

REQUEST:

Refer to the FAC supplemental schedules filed on March 26, 2014, by Duke Kentucky, the schedule titled "Explanation Associated with Schedule 2 of the March 2014 FAC rates-January 2014 expense month? (attached as Appendix B to this Order).

a. The schedule states:

Previously, the Company was using the Day Ahead/Real Time blended locational marginal price (LMP) for its generation modeling (non-native sales) but mistakenly only used the Real Time LMP for its load modeling (purchased power). The Company will use Day Ahead/Real Time blended locational marginal price (LMP) for both generation (non-native sales) and load modeling (purchased power) for the expense month of January 2014 and going forward.

By month, for the period November 2012 through April 2014, provide the effect it would have had on the FAC calculation if the Day-Ahead/Real-Time blended LMP had been used for both generation and load modeling.

b. The schedule also states that "Duke Energy Kentucky purchases energy from PJM to make-up the difference when the real-time native load is greater than the available real-time generation not committed in the day-ahead energy market to non-native."

1. State whether it is a common occurrence for the real-time native load to be greater than the available real-time generation not committed in the day-ahead energy market to non-native sales.
2. Explain the reason(s) the situation occurs.

3. State whether native-load customers are assigned higher fuel costs in these situations. If yes, explain why Duke Kentucky is unable to allocate the higher purchase power costs to non-native sales and the lower generation costs (although committed in the day-ahead market to non-native sales) to native-load sales.

RESPONSE:

- a. See the table below for the effect of using the day-ahead/real-time blended LMP would have had on the FAC if it had been used. The purchased power recovered in the FAC would have been \$1,061,837 higher than actually recovered.

	MWhs Purchased Power	Cost at DA/RT LMP Blend (New Method)	Cost at RT LMP (Old Method)	New Method less Old Method
November-12	48,927	\$1,862,778	\$1,881,944	(\$19,167)
December-12	66,310	\$2,072,678	\$2,004,844	\$67,835
January-13	62,653	\$1,842,352	\$1,871,033	(\$28,681)
February-13	78,497	\$2,529,411	\$2,475,513	\$53,898
March-13	36,428	\$1,490,716	\$1,381,109	\$109,608
April-13	161,692	\$6,232,276	\$6,069,285	\$162,990
May-13	39,474	\$1,726,958	\$1,717,059	\$9,899
June-13	112,318	\$4,093,946	\$4,023,905	\$70,040
July-13	141,360	\$6,074,857	\$6,016,477	\$58,380
August-13	84,534	\$3,050,264	\$2,927,144	\$123,120
September-13	39,545	\$1,659,182	\$1,585,380	\$73,802
October-13	12,121	\$469,151	\$452,876	\$16,275
November-13	45,583	\$1,576,002	\$1,489,374	\$86,628
December-13	98,816	\$3,515,574	\$3,238,365	\$277,209
Total				<u>\$1,061,837</u>

The FAC for the periods January 2014 through April 2014 incorporated the day-ahead/real-time blended LMP pricing; therefore, the impact of the change has been reflected in the FAC filings.

- b. 1. It is not a common occurrence for generation to be committed in the day-ahead energy market to non-native sales. This is because the entire capability of the generator

must clear non-native in the day-ahead before it is flagged for non-native in the real-time.

When this does occur it is often during off-peak hours.

2. Please see response to 26b(1).

3. Native-load customers are not necessarily assigned higher fuel costs in these situations. During off-peak hours the cost of purchased power can be less than the cost of generation from Duke Energy Kentucky units.

PERSON RESPONSIBLE: Lisa Steinkuhl / John Swez

**Duke Energy Kentucky
Case No. 2014-00229
Staff First Set Data Requests
Date Received: August 13, 2014**

STAFF-DR-01-027

REQUEST:

Explain how purchase power costs are accounted for in the calculation of the FAC when Duke Kentucky experiences a planned generation outage and purchases power to meet load (i.e., is the entire amount of the purchase power recorded in the calculation, or is there a limit as to the amount recorded?). If there is a limit, explain the basis for the limitation and how it is calculated. If there is no limit, explain the basis for including 100 percent of the purchase power costs.

RESPONSE:

When Duke Energy Kentucky experiences a planned generation outage and purchases power to meet load, the entire amount of the purchase power is included in the calculation of the FAC rate. KAR 807 5:056 (3)(c) states the fuel costs shall be the most recent actual monthly cost of the net energy cost of energy purchases, exclusive of capacity or demand charges when such energy is purchased on an economic dispatch basis. Included therein may be such costs as the charges for economy energy purchases and the charges as a result of scheduled outage.

PERSON RESPONSIBLE: Lisa Steinkuhl

**Duke Energy Kentucky
Case No. 2014-00229
Staff First Set Data Requests
Date Received: August 13, 2014**

STAFF-DR-01-028

REQUEST:

Explain how purchase power costs are accounted for in the calculation of the FAC when Duke Kentucky is not experiencing a generation outage but must purchase power in order to meet demand (i.e., is the entire amount of the purchase power recorded in the calculation, or is there a limit as to the amount recorded?). If there is a limit, explain the basis for the limitation and how it is calculated. If there is no limit, explain the basis for including 100 percent of the purchase power costs.

RESPONSE:

When Duke Energy Kentucky is not experiencing a generation outage and purchases power in order to meet demand, the entire amount of the purchase power is included in the calculation of the FAC rate. In this situation, Duke Energy Kentucky purchased power to meet demand because it was the most economical option. PJM economically commits and dispatches Duke Energy Kentucky's generating units using offers made by the Company. If native load is more than the generation dispatched for a given hour, Duke Energy Kentucky purchases power from PJM. KAR 807 5:056 (3)(c) states the fuel costs included in the fuel adjustment clause shall include the most recent actual monthly cost of the net energy cost of energy purchases, exclusive of capacity or demand charges when such energy is purchased on an economic dispatch basis.

PERSON RESPONSIBLE: John Swez / Lisa Steinkuhl

REQUEST:

If Duke Kentucky is familiar with the term “no load costs,” provide a definition of the term and responses to the following:

- a. If all or a portion of these costs are recovered through the FAC, explain how these costs are calculated and allocated between native-load sales and off-system sales each hour.
- b. By month and generating unit, provide the amount of “no load costs” that have been allocated each to native-load customers and off-system sales from November 1, 2012, through April 30, 2014.

RESPONSE:

No-load energy (cost) is the amount of energy necessary to run a generating unit at a 0 MW output. No-load cost is used to calculate a generating units offer and is used for unit commitment purposes. Note that no-load cost is not a units start-up cost, as they are two different items in determining the components of a units cost.

- a. After the generating unit is dispatched, the actual energy costs consumed in a generating unit is allocated as either native or non-native based on a stacking process, allocating the lowest cost resources to native load first. An after-the-fact generation model is used to economically dispatch, on an hourly basis, the demand (load) with available supply resources (*i.e.* generation or purchases) which are economically stacked. To the extent that the energy produced by a generating unit is

allocated to native load, the units total energy cost, including no-load cost, is allocated to native load which is recovered through the FAC.

- b. No-load cost is a component of a unit's total energy cost consumed. Total energy cost consumed is allocated native or non-native based on a stacking process explained above. The company doesn't track how much of the total energy cost consumed in a month is related to no-load costs.

PERSON RESPONSIBLE: John Swez / Lisa Steinkuhl

Duke Energy Kentucky
Case No. 2014-00229
Staff First Set Data Requests
Date Received: August 13, 2014

STAFF-DR-01-030

REQUEST:

State whether Duke Kentucky outsources coal handling or whether coal handling is performed by Duke Kentucky employees and explain how coal-handling costs are accounted for in the calculation of the FAC.

RESPONSE:

Coal handling is performed by Duke Kentucky employees at East Bend Generating Stations. Coal handling at Miami Fort 6 is performed by Duke Energy Commercial Enterprises, Inc. employees. The employees directly charge their time to Duke Energy Kentucky when they are working specifically on the Miami Fort 6 pile. If they are working on the entire station, their time is allocated to Duke Energy Kentucky based on MW capacity of the units.

Coal handling costs are not included in the calculation of the FAC.

PERSON RESPONSIBLE: Brett Phipps / Lisa Steinkuhl

**Duke Energy Kentucky
Case No. 2014-00229
Staff First Set Data Requests
Date Received: August 13, 2014**

STAFF-DR-01-031 PUBLIC as to Attachment

REQUEST:

State whether all long-term fuel transportation contracts have been filed with the Commission. If any contracts have not been filed, provide a copy.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET as to Attachment

All long-term fuel transportation contracts have not been filed with the Commission. See Public Attachment KyPSC-DR-01-031 for those contracts not previously filed with the Commission. The confidential version is filed under seal and will be made available to all parties in this case upon the execution of a Confidentiality Agreement.

PERSON RESPONSIBLE: Brett Phipps

Barge Transportation Agreement

By and Among

Duke Energy Business Services LLC as agent for and on behalf of

Duke Energy Kentucky, Inc. and Duke Energy Indiana, Inc.

Collectively, as Buyer

and

Crouse Corporation

As Carrier

Barge Transportation Agreement

THIS BARGE TRANSPORTATION AGREEMENT (the "Agreement") is made and entered into as of the ___ day of December, 2011 with an effective date of January 1, 2013 ("Effective Date"), by and among **DUKE ENERGY BUSINESS SERVICES LLC** as agent for and on behalf of **DUKE ENERGY KENTUCKY, INC.** a Kentucky corporation, **DUKE ENERGY INDIANA, INC.**, an Indiana corporation, both having offices in Charlotte, NC (collectively, the "Buyer"), and **CROUNSE CORPORATION**, a Kentucky corporation with a place of business at 400 Marine Way, Paducah, Kentucky 42002-0360 ("Carrier"). Buyer and Carrier may each be referred to as a "Party" and collectively as the "Parties."

WITNESSETH:

WHEREAS, Buyer desires that Carrier transport coal in barges between the loading and unloading points stated in Schedule I of this Agreement and transport lime in barges between the loading and unloading points as stated in Schedule II of this Agreement; and

WHEREAS, Carrier desires to perform the aforesaid coal and lime transportation services for Buyer upon the terms and conditions set forth herein.

NOW, THEREFORE, Buyer and Carrier agree as follows:

AGREEMENT:

1-Term

The term of this Agreement will commence on the 1st day of January, 2013, and will end on the 31st day of December, 2017 ("**Term**").

2 - Scope

The Parties hereby agree that Carrier shall transport Buyer's annual tonnage needs of water-borne coal products from the origins listed in Schedule I and the annual tonnage needs of water-borne lime products from the origins listed in Schedule II (collectively, the origins in Schedules I and II are referred to herein as "Origins") to the following destinations of the Buyer: [REDACTED]

[REDACTED]

that Buyer will be released from this obligation due to a failure of Carrier to perform or a force majeure situation. Wherever used in this Agreement, the term "coal" shall include other solid fuels such as petroleum coke and synfuel, and the term "lime" shall include limestone, pulverized limestone and other lime-based products. The term "ton" as used herein shall mean a net ton of two thousand (2000) pounds avoirdupois weight. Buyer reserves the right to purchase distressed coal or lime already in barges belonging to other carriers, or to divert coal or lime in barges intended for Buyer's affiliates to the Served Plants. [REDACTED] Carrier's barges will be given priority at the Served Plants in the unloading schedule and empty barges will be placed in the fleet so that they can be secured by Carrier for pick up.

3-Tonnage

Prior to October 31 of each contract year, Buyer shall give Carrier an estimate of tons of coal and lime to be handled each calendar quarter during the upcoming year including Origins and Destinations (as defined below). On a monthly basis, Buyer will promptly notify Carrier of revisions in tonnage estimates, Origins and/or Destinations. In addition, on Thursday of each week, Buyer will provide Carrier a weekly schedule of anticipated barge loadings for the following week, and Carrier agrees to confirm whether or not barges are available to meet the schedule.

Buyer may at its option purchase coal or lime to be delivered to destinations other than the Served Plants as long as the destinations are on the Ohio, Green, Big Sandy, Kanawha or

Tennessee Rivers (the “**Alternate Locations**”) (collectively, the Served Plants and Alternate Locations are referred to herein as “**Destinations**”). Carrier shall move such coal at rates consistent with Base Rates as specified in Schedule I or Schedule II, as applicable, so long as Carrier has the capacity to move additional tons; provided that [REDACTED]

[REDACTED]

[REDACTED]

Buyer has no obligation to have any minimum tonnage transported under this Agreement. Except for distressed and diverted coal or lime (as referenced in Section 2) or in the event of a force majeure situation as set forth herein, Buyer and Carrier agree that all coal and lime actually delivered by barge to Served Plants will be delivered by Carrier under this Agreement.

4- Delivery and Unloading

4.1 Delivery. For all coal deliveries, Carrier will furnish empty jumbo open hopper barges in good condition at the Origins identified in Schedule I in adequate numbers and at such times as to permit loading of coal in accordance with the reasonable operating and loading schedules of the Origin and in accordance with the Buyer's shipping and delivery requirements. For all lime deliveries, Carrier will furnish up to two empty jumbo roll-top covered barges in good condition at the Origins identified in Schedule II at such times as to permit loading of lime in accordance with the reasonable operating and loading schedules of the Origin and in accordance with Buyer's shipping and delivery requirements. Buyer will use all commercially reasonable efforts to have the coal or lime suppliers (or their contracted third-party terminal operators) at the Origin to load coal or lime into the barges with due diligence and dispatch, and to the required draft levels specified by Carrier, and otherwise comply with reasonable requirements of Carrier's barging operation. The coal or lime suppliers (or their contracted third-party terminal operators) shall have the right to refuse to load any barges they consider unseaworthy or any barges containing water or other foreign matter, including left-over coal from a previous haul. Carrier will deliver the loaded barges

to Buyer's unloading dock at the Destinations as designated by Buyer at such times as to permit the unloading of the coal or lime in accordance with Buyer's reasonable operating schedules.

4.2 Unloading. Carrier shall properly and securely moor the loaded barges at the Destination and notify the appropriate person(s) that such mooring has been completed in accordance with the provisions set forth in Appendix A, which is attached hereto. Buyer at its own expense shall have the coal or lime unloaded out of the barges with due diligence and dispatch and otherwise comply with the reasonable requirements of Carrier's barging operation.

5 - Base Rates

Buyer agrees to pay Carrier at the base rates per net ton (or per barge per Schedule III) set forth in Schedules I, II, and III, attached hereto, provided that such base rates shall be adjusted in accordance with Section 6 hereof (the "Base Rates") [REDACTED]

[REDACTED] Base Rates for the transportation of coal or lime from or to origins or destinations not listed in Schedule I or Schedule II shall be computed by Carrier so as to bear a logical relationship to the Base Rates provided in Schedule I or Schedule II, taking into account differences in distance, operating conditions and loading/unloading conditions.

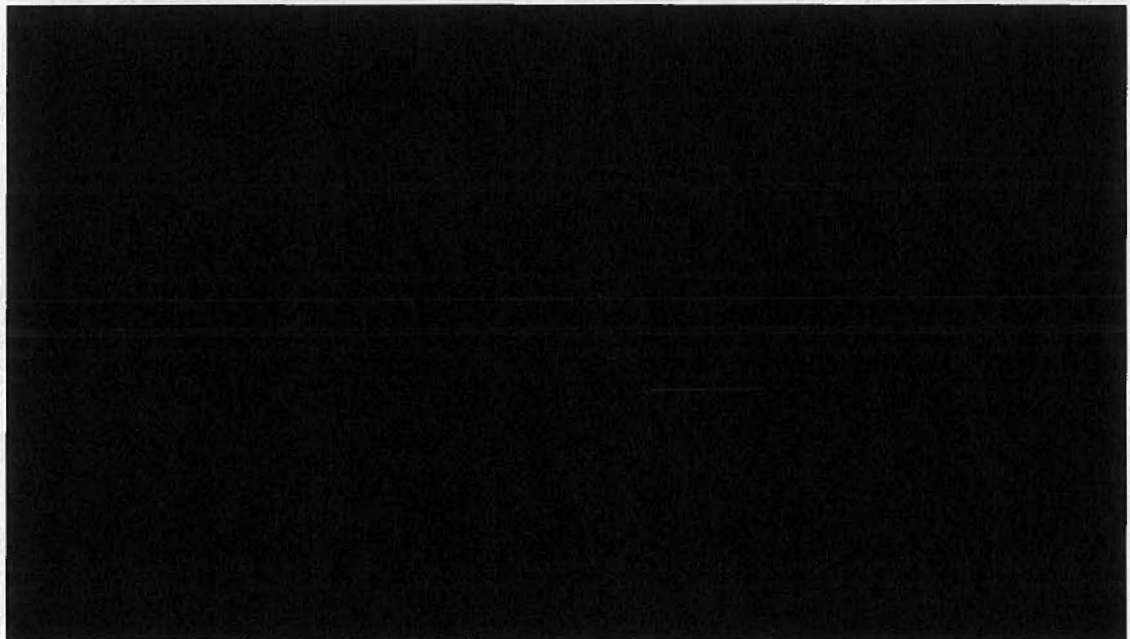
6 - Rate Revisions and Adjustments

The Base Rates set forth in Schedules I, II, and III, will be subject to adjustment, commencing on January 1, 2013, and the first day of each calendar quarter thereafter as follows:

- Fuel Component Adjustment: On the first day of each calendar quarter during the Term beginning on January 1, 2013, the Base Rates shall be increased or

decreased by the Fuel Component Adjustment which is calculated as follows:

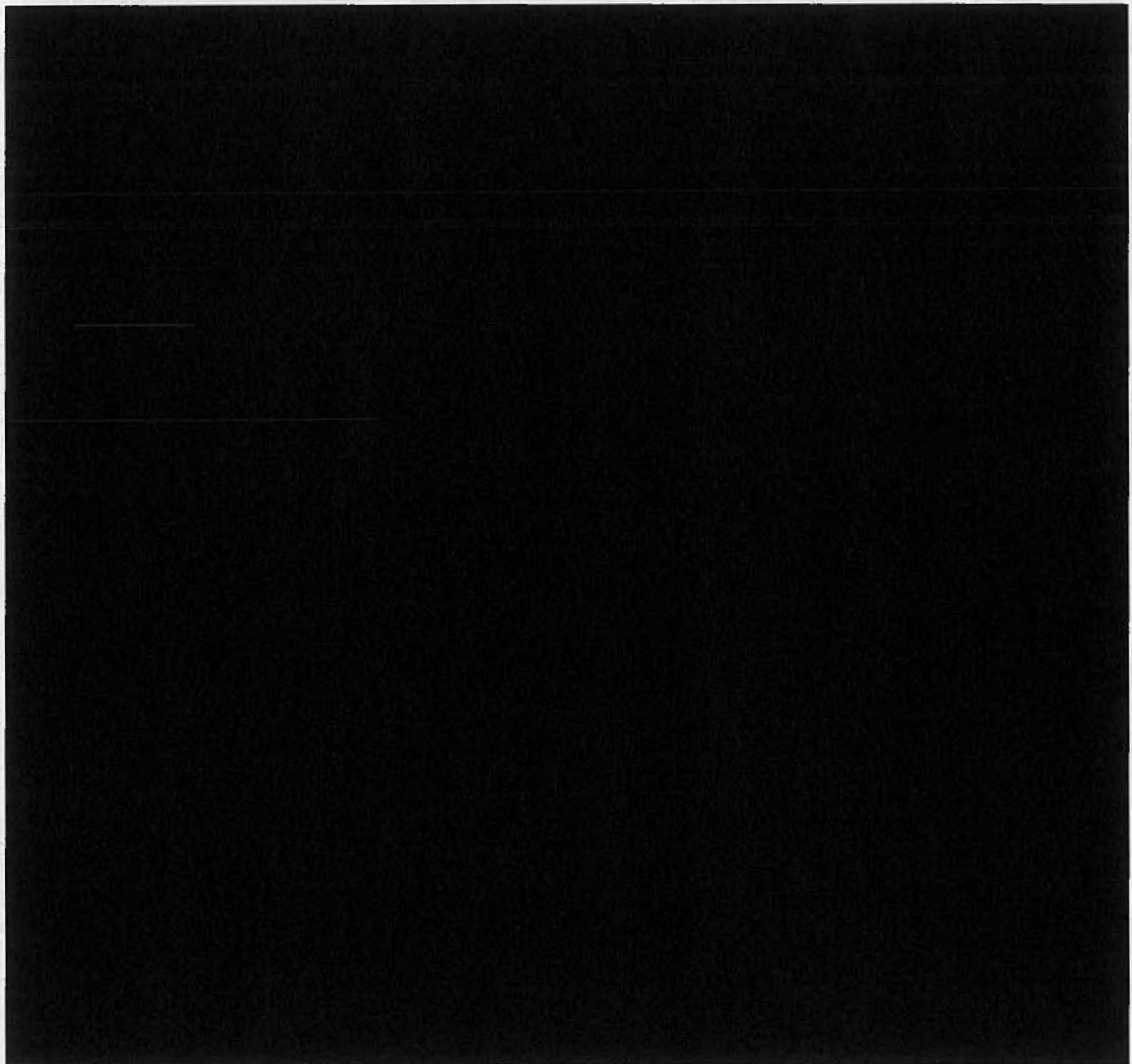
(a) [REDACTED] of the Base Rate multiplied by (b) the result of the following calculation: the quotient of (i) the average of the first published Producer Price Index –No. 2 Diesel Fuel, BLS Series ID wpu057303 for the three (3) month period that ends two (2) months prior to the adjustment date and (ii) the Base Fuel Price Index, subtracted by one. The “Base Fuel Price Index” will be the first published PPI-No. 2 Diesel Fuel BLS Series ID wpu057303 for May 2011, which value is 328.4. An example of the calculation of the Fuel Component Adjustment is as follows:



The Fuel Component Adjustment for the relevant calendar quarter will be added to or subtracted from the Base Rate and will replace all previous per ton Fuel Component Adjustments. The Base Rate as adjusted for the Fuel Component Adjustment shall hereinafter be referred to the “Adjusted Base Rate”.

- Cost Component Adjustment: Annually beginning on January 1, 2013, [REDACTED] of the Base Rates will be adjusted in direct proportion to the changes in the average of the first published PPI—Industrial

Commodities less Fuel (BLS Series ID: WPU03T15M05) and CPI – Urban Wage Earners and Clerical Workers (BLS Series ID: CWUR0000SA0) for the three (3) month period that ends two (2) months prior to the adjustment date. For example, the three month period used for January 1, 2013 shall be August, September and October of 2012. The index level average for each year will be computed by adding the monthly PPI and CPI indices from the preceding three (3) month period as described above and dividing the total by six (6). The base index for this component shall be the first published averages for the above indices for the months of February, March and April of 2011. An example of the calculation of the Cost Component Adjustment and formula is as follows:



[REDACTED]

Carrier shall be entitled to recover any increases (and will credit to Buyer any decreases) in fuel taxes or waterway fees ("**Fuel Taxes or Waterways Fees**") from the then-current taxes rates and amounts as of November 1, 2011. Fuel Taxes or Waterways Fees as of November 1, 2011 equate to 20.1 cents per gallon, and consist of: Inland Waterway Fuel Tax in the amount of 20 cents, and Leaking Underground Storage Tax in the amount of 0.1 cents.

Any such Taxes shall include any levy imposed by an authorized Federal, State or Local taxing entity, including, but not limited to, "fee", "excise amount", or other similar levy.

Calculations shall be carried to not less than three (3) decimal places and the Adjusted Base Rates shall be rounded to the nearest cent, using conventional rounding principles. If the base of an index specified in this section is changed, published conversion tables shall be used to recompute the level of the index. Should publication of an index specified in this section be discontinued, an index which is as nearly equivalent as practicable shall be substituted by mutual agreement.

Carrier shall be entitled to adjust the Base Rate or the Adjusted Bases Rate (as applicable) for increase in any taxes or fees imposed by any federal, state or local government or government agency (such changes referred "**Governmental Impositions**") enacted after December 1, 2011 which are assessed against Carrier for transporting coal or lime under this Agreement. Such adjustments will be effective as of the effective date of such Governmental Impositions. If there are multiple claims for adjustment in a calendar year, the Carrier shall aggregate such claims and submit them to Buyer bi-annually. For the avoidance of doubt, no claim for an adjustment to the Base Rates shall include any claims for costs not actually incurred and paid and which are not directly related to Carrier's costs to perform transportation activities, including but not limited to claims for lost profits or lost opportunity costs. No claim for adjustments to the Base Rates shall be submitted more than one year after the effective date of a Governmental Imposition. Carrier shall provide adequate

documentation to Buyer in support of any increase or decrease in the Base Rates as a result of this subsection.

The following shall not constitute Governmental Impositions: Fuel Taxes or Waterway Fees (which are covered under paragraph 4 of this Section), any non-compliance existing as of the Effective Date of this Agreement, financing costs and taxes, income tax or property taxes or related costs, any penalties, interest, fines, costs of arbitration, mediation, litigation, or any other type of dispute resolution through all stages of appeal, payment of judgments against Carrier or Carrier's affiliates, or on instruments or documents evidencing the same or on the proceeds thereof, and wages, benefits and retirement. To qualify as a Governmental Imposition, the taxes or fees must be imposed against the barging industry either on a regional, state, or national basis. Carrier must notify Buyer in writing of the obligation to comply with such laws (if Carrier anticipates meeting the conditions that would require Carrier to comply with such laws) within thirty (30) days of the time Carrier becomes aware of such laws, setting forth the specific law or regulation and the anticipated actual or actual financial impact on Carrier's delivery of coal or lime hereunder, and the anticipated or actual effective date. Carrier shall provide Buyer with detailed documentation of such Governmental Impositions and the basis for the increase in the Base Rate or Adjusted Base Rate, as applicable. Buyer shall have not less than thirty (30) day to review and respond to such claim before it becomes effective. Additionally, the applicable Base Rate or Adjusted Base Rate, as applicable, hereunder shall be increased only if the price adjustment is allocated evenly to all affected cargo transported by Carrier, so that Buyer is allocated only its proportionate share of such Governmental Imposition.

In the event of a Governmental Imposition which reduces Carrier's cost, Carrier shall notify Buyer of such decrease and Buyer shall be entitled to bring a claim for a decrease in the Base Rate or Adjusted Base Rate and the same process above shall be followed. The Base Rate or Adjusted Base Rate shall be decreased by an amount equal to the decrease in Carrier's cost caused by Governmental Impositions enacted after the Effective Date.

7- Cargo Weights for Billing

The method of determining the weight of the coal or lime for the purpose of calculating payment to the Carrier hereunder shall be the same method used for the purpose of calculating payment to the coal or lime supplier set forth in Buyer's various coal supply and lime agreements provided, that in those instances when unloaded weights are used, those weights shall reflect both the tons unloaded at the Destination as well as any tons recovered through barge cleaning at the Destination or its fleets. Buyer shall provide Carrier with a report for unloads from the 1 st to 10th of the month, the 11th to 20th of the month and 21 st to end of month ("**Ten Day Report**"). The Ten Day Report will be sent to Carrier five (5) calendar days after the end of each ten day period at the following address:

Crouse Corporation

E-mail: hdwilliams@crouse.com or cfarlee@crouse.com

The Ten Day Report shall include the point of unloading, barge numbers, Origin, date of placement at the Destination, date of barge release, and weight of coal or lime unloaded, Base Rate or Adjusted Base Rate (as applicable), and amount due. [REDACTED]

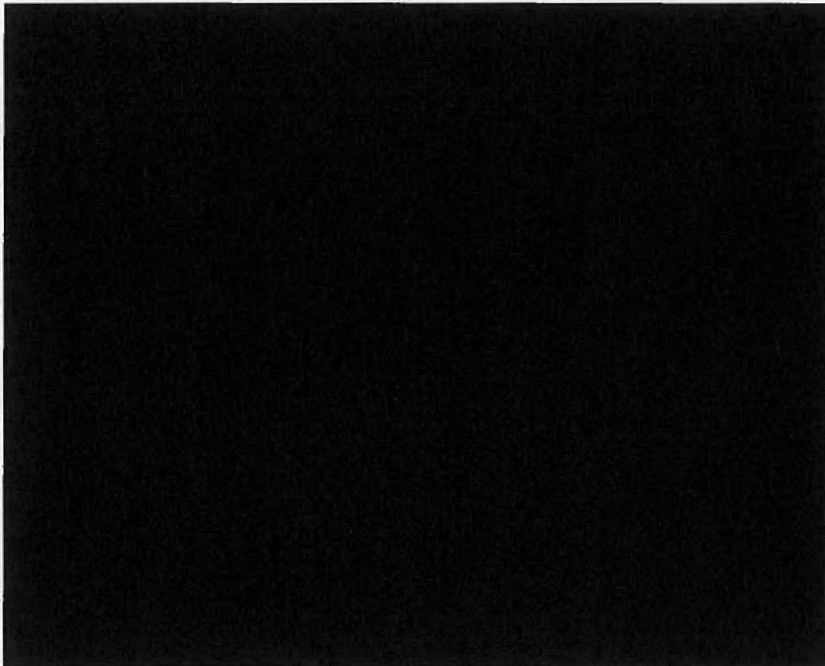
[REDACTED] of the date the Ten Day Report was generated.

8 - Demurrage

Buyer will have [REDACTED] free days for loading at Origin and [REDACTED] free days to unload barges at the Destination. For purposes of this Section, a "day" shall be a period of 24 hours beginning at 7:00 a.m. and ending at the next 7:00 a.m. ("**Barge Day**"). A fraction of a Barge Day will be considered as one Barge Day. Unloading Barge Days shall commence at the first 7:00 a.m. following placement or constructive placement of the barge to Buyer and shall run until the first 7:00 a.m. following completion of unloading and notification of Carrier's dispatcher that the barge is ready for pickup, provided that at least one Barge Day of free time shall be considered consumed in unloading each barge. Loading Barge Days shall

commence at the first 7:00 a.m. following placement or constructive placement of the barge at Origin and shall run until the first 7:00 a.m. following completion of loading and notification of Carrier's dispatcher that the barge is ready for pickup, provided that at least one Barge Day of free time shall be considered consumed in loading each barge. Saturdays, Sundays, and holidays shall be counted in the computation of free time.

If Buyer loads barges at the Origins prior to the end of the [REDACTED] Barge Day period or unloads the barges at the Destinations prior to the end of the [REDACTED] Barge Day period, then Buyer shall receive a credit equal to the number of days left during the [REDACTED] period. If Buyer loads barges at the Origins after the end of the [REDACTED] period or unloads the barges at the Destinations after the end of the [REDACTED] period, then Buyer shall receive a debit equal to the number of days after [REDACTED], as applicable, it took Buyer to load or unload the coal or lime. Debit/credit accounting will apply and will be balanced for all Destinations on a monthly basis. Credits are to be cleared at the end of the month and not carried forward, such that excess credits shall not be invoiced back to the Carrier the following month. The applicable debit and credit charges which shall apply during the month shall be as follows:



Collectively, hereinafter referred to as the “**Demurrage Rate**”. Demurrage calculations shall be as follows: for each barge delivered to a Destination that is actually unloaded during a calendar month, (i) the applicable Demurrage Rate multiplied by (ii) the total number of Barge Days that the Buyer is in excess of (or is less than) the number of allowed Barge Days for each barge for such Destination during the calendar month. The Carrier shall total the aggregate amount of all demurrage debits and credits for the calendar month for all barges delivered to a Destination and all debits shall be netted against all credits for the month at such Destination to arrive at a total debit or credit for such Destination. For the avoidance of doubt, the monthly demurrage amounts for one Destination shall not be aggregated or set off against any demurrage for any other Destinations. The Demurrage Rates set forth above will be adjusted by the same rate adjustment formulas as specified in Section 6. "). Carrier will deliver a monthly report of the demurrage amounts within ten (10) calendar days after the end of each month at the following address:

Duke Energy Indiana, Inc. & Duke Energy Kentucky, Inc.
Attn: Fuels Department – Contract Administration
526 South Church Street
Charlotte, NC 28202
Telecopier No.: (704) 382-4568

With a copy to:

Duke Energy Indiana, Inc. & Duke Energy Kentucky, Inc.
Attn: Transportation and Logistics Coordinator – Midwest
526 South Church Street
Charlotte, NC 28202
Telecopier No.: (513) 419-5650

Buyer shall review and approve such demurrage amounts for payment (or credit) within 30 days of receipt.

9 - Barge Unloading

The unloading of coal and/or lime shall be done by Buyer, or Buyer's contractor, at Buyer's expense. Buyer shall unload Carrier's barges in a competent and workman like manner. Any cargo remaining in a barge after its release shall be considered abandoned.

10 - Redelivery of Barges

After a barge has been delivered to the Destination designated by Buyer, if Buyer asks Carrier to redeliver the barge to a different destination, Carrier shall provide such service at the next reasonable opportunity within Carrier's normal operating pattern; and Buyer shall pay Carrier the applicable redelivery charge set forth in Schedule III attached hereto, provided that the base rate(s) of such redelivery charges shall be increased or decreased at the same time and by the same formulas as the Base Rates for transportation services provided pursuant to Section 6 hereof. The redelivery charge shall be paid in addition to the applicable Base Rates or Adjusted Base Rates (as applicable) under Schedule I, from the Origin to the first Destination. Unloading free time for any such redelivered barge shall end when such barge is picked up at the original Destination, and resumed when placed or constructively placed at the next destination.

11 - Competent Service

Carrier agrees that all services which it is to perform hereunder shall be performed with promptness and dispatch and in a competent and workmanlike manner and that it will at all times provide adequately skilled personnel, equipment, facilities, and capital to transport coal and lime safely in accordance with the terms of this Agreement. Carrier shall comply with applicable laws and regulations in performance of services under this Agreement.

12 - Care and Custody

Carrier shall be responsible for barges and contents until barges are safely delivered to the Destination designated by Buyer. In the event of loss due to sinking or other occurrence, Buyer shall be reimbursed by Carrier for the f.o.b. barge price of the coal or lime so lost. Buyer shall be responsible for loss of or damage, except normal wear and tear, to barges while in Buyer's care and custody. A barge shall be deemed to have been delivered to

Buyer's care and custody when it has been properly placed in the fleeting area and secured by or on behalf of Carrier at the Origin or Destination designated by Buyer. A barge shall be deemed to have been released from Buyer's care and custody when the barge is untied by or on behalf of Carrier from such Destination. For all roll-top lime barges, the Buyer shall be responsible for ensuring the covers are closed at the time of release from care and custody to the Carrier.

13 - Other Modes of Transporting Coal and/or Lime

This Agreement covers transportation of only water-borne coal and lime. Nothing contained herein shall be deemed to restrict Buyer from using, from time to time, other modes of transportation (including, but not limited to, railroads, trucks, and pipe lines) to transport any amounts of coal or lime to the Destinations. Buyer shall give Carrier as much advance notice as possible of any intended use of modes of transportation not furnished by Carrier to the Served Plants.

14 - Insurance

Carrier will carry and maintain at its own cost (a) protection and indemnity insurance, including crew coverage, tower's liability, collision liability, and wharfinger's liability, in the amount of at least [REDACTED] per occurrence and (b) cargo insurance which shall fully insure the cargo at the then current cost of that cargo to Buyer, (c) pollution insurance in the amount of at least [REDACTED], and (d) Workers Compensation, Employers Liability and U. S. Longshore and Harborworkers insurance and (e) general liability insurance in the amount of at least [REDACTED].

[REDACTED]. Certificates of insurance satisfactory in form to Buyer and signed by the Carrier's insurer shall be supplied by the Carrier to Buyer evidencing that the above insurance is in force and that not less than thirty (30) calendar days written notice will be given to Buyer prior to any cancellation or material reduction in coverage under the policies, except ten (10) days notice shall be given in the event of non-payment of premium. Carrier shall cause its insurer to name Buyer as an additional named insured, and waive all subrogation rights against Buyer for all losses or claims arising from performance hereunder

as respects the liability assumed by Carrier under this Agreement. It is understood and agreed such naming and waiving shall not apply with respect to Buyer's indemnity obligations under this Agreement. Evidence of Buyer's status as an additional insured, a statement that such status shall not prejudice any rights to which Buyer would have been entitled were Buyer not an additional insured, and evidence of such waiver of subrogation satisfactory in form and substance to Buyer shall be exhibited in the Certificate of Insurance mentioned above. Carrier's liability shall not be limited by this coverage.

15 - Indemnification

Each Party agrees to defend, indemnify and hold harmless the other Party from any claim, demand, suit, loss, cost or expense or any damage which may be asserted, claimed or recovered against or from one of them by reason of any damage to property, including property of others, or injury, including death, sustained by any person or persons whomsoever to the extent such damage, injury or death arises out of any act or omission by the offending Party, its officers, employees or parties engaged by it, in its performance of this agreement.

NOTWITHSTANDING ANYTHING ELSE IN THIS AGREEMENT TO THE CONTRARY, NEITHER PARTY SHALL BE LIABLE UNDER ANY THEORY OR CAUSE OF ACTION TO THE OTHER PARTY FOR ANY CLAIMS OF LOST PROFITS, CONSEQUENTIAL, PUNITIVE, OR EXEMPLARY DAMAGES.

16 - Force Majeure

If either Party hereto is delayed in or prevented from performing any of its obligations under this Agreement due to acts of God, war, riots, civil insurrection, acts of the public enemy, strikes, lockouts, fires, floods, earthquakes, icing events, low water events, equipment breakdowns, or other causes beyond the reasonable control of the affected Party, then the obligations of both parties hereto shall be suspended to the extent made necessary by such event provided that such Party gives written notice to the other Party as promptly as practicable of the nature and probable duration of the force majeure event. The Party

declaring force majeure shall exercise due diligence to avoid and shorten the force majeure event and will keep the other Party advised as to the continuance of the force majeure event. Services not provided during any force majeure period shall be made up within a reasonable time at the option of Buyer. If a force majeure event affects all or a material portion of the services hereunder for more than ninety (90) consecutive days, the Party not claiming force majeure may give notice to the other party of an intent to terminate this Agreement, and if such force majeure is not lifted within ten (10) days of receipt of such notice of an intent to terminate, such Party not claiming force majeure may terminate the contract by forwarding written notice to the claiming Party. If the force majeure event claimed by Carrier is industry-wide, Buyer may not terminate this Agreement unless Buyer can obtain alternate river transportation services from another provider.

17 - Independent Contractor

Nothing in this Agreement shall be deemed to make the Carrier or any of the Carrier's employers or agents the representative, agent, or employee of Buyer. The Carrier shall be an independent contractor and shall have responsibility for and control over the details and means for performance under this Agreement.

18 - Assignment

This Agreement shall inure to and be binding upon the Parties hereto and their respective successors and assigns, and either Party may assign this Agreement to a successor to all or substantially all of its physical property. Carrier may also assign, in whole or in part, this Agreement to or delegate performance thereunder to any company which controls or is controlled by, or affiliated with, Carrier but in such event Carrier shall remain fully liable for the performance of all of its obligations under this Agreement; provided if any obligations so assigned are expressly assumed in writing by the assignee and performance thereof is unconditionally guaranteed by Carrier, then Carrier shall be relieved of all liability for performance of the obligations so assigned. Buyer may also assign this Agreement to, or delegate performance hereunder, to any Company which controls or is controlled by or affiliated with it, but in such event Buyer shall remain fully liable for the performance of all

of its obligations under this Agreement; provided if any obligations so assigned are expressly assumed in writing by the assignee and performance thereof is unconditionally guaranteed by Buyer, then Buyer shall be relieved of all liability for performance of the obligations so assigned.

19 - No Waiver

The failure of either Party to insist in one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights, but the same shall continue and remain in full force and effect.

20 - Notices

All notices or demands required to be given in writing hereunder shall be sent by certified mail or commercial overnight delivery service, or by telecopier, to the Party to be notified at is following address or telecopier number:

Duke Energy Indiana, Inc. / Duke Energy Kentucky, Inc.
Attn: Director, Midwest Fuel Supply
526 South Church Street
Charlotte, NC 28202
Telecopier No.: (704) 382-4568

Crouse Corporation
400 Marine Way
P.O. Box 360
Paducah, KY 42002-0360
Attention: President
Telecopier No.: (270) 444-9615

21- Applicable Law

This Agreement and the rights and obligations of the parties hereunder shall be governed by and construed in accordance with the laws of the State of Kentucky.

22 - Confidentiality

The parties shall keep confidential the terms and conditions hereof, the transactions provided for herein and any documents or other information delivered in connection herewith unless readily ascertainable from public information or sources, requested by any regulatory commission or otherwise required by law to be disclosed, and only disclose the terms and conditions hereof to such employees, officers, agents, representatives or potential purchasers as is necessary in conducting its operations. In the event of such request for disclosure by a regulatory commission or other legal authority, the disclosing Party shall promptly notify the other Party prior to the disclosure to allow the other Party to move for a protective order or similar relief. The disclosing Party will cooperate with the other Party to obtain a protective order or similar relief. If in the opinion of legal counsel and in the absence of a protective order or waiver, the receiving Party is legally compelled to disclose confidential information, the disclosing Party shall only disclose so much of the confidential information as, in the opinion of its legal counsel, is legally required. In any such event, the receiving Party agrees to use good faith efforts to ensure that all confidential information that is so disclosed will be accorded confidential treatment.

23 - Default & Termination

An "Event of Default" shall mean with respect to a Party ("Defaulting Party"): (i) the failure by the Defaulting Party to make, when due, any payment required under this Agreement if such failure is not remedied within ten (10) business days after written notice of such failure is given to the Defaulting Party; (ii) any representation or warranty made by the Defaulting Party herein shall prove to be false or misleading in any material respect when made or deemed to be repeated; (iii) the failure by the Defaulting Party to perform any covenant set forth in this Agreement (other than obligations to make any payment or obligations which are otherwise specifically covered in this paragraph as a separate Event of Default), and such failure is not cured within fifteen (15) business days after written notice thereof to the Defaulting Party; or (iv) the Defaulting Party shall be subject to a Bankruptcy Proceeding. Bankruptcy Proceeding is defined as, with respect to a Party or entity, such Party or entity (a) makes an assignment or any general arrangement for the benefit of creditors, (b) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a

proceeding or cause of action under any bankruptcy or similar law for the protection of creditors, (c) has such a petition filed against it and such petition is not withdrawn or dismissed within thirty (30) days after such filing, (d) otherwise becomes bankrupt or insolvent (however evidenced), or (e) is unable to pay its debts as they fall due.

Upon the occurrence and during the continuance of an Event of Default, as to the Defaulting Party, the other Party (the "Non-Defaulting Party") may, in its sole discretion, (a) terminate this Agreement and/or (b) suspend performance of its obligations under this Agreement until such Event of Default is cured. Upon an Event of Default, either Party may pursue any such remedies available at law or equity, including the cost of replacing this agreement.

24 - Netting and Setoff

If Buyer and Carrier are required to pay any amount on the same day or in the same month, then such amounts with respect to each Party shall be aggregated and the parties shall discharge offsetting obligations to pay through netting, in which case the Party, if any, owing the greater aggregate amount may pay to the other Party the difference between the amounts owed. Each Party reserves to itself all rights, setoffs, counterclaims, combination of accounts, liens and other remedies and defenses which such Party has or may be entitled to (whether by operation of law or otherwise) arising out of this Agreement or any other outstanding transactions between the parties. The obligations to make payments under this Agreement or other agreements between the parties may be offset against each other, set off or recouped therefrom.

25 - Representations and Warranties

On the Effective Date hereof and throughout the Term, each Party represents and warrants to the other that:

(a) The execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate or other organizational action on its part and do not

violate or conflict with any law applicable to it, its organizational documents or any order or judgment of a court or other agency of government applicable to it or its assets;

(b) Its obligations under this Agreement are legally valid and binding obligations, enforceable in accordance with their terms;

(c) It has any and all necessary governmental and other third Party permits, approvals and licenses required in connection with the execution, delivery and performance of this Agreement;

(d) There are no Bankruptcy Proceedings, as defined herein, pending or being contemplated by it or, to its knowledge, threatened against it; and

(e) There are no suits, proceedings, judgments rulings or orders by or before any court or any governmental authority that materially adversely affect its ability to perform its obligations under this Agreement.

26 - Entire Agreement

This Agreement sets forth the entire agreement of the Parties hereto, and no agreement or understanding shall be binding on either of the Parties unless specifically set forth in this Agreement, and no amendment hereto shall be valid unless made in writing and duly signed by the Parties hereto.

27 - Financial Information

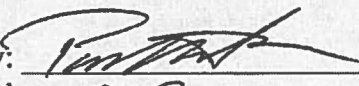
If requested by a Party, the other Party shall deliver within 120 days following the end of each fiscal year, a copy of its audited consolidated financial statements for such fiscal year. In all cases the statements shall be for the most recent accounting period and prepared in accordance with generally accepted accounting principles; provided, however, that should any such statements not be available on a timely basis due to a delay in preparation or certification, such delay shall not be an Event of Default so long as the Party diligently pursues the preparation, certification, and delivery of the statements.

Prior to providing financial information requested above, the parties shall execute a mutually agreeable confidentiality agreement. Any such confidentiality agreement shall, at a

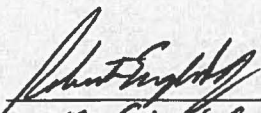
minimum, require the receiving Party to use the same standard of care to ensure the confidentiality of such information as it applies to protect the secrecy of its own proprietary information.

IN WITNESS WHEREOF, the Parties, by their duly authorized representatives, hereby execute this Agreement which shall be effective on the date first above written.

Buyer: Duke Energy Business Services
LLC

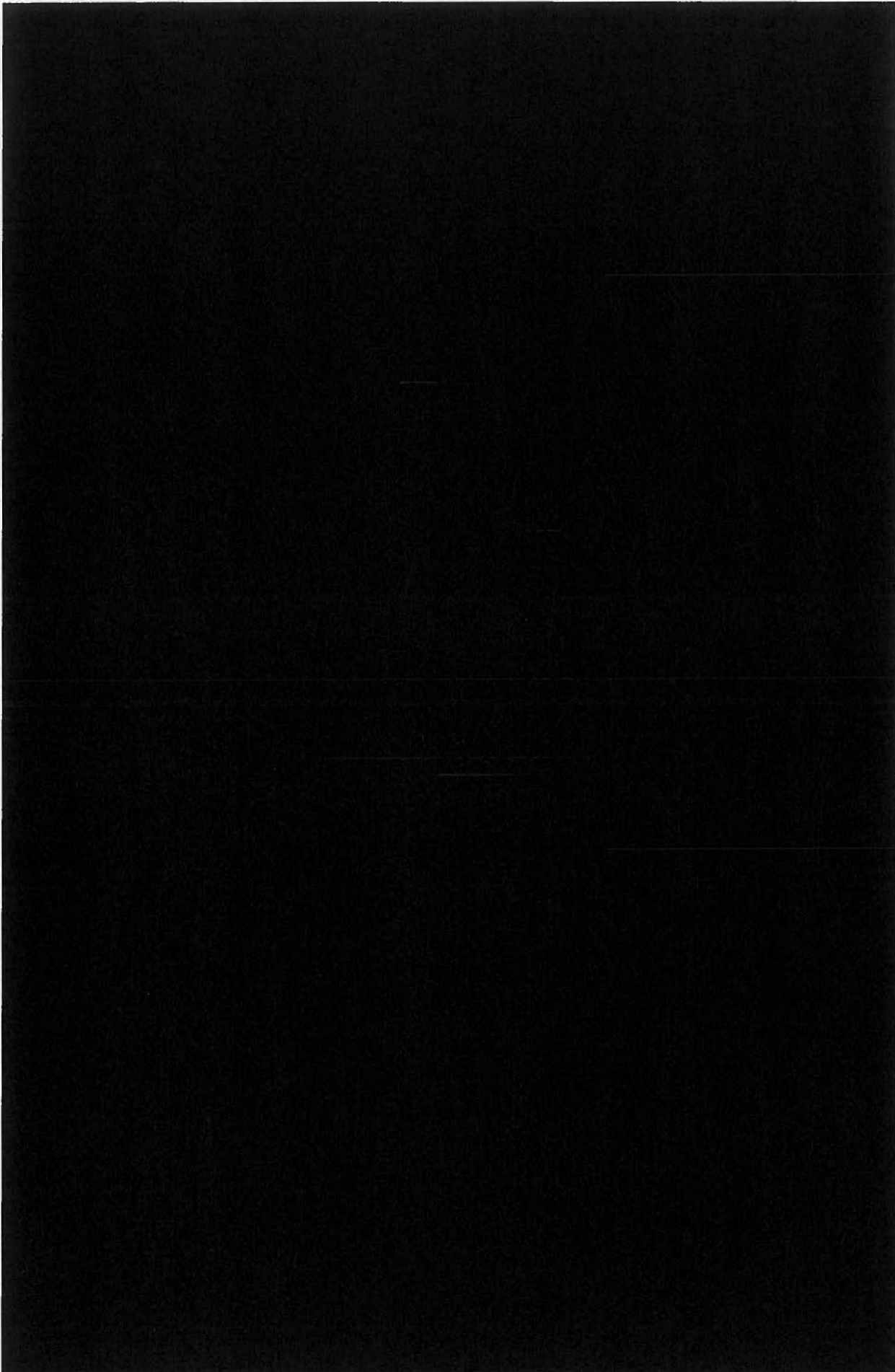
By: 
Title: SRP
Date: 2/1/12

Carrier: Crouse Corporation

By: 
Title: VP - Sales & Customer Service
Date: 12/15/11

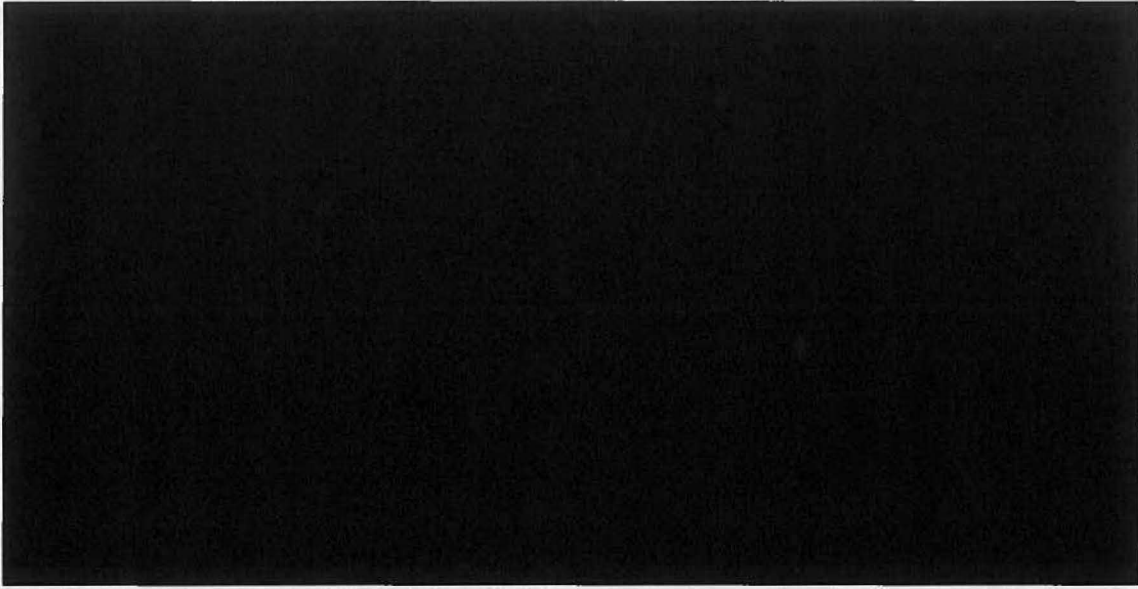
SCHEDULE I

COAL BARGE BASE RATES AS OF JANUARY 1, 2013



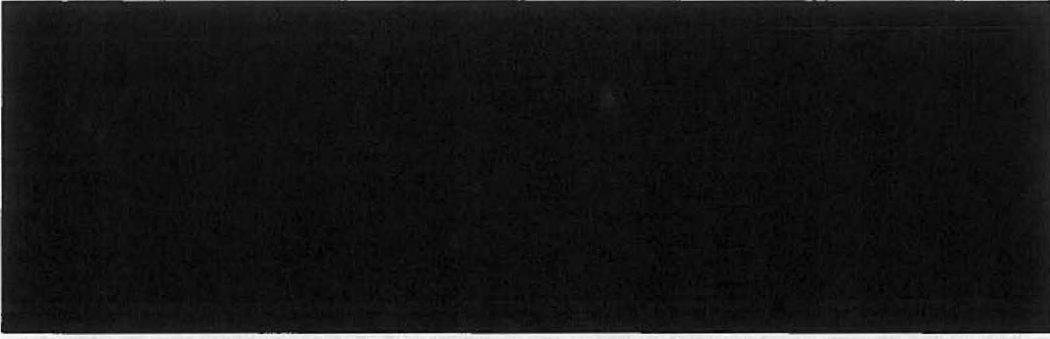
SCHEDULE II

LIME BARGE BASE RATES AS OF JANUARY 1, 2013



SCHEDULE III

RECONSIGNMENT RATES AS OF JANUARY 1, 2013

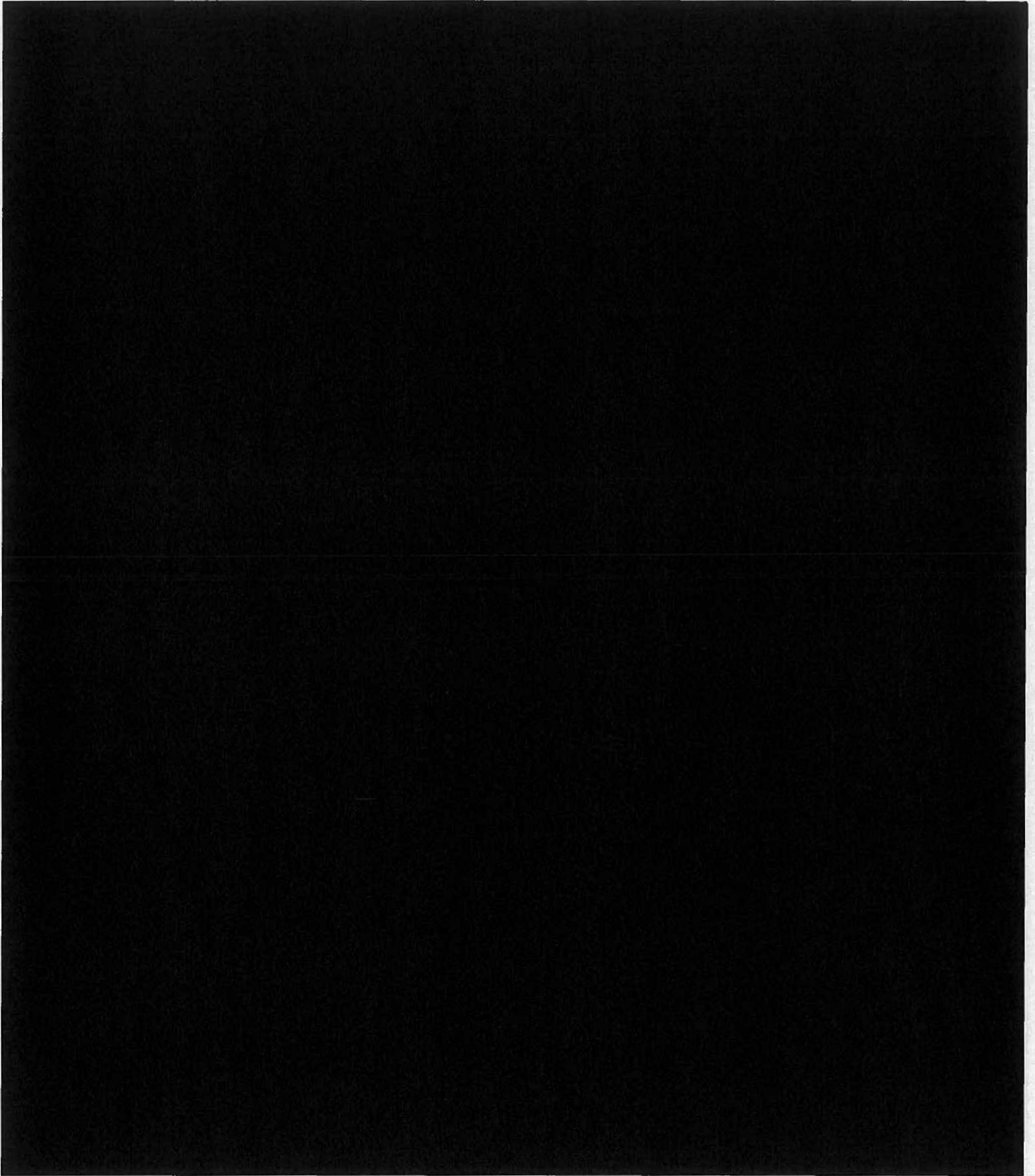


APPENDIX A

DRAWINGS OF SERVED STATIONS AND HARBOR AREAS

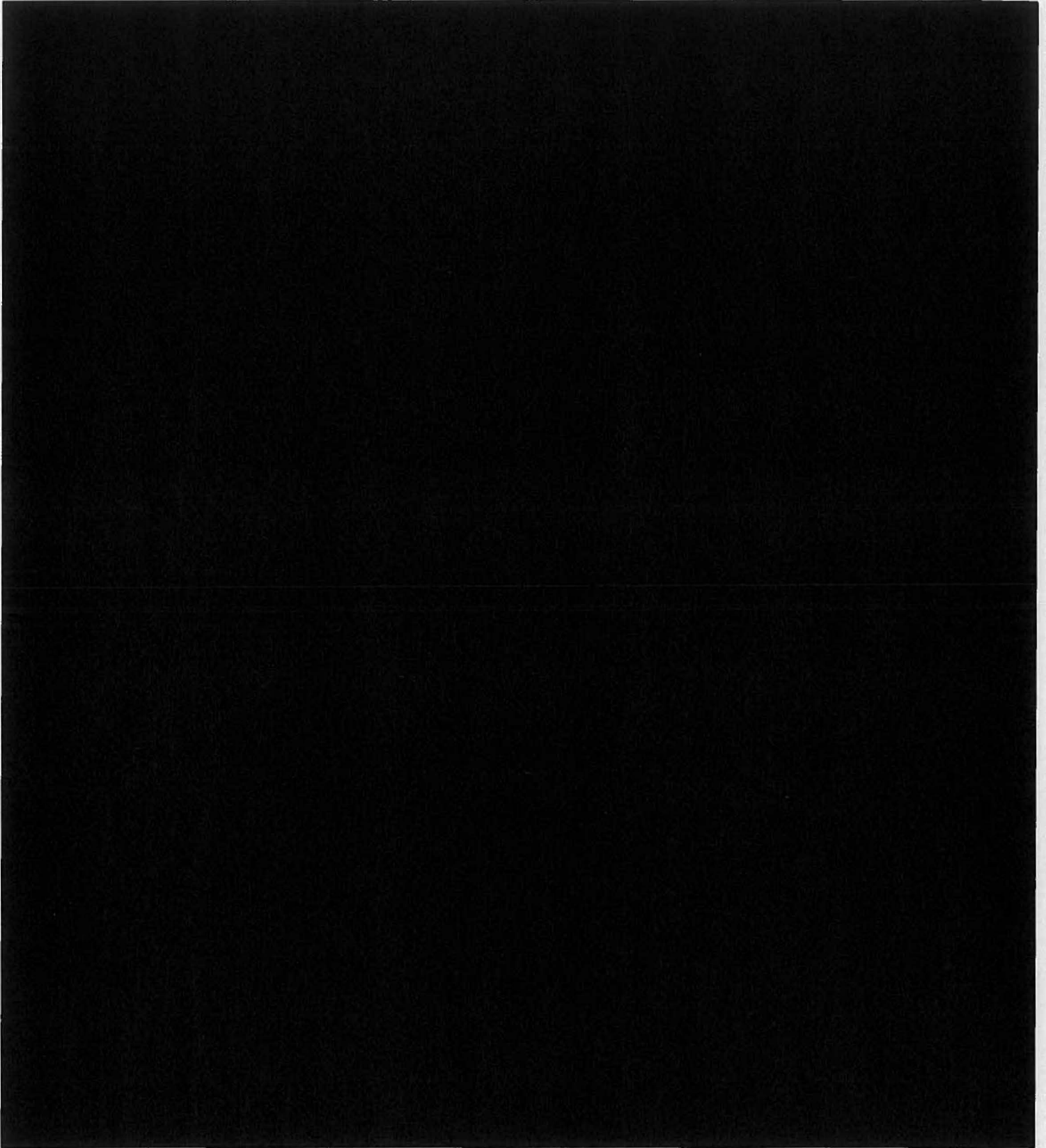
East Bend Power Station

Appendix A



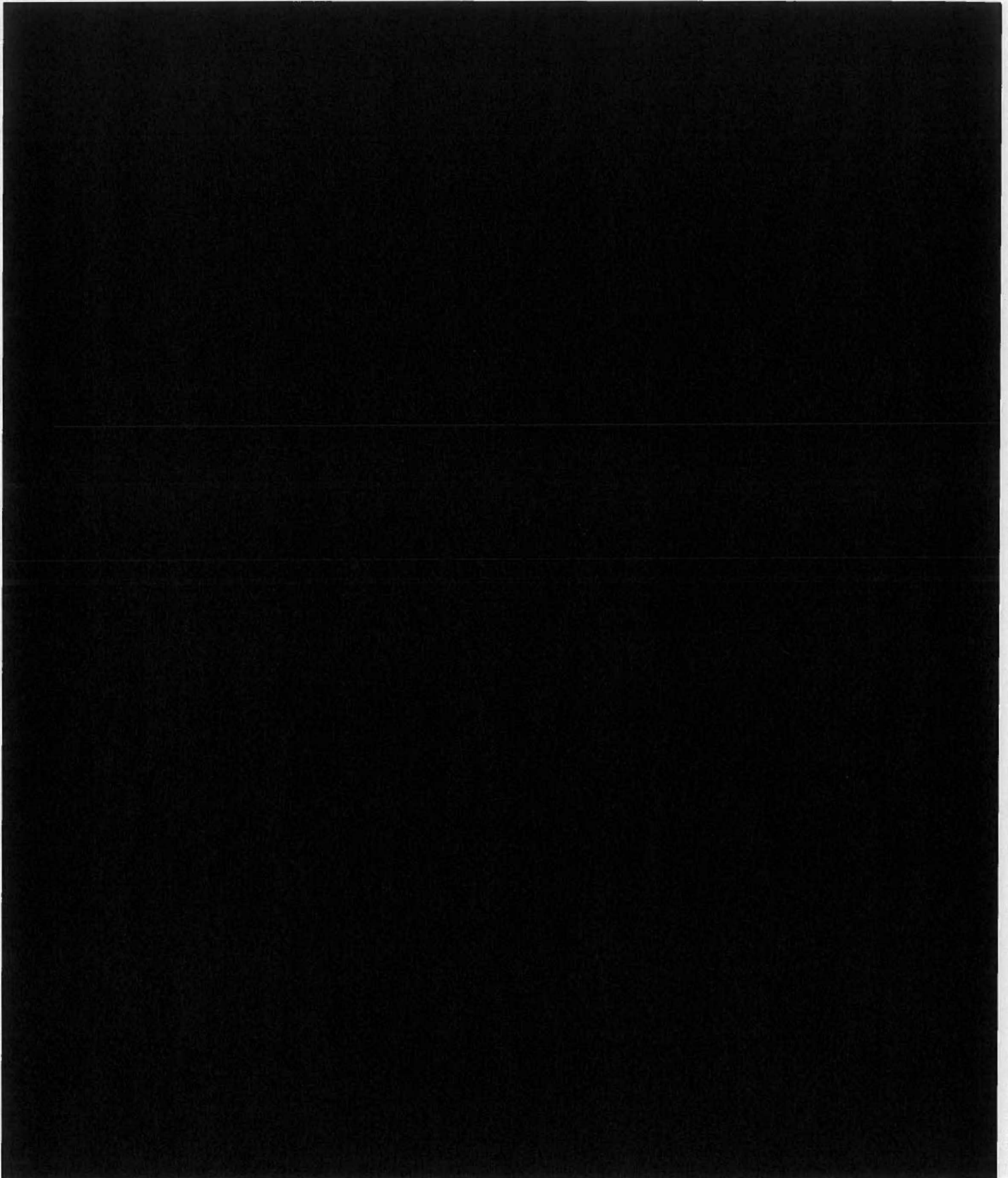
Gallagher Power Station

Appendix A



Miami Fort Power Station

Appendix A



FIRST AMENDMENT To The Barge Transportation Agreement

This First Amendment (this "**First Amendment**") dated as of December 14, 2012 to that certain Barge Transportation Agreement dated as of December 15th, 2011 by and between Duke Energy Business Services, LLC as agent for and on behalf of Duke Energy Kentucky, Inc., a Kentucky corporation and Duke Energy Indiana, Inc., an Indiana corporation both having offices located at 526 South Church Street, Charlotte, North Carolina, 28202 (hereinafter "**Buyer**") and Crouse Corporation, a Kentucky corporation with its principal place of business at 400 Marine Way Paducah, Kentucky 42003 (hereinafter "**Carrier**") (the "**Agreement**"). Buyer and Carrier may be hereinafter referred to individually as a "**Party**" or collectively referred to as the "**Parties**".

WHEREAS the Carrier and Buyer, entered into the Agreement, with an effective date of January 1, 2013; and

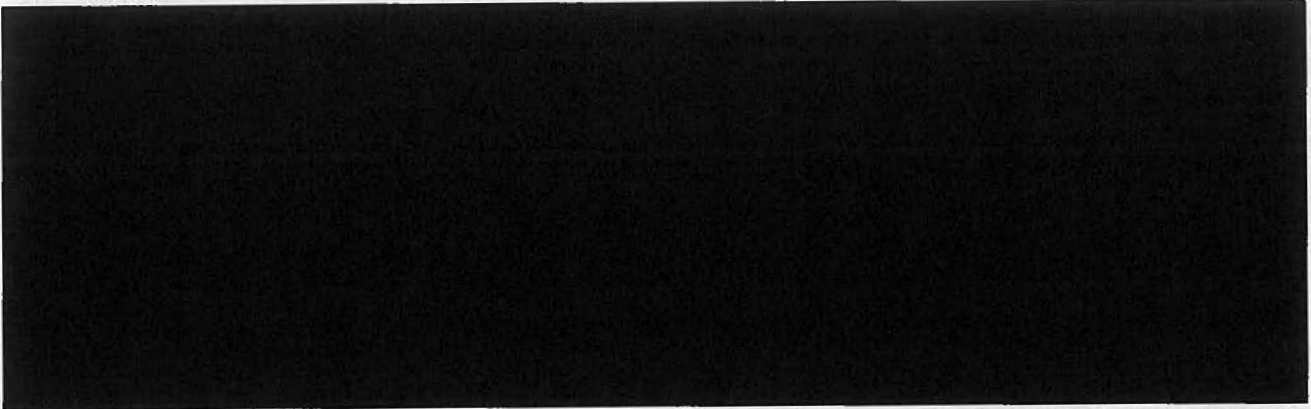
WHEREAS, Buyer desires to amend the Agreement by this First Amendment so as to allow Carrier to provide barge transportation services of coal for Buyer's affiliate Duke Energy Carolinas, LLC, pursuant to the terms and conditions of both this First Amendment and those pertinent terms and conditions of the Agreement (the "**New Services**").

NOW THEREFORE, in consideration of the promises and mutual covenants exchanged by the Parties and herein contained, the Parties agree to amend the Agreement as set forth herein for the sole purpose of allowing Carrier to provide the New Services, as such services are requested by Buyer and accepted by Carrier.

The Agreement shall be amended only as between the Parties hereto as follows:

1. **Term of First Amendment.** The term of this First Amendment shall be from December 1, 2012 until the end of the Term of the Agreement.
2. **Scope of First Amendment.** Carrier, as requested by Buyer and upon acceptance by Carrier, shall provide the New Services. This First Amendment shall not amend the scope of the Agreement as set forth in Section 2 of the Agreement, but merely provides for the right of Carrier to provide the New Services.
3. **Effective Rates.** The coal barge rates per ton for the New Services provided to Buyer during the month of December 2012 are inclusive of all fees and not subject to any additional price adjustments or charges (the "**Effective Rates**") and shall be as set forth below:

4. **Base Rates.** The coal barge base rates for the New Services provided to Buyer under this First Amendment (the "Amendment Rates") shall be as set forth below:




The Amendment Rates shall be subject to all adjustments as for the Base Rates in the Agreement and shall adjust accordingly during the Term of the Agreement.

5. **Demurrage.** Buyer shall be responsible for the same demurrage incurred from Carrier's performance of the New Services as such is set out in the Agreement for the services provided thereunder.
6. **Performance of New Services at Carrier Discretion.** Carrier will provide the New Services upon the request of Buyer in its discretion, based upon its capacity and equipment availability. Nothing herein shall require Carrier to provide the New Services upon request of Buyer. For the avoidance of doubt, nothing herein shall require Buyer to purchase any minimum amount of New Services.
7. **Terms and Conditions.** Carrier will provide the New Services, as requested by Buyer and accepted by Carrier, under the same terms and conditions of the Agreement, as amended herein.
8. **Defined Terms.** All defined terms not herein defined shall have the definition as set out in the Agreement.
9. **Ratification.** Except as modified and amended herein, the Agreement is hereby ratified and shall remain in full force and effect.

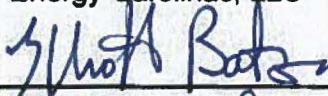
[Signature Page to Follow]

IN WITNESS WHEREOF, the Parties hereto have caused this First Amendment to be executed by their duly authorized representatives on the date first written above.

CROUNSE CORPORATION

By: 
Title: SUP-Sales & Customer Services
Date: 12/19/12

DUKE ENERGY BUSINESS SERVICES, LLC
as agent for and on behalf of Duke Energy
Kentucky, Inc., Duke Energy Indiana, Inc, and
Duke Energy Carolinas, LLC

By: 
Title: Mgr Coal
Date: 12/14/12

SECOND AMENDMENT To The Barge Transportation Agreement

This Second Amendment (this "Second Amendment") dated as of February 26, 2014 to that certain Barge Transportation Agreement dated as of December 15, 2011 by and between Duke Energy Business Services, LLC as agent for and on behalf of Duke Energy Kentucky, Inc., a Kentucky corporation, Duke Energy Indiana, Inc., an Indiana corporation and Duke Energy Carolinas, LLC, a limited liability company all having offices located at 526 South Church Street, Charlotte, North Carolina, 28202 (hereinafter "Buyer") and Crouse Corporation, a Kentucky corporation with its principal place of business at 400 Marine Way Paducah, Kentucky 42003 (hereinafter "Carrier") (the "Original Agreement"). Buyer and Carrier may be hereinafter referred to individually as a "Party" or collectively referred to as the "Parties".

WHEREAS the Carrier and Buyer, entered into the Original Agreement, with an effective date of January 1, 2013;

WHEREAS, on December 14, 2012, the Parties amended the Original Agreement to allow Carrier to provide barge transportation services of coal for Buyer's affiliate Duke Energy Carolinas, LLC (together with the Original Agreement hereinafter referred to as the "Agreement"); and

WHEREAS, the Parties desire to amend the Agreement to add a redelivery rate to Schedule III of the Agreement.

NOW THEREFORE, in consideration of the promises and mutual covenants exchanged by the Parties and herein contained, the Parties agree to amend the Agreement as set forth herein.

The Agreement shall be amended only as between the Parties hereto as follows:

1. **SCHEDULE III – Redelivery Base Rates 1/01/2013.** The following base rate shall be added to the end of Schedule III:

Origin	Destination	Base Rate Per Ton

2. This Second Amendment shall be effective on February 27, 2014.
3. All other terms and conditions of the Agreement shall remain in full force and effect. Unless otherwise defined in the Second Amendment, all defined terms used herein shall have the meanings set forth in the Agreement. This Second Amendment shall prevail in the event of an inconsistency between the Agreement and this Second Amendment.

[Signature Page to Follow]

IN WITNESS WHEREOF, the Parties hereto have caused this Second Amendment to be executed by their duly authorized representatives on the date first written above.

CROUNSE CORPORATION

DUKE ENERGY BUSINESS SERVICES, LLC
as agent for and on behalf of Duke Energy
Kentucky, Inc., Duke Energy Indiana, Inc., and
Duke Energy Carolinas, LLC

By: *Rol McCune*
Title: *Mgr. Sales + Cust Services*
Date: *2/27/14*

By: *John Betson*
Title: *Director, Coal*
Date: *3/10/14*

Third Amendment to Barge Transportation Agreement

This Third Amendment to Barge Transportation Agreement (this “**Amendment**”) is made and entered into as of this 3rd day of April, 2014 (the “**Effective Date**”) by and between each of Duke Energy Kentucky, Inc., a Kentucky corporation, by and through its agent Duke Energy Business Services LLC (“**DEK**”), Duke Energy Indiana, Inc., an Indiana corporation by and through its agent Duke Energy Business Services LLC (“**DEI**”), Duke Energy Carolinas, LLC, a North Carolina limited liability company by and through its agent Duke Energy Business Service, LLC (“**DEC**”) and Duke Energy Progress, Inc., a North Carolina corporation by and through its agent Duke Energy Business Services LLC (“**DEP**”) and Crouse Corporation, a Kentucky corporation (“**Carrier**”). Each of DEK, DEI, DEC and DEP may sometimes hereinafter be referred to collectively as “**Duke Energy**” and individually as a “**Buyer**”. Furthermore, each of Carrier, DEK, DEI, DEC and DEP may sometimes hereinafter be referred to individually as a “**Party**” and collectively as the “**Parties**”.

WHEREAS, Carrier, DEK, DEI and DEC entered into that certain Barge Transportation Agreement dated December 15, 2011 as amended by First Amendment dated December 14, 2012 and Second Amendment dated February 26, 2014 (collectively the “**Agreement**”); and

WHEREAS, the Parties desire to amend the Agreement in order for Carrier to provide certain services to DEP as more specifically set forth herein; and

WHEREAS, the Parties desire to amend the Agreement and clarify that the transportation services provided hereunder, shall be provided separately to each of DEK, DEI, DEC and DEP, as applicable, and to otherwise amend this Agreement as more specifically set forth herein.

NOW, THEREFORE, in consideration of the foregoing and for the mutual promises and covenants contained herein, the receipt and sufficiency of which are hereby acknowledged by the Parties and intending to be legally bound hereby, each of Carrier, DEK, DEI, DEC and DEP hereby agree as follows:

1. As of the Effective Date, all references to "Buyer" will be deemed to be references to DEK, DEI, DEC or DEP, as applicable. Notwithstanding the terms and provisions of the Agreement, it is agreed that the obligations of each Buyer is individual and separate from each other and that Crouse shall look solely only to DEK, DEI, DEC or DEP, as applicable, for the specific services requested by each Buyer.

2. Section 2 of the Agreement is hereby deleted in its entirety and replaced with the following:

2 - Scope: The Parties agree that Carrier shall transport for each of DEK, DEI, DEC or DEP, as applicable, as follows:

Section 2.1 DEK Services. Carrier shall transport DEK's annual tonnage needs of water-borne coal products from the origins listed on Schedule I and the annual tonnage needs of water-borne lime products from the origins listed is Schedule II (collectively the origins in Schedule I and II are referred herein as "**Origins**") to the

following destinations of DEK: [REDACTED]
[REDACTED]; provided that DEK will be released from this obligation due to a failure of Carrier to perform or a force majeure situation(s). Whenever used in this Agreement, the term "coal" shall include other solid fuels such as petroleum coke and Synfuel and the term "lime" shall include limestone, pulverized limestone and other lime-based products. The term "ton" as used herein shall mean a net ton of 2,000 pounds of avoirdupois weight. DEK reserves the right to purchase distressed coal or lime already in barges belonging to other carriers and to divert coal or lime in barges intended for DEK's affiliates to DEK Served Plants. [REDACTED] Carrier's barges will be given priority at the DEK Served Plants in the unloading schedule and empty barges will be placed in the fleet so they can be secured by Carrier for pick-up.

Section 2.2 DEI Services. Carrier shall transport DEI's annual tonnage needs for water-borne coal and lime products from the Origins to the [REDACTED] [REDACTED] (the "DEI Served Plant", together with the DEK Served Plants sometimes herein collectively referred to as the "Served Plants"); provided that DEI will be released from this obligation due to failure of Carrier to perform or a force majeure situation(s). DEI reserves the right to purchase distressed coal or lime already in barges belonging to other carriers, or to divert coal or lime in barges intended for DEI's affiliates to the DEI Served Plant. [REDACTED] Carrier's barge will be given priority at the DEI Served Plant and the unloading schedule and empty barges will be placed in the fleet so they can be secured by Carrier for pick-up.

Section 2.3 DEC Services. Carrier, on a non-exclusive basis, may from time to time upon request from DEC and upon acceptance by Carrier, provide certain transportation services for water-borne coal products from the origins listed on Exhibit 1 attached hereto to the destinations shown on Exhibit 1 (the "DEC Services"). Carrier shall provide the DEC Services upon the request of DEC, in its discretion, based on Carriers capacity and equipment availability. Nothing herein shall require Carrier to provide the DEC Services upon request of DEC. For the avoidance of doubt, nothing herein shall require DEC to purchase any minimum amount of DEC Services hereunder.

Section 2.4 DEP Services. Carrier, on a non-exclusive basis, may from time to time upon request from DEP and upon acceptance by Carrier, provide certain transportation services for water-borne coal products from the origins listed on Exhibit 1 attached hereto to the destinations shown on Exhibit 1 (the "DEP Services"). Carrier shall provide the DEP Services upon the request of DEP, in its discretion, based on Carriers capacity and equipment availability. Nothing herein shall require Carrier to provide the DEP Services upon request of DEP. For the avoidance of doubt, nothing herein shall require DEP to purchase any minimum amount of DEP Services hereunder.

Section 2.5 Individual Services. Carrier acknowledges and agrees that the services described above shall be for each of DEK, DEI, DEC or DEP, as applicable, and that such services are provided solely and only to each Buyer, alone, and none of the other Buyers shall be responsible or have any obligation to Carrier for services provided to each of the other Buyers.

3. The parties agree that any references to the Origins identified on Schedules I and II shall also include the origins identified on Exhibit 1 relative to the services provided to each of DEC or DEP, as applicable.

4. Carrier and DEP agree that the barge rates set forth on Exhibit 1, as it relates to the DEP Services, shall be subject to all adjustments as the base rates in the Agreement and shall adjust accordingly during the term of the Agreement. Further, DEP shall be responsible for the same demurrage terms incurred from Carrier's performance of the DEP Services as such is set out in the Agreement for the services otherwise provided in the Agreement to each of DEK, DEI and DEC.

5. All of the provisions of Section 8 under demurrage found on page 11 of the Barge Agreement dated December 15, 2011 and commencing with the sentence that begins with "Collectively" is hereby deleted and replaced with the following:

"Collectively, hereinafter referred to as the "Demurrage Rate". Demurrage calculations shall be as follows: for each barge delivered to a destination that is actually unloaded during a calendar month, (i) the applicable Demurrage Rate multiplied by (ii) total number of barge days that DEK, DEI, DEC or DEP, as applicable, is in excess of (or is less than) the number of allowed barge days for each barge for such destination for each calendar month. Carrier shall total the aggregate amount of all demurrage debits and credits for the calendar month for all barges delivered to a destination or a particular Buyer and all debits shall be netted against all credits for the month at such destination for the particular Buyer to arrive at a total debit or credit for such destination for each

Buyer. For the avoidance of doubt, the Demurrage Rate for each of DEK, DEI, DEC and DEP, as applicable, shall be prepared separately and only for shipment for each such Buyer. The monthly Demurrage Rate for one destination for each Buyer shall not be aggregated or set off against any demurrage or for any other destinations for each such Buyer. The Demurrage Rate set forth above will be adjusted by the same rate percentage formulas as specified in Section 6. Carrier will deliver a monthly report to each Buyer of the demurrage amounts within ten (10) calendar days at the end of each month at the following address:

For DEK:
Duke Energy Kentucky, Inc.
Attention: Fuels Department-Contract Administrator
526 South Church Street
Charlotte, NC 28202
Telecopier No.: 980-373-9928

For DEI:
Duke Energy Indiana, Inc.
Attention: Fuels Department-Contract Administrator
526 South Church Street
Charlotte, NC 28202
Telecopier No.: 980-373-9928

For DEC:
Duke Energy Carolinas, Inc.
Attention: Fuels Department-Contract Administrator
526 South Church Street
Charlotte, NC 28202
Telecopier No.: 980-373-9928

For DEP:
Duke Energy Progress, Inc.
Attention: Fuels Department-Contract Administrator
526 South Church Street
Charlotte, NC 28202
Telecopier No.: 980-373-9928”

6. **15 – Indemnification** section is hereby deleted in its entirety and replaced with the following:

“Carrier agrees to defend, indemnify and hold harmless DEK, DEI, DEC or DEP, as applicable, from any claim, demand, suit, loss, cost or expense or any damage that may be asserted, claimed or recovered against or from each of them by reason of any damage to property, including property of others, or injury, including death, sustained by any person or persons whomsoever to the extent such damage, injury or death arises out of any act or omission by Carrier, its officers, employees or parties engaged by it, in its performance of this Agreement. Likewise, each of DEK, DEI, DEC or DEP, as applicable, agrees to defend, indemnify and hold harmless Carrier from any claim, demand, suit, loss, cost or expense for any damage which may be asserted, claimed or recovered against or from Carrier by reason of any damage to property, including property of others, or injury, including death, sustained by any person or persons whomsoever to the extent such damage, injury or death arises out of any act or omission by each of DEK, DEI, DEC or DEP, as applicable, or each of their officers, employees or parties engaged by each of them, and each of their performance of this Agreement. Crouse acknowledges that the indemnity provided for hereunder is individual and separate from each of DEK, DEI, DEC or DEP, as applicable, and that each Buyer’s liability to Crouse is individual and separate from each of the other Buyers.

NOTWITHSTANDING ANYTHING ELSE IN THIS AGREEMENT TO THE CONTRARY, NONE OF THE PARTIES SHALL BE LIABILITY UNDER ANY THEORY OR CAUSE OF ACTION TO ANY OF THE OTHER PARTIES FOR ANY

**CLAIMS OF LOST PROFITS, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY
DAMAGES.”**

7. **20 - Notices** is hereby deleted in its entirety and replaced with the following:

“All notices or demands required to be given in writing hereunder, shall be sent by certified mail or commercial overnight delivery service, or by telecopier, to the party to be notified at the following address or telecopier number:

If to a Buyer:

Duke Energy Kentucky, Inc., Duke Energy Indiana, Inc., Duke Energy Carolinas, LLC, or Duke Energy Progress, Inc. (as applicable) to:

Attention: Manager, Midwest & Florida Transportation
526 South Church Street
Charlotte, NC 28202
Telecopier No.: 980-373-9928

For Crouse:

Crouse Corporation
400 Marine Way
P.O. Box 360
Paducah, KY 42002-0360
Attention: President
Telecopier No.: 270-444-9615

8. The last paragraph of Section 23 - Default and Termination, is hereby deleted in its entirety and replaced with the following:

“Upon the occurrence and during the continuance of an event of default by DEK, DEI, DEC or DEP, as applicable, (each a “Defaulting Buyer”) then Carrier may, in its sole discretion (a) terminate this Agreement as to the Defaulting Buyer and/or (b) suspend performance of its obligation of this Agreement as to the Defaulting Buyer until

such event of default is cured. It is agreed that the default by one of the Buyers shall not be considered a default by any other Buyer and this Agreement shall continue as to each such non-defaulting Buyer under the same terms and conditions. Upon the occurrence and during the continuance of an event of default by Carrier as to DEK, DEI, DEC or DEP, as applicable, (each a "Non-Defaulting Buyer"), then the Non-Defaulting Buyer may, in its sole discretion (a) terminate this Agreement related only to the Non-Defaulting Buyer's rights hereunder and/or (b) suspend performance of the Non-Defaulting Buyer obligations under this Agreement until such default is cured. Upon an event of default, any Party may pursue any such remedies available at law and equity, including the cost of replacing this Agreement."

9. Section 24. Netting and Setoff is hereby amended by inserting the following at the beginning of this section:

"Carrier shall keep separate all accounting for the services provided hereunder to each of DEK, DEI, DEC and DEP, as applicable, and Carrier shall invoice each Buyer separately for the services provided to it hereunder."

10. All other terms and conditions of the Agreement remain unchanged and in full force and effect.

11. Capitalized terms used but not defined in this Amendment have the meaning given to them in the Agreement.

12. This Amendment supersedes and replaces all prior agreements, oral and written between the Parties with respect to the subject matter hereof. In the event of any conflict or inconsistency between the Agreement and this Amendment, the terms and conditions of this Amendment prevail.

13. This Amendment is binding upon and inures to the benefit of the Parties hereto and their respective successors and permitted assigns.

14. Each Party acknowledges and agrees that it and its counsel have reviewed and revised this Amendment and that the normal rule of construction to the effect that any ambiguities are to be construed against the drafting Party will not be used in the interpretation of this Amendment.

15. This Amendment will be governed by, interpreted and construed as one in accordance with the substantive laws of the State whose laws govern the Agreement.

16. This Amendment may be executed in multiple counterparts, including by facsimile signature, each of which, when so executed, are deemed to be an original but all of which constitute but one and the same instrument.

[Signature page follows.]

IN WITNESS WHEREOF, each of the Parties has caused this Amendment to be executed by their duly authorized representative to be effective as of the Effective Date.

DUKE ENERGY KENTUCKY, INC.

By: _____

Alexander (Sasha) Weintraub
Vice President - Fuels and Systems Optimization
Title: _____

DUKE ENERGY INDIANA, INC.

By: _____

Alexander (Sasha) Weintraub
Vice President - Fuels and Systems Optimization
Title: _____

DUKE ENERGY CAROLINAS LLC

By: _____

Name: _____
Alexander (Sasha) Weintraub
Vice President - Fuels and Systems Optimization
Title: _____

DUKE ENERGY PROGRESS, INC.

By: _____

Name: _____
Alexander (Sasha) Weintraub
Vice President - Fuels and Systems Optimization
Title: _____

CROUNSE CORPORATION

By: _____

Name: _____

Title: _____

REQUEST:

For each generating station:

- a. State how often coal-pile surveys are undertaken;
- b. Explain how any resulting adjustment affects fuel costs in the calculation of the FAC;
- c. Provide the costs of performing a coal-pile survey at each of the generating stations and explain how the costs are accounted for; and
- d. Provide a copy of all internal accounting policies related to coal-pile survey adjustments and the date the policies were last revised.


RESPONSE:

- a. Coal pile surveys are conducted annually.
- b. The Duke Energy Kentucky's portion of the East Bend aerial survey adjustment and Miami Fort 6's aerial survey adjustment are allocated between native and non-native based on the monthly native/non-native allocation of the coal dollars consumed by station for the 12 month period covered by the aerial survey. The portion of the aerial survey adjustment allocated to native is included in the calculation of the FAC rate.
- c. The costs of performing the 2013 coal pile survey were \$2,542,12 for East Bend and \$688.94 for Miami Fort 6. These costs are for a 3rd party vendors to conduct the flyover,

calculation of the volumes, and density/moisture testing. The costs are recorded in a FERC Account 501 not recovered in the FAC.

- d. Please see Staff-DR-01-032(d) Attachment for the internal policies related to coal pile survey adjustments. The policies were issued 8/19/2013.

PERSON RESPONSIBLE: Brett Phipps / Lisa Steinkuhl

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	Title: Stockpile Survey Guidelines	

MANUAL: DUKE ENERGY ADMINISTRATIVE GUIDELINES

GUIDELINES NUMBER:

GUIDELINES TITLE: STOCKPILE SURVEY GUIDELINES

ISSUE DATE: 8/19/2013

NUMBER OF PAGES: 7

LIST OF EFFECTIVE PAGES: ALL

<u>PAGE</u>	<u>REVISION NO.</u>
1-7	0

	SIGNATURES (AS-APPLICABLE)	DATE
PREPARED BY:	_____	_____
REVIEWED BY:	_____	_____
REVIEWED BY:	_____	_____
REVIEWED BY:	_____	_____
REVIEWED BY:	_____	_____
REVIEWED BY:	_____	_____
FINAL APPROVAL	_____	_____



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1.0 Purpose

- 1.1 The purpose of these guidelines is to outline the steps and responsibilities of the departments involved in conducting the annual physical inventory of the coal stockpiles.

2.0 Applicability

- 2.1 These guidelines applies to the following departments:
- Fuels & Systems Optimization (FSO) (Regulated and Non-Regulated Entities)
 - Central Engineering & Services/Engineering Services/Fleet Consulting Services/Balance of Plant
 - Power Generation Operations, PGO-CE, PGO-CW, PGO-F, PGO-MW (Regulated and Non-Regulated Entities)
 - Internal Auditing
 - Accounting Department

3.0 Guidelines

3.1 Overview


Duke Energy deems it prudent to conduct an annual physical inventory of its coal stockpiles. The purpose of the inventory survey is to verify the amount of coal claimed to be present in reserve by the fuel ledger. Upon completion of the physical inventory, its results are compared with the fuel ledger and a variance is calculated. If the variance exceeds certain criteria, an adjustment to the fuel ledger figure may be considered.

Fuel is the largest operating expenses in the generation of electricity. Accurate, consistent monitoring of inventory at the fossil steam plant is important for use in determining delivery schedules, busbar costs and monitoring of operating heat rates. Additionally, it is important that financial reporting comply with Sarbanes-Oxley requirements so reported inventory levels must match the physical survey within procedural limits of error.

3.2 Contract for Aerial Survey

Central Engineering & Services will contract with a Photogrammetric Consulting Firm to perform an aerial survey of the coal stockpiles. The process will be performed per ASTM D6172-98. A report will be prepared for each site that shall include:

- i. The digital aerial photograph.

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- ii. The topographical map generated from the photograph at one (1) foot contour intervals.
- iii. The tabulated list of pile area (ft²) and volume (ft³) of each pile.

Central Engineering & Services will provide the contractor all necessary control and base data. The target date for the Midwest flyover is July. The target date for the Carolinas & Florida flyover is August to September.

3.3 Contract for Density and Moisture Determination


Central Engineering & Services will contract a Geotechnical Consulting Firm to perform density and moisture content testing of the stockpiles. The contractor will determine the density of the stockpile per ASTM D6938 (replaces D2922 as of Nov 2006) with the following guidelines:

- i. The number of test locations per stockpile determined by dividing the book tonnage of the pile by 18,000 and rounding up. A minimum of three tests performed on any pile less than 54,000 tons.
- ii. The contractor will calibrate the test equipment (nuclear backscatter) before the start of testing at each stockpile.
- iii. At each stockpile the top 12-24 inches of loose material will be removed by the stations mobile equipment.
- iv. Contractor drives a solid pin into the stockpile at each test location and removes it. The test equipment inserted into the hole and density is measured and recorded at three depths, 4, 8, & 12 inches.

A sample is taken at each test location and analyzed for moisture using ASTM D3302M-10. The testing will take place as near as possible to the aerial fly-over date.

3.4 Notification of Fly-Over

Central Engineering & Services to notify each generating station's FGD/Material Handling Superintendant of the approximate date of the flyover. The notification should be given one month prior to the fly over date. The Central Engineering & Services will give the plants two weeks' notice of the firm's target fly over date and density testing dates. Central Engineering & Services will handle coordination responsibilities with Photogrammetric Contractor, the Geotechnical Contractor and each generating stations material handling contact.

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3.5 Preparation of Coal Stockpile

The individual station's FGD/Material Handling Superintendant will have his station prepared for the aerial survey flyover and inventory. This includes:

- i. Having the stockpile groomed/straightened, and lined to separate/identify boundaries prior to the flyover date.
- ii. Marking aerial control monuments so they will show up in the aerial photos, insuring that the control monuments coordinates are correct, control monuments have not been disturbed or are obstructed from view.
- iii. Removing any heavy equipment from the pile area while the pile is being surveyed.
- iv. Suspending receiving and reclaiming operations during the aerial survey.
- v. Providing a pan/scrapper/bulldozer with an operator available on the date of the density testing.
- vi. Reporting to Central Engineering & Services the receipts and reclaims on day of flyover via aerial survey data sheet (this info is required by SOX and auditors).


It should be noted that keeping the outline on the coal pile consistent from year to year will help in keeping the results of the inventory consistent. Central Engineering & Services will work with the Photogrammetric Consulting Firm and the stations to establish template lines around each pile to be used for volumetric calculations.

3.6 Computation of Measured Tonnage

Central Engineering & Services calculates the tonnage on each pile utilizing the volume data from the aerial photogrammetric survey, coal pile moisture data, and the density data.

Only usable tonnage will be compared to the Fuel Ledger balances. Usable tonnage is coal which is identifiable, recoverable, and readily available and (being free of excess moisture, debris and non-combustible material) can be easily reclaimed, pulverized and burned without de-rating the unit or causing operational problems at the generating station. The base of usable inventory is based on a topographical survey of the coal pile area and is unique to each station and each pile.

Beginning pile inventory balances obtained through the appropriate commodity tracking system for the fly-over date and the station provides receipts and consumption at time of fly over.

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3.7 Review of Results

Central Engineering & Services distributes the preliminary results of the inventory survey to each Station and key stakeholders.

A decision to accept the results of the inventory, cause of variance identified or to do another physical inventory will be made. If the decision to accept is made, the approval process is initiated. If further testing is required to confirm the physical inventory, Central Engineering & Services will schedule another fly-over and/or density testing.

If at all possible a secondary survey will be scheduled to allow for verification within the same adjustment period (December). However, if not possible, the secondary survey will be completed for mid-year adjustment.

3.8 Approve Inventory Results

The approval process will include the responsible parties for the regulated and non regulated entities in regard to pile inventories. Upon approval, Central Engineering & Services will distribute the final report which will be used to make adjustments, if necessary, to the Fuel Ledger.

3.9 Determination of Adjustment Quantity

When an individual station incurs a variance an adjustment is considered. The amount of the adjustment will be based on the calculated variance, review of as-received and performance scales calibration and material test data, and prior years inventory trends. Variances may be carried forward if deemed to more accurately reflect actual inventory levels.


3.10 Record the Adjustment

The tons associated with the adjustments are made to the Fuel Ledger through the appropriate commodity tracking system. The adjustment tons are made at the end of December if required.

Adjustments are also made to Joint Owner shares of certain generating units to correct the Fuel Ledger.

4.0 Responsibilities

4.1 Central Engineering & Services

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- 4.2.1 Overall responsibility for the physical inventory process.
- 4.1.1 Notification of the stations for the fly over and density testing dates in a timely manner.
- 4.1.2 Contracting with a Photogrammetric Consulting Firm to perform an aerial survey and volumetric computation of the stockpiles.
- 4.1.3 Contracting with a Geotechnical Consulting Firm to perform density and moisture testing.
- 4.1.4 Computation of tonnage, given the results of the aerial survey volume report, density and moisture test results.
- 4.1.5 Compiling data and preparing the report.
- 4.1.6 Communication of the preliminary results of the physical inventory.

4.2 Power Generations Operations – Generating Stations

- 4.2.1 Having the stockpile groomed/straightened, and lined to separate/identify boundaries prior to the flyover date.
- 4.2.2 Marking aerial control monuments so they will show up in the aerial photos, insuring that the control monuments coordinates are correct, control monuments have not been disturbed or are obstructed from view.
- 4.2.3 Removing any heavy equipment from the pile area while the pile is being surveyed.
- 4.2.4 Suspending receiving and reclaiming operations during the aerial survey.
- 4.2.5 Providing a pan/scrapper/bulldozer with an operator available on the date of the density testing.
- 4.2.6 Reporting to Central Engineering & Services the receipts and reclaims on day of flyover via aerial survey data sheet (this info is required by SOX and auditors).

4.3 Accounting Department

- 4.3.1 Make adjustments to the fuel ledger accounts as required and directing generating stations to adjust their ledgers accordingly.
- 4.3.2 Notifying the Fuels & Systems Optimizations, Power Generation Operations, Internal Auditing and key stakeholders, that the adjustments have been completed.

5.0 Guidelines Approvals

- 5.1 The approval process will include the responsible parties for the regulated and non regulated entities in GOSP with regard to pile inventories.