <input type="checkbox"/> | <input type="checkbox"/> | Hangers               | <input type="checkbox"/> | <input type="checkbox"/> | Cleanup/Brush Disposal | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Drop Crotch Selection | <input type="checkbox"/> | <input type="checkbox"/> | Clearing around poles | <input type="checkbox"/> | <input type="checkbox"/> | Regard for property    | <input type="checkbox"/> | <input type="checkbox"/> | _____ |

#### Reporting Accuracy (KPI) Audit

| Week ending date: ____/____/____                         | TimeSheet Data |       | Audit Data |       | Variance |       |
|--|----------------|-------|------------|-------|----------|-------|
|  | Cap            | O&M   | Cap        | O&M   | Cap      | O&M   |
| Number of trees trimmed                                  | _____          | _____ | _____      | _____ | _____    | _____ |
| Number of trees removed                                  | _____          | _____ | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acre Re-cleared                          | _____          | _____ | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acre Ground Sprayed                      | _____          | _____ | _____      | _____ | _____    | _____ |
| YES <input type="checkbox"/> NO <input type="checkbox"/> |                |       |            |       |          |       |
| Widening <input type="checkbox"/>                        |                |       |            |       |          |       |

#### Non - KPI Crew Audit Items

|                        | PASS                     | FAIL                     | Description             | PASS                     | FAIL                     | Description            | PASS                     | FAIL                     | Description    | PASS                     | FAIL                     |
|------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------------|--------------------------|--------------------------|
| Equipment & Personnel  | <input type="checkbox"/> | <input type="checkbox"/> | Professional appearance | <input type="checkbox"/> | <input type="checkbox"/> | Crew Properly Equipped | <input type="checkbox"/> | <input type="checkbox"/> | Tree Knowledge | <input type="checkbox"/> | <input type="checkbox"/> |
| Truck Appearance/ID    | <input type="checkbox"/> | <input type="checkbox"/> | Manpower utilization    | <input type="checkbox"/> | <input type="checkbox"/> | Herbicide Equipment    | <input type="checkbox"/> | <input type="checkbox"/> | Planning       | <input type="checkbox"/> | <input type="checkbox"/> |
| Number of Working Saws | <input type="checkbox"/> | <input type="checkbox"/> | Customer Relations      | <input type="checkbox"/> | <input type="checkbox"/> | AEP Guidelines         | <input type="checkbox"/> | <input type="checkbox"/> | Use of Forms   | <input type="checkbox"/> | <input type="checkbox"/> |
| ROW Equipment/Chipper  | <input type="checkbox"/> | <input type="checkbox"/> |                         |                          |                          |                        |                          |                          |                |                          |                          |

ADDITIONAL COMMENTS: \_\_\_\_\_

AEP REPRESENTATIVE: \_\_\_\_\_ CONTRACTOR REPRESENTATIVE: \_\_\_\_\_

**AEP Kentucky Power Distribution Line Clearance Guidelines\***

July 2010

|  | <b>RIGHT-OF-WAY WIDTH</b>  | <b>BRUSH CUT</b>   | <b>STUMP TREATMENT</b>                              |
|--|--|--|---|
| <b>Multi-Phase primary facilities</b>  | ROW Width Varies.<br>Reclear established ROW width to tree-line. If tree-line is indiscernible, reclear to 50 foot width | All Incompatible woody species are cut. In non-maintained areas, Cut Brush & Limbs shall be lopped in a manner not to exceed two feet in height. All pole bases cleared to a 5' radius free of vegetation. | Required for all cut stumps within the Right-of-Way |
| <b>Single-Phase primary facilities</b> | ROW Width Varies.<br>Reclear established ROW width to tree-line. If tree-line is indiscernible, reclear to 40 foot width | All Incompatible woody species are cut. In non-maintained areas, Cut Brush & Limbs shall be lopped in a manner not to exceed two feet in height. All pole bases cleared to a 5' radius free of vegetation. | Required for all cut stumps within the Right-of-Way |
| <b>Open-Wire and Cable Secondary</b>   | Reclear to established width. Minimum of 5'  | All pole bases cleared to a 5' radius free of vegetation   | Required for all cut stumps within the Right-of-Way |

\*Refer to AEP Forestry Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations 5/14/2009

# EXHIBIT C



Kentucky Power Rate Clarifications  
May 15, 2012

**1. Holidays**

- a. Contractor holidays include New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.
- b. Owner recognizes the following additional holidays: Good Friday, the day after Thanksgiving, and the day before Christmas.
- c. Contractor shall not schedule work on Owner holidays unless requested in writing by Owner or the holiday has been agreed to as a regularly scheduled day.
- d. Contractor shall not bill Owner for its employees' holiday pay. Holiday pay is covered as part of the benefits mark-up.
- e. On years when a Contractor or Owner holiday falls on a weekend, Owner shall notify Contractor of the date the holiday will be observed.

**2. Calculations and Examples**

- a. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
- b. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday at Owner's request.
- c. When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.
- d. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in 2.a above.
- e. Calculation examples are provided below.

Straight Time Rate = Taken from table

Overtime Rate = Straight Time Rate x 1.5

Sunday/Holiday Rate = Straight Time Rate x 2

Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)

Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)

Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)

Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate +  
(Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) = \$30.72$

Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) = \$33.40$

Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) = \$40.94$

Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) = \$44.52$

### 3. Herbicide Application

- a. When Contractor's employees are assigned to apply herbicides, their hourly rate will be increased by \$0.20. Anyone assigned to perform herbicide application must be certified, licensed, registered or otherwise qualified as required by the state where the Work is being performed or as otherwise required by law, statute or regulation. This increase does not apply to employees applying stump treatment as part of their normal daily duties.

### 4. Special Supervisor Payment

- a. If Owner has declared a major storm, or when otherwise determined by Owner and authorized in writing, Supervisors may be paid at the General Foreman straight time rate for all hours worked in excess of forty (40) per week. Contractor shall bill Owner the straight time rate without mark-ups.

### 5. Pay During Training

- a. Owner shall pay Contractor's employees' hourly rate while said employees attend either Owner-sponsored training or other training required and agreed to by Owner to obtain or retain a professional certification. All other training shall be Contractor's responsibility. Unless otherwise agreed to by Owner in writing, no other billing relating to attendance at training will be paid.

### 6. Travel to Work Site

- a. Contractor will designate a reporting site acceptable to Owner for each work area. A travel allowance (not to exceed one-half hour each way) will be allowed for travel via the most direct route from the reporting site to the work location while the crew is working in that work area. The Owner will not pay travel time from any other location unless otherwise agreed to.

### 7. Per Diem Rates

- a. When agreed by Owner and Contractor, Per Diem will be paid to crewmembers when performing Work outside their normal work area [out-of-town] at the following rates:

- \$20.00 per crewmember per day, for crewmembers who rent a house/apartment.
  - \$30.00 per crewmember per day, for crewmembers staying in a hotel with a cost of less than \$50.00 per night (hotel receipts must be submitted with invoice).
  - \$40.00 per crewmember per day, for crewmembers staying in a hotel with cost greater than \$50.00 per night (hotel receipts must be submitted with invoice).
- b. When held over at the request of the Owner on regularly scheduled work days, crew members shall be eligible for a meal if held over for two hours or more after normal quitting time. Owner shall reimburse Contractor \$12.00 per meal for each crew member entitled to a meal unless meals are provided by Owner.
- c. For Contractor employees entitled to a meal in accordance with the Supplementary Terms, Section 2, Item 2.8: Contractor personnel shall be off the clock for meal breaks. Owner shall reimburse Contractor \$12.00 per meal for each employee entitled to a meal unless meals are provided by Owner. Contractor personnel shall be on the clock for meals if they do not stop work to eat. Not stopping work to eat means eating on-the-fly at the jobsite (personnel spend less than 10 minutes eating) or while traveling from jobsite to jobsite. Owner shall not reimburse Contractor for breakfast or lunch meals if Contractor personnel return to their homes at night

#### **8. Quarterly True-up**

- a. Contractor and Owner have agreed to job classifications and labor rates for Work performed under the Contract as found in the Rate Sheets in Exhibit C. Contractor utilizes the established rates, multiplied by overheads, to bill Owner for hours worked. Both parties recognize that different employees in the same job classifications may be paid a rate more or less than the established rates, but agree that the average rate paid for hours worked in each job classification shall not exceed the established rate.
- b. By the last working day of the month following the end of each fiscal quarter, Contractor shall provide for each job classification within the Contract: the total number of hours worked at straight time rates, overtime rates and holiday rates, and the gross wages paid by Contractor to its employees for the hours worked at each rate: straight time, overtime and holiday. The difference between the straight time hours worked multiplied by the established rate, plus the overtime hours worked multiplied by 1.5 times the established rate, plus the holiday hours worked multiplied by 2 times the established rate, and the gross wages paid by Contractor for each job classification shall be totaled. Appropriate overhead markups shall be applied and settlement between the two parties shall be made. Contractor must present Owner with a plan to reduce the difference, if the difference in any single classification is greater than five percent (5%) for two (2) consecutive quarters.
- c. When the difference for all classifications, viewed individually within a contract unit, is less than 1% of the gross wages paid for 2 consecutive quarters, the true-up shall become a semi-annual process, following the end of the 2<sup>nd</sup> and 4<sup>th</sup> quarters. The semi-annual true-up will be based on the prior quarter's billing, not the entire six month period. In all true-ups, the settlement will be calculated and paid to the appropriate party. If the difference for all classifications, viewed individually within a contract unit, in a semi-annual true-up is equal to or exceeds 1% (one percent) of the gross wages paid, the true-ups shall again be made on a quarterly basis until the difference again drops to less than 1% (one percent).

| Labor                                      |            | August 1, 2011   |
|--|------------|--|
| Labor Description                          | Labor Code | Comments   |
| Equipment Operator                         | EO         | An equipment operator shall be able to operate and perform minor maintenance on a ROW brush mower or bulldozer   |
| General Foreman A/<br>General Foreperson A | GFA        | The primary contact with AEP Forestry field representatives Has worked a minimum of 12 months as an Assistant General Foreperson and should be ISA certified Individuals are responsible for all aspects of the contractor's local field operation including and not limited to employee safety, equipment maintenance, work planning effect (if applicable), and emergency response   |
| Foreman A/Foreperson A                     | FA         | Meet all the qualifications of a Foreperson B Has worked a minimum of 12 months as a Foreperson B and should meet all state required herbicide qualifications Is able to competently work and lead others with no direct supervision   |
| Foreman B/Foreperson B                     | FB         | Meet all the qualifications of a Trimmer A Individuals have completed all line clearance foreperson certification/ training programs as required Must be able to work and lead others with limited supervision Has worked a minimum of 18 months in the line clearance industry Must be able to effectively communicate with AEP representatives and landowners Must be able to prepare required record documents, read and follow instructions on maps and notification records Must possess a CDL and pesticide certification as required  |
| Work Planner A                             | WPA        | Meet all qualifications of Work Planner B and be ISA certified Two years experience as a Work Planner II or three years related utility experience Consistent work planning accuracy greater than or equal to 95% Demonstrates initiative and pro-actively looks for ways to do work cost effectively Demonstrated abilities in teamwork, leadership and problem solving Willing to travel and stay away from home overnight   |
| Work Planner B                             | WPB        | Meet all qualifications of Work Planner C and working towards ISA certification Six months satisfactory performance as a Work Planner C or related utility experience Thorough knowledge of species and growth characteristics of trees located in assigned work area Good understanding of electrical facilities and hardware and associated line/circuit maps Understanding of electric utility vegetation management and ability to communicate such to property owners Work effectively with people (utility, contractors, customers, etc ) Demonstrated ability to work safely and efficiently with minimal supervision and have the ability to travel and stay overnight |
| Work Planner C                             | WPC        | Two-year Degree in Forestry, Arboriculture, etc , or related utility experience is desirable Good verbal and written communications skills Positive attitude/neat professional appearance Able to work outside in a safe, productive manner in all weather conditions Valid drivers license  |
| General Foreman B/<br>General Foreperson B | GFB        | Individuals shall be able to communicate effectively with utility representatives, the public and their direct reports Determine the most effective manner within established guidelines of how to treat vegetation conditions and coordinate and instruct crew activities to safely and effectively complete an assigned task Must possess a pesticide license and where required strive to become a certified arborist   |
| Trimmer A                                  | TA         | Meet all qualifications of Trimmer B Individuals have completed all climbing trimmer and bucket (where required) certifications Individual has worked a minimum of 12 months in the line clearance industry Is able to perform all aspects of tree trimming and tree removal including and not limited to rigging ropes, and pulling overhang, and any other assigned duties in a safe, consistent, competent manner Individuals should be capable of filling in for a crew foreperson on a limited basis and have started foreperson training as required by the employer   |
| Trimmer B                                  | TB         | Meet all qualifications of Trimmer C Individual have completed climbing trimmer training Individual has worked a minimum of 6 months in the line clearance industry  |
| Trimmer C                                  | TC         | Entry level or trainee position that requires the individual passes screening criteria as established by employer A Trimmer C shall be able under direction to safely perform a variety of job duties including and not limited to chain saw maintenance, operate a brush chipper, and apply herbicides, clear and cut trees and brush They shall begin climbing trimmer training Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification   |



# Unit Price Model

## April 30, 2012

Services may be paid under the following Unit Price model.

### 1. Unit Price Model Overview

Unit Price is a model where a Unit Price hourly rate is paid to Contractor for all work units completed in an assigned Circuit. The Unit Price hourly rate includes all costs, including but not limited to, wages, supervision, overheads, profit, equipment and materials required to complete the assigned Work. While the Unit Price hourly rate includes the labor required to apply herbicides, it does not include the cost of the herbicides. The Unit Price hourly rate is multiplied by the assigned work hour per unit, a rate that is assigned for each specific work unit (tree trim, tree removal, brush cut, etc.). This is a rate that has been determined to complete a unit of Work on the assigned Circuit, as agreed by the Owner and Contractor. All Unit Price Work issued to Contractor shall be completed by the agreed upon completion date.

### 2. Unit Price Calculation

#### a. Man Hours per Unit Calculation

Unit Price uses historical average times, or other method agreed to by Owner and Contractor, required to perform a specific type of Work (tree trim, tree removal, brush cutting, brush spraying) ("Work Unit") and includes all time necessary to complete that Work, including but not limited to travel, actual job site time, debris disposal, landowner contacts, immediate crew supervision and appropriate non-productive time (such as time lost to inclement weather and minor on-the-job equipment breakdown).

- I. Owner shall explain the method of calculation and the information used in a Circuit to Contractor's supervision and management prior to authorizing Work.
- II. The average times used to calculate hours per unit can be collected by distribution circuit, portions of a given circuit (sub-circuit), or other defined geographic area within the Contract region (e.g. "Circuit" or "Area.")
- III. The historical average times are developed by accumulating data for vegetation management Work performed on the Circuit during the last three calendar years or other time period as agreed by Owner and Contractor. Each time a Circuit is scheduled for maintenance, a new three-year average is calculated by replacing the earliest year's data with the most recent or next successive year's data. This rolling three year average is given in hours per unit.
- IV. If there are inconsistencies in the three-year data based on disparity in the actual work within a specific Contract region, the Owner and Contractor may agree to use another method to generate the hours per unit. This method shall be documented in the Work Request authorizing the Work.

#### b. Unit Price Calculation

Contractor has submitted a Unit Price hourly rate that shall be used for all units of Work performed, regardless of the Work Unit type. The cost for a given unit of Work (e.g. for a given Circuit) is established by multiplying the Contractor's Unit Price hourly rate for

that Work Unit by its hours per unit. If the Unit Price hourly rate is \$20.00 and the hours per unit is 1.25 hours, Contractor earns 1.25 hours x \$20.00 – \$25.00 for each unit of that Work Unit.

### **3. Job Assignment**

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned; prepare a Unit Price Sheet (sample attached); include any exceptions to the hours per unit; and shall schedule a field review with the Contractor to discuss the Work assignment, including how the hours per unit were developed. An exception to the hours per unit might be a tree removal where the location and size of the tree and its proximity to structures cause a substantial increase in the hours per unit required for the removal. These exceptions must be agreed to by both Parties and are not to include those deviations that are normally encountered in performing a Work Unit.

At the field review, Owner and Contractor shall review all the Work, agree to the exceptions to the hours per unit, agree to the Unit Price Sheet and determine a start date for the Work. A Work Request (“WR”), similar to the sample attached, shall be signed by both Parties and constitutes the written authority for Contractor to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Unit Price Sheet, the map, a list of exceptions to the hours per unit, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date, but subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor’s work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. The work planners, per current practice, shall be paid on a time and material basis and will not be included within the stated Unit Price or Unit Price calculation. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor’s employees are unable to resolve their concerns quickly, Contractor’s employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

## Lump Sum Price Model

April 30, 2012

Services may be paid under the following Lump Sum Price model.

### 1. Authorizing Work

Owner and Contractor may agree to perform work based on a Lump Sum price for the specified Circuit.

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned, complete a Lump Sum Price Sheet; and schedule a field review with the Contractor to discuss the Work assignment.

At the field review, Owner and Contractor shall review all the Work, agree to the Lump Sum Price and determine a start and end date for the Work. A Work Request ("WR") for Lump Sum Price Work, similar to the sample attached, shall be signed by both Parties and constitutes the Contractor's written authority to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Lump Sum Price, the map, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date but is subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor's work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor's employees are unable to resolve their concerns quickly, Contractor's employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.



**Work Request  
For  
Unit Price/Time and Materials Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Unit Price/Time and Materials Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

If no map is attached, identify the circuit, sub-circuit, or the specific geographic area identifying the Work to be performed.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

**Unit Price** --- Contractor’s weekly billing shall be calculated using the number of units completed during the week being billed multiplied by the cost per unit from the Rates as found in the Contract.

**Time and Materials** – Contractor’s weekly billing shall be calculated using the following formula: (labor classification X number of hours worked during billable period) + (equipment rate X number of hours used during billable period). The labor classifications and equipment rates used will be in accordance to the Rates as found in Exhibit C of the Contract

Unless otherwise stated in this Work Request or the attached map, pricing will be per the price model as selected above and in accordance with the Rates as found in Exhibit C of the Contract.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**WORK REQUEST  
For  
Lump Sum Work**

**Work Request No:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_ **Issued To:** \_\_\_\_\_  
(Owner) (Contractor)

This Work Request for Lump Sum Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ ("Contract") between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

Work shall be performed in accordance with the attached Request For Quote ("RFQ") attached hereto.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

Unless otherwise stated in the Work Request, Contractor shall be paid the total cost for the Circuit upon completion of all Work and subsequent acceptance by Owner. Contractor shall perform all Work for the lump sum amount of \$ \_\_\_\_\_.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent's respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**PRICING CHANGE ORDER**

---

Contract # : \_\_\_\_\_ Request Date: \_\_\_\_\_  
 Owner: \_\_\_\_\_ Contractor: \_\_\_\_\_

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

Specific reason(s) for Change Order:
  Rate Addition(s)
                 
  Rate Deletion(s)  
 Rate Description Change(s)
                 
  Rate Code Change(s)  
 Other (please describe): \_\_\_\_\_

| <b>Labor</b> |                   |            |            |      |      |      |
|--------------|-------------------|------------|------------|------|------|------|
| Reason       | Labor Description | Labor Code | Labor Rate | ST   | RH   | DT   |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
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|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
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|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |
|              |                   |            | \$ -       | \$ - | \$ - | \$ - |

| <b>Storm</b> |                   | <b>STORM LOADED RATES</b> |      |      |      |
|--------------|-------------------|---------------------------|------|------|------|
| Reason       | Labor Description | Labor Code                | ST   | RH   | DT   |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
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|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
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|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |
|              |                   |                           | \$ - | \$ - | \$ - |





[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



[REDACTED]



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### THIRD AMENDMENT TO CONTRACT NO. 02573444X110

This Third Amendment to Contract No. 02573444X110 ("Third Amendment"), executed to be effective February 2, 2016 ("Third Amendment Effective Date"), is by and between between **Kentucky Power Company**, a Kentucky corporation ("Owner") and **Nelson Tree Service, Inc.**, an Ohio corporation ("Contractor").

**WHEREAS**, Contractor and Owner entered into Contract No. 02573444X110 with an Effective Date of October 22, 2012 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the Parties hereby agree as follows:

1. In Exhibit C, the existing Rate Sheets dated January 1, 2014 shall be removed and replaced with the Contractor's Rates for Kentucky dated February 1, 2016 (the "Rate Sheet").
2. Except as amended by this Third Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Third Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Third Amendment Effective Date.

Ken DocuSigned by:  
By: Everett Phillips ly  
D4EDBB9429D245C...  
Name: Everett Phillips  
Title: Managing Director Distribution Operations  
Date: 3/23/2016 | 8:13 AM ET

Nels DocuSigned by:  
By: Jeff Jones , Inc.  
75D10209C4344D6...  
Name: Jeff Jones  
Title: Executive Vice President  
Date: 3/23/2016 | 12:05 PM ET



DocuSign Envelope ID: 918DF90B-D7C7-447B-A41D-2F60A10B374C



## CONFIDENTIAL

### Contract Routing Slip

| ROUTING          | Purpose              | Initials             | Date Signed            |
|------------------|----------------------|----------------------|------------------------|
| Sonia Pickens    | For your review      | <sup>DS</sup><br>SP  | 2/25/2016   2:45 PM ET |
| Matt Curtis      | For your review      | <sup>DS</sup><br>MC  | 2:53 PM ET             |
| Terri Stiltner   | For your review      | <sup>DS</sup><br>TS  | 2/25/2016   2:54 PM ET |
| Walter Sherry    | For your review      | <sup>DS</sup><br>WRS | 2/25/2016   3:40 PM ET |
| Mark Jackson     | For your review      |                      |                        |
| Greg Bell        | For your review      | <sup>DS</sup><br>GAB | 2/26/2016   7:28 AM ET |
| Everett Phillips | Amendment Signature  | <sup>DS</sup><br>EP  | 3/23/2016   8:13 AM ET |
| AEP Audit        | Copy                 |                      |                        |
| Gina Crabtree    | Document in File     | NR                   | NR                     |
| Jeff Jones       | Contractor Signature | NR                   | NR                     |

**Date:** February 23, 2016

**Company:** Kentucky Power Company

**Contractor Name:** Nelson Tree Service, Inc.

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 02573444X110 Amd#3

**Term:** October 23, 2012 – May 26, 2018

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** No change

**Description of Service/Work:** Updating and modifying of contract rates







## Certificate Of Completion

|  |                   |                            |
|--|-------------------|----------------------------|
| Envelope Id: 918DF90BD7C7447BA41D2F60A10B374C                      | Status: Completed |                            |
| Subject: AEP Contract No. 02573444X110; Amd#3: Nelson Tree Service |                   |                            |
| Source Envelope:   |                   |                            |
| Document Pages: 3  | Signatures: 2     | Envelope Originator:       |
| Certificate Pages: 3   | Initials: 6       | Gina Crabtree              |
| AutoNav: Enabled   |                   | 1 Riverside Plz FL 1       |
| Envelopeld Stamping: Enabled                                       |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                  |                   | gmcraabtree@aep.com        |
|  |                   | IP Address: 167.239.221.87 |

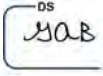
## Record Tracking

|   |  |                    |
|---|--|--------------------|
| Status: Original<br>2/23/2016 12:40:35 PM | Holder: Gina Crabtree<br>gmcraabtree@aep.com | Location: DocuSign |
|---|--|--------------------|

## Signer Events

| Signer Events  | Signature  | Timestamp  |
|--|--|--|
| Sonia Pickens<br>srvaughan@aep.com<br>Category Mgr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:                                | <br>Using IP Address: 166.175.188.236<br>Signed using mobile  | Sent: 2/23/2016 2:54:12 PM<br>Viewed: 2/25/2016 2:44:43 PM<br>Signed: 2/25/2016 2:45:12 PM |
| Matt Curtis<br>mpcurtis@aep.com<br>Mgr, T & D Contracts<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:       | <br>Using IP Address: 12.111.104.128<br>Signed using mobile | Sent: 2/25/2016 2:45:14 PM<br>Viewed: 2/25/2016 2:53:06 PM<br>Signed: 2/25/2016 2:53:33 PM |
| Terri Stiltner<br>tastiltner@aep.com<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/18/2015 3:27:15 PM<br>ID: 592a4afd-f450-4104-bdeb-635cbde989d5                              | <br>Using IP Address: 167.239.221.83                        | Sent: 2/25/2016 2:53:36 PM<br>Viewed: 2/25/2016 2:54:05 PM<br>Signed: 2/25/2016 2:54:22 PM |
| Walter A. Sherry<br>washerry@aep.com<br>Forestry Operation Manager<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 7/1/2014 7:08:14 PM<br>ID: ca043d9b-aaab-40e4-bee5-8c449d93d309 | <br>Using IP Address: 167.239.221.86                        | Sent: 2/25/2016 2:53:36 PM<br>Viewed: 2/25/2016 3:40:38 PM<br>Signed: 2/25/2016 3:40:49 PM |

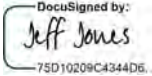
| Signer Events | Signature | Timestamp |
|---------------|-----------|-----------|
|---------------|-----------|-----------|

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|--|---|--|
| Gregory A Bell<br>gabell@aep.com<br>Security Level: Email, Account Authentication (None) | <br>Using IP Address: 167.239.221.86 | Sent: 2/25/2016 3:40:51 PM<br>Viewed: 2/26/2016 7:22:32 AM<br>Signed: 2/26/2016 7:28:31 AM |
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 ID: 60a7b411-0823-4913-b894-de97874ad78c

|   |   |  |
|---|---|--|
| Everett Phillips<br>egphillips@aep.com<br>Managing Director Distribution Operations<br>Security Level: Email, Account Authentication (None) | <br>Using IP Address: 167.239.221.81 | Sent: 3/22/2016 6:04:43 PM<br>Viewed: 3/23/2016 8:12:53 AM<br>Signed: 3/23/2016 8:13:52 AM |
|---|---|--|

Electronic Record and Signature Disclosure:  
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 ID: 0a7983a5-0efd-401d-b4b7-bbcb224a8091

|  |  |  |
|--|--|--|
| Jeff Jones<br>jeff@nelsontree.com<br>Executive Vice President<br>Nelson Tree Service, Inc.<br>Security Level: Email, Account Authentication (None) | <br>Using IP Address: 199.106.175.160 | Sent: 3/23/2016 8:13:54 AM<br>Viewed: 3/23/2016 12:04:47 PM<br>Signed: 3/23/2016 12:05:09 PM |
|--|--|--|

Electronic Record and Signature Disclosure:  
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| In Person Signer Events | Signature | Timestamp |
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|-------------------------|-----------|-----------|

| Editor Delivery Events | Status | Timestamp |
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|------------------------|--------|-----------|

| Agent Delivery Events | Status | Timestamp |
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| Intermediary Delivery Events | Status | Timestamp |
|------------------------------|--------|-----------|
|------------------------------|--------|-----------|

| Certified Delivery Events | Status | Timestamp |
|---------------------------|--------|-----------|
|---------------------------|--------|-----------|

| Carbon Copy Events | Status | Timestamp |
|--------------------|--------|-----------|
|--------------------|--------|-----------|

|   |   |                             |
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Electronic Record and Signature Disclosure:  
 Not Offered via DocuSign  
 ID:

| Notary Events | Timestamp |
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| Envelope Summary Events | Status | Timestamps |
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|---------------------|------------------|-----------------------|
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| Certified Delivered | Security Checked | 3/23/2016 12:05:12 PM |
| Signing Complete    | Security Checked | 3/23/2016 12:05:12 PM |
| Completed           | Security Checked | 3/23/2016 12:05:12 PM |

| Electronic Record and Signature Disclosure |
|--|
|--|

Electronic Record and Signature Disclosure created on: 5/30/2014 1:32:06 PM

Parties agreed to: Terri Stiltner, Walter A. Sherry, Gregory A Bell, Everett Phillips, Jeff Jones

**ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

DocuSign Envelope ID: 553146FA-6993-462A-9F0E-0B726A7F336B

**AMERICAN ELECTRIC POWER SYSTEM  
ENERGY DELIVERY  
TOTAL EVALUATED COST**

**COMPANY:** Kentucky Power **REGION:** AEP Kentucky  
**TYPE OF CONTRACT:** Contract **CONTRACT #:** 02573444X110  
**CONTRACTOR:** Nelson Tree Service  
**SCOPE OF WORK:** Vegetation Management Services  
**CONTRACT DATES:** 10/23/12 - 5/26/18

| SUMMARY OF PROJECTED COSTS:            | ORIGINAL* | REVISION 1 | REVISION 2 | REVISION 3 |
|--|-----------|------------|------------|------------|
| <i>Blanket Contract Value</i>          |           |            |            |            |
| <i>Increase Blanket Contract Value</i> |           |            |            |            |
| <i>TOTAL FROM ABOVE</i>                |           |            |            |            |

**REVISED TOTAL EVALUATED COST:**

**APPROVED BY:**  
**Signature:**   
**Name:** Everett Phillips  
**Title:** Mng Dir Dist Region Opers  
**Date:** 5/20/2016 | 3:44 PM ET

**PREPARED BY:**  
**Name:** Denise Tolliver  
**Date:** 5/19/2016

DocuSign Envelope ID: 553146FA-6993-462A-9F0E-0B726A7F336B



## CONFIDENTIAL

### Request to Increase Contract Spend Limit

| ROUTING          | Purpose  | Initials             | Date Signed             |
|------------------|----------|----------------------|-------------------------|
| Terri Stiltner   | Review   | <sup>DS</sup><br>WAS | 5/20/2016   11:15 AM ET |
| Walter Sherry    | Review   | <sup>DS</sup>        | 5/20/2016   12:08 PM ET |
| Billy D. Roll    | Review   | <sup>DS</sup><br>RB  | 5/20/2016   2:36 PM ET  |
| Greg Bell        | Review   | <sup>DS</sup><br>YOB | 5/20/2016   2:45 PM ET  |
| Everett Phillips | Approval | <sup>DS</sup><br>EP  | 5/20/2016   3:44 PM ET  |
| AEP Audit        | Copy     |                      |                         |

**Date:** 5/19/16  
**Owner:** AEPSC  
**Contractor Name:** Nelson Tree Service  
**Contract Number:** 02573444X110  
**Contract Analyst:** Denise Tolliver  
**Current Contract Value:** [REDACTED]  
**Term:** October 23, 2012 – May 26, 2018  
**Description of Service/Work:** Vegetation Services

This work was competitively bid in 2012 and a contract with Nelson was awarded, effective October 1, 2012. This contract with Nelson supports the Distribution territory within Kentucky Power. The original total spends for this contract was estimated to be [REDACTED] over the five-year term. This estimate was based upon historical data and anticipated spend known at the time the contract was executed (10/23/12).

The requested increased is for the use of crews to meet work demand and vendor diversification.





## Certificate Of Completion

|   |                   |                            |
|---|-------------------|----------------------------|
| Envelope Id: 553146FA6993462A9F0E0B726A7F336B                         | Status: Completed |                            |
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| Certificate Pages: 3  | Initials: 5       | Denise Tolliver            |
| AutoNav: Enabled  |                   | 1 Riverside Plz FL 1       |
| Envelopeld Stamping: Enabled  |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                     |                   | dltolliver@aep.com         |
|   |                   | IP Address: 167.239.221.86 |

## Record Tracking

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## Signer Events

Terri Stiltner  
tastiltner@aep.com  
Security Level: Email, Account Authentication (None)

## Signature

Using IP Address: 167.239.221.80

## Timestamp

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Electronic Record and Signature Disclosure:  
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Walter A. Sherry  
washerry@aep.com  
Forestry Operation Manager  
Security Level: Email, Account Authentication (None)

Using IP Address: 167.239.221.82

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Electronic Record and Signature Disclosure:  
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Dusty Roll  
droll@aep.com  
Security Level: Email, Account Authentication (None)

Using IP Address: 167.239.221.86

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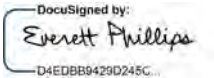
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Gregory A Bell  
gabell@aep.com  
Security Level: Email, Account Authentication (None)

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| Everett Phillips<br>egphillips@aep.com<br>Managing Director Distribution Operations<br>Security Level: Email, Account Authentication (None)<br><br>Electronic Record and Signature Disclosure:<br>Accepted: 7/3/2014 10:29:58 AM<br>ID: 0a7983a5-0efd-401d-b4b7-bbcb224a8091 | <br>Using IP Address: 76.177.167.14<br>Signed using mobile | Sent: 5/20/2016 2:45:42 PM<br>Viewed: 5/20/2016 3:44:07 PM<br>Signed: 5/20/2016 3:44:24 PM |

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| Intermediary Delivery Events | Status | Timestamp |
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| Notary Events | Timestamp |
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| Signing Complete        | Security Checked | 5/20/2016 3:44:25 PM |
| Completed               | Security Checked | 5/20/2016 3:44:25 PM |

| Electronic Record and Signature Disclosure |
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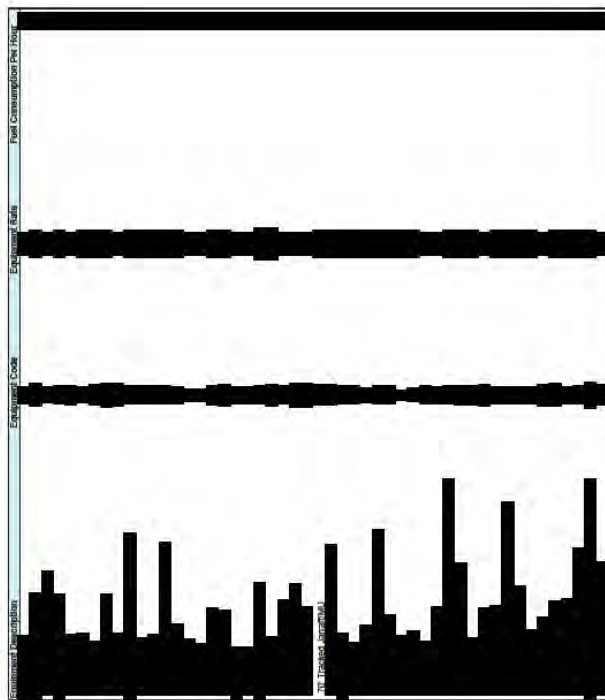
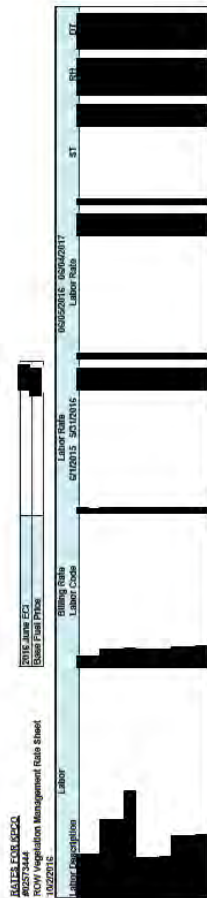
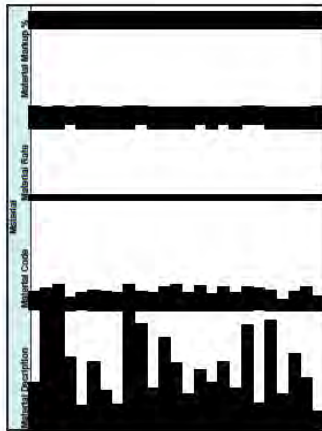
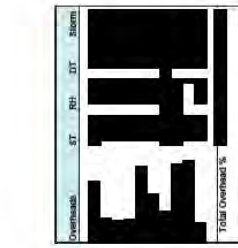
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Parties agreed to: Terri Stiltner, Walter A. Sherry, Dusty Roll, Gregory A Bell, Everett Phillips

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.



AGS1510010000  
 RCW Vegetation Management Rate Sheet  
 10/22/2015

0015 June 02  
 State Farm Price  
 06/05/2015 06/02/2017

DocuSign Envelope ID: 4B4A8BFA-BD19-4E1E-ADE7-6CFB12FF513B

## Pricing Change Order

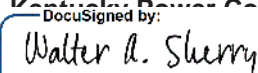
Contract No.: 02573444X110 Request Date: 10/10/2016  
 Owner: Billy Roll Effective Date: 10/10/2016  
 Authorized Reviewer: Walter Sherry Contractor: Nelson Tree Service

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

| Material |  |               |                         |                          |
|----------|--|---------------|-------------------------|--------------------------|
| Reason   | Material Description                     | Material Code | Material Rate (\$/unit) |                          |
| New      | Mower/W/o transport/support-rental basis | SS2R          | \$ 60.00                | 2.50 PER Gallon per hour |
|          |  |               |                         |                          |
|          |  |               |                         |                          |
|          |  |               |                         |                          |
|          |  |               |                         |                          |

**American Electric Power Service Corporation, as agent for**

**Kentucky Power Company**

DocuSigned by:  
  
 320F2FBB3E224DE...  
 Signature

walter A. Sherry

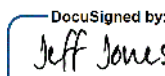
Name  
 Forestry operation Manager

Title

10/20/2016 | 11:58 AM EDT

Date

**Nelson Tree Service, Inc.**

DocuSigned by:  
  
 75D10209C4344D6...  
 Signature

Jeff Jones

Name  
 President

Title

10/20/2016 | 4:21 PM EDT

Date



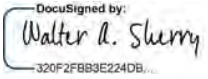
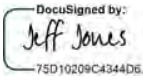
## Certificate Of Completion

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| Source Envelope:  |                            |
| Document Pages: 1   | Signatures: 2              |
| Certificate Pages: 3  | Initials: 0                |
| AutoNav: Enabled  | Envelope Originator:       |
| Envelopeld Stamping: Enabled  | Gina Crabtree              |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                                     | 1 Riverside Plz FL 1       |
|   | Columbus, OH 43215-2373    |
|   | gmcrabtree@aep.com         |
|   | IP Address: 167.239.221.82 |

## Record Tracking

|                       |                       |                    |
|-----------------------|-----------------------|--------------------|
| Status: Original      | Holder: Gina Crabtree | Location: DocuSign |
| 10/18/2016 9:13:10 AM | gmcrabtree@aep.com    |                    |

## Signer Events

| Signature  | Timestamp  |
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| <p><b>Completed</b></p> <p>Terri Stiltner<br/>           tastiltner@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Using IP Address: 167.239.221.80</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 6/18/2015 3:27:15 PM<br/>           ID: 592a4afd-f450-4104-bdeb-635cbde989d5</p>   | <p>Sent: 10/18/2016 9:15:24 AM<br/>           Viewed: 10/19/2016 7:08:33 AM<br/>           Signed: 10/19/2016 7:09:02 AM</p>   |
| <p><b>Completed</b></p> <p>Dusty Roll<br/>           droll@aep.com<br/>           Security Level: Email, Account Authentication (None)<br/>           Using IP Address: 167.239.221.80</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 10/20/2016 9:03:31 AM<br/>           ID: 02ee0363-53d5-4b20-9d1c-1ce0bc712e59</p>   | <p>Sent: 10/19/2016 7:09:03 AM<br/>           Viewed: 10/20/2016 9:03:31 AM<br/>           Signed: 10/20/2016 9:03:52 AM</p>   |
| <p><b>DocuSigned by:</b><br/> <br/> <small>320F2FBB9E224DB...</small></p> <p>Walter A. Sherry<br/>           washerry@aep.com<br/>           Forestry Operation Manager<br/>           Security Level: Email, Account Authentication (None)<br/>           Using IP Address: 167.239.221.85</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 7/1/2014 7:08:14 PM<br/>           ID: ca043d9b-eaab-40e4-bee5-8c449d93d309</p>                         | <p>Sent: 10/20/2016 9:03:53 AM<br/>           Viewed: 10/20/2016 11:42:11 AM<br/>           Signed: 10/20/2016 11:58:38 AM</p> |
| <p><b>DocuSigned by:</b><br/> <br/> <small>75D10209C4344D6...</small></p> <p>Jeff Jones<br/>           jeff@nelsontree.com<br/>           President<br/>           Nelson Tree Service, Inc.<br/>           Security Level: Email, Account Authentication (None)<br/>           Using IP Address: 199.106.175.160</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 10/20/2016 4:21:16 PM<br/>           ID: 848c5851-8966-45d0-bf3b-dd7adfb63a80</p> | <p>Sent: 10/20/2016 11:58:39 AM<br/>           Viewed: 10/20/2016 4:21:16 PM<br/>           Signed: 10/20/2016 4:21:54 PM</p>  |

| In Person Signer Events | Signature | Timestamp |
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| Editor Delivery Events  | Status    | Timestamp |
| Agent Delivery Events   | Status    | Timestamp |

| Intermediary Delivery Events | Status | Timestamp |
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| Electronic Record and Signature Disclosure |
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Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM  
Parties agreed to: Terri Stiltner, Dusty Roll, Walter A. Sherry, Jeff Jones

**ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.



#### **FOURTH AMENDMENT TO CONTRACT NO. 02573444X110**

This Fourth Amendment to Contract No. 02573444X110 (“Fourth Amendment”), executed to be effective October 16, 2016 (“Fourth Amendment Effective Date”), is by and between **Kentucky Power Company**, a Kentucky corporation (“Owner”) and Nelson Tree Service, Inc., an Ohio corporation (“Contractor”).

**WHEREAS**, Contractor and Owner entered into Contract No. 02573444X110 with an Effective Date of October 23, 2012 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the Parties hereby agree as follows:

1. In order to update Section 5 Pricing, remove the third paragraph in its entirety and replace with the following:

“Beginning June 1, 2015, and then on June 5, 2016 and June 4, 2017, Contractor’s labor rates will be adjusted using the Bureau of Labor Statistics, U.S. Department of Labor, Employment Cost Index (ECI) for Total Compensation (not seasonally adjusted), for (Table 9) Employment Cost Index for wages and salaries, for private industry workers, by occupational group and industry. The percent change for the 12-months ended in March of the year of the adjustment will be multiplied by the current labor rates to determine the adjusted labor rates.

All other rates in Contractor’s Rate Sheet may be revised annually. Proposed changes must be submitted by February 15<sup>th</sup> and, if accepted by Owner, shall become effective the first Sunday of June for that year.”

2. In Exhibit C, the existing Rate Sheets shall be removed in its entirety and replaced with the Contractor’s Rates dated October 2, 2016 (the “Rate Sheet”). These rates will be effective October 16, 2016.
3. In order to update Section 6 Fuel Adjustments in the Contract, remove in its entirety and replace with the following:

“The base fuel price is \$2.261 per gallon (“Base Fuel Price”) and will remain in effect until contract termination. The weekly fuel price is the state average for regular grade unleaded gasoline taken from the American Automobile Association’s website (“Weekly Fuel Price”). When preparing the weekly invoices, if that week’s Weekly Fuel Price differs from the Base Fuel Price by more than ten (10) cents, a fuel adjustment for each piece of equipment will be calculated by using the following formula:

Fuel adjustment = [(Weekly Fuel Price) – (Base Fuel Price)] x gallons/hour x Equipment hours billed

The gallons/hour figure is taken from the Contractor’s Rate Sheets in Exhibit C. The sum of the fuel adjustments for each piece of equipment used that week shall be added to or subtracted from that week’s invoice amount. If the Unit Price Model, as described in Exhibit C, is used and billing is

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done with a single invoice when all the Work is completed, the Weekly Fuel Price used shall be that for the week in which the invoice is being prepared.”

4. In order to update the AEP Kentucky Power Rate Clarifications in Exhibit C, the Rate Clarifications dated May 15, 2012 shall be removed in its entirety and replaced with the Rate Clarifications dated October 1, 2016, attached hereto and incorporated herein.
5. In order to update Exhibit B, remove AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated June 1, 2015 in its entirety and replace with AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission dated October 1, 2016 attached hereto and incorporated herein.
6. Except as amended by this Fourth Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Fourth Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Fourth Amendment Effective Date.

Ken DocuSigned by:  
*Everett Phillips* ly  
By: D4EDBB9429D245C...  
Name: Everett Phillips  
Title: Managing Director Distribution Operations  
Date: 10/19/2016 | 10:40 AM EDT

Nel DocuSigned by:  
*Jeff Jones* e, Inc.  
By: 75D10209C4344D6...  
Name: Jeff Jones  
Title: President  
Date: 10/20/2016 | 5:18 PM EDT



## Kentucky Power Rate Clarifications

October 1, 2016

### 1. Holidays

- a. Contractor holidays include New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.
- b. Owner recognizes the following additional holidays: Good Friday, the day after Thanksgiving, and the day before Christmas.
- c. Contractor shall not schedule work on Owner holidays unless requested in writing by Owner or the holiday has been agreed to as a regularly scheduled day.
- d. Contractor shall not bill Owner for its employees' holiday pay. Holiday pay is covered as part of the benefits mark-up.
- e. On years when a Contractor or Owner holiday falls on a weekend, Owner shall notify Contractor of the date the holiday will be observed.

### 2. Calculations and Examples

- a. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
- b. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday at Owner's request.
- c. When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.
- d. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in 2.a above.
- e. Calculation examples are provided below.

Straight Time Rate = Taken from table

Overtime Rate = Straight Time Rate x 1.5

Sunday/Holiday Rate = Straight Time Rate x 2

Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)

Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)

Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)

Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate +  
(Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) =$

$\$30.72$  Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) = \$33.40$

Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) =$

$\$40.94$  Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) =$

$\$44.52$

### 3. Herbicide Application

- a. When Contractor's employees are assigned to apply herbicides, their hourly rate will be increased by \$0.20. Anyone assigned to perform herbicide application must be certified, licensed, registered or otherwise qualified as required by the state where the Work is being performed or as otherwise required by law, statute or regulation. This increase does not apply to employees applying stump treatment as part of their normal daily duties.

### 4. Special Supervisor Payment

- a. If Owner has declared a major storm, or when otherwise determined by Owner and authorized in writing, Supervisors may be paid at the General Foreman straight time rate for all hours worked in excess of forty (40) per week. Contractor shall bill Owner the straight time rate without mark-ups.

### 5. Pay During Training

- a. Owner shall pay Contractor's employees' hourly rate while said employees attend either Owner-sponsored training or other training required and agreed to by Owner to obtain or retain a professional certification. All other training shall be Contractor's responsibility. Unless otherwise agreed to by Owner in writing, no other billing relating to attendance at training will be paid.

### 6. Per Diem Rates

- a. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from that individual's normal reporting site.
- b. Per Diem will not be paid if lodging and meals are provided by Owner.
- c. Contractor shall submit documentation with their invoice specifying the distance between home address of record or reporting site and work site for each individual claiming Per Diem

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on each submitted invoice. Contractor will submit to OPCO the employees due per diem using the template within this document.

- d. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
- e. The Per Diem rate is defined in the applicable contract rate sheets and includes lodging and meals.
- f. Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.
- g. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.
- h. **Definitions**
  - **Crew Cohesion** – The need of a crew member to stay overnight with a per diem eligible crew when that crew member may be within the mileage threshold but travel to the overnight stay location in a company vehicle.
  - **Emergency Assistance** – Owner's Designated Representative will have the authority to hold Contractor crews in an area during storm or other situations deemed an emergency when the mileage is less than in Bullet #1. If held in the an area the Contractor employee affected will be eligible for Per Diem if such charges would normally be incurred. All parties should understand this action is auditable and the time sheet and invoice must have the words Emergency Assistance and the forester's name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to Owner.
  - **Home Address** – The contract employee's legal address of record for tax purposes.
  - **Owner's Designated Representative** – Owner Designated Representative for daily forestry operations will be the OPCO/transmission region forester or OPCO/transmission forestry supervisor.
  - **Outsource or Off System** – Contractor employees that do not normally or exclusively work on the Owner's property and whose home address of record is 80 miles or more from the reporting site and is acceptable to Owner's Designated Representative.

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- **Per Diem** – Daily allowance for expenses that include housing and meals to cover expenses when traveling for work and agreed upon by the Contractor and the Owner's Designated Representative.
- **Reporting Site** – A Contractor designated location acceptable to the Owner's Designated Representative where the Contractor's trucks/equipment is parked and the employees go to get the trucks/equipment to travel to the work site. (In some regions called a show up location.) If a crew is starting its billable time at a reporting site, travel time to the work site shall not be more than thirty (30) minutes, via the most direct route, unless authorized by Owner's Designated Representative.
- **Work Flow Driven(LEAN)** – Owner Designated Representative will have the authority to instruct crews to stay overnight when the mileage is less than in Bullet #1. There are times when it is cost effective to have the crews stay overnight instead of returning to the home address of record or reporting site. For example, crew is working 45 miles from the reporting site and the next work location is in the same direction but is 85 miles from the reporting site. In this situation the forester will have the authority to authorize an overnight stay that would require a Per Diem payment since staying overnight is more productive than to return to the reporting site or home address of record. All parties should understand this action is auditable for work efficiencies and productivity and the time sheet and invoice must have the words Work Flow Driven(LEAN) and the foresters name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to owner.
- **Work Site** - The day's starting location for the performance of services ex, work site should be associated with vegetation management activities on the Company's rights-of-way.
  - i. When held over at the request of the Owner on regularly scheduled work days, crew members shall be eligible for a meal if held over for two hours or more after normal quitting time. Owner shall reimburse Contractor \$12.00 per meal for each crew member entitled to a meal unless meals are provided by Owner.
  - j. For Contractor employees entitled to a meal in accordance with the Supplementary Terms, Section 2, Item 2.8: Contractor personnel shall be off the clock for meal breaks. Owner shall reimburse Contractor \$12.00 per meal for each employee entitled to a meal unless meals are provided by Owner. Contractor personnel shall be on the clock for meals if they do not stop work to eat. Not stopping work to eat means eating on-the-fly at the jobsite (personnel spend less than 10 minutes eating) or while traveling from jobsite to jobsite. Owner shall not reimburse Contractor for breakfast or lunch meals if Contractor personnel return to their homes at night.

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Kentucky Power Distribution Forestry

|                  |  |
|------------------|--|
| Contractor Name: |  |
| General Foreman: |  |
| AEP Forester:    |  |
| Contract Number: |  |
| W/E Date:        |  |
| Reporting Site:  |  |



|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
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| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
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**Per Diem Eligibility Number:**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from the individual's normal reporting site.
2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

*Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.*



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# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010-04**

Effective Date: October 1, 2016

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AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

|   |                        |  |        |              |
|---|------------------------|--|--------|--------------|
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## Revision History

| Rev. | Description of Change(s)  | By           | Date      | Approved                    |
|------|---|--------------|-----------|-----------------------------|
| 0    | Original Issue  |              |           |                             |
| 1    | Update  |              | 5/14/2009 |                             |
| 2    | Update; formatting changes; addition of company specific guidelines; addition of referenced documents table; addition of end notes to link to other documents; review of document performed by Legal; | Kevin Patton | 9/10/2014 | Walter Sherry<br>12/14/2016 |
| 3    | Addition of Transmission Forestry construction clearing guidelines  | Kevin Patton | 5/1/2016  | Walter Sherry<br>5/4/2016   |
| 4    | Addition of reporting site location to the guidelines from language that was previously in the rate clarification section of the contract.  | Kevin Patton | 9/21/2016 | Walter Sherry<br>9/23/2016  |

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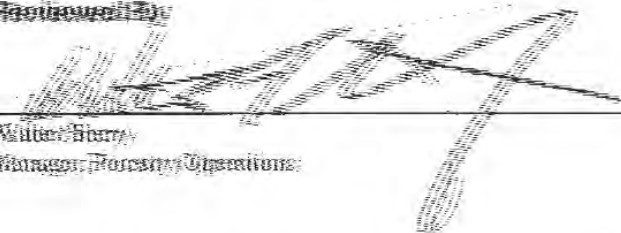
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### Revision Cycle

This document will be reviewed every three months for accuracy and changes to the scope of work.

### Signatures

Approved By:

  
Walter Berry, Manager, Forestry Operations

  
Dan

### Document Team

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American Electric Power Company, Inc.  
Transmission and Distribution Department

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## 2. Purpose

The purpose of these American Electric Power ("AEP") Forest Vegetation Management Guidelines is to document and inform AEP employees and its contractors of important criteria, practices, and procedures pertaining to initial vegetation assessment, information gathering, and the management of vegetation within rights-of-way. AEP incorporates these guidelines into each vegetation management permit to specify all applicable vegetation management Commission's conditions. These guidelines are to be read consistently with the contract documents and between AEP and its contractors. Where necessary, modifications to these guidelines may be necessary and applied to specific operating companies.

These guidelines conform to national industry standards, government regulations, and AEP standards and practices. Upon approval of this document by the information provided will be made available to the public and provided as a reference to AEP and its contractors. AEP and its contractors may also have the possibility of applying the most recent editions.

## 3. Definitions

**Brush:** Woody stem vegetation less than 60 (60) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation.

**Control:** 100% definition within a specified boundary for application of management practices that require a number of years to achieve a desired, significant improvement in habitat quality.

**Design Line:** A line drawn on the right-of-way within the project area to indicate the applicable lines.

**DBH:** Diameter of a tree at its girth. The diameter of a tree measured at the height of 4.5' (1.5 m) above the ground on the uphill side.

**Electric:** Vegetation and non-vegetation material such as poles, wires, proper branches, or other materials from the utility operation.

**Initial Assessment:** The process of field data collection and the provision of a detailed report to the contractor and the contractor.

**Range:** A four-foot buffer hanging in a tree or on the forest floor.

**Right-of-Way:** A term that refers to a road or other area that is used for the purpose of the utility operation.

**Tag:** The number and the position of a tree or other vegetation by AEP.


**Trimming:** The cutting of limbs and dead or failing limbs or branches with the ground or as otherwise directed by AEP.

**Utility:** A property owner or other party prohibiting the Contractor from managing vegetation as specified within the scope of, and according to, these guidelines and all applicable regulations, permits, and assessments.

**Utility:** The cutting of trees or other vegetation on a range or utility line.

**Utility:** The number and the position of a tree.

**Utility:** Woody stem vegetation greater than 60 (60) inches DBH.

|   |          |  |               |
|---|----------|--|---------------|
|  | ACCEPTED | Forestry: Vegetation Management Guidelines & Guide for Distribution and Operations | DATE: 8/14/17 |
|   | APPROVED | Line Clearing Operations   | DATE: 8/14/17 |

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## **III. Contractor Guidelines**

### **A. Safety**

The safety of all people (Contractors, public, and AEP employees) is the primary concern of AEP. Contractors shall comply with all applicable safety regulations and standards. Contractors shall comply with all applicable laws, rules, and regulations of public utility work safety. Any safety-related incident, injury, or loss shall be reported to the appropriate AEP personnel as specified by AEP management.

### **B. Reporting**

- 1) The Contractor shall establish reporting procedures as possible to the work.
- 2) All reporting decisions must be reported to the Owner.
- 3) The reporting site may be closed if it is determined to be excessive from the reporting site to the work site and the amount of work exceeds the work.

### **C. Personnel**

- 1) Contractors shall comply with all federal, state, and local laws to permit, certifications and licensing requirements necessary to perform vegetation management in specified operating areas.
- 2) All private work may be performed by the Contractor or its employees with an AEP line. Contractors shall not seek or receive compensation from any one except AEP for any work that is part of AEP's safety or vegetation management program. The same requirements will be required for Contractor employees.

### **D. Equipment**

- 1) Contractors shall provide sufficient equipment to work safely and to operate efficiently.
- 2) The minimum number of chainsaws on the job shall equal the number of personnel on the work area per contract agreement. Chainsaws and other tools shall be properly maintained by AEP forest personnel.
- 3) Each trimmer shall be provided with a complete set of equipment including rope, saddle, chainsaw, pump and fuel tank. Each trimmer shall be properly equipped and maintained as necessary and as required by the job.
- 4) The use of equipment in the field shall be avoided.

### **E. Overtime**

Overtime shall be as determined by the reporting company.

### **F. Work Procedures**

- 1) Contractor practices shall be compliant with applicable industry standards (e.g., ANSI, OSHA, and ISES) when ever practicable in the use of hand tools in the forest to reduce injury or property damage.



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21. Changes in the work schedule due to inclement weather, equipment breakdowns, or other circumstances must have prior approval by AEP's safety personnel.
22. The Contractor will be responsible for the selection and installation of equipment unless the assignment makes it impossible for AEP approval of the work schedule.
23. The AEP Contractor's responsibility for materials and equipment is limited to the items estimated in the assignment.
24. Contractor shall provide daily work status to AEP, including changes to the assignment throughout the day.
25. If there is any objection and/or change in procedure or cost to the work made by the Contractor, the Contractor shall perform the job in writing to report to the AEP personnel who are assigned to the job. AEP will not be responsible for any and all changes or additional work performed during the job.
26. An ongoing list of critical tasks, scheduled changes, or materials that have not been worked in the ongoing process shall be provided to AEP safety personnel. AEP will not be responsible for any and all changes or additional work performed during the job.
27. Contractor's work schedule is subject to change and quality of work is ongoing. However, the Contractor and AEP safety personnel assigned to the job shall be responsible for the safety of the job.
28. The Contractor shall handle any hazardous conditions found during the performance of work under the contract.

### 6. Public Relations

The Contractor's responsibility to AEP is to provide a safe and secure work environment for the workers.

11. When equipment or property will be made to contact property owners through personal notification, the Contractor, new or old, shall be notified. AEP will attempt to contact the owner and if the owner is not available, AEP will attempt to contact the owner through personal notification.
12. During ongoing work, the Contractor will attempt to notify the property owner of the work. If the owner is not available, the Contractor will attempt to notify the owner through personal notification. AEP will attempt to notify the owner through personal notification.
13. Contractor shall maintain all locations where the work is performed in a safe and secure environment. The Contractor shall be responsible for the safety of the workers.

### 7. Records

14. The Contractor shall maintain the project records with all personnel in the field.
15. The Contractor shall be responsible for the records of the project.
16. The Contractor shall be responsible for the records of the project.



AEP's best Vigilance in the field, and  
Procedures to guide the work and  
The Contractor's line of work.

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~~III. Damage Claims and Compensation~~

1. The Contractor shall be responsible for all damage claims and compensation due to its negligence. AEP shall be notified immediately of all claims and compensation.
2. An on-site investigation with the accident property owner shall be made as soon as possible. A claimant's attempt to contact the claimant shall be made within twenty (20) hours of receipt of the complaint. AEP's suppression of any, including the Contractor, during the investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled (within thirty (30) days) by the Contractor or the Contractor shall provide evidence to support a reasonable settlement.
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written notice of final AEP and the Contractor shall be obtained from the property owner/accident. The Contractor shall provide a copy of all supporting information to AEP.
5. The settlement amount is subject to the Contractor's final opinion with AEP. The final settlement will be authorized by summary work report in the office.
6. After thirty (30) days, if a Contractor fails to resolve a claim, the contractor must re-evaluate the claim or keep AEP fully informed. AEP may settle the claim and bill the Contractor.
7. Contractor's negligence or any AEP's activities due to negligence may be held due to Contractor's determination by AEP.

~~III. Performance Guidelines~~

~~A. Personnel~~

1. Stumps shall be cut as directed on the ground as presented to the contractor and shall be removed within the specified time frame, unless the situation presents application according to the instructions on the site as documented by a certified person. If necessary, the contractor shall be notified.
2. The contractor shall be responsible for the operation of the site as presented. The contractor shall be responsible for the work as presented by the contractor. The contractor shall be responsible for the removal of the stumps, the removal of the stumps, the removal of the stumps, and the removal of the stumps.
3. The contractor shall be responsible for the operation of the site as presented. The contractor shall be responsible for the work as presented by the contractor. The contractor shall be responsible for the removal of the stumps, the removal of the stumps, and the removal of the stumps.
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17. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.

18. The utility shall:

- 18.1. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.
- 18.2. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.

19. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.

**20. Planning**

- 20.1. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.
- 20.2. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.
- 20.3. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.
- 20.4. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.
- 20.5. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.

**21. Hazards and Clearance**

- 21.1. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.
- 21.2. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.
- 21.3. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.
- 21.4. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.

**22. Clearing and Re-clearing**

- 22.1. The utility shall provide a written report to the Commission within 30 days of the date of the Commission's order regarding the proposed remedial measures.

|  |   |                                      |
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33. All new utility lines and lines with personal property growing into the lines or crossing the lines shall be controlled by the opening company guidelines.
34. During construction and maintenance operations, any vegetation made contact with overhead lines shall be removed. The maintenance of these facilities shall be through the maintenance of the property owner.
35. Trees, brush, and existing stumps will be limited to a maximum height of 10 feet above the ground line. Where possible, the cut shall be parallel to the slope.
36. Trees shall be limited to a maximum height of 10 feet above the ground line. Any cross-cutted limbs or limbs that are a hazard to the public shall be promptly removed. No trees shall be cut or removed unless the owner of the property on which the trees are located has been notified in writing.
37. Trees to be cut shall be marked with a red flag or paint at the location of the cut. All trees to be cut shall be marked with a red flag or paint at the location of the cut. All trees to be cut shall be marked with a red flag or paint at the location of the cut.
38. Stumps of trees growing in lines shall be cut at a depth of 10 feet below the ground line. The stumps shall be cut at a depth of 10 feet below the ground line. The stumps shall be cut at a depth of 10 feet below the ground line.
39. As designated by WEP Company, brush and logs may be piled at the edge of the right-of-way for removal.
40. In the event of a fire, any vegetation shall be removed or managed to prevent the spread of fire. In the event of a fire, any vegetation shall be removed or managed to prevent the spread of fire.

### III. Maintenance Application

1. All wood by-products that have the potential of growing into the lines or impair access shall be controlled by the opening company.
2. Contractors are required to maintain accounts and update records of all maintenance applications made as required by all Federal, State, and local laws.
3. The contractor shall be required to maintain a minimum of 40% of the vegetation cut by the opening company of the targeted vegetation. Any excess cut material to be controlled requirements shall be removed from the contractor's property.
4. WEP Company may make vegetation management prescriptions in accordance with the contract.
5. Property owner and all equipment used by the contractor shall be notified by WEP Company upon arrival for maintenance.
6. All vegetation public rights of way and shall be limited to a maximum height of 10 feet above the ground line.



AG's First Set of Data Requests  
Procedures, Rules, and Regulations  
AG's First Set of Data Requests

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77. Contractor shall be responsible for obtaining all permits for the application.
78. Written approval of all quality control programs by AEP Foresty representative is essential to the material within appropriate electrical clearance.

### **E. Tree Growth Regulator Application**

1. The use of growth regulator for tree growth regulation shall be assessed with an approved tree growth regulator (TRGR) in accordance with the instructions.
2. All TRGR shall be inspected by the Contractor in a field and in a laboratory prior to treatment. Use of growth regulator shall not be used unless approved by AEP Foresty.
3. If approved, written instructions shall be provided to the Contractor in a field and in a laboratory representative of the equipment.

### **G. Wires**

Written approval of all wires from AEP Foresty facilities and to be used with an appropriate electrical as designated by AEP Foresty representative. If all high voltage wires from the facilities may damage equipment and endanger the employees.


### **H. Vegetation Clearances**

Written approval of the recommendation may be necessary and applicable to specific vegetation company guidelines and permit conditions in permit and clearance.

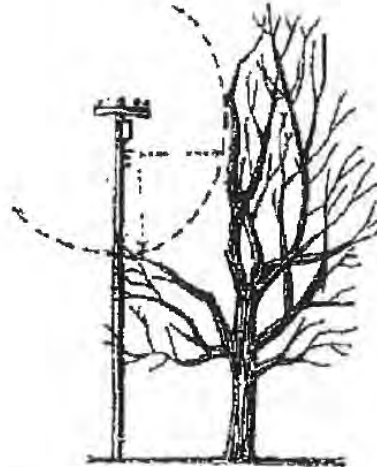
Minimum clearance of 6 feet to be maintained in all areas that will be present except in any AEP conductor for a minimum of three (3) years. The species shall be removed or removed away during wind conditions and the distance between the trees shall be considered when determining the clearance requirements.

### **A. Primary Clearances**

Minimum clearance of 6 feet to be maintained in all areas that will be present except in any AEP conductor for a minimum of three (3) years. The species shall be removed or removed away during wind conditions and the distance between the trees shall be considered when determining the clearance requirements.

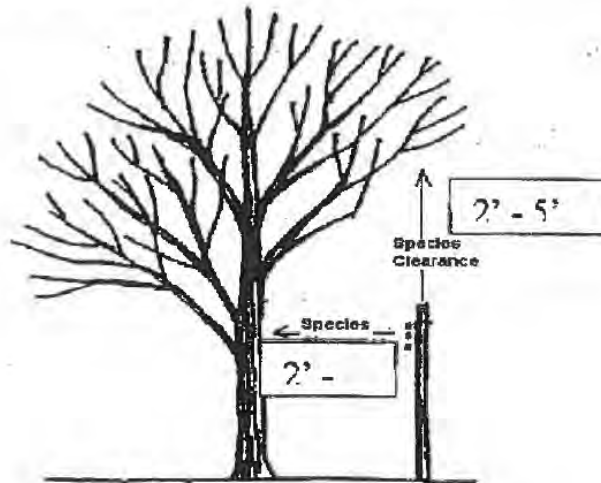
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|  | <p>AEP Foresty Vegetation / Pruning Guidelines Line Clearances</p> | <p>Management Goals Distribution and Operations</p> | <p>2017-2018</p> |
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### B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



### C. Service Drops and Street Light Conductors

Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.

|  |  |        |               |
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~~D. Process and Scope~~

~~1. Review and apply any procedures to mitigate any possible impact on the specific facilities and equipment owned by AEP or its representatives;~~

~~2. Take the appropriate steps to obtain a minimum of 72 hours notice of any outages or other events that may be specified by any AEP or its representatives;~~

~~E. Access~~

~~1. Install location, ~~800-441-0000~~ from AEP or other facilities, and access with an appropriate level of access designated by AEP or its representatives. Alling to new power facilities may damage equipment and endanger the employees.~~



AEP Core and Region Management  
Procedures  
Transmission Line Construction

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4. Contractors shall provide evidence of training to employees related to tree felling upon request.

### C. Clearances


The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| Right-of-way No Restrictions   | Right-of-way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2.</b>                   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |

<sup>4</sup> Upon completion of maintenance

|   |  |        |               |
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**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |


### D. Transmission Dispatch Communication Procedures

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

### E. Transmission Forestry Construction Guidelines

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

<sup>5</sup>ANSI Z133-2012.

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All removal/trimming shall be done in accordance with the best recognized and approved practices of the industry for the type and class of work, with particular emphasis on current tree health and clearance.

The full width of the right-of-way, as determined by assessment agreements, shall be clear of all utility lines and other obstructions. Special Conditions List.

Approved Work practices will provide a clear and safe work area with the handling of any debris to the satisfaction of the Property Owner. Work not in the contract will be done at the discretion of the Property Owner. Work will be done in accordance with the contract and any modifications from the Contract are to be done starting work on the property.

**1. Contractor Qualifications**

Contractor practices shall be in compliance with applicable industry standards (e.g., ANSI, OSHA, NFPA) when working on utility sites and shall be successful in the work of the project.

**2. Clearing**

The right-of-way shall be cleared with bulldozer, excavator, or other equipment as specified in the contract. The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris.

Contractor will take whatever measures necessary to appear in the SWPPP and to be in compliance with the special conditions present in the contract. The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris.

The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris.

**3. Time and Cost Estimate**

The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris.

The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris. The contractor shall be responsible for the removal of all stumps and debris.

- Stumps shall be cut and removed within the time frame of the contract.
- Stumps shall be cut and removed within the time frame of the contract.
- Stumps shall be cut and removed within the time frame of the contract.
- Stumps shall be cut and removed within the time frame of the contract.

|  |                     |                      |                  |
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|  | Project: [Redacted] | Date: [Redacted]     | Page: [Redacted] |
|  | Process: [Redacted] | Operator: [Redacted] | [Redacted]       |



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20. Height may be reduced in the right-of-way as is deemed practical. The maximum height will be as of the height will be preserved to the maximum extent possible.

21. Alternatives to the above height and/or conditions are the following:

- Clearance and Obstruction: Height may be reduced in the right-of-way by cutting and by compacting piles with a crawler-type equipment at selected locations (approximate in (approximate) in the right-of-way) as is deemed practical in the construction path.
- Clearance and Obstruction: Height may be reduced in the right-of-way by cutting or re-cutting on the right-of-way as is deemed practical in the construction path and on the right-of-way but as is deemed practical in the right-of-way as possible.
- Clearance and Obstruction: Where required by right-of-way agreement, height shall be reduced or re-cut as is deemed practical in the right-of-way.
- Clearing and Grading: Clearing and grading work shall be done in a manner that may be suitable with the access of equipment.
- Clearing and Grading: Clearing and grading shall be done in the right-of-way agreement and in accordance with applicable regulations. This method requires approval by the Manager of Forestry Operations.

**F. Hazard Trees**

1. Hazard trees (outside of right-of-way) will be cut or removed and the logs and chips will be left on the site. Where the condition of a ground tree makes it over 100 feet tall, the trees shall be cut to the required clearance will be cut. Refer to Section VII on page 11 for additional information.

**G. Herbicide**

1. Application of all herbicides shall be performed as required by federal, state, and local laws. The contractor will remain liable for all pesticides, including proper disposal of their containers, and insure their use in accordance with the label instructions. All work will be done as defined in Section VII, Application on page 11.

**H. Fences and Crops**

1. All fences shall be cut and be removed and to be left on site by the contractor without repair. All utility and other lines shall be repaired and replaced as required.

2. Contractor is responsible for the right-of-way. All damage shall be repaired and the contractor agrees to provide a necessary damage to growing crops on the properties and agrees to pay the cost and to the bank was used for any unnecessary damage to growing crops and to the properties. All shall be the sole judge of what is or is not "necessary" and "unnecessary" damage under the conditions.



AEP Foresty, Vegetation Management Goals  
 Planning & Construction Division  
 Transmission Line Construction

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## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species   |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d'arc (Osage orange, hedge tree) |

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| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |

### 1. Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

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### B. Distribution Operating Company Specific Guidelines

1. AEP Ohio
2. AEP Texas
3. Appalachian Power
4. Indiana Michigan Power
5. Kentucky Power
6. Public Service of Oklahoma
7. Southwestern Electric Power Company
8. Westing Power



AEP | Energy Management | Transmission | Distribution | Generation | Gas | Pipelines | Environmental & Safety | Regulatory & Compliance | Information Technology | Human Resources | Procurement | Finance | Legal | Public Affairs | Corporate Governance | Risk Management | Security | Insurance | Environmental & Safety | Regulatory & Compliance | Information Technology | Human Resources | Procurement | Finance | Legal | Public Affairs | Corporate Governance | Risk Management | Security | Insurance

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## C. Referenced Documents and Specifications

| Title  | Year | Version                              | Pages |
|--|------|--------------------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2                           | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                                      | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                             |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI <sup>®</sup> Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI <sup>®</sup> A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI <sup>®</sup> A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI <sup>®</sup> A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition                       | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008                        | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition                        | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                             |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                             |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                             |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                             |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                             |       |

<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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|   |      |               |       |
|---|------|---------------|-------|
| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

<sup>1</sup> American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006), Tree Care Industry Association, Manchester, NH

<sup>ii</sup> Best Management Practices – Utility Pruning of Trees. International Society of Arboriculture. Champaign, IL

<sup>iii</sup> American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006), Tree Care Industry Association, Manchester, NH

<sup>iv</sup> Supplementary Terms and Conditions for Forestry Contracts. American Electric Power

<sup>v</sup> AEP General Terms and Conditions for Labor and Services. American Electric Power

<sup>vi</sup> AEP General Terms and Conditions for Labor and Services. American Electric Power

<sup>vii</sup> AEP General Terms and Conditions for Labor and Services. American Electric Power

<sup>viii</sup> Supplementary Terms and Conditions for Forestry Contracts. American Electric Power

<sup>ix</sup> Supplementary Terms and Conditions for Forestry Contracts. American Electric Power

<sup>x</sup> Supplementary Terms and Conditions for Forestry Contracts. American Electric Power

<sup>xi</sup> Supplementary Terms and Conditions for Forestry Contracts. American Electric Power

<sup>xii</sup> Supplementary Terms and Conditions for Forestry Contracts. American Electric Power

<sup>xiii</sup> AEP General Terms and Conditions for Labor and Services. American Electric Power

<sup>xiv</sup> AEP Vegetation Management Ground Spray Requirements. American Electric Power

<sup>xv</sup> AEP Vegetation Management Ground Spray Requirements. American Electric Power

<sup>xvi</sup> AEP Vegetation Management Ground Spray Requirements. American Electric Power

<sup>xvii</sup> Managing Hazard Trees on FAC-003 Applicable Circuits. American Electric Power

<sup>xviii</sup> American National Standard for Arboricultural Operations – Safety Requirements. International Society of Arboriculture. Champaign, IL

<sup>xix</sup> American National Standard for Arboricultural Operations – Safety Requirements. International Society of Arboriculture. Champaign, IL

<sup>xx</sup> American National Standard for Arboricultural Operations – Safety Requirements. International Society of Arboriculture. Champaign, IL

<sup>xxi</sup> American National Standard for Arboricultural Operations – Safety Requirements. International Society of Arboriculture. Champaign, IL

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## CONFIDENTIAL

### Contract Routing Slip

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| Sonia Pickens    | For your review      | <sup>DS</sup><br>SP  | 10/17/2016   3:52 PM EDT  |
| Kevin Patton     | For your review      | <sup>DS</sup><br>KBP | 10/17/2016   4:45 PM EDT  |
| Matt Curtis      | For your review      | <sup>DS</sup><br>MC  | 10/17/2016   5:14 PM EDT  |
| Dusty Roll       | For your review      | <sup>DS</sup><br>DR  | 10/17/2016   6:13 PM EDT  |
| Walter Sherry    | For your review      | <sup>DS</sup><br>WAS | 10/17/2016   7:37 PM EDT  |
| Greg Bell        | For your review      | <sup>DS</sup><br>GAB | 10/19/2016   7:44 AM EDT  |
| Everett Phillips | Amendment Signature  | <sup>DS</sup><br>EP  | 10/19/2016   10:40 AM EDT |
| AEP Audit        | Copy                 | NR                   | NR                        |
| Terri Stiltner   | Copy                 | NR                   | NR                        |
| Jeff Jones       | Contractor Signature | NR                   | NR                        |

**Date:** October 17, 2016

**Company:** Kentucky Power Company

**Contractor Name:** Nelson Tree Service, Inc.

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 02573444X110 Amd#4

**Term:** October 23, 2012 – May 26, 2018

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** No change

**Description of Service/Work:** Updating ECI table reference, rates, fuel rate, rate clarifications, and forestry goals and procedure document







## Certificate Of Completion

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| Certificate Pages: 4   | Initials: 7       | Gina Crabtree              |
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| Envelopeld Stamping: Enabled                                       |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                  |                   | gmcrabtree@aep.com         |
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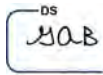
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## Signer Events

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| Kevin Patton<br>kbpattson@aep.com<br>Business Analyst Sr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/5/2014 2:08:35 PM<br>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409 | <br>Using IP Address: 12.111.104.128<br>Signed using mobile | Sent: 10/17/2016 3:52:12 PM<br>Viewed: 10/17/2016 4:42:24 PM<br>Signed: 10/17/2016 4:45:21 PM |
| Matt Curtis<br>mpcurtis@aep.com<br>Director, T&D Services<br>American Electric Power Service Corporation<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:                      | <br>Using IP Address: 165.171.240.45<br>Signed using mobile | Sent: 10/17/2016 3:52:11 PM<br>Viewed: 10/17/2016 5:14:08 PM<br>Signed: 10/17/2016 5:14:20 PM |

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Gregory A Bell  
 gabell@aep.com  
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Walter A. Sherry  
 washerry@aep.com  
 Forestry Operation Manager  
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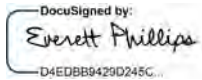


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Everett Phillips  
 egphillips@aep.com  
 Managing Director Distribution Operations  
 Security Level: Email, Account Authentication (None)

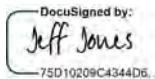


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 ID: 0a7983a5-0efd-401d-b4b7-bbcb224a8091

Jeff Jones  
 jeff@nelsontree.com  
 President  
 Nelson Tree Service, Inc.  
 Security Level: Email, Account Authentication (None)



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| Agent Delivery Events | Status | Timestamp |
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| Intermediary Delivery Events | Status | Timestamp |
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| Certified Delivery Events | Status | Timestamp |
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| Carbon Copy Events | Status | Timestamp |
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 gbscontractassessments@aep.com  
 Security Level: Email, Account Authentication (None)



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 ID:

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| Notary Events | Timestamp |
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| Signing Complete        | Security Checked | 10/20/2016 5:18:30 PM |
| Completed               | Security Checked | 10/20/2016 5:18:30 PM |

| Electronic Record and Signature Disclosure |
|--|
|--|

Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Dusty Roll, Kevin Patton, Gregory A Bell, Walter A. Sherry, Everett Phillips, Jeff Jones, Terri Stiltner

### **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

**CONTRACT LETTER FOR  
CONTRACT NO. 026972840000X103**

This Contract No. 026972840000X103 ("Contract") is made to be effective as of the 1<sup>st</sup> day of April 2014 (the "Effective Date") by and between **American Electric Power Service Corporation**, a New York corporation, as agent for the operating companies of the **American Electric Power System** ("Owner"), with offices at 1 Riverside Plaza, Columbus, Ohio 43215 and **Summit Helicopters, Inc.**, a Virginia corporation ("Contractor"), with offices at 595 Cougar Drive, Cloverdale, VA 24077.

**1. DESCRIPTION OF SERVICES**

Subject to the terms and conditions hereof, Contractor agrees to furnish to Owner on an as-needed basis all supervision, labor, transportation, equipment, tools and specified materials necessary to perform aerial herbicide application, aerial inspection services, emergency aerial patrols and video services, as further described in Exhibit C. Services may also include aerial lifting and setting of wood and steel structures and aerial wire pulling. Contractor agrees to provide a dedicated Contractor helicopter and crew on-call 24 hours a day, 7 days a week.

Services may be requested by either Owner's Transmission Field Services ("TFS") department or Owner's Forestry department. Each department has their own unique performance requirements and standards represented by the Contract documents identified in Section 3. If Contractor has questions regarding the applicability of a Contract document for any requested services, it is the Contractor's responsible to request clarification from Owner prior to the performance of services.

The parties agree the execution of this Contract does not authorize Contractor to begin performance of services. This Contract covers only such services as may be assigned by Owner to Contractor, with no guarantees of a minimum volume of services.

The execution of this Contract does not constitute an exclusive relationship between the parties. Owner reserves the right, at any time, to use its own forces, equipment, tools, conveyances and materials or those of another contractor to perform the same or similar services.

**2. ENGAGEMENT PROCESS**

This Contract is intended to be a master agreement under which Owner may request services to be performed by Contractor on an as needed basis. Services shall be requested by Owner either by verbal, written or electronic request ("Work Request"). All verbal requests shall be followed by a written confirmation. Each Work Request shall contain a detailed description of the requested services, the location, start and completion dates, pricing method, points of contact and other pertinent information.

Upon receipt of a Work Request, Contractor shall promptly perform the services described in said Work Request. Each Work Request shall be governed by the terms, conditions and provisions of this Contract, whether or not such statement is made or included in any individual Work Request.

The parties agree that any terms and conditions inconsistent with, additional to, or different than this Contract that may be preprinted or attached to a quote, acknowledgement, Work Request, or any other document that the parties may use for the ordering of services hereunder shall not apply and each party hereby rejects all such terms and conditions.



### 3. CONTRACT DOCUMENTS, INCORPORATION AND PRIORITY

Contractor and Owner agree that Work will be performed in accordance with the following Contract documents, attached hereto unless otherwise noted, incorporated herein, and listed below in their order of priority in the event of a conflict between the documents:

- a. This Contract Letter;
- b. AEP General Terms and Conditions for Labor and Services, March 2009 Rev. 2 dated 7/12 ("General Terms"), AEP Transmission Supplemental Safety Terms and Conditions, Version 8 dated 11/01/2012, AEP Supplementary Terms and Conditions for Forestry Contracts dated 06/24/2011, and AEP Security & Aviation Aircraft Deconfliction Policy and Procedures, Version 1.0 dated 07/15/2013, collectively designated as Exhibit A;
- c. Transmission Vegetation Management Program, Rev. 12 effective 07/31/2013, AEP Forestry Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations dated 05/14/2009, and AEP Transmission Guidelines for Monthly Unvouchered Liabilities dated 02/2014, collectively designated as Exhibit B;
- d. Aerial Herbicide Application Requirements dated 3/10/14, Forestry Operations Aerial Patrol Requirements dated 3/10/14, and Transmission Helicopter Patrol Requirements dated 3/10/14, collectively designated as Exhibit C;
- e. Contractor's Aerial Herbicide Application Rates and Aerial Patrol Rates, both dated effective 4/1/14, collectively designated as Exhibit D;
- f. Work Request(s).

The following documents apply only to services performed for Transmission Field Services:

- (1) AEP Transmission Supplemental Safety Terms and Conditions.
- (2) AEP Transmission Guidelines for Monthly Unvouchered Liabilities.
- (3) Transmission Helicopter Patrol Requirements.

The following documents apply only to services performed for Forestry:

- (1) AEP Supplementary Terms and Conditions for Forestry Contracts.
- (2) Transmission Vegetation Management Program.
- (3) AEP Forestry Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations.
- (4) Aerial Herbicide Application Requirements and Forestry Operations Aerial Patrol Requirements.

### 4. TERM

The term of the Contract shall commence on the Effective Date and shall remain in full force and effect through March 31, 2019, unless earlier terminated in accordance with this Contract. If this Contract is terminated or expires prior to services under a Work Request being completed, unless the parties agree otherwise in a signed writing, the services under such Work Request shall be completed pursuant to the terms of this Contract.

### 5. PRICING AND PAYMENT TERMS

The parties agree that Contractor shall be compensated for the satisfactory performance of services in accordance with the rates contained in Exhibit D. Should the price of fuel exceed [REDACTED] per gallon, Owner shall pay a fuel surcharge for the amount over [REDACTED] per gallon. Owner may also, from time to

time, request Contractor to participate in a competitive bid process, or Owner may request lump sum, not to exceed, or other mutually agreed to pricing from the Contractor. Such alternative pricing structures shall be defined and mutually agreed to by the parties in a Work Request. Prior to performing any services that would result in billing in excess of the amount stated in any Work Request, Contractor must receive written approval from Owner's authorized representative.

## 6. INVOICING REQUIREMENTS

### a. FORESTRY INVOICING

Contractor shall create timesheets in Owner's Right-of-Way Management ("RWM") software system, or other applicable system as designated by Owner, weekly, in arrears.

Retention will not be withheld on Contractor invoices.

### b. TRANSMISSION FIELD SERVICES INVOICING

Each invoice shall include the following minimum information, and any other information as may be requested by Owner:

- a. unique invoice number;
- b. Contract number, appropriate Release/Work Request number and work order number(s);
- c. detailed line item description of the Work and deliverables billed
- d. Hourly or unit rates, as applicable;
- e. location receiving the Work or deliverables;
- f. if no direct pay permit or exemption certificate, the rate and amount of taxes being billed; and
- g. total amount of the invoice.

Contractor shall mail invoices to:  
Email In-box: TO\_Invoice@aep.com

Retention will not be withheld on Contractor invoices.

## 7. NOTICES

In accordance with Article 33 of the General Terms, the representatives of the parties for receipt of notices are:

For Owner: Sonia Pickens, Contract Analyst  
1 Riverside Plaza, 9<sup>th</sup> floor  
Columbus, OH 43215  
614-716-1357 / srvaughan@aep.com

For Contractor: John Milko, Secretary/Treasurer  
595 Cougar Drive  
Cloverdale, VA 24077  
540-992-5500 / summitsales@rbnet.com

**8. OPERATION CONTACTS**

**FORESTRY:**

| Name           | Role                             | Email             | Phone        |
|----------------|----------------------------------|-------------------|--------------|
| Walter Sherry  | Manager Forestry Operations      | washerry@aep.com  | 614-716-2772 |
| Richard Karber | East Supervisor (IN, MI, OH, WV) | rlkarber@aep.com  | 260-897-8090 |
| Rick Mowbray   | East Supervisor (KY, TN, WV, VA) | drmowbray@aep.com | 540-427-3627 |
| Jim Crusier    | West Supervisor (TX, LA, OK, AR) | jgcruser@aep.com  | 361-881-5738 |

**TRANSMISSION FIELD SERVICES:**

| Name            | Role                                 | Email              | Phone        |
|-----------------|--------------------------------------|--------------------|--------------|
| <b>EAST</b>     |                                      |                    |              |
| John Rayburn    | Trans Line Mgr (Ops – Roanoke)       | jrrayburn@aep.com  | 304-746-2593 |
| Gary Fawley     | Trans Line Mgr (Ops - Ft. Wayne)     | grfawley@aep.com   | 260-408-3411 |
| Jonathan Cronin | Trans Line Mgr (Ops – Pataskala)     | jdchronin2@aep.com | 740-964-5420 |
| Bradly Sutter   | Trans Line Mgr (Construction)        | bjsutter@aep.com   | 740-774-7022 |
| <b>WEST</b>     |                                      |                    |              |
| Dale Darter     | Trans Line Mgr (Ops PSO/SWEPCO)      | erdarter@aep.com   | 903-234-7347 |
| Jimmy Emmert    | Trans Line Mgr (Ops - Texas Central) | jlemmertjr@aep.com | 361-242-3638 |
| Steve Thomas    | Trans Line Mgr (Ops - Texas North)   | stthomas@aep.com   | 325-674-7523 |
| Kenneth Godwin  | Trans Line Mgr (Construction)        | kwgodwin@aep.com   | 918-599-2474 |

**9. MISCELLANEOUS**

Contractor agrees:

- a. to provide Owner with a copy of their West Virginia Contractor's License prior to the performance of services in West Virginia;
- b. to not attempt to perform any Work outside of the capabilities of its equipment ratings;
- c. to meet with the Owner's local representative and review safety recommendations prior to the performance of services;
- d. to strictly abide by Article 5.0 Assignment and Subcontracting of the General Terms.
- e. to maintain with Owner throughout the term of the Contract a current certificate of insurance (COI) in accordance with Article 16.0 of the General Terms. COI submittals should be either mailed or emailed to the Contract Analyst noted in Section 7;
- f. to maintain a current COI within the helicopter during performance of services under this Contract;
- g. to provide Owner with notice in the event Contractor's Interstate Experience Modification Rating (EMR) exceeds 1.0 during the term of the Contract.

All capitalized terms not defined herein are as defined in the General Terms.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be signed by their respective duly authorized officers on the dates set forth below to be effective as of the Effective Date.

American Electric Power Service Corporation,  
as agent for the operating companies of the  
American Electric Power system

*Handwritten:* ~~Redacted~~

Summit Helicopters, Inc.

  
\_\_\_\_\_  
Thomas L. Kirkpatrick  
Vice President - Customer Services, Marketing  
& Distribution Services

  
\_\_\_\_\_  
Carl Milko  
President

*4/2/2014*  
\_\_\_\_\_  
date

*4/4/2014*  
\_\_\_\_\_  
date



# EXHIBIT A

- AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES, MARCH 2009 REV. 2 DATED 7/12
- AEP TRANSMISSION SUPPLEMENTAL SAFETY TERMS & CONDITIONS, V. 8 DATED 11/01/12
- AEP SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS DATED 6/24/11
- AEP SECURITY & AVIATION AIRCRAFT DECONFLICTION POLICY AND PROCEDURES, V.1 DATED 7/15/13



# *AMERICAN ELECTRIC POWER*

## **AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES**

**March 2009 Rev. 2 dated 7/12**



AMERICAN ELECTRIC POWER

ALL EMPLOYEES, TERMS AND CONDITIONS FOR  
LABOR AND SERVICES

March 1999 Rev. 2 dated 7/11

UNIT 1000

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**AFFIDAVIT OF COMPLETION**

**Exhibit 1**

## AEP GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES

### 1.0 DEFINITIONS

- 1.1 Business Day: "Business Day" means any calendar day, other than a Saturday or Sunday or a calendar day on which U.S. commercial banking institutions are authorized or required by law to close.
- 1.2 Change Order: "Change Order" means a written order as defined and issued in accordance with Article 12.0.
- 1.3 Contract: "Contract" means collectively the Contracting Instrument and all documents referenced in the Contracting Instrument and any Change Orders, amendments or addenda.
- 1.4 Contract Price: "Contract Price" means the price to be paid to the Contractor for the performance of Work as set forth in the Contracting Instrument.
- 1.5 Contracting Instrument: "Contracting Instrument" means the contractual document that identifies the parties, the nature of the Work, the Contract Price, documents to be included as part of a Contract, and other matters relating to a Contract. The Contracting Instrument may be in the form of a contract letter, blanket purchase order, purchase order or other similar documents.
- 1.6 Contractor: "Contractor" means the entity contracting with Owner for the performance of Work.
- 1.7 Direct Cost: "Direct Cost" means the actual costs and charges incurred and payments made by Contractor, its Subcontractors, for Site equipment, materials, services and labor (including payroll burden and expenses) which are directly attributable to the performance of Contractor's Work hereunder. Direct Cost includes Contractor's home office or Site labor to the extent Contractor's home office or Site labor is directly assignable to the Work which must be demonstrable under the circumstances. Direct Cost shall not include corporate, general and administrative costs including home office functions, sales, marketing, accounting, human resources, information technology, payroll, profit, research, development, quality assurance and control, purchasing, safety, management, administration, warranties, insurances, off-Site or other unabsorbed costs.
- 1.8 Final Acceptance: "Final Acceptance" means Owner's determination that the Work has been completed in accordance with the Contract requirements.
- 1.9 Initial Acceptance: "Initial Acceptance" means Owner's determination prior to final inspection and testing that the Work conforms to the Contract requirements for purposes of receipt.
- 1.10 Owner: "Owner" means any one or more of the companies of the American Electric Power System as may be specified in the Contract Instrument.
- 1.11 Site: "Site" means Owner's property or such other premises (including adjacent bodies of water and property owned or controlled by a third-party) upon which the Work is to be performed.
- 1.12 Subcontractor: "Subcontractor" means vendors, suppliers, consultants, and subcontractors of any tier, materialmen, professionals, laborers, and all other persons providing equipment, materials or services directly or indirectly to Contractor in connection with the Work.
- 1.13 Work: "Work" means all of Contractor's obligations under the Contract.

## 2.0 CONTRACTOR'S OBLIGATIONS

- 2.1 Contractor shall at its expense provide everything necessary for the complete, proper and timely execution of the Work including, but not limited to, home office support, supervision, labor, tools, transportation, safety equipment, construction equipment, temporary utilities and facilities, equipment to be installed, materials and supplies, unless explicitly excluded in the Contract. Contractor's performance of the Work shall include everything requisite and necessary to comply with prudent electric utility industry standards and to complete its Work, notwithstanding the fact that every item necessarily involved may not be specifically mentioned. Details and items not indicated by the Contract documents shall be adequately and properly performed by Contractor at no extra cost if such details and items are necessary to complete the intent of the Contract or otherwise to complete the Work.
- 2.2 Contractor is responsible for considering the conditions affecting the Work including, but not limited to, conditions affecting the transportation, disposal, handling and storage of materials; the availability and cost of labor, water, electric power, utilities and roads; the uncertainties of weather, river stages, and similar physical conditions at the Site; the conformation and condition of the ground; and the character of equipment and facilities needed. Contractor shall take into account the character, quality and quantity of surface and subsurface materials or obstacles to be encountered to the extent this information is reasonably ascertainable from the contract documents or an inspection of the Site.
- 2.3 Contractor shall immediately and before such conditions are disturbed notify Owner of: (a) subsurface or latent physical conditions at the Site which differ materially from those indicated in the Contract; (b) unusual geologic conditions at the Site which differ materially from conditions ordinarily encountered or from conditions addressed in the Contract; or (c) artifacts or articles which appear to have archaeological or historical significance. Owner shall promptly investigate such conditions and, if such conditions do materially differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of the Work, the parties shall agree to amend the Contract. No claim of Contractor under this clause shall be allowed unless Contractor has given immediate notice as required above and confirmed such notice in writing within ten (10) days of discovery.
- 2.4 Contractor shall have an authorized representative at the Site to whom Owner may give instructions at all times when Work is being performed.
- 2.5 Contractor shall assign qualified and competent personnel to perform the Work and have qualified and competent supervision at the Site at all times to direct and observe the Work. Key personnel shall not be removed from the Work without prior notice to, and consent by Owner which shall not be unreasonably withheld. Contractor will investigate and take appropriate action with respect to any personnel problems brought to its attention by Owner.
- 2.6 Contractor shall confine all of its operations and personnel to those areas of the Site to which Owner authorizes access.
- 2.7 Contractor's personnel may not operate Owner's tools, vehicles, materials or equipment ("Owner's Equipment") without Owner's prior authorization. If Contractor borrows Owner's Equipment, Contractor (a) agrees that Owner has provided Owner's Equipment AS IS, with no representations or warranties; (b) assumes full responsibility for the protection of the borrowed Owner's Equipment; (c) assumes all liability for injuries or damages resulting from the use of the borrowed Owner's Equipment; and (d) agrees to return the borrowed Owner's Equipment to Owner in the same condition as when it was borrowed, or, if repairs are necessary, to cause such repairs to be performed promptly at Contractor's expense before the Owner's Equipment is returned to Owner. Owner has no obligation to lend Owner's Equipment to Contractor.

- 2.8 Contractor shall cooperate with Owner and others working at or near the Site. Contractor shall promptly report to Owner any defects in the work of others which affects the Work. Failure to report such defects constitutes acceptance of the conditions by Contractor. Contractor shall properly fit, connect and coordinate its Work with that of Owner and other contractors.
- 2.9 Contractor shall keep all of its work areas free from trash and debris, and keep its work areas "broom clean" on a continuous basis.
- 2.10 Contractor shall secure and protect its materials, tools, equipment and the Work, including Owner-provided materials and equipment.
- 2.11 Contractor is responsible for the proper execution of the Work with respect to any base lines and bench marks established by Owner.
- 2.12 If the Work is subject to prevailing wage requirements, Contractor agrees to comply with such requirements.
- 2.13 Contractor, its Subcontractors, and their respective employees and agents involved in the Work shall adhere to the provisions contained in Owner's Code of Business Conduct which can be found at Owner's website.

### 3.0 TERM AND EFFECTIVE DATE

- 3.1 The Contract shall commence as of the effective date and, unless earlier terminated as provided in Article 27.0, shall terminate on the termination date set forth in the Contract. Unless specified elsewhere in the Contract, the effective date of the Contract shall be the earlier of the date on which Contractor begins performance hereunder or the date of the latter signature on the Contract.

### 4.0 RELATIONSHIP OF THE PARTIES

- 4.1 Contractor and all of its employees and Subcontractors are, with respect to Owner, independent contractors. Contractor will be solely responsible for the supervision, direction, and control of its employees and Subcontractors. Contractor is responsible for the payment of all compensation, benefits, and employment taxes with respect to the Contractor's employees.

### 5.0 ASSIGNMENT AND SUBCONTRACTING

- 5.1 Contractor shall not assign or otherwise dispose of the Contract, or any obligations hereunder, without the written consent of Owner. Any assignment or disposal without the written consent of Owner shall be null and void.
- 5.2 Prior to entering into any subcontract, Contractor shall submit to Owner a subcontractor data sheet that includes the name and address of the Subcontractor and the scope of work proposed to be included under such subcontract. Within five (5) Business Days of receipt of a Subcontractor data sheet, Owner may reject such Subcontractor without cost or contract extension by giving written notice of such rejection to Contractor.
- 5.3 Contractor is responsible for the selection of any Subcontractor and for the Subcontractor's proper performance of the Work assigned to it. If the work of a Subcontractor is not in compliance with the Contract requirements, Contractor shall take immediate steps to bring the Subcontractor's work into compliance and, at Owner's written request, terminate its contractual relationship with the Subcontractor as it relates to the Work at no cost to Owner.

## 6.0 LABOR RELATIONS

- 6.1 Contractor shall comply with any project, national or local labor agreements that are applicable to the Work or Site. Contractor shall cooperate with Owner and other contractors in establishing and maintaining labor work rules and practices.
- 6.2 When the Work is performed by building and construction trades labor, a pre-job conference shall be held with local labor representatives prior to starting Work. Owner shall be afforded the opportunity to attend and participate in pre-job conferences.
- 6.3 Contractor shall provide immediate notice to Owner of any actual or potential labor dispute that may delay the timely, efficient and productive performance of the Work.
- 6.4 Contractor shall inform and cooperate with Owner on labor matters. Contractor shall consult with Owner prior to rendering its decision(s) on labor matters that may impact the timely, efficient and productive performance of the Work.
- 6.5 Contractor shall exercise its management rights contained in applicable labor agreements to establish, maintain, and enforce work rules conducive to timely, efficient, productive and harmonious work operation. Contractor shall take the necessary steps available to resolve grievances, jurisdictional disputes, or other violations of collective bargaining agreements.

## 7.0 SAFETY AND SECURITY

- 7.1 Contractor shall perform the Work in a safe and careful manner, provide first aid facilities and transportation, and use such safety devices and methods as are necessary to protect its employees, agents, Subcontractors, Owner's employees and agents, other contractors and the public from bodily injury and property damage.
- 7.2 Contractor shall comply with and enforce all laws, rules and regulations applicable to safety and health standards, including, but not limited to, the Occupational Safety and Health Act of 1970 (OSHA) and any revisions of OSHA or successor legislation.
- 7.3 Contractor shall comply with project and Site safety and security rules and all procedures issued by Owner, provided that such rules and procedures do not conflict with OSHA or other safety laws, rules or regulations. Contractor shall assign a competent person at all times to manage, coordinate and enforce its safety program during performance of the Work.
- 7.4 Contractor shall provide Owner with Material Safety Data Sheets (MSDS) for all applicable materials prior to delivery to Owner's Site.
- 7.5 Contractor shall obtain Site permits or approval from Owner for its vehicles, any excavation, use of explosives, access to restricted areas, use of Owner's Equipment, tools and facilities, and other similar activities.
- 7.6 Owner will arrange all necessary clearances on energized equipment, electrical and communications circuits, piping systems or other operational equipment. Contractor shall notify Owner requesting the clearances prior to the scheduling of such Work. Contractor shall comply with Owner's clearance permit system regarding tagout and lockout of electrical and mechanical systems and other equipment.
- 7.7 Contractor shall fully inform Owner in writing regarding the types, quantities and use of any hazardous materials brought on the Site; the types and quantities of hazardous wastes being generated from the Work; and Contractor's program for proper storing, handling and disposal of such materials in a safe and secure manner.

- 7.8 Contractor shall immediately inform Owner of all regulatory safety, health and environmental inspections, citations and penalties associated with the Work. Contractor shall provide Owner with written reports and copies of all documents submitted to or by regulatory agencies and insurance companies.
- 7.9 Contractor shall promptly inform Owner of any injuries to its employees, agents, Subcontractors, or other persons arising out of the Work that require medical treatment.
- 7.10 Contractor shall obtain, maintain, and properly complete all record keeping required by regulatory agencies. Upon request, Contractor shall provide Owner with copies of all logs, reports and other records.
- 7.11 Contractor shall investigate all accidents resulting in personal injury, property damage, or near misses to determine root cause(s) and corrective action(s). Upon request, Contractor shall provide Owner with a copy of investigative reports, including all documents submitted to insurance companies.
- 7.12 All of Contractor's employees, agents, Subcontractors, vehicles, trailers, etc. entering or leaving the Site are subject to inspection at any time by Owner.
- 7.13 If a safety violation or other unsafe condition causes imminent danger, Owner may immediately shut down the Work involved without advance written notice.
- 7.14 Contractor and all Subcontractors performing Work at Site must have a substance abuse program. This program must apply to all personnel. Minimum requirements of this program shall include pre-hire testing, testing for cause and if requested, random testing. Screening substances and their associated cut-off limits are listed below.

| Drug Classes     | Screening Cut-Off Limit (ng/ml) | Confirmation Cut-Off Limit (ng/ml) |
|------------------|---------------------------------|------------------------------------|
| Amphetamines     | 1,000                           | 500                                |
| Benzoyllecgonine | 300                             | 150                                |
| Cannabinoids     | 50                              | 15                                 |
| Opiates          | 2,000                           | 2,000                              |
| Phencyclidine    | 25                              | 25                                 |

Blood & Breath alcohol content : .02% per Department of Transportation.

Testing shall be performed by a testing facility certified by Department of Health & Human Services. Personnel must have evidence of having tested negative within a year prior to employment. Owner will accept conditional employment predicated upon (a) employee(s) furnishing evidence that they have submitted to testing within forty-eight (48) hours of initial employment and (b) employee(s) furnishing evidence of negative test results within five (5) work days of initial employment. Contractor shall ensure personnel are "drug free". Owner reserves the right to examine evidence outlined herein. Contractor's program shall incorporate reciprocity on "drug free" employee verification to minimize Owner's economic impact and employee recertification while maintaining the program's intent.

- 7.15 If required by Owner, Contractor must meet certain security criteria set forth herein.
  - 7.15.1 Contractor shall submit to Owner a copy of its background investigation process for Owner's review and file. If Owner, in its sole discretion, determines that Contractor's background investigations do not meet certain specific requirements, then Contractor, at

its expense, must perform a background investigation that does meet Owner's certain specific requirements on each individual designated by Contractor to perform Work, or is performing Work on behalf of Contractor, for Owner (referred to herein for purposes of this Article, as an "individual"). Notwithstanding anything to the contrary stated herein, Owner reserves the right to conduct a background investigation on each individual at Contractor's expense.

7.15.2 Owner's certain specific requirements of background investigations include the following: (i) determination of whether an individual has been convicted of a felony crime in each state where the individual has resided during the past seven years; (ii) performance of the background investigation at the state level (in other words, to only search the records of the county in which the individual has resided during the past seven years is not a sufficient background investigation); and (iii) if the individual is to operate a motor vehicle while performing Work for Owner, then a state operator's license abstract must be completed in the states where the individual has been licensed as a vehicle operator during the past seven years.

7.15.3 If any background investigation reveals or indicates that an individual has been convicted of a felony crime, then the Contractor must notify the Owner prior to the individual commencing Work. Owner in its sole discretion shall have the option of barring from any Work Site any individual who has a reported felony conviction. Owner may audit or review specific Contractor screening files to ensure compliance with the Contract.

7.15.4 If an individual requires unescorted access to Owner's critical cyber assets, then Owner will conduct its own background investigation, which will include a Social Security Number verification. Additional specific provisions or requirements related to any Owner conducted background investigation pursuant to this Section 7.15.4 will be communicated to Contractor prior to implementation of such background investigation.

7.15.5 Contractor shall not perform any screening activities that violate the federal Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964 or any other applicable law in any circumstances. Contractor shall ensure that the substance and manner of any and all background investigations performed by Contractor conform fully to applicable law.

7.16 "Personally Identifiable Information" or "PII" means any information to which Contractor is provided access that could identify an individual either directly or indirectly including, without limitation to the individual's name, credit card numbers, social security number, biometric, bank account numbers, passport numbers, computer passwords or health, financial or employment information and other individual confidential information.

7.16.1 To the extent that Work under the Contract requires Contractor to be given access to PII gathered and/or maintained by or on behalf of Owner, or in the event Contractor acquires access to or encounters any PII during performance of the Work, Contractor shall after receipt thereof, treat such PII as confidential and safeguard such PII from unauthorized use and disclosure. Upon request of Owner, Contractor shall have its employees execute a confidentiality agreement protecting PII. Contractor agrees not to appropriate such PII for its own use or to disclose such PII to third parties unless specifically authorized by Owner in writing. Contractor shall ensure that its employees will not discuss, divulge or disclose any such PII to any person or entity except those persons directly concerned with and only to the extent necessary to complete the performance of the Work. Contractor shall access, use and process PII and other data on behalf of Owner only for the purposes specified in the Contract.



- 7.16.2 Contractor shall comply with (i) NERC Reliability Standards as applicable, including without limitation, those relating to Critical Infrastructure Protection, (ii) Owner's security standards, and (iii) such further instructions as Owner may provide regarding the processing of such PII. Contractor shall inform Owner promptly if it has reason to believe that applicable law (or changes in applicable law) prevents Contractor from fulfilling the obligations relating to treatment of PII or other data under Owner's security standards and/or the Contract.
- 7.16.3 To the extent permitted by law, Contractor shall notify Owner promptly and act only upon Owner's instruction concerning: (a) any request for disclosure of PII or other data by law enforcement or other governmental authority; (b) any request by law enforcement or other governmental authority for information concerning the processing of PII or other data in connection with the Contract; or (c) any request received directly from an individual concerning his/her PII.
- 7.16.4 Contractor may not store PII on computers, mobile devices, including but not limited to cellular telephones and/or personal digital assistants, servers and/or storage devices including removable media (any of which, hereinafter known as a "Computer"), unless required for the performance of Work. Any such information must be deleted from a Computer, in a manner that ensures that it cannot be accessed or read, as soon as such storage is no longer required for the performance of Work.
- 7.16.5 Upon termination of the Contract or upon Owner's request, Contractor must promptly (a) return all PII in written form to Owner, and (b) delete all PII in Contractor's possession or control (on computer or in whatever other form or media) in a manner that ensures that this information cannot be accessed or read.
- 7.16.6 Contractor shall administer a monitoring process to ensure compliance with Section 7.16 and the related subsections hereof, promptly report any breaches to Owner, and implement immediate, appropriate corrective actions to contain and prevent recurrence. Contractor shall report to Owner immediately upon discovery of a real or suspected loss of PII. In the event of a breach of this provision or the occurrence of any other event regarding PII that requires notification under applicable law, Contractor agrees to assume responsibility for informing all such individuals in accordance with applicable law.
- 7.16.7 In addition to any remedy available to Owner under the Contract, Contractor acknowledges that any breach of Section 7.16 or the related subsections hereof by Contractor or its Subcontractors may subject Contractor to civil and criminal penalties. Contractor shall include the full text of Section 7.16 and the related subsections 7.16.1 through 7.16.7 in all appropriate subcontracts. However, including such provision in the subcontracts shall not relieve Contractor of its obligation to ensure compliance with the provisions of Sections 7.16.1 through 7.16.7.

## 8.0 MATERIALS

- 8.1 All Contractor-furnished materials, equipment and related products (referred to in this Article 8.0 as "Materials"), which are to be installed shall be new and meet the requirements of all applicable codes. Materials which will not become a part of the permanent installation are not required to be new. Owner reserves the right to reject materials which have not been previously used but which have been in storage for an unreasonable period of time. Title to and risk of loss of the Materials shall pass to Owner upon Final Acceptance of the Work. Title to the Materials shall be free and clear of all liens and encumbrances.

8.2 Contractor shall not substitute Materials specified in the Contract unless authorized by Owner in writing. Unless substitution has been so authorized, Contractor shall, at its expense, remove and replace any improperly substituted material.

8.3 Upon Owner's request, Contractor shall, at its expense, submit to Owner samples of Contractor-furnished materials. Contractor must obtain Owner's written approval before performing Work involving the use of materials for which samples have been requested. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes. Materials used shall conform to the approved samples. Contractor shall remove and replace nonconforming materials at its expense.

#### 9.0 INSPECTION AND ACCEPTANCE

9.1 Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed conforms to the Contract requirements. Owner reserves the right to review and approve the adequacy of Contractor's inspection system. Contractor shall provide all quality control and quality assurance program information requested by Owner.

9.2 Owner shall have free access to the Work for inspection purposes. Owner's inspection, receipt or Initial Acceptance of the Work shall not relieve Contractor of its obligation to comply with the terms of the Contract.

9.3 Each party shall bear its own expenses in performing inspections, except that (a) Owner may use Contractor's facilities, ladders and scaffolds to perform inspections of the Work; (b) Contractor shall pay Owner's expenses in re-inspecting Work which was rejected as non-conforming to the Contract requirements in an earlier inspection; (c) Contractor shall pay the costs of uncovering and re-covering Work for Owner's inspection if Contractor failed to give Owner reasonable notice that the Work was ready to be covered; and (d) prior to Final Acceptance, if Owner requests an inspection of Work already completed which requires removing and tearing out Work, and the Work is found to be materially defective, Contractor shall pay the expenses of inspection and reconstruction, but if the Work is found to be in conformance with the Contract requirements, Owner shall pay the expenses of inspection and reconstruction.

9.4 Owner will not pay for defective work. Contractor shall repair or replace all defective work at its expense. Contractor shall promptly remove from the Site any Contractor-furnished materials that do not comply with the requirements of the Contract. If Owner-furnished materials have been used in any defective work, the cost of such materials shall be backcharged to Contractor.

9.5 Owner shall have the right to take possession of or use any part of the Work. Owner's possession or use shall not constitute Initial Acceptance or Final Acceptance of the Work.

9.6 Unless otherwise provided in the Contract, Final Acceptance by Owner shall be made as soon as practicable after all Work has been completed and inspected. Any part of the Work not rejected by Owner following Final Inspection shall be deemed to have achieved Final Acceptance.

#### 10.0 SCHEDULE

10.1 Contractor shall perform the Work to meet the schedule date(s) set forth in the Contract. Contractor shall not commence Work until authorized by Owner to do so.

10.2 In a format acceptable to Owner, Contractor shall develop, update, maintain and provide to Owner a written schedule for execution of the Work. The schedule shall be time scaled, complete, and accurate in detail depicting Contract milestone dates, work activities and durations. Upon review and approval by Owner, this schedule shall become the Contract schedule. Updates to the Contract schedule shall

be provided to Owner on at least a monthly basis. Updates shall depict actual progress measured against planned progress.

- 10.3 Contractor shall notify Owner within 24 hours of the first knowledge that any completion date(s) will not be met and shall, within five (5) Business Days thereafter, submit a detailed program depicting the plans and actions being taken to regain the lost time. The notice shall not limit any other rights or remedies afforded Owner under the Contract or by law.

#### 11.0 TERMS OF PAYMENT

- 11.1 Except as otherwise provided in the Contract, the following terms of payment shall apply:

11.1.1 The Contract Price set forth in the Contract shall constitute full and complete payment for all Work.

11.1.2 Contractor shall submit invoices with proper documentation to Owner for the Work completed or for milestones achieved during the prior month. Owner may withhold all or any part of payment in an amount necessary to protect Owner from loss due to the occurrence, or imminent occurrence, of (i) Contractor's breach or failure to perform in accordance with the Contract, (ii) defective Work, (iii) Contractor's failure to pay any Subcontractor, (iv) other claims by Owner against Contractor, including indemnity claims, and (v) damages for delay or any agreed upon liquidated damages.

11.1.3 Owner shall pay 90% of each properly submitted and accepted invoice within forty five (45) days of receipt. The release of retention shall become due and payable forty five (45) days after the date of Final Acceptance of the Work.

11.1.4 Each invoice shall contain a statement that all bills for material and labor relating to the Work have been paid in full by Contractor, and there are no unpaid bills for which a lien could be filed. If requested by Owner, Contractor shall provide evidence of such payments. The final invoice for the Work shall be accompanied by a satisfactorily completed Affidavit of Completion in the form attached as Exhibit 1. Payment of the final invoice and retention constitutes a full and final release of Owner from all claims, damages, liabilities and obligations under the Contract.

- 11.2 Contractor shall promptly pay all of its Subcontractors.

#### 12.0 CHANGES IN WORK AND EXTRA WORK

##### 12.1 Change in Work

12.1.1 "Change Order" means a written order issued in accordance with this Article 12.0 documenting an addition to, deletion from, or other modification to the Work, including a change in the scope of Work, the Contract Price, the payment schedule, the completion dates, or the schedule for the Work.

12.1.2 Owner may issue a Change Order: (i) at Owner's option, or (ii) if requested by Contractor due to the occurrence of an event that entitles Contractor to a Change Order as determined by Owner.

12.1.3 If Owner issues a Change Order, Contractor shall perform the changed Work in accordance with the terms of the Contract and the issued Change Order.

- 12.1.4 No order, statement or other conduct of Owner shall be treated as a change in Work until such change is authorized in writing by Owner.
- 12.1.5 Contractor shall not be entitled to a Change Order for conditions such as, but not limited to, (i) work which is of such a nature as to be normally included in the Work or is reasonably inferable from the Contract; (ii) any errors, omissions, non-performance, negligence, deficiencies or improper or defective work on the part of Contractor (including miscalculations, incorrect estimates, or other errors in Contractor's proposal for the Work); (iii) changes relating to refinement, minor correction and detailing of the Work or any part of the Contract; or (iv) other unallowable claims such as cost impacts not due to Owner and cumulative impact claims.
- 12.1.6 With respect to Contractor claims for additional compensation, Owner shall pay only incremental Direct Costs associated with the proposed changes and only to the extent that Contractor can demonstrate that the changes actually increased its costs of performance. Any claims for additional compensation based on a change to the Work or extra work must be material in nature, and Contractor must provide full documentation supporting all elements of such claims. For a reduction in the scope of Work or a change which reduces Contractor's costs, the Contract Price shall be adjusted downward. The payment for changes to the Work shall be complete compensation to Contractor for performing such changes, including any schedule or cost impacts on the Work.
- 12.1.7 If Owner requests in writing that Contractor furnish materials or equipment to be permanently incorporated in changed work, extra work or cost-plus work, Owner shall reimburse Contractor for such materials or equipment its incremental Direct Cost plus a percentage mark-up to be agreed upon by the parties. Requests for payment for materials and equipment shall be accompanied by copies of receipted invoices. Owner has the right to audit Contractor's requests for changes and the financial basis therefor.
- 12.1.8 If Contractor and Owner disagree on whether any particular work is within the scope of Work and such work must be completed to insure timely progress, Owner will issue a disputed Change Order to cover the disputed work. Contractor shall diligently proceed with the disputed work. By noon on the work day following performance of the disputed work, Contractor shall submit to Owner for review timesheets itemizing all labor and equipment hours expended on the disputed work and an itemized listing of Contractor furnished materials. Such review is not an admission of liability by Owner. Prior to Final Acceptance, each disputed Change Order will be resolved to the mutual agreement of the parties.

## 12.2 Extra Work

- 12.2.1 "Extra work" is work which is beyond Contractor's scope of Work. At Owner's request, Contractor shall perform extra work at the applicable prices set forth in the Contract. If the Contract prices are not applicable to the type of extra work to be performed, Contractor shall promptly submit a proposal to perform the extra work, which proposal shall become an amendment to the Contract upon acceptance by Owner. If Owner directs Contractor to perform extra work on an overtime basis, Owner shall reimburse Contractor the actual payroll cost of premium time for direct job labor. Contractor shall invoice and maintain separate cost records for each extra work authorization issued by Owner.
- 12.2.2 If Owner elects, Contractor shall perform extra work on a cost-plus basis. Cost-plus extra work shall be paid in accordance with Article 13.0.

- 12.3 Contractor waives all claims for additional compensation for changes in work and extra work not made strictly in accordance with the terms of this Article 12.0.

### 13.0 REIMBURSEMENT FOR COST-PLUS WORK

- 13.1 Direct labor costs will be reimbursed at the actual payroll costs of direct labor wages, fringe benefits, payroll taxes and insurance required by collective bargaining agreements or by law, plus an agreed wage mark-up. Copies of certified payrolls and time sheets shall be provided to Owner for review and approval. Contractor shall not invoice Owner for social security, unemployment, workers' compensation, or other federal, state or local taxes or insurance at rates which exceed Contractor's actual costs.
- 13.2 Owner will pay Contractor actual invoice costs for subcontracted work, provided Owner has approved payment terms in advance of performing the work, plus an agreed mark-up.
- 13.3 Contractor-furnished permanent materials and equipment costs will be reimbursed at actual invoice costs plus an agreed mark-up.
- 13.4 Construction equipment costs will be reimbursed based on actual usage time during the performance of Work and established rental rates not to exceed monthly rates set forth in the "Rental Rate Blue Book for Construction Equipment" adjusted for geographical region as published by Dataquest or other basis acceptable to Owner. Hourly rates shall be established by taking the monthly rate divided by 176 hours per month.
- 13.5 Small tools and consumables costs will be reimbursed based on agreed rates.
- 13.6 Field supervision, clerical, safety and other non-direct labor costs will be reimbursed at agreed billing rates, except that reimbursement for these costs for cost plus extra work shall require the prior review and approval of Owner.

### 14.0 BACKCHARGES

- 14.1 Owner may impose backcharges against Contractor or deduct backcharges from monies owed to Contractor for performance or reperformance by Owner or others of Work, including but not limited to, costs associated with defective work, nonperformance by Contractor, termination for cause, clean-up and disposal of debris, damages to Owner's tools and equipment and warranty repairs. Contractor will be responsible for the cost of such performance or reperformance plus a fifteen percent (15%) administrative charge.

### 15.0 TAXES

- 15.1 The Contract Price shall include, and the Contractor shall pay, all taxes and assessments for unemployment insurance, workers' compensation, social security and disability benefits, and other taxes which are based upon the compensation paid to persons employed by Contractor or its Subcontractors for the performance of any Work under the Contract.
- 15.2 Except as provided below, the Contract Price shall include all applicable foreign, federal, state and local taxes payable by Contractor with respect to the Contract.
  - 15.2.1 Contractor Purchases. If Owner specifies that tangible personal property to be incorporated into real property as defined for sales and use tax purposes or taxable services to be purchased by Contractor from vendors or Subcontractors qualify for exemption from sales or use taxes, Contractor shall not include sales or use taxes on such exempt tangible personal property or services in the Contract Price. Unless otherwise specified: a) consumable materials and supplies or Contractor's tools and equipment that are not incorporated into the Work or the overall project are not eligible for exemption

and the Contract Price shall include, and Contractor shall pay, any sales or use taxes on such items; and b) Contractor will use its own properly-executed exemption or resale certificate, and not Owner's direct pay permit, to make exempt purchases of tangible personal property or services from vendors or Subcontractors.

- 15.2.2 Owner Purchases from Contractor. With respect to any Owner purchases from Contractor of tangible personal property not incorporated into real property as defined for sales and use tax purposes or taxable services, Owner shall provide to Contractor its direct pay permit (if Owner has been issued a direct pay permit) or an appropriate exemption certificate required to relieve the Contractor of its responsibility to collect sales or use tax from the Owner. If Owner provides Contractor such direct pay permit or exemption certificate, sales or use taxes on Owner purchases from Contractor of tangible personal property or taxable services shall not be collected from Owner or included in the Contract Price. Unless otherwise approved or directed by Owner in writing, Contractor shall not use Owner's direct pay permit to make exempt purchases of tangible personal property or taxable services from vendors or Subcontractors.
- 15.2.3 Contractor Cooperation. Contractor shall take all steps reasonably necessary to ensure that Contractor's purchases from vendors or Subcontractors of items of tangible personal property or services are exempt from sales and use tax pursuant to any applicable exemption pursuant to the law of any U.S. jurisdiction or its political subdivisions.

## 16.0 INSURANCE

- 16.1 Contractor shall at its sole expense, procure and maintain, and shall cause its Subcontractors to procure and maintain, throughout the term of this agreement except as set forth in Section 16.5, the following types of insurance with the following, minimum limits:
- 16.1.1 Workers' compensation insurance in accordance with all jurisdictions where Contractor has operations including where the Work is to be performed. If Contractor is a non-subscriber to workers' compensation evidence of insurance equivalent to workers' compensation must be provided.
- 16.1.2 Employer's liability in an amount not less than \$1,000,000.
- 16.1.3 Business automobile insurance covering all Owned, Non-owned and Hired Autos in an amount not less than \$5,000,000 per occurrence.
- 16.1.4 Commercial general liability insurance covering claims of bodily injury and property damage in an amount not less than \$5,000,000 per occurrence.
- 16.1.5 Aircraft liability insurance with a combined limit of not less than \$10,000,000. Such insurance shall be required only if the Contractor or its Subcontractors shall utilize an aircraft in the performance of the Work.
- 16.1.6 If Contractor (or any of its Subcontractors) are engaged in operations which use marine vessels or floating equipment, or which are subject to maritime jurisdiction, the following insurance shall be required: Marine Liability insurance (including Jones Act and maritime employer's liability if operations are subject to federal jurisdiction) and pollution liability (under terms equivalent to current W.Q.I.S. policy provisions if operations are subject to federal jurisdiction) in amounts not less than \$10,000,000 per occurrence.

- 16.1.7 Professional liability insurance and/or Errors and Omissions insurance in an amount not less than \$5,000,000. Such insurance shall be required only if the Work includes professional liability exposures.
- 16.1.8 "All risk" property insurance covering the full replacement cost of Contractor's personal property.
- 16.2 To the extent permitted by law, Contractor shall waive, and shall cause each of its insurers to waive, any and all rights of recovery, by subrogation or otherwise, against Owner and its affiliates, officers, directors, employees, agents and assigns of any type. Each of Contractor's insurance policies shall be primary to and non-contributory with any insurance or self-insurance of Owner.
- 16.3 The Commercial General Liability, the Business Automobile, and (if applicable) the Aircraft Liability and Marine Liability insurance shall include Owner as an additional insured with respect to Owner's liability arising out of the operations of Contractor. Such coverage shall also include blanket contractual coverage and contain no exclusion for explosion, collapse, or underground property damage (XCU coverage).
- 16.4 The insurance required by this Article 16.0 is in addition to and separate from any other obligations contained in the Contract.
- 16.5 Products and/or completed operations coverage shall be maintained for a period of five (5) years after the completion of the Work. If any of the policies indicated above are placed on a "claims-made" basis, such coverage shall be maintained for a period of not less than five (5) years following the completion of the Work.
- 16.6 Any deductibles or retentions on any of the policies required herein shall be the sole responsibility of the Contractor.
- 16.7 The above referenced limit requirements may be met by any combination of umbrella or excess and primary policies so long as the total limit of insurance requirement is met. The required coverages referred to herein shall in no way affect, nor are they intended as a limitation of, Contractor's liability with respect to its performance of the Work. The limits of insurance indicated herein are minimum requirements and are in no way intended to limit Contractor's liability.
- 16.8 In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special, or statutory employees) are covered by the Louisiana Worker's Compensation Act, La. Rev. Stat. Ann. 23:1021 et seq., Owner and Contractor agree that pursuant to Section 23:1061 (A) (1) all Work performed by Contractor and its employees under the terms and conditions of the Contract is an integral part of Owner's operations and is essential to Owner's ability to generate its goods, products and services. Additionally, Owner and Contractor agree that for purposes of Section 23:1061 (A) (3) Owner is the principal or statutory employer of Contractor's employees. Irrespective of Owner's status as the statutory employer or special employer of Contractor's employees, pursuant to Section 23:1031 (C), Contractor shall remain primarily responsible for the payment of Louisiana Worker's Compensation benefits to its employees, shall indemnify Owner from any and all claims of Contractor's employees or its Subcontractor's employees and shall not be entitled to seek contribution for any such payments from Owner.
- 16.9 Upon inception of the Contract and prior to commencement of Work, Contractor shall provide Owner with an acceptable certificate of insurance evidencing the insurance required under Article 16. Contractor will not be permitted to bring its employees, materials or equipment onto the Site until Owner receives from such evidence of insurance. Contractor also must provide an updated certificate of insurance at any time during the Contract term upon Owner's request. Contractor

shall immediately notify Owner of cancellation or of any material changes in the insurance policies required herein. If such insurance policies are subject to any exceptions to the terms specified herein, such exceptions shall be explained in full in such certificates. Owner may, at its discretion, require Contractor to obtain insurance policies that are not subject to non-standard exceptions.

16.10 In lieu of Sections 16.1 thru 16.9, the Owner may elect to implement an Owner Controlled Insurance Program ("OCIP"). If an OCIP is implemented, all Contractor(s) and Subcontractor(s) of any tier and such other persons or entities as the Owner may designate as enrolled parties, may, at Owner's option, be required to enroll and participate. Owner shall procure and maintain at its own expense during the performance of this Contract and a stipulated completed operations period, such insurance coverage as Owner deems appropriate on behalf of enrolled parties. Eligible Contractor(s) and Subcontractor(s) must submit all necessary enrollment forms for acceptance into the OCIP, and agree to the terms of the Owner's project safety standards. Owner and Contractor agree that the terms of the OCIP as contained in amendments to this Contract and the OCIP Contractor Manual shall control. The OCIP does not relieve any Contractor or Subcontractor from its obligations to procure coverage for offsite operations or coverages not included in the OCIP. In the event an OCIP is implemented, amended insurance requirements for enrolled parties will be provided.

16.11 The furnishing of insurance by Owner through an OCIP will in no way relieve or limit any enrolled party of any responsibility, liability, or obligation imposed by the contract documents or by law, including without limitation any indemnification obligations which any enrolled party has to the Owner thereunder.

## 17.0 INDEMNIFICATION

17.1 The laws of the state where the Work giving rise to the claim is performed shall apply to this Article 17.0.

17.2 **TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.**

17.3 **WITH RESPECT TO CLAIMS AGAINST OWNER BY CONTRACTOR'S EMPLOYEES, CONTRACTOR UNDERSTANDS AND AGREES THAT THIS INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY, AND CONTRACTOR EXPRESSLY WAIVES, ITS IMMUNITY AS A COMPLYING EMPLOYER UNDER ANY**



**APPLICABLE WORKERS' COMPENSATION LAW, BUT ONLY TO THE EXTENT THAT SUCH IMMUNITY WOULD BAR OR AFFECT RECOVERY UNDER OR ENFORCEMENT OF THIS INDEMNIFICATION OBLIGATION.** With respect to the State of Ohio, this waiver applies to Section 35, Article II of the Ohio Constitution and Ohio Rev. Code Section 4123.74.

**17.4 CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT.**

**18.0 LIMITATION OF LIABILITY**

18.1 Except as expressly provided herein, neither party shall be liable to the other for any incidental, indirect, special, punitive or consequential damages. Contractor must bring any cause of action arising under the Contract within one year from the time the cause of action accrues.

**19.0 LIENS**

19.1 To the extent permitted by law, Contractor shall not file or permit to be filed any lien with respect to the Work and hereby expressly waives any right to file or cause to be filed a lien. Contractor, in its subcontracts, shall require all Subcontractors to expressly waive the right to file any liens against Owner's property, and, if requested, provide Owner with copies of such waivers.

19.2 In the event any claim is asserted or any lien filed against Owner or its property, or notice of lien is provided to Owner in violation of this provision, further payment to Contractor shall not become due under the Contract until the claim is satisfied or the lien released without cost to Owner and Contractor shall provide Owner with evidence of payment relating to such claim or lien. If Contractor fails to settle any claim or secure the release of any lien, Owner may take whatever steps it deems necessary to settle the claim or release the lien, including bonding off the lien. Owner may deduct its costs and expenses for settling any claim or securing the release of any lien filed by Contractor or its Subcontractors from any money due or to become due to Contractor under the Contract. If final payment has been made, Contractor shall reimburse to Owner its costs to settle any claim or secure the release of any lien arising out of the Contract.

**20.0 INTELLECTUAL PROPERTY**

20.1 Contractor warrants that its performance of the Work will not infringe upon or violate any trademarks, patents, copyrights, trade secrets or other third party property rights. If the performance of Work is held in any action to constitute infringement, or the use of the Work is enjoined, Contractor, at its expense, shall procure for Owner the right to continue use of the Work, or replace the Work with non-infringing materials or methods satisfactory to Owner, or modify the Work in a manner satisfactory to Owner so that the Work becomes non-infringing. Contractor agrees to indemnify and save Owner harmless from and against any liability or damages, including attorneys' fees, arising out of any alleged infringement or violation.

20.2 All inventions, discoveries, documents, works of authorship, methods, and the derivative works thereof, resulting from the Work, including patents, patent applications, copyrights, trade secrets and other intellectual property (collectively "Intellectual Property"), shall be the sole and exclusive property of Owner. Contractor shall promptly inform Owner of the development of any such Intellectual Property and does hereby assign and transfer the entire right, title and interest, together with all rights of priority in and to such Intellectual Property to Owner. Contractor shall promptly cooperate with Owner in signing any additional documentation necessary to assign and perfect ownership of such Intellectual Property in Owner or to allow Owner to register its property rights therein. Contractor warrants that it has obtained written agreements from its employees and

agents as necessary to effectuate the purpose of this Section. The Intellectual Property assigned and transferred to Owner shall be the Confidential Information of Owner.

- 20.3 Contractor grants Owner a nonexclusive, nonrevocable, perpetual, fully paid license to utilize Contractor's intellectual property existing separate from the Contract, including inventions, discoveries, works or authorship, methods, and trade secrets, regardless of whether such are the subject of patents, copyrights or other intellectual property protection, to the extent necessary for Owner to achieve the full benefit of the Work.
- 20.4 Contractor shall not use Owner's name or logo in marketing, endorsements, or other business purposes without prior written consent from Owner.

#### 21.0 DRAWINGS AND DATA

- 21.1 Contractor shall furnish for Owner's review, prior to commencement of Equipment manufacture or fabrication, general and detailed drawings of the Equipment in the format requested. Such drawings shall be certified as to accuracy and completeness and shall show information adequate to enable Owner to design and provide suitable clearances. If required by the Contract or any code, law or agency, Contractor will provide professional engineer or architect sealed drawings and reports for the state where the Equipment is to be finally installed. Figures shall take precedence in all cases over scaled measurements on drawings. Where obvious discrepancies exist, Contractor shall consult with and follow the instructions of Owner. Owner's approval of Contractor's drawings shall not relieve Contractor of its obligation to comply with the Contract requirements.
- 21.2 All written data, such as drawings, plans, reports, designs and specifications, prepared by Contractor for Owner during the performance of Work shall become the property of Owner. Such data, together with all data furnished by Owner and lent to Contractor for return, shall be delivered to Owner upon request, or upon completion of the Work or termination of the Contract. For clarification purposes, Owner shall have the unrestricted right to use, release, disclose, copy and reproduce such data for purposes of operation, maintenance, analysis, testing, cleaning, erection, improvement or modification of any facilities owned or operated by Owner. Contractor shall cooperate with Owner by executing such documents as are necessary to assign and perfect ownership in Contractor provided data to Owner.

#### 22.0 CONFIDENTIALITY

- 22.1 "Confidential Information" means any confidential or proprietary information, whether written, oral, or visual, whether or not it constitutes a trade secret under applicable law. "Confidential Information" includes, but is not limited to, business plans and methods; customer information; engineering, operating and technical data; and the dates of Owner's outage schedule, information concerning the Work, and Owner's activities. "Confidential Information" does not include information that (a) has become part of the public domain other than by acts or omissions of the recipient; (b) has been furnished or made known to the recipient by a third person as a matter of legal right and without restriction on use; (c) was in the recipient's possession prior to disclosure by the disclosing party without restriction on use; or (d) is independently developed by the recipient without access to the Confidential Information.
- 22.2 Subject to Section 22.5, each party agrees (a) to protect the Confidential Information of the other with at least the same degree of care used to protect its own Confidential Information; (b) not to use (except for the purpose described herein), publish or disclose to third parties such Confidential Information; and (c) upon the request of the disclosing party, to promptly deliver to the disclosing party all written copies of its Confidential Information. Notwithstanding the foregoing, a recipient shall be entitled to disclose Confidential Information to its officers, employees, affiliates (including any joint ventures of which Owner or any of its affiliates are a member and the other

members of such joint ventures), agents, lenders, attorneys and other advisors (collectively, "Representatives"), provided that the Representatives shall be informed of the confidentiality obligations provided herein.

22.3 If either party is required pursuant to applicable law or otherwise becomes legally compelled to disclose any of the Confidential Information, such party shall promptly advise the disclosing party in order that the disclosing party may seek a protective order or such other remedy as the disclosing party may consider appropriate in the circumstances. In any event, the compelled party may disclose only that portion of the Confidential Information which such party is legally required to disclose in the judgment of the party's legal counsel without any liability to the disclosing party hereunder and such disclosure shall not be a breach of this Section.

22.4 Contractor shall require its Subcontractors, if any, to expressly comply with the confidentiality provisions as set forth herein.

22.5 All documents prepared by Contractor for Owner during the performance of Work that incorporate, in whole or in part, information owned or provided by Owner shall not be marked or designated in any way as the confidential or proprietary information of Contractor without also stating that Owner has rights in such documents. Owner shall have the right to question the designation of Confidential Information by Contractor and Contractor agrees to provide Owner with reasonable cooperation in explaining such designation. Contractor agrees that Owner's acceptance of documents containing the Confidential Information of Contractor shall not be construed as a restriction on Owner's rights to use, release, disclose, distribute, copy or reproduce the documents.

### 23.0 DEFAULT

23.1 The occurrence of any of the following shall constitute an "Event of Default":

23.1.1 Contractor files a petition in bankruptcy, or if its creditors file an involuntary petition in bankruptcy, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency.

23.1.2 Contractor (a) fails to maintain the schedule set forth in the Contract, or (b) fails to promptly pay Subcontractors for material or labor, or (c) commits repeated or substantial violations of laws, rules, regulations or policies, or (d) fails to perform in accordance with the Contract, and Contractor fails to take corrective action or submit an acceptable plan within two (2) Business Days after the receipt of a notice of non-conformance from Owner.

23.2 Upon an Event of Default, Owner may take any or all of the following actions without affecting the Contract Price or schedule:

(a) Owner may direct Contractor to cease performance on all or part of the Contract until satisfactory corrective action has been taken;

(b) Owner may have others take corrective action necessary to achieve compliance with the Contract. Owner may deduct the cost of such corrective action by others from any monies due to Contractor. Corrective action by others shall be taken when, in the judgment of Owner, the noncompliance threatens safety, unreasonably interferes with or delays the work of others, or otherwise creates a situation the resolution of which cannot be delayed without adversely impacting quality, cost or timely completion;

(c) Owner may pursue damages for delay under the terms of Article 24.0;

- (d) Owner may suspend the Contract under Article 26.0; and/or
  - (d) Owner may terminate the Contract under the terms of Section 27.1
- 23.3 Each of Owner's rights set forth above shall be cumulative and additional to any other rights or remedies provide in law or equity or otherwise.

24.0 DAMAGES FOR DELAY

- 24.1 Contractor shall be liable for any direct damages incurred by Owner arising out of Contractor's failure to perform on time.
- 24.2 In lieu of Section 24.1, if the parties have agreed to liquidate the amount of direct damages resulting from Contractor's delay, the parties agree that such damages which might be incurred by Owner as a result of Contractor's delay in performance are uncertain and would be difficult to calculate. The parties agree that the liquidated damages contained in the Contract would be reasonable and fair compensation for late performance. Contractor commits to pay and Owner agrees to accept such sum as liquidated damages and not as a penalty in the event of late performance.

25.0 FORCE MAJEURE

- 25.1 Neither party shall be in breach of the Contract to the extent that any delay or default in performance is due to a Force Majeure Event. The term, "Force Majeure Event", shall mean any cause beyond the reasonable control of the delayed or defaulting party, including, but not limited to, acts of God including unusually adverse weather, fire, and epidemic; acts of public enemy including war, acts of terrorism, riot, and civil disturbance; and national labor strikes, which by exercise of due foresight such party could not have been expected to avoid or overcome. Contractor's inability to obtain adequate and sufficient labor in order to maintain progress of the Work shall not constitute a Force Majeure Event. No delay in performance resulting from a Force Majeure Event shall result in any liability on the part of Owner. Notwithstanding the preceding sentence, in the event of a delay caused by any act or failure to act on the part of Owner, Contractor's sole remedy shall be as set forth in Article 12.0.
- 25.2 The delaying party shall immediately notify the other party of the beginning of a delaying event, and shall confirm the notice in writing within ten (10) Business Days of the beginning of the event. The notice shall contain a detailed account of the delay, including the cause of the delay, an estimate of the duration of the delay, an estimate of the delay's impact to the schedule, and the plan to mitigate the effects of the delay.
- 25.3 If Contractor is the delaying party, and the delay is a Force Majeure Event as defined in Section 25.1, Owner shall grant Contractor an extension of the time for performance, to be mutually agreed upon by Contractor and Owner. The extension of time granted as a result of a Force Majeure Event shall in no case exceed the length of the delay and such extension may be withheld or reduced to the extent Contractor does not provide notice in accordance with Section 25.2. If Owner so requests, Contractor shall expedite its schedule to mitigate the effects of the excusable delay. Owner shall pay incremental, Direct Costs incurred by Contractor for expediting at Owner's request.

26.0 SUSPENSION

- 26.1 Owner may at any time suspend all or any part of the Work. Owner shall provide Contractor written notice verifying the suspension date. Immediately upon receipt of the suspension notice, Contractor shall take the necessary actions to comply with the suspension notice.

- 26.2 Owner shall pay Contractor in accordance with the terms of payment set forth in the Contract for the Work completed prior to the time of suspension and for the incremental, Direct Costs that result from Contractor's compliance with the suspension notice.
- 26.3 Owner may, at any time during the suspension period, either terminate the Contract in accordance with Section 27.2, or authorize the Work or any portion thereof to be restarted. Owner shall pay Contractor the incremental, Direct Costs associated with the restart of the Work and shall resume payments to Contractor in accordance with the terms of payment under the Contract thirty (30) days after the restart of Work.
- 26.4 The schedule shall be adjusted to provide for a reasonable extension of time for Contractor's performance.

27.0 TERMINATION

27.1 Termination for Cause

- 27.1.1 Upon an Event of Default, Owner may terminate the Contract upon written notice to Contractor.
- 27.1.2 In the event of such termination, Contractor shall immediately prepare and submit to Owner an itemization of the Work completed by Contractor. Owner may require Contractor to leave the Site. Owner may take over such Work and complete it, or have the Work completed by others. Owner may take possession of and utilize in completing the Work Contractor's materials, Equipment to be installed, supplies, tools and equipment at the Site.
- 27.1.3 Contractor shall not be entitled to further payment until all of the Work is completed in its entirety and Final Acceptance has been achieved. If the cost of completion exceeds the unpaid balance under the Contract, Contractor shall pay the difference to Owner within thirty (30) calendar days of demand.
- 27.1.4 In the event that a court determines that the termination was not properly a termination for cause, pursuant to Section 27.1.1, Contractor's remedy shall be limited to the payments permitted in accordance with Section 27.2.

27.2 Termination for Convenience

- 27.2.1 Owner may terminate the Contract, in whole or in part, for its convenience. Owner will give Contractor written notice of termination specifying the extent to which the Contract is terminated and the date, immediately or otherwise, on which termination becomes effective.
- 27.2.2 Upon termination for convenience, Contractor will comply with instructions in the notice of termination regarding delivery to Owner of all Work in progress and all completed Work, which shall become the property of Owner upon delivery.
- 27.2.3 In the event of such termination, Contractor shall receive payment, including the retained percentage, for the Work satisfactorily performed up to the time of such termination. In addition, Owner shall reimburse Contractor for incremental, Direct Costs resulting from the termination, provided that compensation was not otherwise made for such costs. Final payment shall be made upon the parties' agreement of the amount of the final invoice and Owner's receipt of an Affidavit of Completion in the

form of Exhibit 1. Owner shall not be responsible for Contractor's lost profit on the terminated portion of the Contract.

28.0 MATERIALS AND WORKMANSHIP WARRANTY

- 28.1 Beginning upon Final Acceptance and for a period of one year thereafter, or for such period as may be specified elsewhere in the Contract, Contractor warrants that (a) it will perform the Work in accordance with the accepted standards of care and competence found in the applicable profession as such standards relate to and are commonly used in the electric utility industry and (b) all Contractor furnished materials and workmanship shall be free of any and all defects and shall be in conformity with the requirements of the Contract.
- 28.2 Subject to the provisions of Section 28.3, in the event that the material or workmanship does not comply with the warranty, Contractor shall, at no cost to Owner, promptly repair or replace such nonconforming material or workmanship with as little disruption to Owner's operations as practicable. Contractor shall be responsible for the total cost of correcting any defects, including but not limited to, the costs of materials, labor, any necessary equipment removal, disassembly, shipping, reinstallation and retesting of the installation. Owner shall give Contractor notice of observed defects with reasonable promptness. If nonconforming material or workmanship causes an outage or other delay of operations, Contractor shall make the repair or replacement on an overtime, maximum effort basis, at Contractor's expense.
- 28.3 If Owner directs Contractor to repair or replace any defect and Contractor fails to do so within a reasonable time, or if an emergency exists rendering it impracticable for Contractor to perform the repair or replacement, Owner may make or cause to be made such repair or replacement without affecting the validity of the warranty. Owner's cost for making the repair or replacement shall be deducted from the Contract Price or any unpaid portion thereof. If the unpaid portion of the Contract Price is insufficient to cover such cost, Contractor shall reimburse Owner.
- 28.4 Owner will not pay for any defective portion of the materials or workmanship until remedied by Contractor at Contractor's expense in accordance with the Contract requirements.
- 28.5 Owner must approve any proposed correction or alteration by Contractor of the materials or workmanship, or parts thereof, made at any time or at any location, before such correction or alteration is undertaken. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes.
- 28.6 Any materials or workmanship which are repaired or replaced pursuant to this Article 28.0 shall be warranted for a period of one year from the date of completion and acceptance of such repair or replacement, or for the remainder of the original warranty period, whichever is longer.
- 28.7 Contractor shall obtain, for the benefit of Owner, all available warranties from Subcontractors, vendors and suppliers of Contractor. Such warranties shall be in addition to the warranties set forth in this Article. If such warranties are in written form, Contractor shall provide Owner with the original warranties.

29.0 REPORTING OF COMPLAINTS

- 29.1 Contractor shall immediately report to Owner, in accordance with Article 33.0, the complete details of all complaints, including any OSHA violations and complaints received from governmental authorities, Subcontractors, laborers, other third parties or members of the public relating to the Work.

30.0 RETENTION AND EXAMINATION OF INFORMATION, BOOKS AND RECORDS

- 30.1 Owner reserves the right to audit records necessary to permit evaluation and verification of (i) claims submitted, (ii) Change Orders, and related overhead and general and administrative costs, and (iii) Contractor's compliance, in the performance of the Contract and its dealings with Owner, with (a) the Contract requirements; and (b) Owner's Code of Business Conduct governing business ethics. Owner's right to audit shall not extend to fixed, lump-sum or unit pricing.
- 30.2 Contractor shall cooperate with Owner and provide Owner with information and records ("information") pertaining to the Work as requested by governmental agencies, Owner, or courts of law.
- 30.3 Contractor shall retain for a period of three (3) years after Contract termination or expiration all information relating to the Work. Owner may audit and copy such information at Contractor's premises during regular business hours. If requested by Owner, Contractor shall submit to Owner a copy of each of its subcontracts. Contractor shall include in its subcontracts a provision granting Owner the rights against Subcontractors contained in this Article 30.0.

31.0 COMPLIANCE WITH LAWS

- 31.1 Contractor warrants that all materials and equipment supplied and all Work performed will comply with, and be manufactured, priced, sold and labeled in compliance with, all applicable federal, state and local laws, rules, regulations, orders and ordinances, including, without limitation, environmental protection, energy, safety and health, and labor laws and regulations and applicable industry codes and standards.
- 31.2 Unless exempted, Contractor shall comply with the equal employment opportunity clause in Section 202 of Executive Order 11246 and all applicable rules, regulations, and relevant orders pertaining to Executive Order 11246, Section 503 of the Rehabilitation Act of 1973, and Section 4212 of the Vietnam Era Readjustment Assistance Act of 1974, as amended. Contractor represents that it does not, and shall not for the term of the Contract, provide or maintain for its employees facilities that are segregated on the basis of race, color, religion, sex or national origin. Contractor represents that it will not assign its employees to perform any work related to the Contract at a location where facilities are segregated on the basis of race, color, religion, sex or national origin. Contractor agrees that it will not enter into any agreement to obtain goods or services relating to the Contract with any entity that provides, maintains or assigns its employees to work at locations where facilities are segregated on the basis of race, color, religion, sex or national origin. As used herein, "facility" means waiting rooms; work areas; restaurants and other eating areas; time clocks; locker rooms and other storage or sleeping areas, except as necessary to ensure privacy between male and female employees; parking lots, drinking fountains; recreation or entertainment areas; and transportation. If not otherwise exempted by Title 48 and to the extent applicable, Contractor will comply with 48 CFR §52.219-8, Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns, and 48 CFR §52.219-9, Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan. If not otherwise exempted by 41 CFR §60-1.5, Contractor represents that it will file all reports or other required information specified in 41 CFR §60-1.7.
- 31.3 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of any violations of such laws, ordinances and regulations.

32.0 PERMITS AND LICENSES

- 32.1 Contractor shall obtain all permits and licenses required by any regulatory authority for the performance of any portion of the Work, except that Owner shall obtain permits and licenses for all structures which are to become a permanent part of the Site. Before starting Work, Contractor shall submit to Owner a copy of all permits and licenses required by any such regulatory authority.
- 32.2 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of the failure of Contractor to obtain such permits and licenses.

33.0 NOTICES

- 33.1 Each party shall designate in writing a representative to receive any and all notices required under the Contract. Notices shall be in writing and shall be given to the representative designated to receive them, either by personal delivery, certified mail, facsimile, e-mail or any similar means, properly addressed to such representative. All notices shall be effective upon receipt, or upon such later date following receipt as set forth in the notice. Either party may, by written notice to the other, change the representative or the address to which such notices are to be sent. Contract shall be strictly construed and Contractor expressly waives any claims which do not strictly comply with the written notice requirements of the Contract.

34.0 SEVERABILITY

- 34.1 In the event that any of the provisions, or portions thereof, of the Contract are held to be unenforceable or invalid by any court, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

35.0 WAIVER

- 35.1 Either party's waiver of any breach of the Contract shall not be deemed to be a waiver of any other breach of the same or a different term of the Contract. Contractor agrees not to claim any waiver by Owner of such notice requirements based upon Owner's conduct or Owner having actual, verbal, implied, or constructive notice.

36.0 NON-DISCLOSURE

- 36.1 Except as required by law, regulation, or judicial or administrative order, neither party shall disclose the terms of the Contract without the consent of the other party. Notwithstanding the foregoing, Owner may disclose the terms of the Contract without the consent of Contractor (a) to any of its affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures); and (b) to any prospective transferee or purchaser of assets of Owner or any of affiliates.

37.0 HEADINGS

- 37.1 Headings are provided for the convenience of the parties, and shall not affect the interpretation of any provision.



38.0 AFFILIATED COMPANIES

- 38.1 Any indemnification of Owner or any limitation of Owner's or Contractor's liability under the Contract shall to the same extent apply to Owner's or Contractor's directors, officers, employees, agents, and affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), including any directors, officers, employees and agents thereof.
- 38.2 The affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures) of the American Electric Power System are severally and not jointly liable for obligations arising hereunder.

39.0 APPLICABLE LAWS AND JURISDICTION

- 39.1 Except for Article 17.0, the rights and obligations of the parties arising out of the Contract shall be governed in all respects by the laws of the State of Ohio. Any reference herein to the laws of other states is made only to the extent that the laws of that state might apply, notwithstanding the intent of the parties that the laws of the State of Ohio should apply.
- 39.2 Contractor agrees that all actions and proceedings brought by Owner against Contractor may be litigated in courts located in the State of Ohio or the state where the work was performed. Contractor agrees that such courts are convenient forums and irrevocably submits to the personal jurisdiction of such courts. Contractor waives personal service of process and consents to service of process by certified or registered mail at the address designated for receiving notices under the Contract.

40.0 ENTIRE AGREEMENT

- 40.1 The Contract constitutes the entire agreement between the parties and supersedes all previous and collateral agreements or understandings with respect to the subject matter of the Contract. No waiver, alteration, amendment or modification of any of the provisions of the Contract shall be binding unless in writing and signed by duly authorized representatives of the parties.

41.0 BINDING EFFECT; NO THIRD-PARTY BENEFICIARIES

- 41.1 Subject to the restrictions on assignment in Section 5.1, the Contract shall be binding upon and shall inure to the benefit of the parties of their respective successors and permitted assigns.
- 41.2 No provision of the Contract is intended or shall be construed to be for the benefit of third party other than as set forth in Article 36.0.

42.0 EXECUTION; COUNTERPARTS

- 42.1 The Contract shall not be binding or effective until properly executed by each of the parties hereto. The Contract may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which, taken together, shall constitute but one and the same Contract, which may be sufficiently evidenced by one counterpart.

43.0 SURVIVAL

- 43.1 All of the terms of the Contract which by their nature extend beyond the expiration or termination of the Contract, including indemnification obligations, confidentiality obligations, limitations of liability, shall survive expiration or termination of the Contract and remain in full force and effect.

**END OF DOCUMENT**

AFFIDAVIT OF COMPLETION

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, states that:  
(Name of Affiant)

I. S/He is the \_\_\_\_\_ of  
(Office held by Affiant)

\_\_\_\_\_(Contractor)  
(Legal Name of Contractor)

that has a contract with \_\_\_\_\_  
(Legal Name of Owner)

(Owner) dated \_\_\_\_\_ (Owner's Contract No. \_\_\_\_\_)  
(Contract Date) (Contract No.)

involving work on the Owner's property at \_\_\_\_\_  
(Project Name)

located near \_\_\_\_\_  
(City, State)

2. All of the Work required to be performed by the Contractor under said Contract has been performed. All bills and claims for material, labor and services to employees, Subcontractors, material suppliers, and others, covering the Work required to be performed under the Contract, have been paid in full by the Contractor. There are no unpaid amounts on the basis of which a lien has been filed, or can be filed, in connection with the Work performed under the Contract.

\_\_\_\_\_  
Signature of Affiant

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
Notary

EXHIBIT  
1

STATE OF KANSAS

IN SENATE,  
January 14, 2018.

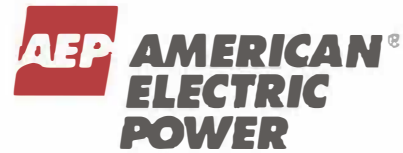
REPORT OF THE  
COMMISSIONER OF  
THE STATE BOARD OF  
AGRICULTURE,  
FOR THE YEAR  
ENDING DECEMBER  
31, 2017.

Submitted by  
COMMISSIONER  
OF AGRICULTURE,  
STATE OF KANSAS.

The report of the  
Commissioner of  
Agriculture for the  
year ending  
December 31, 2017,  
is hereby  
presented to the  
Senate.

Approved and  
forwarded to the  
Senate for  
its consideration,  
this 14th day of  
January, 2018.

\_\_\_\_\_  
Governor



## American Electric Power Transmission Supplemental Safety Terms and Conditions

The Supplemental Safety Terms and Conditions shall supplement the following AEP General Terms and Conditions referenced in the applicable Service Agreement Form, Contract Letter, Blanket Purchase Order, Purchase Order, or other similar contracting document.

These Supplemental Safety Terms and Conditions are intended to supplement and not replace the safety provisions in the AEP General Terms and Conditions. In the event of a conflict between the applicable General Terms and Conditions and these Supplemental Safety Terms and Conditions, the terms of these Supplemental Safety Terms and Conditions shall apply.

These Supplemental Safety Terms and Conditions shall also apply to any subcontractors that Contractor may use for the Work. **Contractor is responsible for ensuring that its subcontractors are aware of and comply with these Supplemental Safety Terms and Conditions.** The Contractor must provide proof, via written communication, that these Supplemental Safety Terms and Conditions have been reviewed with the Subcontractors and acknowledged.

Contractor's failure to comply with these Supplemental Safety Terms and Conditions shall be cause for the Contractor to be terminated and Contractor to be removed from AEP's Approved Bidder's List.

### 1.0 GENERAL

- 1.1. Contractor is hereby reminded that AEP's Contractor Safety Management System will be in effect. Contractor's safety performance will be monitored and evaluated during the project by Owner's Representative.
- 1.2. Contractor shall adhere to all applicable local, state, and federal regulations and all rules and policies set forth in Contractor's own Safety Manual. Contractor shall immediately correct any deficiency brought to the attention of Contractor by Owner or Owner's Representative. Repeated safety violations, severe violations, or events are cause for the Contractor to be terminated and removed from AEP's Approved Bidder's List.
- 1.3. Contractor shall adhere to all written Safety Directives issued by AEP Transmission.

- 1.4. All persons who enter the project site shall have completed the AEP Transmission Contractor Safety Orientation. This training shall be valid for one year and must be refreshed annually.
- 1.5. Owner or Owner's Representative shall have the authority to immediately stop Contractor's Work indefinitely for operations, which in the opinion of Owner, constitute a safety concern. It is the responsibility of Contractor to adequately satisfy Owner of any remediation necessary to provide a safe and healthful workplace.
- 1.6. Contractor shall have qualified and competent supervision at the Site at all times to direct and observe the Work. The individual(s) providing the qualified and competent supervision is permitted to perform Work activities; however these activities can not interfere with ability to direct and observe the Work.
- 1.7. Contractor shall appoint a qualified and competent representative anytime Contractor has subcontractors working onsite without Contractor present. This representative shall be onsite at all times while Work is being performed by subcontractor.
- 1.8. If Contractor in good faith believes that any rule or procedure set forth in these Supplemental Safety Terms and Conditions will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

## **2.0 CONTRACTOR SAFETY REPRESENTATIVE**

- 2.1. Contractor shall provide a full-time on-site safety representative for each project with twenty or more employees (Contractor and its subcontractors). This individual shall have successfully completed the OSHA 30-Hour Training. Owner or Owner's Representative may request verification of qualifications for review and approval.
- 2.2. The full-time on-site safety representative shall assist Contractor Management with the initiation, enforcement, maintenance, and administration of job site safety and other loss prevention programs associated with the Work.
- 2.3. Owner may request Contractor to provide a full-time safety representative for Work with fewer than 20 employees if Owner determines the nature of the Work justifies additional safety oversight. A risk analysis of the project will be performed to assist in determining this requirement.

## **3.0 MONTHLY SAFETY REPORTING**

- 3.1. Contractor must report the following:
  - Hours worked monthly and year-to-date on AEP Transmission Work
  - First Aid Events monthly and year-to-date on AEP Transmission Work

- OSHA Recordable Events monthly and year-to-date on AEP Transmission Work

The above requirements must be reported by the 4<sup>th</sup> working day of the following month via the Transmission Contractor Safety portal. Contractors shall access the portal at [www.aeptcs.com](http://www.aeptcs.com) and enter this information.

#### **4.0 EVENT REPORTING**

- 4.1. When working for AEP Transmission Engineering and Project Services, once the scene is secure, Contractor shall report all events immediately to the project Transmission Construction Representative (TCR). Events of a more serious nature shall also be reported to the Transmission Contractor Safety Project Manager immediately (verbal reporting is sufficient). Events of a more serious nature include, but are not limited to, injuries requiring transport to a hospital or other medical facility and customer outages. Following initial notification, standardized incident reports shall be completed and submitted via the Transmission Contractor Safety portal. Contractors shall access the portal at [www.aeptcs.com](http://www.aeptcs.com).

An initial written report shall be submitted by 8:00 am the following day. Within 48 hours, Contractor shall submit an in depth written report.

- 4.2. When working for AEP Transmission System and Region Operations, once the scene is secure, Contractor shall report all events immediately to AEP Transmission System and Region Operations. Following initial notification, standardized incident reports shall be completed and submitted via the Transmission Contractor Safety portal. Contractors shall access the portal at [www.aeptcs.com](http://www.aeptcs.com).

An initial written report shall be submitted by 8:00 am the following day. Within 48 hours, Contractor shall submit an in depth written report.

- 4.3. All environmental spills must be reported immediately to the TCR or AEP Transmission System and Region Operations representative as appropriate.

#### **5.0 TASK HAZARD ANALYSIS**

- 5.1. Before any Work begins and before changing any Work procedures or activity at any location, Contractor shall perform a documented Task Hazard Analysis (THA) and in a written report identify all potential Work site risks. The THA shall include: 1) step-by-step plan for the task to be performed, 2) risks/hazards associated with the task, and 3) control measures that Contractor will take to eliminate or control these potential risks/hazards.

- 5.2. Contractor's assigned supervisor/lead shall review the THA with each crewmember prior to the start of each task and anytime the Work procedure changes. Additionally, the Contractor's assigned supervisor / lead shall review the THA with each crewmember after lunch and/or significant break in the Work.

Each crewmember must sign their name verifying they understand and will adhere to the THA.

- 5.3. Contractor's supervision shall conduct a THA review with all persons who enter the work zone. This review shall include a scope of Work and any hazards present at the site.
- 5.4. Contractor shall make its THA reports available to Owner or Owner's Representative upon request.

## **6.0 PERSONAL PROTECTIVE EQUIPMENT**

- 6.1. Contractor is responsible for requiring the use of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions.
- 6.2. Contractor and subcontractor employees shall wear at a minimum the following personal protective equipment (PPE) while in any construction area:
  - Hardhat
  - Safety Glasses or Prescription Safety Glasses with Side Shields that meet the specifications of ANSI Z87
  - Approved hearing protection devices in designated areas
  - The outermost layer of clothing on the upper body must be High Visibility and Reflective
  - Work gloves appropriate for the potential hazards of the job tasks. Note: Jersey gloves are not permitted to be worn as the only means of protection.
  - Protective toe footwear that meet the safety-toe specifications of ASTM F2413-05 with a compression rating of C75 (i.e. safety toe shoes)
  - Employees that climb structures shall wear a shoe with a defined heel.
  - 100% Fall Protection when climbing on wooden structures.

Additional PPE may be required based on the Contractor's PPE Assessment.

Open-toed, open-heeled, athletic footwear and tennis shoes are prohibited.

- 6.3. Contractor employees shall wear fire retardant (FR) clothing when working on or near energized equipment. While not all-inclusive, the following list provides examples:
  - When working within the minimum approach distances
  - When rubber gloves or rubber gloves and sleeves are required
  - When performing hot-stick Work
  - When bonding or working "bare hand method"
  - When grounding conductors or equipment
  - When testing lines or equipment to be de-energized
  - When performing switching operations
  - When entering enclosed/confined spaces with energized lines or equipment
  - When disconnecting or connecting testing meters

- When an employee is required to physically assist with energized Work on lines or equipment where mechanical failure or human error could expose employee to a flash

When a shirt is worn as the outer layer, it must be FR rated with long sleeves. Sleeves shall be rolled down and buttoned with the shirt tails tucked into trousers. When an additional layer is required, the coat worn as the outer layer must be 100% natural fiber fabrics of 11 ounces per square yard or greater.

Pants must be 100% natural fiber fabrics of 11 ounces per square yard or greater.

All other layers shall be 100% natural fiber fabrics.

Additionally, an employee entering a station under the control of a Dispatch Authority shall be required to wear fire retardant clothing unless specifically exempted by Owner's Representative.

## **7.0 SUBSTATION/SWITCHYARDS**

- 7.1. Contractor shall have all employees in a supervisory role qualified to enter an energized substation. This training is commonly referred to as Station Entry Training. Supervisory employees shall be trained and competent in the skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment, the skills and techniques necessary to determine the nominal voltage of exposed live parts, and the minimum approach distances corresponding to the voltage to which the qualified employee will be exposed. A record of this training must be maintained by Contractor and made available to Owner or Owner's Representative upon request.
- 7.2. Employees not OSHA station entry qualified shall be under direct supervision of a qualified supervisor. In this case, if the supervisory employee leaves an electrical station site where Work is being performed, all employees must leave the site as well.
- 7.3. All substation gates shall remain closed and locked at all times unless under direct observation by an attendant.
- 7.4. Upon entry/exit of a substation, Contractor shall notify the appropriate Dispatch Authority.
- 7.5. Excavation Inside Energized Stations – Approval shall be attained prior to using mechanical devices to perform excavation inside an energized substation. Excavations shall be barricaded at the end of each shift.

## **8.0 FIREARMS, ALCOHOL, AND DRUGS**

- 8.1. Firearms, alcohol, illegal drugs (marijuana, cocaine, etc...) or drugs taken for non-medicinal purposes are prohibited on all Owner controlled sites.



- 8.2. Contractor shall be responsible for its and its subcontractor employees who are under the care of a physician and are taking prescribed medicine, which may alter the employee's physical or mental ability. Contractor shall determine the necessity to change and adjust accordingly the employee's job assignment while undergoing treatment.
- 8.3. If firearms or suspected illegal drugs are discovered on any AEP Transmission worksite, the following guidelines should be followed by whoever discovers the firearms or suspected illegal drugs:
- First, if possible without putting themselves or others in harms way, attempt to secure the location and ensure that others cannot come in contact with the firearms or suspected illegal drugs. Do not handle or move firearms or suspected illegal drugs from their discovered location.
  - Second, immediately contact the AEP Project Manager or Transmission Construction Representative and together make a decision whether or not the situation requires a call to the local law enforcement authorities. Immediately call the local law enforcement authorities and report the discovered items if (a) neither the AEP Project Manager nor the Transmission Construction Representative is available; (b) there is a threat of harm to any person; or (c) there is a risk of improper removal or disposal of the firearms or illegal drugs.
  - Third, call local AEP Security personnel or call the general AEP Security Hotline at 1-866-747-5845.
  - Fourth, for incidents involving Contractor personnel, Contractor shall submit reports according to Section 4.0 Event Reporting.

## 9.0 DRUG/ALCOHOL TESTING

- 9.1. All Contractor and its subcontractor employees must **complete** and **pass** the following drug/alcohol testing:
- AEP Pre-Employment (48 hours or less prior to first employment on an AEP site)
  - Post Event (within two hours) on all employees involved in any safety related event
  - Random
  - Reasonable Suspicion
- If not subjected to a test listed above, Contractor and subcontractor employees must be tested a minimum of once every 12 months.
- 9.2. Screening substances and their associated cut-off limits will be the same as listed in the applicable General Terms and Conditions. Contractor shall incur all costs associated with the drug testing identified in this section.
- 9.3. Contractor shall share test results with Owner upon request to the extent allowed by applicable federal, state, or local law. If applicable, Contractor will ensure that employees, agents, subcontractors, or independent contractors and the

employees of subcontractors or independent contractors sign an appropriate authorization prior to such tests being conducted, acknowledging the tests are being conducted and authorizing the information obtained to be provided to the Owner.

- 9.4. Contractor shall have and ensure compliance with a comprehensive substance abuse/drug and alcohol policy that complies with all applicable federal, state, and/or local statutes or regulations.

## **10.0 TRAINING REQUIREMENTS**

- 10.1. Contractor's and its subcontractors' employees shall be appropriately trained, qualified, and competent to perform assigned tasks and associated Work. Qualifications and training shall be documented by Contractor and available to Owner or Owner's Representative upon request.
- 10.2. Contractor's and its subcontractors' Site Supervision shall have successfully completed the OSHA 30-Hour for Construction Training. "Site Supervision" is defined as personnel with responsibility for making job site Work assignments, personnel with overall responsibility for the Work, and any person leading a crew or Work group (Foreman, Superintendent, Crew Leader, Lead Lineman, etc...). Newly appointed or hired supervision shall complete the OSHA 30-Hour for Construction Training before assuming the supervisory position.
- 10.3. All Contractor and subcontractor employees who are performing Work on AEP Transmission Work sites shall have successfully completed the OSHA 10 Hour for Construction Training. New employees shall be trained within fourteen (14) calendar days of starting their first assignment on an AEP Transmission Work site.
  - If Contractor and subcontractor employees have training that is equivalent to the OSHA 30 Hour or OSHA 10-Hour, Contractor shall submit an overview of the program and documentation of this training to Owner. Owner may require OSHA Training in addition to such training, provided Contractor shall be responsible for the sufficiency of its training program.
- 10.4. Contractor shall submit their annual training plan to Owner for review and approval.
- 10.5. First Aid/CPR Training – A minimum of two currently trained persons in First Aid and CPR shall be present for each crew. This is applicable to all crews with the exception of those performing Electrical Work under 600V.
- 10.6. Contractor and subcontractor shall incur all costs associated with the training of their employees.

## **11.0 INDIVIDUALS RESTRICTED FROM ACCESS TO AEP WORK SITES**

- 11.1. Owner may deny access to its Work Sites any individual who fails to comply with the safety provisions set forth in the applicable General Terms and Conditions or these Supplemental Safety Terms and Conditions or who, in Owner's sole judgment, otherwise demonstrates a lack of safety performance. Examples of a lack of safety performance include, but are not limited to, the following:
- Unsafe job performance
  - Failure to pass drug / alcohol test
  - Refusal to submit to a drug / alcohol test
  - Displaying incompetence in performing their job
  - Employees that are determined to be unfit for project employment
  - Playing of pranks, horseplay, or practical jokes
  - Failure to report injuries and/or accident(s)
  - Fighting or acts of aggression
  - Theft or vandalism
- 11.2. Prior to entering the Site and during the term of the Contract, Contractor shall provide to Owner a list of all individuals (whether its or its subcontractors' employees), which Contractor intends to use at Owner's Sites. The list shall identify the individuals by their name and the last three digits of the individual's Social Security Number. This information shall be submitted via the Transmission Contractor Safety portal. Contractors shall access the portal at [www.aeptcs.com](http://www.aeptcs.com) and enter this information
- 11.3. Contractor shall provide Owner with the names and reasons for removal, when an employee is removed from Owner's property due to lack of safety performance or not meeting the drug / alcohol testing requirements.
- 11.4. Owner, in its sole discretion, may deny access to any individual who has previously been removed from a Work Site by Owner or any of its affiliates for safety reasons.
- 11.5. Contractor may request a restricted employee to be cleared for Work. A letter addressing the original safety violations or reason for suspension with any documentation supporting the request shall be sent to Owner for approval. The employee shall not work at any of Owner's Work Sites until approved by Owner, which approval may be withheld at the sole discretion of the Owner.

## **12.0 JOB SITE COMPLIANCE AUDITING**

- 12.1. If Work is greater than two weeks in duration, a Contractor safety professional shall perform and document one job site audit on each Owner job site a minimum of once per month.
- 12.2. If there is a full-time Safety Representative assigned to the job site, daily site audits shall be performed and documented.

- 12.3. Contractor site supervision shall perform and document a minimum of one job site safety audit per week.
- 12.4. Contractor management personnel shall perform and document one job site safety audit per quarter.
- 12.5. Audits shall be maintained for the duration of the Work and shall be made available to the Owner or Owner's Representative upon request.

### **13.0 EMERGENCY PLANNING**

- 13.1. All job sites must have emergency communication and an emergency response plan that has been communicated and understood by all Contractor and subcontractor employees. The plan shall include at a minimum:
  - Emergency Contacts
  - Location and Name of Local Emergency Services
  - On-site communication methods
  - Location and directions (including maps) to the nearest medical facility
  - Procedure to follow in the event of an emergency

All Contractor and subcontractor employees shall drive the route to the nearest medical facility prior to any Work activities occurring on the site.

### **14.0 BILINGUAL REQUIREMENTS**

- 14.1. At a minimum, Contractor shall provide one English speaking employee for each non English speaking crew up to 10 crewmembers. The English speaking crewmember(s) shall be able to communicate with all other crewmembers.

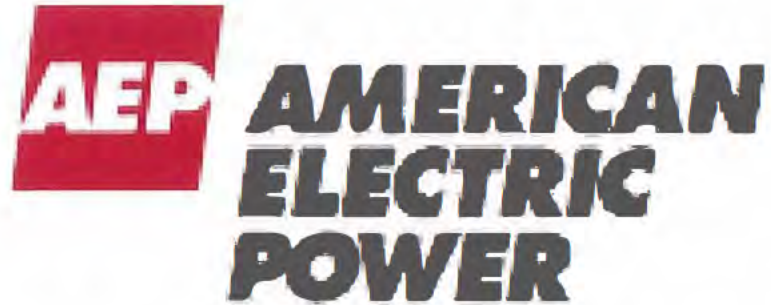
### **15.0 HAZARD COMMUNICATION**

- 15.1. Contractor shall submit a chemical inventory prior to mobilizing onto an AEP Transmission Work Site. This inventory shall be submitted via the Transmission Contractor Safety portal. Contractors shall access the portal at [www.aeptcs.com](http://www.aeptcs.com) and enter this information.
- 15.2. Material Safety Data Sheets (MSDS) shall be kept on file by Contractor and available for Contractor and subcontractor employee's and Owner's review upon request.

### **16.0 MISCELLANEOUS**

- 16.1. Housekeeping – All trash shall be kept in proper containers and disposed of properly.

- 16.2. Cable Verification – Immediately prior to cutting any control cable, Contractor personnel shall have a second person verify that it is the proper cable and that it is de-energized.
- 16.3. GFCI – All extension cords and electric hand tools shall be plugged into a GFCI provided by the contractor. Contractor personnel shall not rely on the receptacles in AEP circuits.
- 16.4. Guard Structures – All hotline crossings and all road crossings shall be protected by the use of a guard structure. Guard structures (including line equipment used as guard structures) shall be installed prior to disconnecting the conductor and shall remain in place until the conductor is clipped in.
- 16.5. Testing of Grounds – All grounds shall be tested in accordance with ASTM F2249 – 03 Standard Specification for In-Service Test Methods for Temporary Grounding Jumper Assemblies Used on De-Energized Electrical Power Lines and Equipment.
- 16.6. Placement of Grounds – The location of all grounds on Transmission Line Work shall be tracked and documented. Grounds shall be installed/removed maintaining minimum approach distance. Grounds shall be inspected prior to each use.
- 16.7. Wire Skinning – All employees shall use tools specifically designed for wire skinning.
- 16.8. Traffic Control – All operations involving roadways shall comply with the Manual of Uniform Traffic Control Devices and/or local requirements.



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Prepared by:

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June 24, 2011



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

The following Supplementary Terms and Conditions for Forestry Contracts ("Supplementary Terms") shall supplement any of the American Electric Power Service Corporation ("Owner" or "AEP") General Terms and Conditions utilized in any Contract under which Contractor is authorized to perform Services. These Supplementary Terms shall not replace the safety or operational provisions in the applicable AEP General Terms and Conditions and are intended to support and reinforce other Contract documents.

All of the provisions of these Supplementary Terms shall also apply to Contractor's subcontractors. Contractor is responsible for ensuring that its subcontractors comply with these Supplementary Terms.

Contractor's and any of its subcontractors' failure to comply with these Supplementary Terms is cause for the Contract to be terminated and may prevent eligibility for the consideration of providing Services in the future (i.e., removal from AEP's qualified bidders list).

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

### SECTION 1 GENERAL SUPPLEMENTARY TERMS AND CONDITIONS

#### **1.1 Protection of Services**

- 1.1.1 Contractor shall use care and diligence so that performed Services and all materials, installed equipment and tools are thoroughly protected from the weather, loss and any and all damage. Contractor shall furnish and pay for all such protection.
- 1.1.2 Contractor shall provide and pay for the removal of snow, ice and water from its storage or work areas.
- 1.1.3 Contractor shall be liable for any loss or damage caused by carelessness, negligence or any act or failure to act on the part of Contractor, its subcontractors or employees. Such loss or damage includes, but is not limited to, losses and damages to performed Services, materials, equipment to be installed, private property, construction equipment and other property belonging to Owner or other contractors.

#### **1.2 Cleanup and Disposal of Non-Vegetative Debris**

- 1.2.1 Contractor shall keep its work areas, storage areas, parking areas and other areas of operations clean and safe.
- 1.2.2 Contractor shall promptly remove trash and other non-vegetative debris from these areas and properly dispose of all trash and other debris resulting from Services.
- 1.2.3 Upon completion of Services, Contractor shall remove from the site and dispose of its surplus material, chemicals, equipment, tools and, unless otherwise directed in writing by Owner, all temporary structures per all applicable laws.
- 1.2.4 Contractor shall bear the cost of providing the cleanup and removal, including the cost of all labor, supplies, tools, construction equipment and transportation.

#### **1.3 Material Storage and Handling**

- 1.3.1 Owner may designate a material storage location that can be used by Contractor.
- 1.3.2 Unless provided by Owner, Contractor is responsible for the purchase and proper handling and storage of material used during the course of providing Services. Contractor shall abide by all applicable laws.
- 1.3.3 Contractor shall be responsible for the impact of all shortages resulting from missing or damaged material issued to Contractor but not applied. Contractor shall replace such material at its own expense. Substitutions will not be allowed unless approved by Owner in writing.
- 1.3.4 All unused material furnished by Owner or provided by Contractor, and paid for by Owner, shall be returned by Contractor to Owner's designated storerooms or storage points upon notification from Owner.

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

### 1.4 Electrical Clearances

- 1.4.1 Owner will arrange for all necessary clearances on energized equipment or circuits required to be taken out of service for the performance of Services. When an outage is required, Contractor shall notify Owner prior to scheduling such Services, allowing sufficient time for scheduling with system operators.

### 1.5 Permits and Easements

- 1.5.1 Owner will secure all right-of-way easements. Owner will also secure certain permits requiring Owner's signature (i.e., DOT permits, siting permits, building permits). Location specific and construction specific permits not already obtained by Owner are the responsibility of Contractor. Local vehicle registration/operation permits (i.e., frost law permit in Michigan) shall be the responsibility of Contractor.

### 1.6 Protection of Property

- 1.6.1 Contractor shall use all possible care not to damage any existing buildings, structures, pipes, sewers, conduits, manholes or other property, or to interfere therewith without the consent of Owner's authorized representative. Such structures and other objects shall be properly supported, braced and secured in place to prevent damage thereto. They shall not be relocated or reconstructed except as authorized by Owner. Contractor shall be responsible for all damage claims due to this negligence, including the cost of all material and labor required to replace or repair any property damaged.
- 1.6.2 Contractor shall immediately report the complete details of all damage claims to Owner. If Owner determines the claim is valid and is a result of Contractor's negligence, Owner will present the claim to Contractor for settlement. Contractor is to settle all valid claims within 30 days. Contractor is to provide Owner with documentation specific to a settlement process for any claim not settled within 30 days, or the claim will be handled by Owner and the damage amount billed to Contractor. All such damage claims settled by Contractor are to be reported to Owner in writing.
- 1.6.3 Contractor shall be responsible for notifying appropriate state one-call systems, as well as any other utility company not a member of the systems, prior to performing Services involving excavation, boring, stump grinding and/or other activities that may affect underground facilities.

### 1.7 Work on Private Property

- 1.7.1 Whenever any Services are to be completed on private property, Contractor shall attempt to notify owner and/or the tenants thereof and make arrangements with them so that Services will be completed with the least practicable inconvenience to them. Work on private property shall be done as expeditiously as possible and the premises restored immediately.

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

### 1.8 Access and Construction Roads

- 1.8.1 It is Contractor's responsibility to ensure that all property owners' roads traveled by Contractor are in the same condition as the roads were before Contractor elected to use the route. Should Contractor cause any damage to any such road, Contractor is obligated to restore the road to like or better condition than the road existed prior to Contractor's use. Such work shall be completed in a timely manner with proper written documentation of the damage/remedy supplied to property owner and Owner alike. Where Owner deems it necessary to maintain access roads on private property, crushed stone will be furnished or paid for by Owner, and Contractor shall provide labor and equipment to haul and place crushed stone as required. When approved in advanced writing by Owner, Owner shall pay for normal damage to fields or loss of crops resulting from necessary travel by Contractor.
- 1.8.2 Contractor shall keep fences in a sufficient state of repair to satisfactorily confine livestock and shall keep gates closed when not in immediate use. Before Services are considered to be completed, all temporary gates shall be removed and all fences cut or damaged shall be restored to original condition. Fencing damaged by Contractor shall be repaired at Contractor's expense.
- 1.8.3 When it is necessary to gain access to right-of-way over private roads, yards, pastures and cultivated fields, and it is impractical to restrict ingress and egress to the right-of-way, Contractor shall use the route agreed upon by the property owner, Contractor and Owner. Contractor shall notify the property owner prior to the use of these routes.

### 1.9 Emergency Assistance

- 1.9.1 In the event of extensive damage to Owners' facilities as a result of severe storms, flooding or other catastrophes, Owner may request assistance from Contractor in the repair of damages and restoration of service to customers. Under such circumstances, the "Forestry Policies and Procedures for Emergency Assistance" in Section 2 shall be followed.

**SUPPLEMENTARY TERMS AND CONDITIONS  
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**SECTION 2**  
**FORESTRY POLICIES AND PROCEDURES FOR EMERGENCY ASSISTANCE**

In the case of emergencies, during which Contractor is called upon by Owner for storm assistance to restore service following catastrophic damage ("Emergency Assistance"), the following policies and procedures shall apply.

- 2.1 Contractor will provide Owner with emergency contacts, including 24-hour telephone numbers for requesting assistance.
- 2.2 Upon request for Emergency Assistance, Contractor shall provide Owner with a list of available personnel and their classification, labor rates, crew make up, equipment to be used and an estimated time of arrival.
- 2.3 Owner will specify the number of physical full time employees and any special equipment required and will notify Contractor as to where the crews are to be assigned and to whom they will report. Owner will check-in each crew upon arrival.
- 2.4 Contractor shall be responsible to make contact with the appropriate State officials concerning commercial driver's licenses and other transportation issues.
- 2.5 Contractor's crews shall arrive prepared to work and be equipped with PPE, PPI, tools, foul weather gear, lights and batteries to perform the assigned Services. Any crews arriving without the proper tools or equipment to perform the assigned Services may be released at Contractor's expense.
- 2.6 Owner shall determine the work hours for responding crews, including start time (at assigned crew headquarters) and duration. Contractor shall check in with Owner daily at the requested starting time for assignment of Services.
- 2.7 After working sixteen (16) consecutive hours up to a maximum of twenty-four (24) consecutive hours, Contractor's employees shall be released from providing Services for a minimum eight (8) hour rest period, which shall commence upon release by Owner.
- 2.8 Owner will allow a meal break every six (6) hours, or as near as practicable, while Contractor performs Emergency Assistance. Contractor's personnel will be off the clock for all meal breaks taken away from the work site.
- 2.9 Time sheets of Contractor employees shall be kept by Contractor. These time sheets shall be turned in daily to Owner for verification and approval.
- 2.10 Contractor shall be responsible for relaying all Owner communications to its crews.
- 2.11 Contractor shall be responsible for the safety of its crews. Contractor will provide safety statistical reporting of all hours worked on AEP property. This report format will be provided by the AEP Safety Coordinator.

**SUPPLEMENTARY TERMS AND CONDITIONS  
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- 2.12 Owner shall reimburse Contractor for Emergency Assistance at the current contracted rate of the classification for each of Contractor employees utilized plus the applicable mark up percentage for straight and/or premium time. When responding from areas with existing AEP Contracts, Contractor's employees shall be paid at the rates incorporated in the Contract for the area from which they are responding. When Contractor responds from locations without existing contracted AEP rates, billing rates will be negotiated when the agreement to send crews is finalized.
- 2.13 Overtime pay for Emergency Assistance shall be paid based on provisions submitted by Contractor and approved in advance by Owner.
- 2.14 Owner will reimburse Contractor for lodging and meals (dollar amount for meals shall be predetermined by Owner) for the crew(s) requested. Owner may elect to supply meals and/or lodging to Contractor, in which case there will be no reimbursement. All other expenses: (i.e., personal phone calls, alcoholic beverages, tobacco, entertainment, etc.) will not be reimbursed by Owner.
- 2.15 Contractor's employees must register in person at the assigned lodging.
- 2.16 If Owner requests Contractor to provide an employee whose classification falls outside the standard Contractual labor billing rates, Owner shall provide the request in writing and will reimburse Contractor for said employee's labor, vehicle, lodging and meals.

**SUPPLEMENTARY TERMS AND CONDITIONS  
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**SECTION 3**  
**SUPPLEMENTARY ENVIRONMENTAL, SAFETY AND HEALTH TERMS AND CONDITIONS FOR  
FORESTRY CONTRACTS**

**3.1 General**

- 3.1.1 Contractor shall comply with AEP's Contractor Oversight program. Contractor's safety performance will be monitored and evaluated during performance of the Contract by Owners' representative.
- 3.1.2 Contractor shall adhere to all pertinent local, state and federal regulations and all rules and policies set forth in Contractor's own safety manual. Any shortcoming brought to the attention of Contractor by Owner shall be immediately corrected by Contractor. Repeated and/or severe safety violations, incidents or accidents may be cause for the Contract to be terminated, prevent eligibility for providing future Services and result in the potential removal from AEP's qualified bidders list.
- 3.1.3 Owner has the authority to immediately stop Contractor's Service performance indefinitely for practices, procedures and operations, which, in the opinion of Owner, constitute a safety concern. It is Contractor's responsibility to adequately satisfy Owner with any remediation necessary to provide a safe and healthful workplace.
- 3.1.4 Contractor shall have qualified and competent supervision on the job at all times to direct and observe the Work.
- 3.1.5 If Contractor in good faith believes that any rule or procedure set forth in these Supplementary Terms will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

**3.2 General Safety Requirements**

- 3.2.1 Owner, or Owner's representative, shall conduct random Forestry Contract crew safety audits and Contractor shall cooperate fully with Owner's representatives during this audit. The audit is defined in Appendix A.
- 3.2.2 Contractor shall promptly notify Owner if Contractor's or its subcontractors' Experience Modification Rate for workers compensation exceeds 1.0.
- 3.2.3 Contractor shall remain solely responsible for the proper and safe use of all tools, and for conducting safe work practices or procedures. Contractor shall provide information necessary for the job briefing identified in Section 3.6 below, Job Briefings.
- 3.2.4 Contractor shall provide Owner a list of all tools, practices or procedures it or its subcontractors will use in performing assigned Services with fabricated or modified tools ("Specialty Tooling"). Specialty Tooling includes all tooling fabricated, developed by or modified by Contractor. Contractor shall notify Owner of any Specialty Tooling it develops or modifies on site. Contractor shall also notify Owner, prior to use, if it intends to use standard tooling in ways other

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

than those for which the tooling was designed. All such Specialty Tooling is subject to review by Owner. Specialty Tooling shall have design plans, engineered diagrams, etc. with a Professional Engineer's stamp of approval. Contractor shall also inspect Specialty Tooling prior to each use. At its sole discretion, Owner may prohibit or restrict the Contractor's use of Specialty Tooling on Owner's site.

3.2.5 Contractor shall immediately cleanup all spills from Contractors' equipment and vehicles.

### 3.3 Contractor Safety Representative

3.3.1 When Contractor has eleven (11) or more total employees on various projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

3.3.2 Qualifications of the aforementioned safety professional may be subject to Owner's review and approval.

3.3.3 Owner may require Contractor to assign additional safety professionals if Owner determines the scope of Services justifies additional safety oversight.

3.3.4 Owner may require Contractor to supply additional safety professionals if Owner has determined geographical Service locations justify additional safety oversight.

### 3.4 Monthly Reporting

3.4.1 Contractor shall report various safety related statistics, using the most current revision of the AEP supplied form, AEP Contractor Performance Report in Appendix B. Reported statistics will include those of Contractor's subcontractors and will represent Services performed on AEP projects/Contracts only.

3.4.2 The above requirements must be reported by the tenth (10<sup>th</sup>) day of the following month to the following e-mail address: [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com). A copy of the AEP Contractor Performance Report will be supplied to Contractor for reporting this required data. The data will be used by Owner to evaluate Contractor's safety effectiveness and performance.

### 3.5 Event Reporting

3.5.1 When performing Services for AEP and a safety event occurs, Contractor shall notify Owner about the event immediately (verbal reporting is sufficient). Contractor shall also submit a written preliminary notification (no later than 8:00 a.m. the following working day of the event) to the Forestry Supervisor, Region Support Manager and/or designee, Forestry Operations Manager, and shall also e-mail a copy to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com), listing any and all safety events occurring during the performance of Services. A separate report is required for each event. Reported events include near miss events, first aid and minor events, OSHA recordable injuries,



## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

flash/outage events, vehicle accidents, spills/release, underground utility strikes and OSHA/EPA citations/visits. The written report should include sufficient detail to identify the nature of occurrence, the extent of injury (if any) and contact name and number of the person leading the investigation. Within seven (7) business days, Contractor shall submit an in depth report to the e-mail address listed above, along with a copy to the Forestry Supervisor, Region Support Manager and/or designee and Forestry Operations Manager. This report must include the time and date of event, location of event, name of injured employee, the injured employee's on the job experience, description of event, factors that may have caused or contributed to the event, corrective actions taken and/or planned and the person(s) responsible for corrective actions.

### 3.6 Job Briefings

3.6.1 Prior to the commencement of Services in any location and before any changes in procedures or activities are made, Contractor shall perform a Job Briefing in written report/form to identify all potential work site risks. Each member of the crew must sign his/her name to this form in order to affirm their presence at the time the information was presented during the Job Briefing. The report shall include, at a minimum: 1) applicable hazards present during the course of performing the specific assignment 2) Service procedures involved 3) special precautions 4) energy source controls and 5) personal protective equipment requirements. Should Contractor not have its own Job Briefing requirements/forms, then Contractor shall use the AEP Supplied Job Briefing Form in Appendix C.

3.6.2 Contractor shall make its Job Briefing Forms available to Owner upon request.

### 3.7 Personal Protective Equipment Requirements

3.7.1 Contractor is responsible for requiring the use of appropriate personal protective equipment ("PPE") in all operations where there is an exposure to hazardous conditions.

3.7.2 Owner requires Contractor and Subcontractor employees to wear the following PPE, at a minimum, while on/in any construction site and/or work area:

- Safety glasses or safety prescription glasses with side shields
- Hardhat
- Work gloves that provide protection for the type of work
- Approved hearing protection devices when required
- Shoes with a defined heel (employees that climb structures)

3.7.3 Open-toed, open-heeled, athletic footwear and tennis shoes are strictly prohibited. Additional foot protection and/or PPE may be required based on Contractor's PPE assessment or special environmental conditions.

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

### 3.8 Substations/Switchyards

- 3.8.1 OSHA requires personnel working within an electrical station be qualified to recognize equipment and hazards unless escorted by a qualified person. Employees not OSHA station qualified shall be under direct supervision of qualified personnel.
- 3.8.2 Gates to station fences shall remain closed and locked when they are not under the direct observation of an attendant.

### 3.9 Firearms, Alcohol and Drugs

- 3.9.1 Firearms, alcohol, illegal drugs or drugs taken for non-medicinal purposes are prohibited on all Owner Sites.
- 3.9.2 Contractor shall be responsible for all Contractor and Subcontractor(s) employees who are under the care of a physician and are taking prescribed medicine, which may alter the employee's physical or mental ability. Contractor shall determine the necessity to modify the employee's job assignment while undergoing treatment.
- 3.9.3 If firearms or suspected illegal drugs are discovered on any AEP property or Work Site/area, the following guidelines should be followed by whoever discovers the firearms or suspected illegal drugs:
- First, if possible without putting themselves or others in harms way, attempt to secure the location and ensure that others cannot come in contact with the firearms or suspected illegal drugs. Do not handle or move firearms or suspected illegal drugs from their discovered location.
  - Second, immediately contact the Owner's Contract Supervisor or Distribution Line Representative and together make a decision whether or not the situation requires a call to the local law enforcement authorities. Immediately call the local law enforcement authorities and report the discovered item(s) if (a) neither the Owner's Contract Supervisor nor the Distribution Line Representative is available; (b) there is a threat of harm to any person; or (c) there is a risk of improper removal or disposal of the firearms or illegal drugs.
  - Third, call local Owner's security personnel or call the Owner's general Security hotline at 1-866-747-5845.
  - Fourth, for incidents involving Contractor personnel, Contractors shall submit reports according to Section 3.5, Event Reporting.

### 3.10 Drug/Alcohol Testing

- 3.10.1 All Contractor and subcontractor employees performing Services under this Contract must complete and pass a pre-employment drug/alcohol screening. Screening substances and their associated cut-off limits are the same as listed in the applicable AEP General Terms and Conditions.

**SUPPLEMENTARY TERMS AND CONDITIONS  
 FOR FORESTRY CONTRACTS**

- 3.10.2 Post event drug and alcohol testing shall be performed, at Owner's discretion, on all Contractor and subcontractor employees involved in any safety related event. Testing results shall be shared with Owner upon request.
- 3.10.3 Contractor shall incur all costs associated with the required drug and alcohol testing as required in these Supplementary Terms.

**3.11 Language Requirements**

- 3.11.1 Contractor's and its subcontractor's employees shall be capable of communicating in English. At least one copy of all documents and reports, including Job Briefings, shall be prepared in English.

**3.12 Job Site Auditing**

- 3.12.1 Contractor representatives, at a minimum, shall perform and document a Job Site Observation based on the following table:

| Representative Level   | Frequency |
|------------------------|-----------|
| Senior Management      | 1/Quarter |
| Operational Management | 1/Month   |
| General Foreman        | 2/Week    |
| Safety Professional    | 2/Week    |

- 3.12.2 If Contractor does not meet the requirements of Safety Section 3.3.1 [less than eleven (11) employees], then the lowest representative level of the table in 3.12.1 above (safety professional) shall be followed by a company representative.
- 3.12.3 Contractor shall make documentation of such job site observations available to Owner upon request.

**3.13 Emergency Planning**

- 3.13.1 All job sites must have an Emergency Action Plan that has been communicated and documented to all employees. The Job Site Emergency Action Plan shall be documented on each job briefing conducted. This plan shall include, at a minimum:
  - Emergency contacts
  - Location and name of local emergency services
  - Location of closest communication method
  - Location of closest medical facility
  - Procedure to follow in the event of an emergency

**3.14 Traffic Control**

- 3.14.1 All Services performed on or adjacent to existing public road or rights-of-way and/or job site roadways shall be performed in conformance to the requirements of the Manual on Uniform Traffic Control Devices (current revision), state and local jurisdiction.

## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

### 3.15 Individuals Restricted from Access to AEP Sites

- 3.15.1 Owner may deny access to its facilities by any person who fails to comply with the safety provisions set forth in the applicable AEP General Terms and Conditions or these Supplementary Terms or any person who, in Owner's sole judgment, otherwise demonstrates a lack of safety performance. Examples of a lack of safety performance include, but are not limited to, the following:
- Unsafe job performance
  - Failure to pass drug/alcohol test
  - Displaying incompetence in performing their job
  - Employees that are determined to be unfit for project employment
  - Playing of pranks, horseplay or practical jokes
  - Failure to report injuries and/or accidents
  - Fighting or acts of aggression
  - Theft or vandalism
  - Convicted Sexual Offenders
- 3.15.2 Prior to the commencement of Services and during the term of the Contract, Contractor shall provide Owner with a list of all individuals, including Contractor and subcontractor employees, whom Contractor intends to perform Services at Owner's sites. The list shall identify the individuals by their name and the last three digits of their Social Security number.
- 3.15.3 Owner may, at its sole discretion, deny access to any individual who has been previously removed from a project by Owner or any of its affiliates for safety reasons.
- 3.15.4 Contractor may request a restricted Contractor employee to be cleared for the performance of Services. A letter addressing the original safety violation(s) or reason(s) for removal and any documentation supporting the request shall be sent to Owner for approval. Contractor's employee shall not perform Services at any of Owner's sites until approved by Owner. Said approval may be granted or withheld at Owner's sole discretion.

### 3.16 Housekeeping

- 3.16.1 Contractor shall ensure that debris, materials, scrap, trash, etc. is contained and removed daily in order to prevent it from interfering with the safety of any employee and/or general public.

**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX A  
AEP FORESTRY CONTRACT CREW AUDIT FORM**

**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX B  
AEP CONTRACTOR PERFORMANCE REPORT**

**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX C**

**AEP SUPPLIED JOB BRIEFING FORM**

**(ONLY FOR CONTRACTORS THAT DO NOT HAVE THEIR OWN DOCUMENT)**



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# **AEP Aircraft Deconfliction Policy and Procedures**

**Version 1.0**

**AEP Security & Aviation**

**07.15.13**



Security & Aviation Aircraft Deconfliction Guidelines


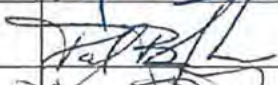

## Revision History

| Date    | Revision Number | Description/Section Changed | Author(s)             |
|---------|-----------------|-----------------------------|-----------------------|
| 4.15.13 | 1.0             | Initial Policy              | S. Partlow, S. Queeno |

## Review History

| Date of Review | Revision Number | Subject Matter Experts Involved   |
|----------------|-----------------|---|
| 06/5/13        | 1.0             | P.B. Johnson, E.G. Schnell, D.E. Guill, D.K. Kunkel, C.D. Moses, D.L. Milford, S Partlow, S. Queeno |

## Approval

| ACTION       | NAME(S)            | TITLE                                     |  |
|--------------|--------------------|---|--|
| Approved by: | Stanley E. Partlow | Managing Director Security and Aviation   |  7/26/13 |
| Approved by: | Paul B. Johnson    | Managing Director Transmission Operations |          |
| Approved by: | Kenneth R. Frazier | VP Safety & Health                        |          |



|                          |   |                            |                     |
|--------------------------|---|----------------------------|---------------------|
| <b>Title:</b>            | AEP Aircraft Deconfliction Guidelines                                 | <b>Revision Date:</b>      | 4.15.13             |
| <b>Owners:</b>           | Stanley Partlow, Managing Director Security, Aviation and Procurement | <b>Sponsoring Area(s):</b> | Security & Aviation |
| <b>Policy Statement:</b> |   |                            |                     |

No aspect of operations is more important than the health and safety of people. These guidelines are written with this single point in mind and adherence to these guidelines shows that commitment to safety.

AEP business units that utilize fixed wing or rotor aircrafts, referred to throughout this document as aircraft to perform aerial surveillance functions on behalf of AEP must follow the attached guidelines to ensure the safety and security of our personnel, facilities, and the general public.

A periodic review of this document may be conducted to ensure accurate information. This document may be updated as conditions and requirements change.

**Detail:**

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### 1.1 PURPOSE

The objective of these guidelines is to provide AEP business units, contracted aircraft companies and key stakeholders with information related to aircraft safety while performing work for AEP. These guidelines provide direction to business units, aircraft companies, the Security Operations Center (SOC) and the Managing Director of Security and Aviation. This document will assist in the deconfliction of Aircrafts that may be contracted by AEP and flying in the same area on the same day.

### 1.2 SCOPE & APPLICABILITY

This document applies to any aircraft such as helicopters or fixed wing used by AEP for any purpose. This document applies to the safety of the aircraft crew, AEP personnel and the general public as it relates to tracking of flights in the same state quadrant. Transmission who oversees the nation's largest electricity transmission system has a vested interested in knowing the exact lines flown and has included a TOPs Aerial Notification Procedure Matrix within this guideline that all business units will use to communicate flights.

### 1.3 DECONFLICTION

Many AEP Business units contract with various aircraft companies to perform services around AEP assets. These business units and aircrafts have no way of knowing each other's flight path on a particular day. Also, AEP facilities are most often not aware of a aircraft that maybe performing aerial patrols over their facility. Deconfliction is designed to ensure that two or more aircrafts are not in the same area at the same time, unless they are aware of each other's presence. In order to achieve this, the Security Operations Center (SOC) will serve as the central point to ensure that all flights are tracked for safety purposes. The SOC will ensure that the aircraft companies are aware of each other's presence and follow up with each to ensure contact has been made.

A safety issue arises when two or more aircrafts are flying in the same area at the same time without knowledge of each other's presence. The SOC is in a position to track such occurrences and notify each company and provide contact information to both and require they communicate with each other while flying for AEP. The SOC will alert aircraft companies when two are more aircrafts are flying in the same state, on the same date, in the same quadrant. The SOC does not need the exact location of the flight plan but does require the state quadrant the aircraft will be over- flying. In addition the SOC requires information related to any AEP facilities that will be overflown.

State Quadrant Example





## 1.4 AEP BUSINESS UNIT RESPONSIBILITIES

It will be the responsibility of the AEP business unit contracting with the aircraft companies to advise the vendors of these guidelines. Business units contracting for this service must follow this policy Appendix I shows the Transmission Aerial Notification Procedure matrix to be followed by all AEP business units for notification purposes.

## 1.5 AIRCRAFT COMPANIES

Aircraft companies contracted by AEP are required to follow these guidelines. The aircraft company will be notified by the SOC of any other AEP contracted aircraft operating in the same state quadrant during the same time frame. The SOC will provide all aircraft companies with each other's 24x7 phone number and advise all parties to contact each other so they can provide specific flight information. Daily the SOC will review any open flights in the same quadrant and contact each aircraft company to remind them that there is another aircraft operating in the same region.

## 1.6 INFORMATION REQUIRED FOR FLIGHT TRACKING

The SOC will require the following information to effectively track and deconflict all aircrafts flying for AEP.

- Name of Person providing flight information
- Name and telephone number of AEP Contact and Business Unit
- Name of Aircraft Company and 24x7 Phone number
- Aircraft Color and Tail Number (provide photo if available)
- Date and Time flight will occur (If scheduled for a week provide that information)
- State in which the flight occur
- Quadrant of the State where the flight will occur (NE, SE, NW, SW)
- Name of any AEP facility that will be overflown
- Flight Plan if involving Transmission or Generation assets

Any changes in dates, times or flight location must be communicated to the SOC and TDC either by phone call or using the Aerial Notification procedure matrix.

## 1.7 SECURITY OPERATIONS CENTER

The Security Operations Center is the alarm and communication center for AEP Physical Security. The SOC focuses on safety, compliance and reliability. The SOC is in a unique position to track and evaluate each flight to determine if a potential conflict exists with multiple aircrafts contracted by different business units flying in the same state quadrant.

The SOC will receive notifications from the Aircraft Company or AEP Business units regarding a flight taking place. The SOC operator on duty will launch an Aircraft Deconfliction Flight Tracking incident in the Situator™ program and obtain the specific information regarding the flight. If there is another flight already scheduled for the same day and same state quadrant, the SOC will notify the aircraft companies flying in the same quadrant and provide contact information to both. It will be the responsibility of the aircraft companies to communicate with each other and provide specific details of their flight location.

Daily, the SOC will review all flights that are scheduled for that day. At this time the TDC can also override a request if there is a system reliability concern. Aircraft vendors who are scheduled to operate in the same state quadrant will receive a call from the SOC reminding them that another aircraft company is scheduled to fly in the same area on that day.



The SOC will provide daily the date, time, state quadrant, and aircraft description to the following business units via email:

Transmission  
Distribution  
Generation Dispatch  
Physical Security

If a flight plan includes the over flight of a Generation facility the SOC will provide pertinent details to the Plant Manager or designee.

The SOC will document all calls and information received in the NICE Situater program. The TDC will log all related activities on the Dispatcher Operating Log (DOL).

### 1.8 COMMUNICATION

Communication is the key to the success of this program and safety of all involved. Aircraft vendors or an AEP representative flying with the aircraft vendor will contact the SOC and TDC using emailing depending on their geographic location. For a detailed list see (Appendix 1)

East - [airial\\_patrol\\_notification\\_t\\_east@aep.com](mailto:airial_patrol_notification_t_east@aep.com)

West - [airial\\_patrol\\_notification\\_t\\_west@aep.com](mailto:airial_patrol_notification_t_west@aep.com)

When email is used to communicate the flight information, the SOC will contact the company via telephone if a conflict is present based on the information received

### 1.9 STORM MODE

When a storm mode is declared by an operating company or an unscheduled forced outage assessment flight is needed, it will be the responsibility of the AEP Business unit contracting aircraft companies to call both the SOC and TDC to report flight information and not use the email notification. Usually during storms there is an increased amount of aircrafts used by AEP surveying the storm area. The possibility of an aircraft flying in the same general area is greater than during normal operating conditions, it will be important that deconfliction is accomplished rapidly by the SOC. The SOC will also communicate the flight information they receive during storm mode to the appropriate e-mail group listed in section 1.8.

### 2.0 AUDIT

The Managing Director of Security and Aviation will audit this program and ensure all business units are following these guidelines. Periodically the Managing Director of Security and Aviation will require the SOC to provide reports of n flights that are logged by the SOC. The Managing Director will contact business units and ask for information on flights contracted by AEP, and both reports will be compared. If a discrepancy is found that there is an aircraft flight and no call was received by the SOC, the Managing Director will provide that information to the business unit.

### CONTACT NUMBERS

Security Operations Center – 1-866-747-5845

Security Operations Center Manager – 614-716-3347

Managing Director Security and Aviation – 614-716-3020

Transmission Dispatch -- (TDC desk phone numbers to be provided only to AEP Representatives. These are internal numbers and should not be shared with the aircraft vendors.)



### Appendix I

#### Proposed Procedures – Effective July xx, 2013

| Group  | Type of Activity   | East TDCs<br>CO, RO   | West TDCs<br>CC, SH, TU   | Comments<br>Before Day of  | Comments<br>Day of  |
|--|--|---|---|--|---|
| Forestry   | Aerial Inspections<br>Aerial Spraying<br>Right-of-way clearing     | Use Email mail list <u>Aerial Patrol Notification T East</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Use Email mail list <u>Aerial Patrol Notification T West</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Informational Email consisting of aircraft info (photo if available), contact names and numbers, scope of work, dates, and assets involved | - System Conflict notification by TDC<br>- Phone call to the TDC/Email Notification if there is deviation from original request<br>- Interconnect notification by TDC |
| TLE  | LiDar Inspections<br>TGIS mapping                                  | Use Email mail list <u>Aerial Patrol Notification T East</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Use Email mail list <u>Aerial Patrol Notification T West</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Informational Email consisting of aircraft info (photo if available), contact names and numbers, scope of work, dates, and assets involved | SAME AS ABOVE   |
| TFS/T Line East  | Live line work<br>Storm recovery and assessments<br>Aerial patrols | Use Email mail list <u>Aerial Patrol Notification T East</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Use Email mail list <u>Aerial Patrol Notification T West</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Informational Email consisting of aircraft info (photo if available), contact names and numbers, scope of work, dates, and assets involved | SAME AS ABOVE   |
| TFS/T Line West  | Live line work<br>Storm recovery and assessments<br>Aerial patrols | Use Email mail list <u>Aerial Patrol Notification T East</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Use Email mail list <u>Aerial Patrol Notification T West</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Informational Email consisting of aircraft info (photo if available), contact names and numbers, scope of work, dates, and assets involved | SAME AS ABOVE   |
| Corporate Communications<br><br>Distribution<br><br>Generation | Any activity involving aerial surveillance functions               | Use Email mail list <u>Aerial Patrol Notification T East</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Use Email mail list <u>Aerial Patrol Notification T West</u> consisting of SOC, TDC, T Line, TLE, D, G, and Forestry reps | Informational Email consisting of aircraft info (photo if available), contact names and numbers, scope of work, dates, and assets involved | SAME AS ABOVE   |

Notes – (1) Any activities not listed above involving a aircraft performing any AEP asset observation or reconnaissance requires notification to the TDC and SOC



# EXHIBIT B

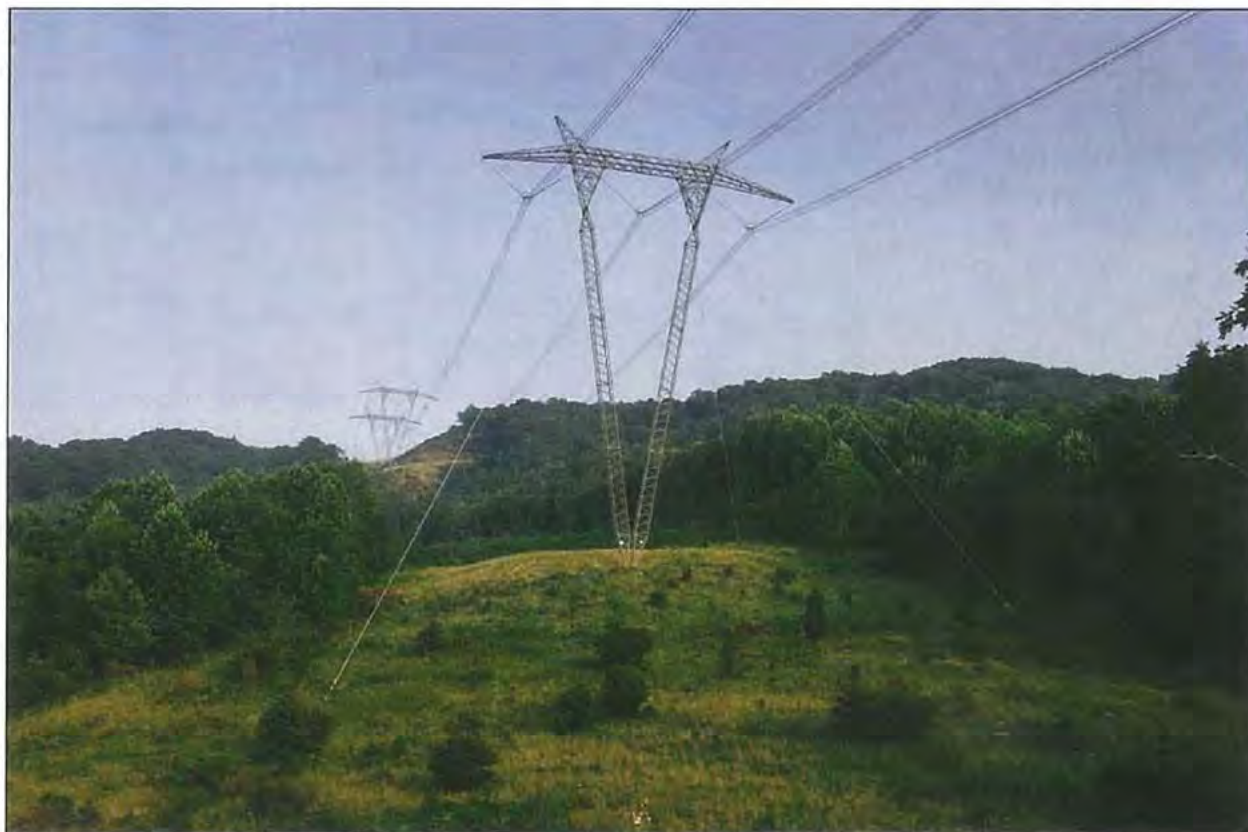
- TRANSMISSION VEGETATION MANAGEMENT PROGRAM REV. 12 EFFECTIVE 7/31/2013
- AEP FORESTRY GOALS, PROCEDURES & GUIDELINES FOR DISTRIBUTION AND TRANSMISSION LINE CLEARANCE OPERATIONS DATED 5/14/09
- AEP TRANSMISSION GUIDELINES FOR MONTHLY UNVOUCHERED LIABILITIES DATED 2/14





# Transmission Vegetation Management Program

Effective July 31, 2013



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## Transmission Vegetation Management Program



Responsible Forester:  
K. B. Patton

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American Electric Power

Rev. 12

TVMD-001

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## Review Cycle

| Version | Description                                | Review Cycle | Retention Period | Review Date |
|---------|--|--------------|------------------|-------------|
| 1       | Reviewed with Changes to Ver. 0.           | Annual       | 3 Yrs            | 01/16/2006  |
| 2       | Reviewed with Changes to Ver. 1 and 2.     | Annual       | 3 Yrs            | 03/12/2007  |
| 5       | Reviewed with Changes to Ver. 3, 4, and 5. | Annual       | 3 Yrs            | 05/06/2008  |
| 8       | Reviewed with Changes to Ver. 6.           | Annual       | 5 Yrs            | 05/26/2009  |
| 9       | Reviewed with Changes to Ver. 8.           | Annual       | 5 Yrs            | 07/27/2010  |
| 10      | Reviewed with Changes to Ver. 9.           | Annual       | 5 Yrs            | 07/21/2011  |
| 11      | Reviewed with Changes to Ver. 10.          | Annual       | 5 Yrs            | 07/12/2012  |
| 12      | Reviewed with Changes to Ver. 11.          | Annual       | 5 Yrs            | 07/15/2012  |

## Revision History


| Version | Description  | Prepared By                          | Reviewed By | Approved By   | Effective Date |
|---------|--|--------------------------------------|-------------|---|----------------|
| 1       | Added Appendixes A and B.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 01/16/2006     |
| 2       | Added Appendix C.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 10/02/2006     |
| 3       | Added Revision History.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 03/12/2007     |
| 3       | Revised Appendix C from Version 2. Clarified video text associated with aerial patrols, page 8.  | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 03/22/2007     |
| 4       | Revised Maintenance Clearances in Table I, page 11. Removed Appendix A from Revision 0 and inserted a new Appendix A. Removed Appendix B from Revision 0 and renamed Appendix C from Revision 0 to Appendix B. | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 11/09/2007     |
| 5       | Revised Maintenance Clearances text page 10. Revised Appendix B.   | H.R. Jones,<br>Principal<br>Engineer | -           | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | 05/06/2008     |

| Version | Description   | Prepared By   | Reviewed By   | Approved By   | Effective Date |
|---------|---|---|---|---|----------------|
| 6       | Added third level of review/approval. Added Internal Mailing list. Added Standard mapped to TVMP. Revised Contents and page numbers. Revised Maintenance Clearances, pages 13 and 14. Revised Imminent Threat, pages 10 and 11. Revised Appendix A. Added new Appendix C. Added new Appendix D. Added hyperlinks. | S .J. Reaves,<br>Forestry<br>Program<br>Coordinator I | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | D. R. Boezio,<br>Dir., Trans.<br>Asset Engineering                | 06/15/2009     |
| 8       | Revised Version History. Revised Personnel Qualifications, Appendix D. Included References on Contents Page. Revised Subject Matter Experts (SMEs).   | S .J. Reaves,<br>Forestry<br>Program<br>Coordinator I | J. E. Schechter,<br>Mgr., Trans.<br>Line Asset<br>Engineering | D. R. Boezio,<br>Dir.,<br>Transmission<br>Asset Engineering       | 07/31/2009     |
| 9       | Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Landowner and Community Relations section to Land Owner Relationships and Environmental Sustainability. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved.   | D.K.<br>Killingsworth,<br>Engineer I                  | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering  | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 07/30/2010     |
| 10      | Reformatted Document to match Transmission Forum Model TVMP.  | D.K.<br>Killingsworth,<br>Engineer I                  | J. E. Momme,<br>Dir. Trans.<br>Line Projects<br>Engineering   | D. J. Recker,<br>Managing Dir.<br>Trans. Projects<br>Engineering  | 7/30/2011      |

| Version | Description  | Prepared By  | Reviewed By  | Approved By   | Effective Date |
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| 11      | Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Land Owner Relationships and Environmental Sustainability to Land Owner Relationships and revised. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved. Removed Appendix C. Revised Personnel Qualifications. Revised New Construction Clearing. Added Document Team. | K. B. Patton,<br>Utility<br>Forester II            | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 7/31/2012      |
| 12      | Revised Document Team. Revised Subject Matter Experts (SMEs). Revised Appendix A Imminent Threat Communication and Procedures. Revised Appendix B Imminent Threat Communication. Revised Appendix C TVMP Internal Mailing List. Revised Forestry Patrol Procedures. Revised Imminent Threat Report Form.   | K. B. Patton,<br>System<br>Forestry<br>Coordinator | J. E. Momme,<br>Dir., Trans.<br>Line Projects<br>Engineering | D. J. Recker,<br>Managing Dir.,<br>Trans. Projects<br>Engineering | 7/30/2013      |

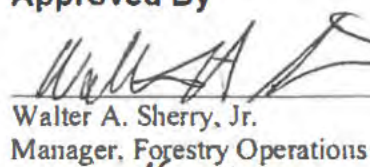
## Signatures

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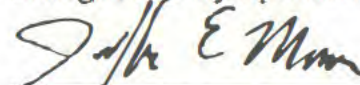
  
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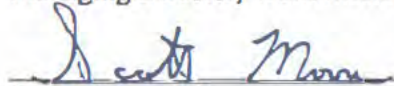
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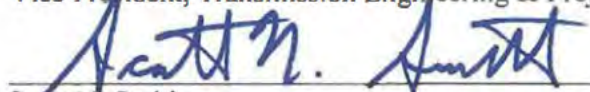
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## I. Referenced Specifications

| Title  | Date | Version      | Pages |
|--|------|--------------|-------|
| <i>AEP Forestry Goals, Procedures &amp; Guidelines for Distribution and Transmission Line Clearance Operations</i>   | 2009 |              |       |
| American Electric Power (AEP). <i>Transmission Right of Way Clearing and Maintenance: A Balanced Approach to Vegetation Management</i> . American Electric Power, Columbus, OH 43215.  | 2008 |              |       |
| American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning)</i> . Tree Care Industry Association, Inc. Londonderry, NH 03053.   | 2008 | A300(1)-2008 | 1-13  |
| American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices Part 7 – Integrated Vegetation Management a. Electric Utility Rights-of-way</i> . Tree Care Industry Association, Inc. Londonderry, NH 03053. | 2012 | A300(7)-2012 | 1-8   |
| American National Standard Institute. <i>Arboricultural Operations - Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush - Safety Requirements</i> . International Society of Arboriculture (ISA). Champaign, IL 61826.                                 | 2012 | Z133.1-2012  | 1-84  |
| IEEE 516-2003. Institute of Electrical and Electronics Engineers, Inc. <i>IEEE Guide for Maintenance Methods on Energized Power Lines</i> . Institute of Electrical and Electronics Engineers, Inc. New York, NY 10016-5997.   | 2003 |              | 1-119 |
| <i>AEP Guideline Accounting for Maximum Conductor and Sag Blowout for Vegetation Management</i>  | 2006 |              |       |
| <i>AEP Transmission Forestry Aerial Patrol Procedures for NERC-Reportable Circuits</i>   | 2011 |              |       |
| <i>AEP Risk Assessment &amp; Procedures</i>  | 2011 |              |       |

## II. The Transmission Vegetation Management Program (TVMP)

### A. Introduction and Purpose

The American Electric Power (AEP) Transmission Vegetation Management Program (TVMP) has been developed and implemented to ensure compliance with the North American Electric Reliability Corporation (NERC) reliability standard FAC-003-1.

- This program is intended to improve the reliability of the electric transmission system by preventing outages from vegetation located on transmission rights-of way (ROW) and minimizing outages from vegetation located adjacent to ROW.
- Maintaining clearances between transmission lines and vegetation on and along transmission ROW.
- Report vegetation-related outages of the transmission systems to the appropriate Regional Entity (RE) and NERC.

This program applies to AEP's transmission system operated as 200 kV and above (>200kV) and other lower-voltage transmission circuits that have been designated as critical by the Reliability Coordinator (PJM, SPP RTO, ERCOT). For this document, transmission circuits meeting that criterion are referred to as NERC-reportable. NERC-reportable circuits are those transmission circuits that are within the scope of FAC-003-1.

AEP's Transmission Forestry Operations group manages and executes the program for vegetation along approximately 8,600 miles of NERC-reportable transmission rights-of-way in portions of eleven states. This is accomplished through the implementation and oversight of a comprehensive, systematic, vegetation management program.

### B. Vegetation Management Objective

The TVMP is an integral part of providing for the safe, reliable operation of the AEP transmission system. The key measure of success is zero reportable vegetation-related outages on NERC-reportable circuits.

For NERC-reportable circuits, AEP's intent is to clear the right-of-way to the maximum appropriate width, removing all woody-stemmed vegetation within the right-of-way<sup>1</sup>. Danger trees (those trees considered a hazard to AEP's facilities) that are outside the right-of-way will be addressed with the landowner and removed or made safe.

AEP conducts inspections, aerial and as needed ground inspections, and develops annual vegetation management work plans to ensure the program objective is achieved in the most efficient, environmentally sound, and economical manner practical.

AEP strives to manage its rights-of-way in accordance with its Environmental, Safety and Health (ES&H) Philosophy of, "No aspect of operations is more important than the health and safety of people. Our customer's needs are met in harmony with environmental protection."

<sup>1</sup> Upon completion of vegetation maintenance.

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Other considerations include:

- Minimizing adverse environmental impacts.
- Complying with laws and regulations.
- Achieving cost efficiency.
- Maintaining a positive relationship with landowners and the public.

## 1. Philosophy of the AEP Vegetation Management Program

Vegetation on AEP's transmission system is managed on a prescriptive basis. Ongoing evaluation of the system through ground and aerial inspections by System Forestry personnel, together with guidance from the program objective, provides the basic information used by Forestry Operations to develop its annual work plan. Circuit criticality, historical data, circuit voltage, location, vegetative inventory information, and land use are among the items considered when developing the annual vegetation management work plan. These plans are dynamic during the year and adjusted for changing conditions.

As succession occurs within the plant communities along the rights-of-way, these annual work prescriptions will change based on the sizes and types of vegetation present. Forestry Operations staff and their contractors continuously work to ensure the appropriate prescription is utilized to maximize effectiveness and efficiency.

Forestry Operations is a centralized organization in both reporting and budgeting. It primarily employs or contracts degreed foresters. Qualified utility line clearance contractors, as defined by ANSI Z133.1-2012, provide the labor force for the ground-based clearing and herbicide applications. FAA-licensed aerial contractors provide patrol, side trimming, and herbicide application services. Contract work is designated and inspected by AEP foresters to ensure that the work is complete, performed in a timely manner, to AEP and industry standards, at reasonable cost, and with courtesy to property owners and to the public. Foresters travel throughout their assigned regions of the AEP companies to accomplish these tasks.

## 2. Landowner Relationships

AEP Transmission Forestry and contract personnel utilize face-to-face communication and door cards to notify resident landowners before routine line clearance work is initiated. Great efforts are made to strike a balance between service reliability and the landowner's landscaped vegetation

AEP has invested time and resources into public education concerning proper tree care and sound environmental practices. Forestry Operations participates in many organizations such as the National Arbor Day Foundation, the Utility Arborist Association, the International Society of Arboriculture, and various state and local vegetation management organizations. AEP Corporate Communications, in cooperation with Transmission Management, has produced a brochure, *Transmission Right of Way Clearing and Maintenance, A Balanced Approach to Vegetation Management*, which is given to landowners and other community groups, outlining general policies for AEP's Transmission vegetation program.

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### 3. Property Owner Right of Maintenance

AEP is required by law or regulation in some areas to provide private property owners with an option of maintaining vegetation within the easement on their property in lieu of herbicide use. Although AEP discourages this practice, when applicable, this option is handled through contractual agreement between the landowner and AEP on a case-by-case basis.

## C. Inspections

### 1. Vegetation Inspections & Patrols

Since right-of-way maintenance is not on a rigid schedule, rigorous routine aerial and ground inspections are crucial to meeting the objective of the AEP TVMP.

Aerial and ground patrol inspections aid in the development of the vegetation maintenance work plan. Aerial patrols, except where the FAA or other ordinance prohibits flight, cover substantial portions of the transmission system to identify areas where remediation may be needed to prevent vegetation from interfering with circuit operation. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted.

Remediation is defined as the evaluation of a point of interest, and if necessary, taking action to resolve the identified vegetative issues.

### 2. Forestry Patrol Procedures

#### a. Patrol of the AEP Transmission System

Bi-annual patrols of the AEP Transmission System are required for all designated NERC-reportable circuits to provide Transmission Foresters a view of right-of-way conditions and judge the efficacy of the vegetation management program.

#### Patrol Requirements

- (1) AEP requires annual training of Transmission Forestry observers through *Transmission Forestry Aerial Patrol Procedures*.
- (2) Patrols shall be made bi-annually for all NERC-reportable circuits.
  - (a) Fall Patrol Barring inclement weather or helicopter unavailability, the NERC-reportable circuits shall be patrolled between August 15 and November 15. The goal of this patrol is to detect areas that need to be remediated on NERC-reportable circuits and plan for future maintenance activities on these circuits.
  - (b) Spring Patrol Barring inclement weather or helicopter unavailability, the NERC-reportable circuits shall be patrolled in the spring; this patrol shall be completed by May 21. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 4. The purpose of this patrol is to monitor current conditions and to evaluate effectiveness of prior activities on all NERC-reportable circuits.

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- (3) Helicopters shall be used for aerial observations. Fixed-wing aircraft may only be used in extenuating circumstances with the approval of Manager, Forestry Operations or Director, Transmission Line Engineering.
- (4) Forestry personnel investigate observed and reported concerns and take appropriate action to remediate any threat to safety or reliability.
- (5) Forestry personnel should be the observers in all patrols. Forestry observers must have at least one year experience in aerial patrol work and completed the annual Transmission Forestry Aerial Patrol Procedures training. Lacking that experience, an additional qualified observer must be in the helicopter during aerial patrol. A qualified observer may substitute for the forester when approved by Transmission Forestry supervision.
- (6) All areas requiring immediate remediation, i.e., A1 conditions (defined in section II.C.5.a, "A1 Condition" on page 16), will be documented with GPS readings and locations on the line. These areas shall be remediated within 24 hours of confirmation.
- (7) Remediation of P1 conditions (defined in section II.C.5.b, "P1 Condition" on page 16) detected in the Spring Patrol on NERC-reportable circuits are scheduled to be completed by May 30. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 14. Reports on the progress of remediation shall be included with the Aerial Patrol Log.
- (8) Remediation of P1 conditions (defined in section II.C.5.b, "P1 Condition" on page 16) detected in the Fall Patrol on NERC-reportable circuits are scheduled to be completed by March 1 of the following year. Reports on the progress of remediation shall be included with the Aerial Patrol Log.
- (9) Documentation of the aerial patrol is considered complete when a) scheduled circuits have been flown (and restricted locations have been inspected), b) conditions have been documented, and c) Patrol Logs have been submitted.
- (10) In prohibited areas, alternate methods, including but not limited to ground patrol, will be used. Photography, GPS, map locations, or other means of archiving points of interest are used.

**b. Patrol Schedule**

Patrol schedules defined in Patrol Requirements, pg 13 and are summarized in the table below.

**Table 1: Patrol Schedule**

|             | <b>Fall Patrol</b>   | <b>Spring Patrol</b>   |
|-------------|--|--|
| Patrol      | <ul style="list-style-type: none"> <li>• Aug 15 Nov 15.</li> </ul>   | <ul style="list-style-type: none"> <li>• By May 21</li> <li>• In areas at higher elevation or with later vegetation emergence, this date may be extended to June 4.</li> </ul>   |
| Remediation | <ul style="list-style-type: none"> <li>• A1 Condition: addressed within 24 hours of confirmation.</li> <li>• P1 Condition: complete by March 1 of the following year.</li> </ul> | <ul style="list-style-type: none"> <li>• A1 Condition: addressed within 24 hours of confirmation.</li> <li>• P1 Condition: complete by May 30. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 14.</li> </ul> |

**3. Exceptions**

Annual patrols of certain line sections may be interrupted by force majeure, such as severe storms or floods. If this encountered, AEP will patrol those line sections as soon as practical.

**4. Action Thresholds**

AEP has established a set of Risk Assessment Procedures that comprise the maximum acceptable levels of plant growth, density, and height that initiate a control action. Thresholds are given in Table 3: Transmission Line Clearance Guidelines on page 20.



## 5. Conditions and Actions

### a. A1 Condition

- Vegetation clearances less than those stated in Column E of Table 3: Transmission Line Clearance Guidelines on page 20.
- Danger trees on or off the ROW that, if the tree fell, would result in clearances less than those stated in Column E.
- A confirmed A1 condition is considered an "Imminent Threat," requiring the Transmission Forester to implement the Imminent Threat procedures stated in Appendix A: Imminent Threat Communication and Procedures, page 27.

### b. P1 Condition

- Vegetation clearances less than those stated in Column D of Table 3: Transmission Line Clearance Guidelines on page 20 but greater than Column E.
- Danger trees on or off ROW that, if the tree fell, would result in clearances less than those stated in Column D but greater than those stated in Column E.
- P1 conditions require ground-based patrol/remediation within remediation deadlines for patrols as set forth in Table 1: Patrol Schedule, page 15.

### c. P2 Condition

- Vegetation clearances less than those stated in Column B of Table 3: Transmission Line Clearance Guidelines on page 20 but greater than those stated in Column D.
- Ground-based patrols required no later the March 1<sup>st</sup> of the following year to determine a future remediation plan.

### d. P3 Condition

- Vegetation clearances equal to or greater than those stated in column B of Table 3: Transmission Line Clearance Guidelines on page 20.
- P3 conditions are noted for planning purposes only.

## 6. High Risk Vegetation Conditions

The vegetation conditions below are classified as High Risk. These conditions require increased scrutiny or for the observer to get additional views by hovering, returning the helicopter back to the location, and/or ground inspection.

### a. Tree Species

Fast-growing species: e.g., willows, elms, ailanthus, vines.

### b. River/Creek Crossings

Erosion around tree trunks or other issues caused by moving water may affect vegetation.

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**c. Wetlands**

Areas with dense vegetation and ideal growing conditions.

**d. Upslope Timber**

Particularly dead, dying, or leaning trees.

**e. Span Length and Blow Outs**

Spans of longer-than-average lengths have more capability of sagging into vegetation and blowing out to edge trees.

**f. Fence Rows**

Vegetation growth may be accelerated by agricultural fertilization.

**7. Imminent Threats**

An imminent threat is a condition that threatens the reliable operation of a NERC reportable circuit. Refer to Appendix A: Imminent Threat Communication and Procedures, page 27.

**D. Clearances**

**1. Right-of-Way Clearance Guidelines**

When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width<sup>2</sup>, leaving the cleared area of the right of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall. Actively maintained trees that could be considered a crop such as in nurseries or orchards will be maintained in accordance with the clearance table guidelines specified in Table 2: Clearance Table Guidelines on page 18. Table 3: Transmission Line Clearance Guidelines on page 20 shows Transmission Line Clearance Guidelines.

<sup>2</sup> Upon completion of vegetation maintenance.

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Table 2: Clearance Table Guidelines

| <b>Right-of-Way with No Restrictions</b>   | <b>Right-of-Way With Restrictions</b>  |
|--|--|
| <b>&lt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   | <b>&lt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   |
| <ol style="list-style-type: none"> <li>1. Remove all woody stemmed vegetation<sup>2</sup>.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol>                 | <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column C, Table 3<sup>2</sup>.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> |
| <b>&gt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   | <b>&gt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b>   |
| <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column B, Table 3<sup>2</sup>.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> | <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column C, Table 3<sup>2</sup>.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol> |

## 2. Restrictions

In areas where easements, other legal agreements, or regulations restrict vegetation management practices, the maximum allowable amount of vegetation will be removed or otherwise controlled. AEP will annually monitor locations where these clearances cannot be achieved and determine if more frequent maintenance may be required in order to assure the safe, reliable operation of the circuit.

AEP will endeavor to cut or trim so that upon completion of the work, no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C in Table 3: Transmission Line Clearance Guidelines on page 20. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and C in Table 3: Transmission Line Clearance Guidelines on page 20).

Right-of-Way Restrictions are recorded in the restriction log.

### 3. Restriction Mitigation

AEP has implemented procedures for achieving sufficient clearances in those locations on its rights of way where AEP is restricted from attaining Clearance 1 listed in Column C of Table 3: Transmission Line Clearance Guidelines. This is described in AEP's Right-of-Way Clearance Guidelines; see section II.D.1, "Right of Way Clearance Guidelines" on page 17.

Right-of-Way Restrictions are recorded in the restriction log.

### 4. Minimum Approach

Additional maintenance should be scheduled when vegetation will encroach within the minimum approach distances from energized conductors for *qualified* line clearance arborists and qualified line clearance arborist trainees (Columns A and D in Table 3: Transmission Line Clearance Guidelines on page 20).

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Table 3: Transmission Line Clearance Guidelines

| Column A<br>Nominal Voltage (kV phase to phase) | Column B <sup>3</sup><br>NERC Clearance 1 (no restrictions) Desired Clearance between Conductor <sup>4, 5, 6</sup> & Vegetation | Column C <sup>2, 7</sup><br>NERC Clearance 1 (with restrictions) Desired Clearance between Conductor <sup>3, 5</sup> & Vegetation | Column D <sup>6</sup><br>ANSI Clearance between Conductor <sup>3, 5</sup> & Vegetation | Column E <sup>8</sup><br>NERC Clearance 2 between Conductor <sup>3, 5</sup> & Vegetation |
|---|---|---|--|--|
| 765 kV  | 45'   | 35' 00"   | 27' 04"  | 14' 0"   |
| 500 kV  | 45'   | 26' 08"   | 19' 00"  | 10' 0"   |
| 345 kV  | 30'   | 20' 05"   | 13' 02"  | 7' 6"  |
| 230 kV  | 30'   | 16' 05"   | 7' 11"   | 5' 2"  |
| 161 kV <sup>9</sup>                             | 25'   | 14' 00"   | 6' 00"   | 3' 5"  |
| 138 kV <sup>9</sup>                             | 25'   | 13' 02"   | 5' 02"   | 2' 11"   |
| 88 kV & 115 kV <sup>9</sup>                     | 25'   | 12' 04"   | 4' 06"   | 2' 6"  |
| 69 kV <sup>9</sup>                              | 25'   | 10' 09"   | 4' 02"   | 2' 6"  |
| 46 kV & 40 kV <sup>9</sup>                      | 20'   | 10' 00"   | 3' 04"   | 2' 6"  |
| 34.5 kV & 23 kV <sup>9</sup>                    | 20'   | 10' 00"   | 3' 00"   | 2' 6"  |

<sup>3</sup> Application of herbicides will be considered as meeting these guidelines, as long as all treated vegetation meets or exceeds the desired clearance from maximum sag (Table 3: Transmission Line Clearance Guidelines, Columns A and C).

<sup>4</sup> Conductor at maximum sag condition.

<sup>5</sup> Desired clearance to maintain reasonable clearing cycles.

<sup>6</sup> *AEP Guideline Accounting for Maximum Conductor Sag and Blowout for Vegetation Management* is to be used to adjust the conductor's found field condition to the maximum sag condition taking into account the conductor size, span length, elevation, and current temperature.

<sup>7</sup> ANSI Z133.1- 2012.

<sup>8</sup> IEEE Standard 516-2003, Section 4.2.2.3, Tables D.3 and D.5, calculated clearances (Clearance 2).

<sup>9</sup> Applies only to circuits that have been designated as critical or operationally significant by the Regional Transmission Organization.

## E. Personnel Qualifications

AEP's TVMP is designed and implemented by personnel qualified and experienced to perform their job responsibilities and/or provide oversight. These personnel, through ongoing training, maintain certifications and licenses as applicable to their roles and responsibilities.

Qualifications of personnel implementing the TVMP may include:

- Physical capability of inspecting lines that are difficult to access.
- Ability to identify:
  - Compatible versus incompatible species.
  - Hazard and danger trees.
  - Vegetation conditions that pose a threat to transmission system reliability.
  - Vegetation growth patterns.
  - Line construction and voltage types
- Familiarity with vegetation control equipment and techniques, including capabilities and limitations.
- Proficiency in recording data with sufficient accuracy and completeness for further follow-up on inspection findings and results.
- Ecology, including:
  - Vegetation succession in the right-of-way environment.
  - Compatible species and practices that promote their establishment.

Utility line clearance contractors shall be qualified and in compliance with applicable industry standards (e.g., OSHA, ANSI, NESC).

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### III. Annual Plan

#### A. Annual Work Plan

An annual transmission vegetation management work plan is developed by AEP. Using inspection information and various data from other sources, specific transmission circuits are identified and prioritized for inclusion in the upcoming year's plan. The circuits are further prioritized based on any potential for tree-caused line contacts, criticality of the circuit, etc. For circuits requiring attention, AEP work plans may consist of manually or mechanically removing and/or trimming trees on and off the right-of-way, selective or broadcast applications of herbicides, either aerially or from the ground, and the application of tree-growth regulators. The range of required work may either involve management of the vegetation along the entire line or addressing individual locations of concern.

##### 1. Annual Plan Development

The annual work plan identifies the facilities to be worked in the current year. The plan is documented and finalized by late January.

##### 2. Start and End Dates

The annual work plan starts on January 1 and ends on December 31.

#### B. Maintenance Schedule

AEP's transmission vegetation management program utilizes a variety of management techniques. Maintenance does not occur on a rigid "cycle" basis; rather, the maintenance technique and schedule are driven by the condition of the vegetation.

#### C. Unscheduled Work

Transmission Forestry Operations deals with a dynamic, living system. Variables such as tree species, weather patterns, and soil conditions all affect tree growth, growth rates of trimmed trees, and other vegetation.

Even the most aggressive line clearance program must make allowances for responding to emerging vegetation conditions. AEP Transmission Forestry Operations dedicates a portion of its resources to this type of work that is incremental to the work plan. Such work may include isolated stands of fast-growing trees, vines growing on AEP poles and hardware, fire- or insect-damaged stands adjacent to the right-of-way, or trees located in slip or slide areas.

#### D. Specifications

Reference the *AEP Forestry Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations* document listed on page 10.

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## E. Right-of-Way Maintenance Methods

### 1. Annual Work Planning/Notification

Landowners are normally notified prior to vegetation management activities on their properties. Contractor personnel are often utilized to perform this notification and are trained to evaluate vegetation management requirements so that they can communicate these requirements to property owners. As required in some states, legal advertisements are posted to advise non-resident property owners of impending vegetation management activity. Should a property owner refuse to allow the contractor to perform the required work, AEP foresters are notified and the necessary steps to complete the work are taken, up to and including legal action against the property owner. If a property owner refuses AEP access to clear trees on an valid transmission easement, or if the easement rights are insufficient to ensure the program objectives are obtainable, then foresters, in concert with operational managers, right-of-way agents, legal and/or public policy personnel will document the condition and direct mitigating actions.

### 2. Tree Removal

The AEP transmission vegetation management program emphasizes tree removal to promote long-term vegetation control and to minimize future maintenance expenditures. In urban areas, tree replacement, with low-growing species, and stump grinding may be offered as an incentive for property owners to allow the removal of larger or fast-growing trees on or near the rights-of-way. AEP foresters and contractor personnel inspect the right-of-way for danger trees (those trees considered a hazard to AEP's facilities growing outside of the normally maintained right-of-way) during scheduled maintenance. Suspected danger trees are addressed on a case-by-case basis with the responsible forester who has the final decision on what action is appropriate.

### 3. Tree Pruning

When tree removal is not practical or feasible, tree pruning<sup>10</sup> may be employed. Pruning may be carried out by a number of means.

Pruning is a part of AEP Transmission Forestry Operations' contract with all qualified utility line clearance contractors. Fast-growing trees, where removal permission is not obtained, are pruned to yield greater clearance distances than slower-growing varieties.

Mechanical pruning operations employ a variety of boom-mounted saws on vehicles capable of traversing the rights-of-way. Access, terrain, and tree heights influence the type of equipment used. When applicable, rights-of-way may be maintained with an aerial saw. These rights-of way possess one or more of the following characteristics: steep, mountainous terrain; limited access; or prohibitive costs to prune by conventional means.

<sup>10</sup> During manual pruning operations, qualified line clearance arborists, as defined by ANSI Z133.1-2012, seek to prune trees according to standards set by the International Society of Arboriculture, the American National Standards Institute, and the Tree Care Industry Association. The American National Standard *for Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning)*, ANSI A300 (Part 1).

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#### 4. Clearing

Manual clearing is employed where the terrain is too steep or rough for mechanized equipment, where the vegetation is too tall for herbicide applications and aerial application is not possible, or where the immediate removal of vegetation is necessary. Contract employees use chainsaws or brush saws to selectively remove vegetation from the rights-of-way.

Mechanical clearing may be employed where terrain and access allow and where the vegetation is not too large for mechanical equipment to handle, where the vegetation is too tall for herbicide applications, where aerial application is not possible, or where the immediate removal of vegetation is necessary. Use of mechanical equipment in some locations and during certain times of the year may result in rutting and erosion or soil compaction problems and may not be acceptable to some property owners.

#### 5. Herbicide Application

Manual and mechanical clearing without follow-up herbicide applications does not control the root systems of incompatible vegetation and often increases the future maintenance requirements in the areas where it is employed. AEP Transmission Forestry strives to convert the vegetative cover types on its transmission rights-of-way to low growing grass-forbs herb covers that inhibit the germination, establishment, and growth of most tree species. Aerial, high-volume foliar, low-volume foliar, ultra-low-volume foliar, cut stubble, stumps, basal, and granular applications may be employed.

United States EPA registered herbicides are applied by licensed pesticide application businesses contracted by AEP.

#### 6. Debris Cleanup

Debris from these operations is left on the rights-of-way to decompose and return nutrients to the soil and to reduce the possibility of soil erosion. Any brush that falls into roadways, waterways, fences, lawns, or pastures is moved to a wooded area of the right-of-way or may, at times, be chipped and/or otherwise removed. Logs may be left in tree lengths on location or as designated by AEP foresters. The merchantable value of logs will be preserved as much as possible.

#### 7. Tree Growth Regulators

AEP Transmission Forestry employs tree growth regulators (TGRs) to reduce the frequency and amount that trees must be trimmed. TGRs control growth, allowing a tree to use its reserves to survive disease and insect attacks and to withstand environmental assaults like drought and pollution.

### F. New Construction Clearing

New transmission lines are designed and cleared to support AEP's transmission forestry vegetation management program.

|   |  |         |               |
|---|--|---------|---------------|
|  | Transmission Vegetation Management Program | Rev. 12 | TVMD-001      |
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## G. Inspections (Work Quality)

AEP Foresters inspect work to ensure that contract forestry crews have maintained adequate clearances to help prevent vegetation contact outages, follow proper arboricultural techniques, and perform their work safely. Work verification logs and right-of-way maintenance audit forms are retained as documentation.

Documentation generated during maintenance activities are normally retained in AEP files until succeeding maintenance is performed on said line or for a minimum of five years, whichever is longer. When work is performed on a circuit, data is collected about tree trimming, tree removals, brush cut, or brush sprayed, and miles accomplished, thus supplying a history of quantity, productivity, and cost.

AEP has a process for documenting the annual vegetation management activities to ensure the following:

- Scheduled work is properly identified and listed in the work plan.
- Adjustments to the work plan are properly noted and recorded.
- Timesheets and maintenance methods employed are noted for each type of work on each project listed in the work plan.
- Work quality inspections are performed and work completed meets company specifications.
- Completed work is recorded to ensure that progress on the work plan is tracked.

|   |  |         |               |
|---|--|---------|---------------|
|  | Transmission Vegetation Management Program | Rev. 12 | TVMD-001      |
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## IV. Reporting

Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Entities or their designees. The supporting document AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system, the Transmission Outage Report (TOR) system. TOR reports list vegetation-related outages by Regional Entities. The report lists the names of circuits where outages occurred; operated voltages; the date, time, and duration of the outage; and a description of the cause of the outage.

### A. Recording Outages Caused by Vegetation

#### 1. Outage information

All outages determined to be caused by vegetation are investigated by a qualified transmission vegetation management employee and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained. NERC's outage categories are defined as follows:

- Category 1 Grow-ins: Outages caused by vegetation growing into lines from vegetation inside and/or outside of the ROW.
- Category 2—Fall-ins: Outages caused by vegetation falling into lines from inside the ROW.
- Category 3 Fall-ins: Outages caused by vegetation falling into lines from outside the ROW.

#### 2. Reports

A standard report format is used to document the outages caused by vegetation with the information specific for each outage and pictures included when practical.

### B. Reporting Outages Caused by Vegetation

Outages caused by vegetation on NERC critical facilities are reported on a quarterly basis (or more frequently if required) to the Regional Entity.

|   |  |         |               |
|---|--|---------|---------------|
|  | Transmission Vegetation Management Program | Rev. 12 | TVMD-001      |
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## Appendix A: Imminent Threat Communication and Procedures

An imminent threat is a condition that threatens the reliable operation of a NERC-reportable circuit or a Regional Transmission Organization-reportable circuit and must be mitigated, within 24 hours of confirmation. This condition is usually characterized by either vegetation or danger trees that are approaching or threatening to approach the minimum vegetation clearance distance to the conductor. For locations found during patrols, routine work, or other observations, where a potential imminent threat condition is confirmed by transmission forestry, an immediate notification<sup>11</sup> to the local dispatching authority is required. This will allow for mitigating actions, such as removal of the vegetation, temporary reduction in circuit rating, or switching the circuit out of service, until the imminent threat is relieved.

Regional Transmission Organizations (PJM, ERCOT, SPP RTO) grant utility operators the right to take emergency actions to prevent an imminent emergency condition or to restore the transmission grid to a secure state in the event of a system emergency. When an imminent threat has been confirmed, Forestry, Engineering, Transmission Field Services, Planning, the Transmission Dispatch Center, the System Control Center Operator, and other parties, as required, will coordinate appropriate actions<sup>12</sup> to mitigate the threat until the vegetation threat is relieved.

When a vegetation issue is found by AEP personnel (non-Forestry), such as AEP line maintenance personnel, other experienced observers, or the general public, notification shall be sent either to the Transmission Dispatch Center, Forestry personnel, Distribution Dispatch Center, or Customer Solutions Center, as identified below. This is also summarized in an Imminent Threat Communication Flow Chart shown in on page

### A. AEP Forestry Personnel

When AEP Transmission Forestry personnel (Forestry) identify a potential vegetation issue, e.g., during aerial patrol, they should notify additional Forestry designated personnel as needed. If Forestry personnel have confirmed a vegetation issue with clearances less than Column E of Table 3: Transmission Line Clearance Guidelines on page 20, they shall immediately<sup>11</sup> notify the Transmission Dispatch Center. The Transmission Dispatch Center shall capture the date and time in the Dispatcher Operating Log. After rectifying the vegetation issue, Forestry personnel shall follow up with documentation of the action taken, completing the Vegetation Imminent Threat Incident Report and the Forestry Supervisor will route the report to management. Alternatively, if Forestry's professional evaluation reveals the vegetation condition is not an imminent threat, they should notify the Transmission Dispatch Center as needed.

<sup>11</sup> NOPR RM-12-4-000, pg 50, #85 (10/18/2012) – NERC explains that the obligation to notify without intentional delay generally “can be understood to include an immediate (within 1 hour of observation) communication notwithstanding a safety issue to personnel, other immediate priority maintenance functions to ensure reliability or system stability, or communication equipment failures that precludes immediate communication.”

<sup>12</sup> NERC Standard FAC-003-2 Technical Reference, pg 30 (9/30/2011) – Appropriate actions may include a temporary reduction in the line loading, switching the line out of service, or positioning the system in recognition of the increasing risk of outage on that circuit.

|   |  |         |               |
|---|--|---------|---------------|
|  | Transmission Vegetation Management Program | Rev. 12 | TVMD-001      |
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## B. AEP non-Forestry Personnel

### 1. Option 1: Notification to AEP Forestry Personnel (Preferred)

When AEP personnel (non-Forestry) find a vegetation issue, they may notify AEP Forestry of this issue. AEP Forestry personnel shall notify the Transmission Dispatch Center, as needed. If notified, the Transmission Dispatch Center captures the date and time in the Dispatcher Operating Log. AEP Forestry will investigate the potential threat as outlined in the procedures in Section A: AEP Forestry Personnel, pg. 27.

### 2. Option 2: Notification to Transmission Dispatch Center

When AEP personnel (non-Forestry) find a vegetation issue, they may notify the Transmission Dispatch Center of a potential vegetation issue, and the Transmission Dispatch Center shall notify AEP Forestry personnel and capture the date and time in the Dispatcher Operating Log. AEP Forestry will investigate the potential threat as outlined in the procedures in Section A: AEP Forestry Personnel, pg. 27.

### 3. Option 3: Notification to Distribution Dispatch Center

When AEP personnel (non-Forestry) find a suspected vegetation issue, they may notify the AEP Distribution Dispatch Center. The Distribution Dispatch Center shall then notify the Transmission Dispatch Center. The Transmission Dispatch Center will capture the date and time in the Dispatcher Operating Log and notifies AEP's Forestry personnel. The Transmission Dispatch Center will note this in the Dispatcher Operating Log. AEP Forestry will investigate the potential threat as outlined in the procedures in Section A: AEP Forestry Personnel, pg. 27.

### 4. Option 4: Notification to AEP Customer Solution Center

When AEP personnel (non-Forestry) find a vegetation issue, they may notify AEP Customer Solution Center, the same as non-AEP personnel in Section C: Non-AEP Personnel.

## C. Non-AEP Personnel

When non-AEP personnel find a suspected vegetation issue, the preferred notification is to an AEP Customer Solution Center. Notifications can come from neighboring utilities, police, fire, other dispatch centers, or the general public. The AEP Customer Solution Center immediately notifies the AEP Distribution Dispatch Center, who with the AEP Transmission Dispatch Center, determines if the line is transmission. The Transmission Dispatch Center captures the date and time in the Dispatcher Operating Log and notifies AEP's Forestry personnel. AEP Forestry will investigate the potential threat as outlined in the procedures in Section A: AEP Forestry Personnel, pg. 27.

|   |  |         |               |
|---|--|---------|---------------|
|  | Transmission Vegetation Management Program | Rev. 12 | TVMD-001      |
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The completed Forestry Vegetation Imminent Threat Incident Report contains the documentation of actions taken because of reported conditions where vegetation may imminently cause an outage. Reports are to be kept on file.

**Vegetation Imminent Threat Incident Report** Rev. 7/02/2013

Forester: \_\_\_\_\_  
 TDC Case # \_\_\_\_\_

**Part I – Basic Information**

Line Name: \_\_\_\_\_  
 Circuit Name: \_\_\_\_\_  
 Structure #: \_\_\_\_\_  
 Operating Voltage: (i.e. 35kV) \_\_\_\_\_  
 Date and Time of Confirmation: \_\_\_\_\_  
 Location Information: (provide as much information as possible)  
 Property Owner: \_\_\_\_\_  
 County/Parrish: \_\_\_\_\_  
 State: \_\_\_\_\_

Right-of-Way  
 In \_\_\_\_\_ Out \_\_\_\_\_  
 yes or no yes or no

**Part II – Vegetation Information** (provide as much information as possible)

Species: \_\_\_\_\_  
 Estimated Height: \_\_\_\_\_  
 Estimated Age: \_\_\_\_\_  
 DBH: \_\_\_\_\_

**Part III – Circuit Parameters at Time of Discovery/Notification**

(at Time of Discovery/Notification)

Conductor Height: \_\_\_\_\_ Time: \_\_\_\_\_  
 Circuit Electrical Load: \_\_\_\_\_  
 Estimated Ambient Air Temperature: \_\_\_\_\_  
 Estimated Wind Speed: \_\_\_\_\_  
 Weather Conditions: \_\_\_\_\_  
 Conductor Size and Type: \_\_\_\_\_  
 Percent Loading: \_\_\_\_\_

**Part IV – Action Taken:**

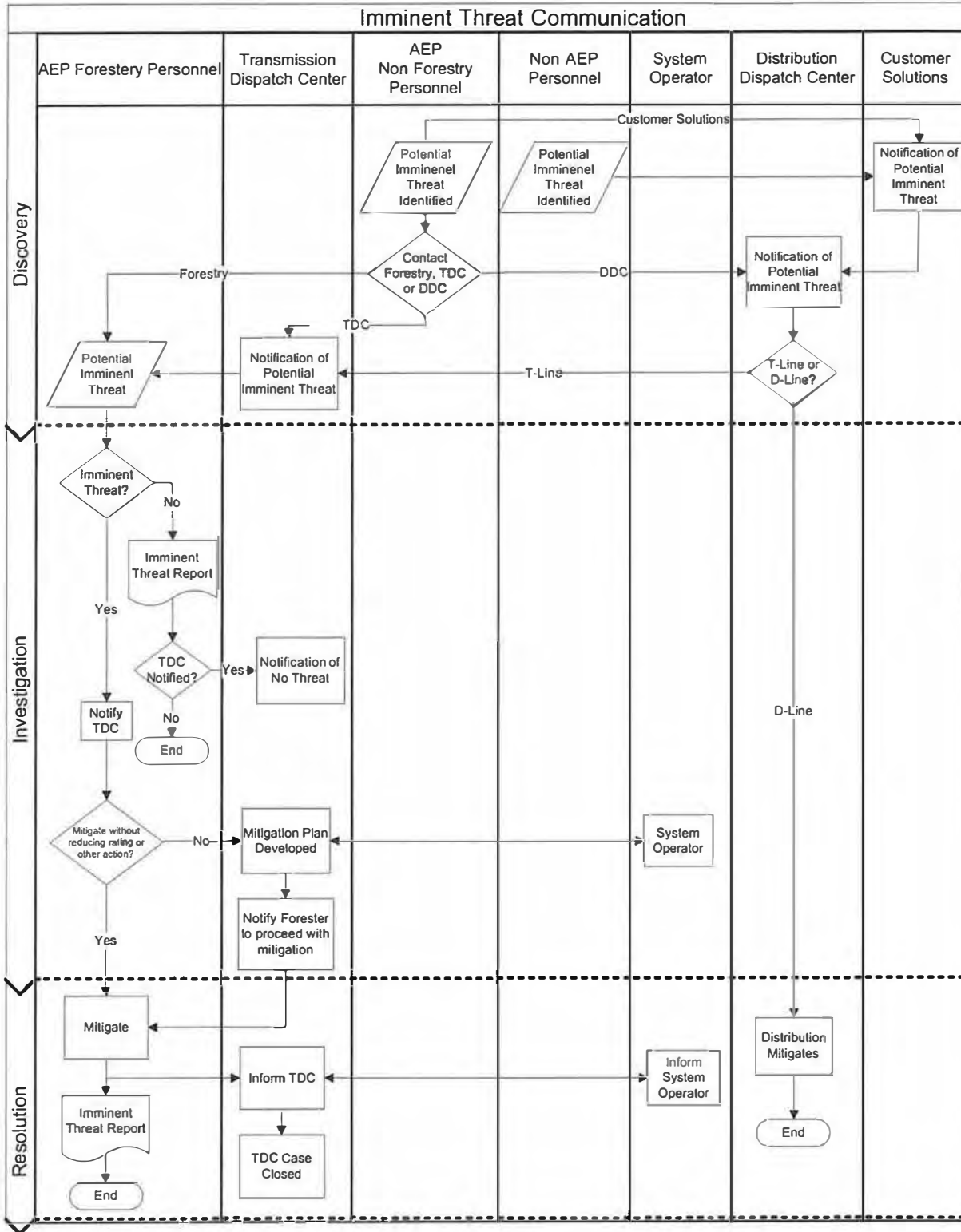
**Transmission Operations Reduced Loading:**  
 Operations-Reduced Load: \_\_\_\_\_  
 Returned to Normal Load: \_\_\_\_\_  
 yes or no date and time date and time  
 Operations-Out of Service: \_\_\_\_\_  
 Returned / In-Service: \_\_\_\_\_  
 yes or no date and time date and time  
**Circuit/Section Removed from Service:**  
 Removed from Service: \_\_\_\_\_  
 Returned / In-Service: \_\_\_\_\_  
 yes or no date and time date and time  
**Vegetation Condition Rectified:**  
 \_\_\_\_\_  
 yes or no If yes, date and time

**Comments:**

Describe the circumstances of the event.

\_\_\_\_\_  
 Forestry Supervisor Approval date

## Appendix B: Imminent Threat Communication



## Appendix C: Subject Matter Experts

| FAC-003-1 Requirement | Description  | Preparer   | SME   | Reviewer  |
|-----------------------|--|--|---|---|
| R1.-M1.               | TVMP document  | Kevin B. Patton<br>System Forestry Coordinator<br>614-716 1231<br>kbpatt@aepp.com  | E. K. Engdahl<br>Staff Engineer<br>614 552 1676<br>ekengdahl@aepp.com                 | J.E. Momme<br>Director, Trans. Line<br>Engineering<br>614 552 1180<br>jemomme@aepp.com        |
| R1.1.-M1.1.           | Inspection schedule                                  | Kevin B. Patton<br>System Forestry Coordinator<br>614 716 1231<br>kbpatt@aepp.com  |   | J. E. Schechter,<br>Manager, P&C Asset<br>Engineering<br>614 552-1908<br>jeschechter@aepp.com |
| R1.2. M1.2.           | Clearance document                                   | Jacqueline M. Rich<br>Engineer III<br>614 552 1391<br>jmrich@aepp.com  | E. K. Engdahl,<br>Staff Engineer<br>614 552-1676<br>ekengdahl@aepp.com                |   |
| R1.2.1.               | Clearance 1  |  |   |   |
| R1.2.2.               | Clearance 2  |  |   |   |
| R1.2.2.1              | Unknown transient overvoltage                        |  |   |   |
| R1.2.2.2              | Known transient overvoltage                          | Barrett Thomas<br>Engineer I<br>918 599 2386<br>bathomas@aepp.com<br><br>R. J. Whitaker<br>Engineer I<br>540 562 7054<br>rjwhitaker@aepp.com |   |   |
| R1.3. M1 3.           | Personnel qualifications                             | Kevin B. Patton<br>System Forestry Coordinator<br>614 716 1231<br>kbpatt@aepp.com  |   |   |
| R1.4. M1.4.           | Vegetation Restrictions                              |  |   |   |
| R1.5. M1.5.           | Imminent threat                                      | Lynn E. Hayward<br>Lead Engineer<br>614 552 7244<br>lehayward@aepp.com   | E. K. Engdahl<br>Staff Engineer<br>614 552 1676,<br>ekengdahl@aepp.com                |   |
| R2.-M2.               | Annual Veg. Mgt. plan                                | Kevin B. Patton<br>System Forestry Coordinator<br>614 716 1231<br>kbpatt@aepp.com  |   |   |
| R3. M3.               | Quarterly Outage Reports                             | Lynn E. Hayward<br>Lead Engineer<br>614 552 7244<br>lehayward@aepp.com   | J.E. Momme<br>Director Trans. Line<br>Engineering<br>614 552 1180<br>jemomme@aepp.com |   |
| R3.1.                 | Multiple Outages in 24 Hrs.                          |  |   |   |
| R3.2.                 | Reporting Exemptions                                 |  |   |   |
| R3.3.                 | Outage circuit, date, time, description, cause, etc. |  |   |   |
| R3.4.                 | Outage Categories                                    |  |   |   |
| R3.4.1.               | Category 1 Grow ins:                                 |  |   |   |
| R3.4.2.               | Category 2 Fall ins:                                 |  |   |   |
| R3.4.3.               | Category 3 Fall ins:                                 |  |   |   |



## Appendix D: FAC-003-1 Requirements Addressed

The following table shows where specific requirements of FAC-003-1 have been addressed in this document.

| FAC-003-1 Requirement   | Location(s) in Document   |
|---|---|
| R1 Transmission Owner's Formal Program  | TVMD-001 II.A. The Transmission Vegetation Management Program (TVMP), Introduction and Purpose, page 11   |
| R1 Transmission Owner's Objectives  | TVMD-001 II.B. Vegetation Management Objective, pages 11–13   |
| R1 Transmission Owner's Approved Practices, Procedures, and Work Specifications | TVMD-001 III.E. Right-of-Way Maintenance Methods, pages 23–24<br>TVMP-001 III.F. New Construction Clearing, page 24<br><i>Also AEP Forestry Goals, Procedures &amp; Guidelines for Distribution and Transmission Line Clearance Operations (May 14, 2009)</i> |
| R1.1 Inspections and Patrols  | TVMD-001 II.C.1. Vegetation Inspections & Patrols, page 13  |
| R1.2 Clearances   | TVMD-001 II.D.1. Right-of-Way Clearance Guidelines, page 17   |
| R1.3 Personnel Directly Involved  | TVMD-001 Document Team, page 7<br>TVMD-001 III.E. Personnel Qualifications, page 21   |
| R1.4—Restrictions   | TVMD-001 III.D.2, Restrictions page 18  |
| R1.5 Imminent Threat  | TVMD-001 II.C.7. Imminent Threats, page 17<br>TVMD-001<br>Appendix A: Imminent Threat Communication and Procedures, page 27<br>TVMD-001 Appendix B: Imminent Threat Communication, page 30  |
| R2 Work Plan  | TVMD-001 III.A. Annual Work Plan, page 22<br>TVMD-001 III.C. Unscheduled Work, page 22<br>TVMD-001 0.<br>Inspections (Work Quality), page 25  |
| R3 Reporting  | TVMD-001 IV. Reporting, page 26   |
| R4- Quarterly Reporting to NERC   | Not Applicable to AEP   |

## Appendix E: TVMP Internal Mailing List<sup>13</sup>

| Name/Lotus Notes Group | Department                          | Title                                 | Role |
|------------------------|-------------------------------------|---------------------------------------|------|
| Smith, Scott N         | Trans Grid Dev & Portfolio Svcs     | Senior Vice President                 | A    |
| Moore, Scott P         | Trans Eng & Proj Svcs               | Vice President                        | A    |
| Kirkpatrick, Thomas L  | Cust Svcs, Mktg, & Dist Svcs        | Vice President                        | A    |
| Crowder, J Calvin      | Electric Transmission Texas         | Exec Dir. Elec. Trans TX              | A    |
| Sastry, Ram            | Customer and Distr Services         | Dir Distribution Svcs Suppt           | A    |
| Recker, Daniel J       | Trans Projects Engrg                | Mng Dir Trans Projects Engrg          | A    |
| Momme, Jeffrey E       | Transmission Line Engineering       | Dir. Trans. Line Projects Engineering | A    |
| Johnson, Paul B        | Transmission Operations             | Mng. Dir. Transmission Ops            | A    |
| Fecho, Thomas R        | GET Eng Elec Intercnt Plng          | Mgr-Gen&Elec Intrcnctn Plnng          | A    |
| Parrish, T. David      | Trans Line Engrg                    | Mgr. Trans. Line Design Standards     | C    |
| Wagner, Robert C       | Trans Field Services                | Vice President                        | I    |
| TRELCOMP               | Transmission Reliability Compliance | Group Mailing List                    | I    |
| Schaffer, Thomas O     | Trans Line Engrg Right-of-Way       | Mgr. Trans. Right-of-Way              | I    |
| Correa, Robert D       | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Jones, Paul R          | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| McNally, Richard P     | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Merrifield, Ned O      | Trans Line Engrg Right-of-Way       | Supv Trans Right of Way               | I    |
| Nguyen, Thuy P         | Trans Tech Svcs Wrk Plan            | Mgr. Trans Work Planning              | I    |
| Fuller, Terry A        | GET Eng Elec Intercnt Plng          | Senior Engineer                       | I    |
| Daniels, David         | Generation NERC Compliance          | Senior Engineer                       | I    |
| Carlson, John P        | ESH Management Systems              | Mgr ESH Mngmnt System I               | I    |
| Liebrecht, John J      | Trans Tech Svcs Wrk Plan Line       | Supv Planning & Engineering II        | I    |
| Ordner, Lance          | Trans Tech Svcs Wrk Plan Line       | Engineer I                            | I    |
| Cotant, Ronald D       | Trans Tech Svcs Wrk Plan Line       | Lead Engineer                         | I    |
| York, Leo              | Electric Transmission Texas         | Mgr Transmission Bus Dev Sr           | I    |
| Macias, Michael M      | Electric Transmission Texas         | ETT Technical Project Lead Sr         | I    |
| Killingworth, Kevin    | Adv Studies & Technology            | Senior Engineer                       | I    |
| Schechter, John E      | Trans Stat Prot Engrg Gahanna       | Mgr Prot & Cntrl Asset Engrg          | I    |

<sup>13</sup> Role definitions: A – Accountable; C – Consult; I – Informaed; R – Responsible; S - Support

| Name/Lotus Notes Group | Department                               | Title                         | Role |
|------------------------|--|-------------------------------|------|
| Garrett, James G       | Trasm Reliability Compliance             | Trans Relblty Complc Spec I   | R    |
| Sherry, Walter A       | System Forestry                          | Mgr. Forestry Operations      | R    |
| T Forestry             | Trans. Foresters and Forestry Management | Group Mailing List            | R    |
| Schnell, Edward G      | Transmission Dispatching                 | Dir. Transmission Dispatching | R    |
| Kunkel, Dennis K       | Trans Dispatch Corpus Christi            | Mgr. Transmission Dispatching | R    |
| Milford, David L       | Trans Dispatch Shreveport                | Mgr. Transmission Dispatching | R    |
| Moses, Clinton D       | Trans Dispatch Columbus                  | Mgr. Transmission Dispatching | R    |
| Guill, Darrell E       | Trans Dispatch Roanoke                   | Mgr. Transmission Dispatching | R    |
| Wagner, Billy W        | Roanoke Dist Dispatch                    | Mgr. Distribution Dispatching | R    |
| Ivinskas, Robert J     | AEP Ohio Distr Dispatch                  | Mgr. Distribution Dispatching | R    |
| Kratt, Thomas A        | Ft Wayne Distrib Dispatch                | Mgr. Distribution Dispatching | R    |
| Apple, Dwayne L        | PSO Distribution Dispatch                | Mgr. Distribution Dispatching | R    |
| Guin, Gary A           | SWEPSCO Distrib Dispatch                 | Mgr. Distribution Dispatching | R    |
| Dunlap IV, Hauge       | C Christi Distrib Dispatch               | Mgr. Distribution Dispatching | R    |
| Williams, Michael A    | Kentucky Distribution Dispatch           | Dispatch Supv. I              | R    |
| Patton, Kevin B        | System Forestry                          | System Forestry Coord         | R    |
| Engdahl, Eric K        | Trans Line Engrg                         | Staff Engineer                | R    |
| Rich, Jacqueline M     | Trans Line Eng Gahanna-Roanoke           | Engineer III                  | R    |
| Thomas, Barret A       | Trans Line Engrg Tulsa Group             | Engineer I                    | R    |
| Whitaker, Robert       | Trans Line Eng Gahanna-Roanoke           | Engineer I                    | R    |
| Hayward, Lynn E        | Transmission Line Engrg Admin            | Lead Engineer                 | R    |
| Krause, Stan A         | Trans Line Engrg Tulsa Group             | Mgr. Trans. Line Engineering  | S    |
| Persing, Carl A        | Trans Line Eng Gahanna-Roanoke           | Mgr. Trans. Line Engineering  | S    |
| TLPE All               | Transmission Line Project Engineering    | Group Mailing List            | S    |
| Hostetler, Timothy A   | Transmission Operations Engineering      | Mgr. Operations Engineering   | S    |
| TCI PM ALL             | Transmission Project Mgt. & Control      | Group Mailing List            | S    |
| Sauriol, Dennis R      | Transmission Real Time Operations        | Mgr. Trans Ops. Reliability   | S    |
| Emberger, Joseph H     | Trans Const Mgmt – Gahana                | Mgr – Trans Construction II   | S    |

| <b>Name/Lotus Notes Group</b> | <b>Department</b>                    | <b>Title</b>                  | <b>Role</b> |
|-------------------------------|--------------------------------------|-------------------------------|-------------|
| Mathews, Charles D            | Transmission Field Services          | Mng. Dir. Transmission West   | S           |
| Rogier, Daniel J              | Transmission Field Services          | Mng. Dir. Transmission East   | S           |
| Boezio, Daniel R              | Transmission Field Services          | Dir Trans Region Tech Support | S           |
| Cook, James K                 | Transmission Field Construction East | Dir Trans Region Construction | S           |
| McCord, Natalie J             | Trans Field Construction West        | Dir Trans Region Construction | S           |
| Workman, Mark A               | Trans Construction Mgmt              | Mng Dir Trans Constr Mgmt     | S           |
| Colvin, Kenneth A             | Trans Construction Mgmt – Gahana     | Mgr – Trans Construction II   | S           |
| Galyean, Rue F                | Trans Construction Mgmt – Tulsa      | Mgr – Trans Construction II   | S           |





## **AEP Forestry**

# **Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations**

**May 14, 2009**



**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

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# AEP System Forestry Guidelines

## Foreword

### A. Introduction

The purpose of these AEP Forestry Guidelines is to document and inform AEP employees and its contractors of important criteria, practices and procedures pertaining to initial vegetation clearing for construction projects and the maintenance of rights of way. AEP incorporates these guidelines into each tree service contract; a copy shall be kept in all vegetation management contractor's vehicles. These guidelines are for the sole and exclusive use of the contractor and are to be read consistently with other contract documents by and between AEP and the Contractor.

### B. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation within the right of way.

**DBH:** (Diameter at Breast Height). The diameter of a tree measured at the height of 4-1/2 feet above the ground on the uphill side.

**Danger Tree:** A tree considered a potential hazard to AEP's facilities positioned outside of the normally cleared right-of-way.

**Debris:** Non-vegetative material such as pop bottles, cans, wire, paper and old tires.

**Directional Pruning:** The reduction of a tree's crown in a manner that provides increased conductor clearance by pruning to direct growth of the upper crown away from the conductors.

**Fallen Tree:** A tree lying on the ground not cut by the Contractor.

**Hanger:** A limb cut from a parent stem or bole of a tree as part of the line clearance pruning procedure left aloft caught and held by the other branches of the tree.

**Hazard Tree:** A tree considered a potential threat to the safety and reliability of AEP's facilities growing within the normally maintained right-of-way.

**Log:** The merchantable portion of a tree as designated by AEP.

**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Mowing:** The mechanical cutting of woody stem vegetation within the right-of-way.

**Prescription:** The plan prepared for each circuit or unit of work. It designates the vegetation to be maintained, the method(s) of maintenance, and who will perform the work.

**Removal:** The complete cutting down of trees at or near the ground line. AEP shall specify the disposal method.

**Slash:** The un-merchantable portion of a tree as designated by AEP.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

## **I. Contractor Guidelines**

### **A. Safety**

1. Protecting the safety of the public is of utmost importance to AEP. Contractors shall regard safety as their first priority. Contractors and their employees will recognize and follow all laws, rules and regulations regarding public and worker safety. Any safety related incidents (e.g., personal injury, vehicle accident, outages, flashes, near miss, customer issues, etc.) that occur on the job must be reported to the appropriate AEP personnel as soon as possible.
2. All contact incidents outages or operations caused by contract crews shall be reported to the appropriate AEP Dispatch center and Forestry immediately.

### **B. Personnel**

1. If required by state or local laws and regulations the contractor shall have an ISA Certified Arborist available.
2. No private work may be solicited or worked by Contractor employees while on AEP time. Contractors shall not receive compensation from anyone except AEP for tree work that is a part of AEP's Forestry program. The consequences will be crew and/or contractor disciplinary action.

### **C. Equipment**

1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chain saws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.

The use of spurs/climbers/hooks should be avoided. Where their use is necessary (as in the removal of some trees or in climbing trees, which do not provide a notch in which to tie in) only qualified persons shall be permitted to use them.

#### **D. Overtime**

Overtime is billable for work performed outside the scope of the normal work schedule.

#### **E. Work Procedures**

1. Contractor practices shall be compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Changes in the workweek due to inclement weather, equipment breakdowns or other circumstances must have prior approval by AEP Forestry personnel.
3. The contractor will be responsible for the development of a plan to complete the assigned tasks. The assigned tasks must be performed in a systematic way that follows this plan. Some examples are: beginning work at substations, working between protection devices, or other methods to prevent inefficiency and/or skipped work. The plan must meet AEP approval before work begins.
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractor shall provide daily work locations to AEP, including changes to these locations throughout the workday.
6. Each crew shall have a planned worksheet at all times, except in the case of emergency work.
7. The Contractor's daily association with their crews and customers will allow planned outages and refusals to be worked on a progressive basis. A written list of such areas that have not been worked, including reasons, shall be supplied to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work shall be inspected on an ongoing basis. When an assigned task is complete, the Contractor must notify AEP Forestry for final inspection.
9. The Contractor will notify AEP of any hazardous conditions found during the performance of work under this contract. This is to include danger trees, soil erosion, and any attachment to AEP's facilities,

deteriorated, damaged or broken facilities and any other abnormal conditions.

## **F. Public Relations**

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise. Advanced notification provides the property owner/resident with an opportunity to voice concerns.

1. Where required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor will document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the contractor should be on each card.

## **G. Refusals**

1. A "refusal" is considered any property owner/resident refusing to allow or permit the contractor to manage vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits and easements.
2. The contractor shall fill out a refusal/complaint form with all pertinent information for all refusals.
3. If the contractor is unable to resolve the refusal within one week, the refusal shall be turned over to the appropriate AEP Forester.
4. Undocumented refusals or those left unaddressed for more than one week by the contractor may be worked at the Contractor's expense.

## H. Damage Claims and Complaints

1. The contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.
2. An on-site investigation with the resident/ property owner shall be made as soon as possible. This meeting, or telephone arrangements for the investigation, shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during this initial investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.
7. Costs to restore outages or repair the Owner's facilities due to negligence may be billed to Contractor as determined by AEP Forestry.

## II. Performance Guidelines

### A. Removals

1. Stumps shall be flush cut (three (3) inch maximum height) and treated with an approved herbicide, unless designated otherwise by AEP Forestry.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect yards, fences, houses, electric lines and other facilities.

3. Targets for removal are:

- All trees with the potential of growing into the conductors.
- Trees where adequate clearance cannot be obtained using proper pruning practices.
- Trees that will take less than three times the amount of time to remove as they would take to prune.
- Trees within five (5) feet of poles.
- Mature trees where more than 50% of the crown must be removed to obtain clearance.
- Young vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
- Palm species.

4. Trees that may be less suitable candidates for removal are:

- Those that would take more than three times longer to remove than to prune for proper clearance and at least 50% of the crown would be left intact.
- Species that will not reach a height that would affect the conductors.
- Slow-growing tree species.

5. Deciduous stumps shall be flush cut (three (3) in. maximum height) and shall be treated with an appropriate herbicide to prevent re-growth unless the situation prevents application according to label instructions, there is a documented customer refusal or an AEP forester directs otherwise.

6. At the request of the property owner/resident diseased, dying, or dead trees which could threaten AEP facilities will be "made safe", allowing for removal by the customer or private arborist. Generally, all brush and wood generated by this activity should be left on site, unless otherwise directed by AEP Forestry.

**B. Pruning**

1. Contractor practices should be compliance with all applicable industry standards (i.e., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development.
3. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth in Tables I and II.

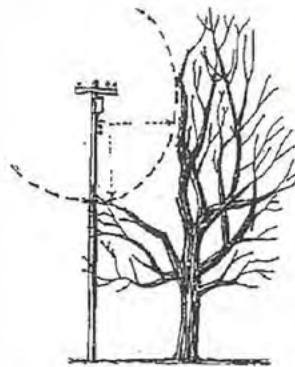
4. Reasonable care should be exercised to prevent the spreading of insects or diseases from one tree to another.
5. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut or damaged by the contractor's activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner.

### C. Clearances - Distribution

Variances to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/ or easements.

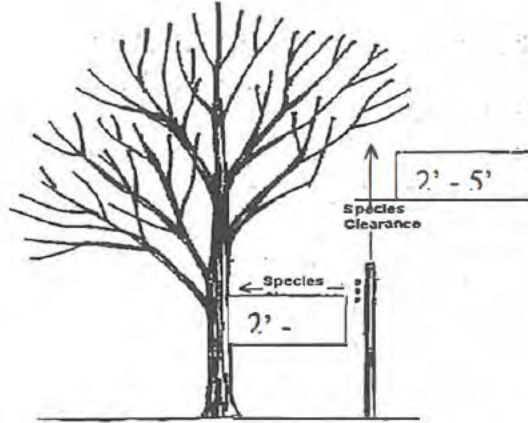
Minimum clearance for distribution system lines is that distance that will prevent re-growth into any AEP conductors for a minimum of three (3) years (see Table I in the appendix). The species, site, limb and conductor sag and sway during windy conditions and the effect of electrical load should all be considered when determining the clearance requirement.

**1. Primary Conductors-** Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the appropriate AEP Forestry representative.



**2. Open Wire Secondary Conductors- Limbs** should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.





**3. Twisted, Cabled Secondary, Service Drops or Street Light Conductors -**

Trees near twisted or cabled secondary service drops and street light wires will not be pruned unless limbs are applying pressure to the line. Do not prune for street light illumination except under the specific direction of the appropriate AEP Forestry representative.

**4. Span Guy Wires** – Trees near span guys should only be pruned of heavy limbs applying pressure on the wires.

**5. Poles and down guys** - All poles and down guys will be cleared of all volunteer trees, brush, and slash to obtain a minimum of a five (5) foot radius of clearance around the pole or guy.

**6. Vines** - Should be cut, but not removed from AEP or other facilities, and treated with an herbicide to prevent re-growth. Pulling / removing vines may damage equipment and endanger the employee.

**D. Clearances - Transmission**

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right of way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right of way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no

more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

### Clearance Table Guidelines

| Right of Way No Restrictions   | Right of Way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove All Woody Stemmed Vegetation *   | 1) Trim or Remove Vegetation to Meet Column C *                                  |
| 2) Do Not Allow Vegetation Closer than Column E                                  | 2) Do Not Allow Vegetation Closer than Column E                                  |
| 3) Trigger Distance to Schedule Maintenance per Column D                         | 3) Trigger Distance to Schedule Maintenance per Column D                         |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or Remove Vegetation to meet Column B *                                  | 1) Trim or Remove Vegetation to Meet Column C *                                  |
| 2) Do Not Allow Vegetation Closer than Column E                                  | 2) Do Not Allow Vegetation Closer than Column E                                  |
| 3) Trigger Distance to Schedule Maintenance per Column D                         | 3) Trigger Distance to Schedule Maintenance per Column D                         |

\* Upon Completion

**1. Restrictions** - When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in -Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**2. Minimum Approach** - Additional maintenance should be scheduled when vegetation will encroach within the minimum approach distances from energized conductors for *qualified* line-clearance arborists and qualified line-clearance arborist trainees (Columns A and D). In areas where easement or other legal agreements, or regulations restrict vegetation management practices, the maximum allowable amount of vegetation will be removed or otherwise controlled. AEP will annually monitor locations where these clearances cannot be achieved. The monitoring will determine whether maintenance that is more frequent may be required in order to assure the safe, reliable operation of the circuit.

#### E. Hangers and Clean Up

1. All hangers should be removed from the pruned tree before leaving the job site.

2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of clean up work should be performed, especially when a property owner requests a tree be removed. Unless otherwise designated by AEP Forestry, wood shall not be cut up or hauled away. Where designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum clean up that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the contractor. Any cut debris that inadvertently falls into such an area, or any debris left in an area that may be prone to regular flooding, shall be moved/removed in an appropriate manner (chipped, stacked on top of ditch bank, etc.)

#### **F. Clearing and Re-clearing**

1. AEP Forestry will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into the lines should be controlled, either by removal, herbicide treatment or a combination of both. On distribution lines and areas approved by Transmission Forestry on transmission lines those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities, should be left undisturbed in the right-of-way whenever possible. Variances to this recommendation may be applied due to specific operating company guidelines.
3. During scheduled maintenance operations, prune or remove any vegetation within the rights-of-way of station entrances or exits that may affect the safe operation of AEP facilities, including station fences and equipment.
4. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the appropriate AEP personnel.
5. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practicable, but not to exceed three (3) inches in height above the ground line. Where possible, the cut shall be parallel to the slope and promptly treated with an approved herbicide, unless otherwise directed by AEP Forestry.
6. Trees shall be felled to avoid damage to crops, fences and other facilities. Any trees felled into crops, ditches, streams, roads or

across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP's facilities or the property of third parties, or hinder access along the right-of-way.

7. Tree, brush and slash shall be lopped as designated by AEP Forestry.
8. Danger trees are identified and addressed / worked at the discretion of the individual operating companies or regions. Consideration for danger tree removal shall be made for those trees that are an imminent hazard or threat to AEP facilities. Danger trees may include, but are not limited to, trees that have severe lean or sweep, are dead, or have visible defect or damage. When cut, danger trees shall be cut as low as possible.
8. Stumps of trees growing in fences may be cut at fence post height, as approved by AEP Forestry.
9. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
10. In remote areas, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
11. Brush should not be left in managed agricultural areas or other maintained areas unless designated by AEP Forestry.

#### **G. Herbicide Applications**

1. All woody plants that have the potential of growing into the lines, should be controlled. Those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities should be left untreated in the right-of-way whenever practical.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made and are required to abide by all Federal, State, and local laws concerning licensing, record keeping, and product handling.
3. Contractors shall attain 100% coverage and 95% control of treated vegetation.
4. AEP Forestry will make vegetation management prescriptions in consultation with contractors.

5. Where required, landowners should be notified before any herbicide treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps should be treated with an appropriate herbicide treatment.

#### **H. Tree Growth Regulator Application**

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (TGR) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in an excessive state of decline shall not be treated unless directed by AEP Forestry.
3. As designated by AEP Forestry, landowners should be notified before any TGR treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX I**

**Distribution Line Clearance Guidelines**

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as **minimum clearance** requirements unless designated otherwise by AEP Forestry. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that during maintenance intervals, trees may encroach into these minimum clearance zones. The guidelines are meant to be used a guide for trimming those trees currently being maintained.

**MINIMUM CLEARANCE FROM CONDUCTORS**

- **Species with Fast Re-growth Rates:** Prune for a *minimum* clearance of 20 feet from conductors

|                |           |
|----------------|-----------|
| Cottonwood     | Willow    |
| Poplar species | Ailanthus |
| Silver maple   | Box Elder |
| Sycamore       |           |

- **Species with Medium Re-growth Rates:** Prune for a *minimum* clearance of 15 feet from conductors

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Locust                          | Hackberry                             |
| Red maple species               | Hickory                               |
| Ornamental pear species         | Crabapple                             |
| Fruit trees (apple, pear, etc.) | Red oak                               |
| Elm species                     | Ash species                           |
| Pine, Spruce & Hemlock species  | Mulberry                              |
| Sweet gum                       | Bois d'arc (Osage orange, hedge tree) |
| Catalpa                         |                                       |

- **Species with Slow Re-growth Rates:** Prune for a *minimum* clearance of 10 feet from conductors

|                           |                         |
|---------------------------|-------------------------|
| Cedar                     | Persimmon               |
| Chinaberry                | White oak (round lobes) |
| Magnolia                  | (Redbud, dogwood, etc.) |
| Any small variety species |                         |

- **Possible Exceptions:**

- When the entire trunk of a tree falls within the minimum clearance specifications.
- When due to the branching structure of the tree less trimming would lend itself to an overall healthier tree, yet with acceptable clearance.
- Isolated instances approved by AEP Forestry representative.

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX II**

**Transmission Line Clearance Guidelines<sup>(7)</sup>**

| Column A<br>Nominal Voltage<br>(kV phase to<br>phase) | Column B <sup>(2)</sup><br>NERC Clearance 1<br>(no restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)(2)</sup> and<br>Vegetation | Column C <sup>(3)(5)</sup><br>NERC Clearance 1<br>(with restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column D <sup>(3)</sup><br>ANSI Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column E <sup>(4)</sup><br>NERC<br>Clearance 2<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation |
|---|---|---|--|---|
| 765 kV  | 45'   | 35' 00"   | 27' 04"  | 14' 0"  |
| 500 kV  | 45'   | 26' 08"   | 19' 00"  | 10' 0"  |
| 345 kV  | 30'   | 20' 05"   | 13' 02"  | 7' 6"   |
| 230 kV  | 30'   | 16' 05"   | 7' 11"   | 5' 2"   |
| 161 kV  | 25'   | 14' 00"   | 6' 00"   | 3' 5"   |
| 138 kV  | 25'   | 13' 02"   | 5' 02"   | 2' 11"  |
| 88 kV & 115kV   | 25'   | 12' 04"   | 4' 06"   | 2' 6"   |
| 69 kV   | 25'   | 10' 09"   | 3' 09"   | 2' 6"   |
| 46kV, 40kV, 34.5<br>kV & 23 kV                        | 20'   | 10' 00"   | 2' 09"   | 2' 6"   |

(1) Conductor at maximum sag condition<sup>(6)</sup>

(2) Desired clearance to maintain reasonable clearing cycles

(3) ANSI Z133.1 rev. 10/2000

(4) IEEE Standard 516-2003, Section 4.2.2.3, Tables 5 and 7, calculated clearances (Clearance 2)

(5) Application of herbicides will be considered as meeting these guidelines, as long as all treated vegetation meets or exceeds the desired clearance from maximum sag (Table AEP1.2, Columns A and C).

(6) AEP Guideline for Determining Maximum Conductor Sag and Blowout for Vegetation Management is to be used to adjust the conductor's found field condition to the maximum sag condition taking into account the conductor size, span length, elevation, and current temperature.

(7) (Columns A, B, C, and D) distances exceed clearances for NERC operationally significant circuits noted in NERC Standard FAC-003-1, which gives clearances (Columns A and E) to be maintained between vegetation and conductors under all rated electrical operating conditions, per IEEE Standard 516-2003 (Guide for Maintenance Methods on Energized Power Lines) and as specified in its Section 4.2.2.3, Minimum Air Insulation Distances without Tools in the Air Gap.





## **AEP Transmission Guidelines for Monthly Unvouchered Liabilities – February 2014**

### **Introduction**

AEP Transmission is required to record unvouchered liabilities (UVLs) at month-end to comply with AEP's Accounting Policies and Guidelines. These procedures are being distributed, consistent with past practices, to remind all vendors and contractors of their contractual obligation to the company.

Generally Accepted Accounting Principles (GAAP), regulatory and reporting standards, and good business practice dictate that liabilities for materials and services received, but not yet vouchered / paid, should be recorded in the accounting period in which they are received. Timely recording of all significant liabilities is required to ensure AEP's financial statements are stated reasonably and fairly.

### **Definition of an Unvouchered Liability**

An Unvouchered Liability is incurred when a vendor or contractor provides materials and / or services to AEP for which a payment has not yet been rendered.

Unvouchered Liabilities include:

- Invoices submitted by a vendor or contractor for materials and / or services provided for which a payment has NOT been rendered by AEP;
- Unbilled amounts by a vendor or contractor for materials and / or services already provided to AEP but no invoice has yet to be submitted; and
- Estimated amounts by a vendor or contractor for materials and / or services **TO BE** provided to AEP thru month-end of the current accounting period.

An open Purchase Order, Contract, or Service Order does **NOT** represent a liability to AEP without receipt of the materials or performance of the service by month-end of the accounting period.

### **Contractor Liability Form: Contract Unvouchered Liabilities**

A template has been provided for vendors and contractors to report their unvouchered liabilities to AEP on a monthly basis that meet the \$\$\$ threshold for each AEP legal entity. The "*Contractor Liability Form*" will be emailed monthly to all vendors and contractors with a response due back to AEP Transmission Financial Controls by the due dates as noted below.

#### **Section B: Cumulative Unpaid Invoices**

Vendors and Contractors must identify **ALL** invoices submitted to AEP that have yet to be paid thru the current date that meet the \$\$\$ threshold for each AEP legal entity. This includes invoices submitted in prior periods that have not been paid. The following information is required for each unpaid invoice:

Contract / Purchase Order, Contract Release #, Invoice #, Invoice Date, Billing Period, Amount, AEP Operating Company (or ETT), Work Order + Task, and Comments.

Any invoice subject to retention should be included at the total amount reported for the invoice. However, if an invoice is for release of retention only, this should be noted in the "Comments".

Section C: Cumulative Unbilled Amounts

Vendors and Contractors must identify **ALL** unbilled amounts for materials delivered or services provided to AEP thru the current date that meet the \$\$\$ threshold for each AEP legal entity. This includes work performed in prior periods for which an invoice has not yet been submitted.

Since this form is due back to AEP around the middle of the month, each Vendor and Contractor must also provide an estimate for work **TO BE PERFORMED** thru the end of the current month and submit this amount as well.

The following information is required for each unbilled line item:

Contract / Purchase Order, Contract Release #, Billing Period, Estimated Amount, AEP Operating Company (or ETT), Work Order + Task, and Description of Work Activity.

If a liability was established in the prior month and the related actual invoice will not be submitted in the current month, then the liability must be re-established in the current month to provide consistent and proper reporting.

Reporting \$\$\$ Thresholds:

Depending on the size of the AEP legal entity, the \$\$\$ threshold that must be reported varies. Invoice amounts, equal to or greater than the reporting threshold amounts, **MUST** be included monthly to assure that there is no "significant" unreported impact to AEP's financial statements.

| Entity                  | GLBU #          | AEP Company Legal Entity    | \$\$\$ Threshold                                    |
|-------------------------|-----------------|-----------------------------|---|
| AEP Operating Companies | 169 / 211       | AEP Texas Central           | Unpaid Invoices and Unbilled Amounts = / > \$25,000 |
|                         | 192 / 119       | AEP Texas North             |   |
|                         | 150 / 140       | Appalachian Power           |   |
|                         | 120 / 170       | Indiana Michigan Power      |   |
|                         | 180 / 110       | Kentucky Power              |   |
|                         | 260 / 230       | Kingsport Power             |   |
|                         | 160 / 250       | Ohio Power                  |   |
|                         | 114 / 167       | Public Service of Oklahoma  |   |
|                         | 194 / 159 / 161 | Southwestern Electric Power |   |

|              |           |                                   |   |
|--------------|-----------|-----------------------------------|---|
|              | 200 / 210 | Wheeling Power                    |   |
| ETT          | 374       | Electric Transmission Texas       | Unpaid Invoices and Unbilled Amounts = / > \$10,000 |
| AEP Transcos | 380       | AEP Ohio Transmission             | Unpaid Invoices and Unbilled Amounts = / > \$10,000 |
|              | 385       | AEP Indiana Michigan Transmission |   |
|              | 386       | AEP Oklahoma Transmission         |   |
|              | 382       | AEP Appalachian Transmission      | All Unpaid Invoices and Unbilled Amounts            |
|              | 383       | AEP West Virginia Transmission    |   |
|              | 384       | AEP Kentucky Transmission         |   |
|              | 388       | AEP Southwestern Transmission     |   |

**Due Dates for Submittal of UVLs to AEP on Contractor Liability Form**

AEP Transmission Financial Controls will email the Contractor Liability Form (excel template) to each vendor and contractor by the 12<sup>th</sup> of each month.

All cumulative unpaid invoices submitted to-date and unbilled amounts, including those estimated amounts to be incurred for materials and services to be provided thru month-end, must be submitted to AEP Transmission to the following email by the dates listed below:

AEP Transmission Financial Controls email for UVLs: **[tcu\\_uul@aep.com](mailto:tcu_uul@aep.com)**

|                   |                           |                            |
|-------------------|---------------------------|----------------------------|
| <u>Due Dates:</u> | January 24 <sup>th</sup>  | July 24 <sup>th</sup>      |
|                   | February 21 <sup>th</sup> | August 22 <sup>nd</sup>    |
|                   | March 24 <sup>th</sup>    | September 23 <sup>rd</sup> |
|                   | April 22 <sup>nd</sup>    | October 23 <sup>rd</sup>   |
|                   | May 22 <sup>nd</sup>      | November 19 <sup>th</sup>  |
|                   | June 23 <sup>rd</sup>     | December 18 <sup>th</sup>  |

**Questions**

If you have any questions or need additional clarification, please contact:

**Mike Lamantia,**  
 Director, AEP Transmission Financial Controls  
 Office: (614) 552-1795

**Brenda LaVeck**  
**Manager, AEP Transmission Financial Controls**  
**Office: (614) 552-1402**

## INSTRUCTIONS FOR CONTRACTOR LIABILITY FORM

### Tab 1: Current Month Liabilities:

Identify all invoices submitted to AEP Transmission which have not been paid thru this date; Please provide the following information (do not reduce invoice amount to reflect withheld retention; do not include invoices that are for retention only): Contract Release / PO Number, Invoice Number / Date, Billing Period, Amount, AEP Operating Company, AEP Work Order + Task, and Comments

Provide estimated amounts for all material / services provided which has NOT been invoiced thru this date as well as estimated amounts for work to be performed thru the last calendar day of this month; Please provide the following information: Contract Release / PO Number, Billing Period, Estimated Amount, AEP Operating Company, AEP Work Order + Task, and Description of Work Activities

| \$\$\$ Thresholds for Unvouchered Liability Reporting:                           |            |
|--|------------|
| Operating Companies - GLBU 111, 114, 120, 150, 160, 169, 181, 192, 194, 200, 260 | > \$25,000 |
| Transcos - GLBU 380,385, 386   | > \$10,000 |
| Transcos - GLBU 382, 383, 384, 388   | > \$0      |

### Email Instructions:

The Cost Coordinators will email the Contractor Liability Form (excel template) to the Vendor by the middle of each month.

The completed template must be submitted back to the following Email: [tci\\_uul@aep.com](mailto:tci_uul@aep.com)

The 2014 due dates for submittal of the information to AEP will be:

|               |                |
|---------------|----------------|
| January 24th  | July 24th      |
| February 21st | August 22nd    |
| March 24th    | September 23rd |
| April 22nd    | October 23rd   |
| May 22nd      | November 19th  |
| June 23rd     | December 18th  |



**CONTRACTOR LIABILITY FORM: CONTRACT UNVOUCHERED LIABILITIES**

|             |            |
|-------------|------------|
| Month/Year: | Enter Date |
| Due Date:   | Enter Date |

Send Template to: [tci\\_uul@aep.com](mailto:tci_uul@aep.com)

| Vendor / Contractor Information |  |
|---------------------------------|--|
| Vendor Name:                    |  |
| Contact:                        |  |
| Email:                          |  |
| Phone #:                        |  |

| AEP Transmission Information |  |
|------------------------------|--|
| Location:                    |  |
| Contact:                     |  |
| Email:                       |  |
| Phone #:                     |  |

**Section B: Cumulative Unpaid Invoices Thru: Enter Date**

| Contract / Purchase Order | Release # | Vendor Invoices Billed but not Paid |              |                |        | AEP Operating Company | AEP Work Order + Task | Comments |
|---------------------------|-----------|-------------------------------------|--------------|----------------|--------|-----------------------|-----------------------|----------|
|                           |           | Invoice Number                      | Invoice Date | Billing Period | Amount |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |
|                           |           |                                     |              |                |        |                       |                       |          |

\*ADD ADDITIONAL LINES AS NECESSARY

**Section C: Cumulative Unbilled Amounts Thru: Enter Date**

| Contract / Purchase Order | Release # | Unbilled Work  |                  | AEP Operating Company | AEP Work Order + Task | Description of Work Activities (e.g., Project, Location, Materials / Services Performed, etc.) |
|---------------------------|-----------|----------------|------------------|-----------------------|-----------------------|--|
|                           |           | Billing Period | Estimated Amount |                       |                       |  |
|                           |           |                |                  |                       |                       |  |
|                           |           |                |                  |                       |                       |  |
|                           |           |                |                  |                       |                       |  |
|                           |           |                |                  |                       |                       |  |
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|                           |           |                |                  |                       |                       |  |
|                           |           |                |                  |                       |                       |  |
|                           |           |                |                  |                       |                       |  |

\*ADD ADDITIONAL LINES AS NECESSARY





# EXHIBIT C

- AERIAL HERBICIDE APPLICATION REQUIREMENTS DATED 3/10/14
- FORESTRY OPERATIONS AERIAL PATROL REQUIREMENTS DATED 3/10/14
- TRANSMISSION HELICOPTER PATROL REQUIREMENTS DATED 3/10/14



**American Electric Power  
Vegetation Management  
Aerial Herbicide Application Requirements  
March 10, 2014**

**SCOPE**

The primary utilization of this work is aerial applications for vegetation management, helicopter services may also be utilized on an as-needed basis for emergency patrols, regulatory permits, investigations, construction contracts, and other company considerations. AEP may also utilize the contract to complete work for other electric utilities or private business, as contracted through AEP's Associated Business Development group.

All applications during the application season must be completed by September 15, unless approved in advance by Owner in writing.

**HELICOPTER REQUIREMENTS**

The aircraft utilized shall be rotary winged (helicopter) turbine-powered type aircraft, and shall be maintained by an FAA certified repair station and certified as operational by FAA standards. All helicopters furnished by the contractor shall be properly licensed and insured.

The Owner reserves the right to examine, with the assistance of qualified personnel, each aircraft and relating documentation and aircraft maintenance record.

All helicopters shall be equipped with a Differential GPS system coupled to a flow control device to ensure accurate delivery of herbicide mixture and shall utilize a drift control system such as the Microfoil or Thru-Valve boom.

If the contractor plans to use a helicopter that does not meet one of the points above it must be noted in the Contractor's proposal under the "Exceptions, Deviations and Clarifications" section.

If requested in order to stay on schedule, the Contractor must be able to furnish a secondary helicopter when the primary helicopter is being maintained or repaired. The Contractor must also furnish to the Owner the helicopter maintenance schedule prior to start of scheduled work.

**PILOT REQUIREMENTS**

The Contractor shall furnish pilots who are qualified and experienced in aerial applications, and possesses all required FAA, FCC, state aerial applicator and commercial pesticide applicator licenses. The Contractor shall submit to the Owner the qualifications of each pilot who is to

perform the subject work. The Owner reserves the right to reject any of the Contractor's pilots based on their qualifications and/or performance. Pilot experience must include:

- Commercial helicopter license
- Minimum two years rotary-winged aerial application experience
- Not less than 1500 PIC ( Pilot in charge ) hours in helicopter

If contractor plans to use a pilot that does not meet one of the bulleted points above it must be noted in the Contractor's proposal under the "Exceptions, Deviations and Clarifications" section.

## **AERIAL APPLICATION REQUIREMENTS**

Contractor shall furnish daily load slips signed by the pilot showing the total acres treated for that day. One copy shall be given to the Owner upon completion of the day's flights and one copy shall be submitted with the invoice. If the Owner does not have a representative available during the work, the Contractor shall telephone the Owner at the beginning and end of the work day.

At a minimum, the daily application report shall show: Applicator and pilot name, applicators pesticide license number, circuit name and number, span or distribution pole numbers, acres treated, right-of-way width, volumes applied, herbicides and adjuvants that were used along with their rate per acre, and pertinent weather conditions (e.g. temperature, wind speed, etc.)

Any span or portion of a span in the application area that is not a known restriction and is not treated shall be documented. Areas skipped due to misapplication will be treated upon Owner's request.

The TDC/DDC may restrict flights due to loading or other emergency conditions, resulting in a Contractor standby.

A schedule that is mutually agreeable to both the Contractor and the Owner will be established. In the event that the work schedule is not being met, the Contractor may be required to provide additional helicopters and pilots to complete the work. If the work cannot be completed by the Contractor, the Owner may utilize the services of another contractor.

All herbicides used must be registered by the U. S. Environmental Protection Agency and the appropriate state agency. The Contractor shall obey all local, State, Federal laws and regulations. The herbicides must be provided in returnable/refillable containers, unless approved by Owner in advance. All transfer points in the application operation shall have closed system connections.

## **FLIGHT TIME AND DELAYS**

The Owner will not compensate for flight time lost due to inclement weather. If the Contractor's pilot and observer are delayed due to the Owner's actions, then compensation will be paid as defined in the contract unit prices. The Owner reserves the right to adjust the start and end of the daily flight schedule, without additional compensation paid to the Contractor.

## **RESTRICTIONS**

Authorities at specific governmental or industrial locations must be notified in advance of planned aerial flights over their property. The Pilot is required to ensure that these contacts are made, as appropriate.

There are certain residential and rural areas considered too sensitive to fly over. These areas will be identified for the pilot prior to the aerial work. The responsibility to avoid these areas remains with the pilot.

## **SAFETY PROGRAM**

The Contractor shall comply with and enforce all FAA and FCC requirements that are applicable to low level power line work. The Contractor will also comply with the Owner's Contractor Oversight Program.

## **UNIT PRICE REQUIREMENTS**

All application quotations will be on a per acre basis. The unit price shall include the helicopter, pilot, support vehicles, ground crew, insurance, maintenance, hanger costs, per diems, as well as all profit and overheads.

Separate quotes (a minimum of three) for all materials must be obtained and provided to the Owner sixty days prior to commencement of work.

Quotes are also requested for mobilization/demobilization and per diems as defined by the Owner.

## **LANDOWNER CONTACTS**

Landowner contacts must comply with all state laws and regulations.



**AMERICAN ELECTRIC POWER  
Forestry Operations  
Aerial Patrol Requirements  
March 10, 2014**

**SCOPE**

Forestry Operations' planned aerial patrols typically consist of a spring and fall aerial patrols. The spring aerial patrols are typically completed by May 21 of the given year and the fall aerial patrols are typically completed between August 15 and November 15 of the given year. The Owner reserves the right to limit the scheduled patrols, or to modify the duration of either the spring or fall aerial patrols.

Work will be based on a normal 5-day workweek. Extended hours or Saturday work may be used upon mutual agreement between Owner and Contractor. Except in emergency situations, Sunday hours will not be scheduled.

AEP Forestry Operations will utilize this contract specifically for their planned transmission/distribution line aerial patrols, emergency transmission/distribution line aerial patrols, and supplemental transmission/distribution line aerial patrols within the AEP system. The AEP system encompasses approximately 8,600 NERC Reportable transmission miles (200kv and above and other lower voltage circuits that have been designated as critical by the Reliability Coordinator), approximately 31,000 non – NERC transmission miles (below 200kv) and 223,000 distribution miles. This can be broken down by AEP East (Indiana, Kentucky, Michigan, Ohio, Tennessee, Virginia, and West Virginia), by AEP West (Arkansas, Louisiana, Oklahoma, and Texas) or by the various operating companies including Appalachian Power (APCO), AEP Ohio, AEP Texas (including ETT), Indiana Michigan Power (I&M), Public Service Company of Oklahoma (PSO), Kentucky Power, and Southwestern Electric Power Company (SWEPCo).

**HELICOPTER AND AERIAL PATROL REQUIREMENTS**

Contractor shall furnish, at a minimum, a turbine helicopter, which is licensed, flown, maintained, and operated in accordance with current FAA regulations. This helicopter shall be suitable for carrying one pilot and two passenger-observers, and shall be of a design that provides satisfactory observation of transmission facilities by the pilot and each passenger-observer. The helicopter must also be equipped with:

- Helicopter shall be a MD 500, Bell 206 or equivalent with a minimum of a three place ship (pilot and two observers)
- Design suitable for observation, while in flight, of power line rights-of-way.



- Fuel Range Extender (3 Hours flight time)
- High Skid Gear (Safety Requirement)
- Dual Communication Radios
- GPS or (like) Navigation system
- Night Flying Capability
- Operational mobile cellular-type telephone

Contractor shall provide site-specific information consisting of GPS coordinates as well as notated nearest landmark if available on request.

The Owner reserves the right to examine, with the assistance of qualified personnel, each aircraft and relating documentation and aircraft maintenance record.

If contractor plans to use a helicopter that does not meet one of the bulleted points above (i.e. is not capable of being fitted with wire strike prevention system) it must be noted in the Contractor's proposal under the "Exceptions, Deviations and Clarifications" section.

The Contractor must be able to furnish a second helicopter when the primary helicopter is being maintained or repaired, if determined necessary by the Owner in order to keep to the planned schedule.

### **PILOT REQUIREMENTS**

The Contractor shall furnish a pilot who is qualified and experienced in aerial patrol of transmission lines, and possesses all required FAA and FCC licenses. The Contractor shall submit to the Owner qualifications of each pilot who is to perform the subject work. The Owner reserves the right to reject any of the Contractor's pilots based on their qualifications and/or performance. Pilot experience must include:

- Commercial helicopter license
- Not less than 1500 PIC ( Pilot in charge ) hours in helicopter engaged in low level power line aerial patrol

### **OBSERVER REQUIREMENTS (Optional-if contract observer is provided)**

The Owner will normally provide the observer. In some cases, the Contractor may be asked to furnish an observer who is qualified and has experience in patrolling vegetation along electrical power lines and/or low level flight.

The Contractor shall submit to the Owner the qualifications of each observer who is to perform the subject work. The Owner reserves the right to reject any of the Contractor's observers based on their qualifications and/or performance. Observer experience must include:

- Minimum of 1 year experience in the electrical utility industry, specifically relating to the vegetation identification/maintenance of overhead transmission/distribution power lines and completion of the AEP Transmission Forestry Aerial Patrol Training Program.
- Minimum of 100 hours experience of low-level flight, power line aerial patrol work.

The Contractor will be required to submit to the Owner a report of conditions found during the aerial patrol. Conditions found which may be hazardous to the public or which could cause a circuit outage shall be immediately reported to the Owner, and then documented in the report.

The Contractor will be required to perform scheduled, emergency, or special flights when requested by the Owner.

Annual aerial patrols for the transmission/distribution lines will be coordinated by the Owner and completed within a specified time period, based on the number of flight hours contracted by the Owner. For completing a scheduled aerial patrol, the Contractor will be paid the hourly unit price to: ferry the helicopter to the Owner's work site; complete the scheduled aerial patrol; and return the helicopter to the Contractor's normal business location. The Contractor will not be paid to ferry from Owner's property and/or service territory to receive regularly scheduled maintenance.

Emergency aerial patrols and non-scheduled air aerial patrols are required on an as needed basis by AEP. Compensation for emergency air aerial patrols will be based on the applicable unit price for ferry time and all flight time incurred for bringing the helicopter to the site, performing the aerial patrol, and returning the helicopter to the Contractor's normal business location, or to the site at which the helicopter was stored previous to the AEP work.

### **VIDEOTAPING REQUIREMENTS**

It is a requirement that the NERC Reportable transmission system be videoed once per year. Helicopters shall be equipped with the following videotaping equipment:

1. Stabilized broadcast quality video cameras attached to the aircraft and fully capable of pan, tilt, zoom, wide angle, focus, and other functions.

It is recommended that the videotaping equipment has the following capabilities:

1. Video camera system capable of inputting video signal to an on-board digital video recorder or computer hard drive utilizing a minimum of three hour tapes or hard drive capacity of at least six hours of streaming video.

2. Video signal recorded onto an onboard digital video recorder that provides video signals to onboard monitors stationed for the pilot and observer.
3. Each helicopter equipped with intercom systems that input comments from pilot and observers on to the streaming video.

### **FLIGHT TIME AND DELAYS**

The Owner will not compensate flight time lost due to inclement weather. If the Contractor's pilot and observer are delayed due to the Owner's actions, then compensation will be paid as defined in the contract unit prices. The Owner reserves the right to adjust the start and end of the daily flight schedule, without additional compensation paid to the Contractor.

### **SAFETY PROGRAM**

The Contractor shall comply with and enforce all FAA and FCC requirements that are applicable to low level power line aerial patrolling. The Contractor will also comply with the Owner's Contractor Oversight Program.

### **WRITTEN REPORTS**

Conditions found shall be reported with respect to the Owner's transmission line number, line name, structure number, circuit, and the specific location on the structure and/or in the structure span. The exact report format and the types of conditions to be reported shall be determined and agreed upon between the Contractor and Owner prior to the scheduled aerial patrol.

### **MISCELLANEOUS:**

Contractor must provide 24-hour accessibility to facilitate emergency call-out during the contract periods. Answering machines are not acceptable.

# TRANSMISSION HELICOPTER PATROL REQUIREMENTS

## March 10, 2014

### SCOPE

Although the primary utilization of an aerial patrol will be for structural and right-of-way maintenance, this capability shall also be utilized on an as-needed basis for emergency patrols, regulatory permits, investigations, construction contracts, engineering requirements, and other company considerations. AEP may also utilize contractor to complete work for other electric utilities or private business.

### PATROL TYPES

The Transmission Line Patrols consist of inspections in the spring and fall of the year. Normal start times for the spring and fall patrol are April and October. Use of the helicopter and pilot will be based on a normal 5-day work week. Overnight stays may be necessary to complete patrols in a timely manner. Extended hours or Saturday work may be used upon mutual agreement between Owner and Contractor. Except in emergency situations, Sunday hours will not be scheduled.

Emergency air patrols are required during line outages when walking patrols are impractical. Request for these types of flights are, by necessity, on an "as-required" basis. Compensation for emergency air patrols will be based on ferry time and all flight time incurred for bringing the helicopter to the site, performing the inspection, and returning the helicopter to the Contractor's normal business location, or to the site at which the helicopter was stored, or was working, when called upon to perform the emergency patrol. Contractor must provide 24-hour accessibility to facilitate emergency call-out. Answering machines are not acceptable.

Special flights are required for regulatory permits, investigations, construction contracts, engineering requirements, or other company considerations. These would normally be scheduled in advance. Compensation for special flights will be based on ferry time and all flight time incurred for bringing the helicopter on site, completing the flight and returning the helicopter to the Contractor's normal business location or to the location the helicopter was stored, or was working when called upon to perform the special flight.

### HELICOPTER REQUIREMENTS

The only aircraft considered utilized shall be **turbine-powered** helicopters and shall be maintained by an FAA certified repair station and certified as operational by FAA standards under Part 91 of the FAA Rules and Regulations. All helicopters furnished by the contractor shall be properly maintained, licensed and insured.

Helicopters shall be furnished and flown following industry safety standards, specifically the most recent Helicopter Association International's (HAI) Utilities, Patrol and Construction Committee (UPAC) Safety Guide for Helicopter Operators.

Contractor shall furnish pricing for a helicopter with the following minimum characteristics:

- Design suitable for observation, while in flight, of power line right-of-way.

- Helicopter shall be similar to MD 500, Bell 206 with a minimum of a three place ship (pilot and two observers)
- Fuel Range Extender (3 hours flight time)
- An installed Wire Strike Protection System or equivalent FAA approved system.
- Suitable intercom system to facilitate conversation between passenger(s) and pilot.
- Operational mobile cellular phone for use by the pilot and inspector.
- High skid gear (safety requirement).
- GPS
- Night flying capability
- Video taping capability (optional)

The Owner reserves the right to examine, with the assistance of qualified personnel, each aircraft and relating documentation and aircraft maintenance record.

**If contractor plans to use a helicopter that does not meet one of the bulleted points above (i.e. is not capable of being fitted with wire strike prevention system) it must be noted to the Owner and accepted in writing prior to flying the assignment.**

If requested, to stay on schedule, the Contractor must be able to furnish a secondary helicopter when the primary helicopter is being maintained or repaired. The Contractor must also furnish to the Owner or its representative the helicopter maintenance schedule prior to start of scheduled work.

#### **Video Taping (Optional)**

Helicopters shall be equipped with the following videotaping equipment:

1. Stabilized broadcast quality video cameras attached to the aircraft and fully capable of pan, tilt, zoom, wide angle, focus, and other functions.
2. Video camera system shall be capable of inputting video signal to an on-board digital video recorder or computer hard drive utilizing a minimum of three (3) hour tapes or hard drive capacity of at least six hours of streaming video.
3. GPS systems shall be interrelated to a video position captioner device that superimposes latitude and longitude values, title of line being flown, time, date, speed, heading and elevation onto the streaming video at all times.
4. Video signal shall be recorded onto an onboard digital video recorder that provides video signals to onboard monitors stationed for the pilot and observer.
5. Each helicopter will be equipped with computerization interrelated to GPS and each flight will be recorded as a GPS Log file.
6. Each helicopter will be equipped with intercom systems that input comments from pilot and observers on to the streaming video.

#### **PILOT REQUIREMENTS**

The Contractor shall furnish a pilot who is qualified and experienced in patrol of transmission lines, and possesses all required FAA and FCC licenses. The Contractor shall submit to the Owner qualifications of each pilot who is to perform the subject work. The Owner reserves the right to reject any of the Contractor's pilots based on their qualifications and/or performance. Pilot experience must include:

- Commercial helicopter license
- Not less than 1500 PIC ( Pilot in charge ) hours in helicopter engaged in low level power line patrol
- A UPAC Guide Section 8 should be filled out for all pilots and crew members

### **AIR PATROL REQUIREMENTS**

Contractor shall furnish daily flight slips signed by the pilot and the Owner's observer showing the total flight hours for that day. One copy shall be given to the Owner upon completion of the flight and one copy shall be submitted with the invoice. If the Owner does not have a representative available for the air patrol, the Contractor's observer shall telephone the Owner at the beginning and end of the patrol. A daily flight report will also be submitted with the invoice.

The Pilot is required to contact the Owner's Transmission Dispatching Center (TDC) on a daily basis when an observer is used. The Pilot will provide to the TDC the approximate time of the patrol and the line names that will be flown.

### **OBSERVER REQUIREMENTS (Optional - if contractor observer is provided)**

Contractor may be asked to furnish an observer who is qualified and has experience in patrolling electrical power lines and/or low-level flight. The Contractor shall submit to the Owner the qualifications of each observer who is to perform the subject work. The Owner reserves the right to reject any of the Contractor's observers based on their qualifications and/or performance. Observer experience must include:

- Minimum of 10 years experience in the electric utility industry, specifically relating to the construction or maintenance of overhead transmission lines.
- Minimum of 1,000 hours experience of low-level flight, power line patrol work.

If a Contractor observer is provided, written documentation of the air patrol should include, at a minimum:

- General condition of the line.
- Defective equipment such as insulators, poles, tower steel, cross-arms, conductor, static wire, tower numbers, mile boards, crossing markers, etc.
- Conditions of trees and other vegetation growth within and adjacent to the transmission line rights-of-way and locations where structure foundations are exposed due to wash outs, erosion, trenches or other causes.
- Encroachments, approaching encroachments, or new construction located on the right-of-way or within 200 feet on either side of the transmission line.
- Use of overhead lifting devices, (i.e. cranes) or equipment on or near the transmission line and give immediate notification to the Owner's Transmission Dispatch Center.

### **FLIGHT TIME AND DELAYS**

The Owner will not compensate flight time lost due to inclement weather. If the Contractor's pilot and observer are delayed due to the Owner's actions, then compensation will be paid as

defined in the contract unit prices. The Owner reserves the right to adjust the start and end of the daily flight schedule, without additional compensation paid to the Contractor.

### **RESTRICTIONS**

Authorities at specific AEP power plants must be notified of planned aerial patrols over the plant property 24 hours prior to the flight. The Pilot is required to ensure that these contacts are made.

Authorities at specific governmental locations must be notified in advance of planned aerial patrols over their property. The Pilot is required to ensure that these contacts are made, as appropriate.

There are certain residential and rural areas considered too sensitive to fly over. These areas will be identified for the pilot prior to the air patrol. The responsibility to avoid these areas during the patrol remains with the pilot.

### **SAFETY PROGRAM**

The Contractor shall comply with and enforce all FAA and FCC requirements that are applicable to low level power line patrolling. The Contractor will also comply with the Owner's applicable Supplemental Safety Terms and Conditions

# EXHIBIT D

- AERIAL HERBICIDE APPLICATION RATES
- AERIAL PATROL RATES





**AMERICAN ELECTRIC POWER  
AERIAL HERBICIDE APPLICATION RATES  
EFFECTIVE 4/1/14**

Unit prices are inclusive of helicopter, equipment, pilot, crew, hanger costs, fuel, per diems, insurance and maintenance, as well as all profit and overheads.

**Application Rates**

|   |  |
|---|--|
| Application rate – ROW width 49 ft. or less:                        | ██████████ per acre                    |
| Application rate – ROW width 50 – 99 ft.:                           | ██████████ per acre                    |
| Application rate – ROW width 100 ft. plus:                          | ██████████ per acre                    |
| Mobilization/demobilization (Move out and move back) <sup>1</sup> : | ██████████ per mile                    |
| Per Diem <sup>2</sup> :   | ██████████ per day per man on the crew |
| Emergency Patrol during productive time:                            | ██████████ per hour                    |
| Emergency patrol during non-productive time:                        | ██████████ per hour                    |

<sup>1</sup> To be paid only when requested or required by Owner.

<sup>2</sup> To be paid only when delayed by Owner's actions.

**2014 Herbicide Mixtures & Rates (applied at 25 gallons per acre)**

|  |                             |
|--|-----------------------------|
| Mix #1: ██████████<br>██████████<br>██████████<br>██████████<br>██████████ | Mix #1: ██████████ per acre |
| Mix #2: ██████████<br>██████████<br>██████████<br>██████████               | Mix #2: ██████████ per acre |
| Mix #3: ██████████<br>██████████<br>██████████<br>██████████<br>██████████ | Mix #3: ██████████ per acre |



**AMERICAN ELECTRIC POWER  
AERIAL PATROL RATES  
EFFECTIVE 4/1/14**

Hourly rates are inclusive of helicopter, pilot, crew, fuel (up to [REDACTED] per gallon), insurance and maintenance, as well as all profit and overheads. Hours billed will be based on actual flight time.

**UNITS**

**A. SCHEDULED PATROLS:**

UNIT PRICE for scheduled patrol of transmission lines using a three-place helicopter and pilot. Unit will be paid for flight time that begins and ends at the Owner's designated staging location.

- A1. Aircraft Description: Bell 206B3 Jet Ranger: [REDACTED] per Flight Hour  
\*Fuel Surcharge for [REDACTED] or greater per gallon
- A2. Aircraft Description: Bell 206L Long Ranger (5 seats): [REDACTED] per Flight Hour  
\*Fuel Surcharge for [REDACTED] or greater per gallon

**B. EMERGENCY PATROL:**

UNIT PRICE for emergency patrol of transmission lines using a three-place helicopter and pilot. Unit will be paid for flight time incurred while performing the emergency patrol work. For repositioning on Emergency Patrols, if no flight time is accumulated during a day then there will be a minimum daily charge of 1.5 hours flight time based on the aircraft requested. (1.5 hours is the average daily patrol time on emergency patrols Summit has performed for AEP)

- B1. Aircraft Description: Bell 206B3 Jet Ranger: [REDACTED] per Flight Hour  
\*Fuel Surcharge for [REDACTED] or greater per gallon
- B2. Aircraft Description: Bell 206L Long Ranger (5 Seats): [REDACTED] per Flight Hour  
\*Fuel Surcharge for [REDACTED] or greater per gallon

**C. VIDEOTAPING**

- C1. Polytech Visual Camera with DVCAM recorder: [REDACTED] installed on A/C  
C2. DVDs: Billed At Cost per DVD  
C3. Hard Drives: Billed At Cost per Unit  
C4. Flash Drives: Billed At Cost per Unit

#### D. FERRY TIME:

UNIT PRICE for bringing helicopter to beginning site of scheduled patrol, emergency patrol or other work requested by owner. Unit will be paid for flight time incurred while bringing the helicopter from the Contractor's normal base of operations or from the location the helicopter was working when called upon, and returning the helicopter to that same location.

D1. Aircraft Description: Bell 206B3 Jet Ranger: [REDACTED] per Flight Hour  
\*Fuel Surcharge for [REDACTED] or greater per gallon

D2. Aircraft Description: Bell 206L Long Ranger: [REDACTED] per Flight Hour  
\*Fuel Surcharge for [REDACTED] or greater per gallon

#### E. PILOT STAND-BY TIME:

E1. UNIT PRICE for pilot stand-by time, per hour, when delay is caused by owner. Note: this unit does not apply to delays caused by inclement weather or other conditions beyond Owner's control.

[REDACTED] per Hour

#### F. PER DIEM COST:

F1. UNIT PRICE for pilot or observer(s) for one overnight stay including lodging, meals, and transportation. Unit is per overnight stay, per person.

[REDACTED] per Night

F2. Car Rental if required away from Base:

Billed At Cost

#### G. OVERNIGHT HANGER FOR HELICOPTER:

G1. UNIT PRICE to hanger the helicopter overnight at the airport when the helicopter is parked away from the Contractor's normal base location. Note: this unit will only be paid when inclement weather is expected overnight. The pilot will notify the Owner's representative prior to placing the helicopter inside a hanger overnight. The Contractor will only be reimbursed the actual expense, not to exceed [REDACTED] per day.

Actual Cost (Not to exceed [REDACTED])

**F. LINE PULL AND CONSTRUCTION PROJECTS:**

- F1. Bell 206 L Long Ranger [REDACTED] per hour (3 hour per day minimum)  
\*Fuel Surcharge for [REDACTED] or greater per gallon
- F2. Bell 205A-1++: [REDACTED] per hour (3 hour per day minimum)  
\*Fuel Surcharge for [REDACTED] or greater per gallon



**Pricing Change Order**

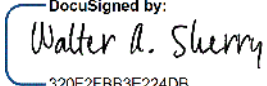
Contract No.: 26972840000X103  
 Owner: Rick Mowbray  
 Authorized Reviewer: Walter Sherry

Request Date: 8/9/2016  
 Effective Date: 8/9/2016  
 Contractor: Summit Helicopters

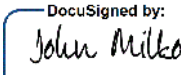
This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

| Material |                       |               |                         |                     |
|----------|-----------------------|---------------|-------------------------|---------------------|
| Reason   | Material Description  | Material Code | Material Rate (\$/unit) | Material Markup (%) |
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| Change   | VIEWPOINT (per oz.)   | VWP           | REDACTED                |                     |
|          |                       |               |                         |                     |
|          |                       |               |                         |                     |

**American Electric Power Service Corporation, as agent for the operating companies of the American Electric Power System**

DocuSigned by:  
  
 320F2FBB3E224DB...  
 \_\_\_\_\_  
 Signature  
  
 walter A. sherry  
 \_\_\_\_\_  
 Name  
  
 Forestry Operation Manager  
 \_\_\_\_\_  
 Title  
  
 8/11/2016 | 9:38 PM EDT  
 \_\_\_\_\_  
 Date

**Summit Helicopters**

DocuSigned by:  
  
 661C1BA01915444...  
 \_\_\_\_\_  
 Signature  
  
 John Milko  
 \_\_\_\_\_  
 Name  
  
 Secretary/Treasurer  
 \_\_\_\_\_  
 Title  
  
 8/15/2016 | 8:25 AM EDT  
 \_\_\_\_\_  
 Date



## Certificate Of Completion

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 Subject: AEP Contract No. 026972840000X103; Summit Helicopters; PCO  
 Source Envelope:  
 Document Pages: 1 Signatures: 2 Envelope Originator:  
 Certificate Pages: 3 Initials: 0 Gina Crabtree  
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 Time Zone: (UTC-05:00) Eastern Time (US & Canada) gmcrabtree@aep.com  
 IP Address: 167.239.221.85

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## Signer Events

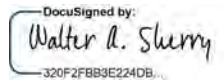
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Sonia Pickens  
 srvaughan@aep.com  
 Category Mgr  
 American Electric Power  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Not Offered via DocuSign  
 ID:

Terri Stiltner  
 tastiltner@aep.com  
 Security Level: Email, Account Authentication (None)  
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Rick Mowbray  
 drmowbray@aep.com  
 Supv. Region Forestry  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
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Walter A. Sherry  
 washerry@aep.com  
 Forestry Operation Manager  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
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DocuSigned by:  
  
 320F2F8B3E224DB

| Signer Events  | Signature  | Timestamp  |
|--|--|--|
| John Milko<br>summitsales@rbnet.com<br>Secretary/Treasurer<br>Summit Helicopters, Inc.<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/2/2014 9:49:01 AM<br>ID: b2c2d65a-f080-4588-8ac2-9cfb2cf795cd | <br>Using IP Address: 67.211.156.94 | Item No. 20<br>Attachment 1<br>Page 1258 of 1469<br>Sent: 8/11/2016 9:38:56 AM<br>Viewed: 8/12/2016 7:50:13 AM<br>Signed: 8/15/2016 8:25:15 AM<br>REDACTED |

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| Agent Delivery Events | Status | Timestamp |
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| Intermediary Delivery Events | Status | Timestamp |
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| Certified Delivery Events | Status | Timestamp |
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| Carbon Copy Events | Status | Timestamp |
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| Notary Events | Timestamp |
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| Completed           | Security Checked | 8/15/2016 8:25:16 AM |

| Electronic Record and Signature Disclosure |
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## **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

# Pricing Change Order

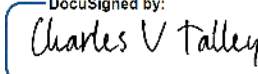
Contract No.: 026972840000X103  
 Owner: Rick Mowbray  
 Authorized Reviewer: Charles Talley

Request Date: 4/20/2017  
 Effective Date: 4/16/2017  
 Contractor: Summit Helicopters, Inc.

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

| Material |                       |               |                         |
|----------|-----------------------|---------------|-------------------------|
| Reason   | Material Description  | Material Code | Material Rate (\$/unit) |
| Add      | VIEWPOINT (per pound) | VWP1          |                         |
| Add      | VIEWPOINT (per oz.)   | VWP           |                         |
|          |                       |               |                         |
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**American Electric Power Service Corporation, as agent for the operating companies of the American Electric Power System**

DocuSigned by:  
  
 8B420D87F19F48B...  
 Signature

Charles V Talley  
 \_\_\_\_\_  
 Name

Manager Distribution Engineering Services  
 \_\_\_\_\_  
 Title

4/24/2017 | 8:53 AM EDT  
 \_\_\_\_\_  
 Date

**Summit Helicopters, Inc.**

DocuSigned by:  
  
 661C1BA01915444...  
 Signature

John Milko  
 \_\_\_\_\_  
 Name

Secretary/Treasurer  
 \_\_\_\_\_  
 Title

4/24/2017 | 11:29 AM EDT  
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 Date

## Certificate Of Completion

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| Source Envelope:  |                            |
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| Supplemental Document Pages: 0  | Initials: 0                |
| Certificate Pages: 3  |                            |
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| Envelopeld Stamping: Enabled  | Envelope Originator:       |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                                   | Gina Crabtree              |
|   | 1 Riverside Plz FL 1       |
|   | Columbus, OH 43215-2373    |
|   | gmcraabtree@aep.com        |
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| Signer Events  | Signature   | Timestamp  |
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| Kevin Patton<br>kbpatt@ae.com<br>Business Analyst Principal<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/5/2014 2:08:35 PM<br>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409 | <b>Completed</b><br><br>Using IP Address: 12.111.104.2<br>Signed using mobile | Sent: 4/20/2017 1:52:51 PM<br>Viewed: 4/21/2017 12:34:12 PM<br>Signed: 4/21/2017 12:34:22 PM |

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| Rick Mowbray<br>drmmowbray@aep.com<br>Supv. Region Forestry<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 4/24/2017 7:05:51 AM<br>ID: d2e5d0b4-9105-4f54-bfea-ed40f0507afc | <b>Completed</b><br><br>Using IP Address: 167.239.221.81 | Sent: 4/21/2017 12:34:23 PM<br>Viewed: 4/24/2017 7:05:51 AM<br>Signed: 4/24/2017 7:06:10 AM |
|--|--|---|

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|--|---|--|
| Charles V Talley<br>cvtalley@aep.com<br>Manager Distribution Engineering Services<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 4/24/2017 8:52:13 AM<br>ID: 8ab86f79-7393-48fe-b384-89fbacfb33bb | <br>Using IP Address: 167.239.221.86 | Sent: 4/24/2017 7:06:11 AM<br>Viewed: 4/24/2017 8:52:13 AM<br>Signed: 4/24/2017 8:53:07 AM |
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| John Milko<br>summitsales@rbnet.com<br>Secretary/Treasurer<br>Summit Helicopters, Inc.<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 6/2/2014 9:49:01 AM<br>ID: b2c2d65a-f080-4588-8ac2-9cfb2cf795cd | <br>Using IP Address: 64.203.158.246 | Sent: 4/24/2017 8:53:08 AM<br>Viewed: 4/24/2017 9:34:39 AM<br>Signed: 4/24/2017 11:29:02 AM |
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## In Person Signer Events

## Signature

## Timestamp

## Editor Delivery Events

## Status

## Timestamp

| Agent Delivery Events | Status | Timestamp |
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Item No. 20  
 Attachment 1  
 Page 1262 of 1469  
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| Certified Delivery Events | Status | Timestamp |
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| Carbon Copy Events | Status | Timestamp |
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AEP Audit  
 gbscontractassessments@aep.com  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Not Offered via DocuSign  
 ID:

**COPIED**

Sent: 4/24/2017 11:29:03 AM

Christopher Donley  
 cdonley@aep.com  
 Contract Analyst  
 American Electric Power Service Corporation  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Not Offered via DocuSign  
 ID:

**COPIED**

Sent: 4/24/2017 11:29:03 AM

Terri Stiltner  
 tastiltner@aep.com  
 Security Level: Email, Account Authentication (None)  
 Electronic Record and Signature Disclosure:  
 Accepted: 6/18/2015 3:27:15 PM  
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**COPIED**

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| Completed           | Security Checked | 4/24/2017 11:29:03 AM |

| Payment Events | Status | Timestamps |
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| Electronic Record and Signature Disclosure |
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## **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

Please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

## CONTRACT NO. 02572604X110

This Contract No. 02572604X110 ("Contract") is made between **Kentucky Power Company**, a Kentucky corporation ("Owner" or "KPCO") and **Wright Tree Service, Inc.**, an Iowa corporation ("Contractor"). Contractor and Owner may be referred to collectively as the "Parties" and individually as a "Party."

### 1. DESCRIPTION OF SERVICES

Subject to the terms and conditions hereof, Contractor agrees to furnish to Owner, on an as-needed basis, all supervision, labor, equipment and specified materials necessary to perform distribution vegetation management services, as delineated below, within Owner's service areas ("Work").

Vegetation management services may include but not be limited to the following:

Emergency- Local emergency restoration tree work on an on-call basis.

Herbicide and Tree Growth Regulator (TGR)- Application of appropriate herbicides and/or TGR in service areas as directed by Owner.

Mowing- Provide mowing services in Owner service areas where easements restrict the ability to use any other method for vegetation control and Owner has determined that mowing is the preferred maintenance method.

Removals- Hazard tree removals performed outside of Owner's routinely maintained right-of-ways.

Right-of-Way Maintenance- Tree and brush work on and off-road and/or cross-country on distribution lines, based upon Owner's specifications.

Side Trimming- Tree trimming along the edges of right-of-ways using either aerial lifts, climbing crews, aerial saw, chemicals and/or mechanical side trim equipment.

Storm Restoration- Emergency restoration in areas affected by storm damage without debris cleanup unless otherwise specified.

Work Planning- Perform inspection and planning services and develop plans, strategies and administrative work for various methods of vegetation management to be performed in Owner's service areas. Work planning services shall be performed using qualified Distribution Contract Utility Foresters, Work Planners, Inspectors, Pesticide Applicators and TGR Pre-Notifiers as described in the documents attached in Exhibit B.

This Contract covers only such Work as may be authorized by Owner and shall not constitute an exclusive agreement between Owner and Contractor. Owner reserves the right to use its own forces, equipment, tools, conveyances and materials or those of another vendor to perform the same or similar Work. Parties agree this Contract does not authorize Contractor to begin performance of any Work, nor does it guarantee Contractor any minimum volume of Work.



## 2. ENGAGEMENT PROCESS

All proposed Work will be discussed and assigned in periodic communications between Owner and Contractor, at which time Parties will agree upon the type of Work, the circuit in which Work will be performed and the pricing mechanism to be utilized. Owner shall authorize Work through the following process:

Work shall be requested by Owner via a written or electronic order request (individually or collectively referred to as "Work Request"). Each Work Request shall reference this Contract as governing the Work provided thereunder. The Work Request shall contain a scope of Work, the requested location, the term for which the Work shall be provided for that service area, any applicable specifications, this Contract number, any invoicing specifications, the pricing model utilized, and any other documents relevant to the Work.

Parties agree that any terms and conditions inconsistent with, additional to, or different than this Contract that may be preprinted or attached to a quote, acknowledgement, job authorization, Work Request, or any other written document that the Parties may use for the ordering or delivery of Work hereunder, shall not apply and each Party hereby rejects all such terms and conditions.

## 3. CONTRACT DOCUMENTS

Contractor and Owner agree that the Work shall be performed in accordance with the following Exhibits:

**Exhibit A –General and Supplementary Terms**, consisting of the following documents, which are attached hereto and made a part hereof;

1. AEP General Terms and Conditions for Labor and Services, dated March 2009 ("AEP General Terms and Conditions"); and
2. Supplementary Terms and Conditions for Forestry Contracts, dated June 24, 2011 ("Supplementary Terms").

**Exhibit B –Forestry Terms and Instructions**, consisting of the following documents, which are attached hereto and made a part hereof;

3. AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated May 14, 2009;
4. AEP Forestry Instructions for Forestry Contract Crew Audits dated January 2007, including its Sample Audit Form ("Audit Instructions"); and
5. AEP Kentucky Power Distribution Line Clearance Guidelines, dated July 2010.

**Exhibit C (Rates)**, consisting of the following documents, which are attached hereto and made a part hereof;

6. Kentucky Power Rate Clarifications, dated May 15, 2012 ("Rate Clarifications");
7. Owner's Unit Price Model, dated April 30, 2012, and the Lump Sum Price Model, dated April 30, 2012;
8. Labor Descriptions, dated August 1, 2011;
9. Contractor's Rates – Standard Labor Rates, Major Storm Rates, Equipment Rates, Material Pricing, Unit Pricing, all dated April 1, 2012 (individually or collectively, the "Rate Sheets");

10. A sample Work Request for Unit Price/Time and Materials Work, a sample Work Request for Lump Sum Work, and all applicable subsequently executed Work Requests; and
11. A sample Pricing Change Order Request Form and all applicable subsequently executed Pricing Change Orders.

**Exhibit D** (KPI), consisting of the following document, which is attached hereto and made a part hereof;

12. KPSC Distribution 2012/2013 Key Performance Incentive Plan Guidelines for Wright Tree Service ("KPI").

In the event of a conflict among any of the Contract documents, the conflict shall be resolved by interpreting the documents in the following order of priority:

- a. any executed amendment to the Contract;
- b. this Contract Letter;
- c. Exhibit A;
- d. Exhibit B;
- e. any executed Pricing Change Order;
- f. Exhibit C;
- g. Exhibit D; and
- h. the applicable Work Request.

#### **4. TERM**

This Contract is made to be effective as of the date of Owner's signature below ("Effective Date") and shall terminate on May 31, 2017, unless terminated earlier in accordance with this Contract. If this Contract is terminated or expires prior to Work under a Work Request being completed, unless Parties agree otherwise in a signed writing, the Work under such Work Request shall be continued pursuant to the terms of this Contract.

#### **5. PRICING**

Parties agree that all Work performed under this Contract shall be completed on a Lump Sum, Unit Price, and/or Time and Materials basis priced in accordance with Contractor's Rate Sheets in Exhibit C of the Contract.

Labor rates as described in Contractor's Rate Sheets shall be held firm for the first six months of the Contract. It will be the sole discretion of the Owner to modify labor rates at that time, or to hold labor rates firm until one year after the Effective Date of this Contract. All other rates in Contractor's Rate Sheets shall be held firm until one year after the Effective Date of this Contract.

Annual Rate Adjustments: Contractor's Rate Sheets may be revised or updated during an annual Contract amendment process. Contractor must submit all proposed rates by February 15<sup>th</sup> of each year of the Contract starting in 2014. Approved annual rate adjustments shall become effective each year on June 1st beginning in 2014.

Pricing Change Order Process: If Contractor has unforeseen changes to Contractor's Rate Sheets that do not conform to the Annual Rate Adjustment process described above, these changes may be made, upon Owner discretion, in accordance with the following procedures:

- Changes to Contractor's Rate Sheets shall be made using the Pricing Change Order Request Form ("Pricing Change Order") included in Exhibit C and must be presented in the authorized pricing format designated by Owner.
- Each Pricing Change Order must be submitted to Owner's Representative and AEP Manager, Forestry Operations, as listed in Section 9 below and submitted at least 30 days before the desired effective date for the new rates. If Contractor fails to submit its proposed Pricing Change Order at least 30 days prior to the desired effective date, the proposed Pricing Change Order will not be considered and existing Contractor's Rate Sheets shall remain in effect.
- If Contractor's Pricing Change Order is accepted by Owner, the revised Contractor's Rate Sheets shall be incorporated into Exhibit C of the Contract upon the authorized signature of the Parties and shall become effective as of the date of the latter signature of the Pricing Change Order.

[REDACTED]

Lump Sum Work: Parties agree to designate the specific pricing for Work performed on a Lump Sum basis in the Work Request. In the event the Contractor is assigned additional Work that was not included in the original Work Request, that Work will be priced utilizing the Contractor's Rate Sheets included in Exhibit C.

[REDACTED]

|            |            |
|------------|------------|
| [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] |
| [REDACTED] | [REDACTED] |

## 6. KEY PERFORMANCE INCENTIVES

KPI as described in Exhibit D will measure Contractor's performance and provide a monetary incentive to Contractor when performance exceeds established benchmarks and a penalty to Contractor when the benchmarks are not met. The documents in Exhibit D provide full details of the KPI.

## 7. FUEL ADJUSTMENTS

The base fuel price is \$4.00 per gallon ("Base Fuel Price"). The weekly fuel price is the state average for regular grade unleaded gasoline taken from the American Automobile Association's website ("Weekly Fuel Price"). When preparing the weekly invoices, if that week's Weekly Fuel Price differs from the Base Fuel Price by more than ten (10) cents, a fuel adjustment for each piece of equipment will be calculated by using the following formula:

Fuel adjustment = [(Weekly Fuel Price) – (Base Fuel Price)] x gallons/hour x Equipment hours billed

The gallons/hour figure is taken from the Contractor's Rate Sheets in Exhibit C. The sum of the fuel adjustments for each piece of equipment used that week shall be added to or subtracted from that week's invoice amount. If the Unit Price Model, as described in Exhibit C, is used and billing is done with a single invoice when all the Work is completed, the Weekly Fuel Price used shall be that for the week in which the invoice is being prepared.

During the first quarter of each year, beginning in 2014, the equipment rates shall be adjusted based on the average gas price for the last quarter of the previous year. The average gas price for the last quarter shall be determined by adding the Weekly Fuel Prices used to calculate the fuel adjustment for the weeks of October, November and December and then dividing that sum by the number of those weeks. The resulting average gas price for the last quarter will be the new Base Fuel Price. The old Base Fuel Price shall be subtracted from the new Base Fuel Price and the difference shall be added to the hourly rate for each item of equipment on the equipment rates that uses fuel. In accordance with the annual rate adjustment process detailed above in Section 5, the new Base Fuel Price shall be incorporated into Exhibit C - Contractor's Rates.

## 8. MARK-UP ADJUSTMENTS

The mark-up percentages in the Contractor's Rate Sheets are fixed for the duration of the Contract, except as specified herein. Owner and Contractor have reviewed the development of the mark-up percentages in Contractor's Rate Sheets and have agreed that they were reasonably developed and fairly reflect Contractor costs they represent. Accordingly, without restricting any of the audit rights in Article 29.0 of the AEP General Terms and Conditions and except as may be provided elsewhere herein, Parties' intent is that Contractor's actual costs for Workers' Compensation and Public Liability and Property Damage Insurance shall not be subject to audit.

## 9. NOTICES AND OPERATION CONTACTS

In accordance with Section 33.0 of the AEP General Terms and Conditions, the representatives of Parties for receipt of notices are:

**For Owner:**

| Role                             | Name               | E-mail            | Phone          | Address  |
|----------------------------------|--------------------|-------------------|----------------|--|
| AEP Contract Analyst             | Georgiana Sullivan | gsullivan@aep.com | (614) 716-6815 | 1 Riverside Plaza, 9 <sup>th</sup> Fl. Columbus, OH 43215  |
| AEP Manager, Forestry Operations | Walter Sherry      | washerry@aep.com  | (614) 716-2772 | 1 Riverside Plaza, 12 <sup>th</sup> Fl. Columbus, OH 43215 |
| KPCO Representative              | Mark Jackson       | mejackson@aep.com | (606) 437-3818 | 3249 North Mayo Trail, Pikeville, KY 41501                 |

**For Contractor:**

|                           |                |                         |                |   |
|---------------------------|----------------|-------------------------|----------------|---|
| Contractor Representative | Steven Pietzyk | spietzyk@wrighttree.com | (515) 277-6291 | 5930 Grand Avenue West Des Moines, IA 50266 |
|---------------------------|----------------|-------------------------|----------------|---|

**10. INVOICES**

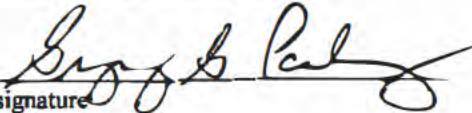
Contractor shall create time sheets in Owner's Right-of-Way Management ("RWM") software system, or other applicable system as designated by Owner, weekly, in arrears. If necessary, paper invoices shall be sent to the Owner Representative as listed on the Work Request and must include this Contract number.

**11. MISCELLANEOUS**

All capitalized terms not defined herein are as defined in the applicable terms and conditions referenced herein.

**IN WITNESS WHEREOF**, Parties hereto have caused this Contract to be signed by their respective officers thereunto duly authorized on the dates set forth below to be effective as of the Effective Date.

**Kentucky Power Company**

  
signature

Gregory Pauley  
print/type name

President and COO  
title

10/10/12  
date

**Wright Tree Service, Inc.**

  
signature

Steven C. Pietzyk  
print/type name

Vice President - Division Operations  
title

9/6/12  
date

# EXHIBIT A



**GENERAL TERMS AND CONDITIONS FOR  
LABOR AND SERVICES**

**March 2009**

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## **GENERAL TERMS AND CONDITIONS FOR LABOR AND SERVICES**

### **1.0 DEFINITIONS**

- 1.1 **Business Day**: "Business Day" means any calendar day, other than a Saturday or Sunday or a calendar day on which U.S. commercial banking institutions are authorized or required by law to close.
- 1.2 **Change Order**: "Change Order" means a written order as defined and issued in accordance with Article 12.0.
- 1.3 **Contract**: "Contract" means collectively the Contracting Instrument and all documents referenced in the Contracting Instrument and any Change Orders, amendments or addenda.
- 1.4 **Contract Price**: "Contract Price" means the price to be paid to the Contractor for the performance of Work as set forth in the Contracting Instrument.
- 1.5 **Contracting Instrument**: "Contracting Instrument" means the contractual document that identifies the parties, the nature of the Work, the Contract Price, documents to be included as part of a Contract, and other matters relating to a Contract. The Contracting Instrument may be in the form of a contract letter, blanket purchase order, purchase order or other similar documents.
- 1.6 **Contractor**: "Contractor" means the entity contracting with Owner for the performance of Work.
- 1.7 **Direct Cost**: "Direct Cost" means the actual costs and charges incurred and payments made by Contractor, its Subcontractors, for Site equipment, materials, services and labor (including payroll burden and expenses) which are directly attributable to the performance of Contractor's Work hereunder. Direct Cost includes Contractor's home office or Site labor to the extent Contractor's home office or Site labor is directly assignable to the Work which must be demonstrable under the circumstances. Direct Cost shall not include corporate, general and administrative costs including home office functions, sales, marketing, accounting, human resources, information technology, payroll, profit, research, development, quality assurance and control, purchasing, safety, management, administration, warranties, insurances, off-Site or other unabsorbed costs.
- 1.8 **Final Acceptance**: "Final Acceptance" means Owner's determination that the Work has been completed in accordance with the Contract requirements.
- 1.9 **Initial Acceptance**: "Initial Acceptance" means Owner's determination prior to final inspection and testing that the Work conforms to the Contract requirements for purposes of receipt.
- 1.10 **Owner**: "Owner" means any one or more of the companies of the American Electric Power System as may be specified in the Contract Instrument.
- 1.11 **Site**: "Site" means Owner's property or such other premises (including adjacent bodies of water and property owned or controlled by a third-party) upon which the Work is to be performed.
- 1.12 **Subcontractor**: "Subcontractor" means vendors, suppliers, consultants, and subcontractors of any tier, materialmen, professionals, laborers, and all other persons providing equipment, materials or services directly or indirectly to Contractor in connection with the Work.
- 1.13 **Work**: "Work" means all of Contractor's obligations under the Contract.

2.0 CONTRACTOR'S OBLIGATIONS

- 2.1 Contractor shall at its expense provide everything necessary for the complete, proper and timely execution of the Work including, but not limited to, home office support, supervision, labor, tools, transportation, safety equipment, construction equipment, temporary utilities and facilities, equipment to be installed, materials and supplies, unless explicitly excluded in the Contract. Contractor's performance of the Work shall include everything requisite and necessary to comply with prudent electric utility industry standards and to complete its Work, notwithstanding the fact that every item necessarily involved may not be specifically mentioned. Details and items not indicated by the Contract documents shall be adequately and properly performed by Contractor at no extra cost if such details and items are necessary to complete the intent of the Contract or otherwise to complete the Work.
- 2.2 Contractor is responsible for considering the conditions affecting the Work including, but not limited to, conditions affecting the transportation, disposal, handling and storage of materials; the availability and cost of labor, water, electric power, utilities and roads; the uncertainties of weather, river stages, and similar physical conditions at the Site; the conformation and condition of the ground; and the character of equipment and facilities needed. Contractor shall take into account the character, quality and quantity of surface and subsurface materials or obstacles to be encountered to the extent this information is reasonably ascertainable from the contract documents or an inspection of the Site.
- 2.3 Contractor shall immediately and before such conditions are disturbed notify Owner of: (a) subsurface or latent physical conditions at the Site which differ materially from those indicated in the Contract; (b) unusual geologic conditions at the Site which differ materially from conditions ordinarily encountered or from conditions addressed in the Contract; or (c) artifacts or articles which appear to have archaeological or historical significance. Owner shall promptly investigate such conditions and, if such conditions do materially differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of the Work, the parties shall agree to amend the Contract. No claim of Contractor under this clause shall be allowed unless Contractor has given immediate notice as required above and confirmed such notice in writing within ten (10) days of discovery.
- 2.4 Contractor shall have an authorized representative at the Site to whom Owner may give instructions at all times when Work is being performed.
- 2.5 Contractor shall assign qualified and competent personnel to perform the Work and have qualified and competent supervision at the Site at all times to direct and observe the Work. Key personnel shall not be removed from the Work without prior notice to, and consent by Owner which shall not be unreasonably withheld. Contractor will investigate and take appropriate action with respect to any personnel problems brought to its attention by Owner.
- 2.6 Contractor shall confine all of its operations and personnel to those areas of the Site to which Owner authorizes access.
- 2.7 Contractor's personnel may not operate Owner's tools, vehicles, materials or equipment ("Owner's Equipment") without Owner's prior authorization. If Contractor borrows Owner's Equipment, Contractor (a) agrees that Owner has provided Owner's Equipment AS IS, with no representations or warranties; (b) assumes full responsibility for the protection of the borrowed Owner's Equipment; (c) assumes all liability for injuries or damages resulting from the use of the borrowed Owner's Equipment; and (d) agrees to return the borrowed Owner's Equipment to Owner in the same condition as when it was borrowed, or, if repairs are necessary, to cause such repairs to be performed promptly at Contractor's expense before the Owner's Equipment is returned to Owner. Owner has no obligation to lend Owner's Equipment to Contractor.

- 2.8 Contractor shall cooperate with Owner and others working at or near the Site. Contractor shall promptly report to Owner any defects in the work of others which affects the Work. Failure to report such defects constitutes acceptance of the conditions by Contractor. Contractor shall properly fit, connect and coordinate its Work with that of Owner and other contractors.
- 2.9 Contractor shall keep all of its work areas free from trash and debris, and keep its work areas "broom clean" on a continuous basis.
- 2.10 Contractor shall secure and protect its materials, tools, equipment and the Work, including Owner-provided materials and equipment.
- 2.11 Contractor is responsible for the proper execution of the Work with respect to any base lines and bench marks established by Owner.
- 2.12 If the Work is subject to prevailing wage requirements, Contractor agrees to comply with such requirements.
- 2.13 Contractor, its Subcontractors, and their respective employees and agents involved in the Work shall adhere to the provisions contained in Owner's Code of Business Conduct which can be found at Owner's website.

3.0 TERM AND EFFECTIVE DATE

- 3.1 The Contract shall commence as of the effective date and, unless earlier terminated as provided in Article 27.0, shall terminate on the termination date set forth in the Contract. Unless specified elsewhere in the Contract, the effective date of the Contract shall be the earlier of the date on which Contractor begins performance hereunder or the date of the latter signature on the Contract.

4.0 RELATIONSHIP OF THE PARTIES

- 4.1 Contractor and all of its employees and Subcontractors are, with respect to Owner, independent contractors. Contractor will be solely responsible for the supervision, direction, and control of its employees and Subcontractors. Contractor is responsible for the payment of all compensation, benefits, and employment taxes with respect to the Contractor's employees.

5.0 ASSIGNMENT AND SUBCONTRACTING

- 5.1 Contractor shall not assign or otherwise dispose of the Contract, or any obligations hereunder, without the written consent of Owner. Any assignment or disposal without the written consent of Owner shall be null and void.
- 5.2 Prior to entering into any subcontract, Contractor shall submit to Owner a subcontractor data sheet that includes the name and address of the Subcontractor and the scope of work proposed to be included under such subcontract. Within five (5) Business Days of receipt of a Subcontractor data sheet, Owner may reject such Subcontractor without cost or contract extension by giving written notice of such rejection to Contractor.
- 5.3 Contractor is responsible for the selection of any Subcontractor and for the Subcontractor's proper performance of the Work assigned to it. If the work of a Subcontractor is not in compliance with the Contract requirements, Contractor shall take immediate steps to bring the Subcontractor's work into compliance and, at Owner's written request, terminate its contractual relationship with the Subcontractor as it relates to the Work at no cost to Owner.

6.0 LABOR RELATIONS

- 6.1 Contractor shall comply with any project, national or local labor agreements that are applicable to the Work or Site. Contractor shall cooperate with Owner and other contractors in establishing and maintaining labor work rules and practices.
- 6.2 When the Work is performed by building and construction trades labor, a pre-job conference shall be held with local labor representatives prior to starting Work. Owner shall be afforded the opportunity to attend and participate in pre-job conferences.
- 6.3 Contractor shall provide immediate notice to Owner of any actual or potential labor dispute that may delay the timely, efficient and productive performance of the Work.
- 6.4 Contractor shall inform and cooperate with Owner on labor matters. Contractor shall consult with Owner prior to rendering its decision(s) on labor matters that may impact the timely, efficient and productive performance of the Work.
- 6.5 Contractor shall exercise its management rights contained in applicable labor agreements to establish, maintain, and enforce work rules conducive to timely, efficient, productive and harmonious work operation. Contractor shall take the necessary steps available to resolve grievances, jurisdictional disputes, or other violations of collective bargaining agreements.

7.0 SAFETY AND SECURITY

- 7.1 Contractor shall perform the Work in a safe and careful manner, provide first aid facilities and transportation, and use such safety devices and methods as are necessary to protect its employees, agents, Subcontractors, Owner's employees and agents, other contractors and the public from bodily injury and property damage.
- 7.2 Contractor shall comply with and enforce all laws, rules and regulations applicable to safety and health standards, including, but not limited to, the Occupational Safety and Health Act of 1970 (OSHA) and any revisions of OSHA or successor legislation.
- 7.3 Contractor shall comply with project and Site safety and security rules and all procedures issued by Owner, provided that such rules and procedures do not conflict with OSHA or other safety laws, rules or regulations. Contractor shall assign a competent person at all times to manage, coordinate and enforce its safety program during performance of the Work.
- 7.4 Contractor shall provide Owner with Material Safety Data Sheets (MSDS) for all applicable materials prior to delivery to Owner's Site.
- 7.5 Contractor shall obtain Site permits or approval from Owner for its vehicles, any excavation, use of explosives, access to restricted areas, use of Owner's Equipment, tools and facilities, and other similar activities.
- 7.6 Owner will arrange all necessary clearances on energized equipment, electrical and communications circuits, piping systems or other operational equipment. Contractor shall notify Owner requesting the clearances prior to the scheduling of such Work. Contractor shall comply with Owner's clearance permit system regarding tagout and lockout of electrical and mechanical systems and other equipment.
- 7.7 Contractor shall fully inform Owner in writing regarding the types, quantities and use of any hazardous materials brought on the Site; the types and quantities of hazardous wastes being generated from the Work; and Contractor's program for proper storing, handling and disposal of such materials in a safe and secure manner.

- 7.8 Contractor shall immediately inform Owner of all regulatory safety, health and environmental inspections, citations and penalties associated with the Work. Contractor shall provide Owner with written reports and copies of all documents submitted to or by regulatory agencies and insurance companies.
- 7.9 Contractor shall promptly inform Owner of any injuries to its employees, agents, Subcontractors, or other persons arising out of the Work that require medical treatment.
- 7.10 Contractor shall obtain, maintain, and properly complete all record keeping required by regulatory agencies. Upon request, Contractor shall provide Owner with copies of all logs, reports and other records.
- 7.11 Contractor shall investigate all accidents resulting in personal injury, property damage, or near misses to determine root cause(s) and corrective action(s). Upon request, Contractor shall provide Owner with a copy of investigative reports, including all documents submitted to insurance companies.
- 7.12 All of Contractor's employees, agents, Subcontractors, vehicles, trailers, etc. entering or leaving the Site are subject to inspection at any time by Owner.
- 7.13 If a safety violation or other unsafe condition causes imminent danger, Owner may immediately shut down the Work involved without advance written notice.
- 7.14 Contractor and all Subcontractors performing Work at Site must have a substance abuse program. This program must apply to all personnel. Minimum requirements of this program shall include pre-hire testing, testing for cause and if requested, random testing. Screening substances and their associated cut-off limits are listed below.

| Drug<br>Classes  | Screening Cut-Off<br>Limit (ng/ml) | Confirmation Cut-Off<br>Limit (ng/ml) |
|------------------|------------------------------------|---------------------------------------|
| Amphetamines     | 1,000                              | 500                                   |
| Benzoyllecgonine | 300                                | 150                                   |
| Cannabinoids     | 50                                 | 15                                    |
| Opiates          | 2,000                              | 2,000                                 |
| Phencyclidine    | 25                                 | 25                                    |

Blood & Breath alcohol content : .02% per Department of Transportation.

Testing shall be performed by a testing facility certified by Department of Health & Human Services. Personnel must have evidence of having tested negative within a year prior to employment. Owner will accept conditional employment predicated upon (a) employee(s) furnishing evidence that they have submitted to testing within forty-eight (48) hours of initial employment and (b) employee(s) furnishing evidence of negative test results within five (5) work days of initial employment. Contractor shall ensure personnel are "drug free". Owner reserves the right to examine evidence outlined herein. Contractor's program shall incorporate reciprocity on "drug free" employee verification to minimize Owner's economic impact and employee recertification while maintaining the program's intent.

- 7.15 If required by Owner, Contractor must meet certain security criteria set forth herein.
  - 7.15.1 Contractor shall submit to Owner a copy of its background investigation process for Owner's review and file. If Owner, in its sole discretion, determines that Contractor's background investigations do not meet certain specific requirements, then Contractor, at

its expense, must perform a background investigation that does meet Owner's certain specific requirements on each individual designated by Contractor to perform Work, or is performing Work on behalf of Contractor, for Owner (referred to herein for purposes of this Article, as an "individual"). Notwithstanding anything to the contrary stated herein, Owner reserves the right to conduct a background investigation on each individual at Contractor's expense.

- 7.15.2 Owner's certain specific requirements of background investigations include the following: (i) determination of whether an individual has been convicted of a felony crime in each state where the individual has resided during the past seven years; (ii) performance of the background investigation at the state level (in other words, to only search the records of the county in which the individual has resided during the past seven years is not a sufficient background investigation); and (iii) if the individual is to operate a motor vehicle while performing Work for Owner, then a state operator's license abstract must be completed in the states where the individual has been licensed as a vehicle operator during the past seven years.
- 7.15.3 If any background investigation reveals or indicates that an individual has been convicted of a felony crime, then the Contractor must notify the Owner prior to the individual commencing Work. Owner in its sole discretion shall have the option of barring from any Work Site any individual who has a reported felony conviction. Owner may audit or review specific Contractor screening files to ensure compliance with the Contract.
- 7.15.4 If an individual requires unescorted access to Owner's critical cyber assets, then Owner will conduct its own background investigation, which will include a Social Security Number verification. Additional specific provisions or requirements related to any Owner conducted background investigation pursuant to this Section 7.15.4 will be communicated to Contractor prior to implementation of such background investigation.
- 7.15.5 Contractor shall not perform any screening activities that violate the federal Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964 or any other applicable law in any circumstances. Contractor shall ensure that the substance and manner of any and all background investigations performed by Contractor conform fully to applicable law.
- 7.16 "Personally Identifiable Information" or "PII" means any information to which Contractor is provided access that could identify an individual either directly or indirectly including, without limitation to the individual's name, credit card numbers, social security number, biometric, bank account numbers, passport numbers, computer passwords or health, financial or employment information and other individual confidential information.
- 7.16.1 To the extent that Work under the Contract requires Contractor to be given access to PII gathered and/or maintained by or on behalf of Owner, or in the event Contractor acquires access to or encounters any PII during performance of the Work, Contractor shall after receipt thereof, treat such PII as confidential and safeguard such PII from unauthorized use and disclosure. Upon request of Owner, Contractor shall have its employees execute a confidentiality agreement protecting PII. Contractor agrees not to appropriate such PII for its own use or to disclose such PII to third parties unless specifically authorized by Owner in writing. Contractor shall ensure that its employees will not discuss, divulge or disclose any such PII to any person or entity except those persons directly concerned with and only to the extent necessary to complete the performance of the Work. Contractor shall access, use and process PII and other data on behalf of Owner only for the purposes specified in the Contract.

- 7.16.2 Contractor shall comply with (i) NERC Reliability Standards as applicable, including without limitation, those relating to Critical Infrastructure Protection, (ii) Owner's security standards, and (iii) such further instructions as Owner may provide regarding the processing of such PII. Contractor shall inform Owner promptly if it has reason to believe that applicable law (or changes in applicable law) prevents Contractor from fulfilling the obligations relating to treatment of PII or other data under Owner's security standards and/or the Contract.
- 7.16.3 To the extent permitted by law, Contractor shall notify Owner promptly and act only upon Owner's instruction concerning: (a) any request for disclosure of PII or other data by law enforcement or other governmental authority; (b) any request by law enforcement or other governmental authority for information concerning the processing of PII or other data in connection with the Contract; or (c) any request received directly from an individual concerning his/her PII.
- 7.16.4 Contractor may not store PII on computers, mobile devices, including but not limited to cellular telephones and/or personal digital assistants, servers and/or storage devices including removable media (any of which, hereinafter known as a "Computer"), unless required for the performance of Work. Any such information must be deleted from a Computer, in a manner that ensures that it cannot be accessed or read, as soon as such storage is no longer required for the performance of Work.
- 7.16.5 Upon termination of the Contract or upon Owner's request, Contractor must promptly (a) return all PII in written form to Owner, and (b) delete all PII in Contractor's possession or control (on computer or in whatever other form or media) in a manner that ensures that this information cannot be accessed or read.
- 7.16.6 Contractor shall administer a monitoring process to ensure compliance with Section 7.16 and the related subsections hereof, promptly report any breaches to Owner, and implement immediate, appropriate corrective actions to contain and prevent recurrence. Contractor shall report to Owner immediately upon discovery of a real or suspected loss of PII. In the event of a breach of this provision or the occurrence of any other event regarding PII that requires notification under applicable law, Contractor agrees to assume responsibility for informing all such individuals in accordance with applicable law.
- 7.16.7 In addition to any remedy available to Owner under the Contract, Contractor acknowledges that any breach of Section 7.16 or the related subsections hereof by Contractor or its Subcontractors may subject Contractor to civil and criminal penalties. Contractor shall include the full text of Section 7.16 and the related subsections 7.16.1 through 7.16.7 in all appropriate subcontracts. However, including such provision in the subcontracts shall not relieve Contractor of its obligation to ensure compliance with the provisions of Sections 7.16.1 through 7.17.7.

## 8.0 MATERIALS

- 8.1 All Contractor-furnished materials, equipment and related products (referred to in this Article 8.0 as "Materials"), which are to be installed shall be new and meet the requirements of all applicable codes. Materials which will not become a part of the permanent installation are not required to be new. Owner reserves the right to reject materials which have not been previously used but which have been in storage for an unreasonable period of time. Title to and risk of loss of the Materials shall pass to Owner upon Final Acceptance of the Work. Title to the Materials shall be free and clear of all liens and encumbrances.

- 8.2 Contractor shall not substitute Materials specified in the Contract unless authorized by Owner in writing. Unless substitution has been so authorized, Contractor shall, at its expense, remove and replace any improperly substituted material.
- 8.3 Upon Owner's request, Contractor shall, at its expense, submit to Owner samples of Contractor-furnished materials. Contractor must obtain Owner's written approval before performing Work involving the use of materials for which samples have been requested. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes. Materials used shall conform to the approved samples. Contractor shall remove and replace nonconforming materials at its expense.

9.0 INSPECTION AND ACCEPTANCE

- 9.1 Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed conforms to the Contract requirements. Owner reserves the right to review and approve the adequacy of Contractor's inspection system. Contractor shall provide all quality control and quality assurance program information requested by Owner.
- 9.2 Owner shall have free access to the Work for inspection purposes. Owner's inspection, receipt or Initial Acceptance of the Work shall not relieve Contractor of its obligation to comply with the terms of the Contract.
- 9.3 Each party shall bear its own expenses in performing inspections, except that (a) Owner may use Contractor's facilities, ladders and scaffolds to perform inspections of the Work; (b) Contractor shall pay Owner's expenses in re-inspecting Work which was rejected as non-conforming to the Contract requirements in an earlier inspection; (c) Contractor shall pay the costs of uncovering and re-covering Work for Owner's inspection if Contractor failed to give Owner reasonable notice that the Work was ready to be covered; and (d) prior to Final Acceptance, if Owner requests an inspection of Work already completed which requires removing and tearing out Work, and the Work is found to be materially defective, Contractor shall pay the expenses of inspection and reconstruction, but if the Work is found to be in conformance with the Contract requirements, Owner shall pay the expenses of inspection and reconstruction.
- 9.4 Owner will not pay for defective work. Contractor shall repair or replace all defective work at its expense. Contractor shall promptly remove from the Site any Contractor-furnished materials that do not comply with the requirements of the Contract. If Owner-furnished materials have been used in any defective work, the cost of such materials shall be backcharged to Contractor.
- 9.5 Owner shall have the right to take possession of or use any part of the Work. Owner's possession or use shall not constitute Initial Acceptance or Final Acceptance of the Work.
- 9.6 Unless otherwise provided in the Contract, Final Acceptance by Owner shall be made as soon as practicable after all Work has been completed and inspected. Any part of the Work not rejected by Owner following Final Inspection shall be deemed to have achieved Final Acceptance.

10.0 SCHEDULE

- 10.1 Contractor shall perform the Work to meet the schedule date(s) set forth in the Contract. Contractor shall not commence Work until authorized by Owner to do so.
- 10.2 In a format acceptable to Owner, Contractor shall develop, update, maintain and provide to Owner a written schedule for execution of the Work. The schedule shall be time scaled, complete, and accurate in detail depicting Contract milestone dates, work activities and durations. Upon review and approval by Owner, this schedule shall become the Contract schedule. Updates to the Contract schedule shall



be provided to Owner on at least a monthly basis. Updates shall depict actual progress measured against planned progress.

- 10.3 Contractor shall notify Owner within 24 hours of the first knowledge that any completion date(s) will not be met and shall, within five (5) Business Days thereafter, submit a detailed program depicting the plans and actions being taken to regain the lost time. The notice shall not limit any other rights or remedies afforded Owner under the Contract or by law.

#### 11.0 TERMS OF PAYMENT

- 11.1 Except as otherwise provided in the Contract, the following terms of payment shall apply:

11.1.1 The Contract Price set forth in the Contract shall constitute full and complete payment for all Work.

11.1.2 Contractor shall submit invoices with proper documentation to Owner for the Work completed or for milestones achieved during the prior month. Owner may withhold all or any part of payment in an amount necessary to protect Owner from loss due to the occurrence, or imminent occurrence, of (i) Contractor's breach or failure to perform in accordance with the Contract, (ii) defective Work, (iii) Contractor's failure to pay any Subcontractor, (iv) other claims by Owner against Contractor, including indemnity claims, and (v) damages for delay or any agreed upon liquidated damages.

11.1.3 Owner shall pay 90% of each properly submitted and accepted invoice within thirty (30) days of receipt. The release of retention shall become due and payable thirty (30) days after the date of Final Acceptance of the Work.

11.1.4 Each invoice shall contain a statement that all bills for material and labor relating to the Work have been paid in full by Contractor, and there are no unpaid bills for which a lien could be filed. If requested by Owner, Contractor shall provide evidence of such payments. The final invoice for the Work shall be accompanied by a satisfactorily completed Affidavit of Completion in the form attached as Exhibit 1. Payment of the final invoice and retention constitutes a full and final release of Owner from all claims, damages, liabilities and obligations under the Contract.

- 11.2 Contractor shall promptly pay all of its Subcontractors.

#### 12.0 CHANGES IN WORK AND EXTRA WORK

##### 12.1 Change in Work

12.1.1 "Change Order" means a written order issued in accordance with this Article 12.0 documenting an addition to, deletion from, or other modification to the Work, including a change in the scope of Work, the Contract Price, the payment schedule, the completion dates, or the schedule for the Work.

12.1.2 Owner may issue a Change Order: (i) at Owner's option, or (ii) if requested by Contractor due to the occurrence of an event that entitles Contractor to a Change Order as determined by Owner.

12.1.3 If Owner issues a Change Order, Contractor shall perform the changed Work in accordance with the terms of the Contract and the issued Change Order.

- 12.1.4 No order, statement or other conduct of Owner shall be treated as a change in Work until such change is authorized in writing by Owner.
- 12.1.5 Contractor shall not be entitled to a Change Order for conditions such as, but not limited to, (i) work which is of such a nature as to be normally included in the Work or is reasonably inferable from the Contract; (ii) any errors, omissions, non-performance, negligence, deficiencies or improper or defective work on the part of Contractor (including miscalculations, incorrect estimates, or other errors in Contractor's proposal for the Work); (iii) changes relating to refinement, minor correction and detailing of the Work or any part of the Contract; or (iv) other unallowable claims such as cost impacts not due to Owner and cumulative impact claims.
- 12.1.6 With respect to Contractor claims for additional compensation, Owner shall pay only incremental Direct Costs associated with the proposed changes and only to the extent that Contractor can demonstrate that the changes actually increased its costs of performance. Any claims for additional compensation based on a change to the Work or extra work must be material in nature, and Contractor must provide full documentation supporting all elements of such claims. For a reduction in the scope of Work or a change which reduces Contractor's costs, the Contract Price shall be adjusted downward. The payment for changes to the Work shall be complete compensation to Contractor for performing such changes, including any schedule or cost impacts on the Work.
- 12.1.7 If Owner requests in writing that Contractor furnish materials or equipment to be permanently incorporated in changed work, extra work or cost-plus work, Owner shall reimburse Contractor for such materials or equipment its incremental Direct Cost plus a percentage mark-up to be agreed upon by the parties. Requests for payment for materials and equipment shall be accompanied by copies of receipted invoices. Owner has the right to audit Contractor's requests for changes and the financial basis therefor.
- 12.1.8 If Contractor and Owner disagree on whether any particular work is within the scope of Work and such work must be completed to insure timely progress, Owner will issue a disputed Change Order to cover the disputed work. Contractor shall diligently proceed with the disputed work. By noon on the work day following performance of the disputed work, Contractor shall submit to Owner for review timesheets itemizing all labor and equipment hours expended on the disputed work and an itemized listing of Contractor furnished materials. Such review is not an admission of liability by Owner. Prior to Final Acceptance, each disputed Change Order will be resolved to the mutual agreement of the parties.
- 12.2 Extra Work
- 12.2.1 "Extra work" is work which is beyond Contractor's scope of Work. At Owner's request, Contractor shall perform extra work at the applicable prices set forth in the Contract. If the Contract prices are not applicable to the type of extra work to be performed, Contractor shall promptly submit a proposal to perform the extra work, which proposal shall become an amendment to the Contract upon acceptance by Owner. If Owner directs Contractor to perform extra work on an overtime basis, Owner shall reimburse Contractor the actual payroll cost of premium time for direct job labor. Contractor shall invoice and maintain separate cost records for each extra work authorization issued by Owner.
- 12.2.2 If Owner elects, Contractor shall perform extra work on a cost-plus basis. Cost-plus extra work shall be paid in accordance with Article 13.0.
- 12.3 Contractor waives all claims for additional compensation for changes in work and extra work not made strictly in accordance with the terms of this Article 12.0.

13.0 REIMBURSEMENT FOR COST-PLUS WORK

- 13.1 Direct labor costs will be reimbursed at the actual payroll costs of direct labor wages, fringe benefits, payroll taxes and insurance required by collective bargaining agreements or by law, plus an agreed wage mark-up. Copies of certified payrolls and time sheets shall be provided to Owner for review and approval. Contractor shall not invoice Owner for social security, unemployment, workers' compensation, or other federal, state or local taxes or insurance at rates which exceed Contractor's actual costs.
- 13.2 Owner will pay Contractor actual invoice costs for subcontracted work, provided Owner has approved payment terms in advance of performing the work, plus an agreed mark-up.
- 13.3 Contractor-furnished permanent materials and equipment costs will be reimbursed at actual invoice costs plus an agreed mark-up.
- 13.4 Construction equipment costs will be reimbursed based on actual usage time during the performance of Work and established rental rates not to exceed monthly rates set forth in the "Rental Rate Blue Book for Construction Equipment" adjusted for geographical region as published by Dataquest or other basis acceptable to Owner. Hourly rates shall be established by taking the monthly rate divided by 176 hours per month.
- 13.5 Small tools and consumables costs will be reimbursed based on agreed rates.
- 13.6 Field supervision, clerical, safety and other non-direct labor costs will be reimbursed at agreed billing rates, except that reimbursement for these costs for cost plus extra work shall require the prior review and approval of Owner.

14.0 BACKCHARGES

- 14.1 Owner may impose backcharges against Contractor or deduct backcharges from monies owed to Contractor for performance or reperformance by Owner or others of Work, including but not limited to, costs associated with defective work, nonperformance by Contractor, termination for cause, clean-up and disposal of debris, damages to Owner's tools and equipment and warranty repairs. Contractor will be responsible for the cost of such performance or reperformance plus a fifteen percent (15%) administrative charge.

15.0 TAXES

- 15.1 The Contract Price shall include, and the Contractor shall pay, all taxes and assessments for unemployment insurance, workers' compensation, social security and disability benefits, and other taxes which are based upon the compensation paid to persons employed by Contractor or its Subcontractors for the performance of any Work under the Contract.
- 15.2 Except as provided below, the Contract Price shall include all applicable foreign, federal, state and local taxes payable by Contractor with respect to the Contract.
  - 15.2.1 Contractor Purchases. If Owner specifies that tangible personal property to be incorporated into real property as defined for sales and use tax purposes or taxable services to be purchased by Contractor from vendors or Subcontractors qualify for exemption from sales or use taxes, Contractor shall not include sales or use taxes on such exempt tangible personal property or services in the Contract Price. Unless otherwise specified: a) consumable materials and supplies or Contractor's tools and equipment that are not incorporated into the Work or the overall project are not eligible for exemption

and the Contract Price shall include, and Contractor shall pay, any sales or use taxes on such items; and b) Contractor will use its own properly-executed exemption or resale certificate, and not Owner's direct pay permit, to make exempt purchases of tangible personal property or services from vendors or Subcontractors.

15.2.2 Owner Purchases from Contractor. With respect to any Owner purchases from Contractor of tangible personal property not incorporated into real property as defined for sales and use tax purposes or taxable services, Owner shall provide to Contractor its direct pay permit (if Owner has been issued a direct pay permit) or an appropriate exemption certificate required to relieve the Contractor of its responsibility to collect sales or use tax from the Owner. If Owner provides Contractor such direct pay permit or exemption certificate, sales or use taxes on Owner purchases from Contractor of tangible personal property or taxable services shall not be collected from Owner or included in the Contract Price. Unless otherwise approved or directed by Owner in writing, Contractor shall not use Owner's direct pay permit to make exempt purchases of tangible personal property or taxable services from vendors or Subcontractors.

15.2.3 Contractor Cooperation. Contractor shall take all steps reasonably necessary to ensure that Contractor's purchases from vendors or Subcontractors of items of tangible personal property or services are exempt from sales and use tax pursuant to any applicable exemption pursuant to the law of any U.S. jurisdiction or its political subdivisions.

## 16.0 INSURANCE

16.1 Contractor shall at its sole expense, procure or maintain, and shall cause its Subcontractors to procure or maintain, throughout the term of this agreement except as set forth in Section 16.5, the following types of insurance with the following, minimum limits:

16.1.1 Workers' compensation insurance in accordance with all jurisdictions where Contractor has operations including where the Work is to be performed.

16.1.2 Employer's liability in an amount not less than \$1,000,000.

16.1.3 Business automobile insurance covering all Owned, Non-owned and Hired Autos in an amount not less than \$5,000,000 per occurrence.

16.1.4 Commercial general liability insurance covering claims of bodily injury and property damage in an amount not less than \$5,000,000 per occurrence.

16.1.5 Aircraft liability insurance with a combined limit of not less than \$10,000,000. Such insurance shall be required only if the Contractor or its Subcontractors shall utilize an aircraft in the performance of the Work.

16.1.6 Protection and Indemnity insurance (including Jones Act liability) and pollution liability in an amount not less than \$10,000,000 per occurrence. Such insurance shall be required only if the Contractor or its Subcontractors shall use a marine vessel or floating equipment in the performance of the Work.

16.1.7 Professional liability insurance and/or Errors and Omissions insurance in an amount not less than \$5,000,000. Such insurance shall be required only if the Work includes professional liability exposures.

16.1.8 "All risk" property insurance covering the full replacement cost of Contractor's personal property.

- 16.2 To the extent permitted by law, Contractor shall waive, and shall cause each of its insurers to waive, any and all rights of recovery, by subrogation or otherwise, against Owner and its affiliates, officers, directors, employees, agents and assigns of any type. Each of the insurance policies indicated above shall be primary to and non-contributory with any insurance or self-insurance of Owner.
- 16.3 The Commercial General Liability, the Business Automobile, and the Aircraft Liability insurance shall include Owner as an additional insured with respect to Owner's liability arising out of the operations of Contractor. Such coverage shall also include blanket contractual coverage and contain no exclusion for explosion, collapse, or underground property damage (XCU coverage).
- 16.4 The insurance required by this Article 16.0 is in addition to and separate from any other obligations contained in the Contract.
- 16.5 If any of the policies indicated above are placed on a "claims-made" basis, such coverage shall be maintained for a period of not less than five (5) years following the completion of the Work. Products and/or completed operations coverage shall be maintained for a period of five (5) years after the completion of the Work.
- 16.6 Any deductibles or retentions on any of the policies required herein shall be the sole responsibility of the Contractor.
- 16.7 The above referenced limit requirements may be met by any combination of umbrella or excess and primary policies so long as the total limit of insurance requirement is met. The required coverages referred to herein shall in no way affect, nor are they intended as a limitation of, Contractor's liability with respect to its performance of the Work. The limits of insurance indicated herein are minimum requirements and are in no way intended to limit Contractor's liability.
- 16.8 In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special, or statutory employees) are covered by the Louisiana Worker's Compensation Act, La. Rev. Stat. Ann. 23:1021 et seq., Owner and Contractor agree that pursuant to Section 23:1061 (A) (1) all Work performed by Contractor and its employees under the terms and conditions of the Contract is an integral part of Owner's operations and is essential to Owner's ability to generate its goods, products and services. Additionally, Owner and Contractor agree that for purposes of Section 23:1061 (A) (3) Owner is the principal or statutory employer of Contractor's employees. Irrespective of Owner's status as the statutory employer or special employer of Contractor's employees, pursuant to Section 23:1031 (C), Contractor shall remain primarily responsible for the payment of Louisiana Worker's Compensation benefits to its employees, shall indemnify Owner from any and all claims of Contractor's employees or its Subcontractor's employees and shall not be entitled to seek contribution for any such payments from Owner.
- 16.9 Contractor will not be permitted to bring its employees, materials or equipment on the Site until Owner receives from Contractor two copies each of acceptable certificates of insurance covering the terms of Subsections 16.1.1 through 16.1.8. Such certificates shall state that the insurance carrier has issued the policies providing for the insurance specified above, that such policies are in force, that the additional insured requirements have been satisfied, and that the insurance carrier will give Owner thirty (30) days prior written notice of any material change in, or cancellation of, such policies. If such insurance policies are subject to any exceptions to the terms specified herein, such exceptions shall be explained in full in such certificates. Owner may, at its discretion, require Contractor to obtain insurance policies that are not subject to non-standard exceptions.

16.10 In lieu of Sections 16.1 thru 16.9, if Owner has elected in the Contract to implement an Owner Controlled Insurance Program ("OCIP"), Owner and Contractor agree that the terms of the OCIP as contained in the Contract shall control.

17.0 INDEMNIFICATION

17.1 The laws of the state where the Work giving rise to the claim is performed shall apply to this Article 17.0.

17.2 **TO THE EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND AT ITS EXPENSE, AND SAVE OWNER HARMLESS FROM, ANY LIABILITIES, COSTS AND CLAIMS, INCLUDING JUDGMENTS RENDERED AGAINST, AND FINES AND PENALTIES IMPOSED UPON, OWNER AND REASONABLE ATTORNEYS' FEES AND ALL OTHER COSTS OF LITIGATION (COLLECTIVELY, "LIABILITIES"), ARISING OUT OF THE CONTRACT, INCLUDING INJURIES, DISEASE OR DEATH TO PERSONS, OR DAMAGE TO PROPERTY, AND ENVIRONMENTAL CLAIMS AND LIABILITIES, CAUSED BY CONTRACTOR, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS, OR IN ANY WAY ATTRIBUTABLE TO THE PERFORMANCE OF THE CONTRACT, EXCEPT THAT CONTRACTOR'S OBLIGATION TO INDEMNIFY OWNER SHALL NOT APPLY TO ANY LIABILITIES ARISING FROM OWNER'S SOLE NEGLIGENCE. TO THE EXTENT PROVIDED IN THIS SECTION, IN STATES OTHER THAN OHIO, MICHIGAN, KENTUCKY, TENNESSEE, MISSOURI, OKLAHOMA, VIRGINIA, AND WEST VIRGINIA, CONTRACTOR AGREES TO INDEMNIFY OWNER FOR LIABILITIES ARISING FROM OWNER'S ACTS AND OMISSIONS, NEGLIGENT OR OTHERWISE. OWNER SHALL HAVE THE RIGHT TO SELECT ITS OWN COUNSEL AND TO HAVE COUNSEL SEPARATE FROM CONTRACTOR, ALL AT CONTRACTOR'S EXPENSE.**

17.3 **WITH RESPECT TO CLAIMS AGAINST OWNER BY CONTRACTOR'S EMPLOYEES, CONTRACTOR UNDERSTANDS AND AGREES THAT THIS INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY, AND CONTRACTOR EXPRESSLY WAIVES, ITS IMMUNITY AS A COMPLYING EMPLOYER UNDER ANY APPLICABLE WORKERS' COMPENSATION LAW, BUT ONLY TO THE EXTENT THAT SUCH IMMUNITY WOULD BAR OR AFFECT RECOVERY UNDER OR ENFORCEMENT OF THIS INDEMNIFICATION OBLIGATION.** With respect to the State of Ohio, this waiver applies to Section 35, Article II of the Ohio Constitution and Ohio Rev. Code Section 4123.74.

17.4 **CONTRACTOR SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND ALL COSTS OF LITIGATION ASSOCIATED WITH ENFORCEMENT OF ALL INDEMNITY OBLIGATIONS SET FORTH IN THE CONTRACT.**

18.0 LIMITATION OF LIABILITY

18.1 Except as expressly provided herein, neither party shall be liable to the other for any incidental, indirect, special, punitive or consequential damages. Contractor must bring any cause of action arising under the Contract within one year from the time the cause of action accrues.

19.0 LIENS

19.1 To the extent permitted by law, Contractor shall not file or permit to be filed any lien with respect to the Work and hereby expressly waives any right to file or cause to be filed a lien. Contractor, in

its subcontracts, shall require all Subcontractors to expressly waive the right to file any liens against Owner's property, and, if requested, provide Owner with copies of such waivers.

- 19.2 In the event any claim is asserted or any lien filed against Owner or its property, or notice of lien is provided to Owner in violation of this provision, further payment to Contractor shall not become due under the Contract until the claim is satisfied or the lien released without cost to Owner and Contractor shall provide Owner with evidence of payment relating to such claim or lien. If Contractor fails to settle any claim or secure the release of any lien, Owner may take whatever steps it deems necessary to settle the claim or release the lien, including bonding off the lien. Owner may deduct its costs and expenses for settling any claim or securing the release of any lien filed by Contractor or its Subcontractors from any money due or to become due to Contractor under the Contract. If final payment has been made, Contractor shall reimburse to Owner its costs to settle any claim or secure the release of any lien arising out of the Contract.

## 20.0 INTELLECTUAL PROPERTY

- 20.1 Contractor warrants that its performance of the Work will not infringe upon or violate any trademarks, patents, copyrights, trade secrets or other third party property rights. If the performance of Work is held in any action to constitute infringement, or the use of the Work is enjoined, Contractor, at its expense, shall procure for Owner the right to continue use of the Work, or replace the Work with non-infringing materials or methods satisfactory to Owner, or modify the Work in a manner satisfactory to Owner so that the Work becomes non-infringing. Contractor agrees to indemnify and save Owner harmless from and against any liability or damages, including attorneys' fees, arising out of any alleged infringement or violation.
- 20.2 All inventions, discoveries, documents, works of authorship, methods, and the derivative works thereof, resulting from the Work, including patents, patent applications, copyrights, trade secrets and other intellectual property (collectively "Intellectual Property"), shall be the sole and exclusive property of Owner. Contractor shall promptly inform Owner of the development of any such Intellectual Property and does hereby assign and transfer the entire right, title and interest, together with all rights of priority in and to such Intellectual Property to Owner. Contractor shall promptly cooperate with Owner in signing any additional documentation necessary to assign and perfect ownership of such Intellectual Property in Owner or to allow Owner to register its property rights therein. Contractor warrants that it has obtained written agreements from its employees and agents as necessary to effectuate the purpose of this Section. The Intellectual Property assigned and transferred to Owner shall be the Confidential Information of Owner.
- 20.3 Contractor grants Owner a nonexclusive, nonrevocable, perpetual, fully paid license to utilize Contractor's intellectual property existing separate from the Contract, including inventions, discoveries, works or authorship, methods, and trade secrets, regardless of whether such are the subject of patents, copyrights or other intellectual property protection, to the extent necessary for Owner to achieve the full benefit of the Work.
- 20.4 Contractor shall not use Owner's name or logo in marketing, endorsements, or other business purposes without prior written consent from Owner.

## 21.0 DRAWINGS AND DATA

- 21.1 Contractor shall furnish for Owner's review, prior to commencement of Equipment manufacture or fabrication, general and detailed drawings of the Equipment in the format requested. Such drawings shall be certified as to accuracy and completeness and shall show information adequate to enable Owner to design and provide suitable clearances. If required by the Contract or any code, law or agency, Contractor will provide professional engineer or architect sealed drawings and reports for the state where the Equipment is to be finally installed. Figures shall take precedence in all cases over

scaled measurements on drawings. Where obvious discrepancies exist, Contractor shall consult with and follow the instructions of Owner. Owner's approval of Contractor's drawings shall not relieve Contractor of its obligation to comply with the Contract requirements.

- 21.2 All written data, such as drawings, plans, reports, designs and specifications, prepared by Contractor for Owner during the performance of Work shall become the property of Owner. Such data, together with all data furnished by Owner and lent to Contractor for return, shall be delivered to Owner upon request, or upon completion of the Work or termination of the Contract. For clarification purposes, Owner shall have the unrestricted right to use, release, disclose, copy and reproduce such data for purposes of operation, maintenance, analysis, testing, cleaning, erection, improvement or modification of any facilities owned or operated by Owner. Contractor shall cooperate with Owner by executing such documents as are necessary to assign and perfect ownership in Contractor provided data to Owner.

22.0 CONFIDENTIALITY

- 22.1 "Confidential Information" means any confidential or proprietary information, whether written, oral, or visual, whether or not it constitutes a trade secret under applicable law. "Confidential Information" includes, but is not limited to, business plans and methods; customer information; engineering, operating and technical data; and the dates of Owner's outage schedule, information concerning the Work, and Owner's activities. "Confidential Information" does not include information that (a) has become part of the public domain other than by acts or omissions of the recipient; (b) has been furnished or made known to the recipient by a third person as a matter of legal right and without restriction on use; (c) was in the recipient's possession prior to disclosure by the disclosing party without restriction on use; or (d) is independently developed by the recipient without access to the Confidential Information.
- 22.2 Subject to Section 22.5, each party agrees (a) to protect the Confidential Information of the other with at least the same degree of care used to protect its own Confidential Information; (b) not to use (except for the purpose described herein), publish or disclose to third parties such Confidential Information; and (c) upon the request of the disclosing party, to promptly deliver to the disclosing party all written copies of its Confidential Information. Notwithstanding the foregoing, a recipient shall be entitled to disclose Confidential Information to its officers, employees, affiliates (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), agents, lenders, attorneys and other advisors (collectively, "Representatives"), provided that the Representatives shall be informed of the confidentiality obligations provided herein.
- 22.3 If either party is required pursuant to applicable law or otherwise becomes legally compelled to disclose any of the Confidential Information, such party shall promptly advise the disclosing party in order that the disclosing party may seek a protective order or such other remedy as the disclosing party may consider appropriate in the circumstances. In any event, the compelled party may disclose only that portion of the Confidential Information which such party is legally required to disclose in the judgment of the party's legal counsel without any liability to the disclosing party hereunder and such disclosure shall not be a breach of this Section.
- 22.4 Contractor shall require its Subcontractors, if any, to expressly comply with the confidentiality provisions as set forth herein.
- 22.5 All documents prepared by Contractor for Owner during the performance of Work that incorporate, in whole or in part, information owned or provided by Owner shall not be marked or designated in any way as the confidential or proprietary information of Contractor without also stating that Owner has rights in such documents. Owner shall have the right to question the designation of Confidential Information by Contractor and Contractor agrees to provide Owner



with reasonable cooperation in explaining such designation. Contractor agrees that Owner's acceptance of documents containing the Confidential Information of Contractor shall not be construed as a restriction on Owner's rights to use, release, disclose, distribute, copy or reproduce the documents.

23.0 DEFAULT

23.1 The occurrence of any of the following shall constitute an "Event of Default":

23.1.1 Contractor files a petition in bankruptcy, or if its creditors file an involuntary petition in bankruptcy, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency.

23.1.2 Contractor (a) fails to maintain the schedule set forth in the Contract, or (b) fails to promptly pay Subcontractors for material or labor, or (c) commits repeated or substantial violations of laws, rules, regulations or policies, or (d) fails to perform in accordance with the Contract, and Contractor fails to take corrective action or submit an acceptable plan within two (2) Business Days after the receipt of a notice of non-conformance from Owner.

23.2 Upon an Event of Default, Owner may take any or all of the following actions without affecting the Contract Price or schedule:

(a) Owner may direct Contractor to cease performance on all or part of the Contract until satisfactory corrective action has been taken;

(b) Owner may have others take corrective action necessary to achieve compliance with the Contract. Owner may deduct the cost of such corrective action by others from any monies due to Contractor. Corrective action by others shall be taken when, in the judgment of Owner, the noncompliance threatens safety, unreasonably interferes with or delays the work of others, or otherwise creates a situation the resolution of which cannot be delayed without adversely impacting quality, cost or timely completion;

(c) Owner may pursue damages for delay under the terms of Article 24.0;

(d) Owner may suspend the Contract under Article 26.0; and/or

(d) Owner may terminate the Contract under the terms of Section 27.1

25.3 Each of Owner's rights set forth above shall be cumulative and additional to any other rights or remedies provide in law or equity or otherwise.

24.0 DAMAGES FOR DELAY

24.1 Contractor shall be liable for any direct damages incurred by Owner arising out of Contractor's failure to perform on time.

24.2 In lieu of Section 24.1, if the parties have agreed to liquidate the amount of direct damages resulting from Contractor's delay, the parties agree that such damages which might be incurred by Owner as a result of Contractor's delay in performance are uncertain and would be difficult to calculate. The parties agree that the liquidated damages contained in the Contract would be reasonable and fair compensation for late performance. Contractor commits to pay and Owner agrees to accept such sum as liquidated damages and not as a penalty in the event of late performance.

25.0 FORCE MAJEURE

- 25.1 Neither party shall be in breach of the Contract to the extent that any delay or default in performance is due to a Force Majeure Event. The term, "Force Majeure Event", shall mean any cause beyond the reasonable control of the delayed or defaulting party, including, but not limited to, acts of God including unusually adverse weather, fire, and epidemic; acts of public enemy including war, acts of terrorism, riot, and civil disturbance; and national labor strikes, which by exercise of due foresight such party could not have been expected to avoid or overcome. Contractor's inability to obtain adequate and sufficient labor in order to maintain progress of the Work shall not constitute a Force Majeure Event. No delay in performance resulting from a Force Majeure Event shall result in any liability on the part of Owner. Notwithstanding the preceding sentence, in the event of a delay caused by any act or failure to act on the part of Owner, Contractor's sole remedy shall be as set forth in Article 12.0.
- 25.2 The delaying party shall immediately notify the other party of the beginning of a delaying event, and shall confirm the notice in writing within ten (10) Business Days of the beginning of the event. The notice shall contain a detailed account of the delay, including the cause of the delay, an estimate of the duration of the delay, an estimate of the delay's impact to the schedule, and the plan to mitigate the effects of the delay.
- 25.3 If Contractor is the delaying party, and the delay is a Force Majeure Event as defined in Section 25.1, Owner shall grant Contractor an extension of the time for performance, to be mutually agreed upon by Contractor and Owner. The extension of time granted as a result of a Force Majeure Event shall in no case exceed the length of the delay and such extension may be withheld or reduced to the extent Contractor does not provide notice in accordance with Section 25.2. If Owner so requests, Contractor shall expedite its schedule to mitigate the effects of the excusable delay. Owner shall pay incremental, Direct Costs incurred by Contractor for expediting at Owner's request.

26.0 SUSPENSION

- 26.1 Owner may at any time suspend all or any part of the Work. Owner shall provide Contractor written notice verifying the suspension date. Immediately upon receipt of the suspension notice, Contractor shall take the necessary actions to comply with the suspension notice.
- 26.2 Owner shall pay Contractor in accordance with the terms of payment set forth in the Contract for the Work completed prior to the time of suspension and for the incremental, Direct Costs that result from Contractor's compliance with the suspension notice.
- 26.3 Owner may, at any time during the suspension period, either terminate the Contract in accordance with Section 27.2, or authorize the Work or any portion thereof to be restarted. Owner shall pay Contractor the incremental, Direct Costs associated with the restart of the Work and shall resume payments to Contractor in accordance with the terms of payment under the Contract thirty (30) days after the restart of Work.
- 26.4 The schedule shall be adjusted to provide for a reasonable extension of time for Contractor's performance.

27.0 TERMINATION

27.1 Termination for Cause

- 27.1.1 Upon an Event of Default, Owner may terminate the Contract upon written notice to Contractor.

- 27.1.2 In the event of such termination, Contractor shall immediately prepare and submit to Owner an itemization of the Work completed by Contractor. Owner may require Contractor to leave the Site. Owner may take over such Work and complete it, or have the Work completed by others. Owner may take possession of and utilize in completing the Work Contractor's materials, Equipment to be installed, supplies, tools and equipment at the Site.
- 27.1.3 Contractor shall not be entitled to further payment until all of the Work is completed in its entirety and Final Acceptance has been achieved. If the cost of completion exceeds the unpaid balance under the Contract, Contractor shall pay the difference to Owner within thirty (30) calendar days of demand.
- 27.1.4 In the event that a court determines that the termination was not properly a termination for cause, pursuant to Section 27.1.1, Contractor's remedy shall be limited to the payments permitted in accordance with Section 27.2.

27.2 Termination for Convenience

- 27.2.1 Owner may terminate the Contract, in whole or in part, for its convenience. Owner will give Contractor written notice of termination specifying the extent to which the Contract is terminated and the date, immediately or otherwise, on which termination becomes effective.
- 27.2.2 Upon termination for convenience, Contractor will comply with instructions in the notice of termination regarding delivery to Owner of all Work in progress and all completed Work, which shall become the property of Owner upon delivery.
- 27.2.3 In the event of such termination, Contractor shall receive payment, including the retained percentage, for the Work satisfactorily performed up to the time of such termination. In addition, Owner shall reimburse Contractor for incremental, Direct Costs resulting from the termination, provided that compensation was not otherwise made for such costs. Final payment shall be made upon the parties' agreement of the amount of the final invoice and Owner's receipt of an Affidavit of Completion in the form of Exhibit 1. Owner shall not be responsible for Contractor's lost profit on the terminated portion of the Contract.

28.0 MATERIALS AND WORKMANSHIP WARRANTY

- 28.1 Beginning upon Final Acceptance and for a period of one year thereafter, or for such period as may be specified elsewhere in the Contract, Contractor warrants that (a) it will perform the Work in accordance with the accepted standards of care and competence found in the applicable profession as such standards relate to and are commonly used in the electric utility industry and (b) all Contractor furnished materials and workmanship shall be free of any and all defects and shall be in conformity with the requirements of the Contract.
- 28.2 Subject to the provisions of Section 28.3, in the event that the material or workmanship does not comply with the warranty, Contractor shall, at no cost to Owner, promptly repair or replace such nonconforming material or workmanship with as little disruption to Owner's operations as practicable. Contractor shall be responsible for the total cost of correcting any defects, including but not limited to, the costs of materials, labor, any necessary equipment removal, disassembly, shipping, reinstallation and retesting of the installation. Owner shall give Contractor notice of observed defects with reasonable promptness. If nonconforming material or workmanship causes an outage or other delay of operations, Contractor shall make the repair or replacement on an overtime, maximum effort basis, at Contractor's expense.

- 28.3 If Owner directs Contractor to repair or replace any defect and Contractor fails to do so within a reasonable time, or if an emergency exists rendering it impracticable for Contractor to perform the repair or replacement, Owner may make or cause to be made such repair or replacement without affecting the validity of the warranty. Owner's cost for making the repair or replacement shall be deducted from the Contract Price or any unpaid portion thereof. If the unpaid portion of the Contract Price is insufficient to cover such cost, Contractor shall reimburse Owner.
- 28.4 Owner will not pay for any defective portion of the materials or workmanship until remedied by Contractor at Contractor's expense in accordance with the Contract requirements.
- 28.5 Owner must approve any proposed correction or alteration by Contractor of the materials or workmanship, or parts thereof, made at any time or at any location, before such correction or alteration is undertaken. Approval by Owner shall not relieve Contractor from responsibility for complying with the requirements of the Contract and all applicable codes.
- 28.6 Any materials or workmanship which are repaired or replaced pursuant to this Article 28.0 shall be warranted for a period of one year from the date of completion and acceptance of such repair or replacement, or for the remainder of the original warranty period, whichever is longer.
- 28.7 Contractor shall obtain, for the benefit of Owner, all available warranties from Subcontractors, vendors and suppliers of Contractor. Such warranties shall be in addition to the warranties set forth in this Article. If such warranties are in written form, Contractor shall provide Owner with the original warranties.

29.0 REPORTING OF COMPLAINTS

- 29.1 Contractor shall immediately report to Owner, in accordance with Article 33.0, the complete details of all complaints, including any OSHA violations and complaints received from governmental authorities, Subcontractors, laborers, other third parties or members of the public relating to the Work.

30.0 RETENTION AND EXAMINATION OF INFORMATION, BOOKS AND RECORDS

- 30.1 Owner reserves the right to audit records necessary to permit evaluation and verification of (i) claims submitted, (ii) Change Orders, and related overhead and general and administrative costs, and (iii) Contractor's compliance, in the performance of the Contract and its dealings with Owner, with (a) the Contract requirements; and (b) Owner's Code of Business Conduct governing business ethics. Owner's right to audit shall not extend to fixed, lump-sum or unit pricing.
- 30.2 Contractor shall cooperate with Owner and provide Owner with information and records ("information") pertaining to the Work as requested by governmental agencies, Owner, or courts of law.
- 30.3 Contractor shall retain for a period of three (3) years after Contract termination or expiration all information relating to the Work. Owner may audit and copy such information at Contractor's premises during regular business hours. If requested by Owner, Contractor shall submit to Owner a copy of each of its subcontracts. Contractor shall include in its subcontracts a provision granting Owner the rights against Subcontractors contained in this Article 30.0.

31.0 COMPLIANCE WITH LAWS

- 31.1 Contractor warrants that all materials and equipment supplied and all Work performed will comply with, and be manufactured, priced, sold and labeled in compliance with, all applicable federal, state and local laws, rules, regulations, orders and ordinances, including, without limitation, environmental

protection, energy, safety and health, and labor laws and regulations and applicable industry codes and standards.

31.2 Unless exempted, Contractor shall comply with the equal employment opportunity clause in Section 202 of Executive Order 11246 and all applicable rules, regulations, and relevant orders pertaining to Executive Order 11246, Section 503 of the Rehabilitation Act of 1973, and Section 4212 of the Vietnam Era Readjustment Assistance Act of 1974, as amended. Contractor represents that it does not, and shall not for the term of the Contract, provide or maintain for its employees facilities that are segregated on the basis of race, color, religion, sex or national origin. Contractor represents that it will not assign its employees to perform any work related to the Contract at a location where facilities are segregated on the basis of race, color, religion, sex or national origin. Contractor agrees that it will not enter into any agreement to obtain goods or services relating to the Contract with any entity that provides, maintains or assigns its employees to work at locations where facilities are segregated on the basis of race, color, religion, sex or national origin. As used herein, "facility" means waiting rooms; work areas; restaurants and other eating areas; time clocks; locker rooms and other storage or sleeping areas, except as necessary to ensure privacy between male and female employees; parking lots, drinking fountains; recreation or entertainment areas; and transportation. If not otherwise exempted by Title 48 and to the extent applicable, Contractor will comply with 48 CFR §52.219-8, Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns, and 48 CFR §52.219-9, Small, Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan. If not otherwise exempted by 41 CFR §60-1.5, Contractor represents that it will file all reports or other required information specified in 41 CFR §60-1.7.

31.3 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of any violations of such laws, ordinances and regulations.

#### 32.0 PERMITS AND LICENSES

32.1 Contractor shall obtain all permits and licenses required by any regulatory authority for the performance of any portion of the Work, except that Owner shall obtain permits and licenses for all structures which are to become a permanent part of the Site. Before starting Work, Contractor shall submit to Owner a copy of all permits and licenses required by any such regulatory authority.

32.2 Contractor shall indemnify and save Owner harmless from any and all costs or expenses arising out of the failure of Contractor to obtain such permits and licenses.

#### 33.0 NOTICES

33.1 Each party shall designate in writing a representative to receive any and all notices required under the Contract. Notices shall be in writing and shall be given to the representative designated to receive them, either by personal delivery, certified mail, facsimile, e-mail or any similar means, properly addressed to such representative. All notices shall be effective upon receipt, or upon such later date following receipt as set forth in the notice. Either party may, by written notice to the other, change the representative or the address to which such notices are to be sent. Contract shall be strictly construed and Contractor expressly waives any claims which do not strictly comply with the written notice requirements of the Contract.

#### 34.0 SEVERABILITY

34.1 In the event that any of the provisions, or portions thereof, of the Contract are held to be unenforceable or invalid by any court, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

35.0 WAIVER

35.1 Either party's waiver of any breach of the Contract shall not be deemed to be a waiver of any other breach of the same or a different term of the Contract. Contractor agrees not to claim any waiver by Owner of such notice requirements based upon Owner's conduct or Owner having actual, verbal, implied, or constructive notice.

36.0 NON-DISCLOSURE

36.1 Except as required by law, regulation, or judicial or administrative order, neither party shall disclose the terms of the Contract without the consent of the other party. Notwithstanding the foregoing, Owner may disclose the terms of the Contract without the consent of Contractor (a) to any of its affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures); and (b) to any prospective transferee or purchaser of assets of Owner or any of affiliates.

37.0 HEADINGS

37.1 Headings are provided for the convenience of the parties, and shall not affect the interpretation of any provision.

38.0 AFFILIATED COMPANIES

38.1 Any indemnification of Owner or any limitation of Owner's or Contractor's liability under the Contract shall to the same extent apply to Owner's or Contractor's directors, officers, employees, agents, and affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures), including any directors, officers, employees and agents thereof.

38.2 The affiliated companies (including any joint ventures of which Owner or any of its affiliates are a member and the other members of such joint ventures) of the American Electric Power System are severally and not jointly liable for obligations arising hereunder.

39.0 APPLICABLE LAWS AND JURISDICTION

39.1 Except for Article 17.0, the rights and obligations of the parties arising out of the Contract shall be governed in all respects by the laws of the State of Ohio. Any reference herein to the laws of other states is made only to the extent that the laws of that state might apply, notwithstanding the intent of the parties that the laws of the State of Ohio should apply.

39.2 Contractor agrees that all actions and proceedings brought by Owner against Contractor may be litigated in courts located in the State of Ohio or the state where the work was performed. Contractor agrees that such courts are convenient forums and irrevocably submits to the personal jurisdiction of such courts. Contractor waives personal service of process and consents to service of process by certified or registered mail at the address designated for receiving notices under the Contract.

40.0 ENTIRE AGREEMENT

40.1 The Contract constitutes the entire agreement between the parties and supersedes all previous and collateral agreements or understandings with respect to the subject matter of the Contract. No waiver, alteration, amendment or modification of any of the provisions of the Contract shall be binding unless in writing and signed by duly authorized representatives of the parties.

41.0 BINDING EFFECT; NO THIRD-PARTY BENEFICIARIES

41.1 Subject to the restrictions on assignment in Section 5.1, the Contract shall be binding upon and shall inure to the benefit of the parties of their respective successors and permitted assigns.

41.2 No provision of the Contract is intended or shall be construed to be for the benefit of third party other than as set forth in Article 36.0.

42.0 EXECUTION; COUNTERPARTS

42.1 The Contract shall not be binding or effective until properly executed by each of the parties hereto. The Contract may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which, taken together, shall constitute but one and the same Contract, which may be sufficiently evidenced by one counterpart.

43.0 SURVIVAL

43.1 All of the terms of the Contract which by their nature extend beyond the expiration or termination of the Contract, including indemnification obligations, confidentiality obligations, limitations of liability, shall survive expiration or termination of the Contract and remain in full force and effect.

**END OF DOCUMENT**

EXHIBIT 1  
Page 1 of 1

AFFIDAVIT OF COMPLETION

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, states that:  
(Name of Affiant)

1. S/He is the \_\_\_\_\_ of  
(Office held by Affiant)  
\_\_\_\_\_  
(Legal Name of Contractor) (Contractor)

that has a contract with \_\_\_\_\_  
(Legal Name of Owner)

(Owner) dated \_\_\_\_\_ (Owner's Contract No. \_\_\_\_\_)  
(Contract Date) (Contract No.)

involving work on the Owner's property at \_\_\_\_\_  
(Project Name)

located near \_\_\_\_\_.  
(City, State)

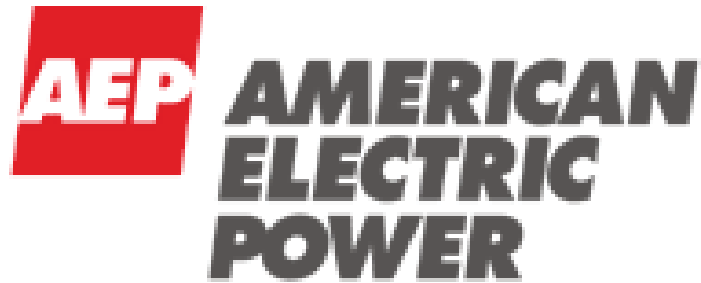
2. All of the Work required to be performed by the Contractor under said Contract has been performed. All bills and claims for material, labor and services to employees, Subcontractors, material suppliers, and others, covering the Work required to be performed under the Contract, have been paid in full by the Contractor. There are no unpaid amounts on the basis of which a lien has been filed, or can be filed, in connection with the Work performed under the Contract.

\_\_\_\_\_  
Signature of Affiant

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary





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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

Prepared by:

Contract Services  
American Electric Power  
Service Corporation  
1 Riverside Plaza  
Columbus, OH 43215

June 24, 2011



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## SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

The following Supplementary Terms and Conditions for Forestry Contracts ("Supplementary Terms") shall supplement any of the American Electric Power Service Corporation ("Owner" or "AEP") General Terms and Conditions utilized in any Contract under which Contractor is authorized to perform Services. These Supplementary Terms shall not replace the safety or operational provisions in the applicable AEP General Terms and Conditions and are intended to support and reinforce other Contract documents.

All of the provisions of these Supplementary Terms shall also apply to Contractor's subcontractors. Contractor is responsible for ensuring that its subcontractors comply with these Supplementary Terms.

Contractor's and any of its subcontractors' failure to comply with these Supplementary Terms is cause for the Contract to be terminated and may prevent eligibility for the consideration of providing Services in the future (i.e., removal from AEP's qualified bidders list).



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

### **SECTION 1**

#### **GENERAL SUPPLEMENTARY TERMS AND CONDITIONS**

##### **1.1 Protection of Services**

- 1.1.1 Contractor shall use care and diligence so that performed Services and all materials, installed equipment and tools are thoroughly protected from the weather, loss and any and all damage. Contractor shall furnish and pay for all such protection.
- 1.1.2 Contractor shall provide and pay for the removal of snow, ice and water from its storage or work areas.
- 1.1.3 Contractor shall be liable for any loss or damage caused by carelessness, negligence or any act or failure to act on the part of Contractor, its subcontractors or employees. Such loss or damage includes, but is not limited to, losses and damages to performed Services, materials, equipment to be installed, private property, construction equipment and other property belonging to Owner or other contractors.

##### **1.2 Cleanup and Disposal of Non-Vegetative Debris**

- 1.2.1 Contractor shall keep its work areas, storage areas, parking areas and other areas of operations clean and safe.
- 1.2.2 Contractor shall promptly remove trash and other non-vegetative debris from these areas and properly dispose of all trash and other debris resulting from Services.
- 1.2.3 Upon completion of Services, Contractor shall remove from the site and dispose of its surplus material, chemicals, equipment, tools and, unless otherwise directed in writing by Owner, all temporary structures per all applicable laws.
- 1.2.4 Contractor shall bear the cost of providing the cleanup and removal, including the cost of all labor, supplies, tools, construction equipment and transportation.

##### **1.3 Material Storage and Handling**

- 1.3.1 Owner may designate a material storage location that can be used by Contractor.
- 1.3.2 Unless provided by Owner, Contractor is responsible for the purchase and proper handling and storage of material used during the course of providing Services. Contractor shall abide by all applicable laws.
- 1.3.3 Contractor shall be responsible for the impact of all shortages resulting from missing or damaged material issued to Contractor but not applied. Contractor shall replace such material at its own expense. Substitutions will not be allowed unless approved by Owner in writing.
- 1.3.4 All unused material furnished by Owner or provided by Contractor, and paid for by Owner, shall be returned by Contractor to Owner's designated storerooms or storage points upon notification from Owner.



**SUPPLEMENTARY TERMS AND CONDITIONS  
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**1.4 Electrical Clearances**

- 1.4.1 Owner will arrange for all necessary clearances on energized equipment or circuits required to be taken out of service for the performance of Services. When an outage is required, Contractor shall notify Owner prior to scheduling such Services, allowing sufficient time for scheduling with system operators.

**1.5 Permits and Easements**


- 1.5.1 Owner will secure all right-of-way easements. Owner will also secure certain permits requiring Owner's signature (i.e., DOT permits, siting permits, building permits). Location specific and construction specific permits not already obtained by Owner are the responsibility of Contractor. Local vehicle registration/operation permits (i.e., frost law permit in Michigan) shall be the responsibility of Contractor.

**1.6 Protection of Property**

- 1.6.1 Contractor shall use all possible care not to damage any existing buildings, structures, pipes, sewers, conduits, manholes or other property, or to interfere therewith without the consent of Owner's authorized representative. Such structures and other objects shall be properly supported, braced and secured in place to prevent damage thereto. They shall not be relocated or reconstructed except as authorized by Owner. Contractor shall be responsible for all damage claims due to this negligence, including the cost of all material and labor required to replace or repair any property damaged.
- 1.6.2 Contractor shall immediately report the complete details of all damage claims to Owner. If Owner determines the claim is valid and is a result of Contractor's negligence, Owner will present the claim to Contractor for settlement. Contractor is to settle all valid claims within 30 days. Contractor is to provide Owner with documentation specific to a settlement process for any claim not settled within 30 days, or the claim will be handled by Owner and the damage amount billed to Contractor. All such damage claims settled by Contractor are to be reported to Owner in writing.
- 1.6.3 Contractor shall be responsible for notifying appropriate state one-call systems, as well as any other utility company not a member of the systems, prior to performing Services involving excavation, boring, stump grinding and/or other activities that may affect underground facilities.

**1.7 Work on Private Property**

- 1.7.1 Whenever any Services are to be completed on private property, Contractor shall attempt to notify owner and/or the tenants thereof and make arrangements with them so that Services will be completed with the least practicable inconvenience to them. Work on private property shall be done as expeditiously as possible and the premises restored immediately.



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**1.8 Access and Construction Roads**

- 1.8.1 It is Contractor's responsibility to ensure that all property owners' roads traveled by Contractor are in the same condition as the roads were before Contractor elected to use the route. Should Contractor cause any damage to any such road, Contractor is obligated to restore the road to like or better condition than the road existed prior to Contractor's use. Such work shall be completed in a timely manner with proper written documentation of the damage/remedy supplied to property owner and Owner alike. Where Owner deems it necessary to maintain access roads on private property, crushed stone will be furnished or paid for by Owner, and Contractor shall provide labor and equipment to haul and place crushed stone as required. When approved in advanced writing by Owner, Owner shall pay for normal damage to fields or loss of crops resulting from necessary travel by Contractor.
- 1.8.2 Contractor shall keep fences in a sufficient state of repair to satisfactorily confine livestock and shall keep gates closed when not in immediate use. Before Services are considered to be completed, all temporary gates shall be removed and all fences cut or damaged shall be restored to original condition. Fencing damaged by Contractor shall be repaired at Contractor's expense.
- 1.8.3 When it is necessary to gain access to right-of-way over private roads, yards, pastures and cultivated fields, and it is impractical to restrict ingress and egress to the right-of-way, Contractor shall use the route agreed upon by the property owner, Contractor and Owner. Contractor shall notify the property owner prior to the use of these routes.

**1.9 Emergency Assistance**

- 1.9.1 In the event of extensive damage to Owners' facilities as a result of severe storms, flooding or other catastrophes, Owner may request assistance from Contractor in the repair of damages and restoration of service to customers. Under such circumstances, the "Forestry Policies and Procedures for Emergency Assistance" in Section 2 shall be followed.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**SECTION 2  
FORESTRY POLICIES AND PROCEDURES FOR EMERGENCY ASSISTANCE**

In the case of emergencies, during which Contractor is called upon by Owner for storm assistance to restore service following catastrophic damage ("Emergency Assistance"), the following policies and procedures shall apply.

- 2.1 Contractor will provide Owner with emergency contacts, including 24-hour telephone numbers for requesting assistance.
- 2.2 Upon request for Emergency Assistance, Contractor shall provide Owner with a list of available personnel and their classification, labor rates, crew make up, equipment to be used and an estimated time of arrival.
- 2.3 Owner will specify the number of physical full time employees and any special equipment required and will notify Contractor as to where the crews are to be assigned and to whom they will report. Owner will check-in each crew upon arrival.
- 2.4 Contractor shall be responsible to make contact with the appropriate State officials concerning commercial driver's licenses and other transportation issues.
- 2.5 Contractor's crews shall arrive prepared to work and be equipped with PPE, PPI, tools, foul weather gear, lights and batteries to perform the assigned Services. Any crews arriving without the proper tools or equipment to perform the assigned Services may be released at Contractor's expense.
- 2.6 Owner shall determine the work hours for responding crews, including start time (at assigned crew headquarters) and duration. Contractor shall check in with Owner daily at the requested starting time for assignment of Services.
- 2.7 After working sixteen (16) consecutive hours up to a maximum of twenty-four (24) consecutive hours, Contractor's employees shall be released from providing Services for a minimum eight (8) hour rest period, which shall commence upon release by Owner.
- 2.8 Owner will allow a meal break every six (6) hours, or as near as practicable, while Contractor performs Emergency Assistance. Contractor's personnel will be off the clock for all meal breaks taken away from the work site.
- 2.9 Time sheets of Contractor employees shall be kept by Contractor. These time sheets shall be turned in daily to Owner for verification and approval.
- 2.10 Contractor shall be responsible for relaying all Owner communications to its crews.
- 2.11 Contractor shall be responsible for the safety of its crews. Contractor will provide safety statistical reporting of all hours worked on AEP property. This report format will be provided by the AEP Safety Coordinator.



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- 2.12 Owner shall reimburse Contractor for Emergency Assistance at the current contracted rate of the classification for each of Contractor employees utilized plus the applicable mark up percentage for straight and/or premium time. When responding from areas with existing AEP Contracts, Contractor's employees shall be paid at the rates incorporated in the Contract for the area from which they are responding. When Contractor responds from locations without existing contracted AEP rates, billing rates will be negotiated when the agreement to send crews is finalized.
- 2.13 Overtime pay for Emergency Assistance shall be paid based on provisions submitted by Contractor and approved in advance by Owner.
- 2.14 Owner will reimburse Contractor for lodging and meals (dollar amount for meals shall be predetermined by Owner) for the crew(s) requested. Owner may elect to supply meals and/or lodging to Contractor, in which case there will be no reimbursement. All other expenses: (i.e., personal phone calls, alcoholic beverages, tobacco, entertainment, etc.) will not be reimbursed by Owner.
- 2.15 Contractor's employees must register in person at the assigned lodging.
- 2.16 If Owner requests Contractor to provide an employee whose classification falls outside the standard Contractual labor billing rates, Owner shall provide the request in writing and will reimburse Contractor for said employee's labor, vehicle, lodging and meals.





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**SUPPLEMENTARY TERMS AND CONDITIONS  
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**SECTION 3**

**SUPPLEMENTARY ENVIRONMENTAL, SAFETY AND HEALTH TERMS AND CONDITIONS FOR  
FORESTRY CONTRACTS**

**3.1 General**

- 3.1.1 Contractor shall comply with AEP's Contractor Oversight program. Contractor's safety performance will be monitored and evaluated during performance of the Contract by Owners' representative.
- 3.1.2 Contractor shall adhere to all pertinent local, state and federal regulations and all rules and policies set forth in Contractor's own safety manual. Any shortcoming brought to the attention of Contractor by Owner shall be immediately corrected by Contractor. Repeated and/or severe safety violations, incidents or accidents may be cause for the Contract to be terminated, prevent eligibility for providing future Services and result in the potential removal from AEP's qualified bidders list.
- 3.1.3 Owner has the authority to immediately stop Contractor's Service performance indefinitely for practices, procedures and operations, which, in the opinion of Owner, constitute a safety concern. It is Contractor's responsibility to adequately satisfy Owner with any remediation necessary to provide a safe and healthful workplace.
- 3.1.4 Contractor shall have qualified and competent supervision on the job at all times to direct and observe the Work.
- 3.1.5 If Contractor in good faith believes that any rule or procedure set forth in these Supplementary Terms will put its employees or others at risk, Contractor shall immediately notify Owner and shall cooperate with Owner to develop a mutually acceptable alternative procedure.

**3.2 General Safety Requirements**

- 3.2.1 Owner, or Owner's representative, shall conduct random Forestry Contract crew safety audits and Contractor shall cooperate fully with Owner's representatives during this audit. The audit is defined in Appendix A.
- 3.2.2 Contractor shall promptly notify Owner if Contractor's or its subcontractors' Experience Modification Rate for workers compensation exceeds 1.0.
- 3.2.3 Contractor shall remain solely responsible for the proper and safe use of all tools, and for conducting safe work practices or procedures. Contractor shall provide information necessary for the job briefing identified in Section 3.6 below, Job Briefings.
- 3.2.4 Contractor shall provide Owner a list of all tools, practices or procedures it or its subcontractors will use in performing assigned Services with fabricated or modified tools ("Specialty Tooling"). Specialty Tooling includes all tooling fabricated, developed by or modified by Contractor. Contractor shall notify Owner of any Specialty Tooling it develops or modifies on site. Contractor shall also notify Owner, prior to use, if it intends to use standard tooling in ways other



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## **SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS**

than those for which the tooling was designed. All such Specialty Tooling is subject to review by Owner. Specialty Tooling shall have design plans, engineered diagrams, etc. with a Professional Engineer's stamp of approval. Contractor shall also inspect Specialty Tooling prior to each use. At its sole discretion, Owner may prohibit or restrict the Contractor's use of Specialty Tooling on Owner's site.

3.2.5 Contractor shall immediately cleanup all spills from Contractors' equipment and vehicles.

### **3.3 Contractor Safety Representative**

3.3.1 When Contractor has eleven (11) or more total employees on various projects of Owner or its affiliates, Contractor will have a safety professional visit the various work sites and/or work crews weekly to ensure Contractor's safety program is being enforced. All safety professionals shall have, at a minimum, the OSHA 30 hour training. A safety professional is defined as having the responsibilities of safety compliance, enforcement and/or training.

3.3.2 Qualifications of the aforementioned safety professional may be subject to Owner's review and approval.

3.3.3 Owner may require Contractor to assign additional safety professionals if Owner determines the scope of Services justifies additional safety oversight.

3.3.4 Owner may require Contractor to supply additional safety professionals if Owner has determined geographical Service locations justify additional safety oversight.

### **3.4 Monthly Reporting**

3.4.1 Contractor shall report various safety related statistics, using the most current revision of the AEP supplied form, AEP Contractor Performance Report in Appendix B. Reported statistics will include those of Contractor's subcontractors and will represent Services performed on AEP projects/Contracts only.

3.4.2 The above requirements must be reported by the tenth (10<sup>th</sup>) day of the following month to the following e-mail address: [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com). A copy of the AEP Contractor Performance Report will be supplied to Contractor for reporting this required data. The data will be used by Owner to evaluate Contractor's safety effectiveness and performance.

### **3.5 Event Reporting**

3.5.1 When performing Services for AEP and a safety event occurs, Contractor shall notify Owner about the event immediately (verbal reporting is sufficient). Contractor shall also submit a written preliminary notification (no later than 8:00 a.m. the following working day of the event) to the Forestry Supervisor, Region Support Manager and/or designee, Forestry Operations Manager, and shall also e-mail a copy to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com), listing any and all safety events occurring during the performance of Services. A separate report is required for each event. Reported events include near miss events, first aid and minor events, OSHA recordable injuries,



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flash/outage events, vehicle accidents, spills/release, underground utility strikes and OSHA/EPA citations/visits. The written report should include sufficient detail to identify the nature of occurrence, the extent of injury (if any) and contact name and number of the person leading the investigation. Within seven (7) business days, Contractor shall submit an in depth report to the e-mail address listed above, along with a copy to the Forestry Supervisor, Region Support Manager and/or designee and Forestry Operations Manager. This report must include the time and date of event, location of event, name of injured employee, the injured employee's on the job experience, description of event, factors that may have caused or contributed to the event, corrective actions taken and/or planned and the person(s) responsible for corrective actions.

**3.6 Job Briefings**

3.6.1 Prior to the commencement of Services in any location and before any changes in procedures or activities are made, Contractor shall perform a Job Briefing in written report/form to identify all potential work site risks. Each member of the crew must sign his/her name to this form in order to affirm their presence at the time the information was presented during the Job Briefing. The report shall include, at a minimum: 1) applicable hazards present during the course of performing the specific assignment 2) Service procedures involved 3) special precautions 4) energy source controls and 5) personal protective equipment requirements. Should Contractor not have its own Job Briefing requirements/forms, then Contractor shall use the AEP Supplied Job Briefing Form in Appendix C.

3.6.2 Contractor shall make its Job Briefing Forms available to Owner upon request.

**3.7 Personal Protective Equipment Requirements**

3.7.1 Contractor is responsible for requiring the use of appropriate personal protective equipment ("PPE") in all operations where there is an exposure to hazardous conditions.

3.7.2 Owner requires Contractor and Subcontractor employees to wear the following PPE, at a minimum, while on/in any construction site and/or work area:

- Safety glasses or safety prescription glasses with side shields
- Hardhat
- Work gloves that provide protection for the type of work
- Approved hearing protection devices when required
- Shoes with a defined heel (employees that climb structures)

3.7.3 Open-toed, open-heeled, athletic footwear and tennis shoes are strictly prohibited. Additional foot protection and/or PPE may be required based on Contractor's PPE assessment or special environmental conditions.



**SUPPLEMENTARY TERMS AND CONDITIONS  
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**3.8 Substations/Switchyards**

- 3.8.1 OSHA requires personnel working within an electrical station be qualified to recognize equipment and hazards unless escorted by a qualified person. Employees not OSHA station qualified shall be under direct supervision of qualified personnel.
- 3.8.2 Gates to station fences shall remain closed and locked when they are not under the direct observation of an attendant.

**3.9 Firearms, Alcohol and Drugs**

- 3.9.1 Firearms, alcohol, illegal drugs or drugs taken for non-medicinal purposes are prohibited on all Owner Sites.
- 3.9.2 Contractor shall be responsible for all Contractor and Subcontractor(s) employees who are under the care of a physician and are taking prescribed medicine, which may alter the employee's physical or mental ability. Contractor shall determine the necessity to modify the employee's job assignment while undergoing treatment.
- 3.9.3 If firearms or suspected illegal drugs are discovered on any AEP property or Work Site/area, the following guidelines should be followed by whoever discovers the firearms or suspected illegal drugs:
- First, if possible without putting themselves or others in harms way, attempt to secure the location and ensure that others cannot come in contact with the firearms or suspected illegal drugs. Do not handle or move firearms or suspected illegal drugs from their discovered location.
  - Second, immediately contact the Owner's Contract Supervisor or Distribution Line Representative and together make a decision whether or not the situation requires a call to the local law enforcement authorities. Immediately call the local law enforcement authorities and report the discovered item(s) if (a) neither the Owner's Contract Supervisor nor the Distribution Line Representative is available; (b) there is a threat of harm to any person; or (c) there is a risk of improper removal or disposal of the firearms or illegal drugs.
  - Third, call local Owner's security personnel or call the Owner's general Security hotline at 1-866-747-5845.
  - Fourth, for incidents involving Contractor personnel, Contractors shall submit reports according to Section 3.5, Event Reporting.

**3.10 Drug/Alcohol Testing**

- 3.10.1 All Contractor and subcontractor employees performing Services under this Contract must complete and pass a pre-employment drug/alcohol screening. Screening substances and their associated cut-off limits are the same as listed in the applicable AEP General Terms and Conditions.



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### SUPPLEMENTARY TERMS AND CONDITIONS FOR FORESTRY CONTRACTS

3.10.2 Post event drug and alcohol testing shall be performed, at Owner's discretion, on all Contractor and subcontractor employees involved in any safety related event. Testing results shall be shared with Owner upon request.

3.10.3 Contractor shall incur all costs associated with the required drug and alcohol testing as required in these Supplementary Terms.

#### **3.11 Language Requirements**

3.11.1 Contractor's and its subcontractor's employees shall be capable of communicating in English. At least one copy of all documents and reports, including Job Briefings, shall be prepared in English.

#### **3.12 Job Site Auditing**

3.12.1 Contractor representatives, at a minimum, shall perform and document a Job Site Observation based on the following table:

| <b>Representative Level</b> | <b>Frequency</b> |
|-----------------------------|------------------|
| Senior Management           | 1/Quarter        |
| Operational Management      | 1/Month          |
| General Foreman             | 2/Week           |
| Safety Professional         | 2/Week           |

3.12.2 If Contractor does not meet the requirements of Safety Section 3.3.1 [less than eleven (11) employees], then the lowest representative level of the table in 3.12.1 above (safety professional) shall be followed by a company representative.

3.12.3 Contractor shall make documentation of such job site observations available to Owner upon request.

#### **3.13 Emergency Planning**

3.13.1 All job sites must have an Emergency Action Plan that has been communicated and documented to all employees. The Job Site Emergency Action Plan shall be documented on each job briefing conducted. This plan shall include, at a minimum:

- Emergency contacts
- Location and name of local emergency services
- Location of closest communication method
- Location of closest medical facility
- Procedure to follow in the event of an emergency

#### **3.14 Traffic Control**

3.14.1 All Services performed on or adjacent to existing public road or rights-of-way and/or job site roadways shall be performed in conformance to the requirements of the Manual on Uniform Traffic Control Devices (current revision), state and local jurisdiction.



**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**3.15 Individuals Restricted from Access to AEP Sites**

3.15.1 Owner may deny access to its facilities by any person who fails to comply with the safety provisions set forth in the applicable AEP General Terms and Conditions or these Supplementary Terms or any person who, in Owner's sole judgment, otherwise demonstrates a lack of safety performance. Examples of a lack of safety performance include, but are not limited to, the following:

- Unsafe job performance
- Failure to pass drug/alcohol test
- Displaying incompetence in performing their job
- Employees that are determined to be unfit for project employment
- Playing of pranks, horseplay or practical jokes
- Failure to report injuries and/or accidents
- Fighting or acts of aggression
- Theft or vandalism
- Convicted Sexual Offenders

3.15.2 Prior to the commencement of Services and during the term of the Contract, Contractor shall provide Owner with a list of all individuals, including Contractor and subcontractor employees, whom Contractor intends to perform Services at Owner's sites. The list shall identify the individuals by their name and the last three digits of their Social Security number.

3.15.3 Owner may, at its sole discretion, deny access to any individual who has been previously removed from a project by Owner or any of its affiliates for safety reasons.

3.15.4 Contractor may request a restricted Contractor employee to be cleared for the performance of Services. A letter addressing the original safety violation(s) or reason(s) for removal and any documentation supporting the request shall be sent to Owner for approval. Contractor's employee shall not perform Services at any of Owner's sites until approved by Owner. Said approval may be granted or withheld at Owner's sole discretion.

**3.16 Housekeeping**

3.16.1 Contractor shall ensure that debris, materials, scrap, trash, etc. is contained and removed daily in order to prevent it from interfering with the safety of any employee and/or general public.



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX A**

**AEP FORESTRY CONTRACT CREW AUDIT FORM**



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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX B**  
**AEP CONTRACTOR PERFORMANCE REPORT**





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**SUPPLEMENTARY TERMS AND CONDITIONS  
FOR FORESTRY CONTRACTS**

**APPENDIX C**

**AEP SUPPLIED JOB BRIEFING FORM**

**(ONLY FOR CONTRACTORS THAT DO NOT HAVE THEIR OWN DOCUMENT)**

# EXHIBIT B



## **AEP Forestry**

# **Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations**

**May 14, 2009**

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

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## AEP System Forestry Guidelines

### Foreword

#### A. Introduction

The purpose of these AEP Forestry Guidelines is to document and inform AEP employees and its contractors of important criteria, practices and procedures pertaining to initial vegetation clearing for construction projects and the maintenance of rights of way. AEP incorporates these guidelines into each tree service contract; a copy shall be kept in all vegetation management contractor's vehicles. These guidelines are for the sole and exclusive use of the contractor and are to be read consistently with other contract documents by and between AEP and the Contractor.

#### B. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation within the right of way.

**DBH:** (Diameter at Breast Height). The diameter of a tree measured at the height of 4-1/2 feet above the ground on the uphill side.

**Danger Tree:** A tree considered a potential hazard to AEP's facilities positioned outside of the normally cleared right-of-way.

**Debris:** Non-vegetative material such as pop bottles, cans, wire, paper and old tires.

**Directional Pruning:** The reduction of a tree's crown in a manner that provides increased conductor clearance by pruning to direct growth of the upper crown away from the conductors.

**Fallen Tree:** A tree lying on the ground not cut by the Contractor.

**Hanger:** A limb cut from a parent stem or bole of a tree as part of the line clearance pruning procedure left aloft caught and held by the other branches of the tree.

**Hazard Tree:** A tree considered a potential threat to the safety and reliability of AEP's facilities growing within the normally maintained right-of-way.

**Log:** The merchantable portion of a tree as designated by AEP.

**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Mowing:** The mechanical cutting of woody stem vegetation within the right-of-way.

**Prescription:** The plan prepared for each circuit or unit of work. It designates the vegetation to be maintained, the method(s) of maintenance, and who will perform the work.

**Removal:** The complete cutting down of trees at or near the ground line. AEP shall specify the disposal method.

**Slash:** The un-merchantable portion of a tree as designated by AEP.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

## **I. Contractor Guidelines**

### **A. Safety**

1. Protecting the safety of the public is of utmost importance to AEP. Contractors shall regard safety as their first priority. Contractors and their employees will recognize and follow all laws, rules and regulations regarding public and worker safety. Any safety related incidents (e.g., personal injury, vehicle accident, outages, flashes, near miss, customer issues, etc.) that occur on the job must be reported to the appropriate AEP personnel as soon as possible.
2. All contact incidents outages or operations caused by contract crews shall be reported to the appropriate AEP Dispatch center and Forestry immediately.

### **B. Personnel**

1. If required by state or local laws and regulations the contractor shall have an ISA Certified Arborist available.
2. No private work may be solicited or worked by Contractor employees while on AEP time. Contractors shall not receive compensation from anyone except AEP for tree work that is a part of AEP's Forestry program. The consequences will be crew and/or contractor disciplinary action.

### **C. Equipment**

1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chain saws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.

The use of spurs/climbers/hooks should be avoided. Where their use is necessary (as in the removal of some trees or in climbing trees, which do not provide a notch in which to tie in) only qualified persons shall be permitted to use them.

#### **D. Overtime**

Overtime is billable for work performed outside the scope of the normal work schedule.

#### **E.. Work Procedures**

1. Contractor practices shall be compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Changes in the workweek due to inclement weather, equipment breakdowns or other circumstances must have prior approval by AEP Forestry personnel.
3. The contractor will be responsible for the development of a plan to complete the assigned tasks. The assigned tasks must be performed in a systematic way that follows this plan. Some examples are: beginning work at substations, working between protection devices, or other methods to prevent inefficiency and/or skipped work. The plan must meet AEP approval before work begins.
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractor shall provide daily work locations to AEP, including changes to these locations throughout the workday.
6. Each crew shall have a planned worksheet at all times, except in the case of emergency work.
7. The Contractor's daily association with their crews and customers will allow planned outages and refusals to be worked on a progressive basis. A written list of such areas that have not been worked, including reasons, shall be supplied to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work shall be inspected on an ongoing basis. When an assigned task is complete, the Contractor must notify AEP Forestry for final inspection.
9. The Contractor will notify AEP of any hazardous conditions found during the performance of work under this contract. This is to include danger trees, soil erosion, and any attachment to AEP's facilities,

deteriorated, damaged or broken facilities and any other abnormal conditions.

#### **F. Public Relations**

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise. Advanced notification provides the property owner/resident with an opportunity to voice concerns.

1. Where required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor will document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the contractor should be on each card.

#### **G. Refusals**

1. A "refusal" is considered any property owner/resident refusing to allow or permit the contractor to manage vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits and easements.
2. The contractor shall fill out a refusal/complaint form with all pertinent information for all refusals.
3. If the contractor is unable to resolve the refusal within one week, the refusal shall be turned over to the appropriate AEP Forester.
4. Undocumented refusals or those left unaddressed for more than one week by the contractor may be worked at the Contractor's expense.



## **H. Damage Claims and Complaints**

1. The contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.
2. An on-site investigation with the resident/ property owner shall be made as soon as possible. This meeting, or telephone arrangements for the investigation, shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during this initial investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.
7. Costs to restore outages or repair the Owner's facilities due to negligence may be billed to Contractor as determined by AEP Forestry.

## **II. Performance Guidelines**

### **A. Removals**

1. Stumps shall be flush cut (three (3) inch maximum height) and treated with an approved herbicide, unless designated otherwise by AEP Forestry.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect yards, fences, houses, electric lines and other facilities.

3. Targets for removal are:

- All trees with the potential of growing into the conductors.
- Trees where adequate clearance cannot be obtained using proper pruning practices.
- Trees that will take less than three times the amount of time to remove as they would take to prune.
- Trees within five (5) feet of poles.
- Mature trees where more than 50% of the crown must be removed to obtain clearance.
- Young vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
- Palm species.

4. Trees that may be less suitable candidates for removal are:

- Those that would take more than three times longer to remove than to prune for proper clearance and at least 50% of the crown would be left intact.
- Species that will not reach a height that would affect the conductors.
- Slow-growing tree species.

5. Deciduous stumps shall be flush cut (three (3) in. maximum height) and shall be treated with an appropriate herbicide to prevent re-growth unless the situation prevents application according to label instructions, there is a documented customer refusal or an AEP forester directs otherwise.

6. At the request of the property owner/resident diseased, dying, or dead trees which could threaten AEP facilities will be "made safe", allowing for removal by the customer or private arborist. Generally, all brush and wood generated by this activity should be left on site, unless otherwise directed by AEP Forestry.

**B. Pruning**

1. Contractor practices should be compliance with all applicable industry standards (i.e., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development.
3. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth in Tables I and II.

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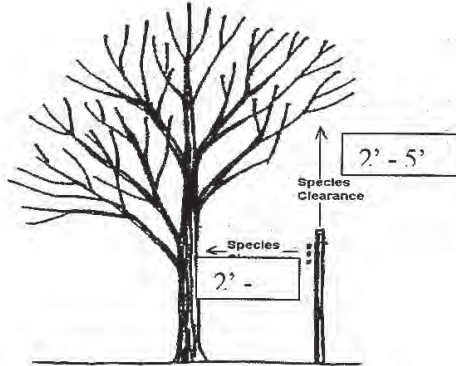
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**3. Twisted, Cabled Secondary, Service Drops or Street Light Conductors -**

Trees near twisted or cabled secondary service drops and street light wires will not be pruned unless limbs are applying pressure to the line. Do not prune for street light illumination except under the specific direction of the appropriate AEP Forestry representative.

**4. Span Guy Wires –** Trees near span guys should only be pruned of heavy limbs applying pressure on the wires.

**5. Poles and down guys -** All poles and down guys will be cleared of all volunteer trees, brush, and slash to obtain a minimum of a five (5) foot radius of clearance around the pole or guy.

**6. Vines -** Should be cut, but not removed from AEP or other facilities, and treated with an herbicide to prevent re-growth. Pulling / removing vines may damage equipment and endanger the employee.

**D. Clearances - Transmission**

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right of way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right of way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no

*[Redacted text block]*

*[Redacted text block]*

*[Redacted text block]*

*[Redacted text block]*

2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of clean up work should be performed, especially when a property owner requests a tree be removed. Unless otherwise designated by AEP Forestry, wood shall not be cut up or hauled away. Where designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum clean up that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the contractor. Any cut debris that inadvertently falls into such an area, or any debris left in an area that may be prone to regular flooding, shall be moved/removed in an appropriate manner (chipped, stacked on top of ditch bank, etc.)

#### **F. Clearing and Re-clearing**

1. AEP Forestry will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into the lines should be controlled, either by removal, herbicide treatment or a combination of both. On distribution lines and areas approved by Transmission Forestry on transmission lines those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities, should be left undisturbed in the right-of-way whenever possible. Variances to this recommendation may be applied due to specific operating company guidelines.
3. During scheduled maintenance operations, prune or remove any vegetation within the rights-of-way of station entrances or exits that may affect the safe operation of AEP facilities, including station fences and equipment.
4. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the appropriate AEP personnel.
5. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practicable, but not to exceed three (3) inches in height above the ground line. Where possible, the cut shall be parallel to the slope and promptly treated with an approved herbicide, unless otherwise directed by AEP Forestry.
6. Trees shall be felled to avoid damage to crops, fences and other facilities. Any trees felled into crops, ditches, streams, roads or

across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP's facilities or the property of third parties, or hinder access along the right-of-way.

7. Tree, brush and slash shall be lopped as designated by AEP Forestry.
8. Danger trees are identified and addressed / worked at the discretion of the individual operating companies or regions. Consideration for danger tree removal shall be made for those trees that are an imminent hazard or threat to AEP facilities. Danger trees may include, but are not limited to, trees that have severe lean or sweep, are dead, or have visible defect or damage. When cut, danger trees shall be cut as low as possible.
8. Stumps of trees growing in fences may be cut at fence post height, as approved by AEP Forestry.
9. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
10. In remote areas, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
11. Brush should not be left in managed agricultural areas or other maintained areas unless designated by AEP Forestry.

#### **G. Herbicide Applications**

1. All woody plants that have the potential of growing into the lines, should be controlled. Those woody plants within the right-of-way that at mature size normally would not threaten lines or interfere with access to AEP's facilities should be left untreated in the right-of-way whenever practical.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made and are required to abide by all Federal, State, and local laws concerning licensing, record keeping, and product handling.
3. Contractors shall attain 100% coverage and 95% control of treated vegetation.
4. AEP Forestry will make vegetation management prescriptions in consultation with contractors.

5. Where required, landowners should be notified before any herbicide treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps should be treated with an appropriate herbicide treatment.

#### **H. Tree Growth Regulator Application**

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (TGR) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in an excessive state of decline shall not be treated unless directed by AEP Forestry.
3. As designated by AEP Forestry, landowners should be notified before any TGR treatments occur. There are several acceptable methods of notification such as personal contact, letter, or door hanger.



**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX I**

**Distribution Line Clearance Guidelines**

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as **minimum clearance** requirements unless designated otherwise by AEP Forestry. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that during maintenance intervals, trees may encroach into these minimum clearance zones. The guidelines are meant to be used as a guide for trimming those trees currently being maintained.

**MINIMUM CLEARANCE FROM CONDUCTORS**

- **Species with Fast Re-growth Rates:** Prune for a *minimum* clearance of 20 feet from conductors

|                |           |
|----------------|-----------|
| Cottonwood     | Willow    |
| Poplar species | Ailanthus |
| Silver maple   | Box Elder |
| Sycamore       |           |

- **Species with Medium Re-growth Rates:** Prune for a *minimum* clearance of 15 feet from conductors

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Locust                          | Hackberry                             |
| Red maple species               | Hickory                               |
| Ornamental pear species         | Crabapple                             |
| Fruit trees (apple, pear, etc.) | Red oak                               |
| Elm species                     | Ash species                           |
| Pine, Spruce & Hemlock species  | Mulberry                              |
| Sweet gum                       | Bois d'arc (Osage orange, hedge tree) |
| Catalpa                         |                                       |

- **Species with Slow Re-growth Rates:** Prune for a *minimum* clearance of 10 feet from conductors

|                           |                         |
|---------------------------|-------------------------|
| Cedar                     | Persimmon               |
| Chinaberry                | White oak (round lobes) |
| Magnolia                  | (Redbud, dogwood, etc.) |
| Any small variety species |                         |

- **Possible Exceptions:**

[REDACTED]

[REDACTED]

**Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance**

**APPENDIX II**

Transmission Line Clearance Guidelines<sup>(7)</sup>

| Column A<br>Nominal Voltage<br>(kV phase to<br>phase) | Column B <sup>(5)</sup><br>NERC Clearance 1<br>(no restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)(2)</sup> and<br>Vegetation | Column C <sup>(3)(5)</sup><br>NERC Clearance 1<br>(with restrictions)<br>Desired Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column D <sup>(3)</sup><br>ANSI Clearance<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation | Column E <sup>(4)</sup><br>NERC<br>Clearance 2<br>between<br>Conductor <sup>(1)</sup> and<br>Vegetation |
|---|---|---|--|---|
| 765 kV  | 45'   | 35' 00"   | 27' 04"  | 14' 0"  |
| 500 kV  | 45'   | 26' 08"   | 19' 00"  | 10' 0"  |
| 345 kV  | 30'   | 20' 05"   | 13' 02"  | 7' 6"   |
| 230 kV  | 30'   | 16' 05"   | 7' 11"   | 5' 2"   |
| 161 kV  | 25'   | 14' 00"   | 6' 00"   | 3' 5"   |
| 138 kV  | 25'   | 13' 02"   | 5' 02"   | 2' 11"  |
| 88 kV & 115kV   | 25'   | 12' 04"   | 4' 06"   | 2' 6"   |
| 69 kV   | 25'   | 10' 09"   | 3' 09"   | 2' 6"   |
| 46kV, 40kV, 34.5<br>kV & 23 kV                        | 20'   | 10' 00"   | 2' 09"   | 2' 6"   |

<sup>(1)</sup> Conductor at maximum sag condition<sup>(6)</sup>

<sup>(2)</sup> Desired clearance to maintain reasonable clearing cycles

<sup>(3)</sup> ANSI Z133.1 rev. 10/2000

<sup>(4)</sup> IEEE Standard 516-2003, Section 4.2.2.3, Tables 5 and 7, calculated clearances (Clearance 2)

<sup>(5)</sup> Application of herbicides will be considered as meeting these guidelines, as long as all treated vegetation meets or exceeds the desired clearance from maximum sag (Table AEP1.2, Columns A and C).

<sup>(6)</sup> AEP Guideline for Determining Maximum Conductor Sag and Blowout for Vegetation Management is to be used to adjust the conductor's found field condition to the maximum sag condition taking into account the conductor size, span length, elevation, and current temperature.

<sup>(7)</sup> (Columns A, B, C, and D) distances exceed clearances for NERC operationally significant circuits noted in NERC Standard FAC-003-1, which gives clearances (Columns A and E) to be maintained between vegetation and conductors under all rated electrical operating conditions, per IEEE Standard 516-2003 (Guide for Maintenance Methods on Energized Power Lines) and as specified in its Section 4.2.2.3, Minimum Air Insulation Distances without Tools in the Air Gap.

# AEP FORESTRY

## *Instructions*

*For*

## **Forestry Contract Crew Audits**

**January 2007**

**The Forestry Contract Crew Safety and Forestry Contract Crew Audits** are tools that AEP Foresters can use to record a tree crew's compliance with safety regulations, contract guidelines and work performance. A crew, or the completed work, is rated as pass or fail and acceptable or unacceptable. Acceptable or pass means a crew meets contract guideline expectations. Unacceptable or fail means a crew, or the completed work, does not meet contract guideline expectations. An unacceptable or fail rating for any single item in the Crew Safety, Forestry Clearance or Forestry Work Quality audit sections will result in a failure rating for the audit section receiving the unacceptable or fail rating.

Each topic found on the Forestry Contract Crew Safety Audit and Forestry Contract Crew Audit is defined in this document. The 10 topics listed under Safety are forestry specific relating to the AEP Contractor Oversight program. The remaining five topics – Clearance, Work Quality, Equipment, Personnel and Reporting Accuracy relate to contract/guideline compliance and work performance.

Definitions of terms used in this document and more detailed explanations of right of way Forestry work compliance standards are supported by and provided in the document "AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations".

One copy of each completed crew audit is to be given to the audited tree crew foreman, one copy to the contractor general foreman/ supervisor responsible for the crew, and one copy kept on file at the responsible/ local AEP forester's office.

All audit information, including comments, should be entered into RWM

**Audit Frequency** – The expectation of AEP Forestry management is that contract crew audits are to be conducted on a regular basis.

**Fail or Unacceptable** - Any item marked 'Fail' or 'Unacceptable' must be explained. Use the comments sections on the audit forms to explain why an item was marked 'Fail' or 'Unacceptable'.

## Safety Audit

**Personal Protective Equipment** - Shall be worn as required by OSHA and ANSI specifications. Such PPE includes and is not limited to:

**Hard Hats** - Shall be worn when entering the job site. Visual inspection of hard hats should be made to insure they are not cracked, broken, or otherwise altered.

**Safety Glasses** - ANSI approved Z87.1 eye protection shall be worn on job site at all times. Safety glasses are required for all jobs.

**Ear Protection** - Shall be worn when running chippers or chainsaws. Exception- not required when using a chainsaw while working in tree.

**Proper Footwear** - Proper work boots that go above the ankle. Footwear should support the foot and ankle area.

**Chain Saw Chaps** - Are to be worn, according to ANSI guidelines, while operating chain saws.

**High Visibility Garments** – Are to be worn when exposed to vehicular traffic.

**Fall Protection Equipment** – Proper fall protection equipment shall be used while working in an aerial lift device or manually climbing. All such equipment shall be inspected on a daily basis for safe working condition.

**Properly Maintained Safety Equipment** - Each truck is required to have a fully stocked, removable first aid kit; fire extinguisher with current fire safety inspection; and wheel chocks.

**Traffic Control Devices** – Approved cones, signs and flagging personnel need to be properly placed in compliance with State and/or Federal DOT regulations (MUTCD). Be sure all vehicles are properly parked adhering to all city and state laws and regulations including OSHA regulations.

**Proper Fall Protection Procedures** – All climbing practices must be in accordance with OSHA and ANSI Z133 standards.

**Properly Barricade Work Area** – Public should be kept away from work area. Safety cones shall be used to isolate work area from public area. Any person not wearing proper PPE shall be escorted out of work area. Unattended equipment should not be left on the ground where it could jeopardize the public or worker safety.

**Properly Maintain and Store Work Tools** – All tools such as chain saws, pole pruners, ladders, etc. that are kept on a work vehicle are to be safely secured and stored away from public availability. Saws with blade scabbards should be stored with scabbard on. Tools should be in good working order and repair.

**Follow Proper Approach Distances** – All tree trimmers are required to follow OSHA 1910.269 minimum clearances for A.C. Live – Line Work Minimum Approach Distances.

**Properly Store and Mark Hazardous Material** – All herbicide sprayers and storage containers shall be properly labeled and kept in a secured location. Flammable liquids shall be stored in approved containers.

**MSDS and Labels Information Available** - Material Safety Data Sheets for all chemicals shall be readily available on each vehicle. State and federal pesticide regulations also require each vehicle to have labels for each herbicide being used by the crew or stored on the vehicle.

**Good Job Site Housekeeping** – Job site shall be kept orderly at all times. Equipment, trimmings and debris need to be contained to allow safe working operations and provide public safety.

### **Clearance Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Tree Pruning- Conductor Clearance** – All tree pruning shall be governed by approved principles of arboriculture and shall adhere to Tree Care Industry Association (TCIA) and International Society of Arboriculture (ISA) standards.

**Primary Conductors- Conductor Clearance** - It is AEP's practice to prune trees in a manner that will direct growth away from the electrical conductors. Growth should be removed to a lateral or parent stem and vertical growth rolled back away from the conductor.

Minimum clearance for distribution system lines should be established by each Operating Company. Overhanging limbs should be removed unless otherwise directed by the appropriate AEP System Forestry representative.

**Secondary Conductors – Conductor Clearance** – Minimum clearance for open wire secondary should be established by each Operating Company. Overhanging limbs should not be removed unless otherwise directed by the appropriate AEP System Forestry representative.

Insulated, Twisted, or Cabled Secondary Conductor Clearance – Will not be pruned unless limbs are applying pressure to the line or unless directed by the appropriate AEP System Forestry representative.

**Tree Removal** – Tree removal is an important part of the AEP line clearance program. Targeted tree removals are all trees with the potential to grow into the conductors., Dead, diseased, fast growing tree species, and trees that cannot be properly pruned to obtain proper clearance for the AEP conductors are removal targets.

Stumps shall be flush cut and treated with an approved herbicide as designated by the appropriate AEP System Forestry representative.

**ROW Width** - AEP forestry will provide the width of the right of way. This area will vary depending on facilities. The full width of the R/W area or easement should be cleared of all tall growing or non-compatible woody plant species unless otherwise instructed by the appropriate AEP System Forestry representative.

**Danger Trees** - Danger trees shall be removed or pruned to eliminate the hazard. When cut, danger trees shall be cut as low as practicable, but not to exceed eight inches in height above the ground line. The logs and slash shall be left as felled, unless otherwise designated by AEP System Forestry.

### **Work Quality Audit**

“AEP System Forestry Goals Procedures and Guidelines for T&D Line Clearance Operations” is the primary document governing Clearance Audits, although some practices may vary between operating companies

**Clearance for Species** - The clearance for a species may be defined as the distance between the tree and conductors after pruning. It is the responsibility of each crew to adhere to the appropriate clearances specified in the AEP guidelines. No exceptions should be made unless otherwise instructed by the appropriate AEP System Forestry representative.

**Hangers Removed** – Any cut or broken limbs left in the tree after pruning shall be removed before leaving work site.

**Collar Cuts** - Collar cuts are important in order to reduce a tree's sprouting. Collar cuts shall be consistently made according to proper arboriculture standards (ANSI A300).

**Directional Pruning** – A pruning practice used to remove branches growing toward conductors; leaving branches growing away from conductors.

**Drop Crotch Selection** – Pruning cuts are to be made, whenever possible, to lateral branches that are at least 1/3 the diameter of the branch being removed.

**Peels / Tears** – Pruning cuts resulting in bark tearing or stripping below a cut shall be avoided.

**Clean Up / Brush Disposal** – All appropriate cleanup work shall be done before leaving a job site unless arrangements have been made with the property owner or AEP forestry personnel. This could include: Chipping or piling brush; removing trash/debris; raking the yard and sweeping driveway, sidewalk or street when appropriate.

**Regard for Property** - All line clearance personnel shall respect the property of the landowner at all times. The crew should take extra effort not to drop limbs on landscaped beds, gardens, yard decorations, fences, roofs, gas meters, cars, etc. The crew should take care not to damage property when walking across or dragging brush.

Ruts or other damage shall be brought to the land owner's attention and addressed accordingly.

**Stump Height** – Stumps should be cut as low to the ground as practical.

**Clearing Around Pole Locations** - A radius of five feet shall be cleared to provide a safe work area free of obstruction from vegetation around each pole location.

**Herbicide Application** – Herbicide applications shall be done in accordance with all Federal, State, and local laws. Contractors shall obtain 100% coverage and at least 95% control of all targeted woody plants.

**Tree Growth Regulator** – Trees designated for Tree Growth Regulators (TGR) shall be treated with an approved product in accordance with the label instructions.

### **Reporting Accuracy Audit**

**Number of trees trimmed** – Record timesheet data. Count the number of trees trimmed by a crew and record on audit sheet.

**Number of trees removed** – Record timesheet data. Count the number of trees removed by a crew and record on audit sheet.

**Footage/Units/Acres Re-cleared** - Record timesheet data. Field count the work completed by a crew.

**Footage/Units/Acres Ground Sprayed** - Record timesheet data. Field count the work completed by a crew.

### **Non-KPI Audit Items**

**Truck Appearance / ID** - Name of contractor clearly displayed with DOT numbers properly displayed. No personal bumper stickers. No long-standing, visible spills.

**Number of Working Saws** – Determined per contract specifications based on type of crew. These saws start and idle without assistance and have a maintained bar and chain.

**R/W Equipment/Chipper** - The proper vehicle, mower, or trimmer unit shall be used based on work location and tree/brush conditions. Chipper starts when key is turned on. Chips are of small size (2"-6"), and not stringy. Brush feeds correctly into chipper and chute deposits chips as directed.

**Crew Properly Equipped** –Each crew shall be equipped according to AEP contract specifications. Crews shall have all necessary tools, on a daily basis, to complete



assigned work productively. For example; ropes, saddles, saws, pruner poles, herbicide sprayer, etc...

**Herbicide Equipment** - Each crew shall have all necessary tools, sprayers and product to ensure safe, productive herbicide applications. Equipment must be in good working condition. All crews shall have all necessary PPE, sprayers etc. to apply according to label instructions.

**AEP Guidelines** - A complete, legible and current set of the AEP Forestry Guidelines and clearance specs is kept in the vehicle (English or Spanish).

**Professional Appearance** - All contract employees will conduct themselves and dress themselves in a manner that positively represents AEP. If required by AEP contract specifications, contract employees must be wearing contractor uniform (i.e. appropriate color T-shirt). Crew must be neat in personal appearance - no excessive holes in clothes and facial hair neat in appearance.

**Manpower Utilization** - All contract employees and equipment shall be used in a fashion that is conducive to maintaining safe work practices and production goals. Look to see if crews are working in efficient manner (i.e. standing around doing nothing, trees that should be treated with herbicide should not be cut then sprayed). Everyone on a crew must be working as a team. If workflow is disjointed with no organization, it is unacceptable. A job briefing should be held each morning to ensure that everyone knows their responsibilities and can perform their tasks in a safe and productive manner.

**Customer Relations** - All contractors will respect the needs and concerns of the customer or landowner. Demonstrate, on an ongoing basis, effective, courteous communication with AEP customers (both internal and external) and landowners and the general public.

**Tree Knowledge** - All members of a crew shall be able to identify and distinguish growth characteristics of trees common to their geographical work area. Ask crews to identify trees in their surrounding area.

**Planning** - The crew should work in a systematic and organized fashion on a daily basis (i.e. not skipping around). The crew supervisor should have a plan for the day and be prepared to discuss that plan with the property owner and any utility employee. It is the responsibility of each crew member to inform their supervisor of any equipment needs that may stand in the way of production or safety.

**Use of Forms** - Forms such as time sheets and production logs, herbicide records, refusal forms, removal cards etc. are filled out completely and accurately and kept up-to-date with all important information. Items such as tree count can be written in daily dairies before being transferred to the correct form; however they must be in a coherent and ordered format.

### Sample Audit Form

#### AEP FORESTRY CONTRACT (KPI) CREW AUDITS

No. \_\_\_\_\_

Audit Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Audit Quarter: 1 2 3 4 (circle one) Operating Co.: \_\_\_\_\_  
 Auditor Name: \_\_\_\_\_ State: \_\_\_\_\_  
 Crew Number: \_\_\_\_\_ District: \_\_\_\_\_ Forestry Region Number: \_\_\_\_\_  
 Circuit #: \_\_\_\_\_ Foreman/ General Foreman: \_\_\_\_\_  
 Circuit Name: \_\_\_\_\_ Pole Number: \_\_\_\_\_

#### Forestry Contract Crew Safety (KPI) Audit CHECK ONE: PASS FAIL

- Failure ratings for any single item will result in failure of this audit.
- Failure must be documented in comments fields and will require random periodic follow up observation.

|  | PASS                     | FAIL                     | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Personal Protective Equipment-<br>Shall be worn as required. Includes but not limited to hard hats, safety glasses, ear protection, proper footwear. | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 Property Maintained Safety Equipment-<br>Fully stocked, removable first aid kit, fire extinguisher and wheel chocks.                                 | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Traffic Control Devices-<br>Approved and placed in accordance with applicable State and Federal regulations.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 4 Proper Fall Protection Procedures-<br>All climbing practices must be in accordance with OSHA and ANSI Z -133 standards.                              | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 5 Properly Barricade Work Areas-<br>Barricade material available and used in accordance with safety rules.   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 6 Properly Maintain and Store Work Tools   | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 7 Follow Proper Approach Distances-<br>Follow OSHA 1910.269 minimum clearances for AC Live Work Minimum Approach Distances.                            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Acceptable/Unacceptable on items below

- An Unacceptable ratings may result in failure of this audit dependent on magnitude and frequency of the violation.
- Any item found to be Unacceptable must be documented in the comments fields and will require random, periodic follow up observation.

|  | ACCEPTABLE               | UNACCEPTABLE             | COMMENTS |
|--|--------------------------|--------------------------|----------|
| 1 Hazardous material properly stored, labeled and documented | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 2 MSDS and Herbicide Label information available             | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| 3 Jobsite Housekeeping                                       | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Forestry Clearance ( KPI) Audit CHECK ONE: PASS FAIL

| Pass / Fail         | PASS                     | FAIL                     |              | PASS                     | FAIL                     | COMMENTS |
|---------------------|--------------------------|--------------------------|--------------|--------------------------|--------------------------|----------|
| Conductor Clearance | <input type="checkbox"/> | <input type="checkbox"/> | Danger Trees | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| ROW Width           | <input type="checkbox"/> | <input type="checkbox"/> |              |                          |                          | _____    |

#### Forestry Work Quality (KPI) Audits CHECK ONE: PASS FAIL

|                       | PASS                     | FAIL                     |                       | PASS                     | FAIL                     |                        | PASS                     | FAIL                     | COMMENTS |
|-----------------------|--------------------------|--------------------------|-----------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------|
| Collar Cuts           | <input type="checkbox"/> | <input type="checkbox"/> | Stump Height          | <input type="checkbox"/> | <input type="checkbox"/> | Peels/Tears            | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Directional Pruning   | <input type="checkbox"/> | <input type="checkbox"/> | Hangers               | <input type="checkbox"/> | <input type="checkbox"/> | Cleanup/Brush Disposal | <input type="checkbox"/> | <input type="checkbox"/> | _____    |
| Drop Crotch Selection | <input type="checkbox"/> | <input type="checkbox"/> | Clearing around poles | <input type="checkbox"/> | <input type="checkbox"/> | Regard for property    | <input type="checkbox"/> | <input type="checkbox"/> | _____    |

#### Reporting Accuracy (KPI) Audit

Week ending date: \_\_\_\_/\_\_\_\_/\_\_\_\_

|                                      | Timesheet Data           |                          | Audit Data |       | Variance |       |
|--------------------------------------|--------------------------|--------------------------|------------|-------|----------|-------|
|                                      | Cap                      | O&M                      | Cap        | O&M   | Cap      | O&M   |
| Number of trees trimmed              | _____                    | _____                    | _____      | _____ | _____    | _____ |
| Number of trees removed              | _____                    | _____                    | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acres Re-cleared     | _____                    | _____                    | _____      | _____ | _____    | _____ |
| Footage/ Units/ Acres Ground Sprayed | _____                    | _____                    | _____      | _____ | _____    | _____ |
| YES NO                               |                          |                          |            |       |          |       |
| Widening                             | <input type="checkbox"/> | <input type="checkbox"/> |            |       |          |       |

#### Non - KPI Crew Audit Items

|                        | PASS                     | FAIL                     |                         | PASS                     | FAIL                     |                        | PASS                     | FAIL                     |                | PASS                     | FAIL                     |
|------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|----------------|--------------------------|--------------------------|
| Equipment & Personnel  | <input type="checkbox"/> | <input type="checkbox"/> | Professional appearance | <input type="checkbox"/> | <input type="checkbox"/> | Crew Properly Equipped | <input type="checkbox"/> | <input type="checkbox"/> | Tree Knowledge | <input type="checkbox"/> | <input type="checkbox"/> |
| Truck Appearance/ID    | <input type="checkbox"/> | <input type="checkbox"/> | Manpower utilization    | <input type="checkbox"/> | <input type="checkbox"/> | Herbicide Equipment    | <input type="checkbox"/> | <input type="checkbox"/> | Planning       | <input type="checkbox"/> | <input type="checkbox"/> |
| Number of Working Saws | <input type="checkbox"/> | <input type="checkbox"/> | Customer Relations      | <input type="checkbox"/> | <input type="checkbox"/> | AEP Guidelines         | <input type="checkbox"/> | <input type="checkbox"/> | Use of Forms   | <input type="checkbox"/> | <input type="checkbox"/> |
| ROW Equipment/Chipper  | <input type="checkbox"/> | <input type="checkbox"/> |                         |                          |                          |                        |                          |                          |                |                          |                          |

ADDITIONAL COMMENTS: \_\_\_\_\_

AEP REPRESENTATIVE: \_\_\_\_\_ CONTRACTOR REPRESENTATIVE: \_\_\_\_\_

**AEP Kentucky Power Distribution Line Clearance Guidelines\***

July 2010

|  | <b>RIGHT-OF-WAY WIDTH</b>   | <b>BRUSH CUT</b>   | <b>STUMP TREATMENT</b>                              |
|--|---|--|---|
| <b>Multi-Phase primary facilities</b>  | ROW Width Varies. Reclear established ROW width to tree-line. If tree-line is indiscernible, reclear to 50 foot width | All Incompatible woody species are cut. In non-maintained areas, Cut Brush & Limbs shall be lopped in a manner not to exceed two feet in height. All pole bases cleared to a 5' radius free of vegetation. | Required for all cut stumps within the Right-of-Way |
| <b>Single-Phase primary facilities</b> | ROW Width Varies. Reclear established ROW width to tree-line. If tree-line is indiscernible, reclear to 40 foot width | All Incompatible woody species are cut. In non-maintained areas, Cut Brush & Limbs shall be lopped in a manner not to exceed two feet in height. All pole bases cleared to a 5' radius free of vegetation. | Required for all cut stumps within the Right-of-Way |
| <b>Open-Wire and Cable Secondary</b>   | Reclear to established width. Minimum of 5'   | All pole bases cleared to a 5' radius free of vegetation   | Required for all cut stumps within the Right-of-Way |

\*Refer to AEP Forestry Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations 5/14/2009

# EXHIBIT C

Kentucky Power Rate Clarifications  
May 15, 2012

**1. Holidays**

- a. Contractor holidays include New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.
- b. Owner recognizes the following additional holidays: Good Friday, the day after Thanksgiving, and the day before Christmas.
- c. Contractor shall not schedule work on Owner holidays unless requested in writing by Owner or the holiday has been agreed to as a regularly scheduled day.
- d. Contractor shall not bill Owner for its employees' holiday pay. Holiday pay is covered as part of the benefits mark-up.
- e. On years when a Contractor or Owner holiday falls on a weekend, Owner shall notify Contractor of the date the holiday will be observed.

**2. Calculations and Examples**

- a. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
- b. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday at Owner's request.
- c. When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.
- d. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in 2.a above.
- e. Calculation examples are provided below.

Straight Time Rate = Taken from table

Overtime Rate = Straight Time Rate x 1.5

Sunday/Holiday Rate = Straight Time Rate x 2

Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)

Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)

Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)

Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate +  
(Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

|   |  |
|---|--|
| Straight Time Billing rate:                 | $\$15.35 + (\$15.35 \times .6644) = \$25.55$ |
| Overtime Billing rate:                      | $\$23.03 + (\$23.03 \times .3338) = \$30.72$ |
| Overtime storm restoration Billing rate:    | $\$23.03 + (\$23.03 \times .45) = \$33.40$   |
| Double Time Billing rate:                   | $\$30.70 + (\$30.70 \times .3338) = \$40.94$ |
| Double Time storm restoration Billing rate: | $\$30.70 + (\$30.70 \times .45) = \$44.52$   |

### 3. Herbicide Application

- a. When Contractor's employees are assigned to apply herbicides, their hourly rate will be increased by \$0.20. Anyone assigned to perform herbicide application must be certified, licensed, registered or otherwise qualified as required by the state where the Work is being performed or as otherwise required by law, statute or regulation. This increase does not apply to employees applying stump treatment as part of their normal daily duties.

### 4. Special Supervisor Payment

- a. If Owner has declared a major storm, or when otherwise determined by Owner and authorized in writing, Supervisors may be paid at the General Foreman straight time rate for all hours worked in excess of forty (40) per week. Contractor shall bill Owner the straight time rate without mark-ups.

### 5. Pay During Training

- a. Owner shall pay Contractor's employees' hourly rate while said employees attend either Owner-sponsored training or other training required and agreed to by Owner to obtain or retain a professional certification. All other training shall be Contractor's responsibility. Unless otherwise agreed to by Owner in writing, no other billing relating to attendance at training will be paid.

### 6. Travel to Work Site

- a. Contractor will designate a reporting site acceptable to Owner for each work area. A travel allowance (not to exceed one-half hour each way) will be allowed for travel via the most direct route from the reporting site to the work location while the crew is working in that work area. The Owner will not pay travel time from any other location unless otherwise agreed to.

### 7. Per Diem Rates

- a. When agreed by Owner and Contractor, Per Diem will be paid to crewmembers when performing Work outside their normal work area [out-of-town] at the following rates:

- \$20.00 per crewmember per day, for crewmembers who rent a house/apartment.
  - \$30.00 per crewmember per day, for crewmembers staying in a hotel with a cost of less than \$50.00 per night (hotel receipts must be submitted with invoice).
  - \$40.00 per crewmember per day, for crewmembers staying in a hotel with cost greater than \$50.00 per night (hotel receipts must be submitted with invoice).
- b. When held over at the request of the Owner on regularly scheduled work days, crew members shall be eligible for a meal if held over for two hours or more after normal quitting time. Owner shall reimburse Contractor \$12.00 per meal for each crew member entitled to a meal unless meals are provided by Owner.
- c. For Contractor employees entitled to a meal in accordance with the Supplementary Terms, Section 2, Item 2.8: Contractor personnel shall be off the clock for meal breaks. Owner shall reimburse Contractor \$12.00 per meal for each employee entitled to a meal unless meals are provided by Owner. Contractor personnel shall be on the clock for meals if they do not stop work to eat. Not stopping work to eat means eating on-the-fly at the jobsite (personnel spend less than 10 minutes eating) or while traveling from jobsite to jobsite. Owner shall not reimburse Contractor for breakfast or lunch meals if Contractor personnel return to their homes at night

## 8. Quarterly True-up

- a. Contractor and Owner have agreed to job classifications and labor rates for Work performed under the Contract as found in the Rate Sheets in Exhibit C. Contractor utilizes the established rates, multiplied by overheads, to bill Owner for hours worked. Both parties recognize that different employees in the same job classifications may be paid a rate more or less than the established rates, but agree that the average rate paid for hours worked in each job classification shall not exceed the established rate.
- b. By the last working day of the month following the end of each fiscal quarter, Contractor shall provide for each job classification within the Contract: the total number of hours worked at straight time rates, overtime rates and holiday rates, and the gross wages paid by Contractor to its employees for the hours worked at each rate: straight time, overtime and holiday. The difference between the straight time hours worked multiplied by the established rate, plus the overtime hours worked multiplied by 1.5 times the established rate, plus the holiday hours worked multiplied by 2 times the established rate, and the gross wages paid by Contractor for each job classification shall be totaled. Appropriate overhead markups shall be applied and settlement between the two parties shall be made. Contractor must present Owner with a plan to reduce the difference, if the difference in any single classification is greater than five percent (5%) for two (2) consecutive quarters.
- c. When the difference for all classifications, viewed individually within a contract unit, is less than 1% of the gross wages paid for 2 consecutive quarters, the true-up shall become a semi-annual process, following the end of the 2<sup>nd</sup> and 4<sup>th</sup> quarters. The semi-annual true-up will be based on the prior quarter's billing, not the entire six month period. In all true-ups, the settlement will be calculated and paid to the appropriate party. If the difference for all classifications, viewed individually within a contract unit, in a semi-annual true-up is equal to or exceeds 1% (one percent) of the gross wages paid, the true-ups shall again be made on a quarterly basis until the difference again drops to less than 1% (one percent).

## Unit Price Model

April 30, 2012

Services may be paid under the following Unit Price model.

### 1. Unit Price Model Overview

Unit Price is a model where a Unit Price hourly rate is paid to Contractor for all work units completed in an assigned Circuit. The Unit Price hourly rate includes all costs, including but not limited to, wages, supervision, overheads, profit, equipment and materials required to complete the assigned Work. While the Unit Price hourly rate includes the labor required to apply herbicides, it does not include the cost of the herbicides. The Unit Price hourly rate is multiplied by the assigned work hour per unit, a rate that is assigned for each specific work unit (tree trim, tree removal, brush cut, etc.). This is a rate that has been determined to complete a unit of Work on the assigned Circuit, as agreed by the Owner and Contractor. All Unit Price Work issued to Contractor shall be completed by the agreed upon completion date.

### 2. Unit Price Calculation

#### a. Man Hours per Unit Calculation

Unit Price uses historical average times, or other method agreed to by Owner and Contractor, required to perform a specific type of Work (tree trim, tree removal, brush cutting, brush spraying) ("Work Unit") and includes all time necessary to complete that Work, including but not limited to travel, actual job site time, debris disposal, landowner contacts, immediate crew supervision and appropriate non-productive time (such as time lost to inclement weather and minor on-the-job equipment breakdown).

- I. Owner shall explain the method of calculation and the information used in a Circuit to Contractor's supervision and management prior to authorizing Work.
- II. The average times used to calculate hours per unit can be collected by distribution circuit, portions of a given circuit (sub-circuit), or other defined geographic area within the Contract region (e.g. "Circuit" or "Area.")
- III. The historical average times are developed by accumulating data for vegetation management Work performed on the Circuit during the last three calendar years or other time period as agreed by Owner and Contractor. Each time a Circuit is scheduled for maintenance, a new three-year average is calculated by replacing the earliest year's data with the most recent or next successive year's data. This rolling three year average is given in hours per unit.
- IV. If there are inconsistencies in the three-year data based on disparity in the actual work within a specific Contract region, the Owner and Contractor may agree to use another method to generate the hours per unit. This method shall be documented in the Work Request authorizing the Work.

#### b. Unit Price Calculation

Contractor has submitted a Unit Price hourly rate that shall be used for all units of Work performed, regardless of the Work Unit type. The cost for a given unit of Work (e.g. for a given Circuit) is established by multiplying the Contractor's Unit Price hourly rate for



that Work Unit by its hours per unit. If the Unit Price hourly rate is \$20.00 and the hours per unit is 1.25 hours, Contractor earns 1.25 hours x \$20.00 – \$25.00 for each unit of that Work Unit.

### **3. Job Assignment**

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned; prepare a Unit Price Sheet (sample attached); include any exceptions to the hours per unit; and shall schedule a field review with the Contractor to discuss the Work assignment, including how the hours per unit were developed. An exception to the hours per unit might be a tree removal where the location and size of the tree and its proximity to structures cause a substantial increase in the hours per unit required for the removal. These exceptions must be agreed to by both Parties and are not to include those deviations that are normally encountered in performing a Work Unit.

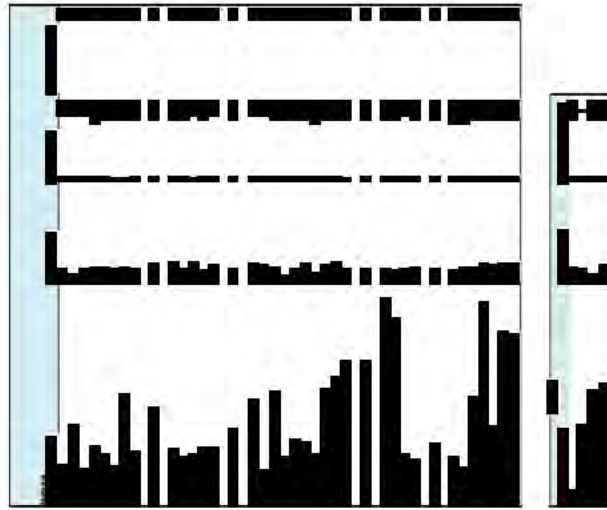
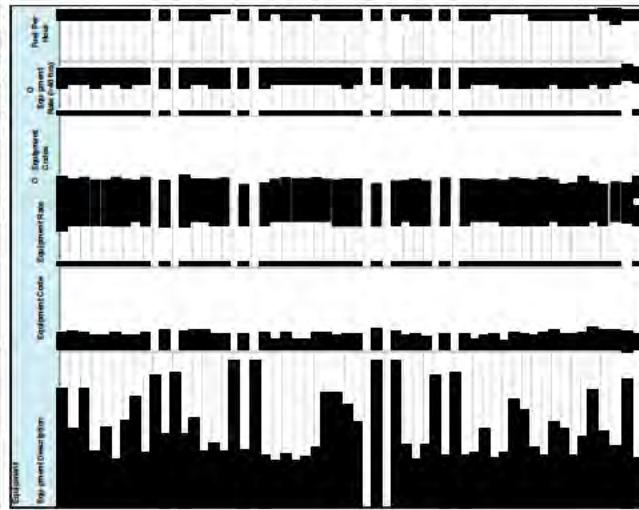
At the field review, Owner and Contractor shall review all the Work, agree to the exceptions to the hours per unit, agree to the Unit Price Sheet and determine a start date for the Work. A Work Request (“WR”), similar to the sample attached, shall be signed by both Parties and constitutes the written authority for Contractor to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Unit Price Sheet, the map, a list of exceptions to the hours per unit, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date, but subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor’s work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. The work planners, per current practice, shall be paid on a time and material basis and will not be included within the stated Unit Price or Unit Price calculation. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor’s employees are unable to resolve their concerns quickly, Contractor’s employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

**RATES FOR KPSC - Ashland**

ROW Vegetation Management Rate Sheet  
# 22172



## Lump Sum Price Model

April 30, 2012

Services may be paid under the following Lump Sum Price model.

### **1. Authorizing Work**

Owner and Contractor may agree to perform work based on a Lump Sum price for the specified Circuit.

Owner shall assign jobs averaging 300-500 hours of Work whenever feasible. An entire Circuit is generally assigned as a single job; however, jobs of more than 500 work hours can be divided into smaller jobs, if requested, for cash flow or scheduling purposes. Owner shall: prepare a map for the Work to be assigned, complete a Lump Sum Price Sheet; and schedule a field review with the Contractor to discuss the Work assignment.

At the field review, Owner and Contractor shall review all the Work, agree to the Lump Sum Price and determine a start and end date for the Work. A Work Request ("WR") for Lump Sum Price Work, similar to the sample attached, shall be signed by both Parties and constitutes the Contractor's written authority to proceed. The WR shall include the agreed upon start and completion dates for the Work, the agreed to Lump Sum Price, the map, and any supplemental information accompanying the map. Owner and Contractor will monitor job progress and, because of the difficulty associated with assessing the damages caused by delay, Contractor may be assessed liquidated damages, not a penalty, of \$100 per day for jobs not completed within the agreed upon time. Liquidated damages of \$100 per day may also apply if a WR has been submitted as complete prior to the completion date but is subsequently rejected for Work that was not performed in conformance with the WR and the non-conforming Work is not brought into conformance by the agreed upon completion date.

Contractor's work planners shall preplan Work and contact key landowners prior to Contractor beginning Work. Work planners patrol the lines, identify all Work on a map and make all necessary arrangements with landowners. Contractor is responsible for leaving timely door hanger notifications (furnished by Owner) and answering customer inquiries about the assignment. Unless otherwise instructed in the WR, further landowner contact is not required and all assigned Work is to be completed within the specified time. As a common courtesy and whenever practical, Contractor employees shall identify themselves to property owners upon entering the property to perform assigned Work.

If a property owner objects to assigned Work and Contractor's employees are unable to resolve their concerns quickly, Contractor's employees should leave the property and report the problem to Owner. An Owner representative shall promptly contact the property owner to resolve all concerns, and shall update Contractor accordingly. If Contractor fails to report the problem to Owner while the Work assignment is still in progress, Contractor cannot raise that problem to excuse any performance issue or the completion of the assignment according to specifications.

| Labor                                      |            | August 1, 2011   |
|--|------------|--|
| Labor Description                          | Labor Code | Comments   |
| Equipment Operator                         | EO         | An equipment operator shall be able to operate and perform minor maintenance on a ROW brush mower or bulldozer   |
| General Foreman A/<br>General Foreperson A | GFA        | The primary contact with AEP Forestry field representatives Has worked a minimum of 12 months as an Assistant General Foreperson and should be ISA certified Individuals are responsible for all aspects of the contractor's local field operation including and not limited to employee safety, equipment maintenance, work planning effect (if applicable), and emergency response   |
| Foreman A/Foreperson A                     | FA         | Meet all the qualifications of a Foreperson B Has worked a minimum of 12 months as a Foreperson B and should meet all state required herbicide qualifications Is able to competently work and lead others with no direct supervision   |
| Foreman B/Foreperson B                     | FB         | Meet all the qualifications of a Trimmer A Individuals have completed all line clearance foreperson certification/ training programs as required Must be able to work and lead others with limited supervision Has worked a minimum of 18 months in the line clearance industry Must be able to effectively communicate with AEP representatives and landowners Must be able to prepare required record documents, read and follow instructions on maps and notification records Must possess a CDL and pesticide certification as required  |
| Work Planner A                             | WPA        | Meet all qualifications of Work Planner B and be ISA certified Two years experience as a Work Planner II or three years related utility experience Consistent work planning accuracy greater than or equal to 95% Demonstrates initiative and pro-actively looks for ways to do work cost effectively Demonstrated abilities in teamwork, leadership and problem solving Willing to travel and stay away from home overnight   |
| Work Planner B                             | WPB        | Meet all qualifications of Work Planner C and working towards ISA certification Six months satisfactory performance as a Work Planner C or related utility experience Thorough knowledge of species and growth characteristics of trees located in assigned work area Good understanding of electrical facilities and hardware and associated line/circuit maps Understanding of electric utility vegetation management and ability to communicate such to property owners Work effectively with people (utility, contractors, customers, etc ) Demonstrated ability to work safely and efficiently with minimal supervision and have the ability to travel and stay overnight |
| Work Planner C                             | WPC        | Two-year Degree in Forestry, Arboriculture, etc , or related utility experience is desirable Good verbal and written communications skills Positive attitude/neat professional appearance Able to work outside in a safe, productive manner in all weather conditions Valid drivers license  |
| General Foreman B/<br>General Foreperson B | GFB        | Individuals shall be able to communicate effectively with utility representatives, the public and their direct reports Determine the most effective manner within established guidelines of how to treat vegetation conditions and coordinate and instruct crew activities to safely and effectively complete an assigned task Must possess a pesticide license and where required strive to become a certified arborist   |
| Trimmer A                                  | TA         | Meet all qualifications of Trimmer B Individuals have completed all climbing trimmer and bucket (where required) certifications Individual has worked a minimum of 12 months in the line clearance industry Is able to perform all aspects of tree trimming and tree removal including and not limited to rigging ropes, and pulling overhang, and any other assigned duties in a safe, consistent, competent manner Individuals should be capable of filling in for a crew foreperson on a limited basis and have started foreperson training as required by the employer   |
| Trimmer B                                  | TB         | Meet all qualifications of Trimmer C Individual have completed climbing trimmer training Individual has worked a minimum of 6 months in the line clearance industry  |
| Trimmer C                                  | TC         | Entry level or trainee position that requires the individual passes screening criteria as established by employer A Trimmer C shall be able under direction to safely perform a variety of job duties including and not limited to chain saw maintenance, operate a brush chipper, and apply herbicides, clear and cut trees and brush They shall begin climbing trimmer training Must possess a valid drivers license, CPR and First Aid certification and where required CDL and pesticide certification   |

**Work Request  
For  
Unit Price/Time and Materials Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Unit Price/Time and Materials Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

If no map is attached, identify the circuit, sub-circuit, or the specific geographic area identifying the Work to be performed.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

**Unit Price ---** Contractor’s weekly billing shall be calculated using the number of units completed during the week being billed multiplied by the cost per unit from the Rates as found in the Contract.

**Time and Materials –** Contractor’s weekly billing shall be calculated using the following formula: (labor classification X number of hours worked during billable period) + (equipment rate X number of hours used during billable period). The labor classifications and equipment rates used will be in accordance to the Rates as found in Exhibit C of the Contract

Unless otherwise stated in this Work Request or the attached map, pricing will be per the price model as selected above and in accordance with the Rates as found in Exhibit C of the Contract.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

By: \_\_\_\_\_  
Print  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**WORK REQUEST  
For  
Lump Sum Work**

**Work Request No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Issued By:** \_\_\_\_\_  
(Owner)

**Issued To:** \_\_\_\_\_  
(Contractor)

This Work Request for Lump Sum Work shall be governed by the Terms and Conditions of Contract No. \_\_\_\_\_ (“Contract”) between Owner and Contractor and is further described as follows:

**Description of Work:**

The Work to be performed is (check **one**):

Work shall be performed in accordance with the attached Request For Quote (“RFQ”) attached hereto.

Map is attached and is for the sole purpose of describing the Work to be performed. Any terms and conditions in the Proposal that are inconsistent with those of the Contract are expressly rejected by Owner.

Work shall be started on or about \_\_\_\_\_ and shall be completed by \_\_\_\_\_.

**Pricing:**

Unless otherwise stated in the Work Request, Contractor shall be paid the total cost for the Circuit upon completion of all Work and subsequent acceptance by Owner. Contractor shall perform all Work for the lump sum amount of \$ \_\_\_\_\_.

**Agreed to and accepted by Owner and Contractor on the date of their authorized agent’s respective signature below.**

**Owner:**

**Contractor:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**PRICING CHANGE ORDER**

---

Contract # : \_\_\_\_\_

Request Date: \_\_\_\_\_

Owner: \_\_\_\_\_

Contractor: \_\_\_\_\_

This Change Order to the above numbered Contract shall modify the terms and conditions of the Contract as set forth herein. Any terms, conditions or provisions not specifically addressed or modified by this Change Order shall remain in full force and effect as agreed to in the Contract.

- Specific reason(s) for Change Order:     Rate Addition(s)                     Rate Deletion(s)
- Rate Description Change(s)     Rate Code Change(s)
- Other (please describe): \_\_\_\_\_

| Labor  |                   |            |            |      |      |      |
|--------|-------------------|------------|------------|------|------|------|
| Reason | Labor Description | Labor Code | Labor Rate | ST   | RH   | DT   |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |
|        |                   |            | \$ -       | \$ - | \$ - | \$ - |

| Storm  |                   | STORM LOADED RATES |      |      |      |
|--------|-------------------|--------------------|------|------|------|
| Reason | Labor Description | Labor Code         | ST   | RH   | DT   |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
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|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |
|        |                   |                    | \$ - | \$ - | \$ - |



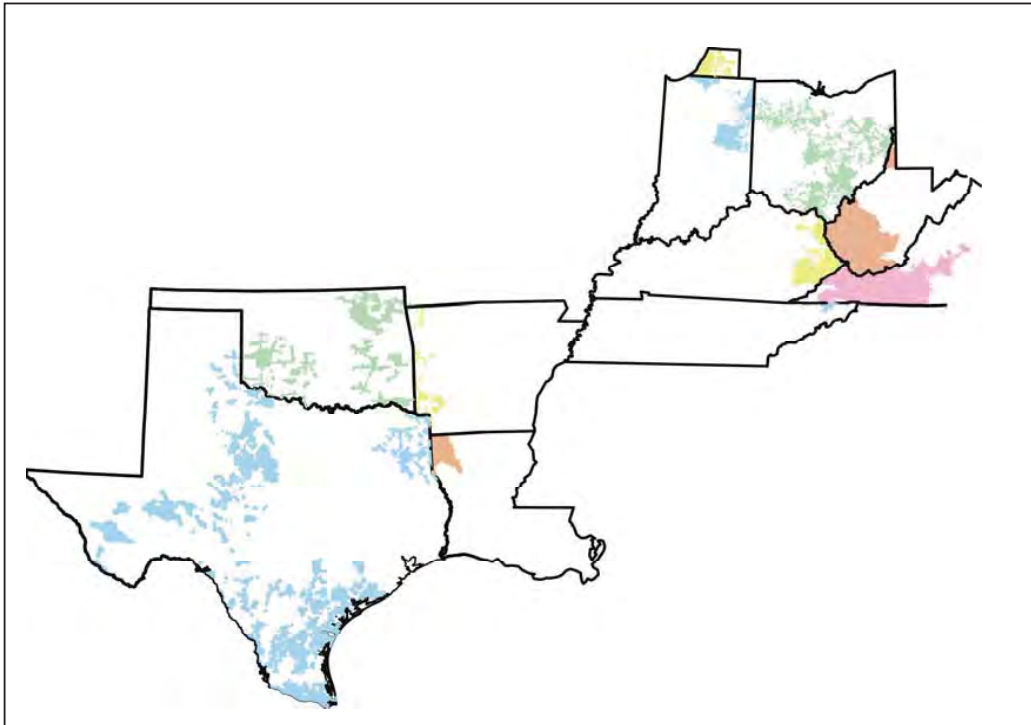




# EXHIBIT D

# KPCO DISTRIBUTION 2012/2013 KEY PERFORMANCE INCENTIVE PLAN GUIDELINES FOR WRIGHT TREE SERVICE

"Complete KPI guidelines are not available at this time for this Operating Company. KPI documents will be created within nine (9) months from issue date of first Work Request."



### FIRST AMENDMENT TO CONTRACT NO. 02572604X110

This First Amendment to Contract No. 02572604X110 ("First Amendment") executed to be effective January 1, 2014 ("First Amendment Effective Date"), is entered into by and between **Kentucky Power Company**, a Kentucky corporation ("Owner" or "KPCO") and **Wright Tree Service, Inc.**, an Iowa corporation ("Contractor").

**WHEREAS**, Contractor and Owner entered into Contract No. 02572604X110 with an Effective Date of October 1, 2012, whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the terms and conditions of the Contract as set forth below.

**NOW THEREFORE**, in consideration of the foregoing premises, the covenants and agreements herein contained, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto, hereby agree as follows:

1. In Exhibit C, the existing Rate Sheets dated April 1, 2012 shall be removed and replaced with the Contractor's Rates for KPCO (Ashland, Hazard, and Pikeville), all dated January 1, 2014 (individually or collectively the "Rate Sheets"). Contractor's Rate Sheets shall be held firm through May 31, 2015;

2. In Section 5 – Pricing, remove the third paragraph and replace with the following:

"Beginning June 1, 2015, and on June 1<sup>st</sup> each year thereafter, Contractor's labor rates will be adjusted using the Bureau of Labor Statistics, U.S. Department of Labor, Employment Cost Index (ECI) for Total Compensation (not seasonally adjusted), for Private Industry Workers, Construction, Extraction, Farming, Fishing and Forestry industry (Series Id: CIU2010000405000A). The percent change for the 12-months ended in March of the year of the adjustment will be multiplied by the current labor rates to determine the adjusted labor rates.

All other rates in Contractor's Rate Sheets may be revised annually. Proposed changes must be submitted by February 15<sup>th</sup> and, if accepted by Owner, shall become effective on June 1<sup>st</sup> of that year.";

3. In Section 9, Notices and Operation Contacts, delete Georgiana Sullivan and associated information and replace with the following:

| Role             | Name                  | E-mail            | Phone        | Address  |
|------------------|-----------------------|-------------------|--------------|--|
| Contract Analyst | Sonia Vaughan Pickens | srvaughan@aep.com | 614.716.1357 | 1 Riverside Plaza, 9 <sup>th</sup> fl., Columbus, OH 43215 |

4. Except as amended by this First Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

  
Mark Jackson  
Supervisor – Region Forestry

  
Steven Pietzyk  
Vice President, Division Operations

11/06/2013  
ite

12-17-13

6/24/16 - Corrected Equip. Codes  
on PCO - rates correct  
in CAMPS

[Faint, mostly illegible text]

| Account    | STB        | DT1        | DT1        | D3Y        | D3Y        |
|------------|------------|------------|------------|------------|------------|
| [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] |
| [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] |
| [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] |
| [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] |

[Faint, mostly illegible text]

Kentucky Power Distribution Forestry



|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |

|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

**Per Diem Eligibility Number:**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from the individual's normal reporting site.
2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

*Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.*

**RATES FOR KPCCQ**

**ROW Vegetation Management Rate Sheet**

| Job Code | Unit     | Rate     | Unit     | Rate     | Unit     | Rate     | Unit     | Rate     |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 09010218 | 09042018 | 09082018 | 09102018 | 09122018 | 09142018 | 09162018 | 09182018 | 09202018 |
| 09010218 | 09042018 | 09082018 | 09102018 | 09122018 | 09142018 | 09162018 | 09182018 | 09202018 |
| 09010218 | 09042018 | 09082018 | 09102018 | 09122018 | 09142018 | 09162018 | 09182018 | 09202018 |

| Job Code | Unit     | Rate     | Unit     | Rate     | Unit     | Rate     | Unit     | Rate     |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 09010218 | 09042018 | 09082018 | 09102018 | 09122018 | 09142018 | 09162018 | 09182018 | 09202018 |
| 09010218 | 09042018 | 09082018 | 09102018 | 09122018 | 09142018 | 09162018 | 09182018 | 09202018 |
| 09010218 | 09042018 | 09082018 | 09102018 | 09122018 | 09142018 | 09162018 | 09182018 | 09202018 |

| Job Description | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |

| Job Description | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |

| Job Description | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |

| Job Description | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |

| Job Description | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code | Equipment Code |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |
| 09010218        | 09042018       | 09082018       | 09102018       | 09122018       | 09142018       | 09162018       | 09182018       | 09202018       |

\*Multiple rates will be charged when system crews are used for a period of 1 emergency work. These rates would also be used for any regular AEP work off system crews during the contract period.



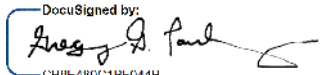
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**AMERICAN ELECTRIC POWER SYSTEM  
ENERGY DELIVERY  
TOTAL EVALUATED COST**

**COMPANY:** Kentucky Power Company      **REGION:** Kentucky  
**TYPE OF CONTRACT:** Contract      **CONTRACT #:** 02574631X110  
**CONTRACTOR:** Wright Tree Service  
**SCOPE OF WORK:** Vegetation Management Services  
  
**CONTRACT DATES:** [REDACTED]

| SUMMARY OF PROJECTED COSTS:            | ORIGINAL*  | REVISION 1 | REVISION 2 | REVISION 3 |
|--|------------|------------|------------|------------|
| <i>Blanket Contract Value</i>          | [REDACTED] |            |            |            |
| <i>Increase Blanket Contract Value</i> |            | [REDACTED] |            |            |
| <b>TOTAL FROM ABOVE</b>                | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

**REVISED TOTAL EVALUATED COST:** [REDACTED]

**APPROVED BY:**  
**Signature:**   
**Name:** Greg Pauley  
**Title:** President & COO - KY  
**Date:** 12/1/2016 | 1:09 PM EST

**PREPARED BY:**  
**Name:** Gina Crabtree  
**Date:** 11/29/2016

### **THIRD AMENDMENT TO CONTRACT NO. 02572604X110**

This Third Amendment to Contract No. 02572604X110 (“Third Amendment”), executed to be effective November 13, 2016 (“Third Amendment Effective Date”), is by and between **Kentucky Power Company**, a Delaware corporation (“Owner”) and **Wright Tree Service, Inc.**, an Iowa corporation (“Contractor”).

**WHEREAS**, Contractor and Owner entered into Contract No. 02572604X110 with an Effective Date of October 10, 2012 whereby Contractor is to perform services as defined in the Contract. All terms not defined herein are as defined in the Contract.

**WHEREAS**, Contractor and Owner desire to modify the Contract as set forth below.

**NOW THEREFORE**, the Parties hereby agree as follows:

1. In order to update Section 5 Pricing, remove the third paragraph in its entirety and replace with the following:

“Beginning June 1, 2015, and then on June 5, 2016 and June 4, 2017, Contractor’s labor rates will be adjusted using the Bureau of Labor Statistics, U.S. Department of Labor, Employment Cost Index (ECI) for Total Compensation (not seasonally adjusted), for (Table 9) Employment Cost Index for wages and salaries, for private industry workers, by occupational group and industry. The percent change for the 12-months ended in March of the year of the adjustment will be multiplied by the current labor rates to determine the adjusted labor rates.

All other rates in Contractor’s Rate Sheet may be revised annually. Proposed changes must be submitted by February 15<sup>th</sup> and, if accepted by Owner, shall become effective the first Sunday of June for that year.”

2. In Exhibit C, the existing Rate Sheets shall be removed in its entirety and replaced with the Contractor’s Rates dated January 1, 2017 (the “Rate Sheet”). These rates will be effective January 1, 2017.
3. In order to update Section 6 Fuel Adjustments in the Contract, remove in its entirety and replace with the following:

“The base Diesel price is [REDACTED] per gallon (“Base Diesel Price”) and will remain in effect until contract termination. The weekly Diesel price is the state average for diesel taken from the American Automobile Association’s website (“Weekly Diesel Price”). When preparing the weekly invoices, if that week’s Weekly Diesel Price differs from the Base Diesel Price by more than ten (10) cents, a Diesel adjustment for each piece of equipment will be calculated by using the following formula:

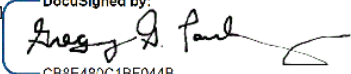
Diesel adjustment = [(Weekly Diesel Price) – (Base Diesel Price)] x gallons/hour x Equipment hours billed

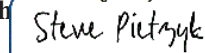
The gallons/hour figure is taken from the Contractor’s Rate Sheets in Exhibit C. The sum of the Diesel adjustments for each piece of equipment used that week shall be added to or subtracted from that week’s invoice amount. If the Unit Price Model, as described in Exhibit C, is used and billing is done with a single invoice when all the Work is completed, the Weekly Diesel Price used shall be that for the week in which the invoice is being prepared.”

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4. In order to update the Kentucky Power Rate Clarifications in Exhibit C, the Rate Clarifications dated May 15, 2012 shall be removed in its entirety and replaced with the Rate Clarifications dated October 1, 2016, attached hereto and incorporated herein.
5. In order to update Exhibit B, remove AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission Line Clearance Operations, dated June 1, 2015 in its entirety and replace with AEP Forestry Goals, Procedures, and Guidelines for Distribution and Transmission dated October 1, 2016 attached hereto and incorporated herein.
6. Remove all references to Exhibit D -KPI, the KPCO Distribution 2012/2013 Key Performance Incentive Plan Guidelines for Wright Tree Service ("KPI") in its entirety.
7. Except as amended by this Third Amendment, all provisions, terms and conditions of the Contract shall remain in full force and effect.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Third Amendment to be signed by their respective duly authorized representatives on the dates set forth below to be effective as of the Third Amendment Effective Date.

Ken DocuSigned by:  
  
By: CB8E480C1BF044B...  
Name: Gregory Pauley  
Title: President & COO  
Date: 12/1/2016 | 1:09 PM EST

Wright DocuSigned by:  
  
By: 1AFF668BDE4F473...  
Name: Steve Pietzyk  
Title: VP of Operations  
Date: 12/21/2016 | 3:01 PM EST

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**RATES FOR MCOO**

ROA Vigilance Management Rate Sheet

| Job Description | Rate | Job Code | Rate | Job Code | Rate | Job Code | Rate | Job Code | Rate |
|-----------------|------|----------|------|----------|------|----------|------|----------|------|
| ...             | ...  | ...      | ...  | ...      | ...  | ...      | ...  | ...      | ...  |

| Equipment | Equipment Description | Equipment Code | Equipment Rate | Equipment Code | Equipment Rate | Equipment Code | Equipment Rate |
|-----------|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| ...       | ...                   | ...            | ...            | ...            | ...            | ...            | ...            |

| Job Description | Rate | Job Description | Rate |
|-----------------|------|-----------------|------|
| ...             | ...  | ...             | ...  |

| Job Description | Rate | Job Code | Rate | Job Code | Rate | Job Code | Rate | Job Code | Rate |
|-----------------|------|----------|------|----------|------|----------|------|----------|------|
| ...             | ...  | ...      | ...  | ...      | ...  | ...      | ...  | ...      | ...  |

| Equipment | Equipment Description | Equipment Code | Equipment Rate | Equipment Code | Equipment Rate | Equipment Code | Equipment Rate |
|-----------|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| ...       | ...                   | ...            | ...            | ...            | ...            | ...            | ...            |

| Job Description | Rate | Job Description | Rate |
|-----------------|------|-----------------|------|
| ...             | ...  | ...             | ...  |

| Job Description | Rate | Job Description | Rate |
|-----------------|------|-----------------|------|
| ...             | ...  | ...             | ...  |

\*Mileage rates will be charged when on system cases are required to travel from one operating company to another in the course of their duties. Mileage will be charged by ADP for all system cases. See ADP for details.

## Kentucky Power Rate Clarifications

October 1, 2016

### 1. Holidays

- a. Contractor holidays include New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.
- b. Owner recognizes the following additional holidays: Good Friday, the day after Thanksgiving, and the day before Christmas.
- c. Contractor shall not schedule work on Owner holidays unless requested in writing by Owner or the holiday has been agreed to as a regularly scheduled day.
- d. Contractor shall not bill Owner for its employees' holiday pay. Holiday pay is covered as part of the benefits mark-up.
- e. On years when a Contractor or Owner holiday falls on a weekend, Owner shall notify Contractor of the date the holiday will be observed.

### 2. Calculations and Examples

- a. Overtime (time and one half) shall be paid for hours in excess of 40 (forty) per week. Overtime shall also be paid when Work is performed outside normally scheduled hours at Owner's request. Normally scheduled hours shall mean five eight-hour days or four ten-hour days, as agreed to by Owner and Contractor.
- b. Double Time shall be paid when Work is performed on a Sunday or a Contractor holiday at Owner's request.
- c. When Owner/AEP Forestry declares a Major Storm event, Contractor may bill for all crews performing service restoration work in the Major Storm event area per the Rate Sheets titled "Labor Rates - Major Storm Rates" if the Contractor has supplied crews and additional support from outside their district boundaries or from one AEP region to another at Owner's request.
- d. Work performed on an Owner holiday that is not a recognized Contractor holiday will be paid at the straight time rates unless the employee qualifies for overtime pay as defined in 2.a above.
- e. Calculation examples are provided below.

Straight Time Rate = Taken from table

Overtime Rate = Straight Time Rate x 1.5

Sunday/Holiday Rate = Straight Time Rate x 2

Straight Time Billing Rate = straight time pay rate + (straight time pay rate x straight time markup)

Overtime Billing Rate = Overtime Rate + (Overtime Rate x overtime markup)

Overtime Billing Rate major storm restoration = Overtime Rate + (Overtime Rate x overtime storm markup)

Sunday/Holiday Billing Rate = Sunday/Holiday Rate + (Sunday/Holiday Rate x overtime markup)

Sunday/Holiday Billing Rate major storm restoration = Sunday/Holiday Rate +  
(Sunday/Holiday Rate x overtime storm markup)

Sample Calculations:

|                           |         |
|---------------------------|---------|
| Straight Time Labor rate: | \$15.35 |
| OT rate:                  | \$23.03 |
| Double Time rate:         | \$30.70 |
| Markup % straight time:   | 66.44%  |
| Markup % overtime:        | 33.38%  |
| Markup % overtime storm   | 45%     |

Straight Time Billing rate:  $\$15.35 + (\$15.35 \times .6644) = \$25.55$

Overtime Billing rate:  $\$23.03 + (\$23.03 \times .3338) =$

$\$30.72$  Overtime storm restoration Billing rate:  $\$23.03 + (\$23.03 \times .45) = \$33.40$

Double Time Billing rate:  $\$30.70 + (\$30.70 \times .3338) =$

$\$40.94$  Double Time storm restoration Billing rate:  $\$30.70 + (\$30.70 \times .45) =$

$\$44.52$

### 3. Herbicide Application

- a. When Contractor's employees are assigned to apply herbicides, their hourly rate will be increased by \$0.20. Anyone assigned to perform herbicide application must be certified, licensed, registered or otherwise qualified as required by the state where the Work is being performed or as otherwise required by law, statute or regulation. This increase does not apply to employees applying stump treatment as part of their normal daily duties.

### 4. Special Supervisor Payment

- a. If Owner has declared a major storm, or when otherwise determined by Owner and authorized in writing, Supervisors may be paid at the General Foreman straight time rate for all hours worked in excess of forty (40) per week. Contractor shall bill Owner the straight time rate without mark-ups.

### 5. Pay During Training

- a. Owner shall pay Contractor's employees' hourly rate while said employees attend either Owner-sponsored training or other training required and agreed to by Owner to obtain or retain a professional certification. All other training shall be Contractor's responsibility. Unless otherwise agreed to by Owner in writing, no other billing relating to attendance at training will be paid.

### 6. Per Diem Rates

- a. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from that individual's normal reporting site.
- b. Per Diem will not be paid if lodging and meals are provided by Owner.
- c. Contractor shall submit documentation with their invoice specifying the distance between home address of record or reporting site and work site for each individual claiming Per Diem

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on each submitted invoice. Contractor will submit to OPCO the employees due per diem using the template within this document.

- d. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
- e. The Per Diem rate is defined in the applicable contract rate sheets and includes lodging and meals.
- f. Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.
- g. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance or Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.
- h. **Definitions**
  - **Crew Cohesion** – The need of a crew member to stay overnight with a per diem eligible crew when that crew member may be within the mileage threshold but travel to the overnight stay location in a company vehicle.
  - **Emergency Assistance** – Owner's Designated Representative will have the authority to hold Contractor crews in an area during storm or other situations deemed an emergency when the mileage is less than in Bullet #1. If held in the an area the Contractor employee affected will be eligible for Per Diem if such charges would normally be incurred. All parties should understand this action is auditable and the time sheet and invoice must have the words Emergency Assistance and the forester's name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to Owner.
  - **Home Address** – The contract employee's legal address of record for tax purposes.
  - **Owner's Designated Representative** – Owner Designated Representative for daily forestry operations will be the OPCO/transmission region forester or OPCO/transmission forestry supervisor.
  - **Outsource or Off System** – Contractor employees that do not normally or exclusively work on the Owner's property and whose home address of record is 80 miles or more from the reporting site and is acceptable to Owner's Designated Representative.

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- **Per Diem** – Daily allowance for expenses that include housing and meals to cover expenses when traveling for work and agreed upon by the Contractor and the Owner's Designated Representative.
- **Reporting Site** – A Contractor designated location acceptable to the Owner's Designated Representative where the Contractor's trucks/equipment is parked and the employees go to get the trucks/equipment to travel to the work site. (In some regions called a show up location.) If a crew is starting its billable time at a reporting site, travel time to the work site shall not be more than thirty (30) minutes, via the most direct route, unless authorized by Owner's Designated Representative.
- **Work Flow Driven(LEAN)** – Owner Designated Representative will have the authority to instruct crews to stay overnight when the mileage is less than in Bullet #1. There are times when it is cost effective to have the crews stay overnight instead of returning to the home address of record or reporting site. For example, crew is working 45 miles from the reporting site and the next work location is in the same direction but is 85 miles from the reporting site. In this situation the forester will have the authority to authorize an overnight stay that would require a Per Diem payment since staying overnight is more productive than to return to the reporting site or home address of record. All parties should understand this action is auditable for work efficiencies and productivity and the time sheet and invoice must have the words Work Flow Driven(LEAN) and the foresters name authorizing the Per Diem in the time sheet and invoice comment field or the Per Diems shall be subject to refund to owner.
- **Work Site** - The day's starting location for the performance of services ex, work site should be associated with vegetation management activities on the Company's rights-of-way.
  - i. When held over at the request of the Owner on regularly scheduled work days, crew members shall be eligible for a meal if held over for two hours or more after normal quitting time. Owner shall reimburse Contractor \$12.00 per meal for each crew member entitled to a meal unless meals are provided by Owner.
  - j. For Contractor employees entitled to a meal in accordance with the Supplementary Terms, Section 2, Item 2.8: Contractor personnel shall be off the clock for meal breaks. Owner shall reimburse Contractor \$12.00 per meal for each employee entitled to a meal unless meals are provided by Owner. Contractor personnel shall be on the clock for meals if they do not stop work to eat. Not stopping work to eat means eating on-the-fly at the jobsite (personnel spend less than 10 minutes eating) or while traveling from jobsite to jobsite. Owner shall not reimburse Contractor for breakfast or lunch meals if Contractor personnel return to their homes at night.



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Kentucky Power Distribution Forestry

|                         |  |
|-------------------------|--|
| <b>Contractor Name:</b> |  |
| <b>General Foreman:</b> |  |
| <b>AEP Forester:</b>    |  |
| <b>Contract Number:</b> |  |
| <b>W/E Date:</b>        |  |
| <b>Reporting Site:</b>  |  |



|    | Employee Name | Home Address | Employee # | Mileage to Site | Per Diem (Y/N) | Days Requested | Eligibility Number |
|----|---------------|--------------|------------|-----------------|----------------|----------------|--------------------|
| 1  |               |              |            |                 |                |                |                    |
| 2  |               |              |            |                 |                |                |                    |
| 3  |               |              |            |                 |                |                |                    |
| 4  |               |              |            |                 |                |                |                    |
| 5  |               |              |            |                 |                |                |                    |
| 6  |               |              |            |                 |                |                |                    |
| 7  |               |              |            |                 |                |                |                    |
| 8  |               |              |            |                 |                |                |                    |
| 9  |               |              |            |                 |                |                |                    |
| 10 |               |              |            |                 |                |                |                    |
| 11 |               |              |            |                 |                |                |                    |
| 12 |               |              |            |                 |                |                |                    |
| 13 |               |              |            |                 |                |                |                    |
| 14 |               |              |            |                 |                |                |                    |
| 15 |               |              |            |                 |                |                |                    |

**Per Diem Eligibility Number:**

1. A Per Diem request may be submitted for approval when a Contractor employee is sent by the Owner's Designated Representative to a work site that is 80 miles or greater (one way) from the individual's normal reporting site.
2. Owner's Designated Representative may authorize the payment of Per Diems to "Outsource" or "Off System" Contractor employees brought onto Owner's property on a temporary basis.
3. Owner's Designated Representative may require Contractor employees to remain in a work area overnight during Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion, regardless of the distance a Contractor employee is from their home address of record or reporting site. In these instances, Owner's Designated Representative will require the contractor to clearly document on the weekly time sheet that the individuals were held over by writing in the timesheet comment field the words "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. In turn, the forester or contractor will be responsible for writing in the invoice comment field "Emergency Assistance, Work Flow Driven(LEAN) or Crew Cohesion" followed by the forester's name authorizing the request. The Per Diem request is approved by the Owner's Designated Representative and Contractor once the invoice is approved in CAMPS.

I attest that all items being submitted for payment are in accordance with the terms of the contract.

Submitted By Signature: \_\_\_\_\_  
 Submittal Date: \_\_\_\_\_

**Contractor shall maintain employee home address of record information and make available to Owner's Designated Representative(s) upon request.**

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# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010-04**

Effective Date: October 1, 2016

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AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

|   |                        |  |        |              |
|---|------------------------|--|--------|--------------|
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## Revision History

| Rev. | Description of Change(s)  | By           | Date      | Approved                    |
|------|---|--------------|-----------|-----------------------------|
| 0    | Original Issue  |              |           |                             |
| 1    | Update  |              | 5/14/2009 |                             |
| 2    | Update; formatting changes; addition of company specific guidelines; addition of referenced documents table; addition of end notes to link to other documents; review of document performed by Legal; | Kevin Patton | 9/10/2014 | Walter Sherry<br>12/14/2016 |
| 3    | Addition of Transmission Forestry construction clearing guidelines  | Kevin Patton | 5/1/2016  | Walter Sherry<br>5/4/2016   |
| 4    | Addition of reporting site location to the guidelines from language that was previously in the rate clarification section of the contract.  | Kevin Patton | 9/21/2016 | Walter Sherry<br>9/23/2016  |

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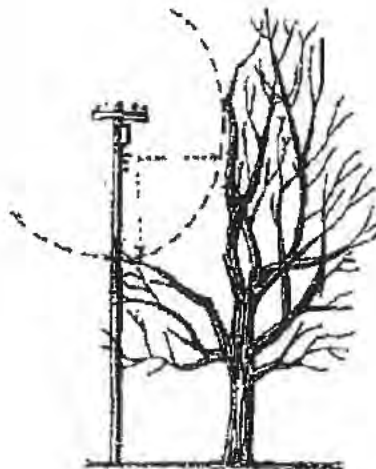


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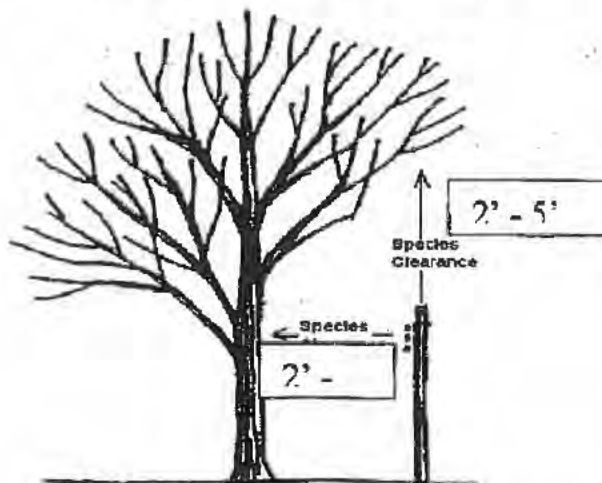
Management Goals and Distribution Line Clearance Operations

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## B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



## C. Service Drops and Street Light Conductors

Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.

|   |  |        |               |
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4. Contractors shall provide evidence of training to employees related to tree felling upon request.

### C. Clearances


The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| Right-of-way No Restrictions   | Right-of-way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2.</b>                   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |

<sup>4</sup> Upon completion of maintenance

|   |  |        |               |
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**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |


### D. Transmission Dispatch Communication Procedures

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

### E. Transmission Forestry Construction Guidelines

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

<sup>5</sup>ANSI Z133-2012.

|   |  |        |               |
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## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species   |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d'arc (Osage orange, hedge tree) |

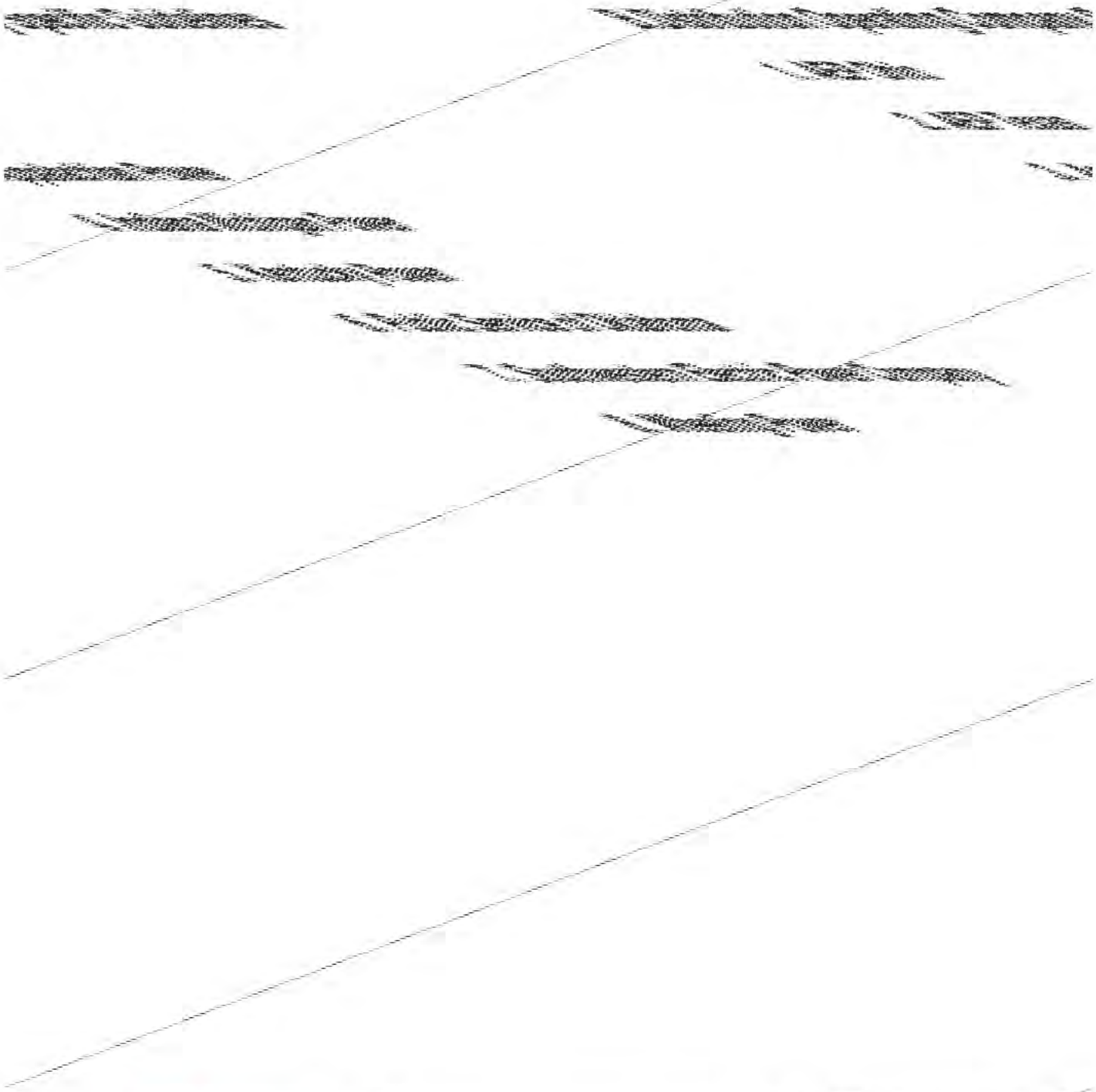
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| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |

### 1. Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

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### C. Referenced Documents and Specifications

| Title  | Year | Version                              | Pages |
|--|------|--------------------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2                           | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                                      | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                             |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI <sup>®</sup> Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI <sup>®</sup> A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI <sup>®</sup> A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI <sup>®</sup> A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition                       | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008                        | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition                        | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                             |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                             |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                             |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                             |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                             |       |

<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

|   |  |        |               |
|---|--|--------|---------------|
|  | AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations | Rev. 4 | TVMD-010      |
|   |  |        | Page 24 of 25 |

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|   |      |               |       |
|---|------|---------------|-------|
| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

<sup>1</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006).* Tree Care Industry Association, Manchester, NH

<sup>ii</sup> *Best Management Practices – Utility Pruning of Trees.* International Society of Arboriculture. Champaign, IL

<sup>iii</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006).* Tree Care Industry Association, Manchester, NH

<sup>iv</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>v</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vi</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>viii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>ix</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>x</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xi</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xiii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>xiv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvi</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvii</sup> *Managing Hazard Trees on FAC-003 Applicable Circuits.* American Electric Power

<sup>xviii</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xix</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xx</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xxi</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

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## CONFIDENTIAL

### Contract Routing Slip

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|------------------|---------------------------------------|----------------------|--------------------------|
| Sonia Pickens    | For your review                       | <sup>DS</sup><br>SP  | 11/29/2016   3:36 PM EST |
| Kevin Patton     | For your review                       | <sup>DS</sup><br>KBP | 11/29/2016   3:45 PM EST |
| Matt Curtis      | For your review                       | <sup>DS</sup><br>MC  | 11/29/2016   3:47 PM EST |
| Walter Sherry    | For your review                       | <sup>DS</sup><br>WAS | 11/29/2016   3:51 PM EST |
| Dusty Roll       | For your review                       | <sup>DS</sup><br>DR  | 11/30/2016   5:32 PM EST |
| Greg Bell        | For your review                       | <sup>DS</sup><br>GAB | 11/30/2016   5:35 PM EST |
| Everett Phillips | For your review                       | <sup>DS</sup><br>EP  | 12/1/2016   9:16 AM EST  |
| Gregory Pauley   | Amendment Signature,<br>TEC signature | <sup>DS</sup><br>GAP | 12/1/2016   1:09 PM EST  |
| Steve Pietzyk    | Contractor Signatory                  |                      |                          |
| AEP Audit        | Copy                                  |                      |                          |
| Terri Stiltner   | Copy                                  | NR                   | NR                       |

**Date:** November 29, 2015

**Company:** Kentucky Power Company

**Contractor Name:** Wright Tree Service

**Contract Administrator:** Gina Crabtree

**Contract Number/Amendment:** 02572604X110 Amd#3

**Term:** October 10, 2012 – May 26, 2018

**Price/Cost Model:** Lump Sum, Unit Price, and/or Time & Materials

**Type:** Service

**Estimated Spend:** [REDACTED]

**Description of Amendment:** Updating ECI table reference, rates, fuel rate, rate clarifications, and forestry goals and procedure document, removal of KPI, and adding funds via TEC



## Certificate Of Completion

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| Document Pages: 36   | Signatures: 3     | Envelope Originator:       |
| Certificate Pages: 4   | Initials: 8       | Gina Crabtree              |
| AutoNav: Enabled   |                   | 1 Riverside Plz FL 1       |
| Envelopeld Stamping: Enabled                                       |                   | Columbus, OH 43215-2373    |
| Time Zone: (UTC-05:00) Eastern Time (US & Canada)                  |                   | gmcrabtree@aep.com         |
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



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

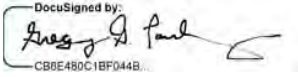
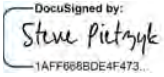
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|---|---|--------------------|

## Signer Events

### Signature

### Timestamp

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| Sonia Pickens<br>srvaughan@aep.com<br>Category Mgr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Not Offered via DocuSign<br>ID:   | <br>Using IP Address: 167.239.221.85                         | Sent: 11/29/2016 3:25:48 PM<br>Viewed: 11/29/2016 3:36:37 PM<br>Signed: 11/29/2016 3:36:45 PM |
| Kevin Patton<br>kbpattton@aep.com<br>Business Analyst Sr<br>American Electric Power<br>Security Level: Email, Account Authentication (None)<br>Electronic Record and Signature Disclosure:<br>Accepted: 8/5/2014 2:08:35 PM<br>ID: 20140880-36ee-4e18-bfad-d47f5e6a2409 | <br>Using IP Address: 65.60.201.133<br>Signed using mobile | Sent: 11/29/2016 3:36:48 PM<br>Viewed: 11/29/2016 3:44:37 PM<br>Signed: 11/29/2016 3:45:31 PM |
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| Dusty Roll<br>droll@aep.com<br>Security Level: Email, Account Authentication (None)   | <br>Using IP Address: 167.239.221.83                       | Sent: 11/29/2016 3:47:29 PM<br>Viewed: 11/30/2016 5:29:11 PM<br>Signed: 11/30/2016 5:32:10 PM |
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| Signer Events   | Signature   | Timestamp  |
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| <p>Walter A. Sherry<br/>           washerry@aep.com<br/>           Forestry Operation Manager<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 7/1/2014 7:08:14 PM<br/>           ID: ca043d9b-aaab-40e4-bee5-8c449d93d309</p>                   | <br>Using IP Address: 167.239.221.82                       | <p>Sent: 11/29/2016 3:47:29 PM<br/>           Viewed: 11/29/2016 3:49:46 PM<br/>           Signed: 11/29/2016 3:51:18 PM</p> |
| <p>Gregory A. Bell<br/>           gabell@aep.com<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 2/17/2016 2:49:47 AM<br/>           ID: 60a7b411-0823-4913-b894-de97874ad78c</p>   | <br>Using IP Address: 167.239.221.83                       | <p>Sent: 11/30/2016 5:32:13 PM<br/>           Viewed: 11/30/2016 5:32:58 PM<br/>           Signed: 11/30/2016 5:35:22 PM</p> |
| <p>Everett Phillips<br/>           egphillips@aep.com<br/>           Managing Director Distribution Operations<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 7/3/2014 10:29:58 AM<br/>           ID: 0a7983a5-0efd-401d-b4b7-bbcb224a8091</p> | <br>Using IP Address: 107.77.203.32<br>Signed using mobile | <p>Sent: 11/30/2016 5:35:25 PM<br/>           Viewed: 12/1/2016 9:15:51 AM<br/>           Signed: 12/1/2016 9:16:30 AM</p>   |
| <p>Gregory Pauley<br/>           ggpauley@aep.com<br/>           President &amp; COO<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Accepted: 12/1/2016 1:08:26 PM<br/>           ID: 58d385a3-a76e-4f29-abe5-fce9c1e35397</p>                           | <br>Using IP Address: 167.239.221.88                     | <p>Sent: 12/1/2016 9:16:33 AM<br/>           Viewed: 12/1/2016 1:08:27 PM<br/>           Signed: 12/1/2016 1:09:19 PM</p>    |
| <p>Steve Pietzyk<br/>           spietzyk@wrighttree.com<br/>           VP of Operations<br/>           Wright Tree Service, Inc.<br/>           Security Level: Email, Account Authentication (None)</p> <p>Electronic Record and Signature Disclosure:<br/>           Not Offered via DocuSign<br/>           ID:</p>                          | <br>Using IP Address: 207.108.46.130                     | <p>Sent: 12/1/2016 1:09:22 PM<br/>           Viewed: 12/2/2016 4:58:05 PM<br/>           Signed: 12/21/2016 3:01:33 PM</p>   |

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| Completed               | Security Checked | 12/21/2016 3:01:37 PM |

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Electronic Record and Signature Disclosure created on: 5/30/2014 9:32:06 AM

Parties agreed to: Kevin Patton, Matthew Curtis, Dusty Roll, Walter A. Sherry, Gregory A. Bell, Everett Phillips, Gregory Pauley, Terri Stiltner

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# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010**

Effective Date: January 1, 2015

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AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

|   |                        |  |        |              |
|---|------------------------|--|--------|--------------|
|  | Owner:<br>Kevin Patton | Copyright 2015<br>American Electric Power<br>Company, Inc. | Rev. 2 | TVMD-0       |
|   |                        |  |        | Page 1 of 21 |

## Revision History


| Rev. | Description of Change(s)  | By           | Date      | Approved |
|------|---|--------------|-----------|----------|
| 0    | Original Issue  |              |           |          |
| 1    | Update  |              | 5/14/2009 |          |
| 2    | Update; formatting changes; addition of company specific guidelines; addition of referenced documents table; addition of end notes to link to other documents; review of document performed by Legal; | Kevin Patton | 9/10/2014 |          |

## Revision Cycle

This document will be reviewed every three to five years depending on the average contract length.

## Signatures


Reviewed By

  
 \_\_\_\_\_  
 Walter Sherry  
 Manager, Forestry Operations

19 Dec 14  
 \_\_\_\_\_  
 Date


## Document Team

Walter Sherry, Manager Forestry Operations  
 Mike Chedester, Supervisor, AEP Ohio Distribution Forestry  
 James Cruser, Supervisor, Transmission Forestry  
 Grant Ehlen, Supervisor, AEP Texas Distribution Forestry  
 Mark Jackson, Supervisor, Kentucky Power Distribution Forestry  
 Richard Karber, Supervisor, Transmission Forestry  
 Marc Labrie, Supervisor, I&M Distribution Forestry  
 Rick Mowbray, Supervisor, Transmission Forestry  
 Phil Ross, Supervisor, APCO Distribution Forestry  
 Danny Salter, Supervisor, SWEPCO Distribution Forestry  
 Richard Simpson, Supervisor AEP Ohio Distribution Forestry  
 Steve Matthews, Supervisor, PSO Distribution Forestry  
 Kevin Patton, Coordinator, Forestry Operations  
 Orlando De La Garza, Forester, Transmission Forestry (Translator)

|   |  |        |              |
|---|--|--------|--------------|
|  | AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations | Rev. 2 | TVMD-0       |
|   |  |        | Page 2 of 21 |

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## I. Purpose

The purpose of these American Electric Power (“AEP”) Forestry Vegetation Management Guidelines is to document and inform AEP employees and its contractors of important criteria, practices, and procedures pertaining to initial vegetation clearing for construction projects and the management of vegetation within rights-of-way. AEP incorporates these guidelines into each vegetation management contract; a copy shall be kept in all vegetation management Contractor’s vehicles. These guidelines are to be read consistently with other contract documents by and between AEP and the Contractor. Variances and/or clarifications to these guidelines may be necessary and applied to specific operating companies.

These guidelines contain references to national industry standards; government regulations; and AEP standards and practices. Upon approval of this document, any editions referenced are valid. All standards, regulations and practices are subject to revision. AEP and the Contractor are encouraged to investigate the possibility of applying the most recent editions.

## II. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation.

**Control:** 100% defoliation with no viable buds one year after application; or, on species that require a number of years to achieve control, significant signs of herbicidal activity.

**Danger Tree:** A tree on or off the right-of-way with the potential to contact electric supply lines.<sup>i</sup>

**DBH:** (Diameter at Breast Height) The diameter of a tree measured at the height of 4 ½ feet above the ground on the uphill side.

**Debris:** Vegetative and non-vegetative material such as bottles; cans; wires; paper; branches; or other residue from clearing operations.

**Directional Pruning:** The removal of limbs in a manner that provides increased conductor clearance and directs growth away from the conductors.<sup>ii</sup>

**Hanger:** A cut limb left hanging in a tree or on other facilities.

**Hazard Tree:** A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electric supply lines.<sup>iii</sup>

**Log:** The merchantable portion of a tree as designated by AEP.


**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Refusal:** A property owner/resident prohibiting the Contractor from managing vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits, and easements.

**Removal:** The cutting of trees/brush at or near ground line.

**Slash:** The un-merchantable portion of a tree.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

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### III. Contractor Guidelines

#### A. Safety

Protecting the safety of all people (Contractors, public, and AEP employees) is of utmost importance to AEP. Contractors shall regard safety as a priority core value; their employees will recognize and follow all laws, rules, and regulations of public and worker safety. Any safety related incidents (e.g. personal injuries, vehicle accidents, outages, flashes, near misses, customer issues, etc.) that occur on the job shall be reported to the proper AEP personnel as specified by AEP management.<sup>iv</sup>

#### B. Personnel

1. Contractors shall comply with all federal, state and local laws for permits, certifications and licensing requirements necessary to perform vegetation management in specified operating areas.<sup>v</sup>
2. No private work may be solicited or performed by the Contractor or its employees while on AEP time. Contractors shall not seek nor receive compensation from anyone except AEP for any work that is a part of AEP's Forestry Vegetation Management program. The consequences will be crew and/or Contractor disciplinary actions.

#### C. Equipment


1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chainsaws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.
4. The use of spurs/climbers/hooks should be avoided.

#### D. Overtime

Overtime is billable as designated by each operating company.

#### E. Work Procedures

1. Contractor practices shall be compliant with applicable industry standards (e.g., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increase the risk of injury or property damage.<sup>vi</sup>
2. Changes in the work schedule due to inclement weather, equipment breakdowns, or other circumstances must have prior approval by AEP Forestry personnel.
3. The Contractor will be responsible for the development of a plan to complete the assigned tasks. The plan must meet AEP approval before work begins.<sup>vii</sup>
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.

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5. Contractors shall provide daily work locations to AEP, including changes to these locations throughout the day.
6. Prior to work in any location and before any changes in procedures or activities are made, the Contractor shall perform a job briefing in written/report form to identify all potential work site risks. At least one copy of all documents and reports, including job briefings, shall be prepared in English.<sup>viii</sup>
7. An ongoing list of refusals, scheduled outages, or areas that have not been worked, including reasons, shall be provided to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work should be inspected for clearance and quality compliance on an ongoing basis by the Contractor and AEP Forestry. When an assigned task is complete, the Contractor shall notify AEP Forestry for final inspection.
9. The Contractor shall notify AEP of any hazardous conditions found during the performance of work under this contract.

## F. Public Relations

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise.


1. When required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, the Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor shall document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the Contractor shall be on the door card.

## G. Refusals

1. The Contractor shall notify the proper AEP Forester with all pertinent information for all refusals.
2. If the Contractor is unable to resolve the refusal, the refusal shall be turned over to AEP Forestry.
3. Undocumented refusals may be worked at the Contractor's expense.

## H. Damage Claims and Complaints

1. The Contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.<sup>ix</sup>
2. An on-site investigation with the resident/property owner shall be made as soon as possible. A documented attempt to contact the complainant shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during the investigation.


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3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.<sup>x</sup>
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.<sup>xi</sup> The Contractor shall provide a copy of all supporting documentation to AEP.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.<sup>xii</sup>
7. Costs to restore outages or repair AEP's facilities due to negligence may be billed to the Contractor as determined by AEP.

## IV. Performance Guidelines

### A. Removals

1. Stumps shall be cut as close to the ground as practical, but not to exceed a three inch maximum height and treated with approved herbicide, unless the situation prevents application according to label instructions; there is a documented customer refusal; or an AEP Forester directs otherwise.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect electric lines, yards, fences, houses, and other facilities.
3. Targets for removal are:
  - a. All trees with the potential of growing into the conductor.
  - b. Trees where adequate clearance cannot be obtained using proper pruning practices.
  - c. Trees that will take less than three times the amount of time to remove as they would take to prune.
  - d. Trees within five (5) feet of poles.
  - e. Mature trees where more than 50% of the crown must be removed to obtain clearance.
  - f. Young, vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
  - g. Palm species.
4. At property owner's request, any tree situated such that the location of AEP's facilities impede, or add significantly to the cost of, the safe removal of the tree and an additional burden is placed upon the property owner, AEP should take the steps necessary to mitigate the impediment or to relieve the additional burden placed upon the property owner. AEP

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actions may include, but not be limited to, moving or protecting its facilities, removing portions of the tree to provide the clearances required by ANSI, OSHA, or any other regulatory authority, to allow removal by “non-line clearance” qualified arborists or non-professionals. Except in case of emergency, AEP must evaluate the property owner’s request and prioritize any necessary work according to its benefit to the provision of electric service to all customers. At property owner’s request, debris will be left for disposal by the property owner.

5. State and local ordinances shall be obeyed during the disposal of debris.

## B. Pruning


1. Contractor practices should be compliant with all applicable industry standards (i.e., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increase the risk of injury or property damage.<sup>xiii</sup>
2. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth below in Section V. Distribution Clearances or Section VI.C. Transmission Clearances or as designated by the operating company.
3. Reasonable care should be exercised to help prevent the spread of insects and pathogens.
4. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut, treated with herbicide, or damaged by the Contractor’s activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner in writing.
5. State and local ordinances shall be obeyed during the disposal of debris.

## C. Hangers and Cleanup

1. All hangers shall be removed from the pruned tree before leaving the job site.
2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of cleanup work should be performed. Unless otherwise designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum cleanup that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the Contractor.

## D. Clearing and Re-clearing


1. AEP will provide the width of the right-of-way.
2. All woody plants that have the potential to grow into and interfere with service reliability; restoration; patrolling; or other maintenance operations of AEP facilities should be controlled by the operating company guidelines.
3. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the proper AEP personnel.

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4. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practical, but not to exceed three inches in maximum height above the ground line. Where possible, the cut shall be parallel to the slope.
5. Trees shall be felled to avoid damage to crops, fences, and other facilities. Any trees felled into crops, ditches, streams, roads, or across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP facilities or the property of third parties, or hinder access along the right-of-way.
6. Trees, brush, and slash shall be lopped as designated by AEP Forestry.
7. Hazard Trees are identified and addressed/worked at the discretion of the individual operating companies or regions. Consideration for hazard tree removal shall be made for those trees that are an immediate threat to AEP facilities. Hazard Trees may include, but are not limited to, trees that have severe lean or sweep; are dead; or have visible defect or damage.
8. Stumps of trees growing in fences may be cut at fence post height. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
9. As designated by AEP Forestry, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
10. Brush and debris from vegetation clearing shall not be left in managed agricultural areas or other maintained areas. Piled and/or windrowed materials shall not be left on or interfere with fences or other facilities of the landowner or AEP unless designated by AEP Forestry.

## E. Herbicide Application

1. All woody plants that have the potential of growing into the lines or impair access should be controlled, as designated by AEP Forestry.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made as required by all Federal, State, and local laws.
3. The Contractor shall be required to control at least 90% or a percentage as designated by operating company of the targeted vegetation. Any areas not meeting the control requirements shall be retreated at the Contractor's expense.<sup>xiv</sup>
4. AEP Forestry may make vegetation management prescriptions in consultation with Contractors.
5. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xv</sup>
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps shall be treated with an appropriate herbicide treatment.

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## F. Tree Growth Regulator Application

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator (“TGR”) in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in excessive state of decline shall not be treated unless directed by AEP Forestry.
3. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xvi</sup>

## G. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.


## V. Distribution Clearances

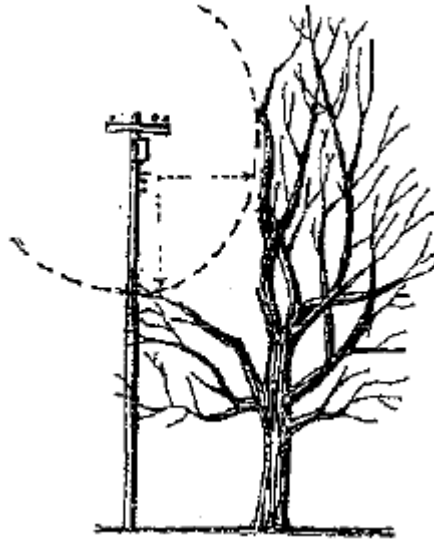
Variances to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/or easements.

Minimum clearance for distribution lines is that distance that will prevent regrowth into any AEP conductors for a minimum of three (3) years. (See **Error! Reference source not found.**, pg.**Error! Bookmark not defined.**) The species, site, limb, conductor sag and sway during windy conditions; and the effect of electrical load should all be considered when determining the clearance requirement.

### A. Primary Conductors

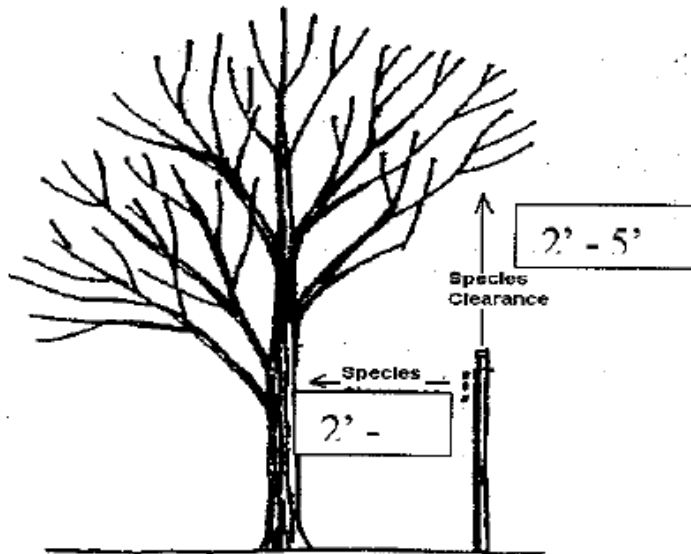
Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the proper AEP Forestry representative.

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## B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



## C. Service Drops and Street Light Conductors

Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.


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## D. Poles and Guys

1. Heavy limbs applying pressure on the span guy should be pruned or removed at the specific direction of the proper AEP Forestry representative.
2. Trees, brush, and slash should be cleared to obtain a minimum of a five (5) foot radius of clearance around the pole or guy unless otherwise specified by an AEP Forestry representative.

## E. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.

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## VI. Transmission

### A. Hazard Trees

Trees may exhibit potential threats to AEP facilities due to disease, damage, physical location, growth characteristics or environmental problems. Where these trees exist, AEP considers them high priority risks that need to be addressed and remediated.<sup>xvii</sup>

#### 1. Visual Assessment

While performing work on a circuit, contract crews shall conduct a visual assessment to identify trees with imminent<sup>1</sup> and/or probable<sup>2</sup> likelihood of failure inside and outside the right-of-way. The tree should be viewed from some distance away, if possible, to consider crown shape and surroundings.

Any tree identified to be a potential imminent threat to an AEP Transmission line shall be reported to the responsible transmission forester.

#### 2. Ground Evaluation

If a Hazard Tree is identified during the visual assessment, a 360° ground evaluation shall be required. The evaluations should include an inspection of:

- Tree crown
- Trunk
- Trunk flare
- Above-ground roots
- Site conditions around the tree in relation to targets.

The Contractor shall report risk and mitigation options to the responsible transmission forester.

### B. Tree Felling


Before beginning any tree felling operation, the Contractor shall consider relevant factors<sup>3</sup> pertaining to the tree and site and shall take appropriate actions to ensure a safe removal operation.<sup>xviii</sup>

1. When there is a danger that the tree pieces or tree being removed may fall in the wrong direction and contact utility facilities or damage other property, appropriate methods shall be used to control the direction of fall.<sup>xix</sup>
2. All limbs shall be removed to a height and width sufficient to allow the tree parts or tree to fall clear of hazards.<sup>xx</sup>

<sup>1</sup> Imminent – failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. (Tree Risk Assessment Manual, pg. 100)

<sup>2</sup> Probable – failure may be expected under normal weather conditions within the specified time frame. (Tree Risk Assessment Manual, pg. 100)

<sup>3</sup> ANSI Z133-2012 Annex C.3, Manual Tree Felling Procedures contains a list of relevant factors to be considered during tree felling.

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3. Notches shall be used on all trees and trunks greater than five inches DBH.<sup>xxi</sup>
4. Contractors shall provide evidence of training to employees related to tree felling upon request.

## C. Clearances

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| <b>Right-of-way No Restrictions</b>  | <b>Right-of-way with Restrictions</b>  |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2.</b>                   | 1) Trim or remove vegetation to meet Column C, <b>Table 2.</b>                   |
| 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 | 2) Do not allow vegetation closer than Column E, <b>Table 2.</b>                 |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2.</b>       | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2.</b>        |

<sup>4</sup> Upon completion of maintenance

**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |

## D. Transmission Dispatch Communication Procedures

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

<sup>5</sup>ANSI Z133-2012.



## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species  |
|-----------------|-----------------------------------|--|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species  |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d' arc (Osage orange, hedge tree) |


| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |

### 1. Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

## **B. Distribution Operating Company Specific Guidelines**


- 1. AEP Ohio**
- 2. AEP Texas**
- 3. Appalachian Power**
- 4. Indiana Michigan Power**
- 5. Kentucky Power**
- 6. Public Service of Oklahoma**
- 7. Southwestern Electric Power Company**
- 8. Wheeling Power**

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## C. Referenced Documents and Specifications

| Title  | Year | Version                              | Pages |
|--|------|--------------------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2                           | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                                      | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                             |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI <sup>®</sup> Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI <sup>®</sup> A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI <sup>®</sup> A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI <sup>®</sup> A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition                       | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008                        | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition                        | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                             |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                             |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                             |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                             |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                             |       |

<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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|---|------|---------------|-------|
| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

<sup>i</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH

<sup>ii</sup> *Best Management Practices – Utility Pruning of Trees.* International Society of Arboriculture. Champaign, IL

<sup>iii</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH

<sup>iv</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>v</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vi</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>viii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>ix</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>x</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xi</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xiii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>xiv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvi</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvii</sup> *Managing Hazard Trees on FAC-003 Applicable Circuits.* American Electric Power

<sup>xviii</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xix</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xx</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xxi</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

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# AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

**Document #: TVMD-010-04**

Effective Date: October 1, 2016

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AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations

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|  | Owner:<br>Kevin Patton | Copyright 2016<br>American Electric Power<br>Company, Inc. | Rev. 4 | TVMD-010     |
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## Revision History

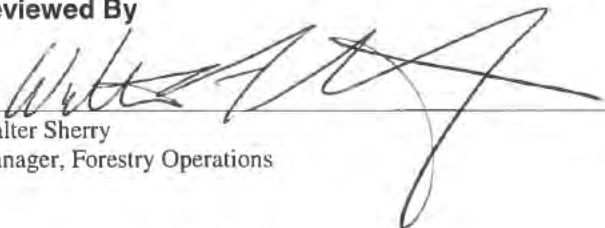
| Rev. | Description of Change(s)  | By           | Date      | Approved                    |
|------|---|--------------|-----------|-----------------------------|
| 0    | Original Issue  |              |           |                             |
| 1    | Update  |              | 5/14/2009 |                             |
| 2    | Update; formatting changes; addition of company specific guidelines; addition of referenced documents table; addition of end notes to link to other documents; review of document performed by Legal; | Kevin Patton | 9/10/2014 | Walter Sherry<br>12/14/2016 |
| 3    | Addition of Transmission Forestry construction clearing guidelines  | Kevin Patton | 5/1/2016  | Walter Sherry<br>5/4/2016   |
| 4    | Addition of reporting site location to the guidelines from language that was previously in the rate clarification section of the contract.  | Kevin Patton | 9/21/2016 | Walter Sherry<br>9/23/2016  |

## Revision Cycle

This document will be reviewed every three to five years depending on the average contract length.

## Signatures


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27 Sep 16  
Date

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## I. Purpose

The purpose of these American Electric Power ("AEP") Forestry Vegetation Management Guidelines is to document and inform AEP employees and its contractors of important criteria, practices, and procedures pertaining to initial vegetation clearing for construction projects and the management of vegetation within rights-of-way. AEP incorporates these guidelines into each vegetation management contract; a copy shall be kept in all vegetation management Contractor's vehicles. These guidelines are to be read consistently with other contract documents by and between AEP and the Contractor. Variances and/or clarifications to these guidelines may be necessary and applied to specific operating companies.

These guidelines contain references to national industry standards; government regulations; and AEP standards and practices. Upon approval of this document, any editions referenced are valid. All standards, regulations and practices are subject to revision. AEP and the Contractor are encouraged to investigate the possibility of applying the most recent editions.

## II. Definitions

**Brush:** Woody stem vegetation less than four (4) inches DBH.

**Clearing:** The physical cutting and/or removal of woody stem vegetation.

**Control:** 100% defoliation with no viable buds one year after application; or, on species that require a number of years to achieve control, significant signs of herbicidal activity.

**Danger Tree:** A tree on or off the right-of-way with the potential to contact electric supply lines.<sup>1</sup>

**DBH:** (Diameter at Breast Height) The diameter of a tree measured at the height of 4 ½ feet above the ground on the uphill side.

**Debris:** Vegetative and non-vegetative material such as bottles; cans; wires; paper; branches; or other residue from clearing operations.

**Directional Pruning:** The removal of limbs in a manner that provides increased conductor clearance and directs growth away from the conductors.<sup>2</sup>

**Hanger:** A cut limb left hanging in a tree or on other facilities.

**Hazard Tree:** A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electric supply lines.<sup>3</sup>

**Log:** The merchantable portion of a tree as designated by AEP.


**Lopping:** The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.

**Refusal:** A property owner/resident prohibiting the Contractor from managing vegetation as specified within the scope of, and according to, these guidelines and all applicable specifications, permits, and easements.

**Removal:** The cutting of trees/brush at or near ground line.

**Slash:** The un-merchantable portion of a tree.

**Tree:** Woody stem vegetation greater than four (4) inches DBH.

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### III. Contractor Guidelines

#### A. Safety

Protecting the safety of all people (Contractors, public, and AEP employees) is of utmost importance to AEP. Contractors shall regard safety as a priority core value; their employees will recognize and follow all laws, rules, and regulations of public and worker safety. Any safety related incidents (e.g. personal injuries, vehicle accidents, outages, flashes, near misses, customer issues, etc.) that occur on the job shall be reported to the proper AEP personnel as specified by AEP management."

#### B. Reporting Site

1. The Contractor should establish reporting sites as close as possible to the work.
2. All reporting site locations must be acceptable to the Owner.
3. The reporting site may be relocated if travel time is excessive from the reporting site to the work site and the amount of work exceeds two weeks.

#### C. Personnel

1. Contractors shall comply with all federal, state and local laws for permits, certifications and licensing requirements necessary to perform vegetation management in specified operating areas.<sup>v</sup>
2. No private work may be solicited or performed by the Contractor or its employees while on AEP time. Contractors shall not seek nor receive compensation from anyone except AEP for any work that is a part of AEP's Forestry Vegetation Management program. The consequences will be crew and/or Contractor disciplinary actions.

#### D. Equipment


1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chainsaws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately unless approved by AEP Forestry personnel.
3. Each climber shall be provided with a complete set of equipment including: rope, saddle, chainsaw, pruner and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.
4. The use of spurs/climbers/hooks should be avoided.

#### E. Overtime

Overtime is billable as designated by each operating company.

#### F. Work Procedures

1. Contractor practices shall be compliant with applicable industry standards (e.g., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>vi</sup>

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2. Changes in the work schedule due to inclement weather, equipment breakdowns, or other circumstances must have prior approval by AEP Forestry personnel.
3. The Contractor will be responsible for the development of a plan to complete the assigned tasks. The plan must meet AEP approval before work begins.<sup>vii</sup>
4. It is the Contractor's responsibility to ensure that the plan is followed, including time estimates to complete the assigned tasks.
5. Contractors shall provide daily work locations to AEP, including changes to these locations throughout the day.
6. Prior to work in any location and before any changes in procedures or activities are made, the Contractor shall perform a job briefing in written/report form to identify all potential work site risks. At least one copy of all documents and reports, including job briefings, shall be prepared in English.<sup>viii</sup>
7. An ongoing list of refusals, scheduled outages, or areas that have not been worked, including reasons, shall be provided to AEP Forestry personnel. Undocumented skips may be worked at the Contractor's expense.
8. Contractor's work should be inspected for clearance and quality compliance on an ongoing basis by the Contractor and AEP Forestry. When an assigned task is complete, the Contractor shall notify AEP Forestry for final inspection.
9. The Contractor shall notify AEP of any hazardous conditions found during the performance of work under this contract.


## G. Public Relations

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise.

1. When required, an attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, the Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor shall document all locations where door cards were left, including address and date. A monitored local or toll-free telephone number to reach the Contractor shall be on the door card.

## H. Refusals

1. The Contractor shall notify the proper AEP Forester with all pertinent information for all refusals.
2. If the Contractor is unable to resolve the refusal, the refusal shall be turned over to AEP Forestry.
3. Undocumented refusals may be worked at the Contractor's expense.

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## I. Damage Claims and Complaints

1. The Contractor shall be responsible for all damage claims and complaints due to its negligence. AEP shall be notified immediately of all claims and complaints.<sup>ix</sup>
2. An on-site investigation with the resident/property owner shall be made as soon as possible. A documented attempt to contact the complainant shall be made within twenty-four (24) hours of receipt of the complaint. AEP's representative may accompany the Contractor during the investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within thirty (30) days by the Contractor, or the Contractor shall provide evidence he is trying to reach a reasonable settlement.<sup>x</sup>
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident.<sup>xi</sup> The Contractor shall provide a copy of all supporting documentation to AEP.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offer and briefly summarize events pertaining to the offer.
6. After thirty (30) days, if a Contractor fails to resolve a claim, does not continue attempts to resolve the claim or keep AEP fully informed, AEP may settle the claim and bill the Contractor.<sup>xii</sup>
7. Costs to restore outages or repair AEP's facilities due to negligence may be billed to the Contractor as determined by AEP.

## IV. Performance Guidelines

### A. Removals

1. Stumps shall be cut as close to the ground as practical, but not to exceed a three inch maximum height and treated with approved herbicide, unless the situation prevents application according to label instructions; there is a documented customer refusal; or an AEP Forester directs otherwise.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect electric lines, yards, fences, houses, and other facilities.
3. Targets for removal are:
  - a. All trees with the potential of growing into the conductor.
  - b. Trees where adequate clearance cannot be obtained using proper pruning practices.
  - c. Trees that will take less than three times the amount of time to remove as they would take to prune.
  - d. Trees within five (5) feet of poles.
  - e. Mature trees where more than 50% of the crown must be removed to obtain clearance.

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- f. Young, vigorously growing trees where more than 66% of the crown must be removed to obtain clearance.
  - g. Palm species.
4. At property owner's request, any tree situated such that the location of AEP's facilities impede, or add significantly to the cost of, the safe removal of the tree and an additional burden is placed upon the property owner, AEP should take the steps necessary to mitigate the impediment or to relieve the additional burden placed upon the property owner. AEP actions may include, but not be limited to, moving or protecting its facilities, removing portions of the tree to provide the clearances required by ANSI, OSHA, or any other regulatory authority, to allow removal by "non-line clearance" qualified arborists or non-professionals. Except in case of emergency, AEP must evaluate the property owner's request and prioritize any necessary work according to its benefit to the provision of electric service to all customers. At property owner's request, debris will be left for disposal by the property owner.
  5. State and local ordinances shall be obeyed during the disposal of debris.

## B. Pruning


1. Contractor practices should be compliant with all applicable industry standards (i.e., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.<sup>xiii</sup>
2. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth below in Section V. Distribution Clearances or Section VI.C. Transmission Clearances or as designated by the operating company.
3. Reasonable care should be exercised to help prevent the spread of insects and pathogens.
4. Portions of wild cherry, black walnut and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut, treated with herbicide, or damaged by the Contractor's activities, should be removed from active pasture areas accessible to livestock, unless agreed to by the property owner in writing.
5. State and local ordinances shall be obeyed during the disposal of debris.

## C. Hangers and Cleanup

1. All hangers shall be removed from the pruned tree before leaving the job site.
2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of cleanup work should be performed. Unless otherwise designated by AEP Forestry, chipping the brush, cutting wood into lengths that can be handled and raking the site is the maximum cleanup that should be performed.
4. All streams and/or drainage ditches shall be kept free of any limbs or woody debris cut by the Contractor.

## D. Clearing and Re-clearing


1. AEP will provide the width of the right-of-way.

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2. All woody plants that have the potential to grow into and interfere with service reliability; restoration; patrolling; or other maintenance operations of AEP facilities should be controlled by the operating company guidelines.
3. During scheduled maintenance operations, any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the proper AEP personnel.
4. Trees, brush, and existing stumps within the right-of-way shall be cut as close to the ground as practical, but not to exceed three inches in maximum height above the ground line. Where possible, the cut shall be parallel to the slope.
5. Trees shall be felled to avoid damage to crops, fences, and other facilities. Any trees felled into crops, ditches, streams, roads, or across fences shall be promptly removed. No trees shall be felled in such a manner as to endanger AEP facilities or the property of third parties, or hinder access along the right-of-way.
6. Trees, brush, and slash shall be lopped as designated by AEP Forestry.
7. Hazard Trees are identified and addressed/worked at the discretion of the individual operating companies or regions. Consideration for hazard tree removal shall be made for those trees that are an immediate threat to AEP facilities. Hazard Trees may include, but are not limited to, trees that have severe lean or sweep; are dead; or have visible defect or damage.
8. Stumps of trees growing in fences may be cut at fence post height. Logs may be left in tree lengths or as designated by AEP Forestry. If so designated, the merchantable value of logs shall be preserved as much as practical.
9. As designated by AEP Forestry, brush and logs may be piled at the edge of the right-of-way for wildlife habitat.
10. Brush and debris from vegetation clearing shall not be left in managed agricultural areas or other maintained areas. Piled and/or windrowed materials shall not be left on or interfere with fences or other facilities of the landowner or AEP unless designated by AEP Forestry.

## E. Herbicide Application

1. All woody plants that have the potential of growing into the lines or impair access should be controlled, as designated by AEP Forestry.
2. Contractors are required to maintain accurate and up to date records of all herbicide applications made as required by all Federal, State, and local laws.
3. The Contractor shall be required to control at least 90% or a percentage as designated by operating company of the targeted vegetation. Any areas not meeting the control requirements shall be retreated at the Contractor's expense.<sup>xiv</sup>
4. AEP Forestry may make vegetation management prescriptions in consultation with Contractors.
5. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xv</sup>
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.

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7. Contractor shall be responsible for training of herbicide applicators.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps shall be treated with an appropriate herbicide treatment.

## F. Tree Growth Regulator Application

1. Trees designated for tree growth regulation shall be treated with an approved tree growth regulator ("TGR") in accordance with label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in excessive state of decline shall not be treated unless directed by AEP Forestry.
3. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.<sup>xvi</sup>

## G. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.


## V. Distribution Clearances

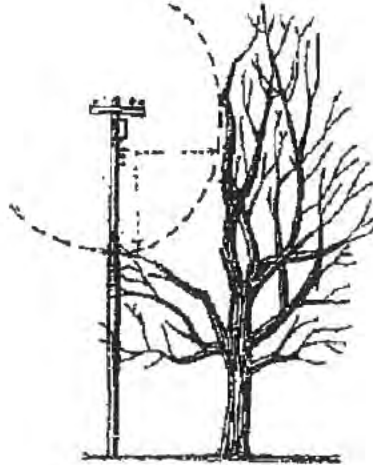
Variances to this recommendation may be necessary and applied due to specific operating company guidelines or specific restrictions in permits and/or easements.

Minimum clearance for distribution lines is that distance that will prevent regrowth into any AEP conductors for a minimum of three (3) years. The species, site, limb, conductor sag and sway during windy conditions; and the effect of electrical load should all be considered when determining the clearance requirement.

### A. Primary Conductors

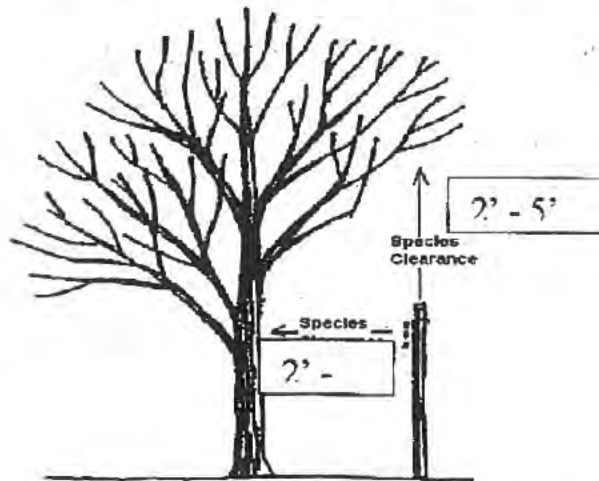
Limbs should be pruned for a minimum of three (3) years clearance. Overhanging limbs should be removed. Top of tree should be directionally pruned unless prior arrangements have been made with the proper AEP Forestry representative.

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## B. Secondary Conductors

Limbs should be pruned for two (2) to five (5) feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.



## C. Service Drops and Street Light Conductors

Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.


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## D. Poles and Guys

1. Heavy limbs applying pressure on the span guy should be pruned or removed at the specific direction of the proper AEP Forestry representative.
2. Trees, brush, and slash should be cleared to obtain a minimum of a five (5) foot radius of clearance around the pole or guy unless otherwise specified by an AEP Forestry representative.

## E. Vines

Vines shall be cut, **BUT NOT REMOVED** from AEP or other facilities, and treated with an appropriate herbicide as designated by AEP Forestry representative. Pulling/removing vines from the facilities may damage equipment and endanger the employee.

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## VI. Transmission

### A. Hazard Trees

Trees may exhibit potential threats to AEP facilities due to disease, damage, physical location, growth characteristics or environmental problems. Where these trees exist, AEP considers them high priority risks that need to be addressed and remediated.<sup>xvii</sup>

#### 1. Visual Assessment

While performing work on a circuit, contract crews shall conduct a visual assessment to identify trees with imminent<sup>1</sup> and/or probable<sup>2</sup> likelihood of failure inside and outside the right-of-way. The tree should be viewed from some distance away, if possible, to consider crown shape and surroundings.

Any tree identified to be a potential imminent threat to an AEP Transmission line shall be reported to the responsible transmission forester.

#### 2. Ground Evaluation

If a Hazard Tree is identified during the visual assessment, a 360° ground evaluation shall be required. The evaluations should include an inspection of:

- Tree crown
- Trunk
- Trunk flare
- Above-ground roots
- Site conditions around the tree in relation to targets.

The Contractor shall report risk and mitigation options to the responsible transmission forester.

### B. Tree Felling


Before beginning any tree felling operation, the Contractor shall consider relevant factors<sup>3</sup> pertaining to the tree and site and shall take appropriate actions to ensure a safe removal operation.<sup>xviii</sup>

1. When there is a danger that the tree pieces or tree being removed may fall in the wrong direction and contact utility facilities or damage other property, appropriate methods shall be used to control the direction of fall.<sup>xx</sup>
2. All limbs shall be removed to a height and width sufficient to allow the tree parts or tree to fall clear of hazards.<sup>xx</sup>
3. Notches shall be used on all trees and trunks greater than five inches DBH.<sup>xxi</sup>

<sup>1</sup> Imminent – failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. (Tree Risk Assessment Manual, pg. 100)

<sup>2</sup> Probable – failure may be expected under normal weather conditions within the specified time frame. (Tree Risk Assessment Manual, pg. 100)

<sup>3</sup> ANSI Z133-2012 Annex C.3, Manual Tree Felling Procedures contains a list of relevant factors to be considered during tree felling.

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4. Contractors shall provide evidence of training to employees related to tree felling upon request.

### C. Clearances


The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is the removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with the safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop, such as in nurseries and orchards.

When removal of all woody-stemmed vegetation is not achievable (i.e. there are restrictions), AEP will endeavor to cut or trim so that upon completion of the work no vegetation will be closer to conductors at maximum sag than the distances outlined in Columns A and C. Distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons *other than qualified* line clearance arborists and qualified line-clearance arborist trainees (Columns A and C).

**Table 1: Clearance Table Guidelines<sup>4</sup>**

| Right-of-way No Restrictions   | Right-of-way with Restrictions   |
|--|--|
| <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&lt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Remove all woody-stemmed vegetation   | 1) Trim or remove vegetation to meet Column C, <b>Table 2</b> .                  |
| 2) Do not allow vegetation closer than Column E, <b>Table 2</b> .                | 2) Do not allow vegetation closer than Column E, <b>Table 2</b> .                |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2</b> .      | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2</b> .       |
| <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> | <b>&gt; 100' Vertical Clearance between Conductors at Maximum Sag and Ground</b> |
| 1) Trim or remove vegetation to meet Column B, <b>Table 2</b> .                  | 1) Trim or remove vegetation to meet Column C, <b>Table 2</b> .                  |
| 2) Do not allow vegetation closer than Column E, <b>Table 2</b> .                | 2) Do not allow vegetation closer than Column E, <b>Table 2</b> .                |
| 3) Trigger distances to schedule maintenance per Column D, <b>Table 2</b> .      | 3) Trigger distance to schedule maintenance per Column D, <b>Table 2</b> .       |

<sup>4</sup> Upon completion of maintenance

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**Table 2: Transmission Line Clearance Guidelines**

| Column A                                   | Column B  | Column C  | Column D   | Column E  |
|--|---|---|--|---|
| <b>Nominal Voltage (kV phase to phase)</b> | <b>AEP Clearance 1 (no restrictions) Desired Clearance Between Conductor and Vegetation</b> | <b>AEP Clearance 1 (with restrictions) Desired Clearance between Conductor and Vegetation</b> | <b>ANSI<sup>5</sup> Clearance between Conductor and Vegetation</b> | <b>AEP Clearance 2 between Conductor and Vegetation</b> |
| 765kV                                      | 45  | 35'00"  | 27'04"   | 14'00"  |
| 500kV                                      | 45'   | 26'08"  | 19'00"   | 10'00"  |
| 345kV                                      | 30'   | 20'05"  | 13'02"   | 7'06"   |
| 230kV                                      | 30'   | 16'05"  | 7'11"  | 5'02"   |
| 161kV                                      | 25'   | 14'00"  | 6'00"  | 3'05"   |
| 138kV                                      | 25'   | 13'02"  | 5'02"  | 2'11"   |
| 115kV                                      | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 88kV                                       | 25'   | 12'04"  | 4'06"  | 2'06"   |
| 69kV                                       | 25'   | 10'09"  | 4'02"  | 2'06"   |
| 46kV                                       | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 34.5 kV                                    | 20'   | 10'00"  | 3'04"  | 2'06"   |
| 23 kV                                      | 20'   | 10'00"  | 3'00"  | 2'06"   |


### D. Transmission Dispatch Communication Procedures

The Contractor shall log on and off transmission circuits per the policy of the responsible Transmission Dispatch Center ("TDC").

### E. Transmission Forestry Construction Guidelines

The ultimate goal of vegetation maintenance is to provide for the safe, reliable operation of the AEP transmission system. When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns and public areas), trees deemed compatible with safe operation of the line remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall or actively maintained trees that could be considered a crop such as in nurseries or orchards.

<sup>5</sup>ANSI Z133-2012.

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All removals/trimming shall be done in accordance with the best recognized and approved principles of modern arboriculture and tree surgery, with balanced emphasis on current tree health and clearance.

The full width of the right-of-way, as determined by easement agreements, shall be cleared unless otherwise indicated on the Special Condition List.

Right-of-Way service will provide a contact list and will be handling damages for the construction work. Property owners who were notified of the construction work will receive a follow-up notification from the Contractor tree days before starting work on that property.

### 1. Contractor Qualifications

Contractor practices shall be in compliance with applicable industry standards (e.g., ANSI, OSHA, NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.

### 2. Clearing

The right-of-way shall not be cleared with a bulldozer, maintainer, or any other method that will disturb surface or sub-surface conditions unless specified in the right-of-way Special Conditions List. Reduction of disturbance of the surface or sub-surface soils reduces the risks of soil erosion and invasive species.

Contractor will take whatever measures necessary as specified in the SWPPP and elsewhere in the specification to prevent the erosion of soil from the right-of-way. The corrective measures may be in the form of grading, terracing, construction of sediment barriers, reseeding, mulching, or steps necessary to prevent erosions and must be approved by AEP.


Mowed right-of-ways shall be left with no stumps higher than three inches and no large chunks of debris left. Examples of preferred mowing equipment to be used on the right-of-ways will be equipped with, but not limited to, "FECON", "SEMPI" or equivalent type mowing heads.

### 3. Tree and Brush Removal

1. Trees and brush designated for cutting or mowing on the rights-of-way shall be cut as close to the ground as practicable, but not to exceed three inches in height above the ground line. All trees and brush cut shall be stump-treated with an approved herbicide as instructed on the label. All spraying procedures are to be fully explained to property owners if requested by landowner. If requested by landowner that no herbicides be used, their request is to be referred to Company. Certain state laws and regulations may require consent of the property owner to apply herbicides.

2. On portions of the right of way where the conductor to ground clearance is 100 feet, or less, all woody stemmed vegetation will be cut, limbed and lopped. No vegetation will be permitted to obstruct roads, lanes, trails, fences and streams. The brush shall also be cut and compacted. Additional requirements are:

- Stump surfaces shall be cut parallel to and within three inches of the ground.
- Brush and logs shall not be placed within 25 feet of improved roads, or river and stream banks.
- Brush and logs shall not be piled in flood plains.
- Brush and logs shall not be placed in fields unless authorized by the property owner.

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- Brush and logs shall not be placed where it will obstruct ingress or egress on other rights-of-way such as roadways or trails.
  - Trees will be felled where possible to protect crops, fences and other facilities.
3. No clearing will be done where the line crosses valleys or ravines when the conductor profile indicates a height of 100 feet or greater above the ground at maximum sag; hence, impacts on streams and woody vegetation in valleys can be avoided or minimized. The exceptions to this are as follows:
- Trees that do not have at least 50' of clearance between conductors and tree under maximum sag conditions will be removed.
  - Where a conductor stringing path is specified
  - Wire set-up areas
  - Work areas, etc.
4. For trees in yards, grind stumps to six inches below grade and restore the ground to match the existing grade and vegetation in the surrounding yard.
5. Low-growing species can be left except in tower locations. All woody stem vegetation within the cleared right-of-way shall be removed on NERC-applicable lines.
6. Any required buffer zones/screens shall be selectively treated in areas designated by AEP. Only tall-growing species (i.e. those trees that will grow taller than 15 feet at maturity) will be cut or treated in these areas.


#### 4. Tree Pruning

Tree pruning will generally be limited to trees on the edge of the right-of-way or in locations designated as environmentally-sensitive; tree pruning will ensure that required clearances are achieved. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development. Manual pruning operations will utilize qualified line clearance arborists, as defined by ANSI Z133.1-2012, and seek to prune trees according to standards set by the International Society of Arboriculture, the American National Standards Institute and the Tree Care Industry Association. Trees will be pruned in accordance with the American National Standard Institute guidelines for "Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning), ANSI A300 (Part 1) – Pruning"

#### 5. Debris Disposal

Debris from construction clearing operations is left on the right-of-way to decompose and return nutrients to the soil and to reduce the possibility of soil erosion. Limbs are reduced in size to maintain a low profile, and both the main stem and brush left on the right-of-way.

1. All woody vegetation that falls into roadways, waterways, fences, lawns, or pastures shall be moved to a wooded area of the right-of-way or may, at times, be chipped and/or otherwise removed.

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2. Logs may be left in tree lengths or as designated. The merchantable value of the logs will be preserved as much as possible.
3. Alternatives to the debris disposal standard are the following:
  - Cut and Compact: Brush may be reduced in height by cutting and by compacting piles with crawler-type equipment at selected locations (depressions in topography) on the right-of-way outside of the conductor path.
  - Cut and Scatter: Brush may be reduced in height by cutting or scattering on the right-of-way outside of the conductor path or roadway, but as close to the edge of the right-of-way as possible.
  - Cut and Pile: Where required by right-of-way agreement, brush shall be piled or scattered off the right-of-way.
  - Chipping/Shredding: Chipping/shredding or other viable methods may be utilized where accessible by equipment.
  - Burning: brush burning shall only be done if it is specified in the right-of-way agreement and is in accordance with applicable regulations. This method requires formal approval by the Manager of Forestry Operations.

## F. Hazard Trees


Hazard trees (outside of right-of-way) will be cut or trimmed and the logs and laps will be left as felled. When the conductor to ground clearance is over 100 feet, only those trees that do not have the required clearance will be cut. Refer to Section VI.A on page 15 for additional information.

## G. Herbicide

Application of all herbicides shall be performed as required by federal, state, and local laws. The contractor will furnish and be responsible for all pesticides, including proper disposal of their containers, and insure their use in accordance with the label instructions. All work will be done as defined in Herbicide Application on page 11.

## H. Fences and Crops

1. No fences shall be cut unless contractor is authorized to do so by AEP, if fences are cut or broken by the contractor without prior AEP authorization, the Contractor, at their expense, shall promptly repair.
2. Contractor is responsible for the right-of-way clearing needed to perform the job, however, the Contractor agrees to not do unnecessary damage to growing crops or other properties and agrees to pay the tenant and/or landowner involved for any unnecessary damage to growing crops and other properties. AEP shall be the sole judge of what constitutes "necessary" and "unnecessary" damage under the terms hereof.

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## VII. Appendices

### A. Distribution Line Clearance Guidelines

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP's rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

**Table 3: Minimum Clearance from Distribution Conductors**

| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Fast            | Minimum clearance of 20 feet      | Cottonwood<br>Poplar species<br>Silver Maple<br>Sycamore<br>Willow<br>Ailanthus<br>Box Elder<br>Elm species   |
| Medium          | Minimum clearance of 15 feet      | Locust<br>Red maple species<br>Ornamental pear species<br>Fruit trees (apple, pear, etc.)<br>Pine, Spruce and Hemlock species<br>Sweet gum<br>Catalpa<br>Hackberry<br>Hickory<br>Crabapple<br>Red oak<br>Ash Species<br>Mulberry<br>Bois d'arc (Osage orange, hedge tree) |


| Re-growth Rates | Minimum Clearance from Conductors | Species   |
|-----------------|-----------------------------------|---|
| Slow            | Minimum clearance of 10 feet      | Cedar<br>Chinaberry<br>Magnolia<br>Any small variety species<br>Persimmon<br>White oak (round lobes)<br>(Redbud, dogwood, etc.) |

### 1. Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

## **B. Distribution Operating Company Specific Guidelines**


- 1. AEP Ohio**
- 2. AEP Texas**
- 3. Appalachian Power**
- 4. Indiana Michigan Power**
- 5. Kentucky Power**
- 6. Public Service of Oklahoma**
- 7. Southwestern Electric Power Company**
- 8. Wheeling Power**

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### C. Referenced Documents and Specifications

| Title  | Year | Version                              | Pages |
|--|------|--------------------------------------|-------|
| <i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power  | 2012 | Revision 2                           | 1-23  |
| <i>AEP Vegetation Management Ground Spray Requirements</i>   | 2014 |                                      | 1-3   |
| <i>Aerial Patrol Training.</i> American Electric Power   | 2013 | TVMD-015                             |       |
| <i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL   | 2012 | ANSI <sup>®</sup> Z133-2012          | 1-71  |
| <i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH                               | 2008 | ANSI <sup>®</sup> A300 (Part 1)-2008 | 1-13  |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL <sup>6</sup> | 2006 | ANSI <sup>®</sup> A300 (Part 7)-2006 | 57-66 |
| <i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL              | 2012 | ANSI <sup>®</sup> A300 (Part 7)-2012 | 1-15  |
| <i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL   | 2014 | Second Edition                       | 1-44  |
| <i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL   | 2008 | Revised, 2008                        | 1-38  |
| <i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL   | 2004 | First Edition                        | 1-22  |
| <i>Budget Development and Cost Forecasting.</i> American Electric Power  | 2013 | TVMD-004                             |       |
| <i>Inspection and Patrol Process.</i> American Electric Power  | 2013 | TVMD-003                             |       |
| <i>Managing Clearance Restrictions.</i> American Electric Power  | 2013 | TVMD-005                             |       |
| <i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power   | 2013 | TVMD-006                             |       |
| <i>Risk Assessment &amp; Procedures.</i> American Electric Power   | 2013 | TVMD-014                             |       |

<sup>6</sup> Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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|---|------|---------------|-------|
| <i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power             | 2011 |               | 1-11  |
| <i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL             | 2013 | First Edition | 1-198 |
| <i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power | 2013 | TVMD-011      |       |
| <i>Work Quality Assurance and Quality Control Inspections.</i> American Electric Power                | 2013 | TVMD-013      |       |

<sup>i</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH

<sup>ii</sup> *Best Management Practices – Utility Pruning of Trees.* International Society of Arboriculture. Champaign, IL

<sup>iii</sup> *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Integrated vegetation Management a. Electric Utility Rights-of-way (Part 7 - 2006),* Tree Care Industry Association, Manchester, NH

<sup>iv</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>v</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vi</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>vii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>viii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>ix</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>x</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xi</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xii</sup> *Supplementary Terms and Conditions for Forestry Contracts.* American Electric Power

<sup>xiii</sup> *AEP General Terms and Conditions for Labor and Services.* American Electric Power

<sup>xiv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xv</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvi</sup> *AEP Vegetation Management Ground Spray Requirements.* American Electric Power

<sup>xvii</sup> *Managing Hazard Trees on FAC-003 Applicable Circuits.* American Electric Power

<sup>xviii</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xix</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xx</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL

<sup>xxi</sup> *American National Standard for Arboricultural Operations – Safety Requirements.* International Society of Arboriculture. Champaign, IL



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# Contractor Guide

for

Distribution Events Scorecard  
System





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## General Information

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- If you do not have a user name and password to log into the online portal, you will need to request them from Vicki Conner.
- If a company is not available in the system, you will need to request that it be added by Vicki Conner.
- If you have any questions or require technical support, contact Vicki Conner at [vaconner@aep.com](mailto:vaconner@aep.com) or to [distributionsafetycoordinator@aep.com](mailto:distributionsafetycoordinator@aep.com).

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# Log In to the Web Application

Go to <https://terrainenet/AEPSScoreCard/welcome.htm>

The screenshot shows the login interface for the 'Distribution Events Scorecard System'. At the top left is the 'AEP AMERICAN ELECTRIC POWER' logo. The page title is 'Distribution Events Scorecard System'. The login form includes a 'User Name' field with the text 'jporterfield@terrainenet.com', a 'Password' field with masked characters, a 'Remember Me' checkbox, and a 'Sign-In' button. Three red callout boxes with arrows provide instructions: one points to the 'Remember Me' checkbox with the text 'Click here to have your browser remember your login information'; another points to the 'Sign-In' button with the text 'Click here to sign in'; and a third points to both the 'User Name' and 'Password' fields with the text 'Log in using the User Name and Password provided to you by admin'. The footer contains 'Copyright ©2012' and a 'Powered By TERRAINE' logo.

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## Add Contractor Hour Data

From the **HOME** screen, go to **CONTRACTOR HOURS DATA INPUT GRID**.

Go here to enter contractor hours



**AEP AMERICAN ELECTRIC POWER** [Logout](#)

### Distribution Events Scorecard System

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[HOME](#) [CONTRACTOR HOURS DATA INPUT GRID](#) [DATA QA/APPROVAL](#) [CONTRACTOR HOURS](#) [EVENTS](#) [REPORTS](#) [ANNUAL CONTRACTOR DATA](#)

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## Add Contractor Hour Data

You can add data as a single input record, multiple input records, or as an annual total entered ONCE PER YEAR.

**AEP AMERICAN ELECTRIC POWER** [Logout](#)

### Distribution Events Scorecard System

HOME CONTRACTOR HOURS DATA INPUT GRID DATA QA/APPROVAL CONTRACTOR HOURS EVENTS REPORTS ANNUAL CONTRACTOR DATA

Monthly Data

+Add a Single Input Record

Annual Data

+Add Annual Data

Use Wizard to Create Multiple Input Records

Note: Annual Data is to be entered ONCE PER YEAR, and is to be include total hours, number of incidents, number of severity days, incident rate, and severity rate for the company as a whole, not just AEP projects

# Add a Single Input Record

The screenshot displays the American Electric Power (AEP) Distribution Events Scorecard System interface. The top navigation bar includes links for HOME, CONTRACTOR HOURS DATA INPUT GRID, DATA QA/APPROVAL, CONTRACTOR HOURS, EVENTS, REPORTS, and ANNUAL CONTRACTOR DATA. The main content area is divided into 'Monthly Data' and 'Annual Data' sections. In the 'Monthly Data' section, there is a button labeled '+Add a Single Input Record' and another button labeled 'Use Wizard to Create Multiple Input Records'. A red box highlights the '+Add a Single Input Record' button with the text 'Click here to begin'. A red arrow points from this button to a detailed form titled 'Add a Single Input Record'. The form contains the following fields: Year (2013), Month (January), and a date field (1/31/2013). There are three mandatory dropdown menus: Operating Company, Contractors, and Function. The 'Hours' field is set to 'Man Hours'. The 'Entered Date' is 01/02/13 and the 'Entered By' is jporterfield@terrine.com. A note at the bottom of the form states '\* Fields are mandatory.' and there are 'Save' and 'Cancel' buttons.

**AMERICAN ELECTRIC POWER** Distribution Events Scorecard System

Logout

HOME CONTRACTOR HOURS DATA INPUT GRID DATA QA/APPROVAL CONTRACTOR HOURS EVENTS REPORTS ANNUAL CONTRACTOR DATA

Monthly Data Annual Data

+Add a Single Input Record +Add Annual Data

Click here to begin

Use Wizard to Create Multiple Input Records

**Add a Single Input Record**

Year: 2013 Month: January 1/31/2013

\* Operating Company  
\* Contractors  
\* Function

Hours: Man Hours \* Fields are mandatory.

Entered Date: 01/02/13  
Entered By: jporterfield@terrine.com

Save Cancel

Press ESC, Click on X (right-top) or Click Out from the popup to close the popup.

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## Add a Single Input Record

Select a year and month.  
**Note:** The third dropdown will automatically populate with the final day of the chosen month.

Use these dropdowns to select an Operating Company, Contractor (only your Contractor name will be available), and Function.

These fields are populated automatically and are not editable.

The screenshot shows a web form titled "Add a Single Input Record". The form contains the following fields and controls:

- Year:** A dropdown menu with "2013" selected.
- Month:** A dropdown menu with "January" selected.
- Date:** A dropdown menu with "1/31/2013" selected.
- Operating Company:** A dropdown menu with a red asterisk to its left.
- Contractors:** A dropdown menu with a red asterisk to its left.
- Function:** A dropdown menu with a red asterisk to its left.
- Entered Date:** A text input field containing "01/02/13".
- Entered By:** A text input field containing "jporterfield@terrine.com".
- Hours:** A text input field containing "Man Hours".
- Buttons:** "Save" and "Cancel" buttons.
- Footer:** "Press ESC Click on X (right-top) or Click Out from".

Annotations with red arrows point to various parts of the form:

- Red arrows point to the Year, Month, and Date dropdowns from the first annotation box.
- Red arrows point to the Operating Company, Contractors, and Function dropdowns from the second annotation box.
- Red arrows point to the Entered Date and Entered By fields from the third annotation box.
- A red arrow points to the Hours field from the fourth annotation box.
- A red arrow points to the Save button from the fifth annotation box.

A red asterisk and the text "\* Fields are mandatory." are visible near the bottom of the form.

Enter Man Hours (numerical value only) here.

After filling out all required fields, click here to Save.

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# Add a Single Input Record

Click here to add another record

Once you have selected a record (see below), you can use these buttons to copy or delete the record.

Click here to select a record

Add/update man hours here. No changes will be saved until you Save to Database.

Click here to save all records to the database.  
**Note:** None of the new records will be saved to the database until you click this button.

Click here to refresh total hours as you add / copy / delete records.

| <input type="checkbox"/> | Date      | Operating Company | Contractor | Function              | Hours | Entered By               | Enter Date |
|--------------------------|-----------|-------------------|------------|-----------------------|-------|--------------------------|------------|
| <input type="checkbox"/> | 1/31/2013 | Appalachian Power | ABB, Inc   | Transmission Forestry | 5     | jporterfield@terrine.com | 01/01/2013 |

+ Add Another Input Record   Copy Selected   - Delete Selected

Save to Database   Total: 5.00

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# Add Multiple Input Records

**AMERICAN ELECTRIC POWER** Logout

## Distribution Events Scorecard System

HOME CONTRACTOR HOURS DATA INPUT GRID DATA QA/APPROVAL CONTRACTOR HOURS EVENTS REPORTS ANNUAL CONTRACTOR DATA

Monthly Data

+Add a Single Input Record

Annual Data

+Add Annual Data

Note: Annual Data is to be entered ONCE PER YEAR, and is to be include total hours, number of incidents, number of severity days, incident rate, and severity rate for the

**Click here to begin** → Use Wizard to Create Multiple Input Records

**Add Multiple Input Records Wizard**

Year: 2013 Month: January Date: 1/31/2013

Select Operating Company: [Dropdown]

Contractor

System

Distribution Forestry

Distribution Line - Primary

Distribution Line - Specialty

Transmission Forestry

\* Fields are mandatory

Create Input Records Cancel

Press ESC, Click on X (right-top) or Click Out from the popup to close the popup.



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# Add Multiple Input Records

Select a year and month.  
**Note:** The third dropdown will automatically populate with the final day of the chosen month.

Use the dropdown to select an Operating Company.

Check this box.

**Add Multiple Input Records Wizard**

Year: 2013 | Month: January | 1/31/2013

Select Operating Company: [Dropdown]

Contractor

Antritt's Lawn Sensations

Function

Distribution Forestry

Distribution Line - Primary

Distribution Line - Specialty

Transmission Forestry

\* Fields are mandatory.

Create Input Records | Cancel

Press ESC, Click on X(right-top) or Click Out from the popup to close the popup.

Select function(s) here. You can select more than one.

When finished, click here to create the records and add man hours.

The input wizard will create 6 new input records, which you will be able to edit before saving to the database.

Proceed?

OK | Cancel

After clicking to create input records, you will receive this message. Click OK to proceed.

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# Add Multiple Input Records

Click here to add another record

Once you have selected a record (see below), you can use these buttons to copy or delete the record.

+ Add Another Input Record   Copy Selected   - Delete Selected

| <input type="checkbox"/>            | Date      | Operating Company | Contractor                | Function                      | Hours | Entered By           | Enter Date |
|-------------------------------------|-----------|-------------------|---------------------------|-------------------------------|-------|----------------------|------------|
| <input type="checkbox"/>            | 1/31/2013 | Appalachian Power | Antritt's Lawn Sensations | Distribution Forestry         |       | jporte0519@yahoo.com | 01/15      |
| <input type="checkbox"/>            | 1/31/2013 | Appalachian Power | Antritt's Lawn Sensations | Distribution Line - Primary   |       | jporte0519@yahoo.com | 01/15      |
| <input type="checkbox"/>            | 1/31/2013 | Appalachian Power | Antritt's Lawn Sensations | Distribution Line - Specialty |       | jporte0519@yahoo.com | 01/15      |
| <input checked="" type="checkbox"/> | 1/31/2013 | Appalachian Power | Antritt's Lawn Sensations | Transmission Forestry         |       | jporte0519@yahoo.com | 01/15      |

Save to Database   Total: 0.00

Click here to select a record

Add/update man hours here. No changes will be saved until you Save to Database.

Click here to save all records to the database.  
**Note:** None of the new records will be saved to the database until you click this button.

Click here to refresh total hours as you add / copy / delete records.

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# Add Annual Data Record

The screenshot displays the American Electric Power (AEP) Distribution Events Scorecard System interface. At the top left is the AEP logo and the text "AMERICAN ELECTRIC POWER". To the right is a "Logout" link. Below this is a navigation bar with tabs: HOME, CONTRACTOR HOURS DATA INPUT GRID, DATA QA/APPROVAL, CONTRACTOR HOURS, EVENTS, REPORTS, and ANNUAL CONTRACTOR DATA. The main content area is divided into "Monthly Data" and "Annual Data" sections. In the "Annual Data" section, there is a button labeled "+Add Annual Data". A red box highlights the text "Click here to begin" with an arrow pointing to the "+Add Annual Data" button. Below this is a button labeled "Use Wizard to Create Multiple Input Records". A note states: "Note: Annual Data is to be entered by contractor. It is to include total hours, number of incidents, severity days, incident rate, and severity rate for the company as a whole, not just the contractor." A modal window titled "Add Annual Data Record" is open, showing a form with the following fields: "Select Year" (dropdown menu set to 2013), "Contractor" (dropdown menu set to Abatement Services), "Total Corporate Hours" (text input), "# of Incidents" (text input), "# of Seventy Days" (text input), "Incident Rate" (text input), and "Severity Rate" (text input). At the bottom of the modal are "Entered Date" (text input set to 01/02/2013) and "Entered By" (text input set to jporterfield@veriname.com). There are "Ok" and "Cancel" buttons at the bottom of the modal. A red arrow points from the "+Add Annual Data" button to the modal window. At the bottom of the modal, there is a small instruction: "Press ESC, Click on X (righttop) or Click Out from the popup to close the popup."

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## Add Annual Data Record

**Add Annual Data Record**

Select Year: 2013

Contractor: Abatement Services

\* Total Corporate Hours

\* # of Incidents

\* # of Severity Days

\* Incident Rate

\* Severity Rate

Entered Date: 01/02/2013

Entered By: jporterfield@terrine.com

Ok Cancel

Press ESC, to close the dialog box

Select the applicable year.

This will be set to your Contractor name.

Enter the TOTAL corporate hours, number of incidents, number of severity days, incident rate, and severity rate for the ENTIRE year.

These fields will pre-populate.

Click Ok when you are finished.



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# Add Annual Data Record

Your new record should now be viewable in this screen.

| Year | Contractor                | Total Hours | # of Incidents | # of severity Days | Incident Rate | Severity Rate | View                 |
|------|---------------------------|-------------|----------------|--------------------|---------------|---------------|----------------------|
| 2012 | Antritt's Lawn Sensations | 1           | 1              | 1                  | 1.00          | 1.00          | <a href="#">View</a> |
| 2012 | Antritt's Lawn Sensations | 24          | 33             | 3                  | 3.00          | 3.00          | <a href="#">View</a> |
| 2012 | Antritt's Lawn Sensations | 1           | 2              | 2                  | 1.00          | 2.00          | <a href="#">View</a> |

3 items found, displaying all items. page 1

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## Add an Event

From the **HOME** screen, go to **EVENTS**.

(\***Note:** you may not have all of the links displayed below in your menu navigation)

Go here to enter an event



A horizontal navigation menu with a dark red background and white text. The menu items are: HOME, CONTRACTOR HOURS DATA INPUT GRID, DATA QA/APPROVAL, CONTRACTOR HOURS, EVENTS, REPORTS, and ANNUAL CONTRACTOR DATA. A red arrow points from a text box above to the 'EVENTS' link.

|      |                                  |                  |                  |        |         |                        |
|------|----------------------------------|------------------|------------------|--------|---------|------------------------|
| HOME | CONTRACTOR HOURS DATA INPUT GRID | DATA QA/APPROVAL | CONTRACTOR HOURS | EVENTS | REPORTS | ANNUAL CONTRACTOR DATA |
|------|----------------------------------|------------------|------------------|--------|---------|------------------------|

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# Add an Event

Click here to add an event.

HOME CONTRACTOR HOURS DATA INPUT GRID DATA QA/APPROVAL CONTRACTOR HOURS **EVENTS** REPORTS ANNUAL CONTRACTOR DATA

12/15/2012 To 01/15/2013

Citation Issued  
 At Fault  
Total Lost Days >

**+ Add an Event** Edit Selected Approve Selected Delete Selected

| Date | Operating Company | Contractor | Function | Work Type | Event Type | Job Classification | Lost Days | Restricted Days | Severity Days | Qa Approved |
|------|-------------------|------------|----------|-----------|------------|--------------------|-----------|-----------------|---------------|-------------|
|------|-------------------|------------|----------|-----------|------------|--------------------|-----------|-----------------|---------------|-------------|

**Event**

Update

Contractor: \_\_\_\_\_  
Event Date: 01/02/13

| Gen Info | Description | QA/Signatures | Notes | Print |
|----------|-------------|---------------|-------|-------|
|----------|-------------|---------------|-------|-------|

Operating Company: \_\_\_\_\_  
Contractor: \_\_\_\_\_  
Employee: \_\_\_\_\_  
Foreman: \_\_\_\_\_  
Event Date: 01/02/13  
Event Time: \_\_\_\_\_  
Day of Week: Wednesday  
City: \_\_\_\_\_  
State: \_\_\_\_\_  
Work Type: \_\_\_\_\_  
Storm/Haz Storm: \_\_\_\_\_  
Job Classification: \_\_\_\_\_  
Event Type: \_\_\_\_\_

**Lost Days**  
Days Away From Work: \_\_\_\_\_

Close

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# Add an Event

The screenshot shows a web-based form titled "Event". At the top left is an "Update" button. Below it, the form has a header "Event" and two input fields: "Contractor:" and "Event Date:" with the value "01/02/13". A tabbed interface is present with tabs for "Gen Info", "Description", "QA/Signatures", "Notes", and "Print". The "Gen Info" tab is active, showing a list of fields: "Operating Company:" (dropdown), "Contractor:" (dropdown), "Function:" (dropdown), "Employee:", "Foreman:", "Event Date:" (text, value "01/02/13"), "Event Time:", "Day of Week:" (text, value "Wednesday"), "City:", "State:" (dropdown), "Work Type:" (dropdown), "Storm/Non-Storm:" (dropdown), "Job Classification:" (dropdown), "Event Type:" (dropdown), and "Lost Days" section with "Days Away From Work:" (text, value "0"). A "Close" button is at the bottom center. A red callout box on the right contains the text "Start by selecting an Operating Company." with a red arrow pointing to the "Operating Company:" dropdown menu.



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# Add an Event

The screenshot shows a web-based form titled "Event" with several tabs: "Gen Info", "Description", "QA/Signatures", "Notes", and "Print". The "Description" tab is active. The form contains the following fields:

- Operating Company: Appalachian Power (dropdown)
- Contractor: (text input)
- Function: (dropdown) - Red arrow points here with callout: "Select a function."
- Employee: (text input)
- Foreman: (text input)
- Event Date: 01/02/13 (calendar icon)
- Event Time: (text input)
- Day of Week: Wednesday (dropdown)
- City: (text input)
- State: (dropdown)
- Work Type: (dropdown)
- Storm/Non-Storm: (dropdown)
- Job Classification: (dropdown)
- Event Type: (dropdown)
- Lost Days**
- Days Away From Work: (text input)
- Job Transfer/Restricted Days: (text input)
- Severity Days: (text input)
- Citation Issued?
- At Fault? (dropdown) - Red arrow points here with callout: "Select if person was at fault or not."

At the bottom of the form is a "Close" button. A red box at the top left contains the text: "Click here to add description and injured body part (if relevant)." with a red arrow pointing to the "Description" tab. A red box at the bottom right contains the text: "These red arrows will appear to indicate required fields. All other fields are optional."

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# Add an Event

The screenshot shows the 'Event' form with the 'Event Date' set to '01/02/13'. The 'Work Description' field is empty. Below it is the 'Injured Body Part(s)' table, which currently shows 'No Records'. The table has columns for 'person', 'body\_part', 'left\_right', and 'injury\_type'. There are 'New' and 'Refresh' buttons next to the table.

← Add description (if relevant) here.

← Scroll down to add an injured body part (if relevant).

This close-up shows the 'Injured Body Part(s)' table with the columns 'person', 'body\_part', 'left\_right', and 'injury\_type'. Below the table is a '+ Add Body Part' button. A red arrow points to this button from the text 'Click here to add a body part.'

← Click here to add a body part.

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## Add an Event

**Event**

Update Cancel New Recalc

**Body Parts**

Contractor: \_\_\_\_\_

**Body Part Involved in Event**

Body Part: Ankle

Left / Right: Right

Injury Type: Abrasion

Update Cancel New Recalc

New Record

Close

Fill out body part information using the dropdowns.

Click Update when you are finished to save the body part record.

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## Add an Event

When you are finished adding event data, click here.

Event

Update

Event

Contractor:

Event Date: 01/02/13

| Status | ID                                | Contractor                 | Company                | Date     |
|--------|-----------------------------------|----------------------------|------------------------|----------|
| [open] | D667E5B5411246328A9F41208A82DB47  | Appalachian Power          | AC Dellvade            | 12/20/12 |
| [open] | 73B2757232041469F06447717A5932E   | Indiana Michigan Power     | Acuren                 | 12/04/12 |
| [open] | 48BCf42EF0E24f7D8CAE4721B37EB7FE  | Kentucky Power             | AEP                    | 12/12/12 |
| [open] | 92D8645DFC6B4D5E4A4D450E1242E682D | AEP-OH                     | Accu Pro-Cut           | 12/04/12 |
| [open] | 911CECDF39754cB28205533910A82697  | Appalachian Power          | Adesta                 | 12/18/12 |
| [open] | EE800629B4204AA8804E59839B8D168E  | Indiana Michigan Power     | Acuren                 | 12/18/12 |
| [open] | 40898C1655704837B7D7645F9D03F433  | Appalachian Power          |                        | 01/02/13 |
| [open] | 3B407CCC8AFA4D119BBE50E4824E2C9B  | AEP-OH                     | American Refractory Co | 12/17/12 |
| [open] | 48320B2FB94E4fBFB99E663D4CE2C8C1  | Public Service of Oklahoma | AC Dellvade            | 12/18/12 |
| [open] | F125A4F5CFEB4c79A6F46B7F12E4468E  | AEP-TX                     | Adesta                 | 12/18/12 |

Close

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## Add an Event

**Event**

|        |     |                                  |                               |                              |          |  |
|--------|-----|----------------------------------|-------------------------------|------------------------------|----------|--|
| [open] | [X] | D667E5B5411249328A9F41208A82DB47 | Appalachian Power             | AC<br>Dellvade               | 12/20/12 |  |
| [open] | [X] | 73B27757232041489F06447717A5932E | Indiana Michigan<br>Power     | Acuren                       | 12/04/12 |  |
| [open] | [X] | 48BCF42EF0E24F7D8CAE4721B37EB7FE | Kentucky Power                | AEP                          | 12/12/12 |  |
| [open] | [X] | 450E1242E6820                    | AEP-OH                        | Accu<br>Pro-Cut              | 12/04/12 |  |
| [open] | [X] | 5533910A82697                    | Appalachian Power             | Adesta                       | 12/18/12 |  |
| [open] | [X] | EE60D629B4204AA8804E59839B8D168E | Indiana Michigan<br>Power     | Acuren                       | 12/18/12 |  |
| [open] | [X] | 4089BC1655704937B7D7645F9D03F433 | Appalachian Power             |                              | 01/02/13 |  |
| [open] | [X] | 3B407CCC8AFA4D119BBE65E4824E2C9B | AEP-OH                        | American<br>Refractory<br>Co | 12/17/12 |  |
| [open] | [X] | 4832DB2FB94E4FBFB99E663D4CE2C8C1 | Public Service of<br>Oklahoma | AC<br>Dellvade               | 12/18/12 |  |
| [open] | [X] | F125A4F5CFEB4C79A6F48B7F12E4488E | AEP-TX                        | Adesta                       | 12/18/12 |  |

Close

While in this screen, you can open the record to make edits or click on the red 'X' to delete it