



Ernie Fletcher
Governor

Mark David Goss
Chairman

Teresa J. Hill, Secretary
Environmental and Public
Protection Cabinet

Commonwealth of Kentucky
Public Service Commission
211 Sower Blvd.
P.O. Box 615
Frankfort, Kentucky 40602-0615
Telephone: (502) 564-3940
Fax: (502) 564-3460
psc.ky.gov

John W. Clay
Commissioner

Timothy J. LeDonne
Commissioner
Department of Public Protection

January 31, 2007

Burns E. Mercer
Meade County R.E.C.C.
P. O. Box 489
Brandenburg, KY 40108-0489

RE: Case No. 2007-00030

We enclose one attested copy of the Commission's Order in the above case.

Sincerely,

A handwritten signature in black ink, appearing to read "Beth O'Donnell".

Beth O'Donnell
Executive Director

BOD/jc
Enclosure

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

MEADE COUNTY RURAL ELECTRIC)	
COOPERATIVE CORPORATION)	
_____)	CASE NO. 2007-00030
)	
ALLEGED FAILURE TO COMPLY)	
WITH KRS 278.042)	

O R D E R

Meade County Rural Electric Cooperative Corporation ("Meade") is a Kentucky corporation engaged in the distribution of electricity for compensation for lights, heat, power, and other uses. It is subject to the jurisdiction of the Commission.¹ Pursuant to KRS 278.042, the Commission shall prescribe the service adequacy and safety standards for electric utilities, as stated in the Commission's administrative regulations and in the most recent edition of the National Electrical Safety Code ("NESC"). Under 807 KAR 5:041, Section 3(1), the Commission requires utilities to construct and maintain plants and facilities in accordance with engineering practices set forth in the NESC.

Commission Staff submitted to the Commission an Electric Utility Personal Injury Accident Report ("Report") dated December 11, 2006, attached hereto as Appendix A. The report alleges that on November 13, 2006, in McQuady, Kentucky, within

¹ See KRS 278.010(3)(a).

Breckinridge County, Donald R. Taylor was electrocuted at the site of a Meade electric construction project.

In March 2006, Meade hired Richardson Contracting (“Richardson”) to serve as a contractor for a 3-year electric system construction project.² Mr. Taylor was a Richardson employee and served as a lineman. Although Richardson had a supervisor on the site, the supervisor did not conduct a job briefing with the employees prior to the start of the work to outline the nature of the equipment or lines to be used during the day. When the accident occurred, Mr. Taylor was in the bucket of a truck, holding a guy wire in his hand when he made contact with a 7200-volt phase wire that was not attached to a temporary hot arm extension. The 7200-volt phase wire was not covered by protective equipment at the time of the accident. Mr. Taylor attempted to take the end of the guy wire up with him instead of waiting for a crew member to get a hand line from another truck. Mr. Taylor was not wearing rubber gloves or sleeves at the time of the accident and grounding equipment for the truck was not being used. Mr. Taylor died at the scene due to electrocution.

The report noted eight probable violations of 807 KAR 5:041, Section 3(1). All alleged violations arise under the 2002 edition of NESC. The alleged violations are as follows:

1. Section 41, Rule 410.C.1 and 2 – Responsibility:
Failure to supervise the safe operation of equipment and lines.

² Richardson was selected as the contractor after having submitted a winning bid to Meade for its project, as required under the regulations for the United States Department of Agriculture’s Rural Utilities Service. A Richardson contract crew was rebuilding a 7200-volt, three-phase line at the site on the day of the accident.

2. Section 41, Rule 411.A.3 – Protective Methods and Devices:
Failure to conduct a job briefing to employees as to the character of the equipment, lines, or work methods.
3. Section 42, Rule 420.C.4 and 5 – Safeguarding Oneself and Others:
Employee failures.
4. Section 42, Rule 420.H – Tools and Protective Equipment:
Failure of an employee to use personal protective equipment, devices, and tools.
5. Section 42, Rule 421.A.1, 2, and 3 – General Operating Routines:
Failure in the duties of the first-level supervisor.
6. Section 44, Rule 441.A.1 – Energized Conductors or Parts:
Failure to adhere to minimum approach distance to live parts.
7. Section 44, Rule 441.A.3 (a, b, and d):
Failure to take precautions for approach.
8. Section 44, Rule 443.A.1 – Work on Energized Lines and Equipment:
Failure to apply safeguards.

The Commission, on its own motion, HEREBY ORDERS that:

1. Meade shall file with the Commission, within 20 days of the date of this Order, a written response to the allegations contained in the Report.
2. Meade shall appear on March 21, 2007 at 9:00 a.m., Eastern Daylight Time, in Hearing Room 1 of the Commission's offices at 211 Sower Boulevard, Frankfort, Kentucky to present evidence concerning the incident which is the subject of the Report. Specifically, Meade shall present evidence as to the eight violations of KRS 278.042 and the NESC and show cause why it should not be subject to the penalties of KRS 278.990 for the alleged violations.
3. The Report, attached hereto as Appendix A, is made a part of the record in this case.

4. Any requests for an informal conference with Commission Staff shall be set forth in writing and filed with the Commission within 20 days of the date of this Order.

Done at Frankfort, Kentucky, this 31st day of January, 2007.

By the Commission

ATTEST:

Executive Director

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE
COMMISSION IN CASE NO. 2007-00030 DATED *January 31, 2007.*



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

UTILITY:	MEADE COUNTY RECC	
Reported By:	David Poe, VP of Operations	
Accident Occurred:	November 13, 2006	Approximately: 4:15 PM
Utility Notified:	November 13, 2006	Approximately: 4:45 PM
PSC Notified:	November 13, 2006	Approximately: 5:05 PM
PSC Investigated:	November 14, 2006	Approximately: 10:35 AM
Report Received:	November 21, 2006	
Accident Location:	12025 Hwy 261, McQuady, Kentucky 40153	
Accident Description:	<p>At approximately 6:06 pm on November 13, 2006 I received a call about an accident at Meade County RECC. I contacted David Poe with Meade County RECC for information about the accident. Mr. Poe told me this was an electrical contact, and it was a fatality. At this time we decided to meet the next morning at the accident site.</p> <p>I arrived at the accident site the next morning and met with Mr. Poe. We examined the accident site, along with Blevins Bowlin of Richardson Contracting. The contract crew was rebuilding a 7200 volt, three-phase line for Meade County RECC. Looking at the truck and the guy wire, you could see the flash burns from the arch when Mr. Taylor (victim) made contact with the 7200 volt phase that was not attached to the temporary hot arm. According to the crew Mr. Taylor attempted to take the end of the guy wire up with him instead of waiting for one of the crew members to get a hand line from another truck. He then made contact with the 7200 volt phase left floating above the truck. The 7200 volt phase with which Mr. Taylor apparently made contact was not covered by protective equipment at the time of the accident according to the crew working with Mr. Taylor. Mr. Taylor was not wearing rubber gloves or sleeves at the time of the accident. The grounding equipment for the truck was not being used at the time of the accident according to the crew. Mr. Taylor was pronounced dead at the scene of the accident.</p>	



Kentucky Public Service Commission

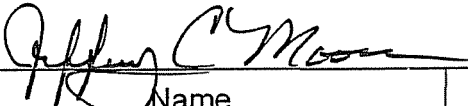
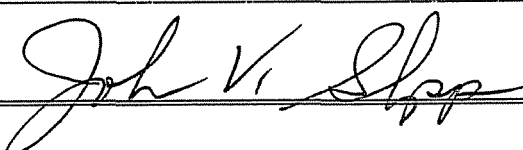
Electric Utility Personal Injury Accident Report

VICTIM(S):	NAME		ADDRESS	EMPLOYER
	Donald R. Taylor		426 Buffalo Branch Rd Corbin, Kentucky 40701	Richardson Contracting
	Fatality	Age		
	Yes	47		
I n j u r y	7200 volt contact was made at the controls of the bucket while it was being raised by Mr. Taylor. He was holding the guy wire in his other hand.			
Witness(es):	Name		Address	Employer
	Earl Henson		62 Sonny Lane Lily, KY 40740	Richardson Contracting
	Mike Dutshke		1970 New State Rd Webster, KY 40176	Richardson Contracting
	Paul Sizemore		433 Shell Rd London, KY	Richardson Contracting
	Doug Martin		Unknown	Richardson Contracting
Information From:	Name		Address	Employer
	David Poe		VP of Operations And Engineering	Meade County RECC



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

Temp & Weather:	85° Calm Sunny		
Probable Violations:	<u>KRS 278.042 Service Adequacy and Safety Standards</u>		
	<u>NESC</u>		
	Section 41: 1. (410-C-1&2) Responsibility		
	2. (411-A-3) Methods (Job Briefing)		
	Section 42: 3. (420-C-4&5) Safeguarding Oneself and Others		
	4. (420-H) Tools and Protective Equipment		
	5. (421-A-1,2&3) Duties Of First-Level Supervisor or Person in Charge		
	Section 44: 6. (441-A-1) Minimum Approach Distance to Live Parts		
	7. (441-A-3-a,b&d) Precautions for Approach		
	8. (443-A-1) Work on Energized Lines and Equipment		
Investigated By:	Name	Company	
	Jeff Moore	Kentucky Public Service Commission	
Signed:			Date
			1-26-07
Reviewed By:	Name	Company	
	John Shupp	Mgr., PSC Engineering Staff	
Signed:			Date
			1/26/07

- Attachments:
- A. Utility Accident Report
 - B. Utility Photographs of Accident Site
 - C. PSC Photographs of Accident Site
 - D. Copy of Cited Violation(s)



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

Attachment A

Utility Accident Report

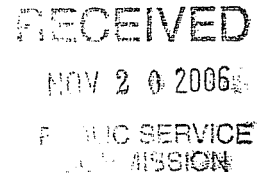
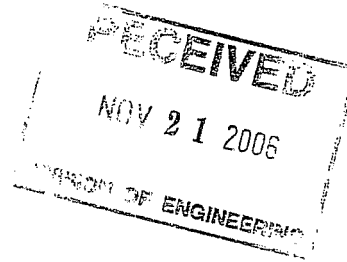


Meade County RECC

P.O. Box 489
Brandenburg, KY 40108-0489
(270) 422-2162
Fax: (270) 422-4705

11/17/06

Mr. Jeff Moore
Electric Investigator
Kentucky Public Service Commission
211 Sower Ave.
P.O. Box 615
Frankfort, Ky 40602



Mr. Moore,

Attached is Meade County RECC's report regarding the fatal electrical contact experienced on 11/13/06 by an employee of our contractor, Richardson Contracting. If you have any questions or concerns, feel free to contact me at (270) 422-2911, ext 3149.

Sincerely,

David R. Poe
Vice President of Operations & Engineering

Enc.

MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION

DATE 11/13/2006 TIME _____ A.M. _____ 4:15 P.M.

Location From Hardinsburg, KY; South on S.R. 261, approximately 9 mi; 12025 Hwy 261, McQuady, KY
40153

Photographs: Yes (to be attached to report)

Diagram: Measure scene, document all objects involved

Person(s) making measurements/diagram James Miller

INJURIES:

NAME: Donald R. Taylor

Address: 426 Buffalo Branch Rd

Corbin, KY 40701

Age: 47 years Occupation Electrical Lineman

Injury Fatality due to electricution

NAME: _____

Address: _____

Age: _____ Occupation _____

Injury _____

Hospital _____ EMS Yes

Name of Provider: Breckinridge County EMS

Address: 807 Old U S 60

Hardinsburg KY 40

(270) 756-2367

Number of Witnesses: 5

Witness # 1

Name: Earl Henson

Address: 62 Sonny Lane

Lily KY 40740

Phone: Home: (606) 682-2823

Work: (502) 484-5062

Statement: - see attached -

Witness # 2

Name: Mike Dutshke

Address: 1970 New State Rd

Webster KY 40176

Phone: Home: (270) 547-3009

Work: (502) 484-5062

Statement: -see attached -

Witness # 3

Name: Paul Sizemore

Address: 433 Shell Rd

London KY

Phone: Home: (606) 682-6896

Work: (502) 484-5062

Statement: - see attached -

Law Enforcement: Breckinridge County Sheriff Dept.

Name(s) Deputy Jim Beacham

Address: Breckinridge County Courthouse

Hardinsburg KY 40143

Phone: (270) 756-2177

Name(s) Deputy Coroner Tim Bandy

Address: 308 South Hardin St

Hardinsburg KY 40143

Phone: (270) 756-2177

Equipment or Product

Name/Type Bucket Truck

Examples: antenna, auger, crane, construction equipment

Manufacturer Name Telelect/Ford 800

Model # _____ Serial # U S DOT 652102

Witness statements

Earl Henson: Foreman

The crew had just laid out the wires at the poles before and after the point of incident. The lineman, Donald Taylor, had just secured two of the three phases on the 'hot arm' just installed onto the new pole. The crew was installing a temporary guy and anchor to allow this pole to be a 'pull-point' in which the new wire would be pulled from or to. Mr. Taylor needed a handline to pull the guy wire up with. There was not a handline available on the bucket truck he was using and Mr. Taylor was upset about that. While one of the crew members went up the hill to get one off of another truck, Donald grabbed the guy wire and went on up into the air with it. At that time, Mr. Taylor had already removed his rubber gloves and sleeves and was using only leather work gloves, but did have on his safety glasses and hard hat. He apparently raised the bucket into the hot phase wire not in the hot-arm and maybe got between it and the neutral wire.

Mr. Taylor was in the current path for 30-60 seconds before slumping into the bucket. Mr. Henson and another employee jumped onto the truck and lowered the boom and bucket down, got Mr. Taylor out, and began CPR. The entire crew worked giving CPR until the EMS arrived.

Mike Dutschke: Lineman

Mr. Dutschke was on the digger truck located approximately 60' behind the bucket truck when he heard the arcing or frying. He seen the bucket and jib firing up and made sure no one was around the guy wire. After about 1 minute, Mr. Taylor slumped down into the bucket and the arcing stopped. He and Mr. Henson, the foreman, jumped onto the bucket truck and lowered the bucket, got Mr. Taylor out, and the crew began CPR and continued until EMS arrived. Mr. Dutschke thinks that Mr. Taylor had boomed up into the phase wire and the neutral or had grabbed both at the same time.

Paul Sizemore: Groundman

Mr. Taylor wanted a handline to pull up the guy wire but was informed that there was not one on that bucket truck. Disgusted, he asked Mr. Sizemore to hand him the guy wire. Mr. Sizemore did and then went immediately up the hill to get a handline. While in transit, he heard frying and looked back to see Mr. Taylor and the bucket firing up. He assumed Mr. Taylor was between the phase and neutral wires. Mr. Sizemore estimated that he was in contact and

energized for about 30-35 seconds before he slumped into the buck. Mr. Henson and Mr. Dutschke jumped onto the bucket truck and lowered the bucket. The crew then got Mr. Taylor out and commenced performing CPR and continued until the EMS arrived.

Doug Martin: Groundman

Mr. Martin was digging a hole for the anchor when he heard Mr. Taylor ask for a handline. Mr. Taylor seemed upset that there was not one on that truck. Mr. Martin left and went to one of the other trucks to get one when he heard the frying. He stated that he seen fire on the boom and Mr. Taylor and the bucket was at about the phase and neutral wire heights and still looked to be going up. Someone hit the deadman switch and Mr. Taylor was energized for about 20 seconds before he slumped into the bucket. Mr. Martin was the nearest person to the bare guy that was lying on the ground (approximately 25-30 feet away), but felt nothing. While others were getting Mr. Taylor out of the bucket, he called 911 and went up the hill to get the address of the location.

Daniel Ridener: Groundman

Mr. Ridener did not witness the incident as it was occurring, but was backing a truck into the drive and was there during the attempted resuscitation effort.

Summary and Investigation Results

At approximately 4:15 PM, CST, Mr. Donald Taylor, a lineman for Richardson Contracting, was electrocuted while rebuilding a three-phase 7200 Volts distribution line for Meade County RECC in Breckinridge County, Kentucky. I received a phone call from Mr. Clyde Wyatt of Richardson Contracting at approximately 4:45 PM, CST informing me of the incident. At 4:50, Mr. Wyatt stated that it looked to be a fatality. I informed Mr. Steve Kingsolver of the Kentucky Public Service Commission at 5:05 CST and then immediately went to the scene with Mr. Billy Wardrip, MCRECC's system supervisor.

Upon arrival, the Breckinridge County sheriff's department and EMS was on the scene along with the county coroner and the deputy coroner. Mr. Taylor's body was already loaded into the coroner's vehicle and had been pronounced dead. The scene had been secured and roped off by the deputy sheriff and coroner. All six of the Richardson Contracting crew members were still on the site, but were visibly shaken. Very brief statements were taken and a visual inspection was made to insure the site and lines were secure for the night. It was completely dark at that time. It was determined that all of the crew members and the MCRECC investigation team would return to the site at 8:00 CST the next morning.

Findings and results

The daylight was fading very fast and as the crew was working in the last hour of the day while rebuilding a three-phase line along State Road 261 in Breckinridge County. An additional pole had been placed amid a long span and two of the energized phase wires were installed on a hot arm that was mounted to the new pole's cross arm. The remaining energized phase and neutral was left swinging since they did not pose any obstruction for the pulling process. This pole was being prepared as a pulling point to string in the new wire. A temporary anchor and a couple of guy wires would be installed to support the pole during the stringing process. Mr. Taylor, the lineman in the bucket, had just tied in two of the energized phases onto the hot arm and lowered the bucket down. He then apparently removed his rubber gloves and sleeves and placed them in the bucket with him. He then asked for a handline in order to pull up the guy wire safely. When he was informed that there was not a handline on the bucket truck he was using, he became agitated. This bucket truck is one that is used in hard-to-get-to places and is many times

left at one location for an extended time. It is not fully loaded with the tools and material that the more frequently used trucks have.

While an employee or two left the immediate scene to get a handline from another nearby truck, Mr. Taylor asked for the guy wire to be handed to him, received it, and proceeded upward in the bucket, holding onto the guy wire with one hand, without wearing the rubber gloves and sleeves, and only wearing leather work gloves at this time. The bucket came into contact with the remaining free phase wire at or near the bucket controls that Mr. Taylor was holding. While having one hand at 7200 Volts potential, the other, which was holding onto the guy wire on the other side of the bucket and was loosely lying on the ground, was near 0 Volts. The full current path seems to be through Mr. Taylor; no other signs of current flow were evident on the truck or the nearby neutral wire.

Mr. Taylor was estimated to have been in the current path for approximately 10-30 seconds. The closest up-line reclosure (100 L) was at the Fordsville substation and it did not open and remain open due to the high resistance that Mr. Taylor presented. The current could have been as much as 200 amps without activating the tripping coil of the reclosure. However, after a sustained fault as this, the current may have risen above the trip level and opened briefly, allowing the lineman to fall loose from the conductor or guy wire.

Specific safety code violations contributing to the incident are listed below with the APPA revision 13 code designation :

- The absence of rubber gloves and sleeves being worn (602 b, 604 c, and 604 d(12))
- The absence of cover-up on the phase wires (602 c)

Another code violation that did not contribute to the accident, but was present was:

- The bucket truck was not effectively grounded (312 v)

A handwritten signature in black ink, appearing to read "David R. Poe". The signature is written in a cursive style with a horizontal line underneath.

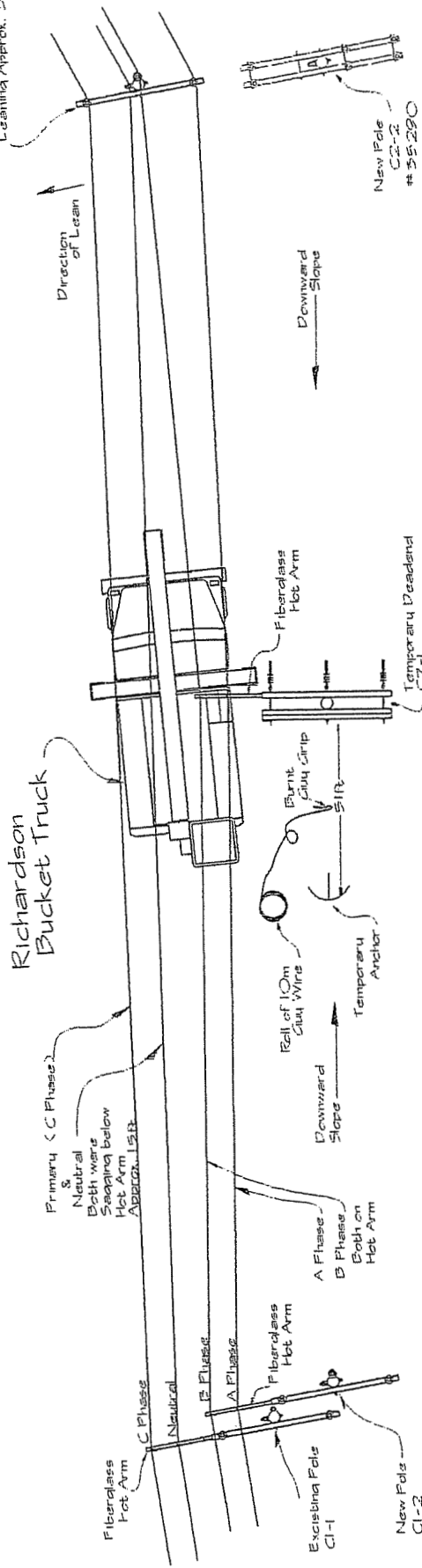
David R. Poe, P.E.
V.P. Operations and Engineering
Meade County RECC

Measurements/Diagrams:

See attached

EXCEL:O:Formslaccinv

Existing Pole
C-1
Leaning Approx. 50 data



Richardson
Bucket Truck

Primary (C Phase)
Neutral &
Both were
Sagging below
Hot Arm
ABOVE LIST

Direction
of Lean

Downward
Slope

New Pole
C-2
#35290

Fiberclass
Hot Arm

Temporary Deadend
C-1
Class 2
SO Class 2
#95825

Burnt
Guy Wire

Roll of 10m
Galv Wire

Temporary
Anchor

A Phase
B Phase
Both on
Hot Arm

Downward
Slope

Whip-poor-will
Hill Farm

Fordsville

Highway 261

McQuady

New Pole
C-2
#35291

Excelsior Pole
C-1

Fatality Accident
Richardson Contractor
Donald Taylor
November 13th, 2006

Carol Cundiff

From: Amy Jacobs [ajacobs@bowlingroup.com]
Sent: Wednesday, November 15, 2006 10:17 AM
To: chcundiff@mcrecc.com
Subject: Richardson Safety Manual

Carol,

Richardson adheres to the APPA 13th edition safety manual.

Thank you,

Amy Jacobs

11/15/2006

Equipment Maintenance

The following two sheets show that the reclosures on Feeder 2 of the Fordsville substation were changed out with new or overhauled ones near the end of June 1998 per the counter readings noted (highlighted area). The reclosers are dated 6-98 to signify the date of overhaul or purchase. There are no other equipment involved in this circuit between the site of accident and the substation.

SUBSTATION FORDSVILLE DATE/TIME 6/17/98 EMPLOYEE R. Ho STY

SUBSTATION VOLTAGE/CURRENT READINGS

KW 2000

DATE	TIME	LOAD	THRESH	HOURS ON
6/17	1:43	2.92	3.00	N/A

LOAD	DATE	TIME	LOAD 2
6/17	6/17	1:43	0
			0

UNREGULATED VOLTAGE

A PHASE	PRESENT	MAX	MIN	RESET
CHART	123.5	132	118	changed
C PHASE	122.7	N/A	119	changed

STATION AMPS

PRESENT	MAX	RESET
220	300	✓
180	240	✓
200	250	✓

REGULATED VOLTAGE

JEM 2 METER

DATE/TIME	READ	CHECK
6/17/98	60:04	✓
00	8162.57	9577.05
01	4.990	4.877
02	5/29 13:30	13:30
06	.92	.92
07	.86	.87

REGULATED VOLTAGE

PRESENT	CHARTS
A PHASE 125.5	changed 1.4
B PHASE 125.7	changed 1.4
C PHASE 125.6	changed 1.4

SUBSTATION GENERAL INSPECTION

SAFETY	OK	YES	NO
EQUIPMENT GRDS	✓		
FENCE GRDS	✓		
GATE GRDS	✓		
WARNING SIGNS ON FENCES	✓		
GATES LOCKED	✓		

SWITCHES	OK	YES	NO
APPEARANCE	✓		
INSULATORS	✓		
HANDLE GROUNDED	✓		

MISCELLANEOUS	OK	YES	NO
ARRESTORS LOW SIDE	✓		
ARRESTORS HIGH SIDE	✓		
STATION SERVICE	✓		
SHIELD WIRE	✓		
YARD LIGHTING	✓		
TRASH	✓		

BUILDING	OK	YES	NO
DOOR	✓		
HEATER/AC	✓		
BUILDING CONDITION	✓		
CIRCUIT BREAKERS	✓		
SPARE MATERIAL	✓		

COMMENTS BIRD NEST 7200V BAY

FORDSVILLE

POWER TRANSFORMERS

PHASE	TAP	LIQ. LEVEL	LIQ. TEMP. NOW/MAX	WINDING TEMP. NOW/MAX	FANS AUTO/MAN	PRESSURE GAUGE +/-	DRAG RESET	BUSHINGS	GROUND	OIL LEAKS	COMMENTS
1 A	3	25C	45, 65	N/A	✓	+2.5	✓	✓	✓	✓	
2 B	3	+25C	48, 80	N/A	✓	+2	✓	✓	✓	✓	
3 C	3	+25C	45, 95	N/A	✓	+1	✓	✓	✓	✓	
4											
5											
6 SCREW	3	25C	25, 35	N/A	✓	+2.5	✓	✓	✓	✓	

VOLTAGE REGULATORS

PHASE	DRAG HAND			NEUTRAL LAMP			OIL			COMMENTS
	MIN	PRES	MAX	RESET	COUNTER	OIL LEVEL	BUSHINGS	GROUND	LEAKS	
A	24	24	210	✓	70907	N/A	✓	✓	✓	
B	24	23	29	✓	325307	N/A	✓	✓	✓	
C	24	23	210	✓	91188	N/A	✓	✓	✓	

CIRCUIT 1

PHASE	PRESENT AMPS	PEAK AMPS	AMPS X	TARGETS	RESET
				TGT AMP	
A	85	110	40	N0	✓
B	70	100	40	N0	✓
C	80	100	40	N0	✓
GRD				N0	

ON NORM

BATTERY TEST NO LOAD LOADED

27 25

GRD TRIP BLOCK NONRECLOSE

LAMP TEST OK BAD

COUNTER 570

CIRCUIT 2

PHASE	PRESENT AMPS	PEAK AMPS	AMPS X	TARGETS	RESET	COUNTER
	A	13	30+	40	N0	✓
B	5	15	40	N0	✓	336
C	10	18	40	N0	✓	884

ON NORM

BATTERY TEST NO LOAD LOADED

27 25

GRD TRIP BLOCK NONRECLOSE

LAMP TEST OK BAD

COUNTER 1109

CIRCUIT 3

PHASE	PRESENT AMPS	PEAK AMPS	AMPS X	TARGETS	RESET	COUNTER
	A	100	110	40	N0	✓
B	80	100	40	N0	✓	
C	100	120	40	N0	✓	
GRD				N0		

ON NORM

BATTERY TEST NO LOAD LOADED

27 25

GRD TRIP BLOCK NONRECLOSE

LAMP TEST OK BAD

COUNTER 500

COMMENTS

SUBSTATION **FORDSVILLE** DATE/TIME **7-17-98** EMPLOYEE **J. F. [Signature]**

SUBSTATION VOLTAGE/CURRENT READINGS

KW 2000

UNREGULATED VOLTAGE

DATE	7-17	LOAD	0
TIME	14:04	DATE	7-1
LOAD	7.56	TIME	0
THRESH	7.00	LOAD 2	0
HOURS ON			

PRESENT	125	MAX	130	MIN	120	RESET	changed ✓
A PHASE CHART	127.1	N/A	129	119	119	changed ✓	
C PHASE							

STATION AMPS

PRESENT	MAX	RESET
280	340	✓
180	260	✓
290	290	✓

REGULATED VOLTAGE

PRESENT	CHARTS
125.9	changed ✓
125.8	changed ✓
126.0	changed ✓

JEM 2 METER

DATE/TIME	READ	CHECK
7-1	00:00	7-17 14:21
10	06:58.02	00 1916.08
11	06:59	01 5.441
12	12-05 13:30	02 7.9 19.30
16	92	06 .92
17	187	07 .87

DATE/TIME
KWH X 1000
PEAK KW
DATE/TIME PEAK
AVE PF
PEAK PF

SUBSTATION GENERAL INSPECTION

SAFETY	OK	YES	NO
EQUIPMENT GRDS	✓	✓	
FENCE GRDS	✓	✓	
GATE GRDS	✓	✓	
WARNING SIGNS ON FENCES	✓	✓	
GATES LOCKED	✓	✓	
SWITCHES	OK	YES	NO
APPEARANCE	✓	✓	
INSULATORS	✓	✓	
HANDLE GROUNDED	✓	✓	
MISCELLANEOUS	OK	YES	NO
ARRESTORS LOW SIDE	✓	✓	
ARRESTORS HIGH SIDE	✓	✓	
STATION SERVICE	✓	✓	
SHIELD WIRE	✓	✓	
YARD LIGHTING	✓	✓	
TRASH	✓	✓	
BUILDING	OK	YES	NO
DOOR	✓	✓	
HEATER/AC	✓	✓	
BUILDING CONDITION	✓	✓	
CIRCUIT BREAKERS	✓	✓	
SPARE MATERIAL	✓	✓	

COMMENTS

POWER TRANSFORMERS

FORDSVILLE

SUBSTATION

COMMENTS

PHASE	TAP	LIQUID LEVEL	LIQUID TEMP NOW/MAX	WINDING TEMP NOW/MAX	FANS AUTO/MAN	PRESSURE GAUGE +/-	DRAG RESET	BUSHINGS	GROUND	OIL LEAKS
1	3	15°C	10.43	---	✓	+3.3	✓	✓	✓	✓
2	3	25°C +	33.63	---	✓	+2.3	✓	✓	✓	✓
3	3	25°C +	35.96	---	✓	+2.0	✓	✓	✓	✓
4										
5										
6										

VOLTAGE REGULATORS

COMMENTS

PHASE	MIN	DRAG HAND PRES	MAX	RESET	COUNTER	NEUTRAL LAMP	OIL LEVEL	BUSHINGS	GROUND	OIL LEAKS
A	-3	+4	+12	✓	7197	---	---	✓	✓	✓
B	-3	+3	+8	✓	22971	---	---	✓	✓	✓
C	-4	+3	+10	✓	10076	---	---	✓	✓	✓

CIRCUIT 2

PHASE	PRESENT AMPS	PEAK AMPS	RESET	COUNTER
A	21	28	✓	3
B	12	13	✓	160
C	13	20	✓	340

CIRCUIT 3

PHASE	PRESENT AMPS	PEAK AMPS	RESET	COUNTER
A	2.5	2.1	✓	---
B	2.0	2.7	✓	---
C	2.7	3.3	✓	---

CIRCUIT 4

PHASE	PRESENT AMPS	PEAK AMPS	RESET	COUNTER
A	2.5	2.1	✓	---
B	2.0	2.7	✓	---
C	2.7	3.3	✓	---

ON NORM

ON NORM

ON NORM

BATTERY TEST

BATTERY TEST

BATTERY TEST

NO LOAD

NO LOAD

NO LOAD

LOADED

LOADED

LOADED

COUNTER

COUNTER

COUNTER

OK

OK

OK

BAD

BAD

BAD

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COMMENTS DIAS NEXT FOR?

System Inspection

The following six sheets are copies of the inspection records along the Feeder 2 of the Fordsville substation. The incident occurred between poles numbered 35290 and 35291, which are listed on the second sheet.

Contract

The following pages are from the contract between Meade County RECC and Richardson Contracting, signed March 2006 and is binding for three years.

U.S. Department of Agriculture
Rural Utilities Service

2006 - 2008 CONSTRUCTION WORK PLAN - NEW CONSTRUCTION
ELECTRIC SYSTEM CONSTRUCTION CONTRACT
NON-SITE SPECIFIC CONSTRUCTION

NOTICE AND INSTRUCTIONS TO BIDDERS

1. **Sealed proposals for the construction, including the supply of necessary labor, materials and equipment, of a rural electric project of** MEADE COUNTY RECC,
RUS designation KY 18, (hereinafter called the "Owner") will be received by the Owner on or before 10:00 a.m. o'clock M., February 28, 2006, at its office at 1351 Hwy 79, Brandenburg KY at which time and place the proposals will be publicly opened and read. Any proposals received subsequent to the time specified will be promptly returned to the Bidder unopened.
2. ~~Owner Furnished Materials. The unit prices in the Contractor's Proposal are to include provisions for Owner Furnished Materials since as stated in Article 3, Section 3 of the Contractor's Proposal, the value of the Owner Furnished Materials, if any, will be deducted from payments to the Bidder for completed Construction Units.~~
3. **Obtaining Documents.** The Plans, Specifications and Construction Drawings, together with all necessary forms and other documents for bidders may be obtained from the Owner, or from the Engineer David R Poe PE at the latter's office at Brandenburg KY upon the payment of \$ -0-, which payment will not be subject to refund. The Plans, Specifications, and Construction Drawings may be examined at the office of the Owner or at the office of the Engineer.
4. **Manner of Submitting Proposals.** Proposals and all supporting instruments must be submitted on the forms furnished by the Owner and must be delivered in a sealed envelope addressed to the Owner. The name and address of the Bidder, its license number if a license is required by the State, and the date and hour of the opening of bids must appear on the envelope in which the Proposal is submitted. Proposals must be completed in ink or typewritten. No alterations or interlineations will be permitted, unless made before submission, and initialed and dated. The successful Bidder will be required to execute two additional counterparts of the Proposal.
5. **Due Diligence.** Prior to the submission of the Proposal, the Bidder shall make and shall be deemed to have made a careful examination of the site of the project and of the Plans, Specifications, Construction Drawings, and forms of Contractor's Proposal and Contractor's Bond, and shall review the location and nature of the proposed construction, the transportation facilities, the kind and character of soil and terrain to be encountered, the kind of facilities required before and during the construction of the project, general local conditions, environmental and historic preservation considerations, and all other matters that may affect the cost and time of completion of the project. Bidder will be required to comply with all federal, state, and local laws, rules, and regulations applicable to its performance, including those pertaining to the licensing of contractors, and the Anti Kick-Back Act of 1986 (41 U.S.C. 51 et seq).
6. Proposals will be accepted only from those prequalified bidders invited by the Owner to submit a proposal.

7. **The Time for Completion of Construction** of the project is of the essence of the Contract and shall be as specified by the Engineer in the Proposal.
8. **Bid Bond.** Each Proposal must be accompanied by a Bid Bond in the form attached hereto or a certified check on a bank that is a member of the Federal Deposit Insurance Corporation, payable to the order of the Owner, in an amount equal to ten percent (10%) of the maximum bid price. Each Bidder agrees, provided its Proposal is one of the three low Proposals, that, by filing its Proposal together with such Bid Bond or check in consideration of the Owner's receiving and considering such Proposals, said Proposal shall be firm and binding upon each such Bidder and such Bid Bond or check shall be held by the Owner until a Proposal is accepted and a satisfactory Contractor's Bond is furnished (where required) by the successful Bidder or for a period not to exceed sixty (60) days from the date hereinbefore set for the opening of Proposals, whichever period shall be the shorter. If such Proposal is not one of the three low Proposals, the Bid Bond or check will be returned in each instance within a period of ten (10) days to the Bidder furnishing same.
9. **Contractor's Bond.** If the estimated cost of the construction of a Section shall exceed \$100,000, the Bidder agrees to furnish a Contractor's Bond in triplicate in the form attached hereto with sureties listed by the United States Treasury Department as Acceptable Sureties, in a penal sum not less than the estimated cost of such Section.
10. **Failure to Furnish Contractor's Bond.** Should the successful Bidder fail or refuse to execute such counterparts or to furnish a Contractor's Bond (where required) within ten (10) days after written notification of the acceptance of the Proposal by the Owner, the Bidder will be considered to have abandoned the Proposal. In such event, the Owner shall be entitled (a) to enforce the Bid Bond in accordance with its terms, or (b) if a certified check has been delivered with the Proposal, to retain from the proceeds of the certified check, the difference (not exceeding the amount of the certified check) between the amount of the Proposal and such larger amount for which the Owner may in good faith contract with another party to construct the project. The term "Successful Bidder" shall be deemed to include any Bidder whose Proposal is accepted after another Bidder has previously refused or has been unable to execute the counterparts or to furnish a satisfactory Contractor's Bond (where required.)
11. **Debarment Certification.** The Bidder must provide to the Owner a suspension and debarment certificate in the form attached hereto.
12. **Contract is Entire Agreement.** The Contract to be effected by the acceptance of the Proposal shall be deemed to include the entire agreement between the parties thereto, and the Bidder shall not claim any modifications thereof resulting from any representation or promise made at any time by any officer, agent or employee of the Owner or by any other person.
13. **Minor Irregularities.** The Owner reserves the right to waive minor irregularities or minor errors in any Proposal, if it appears to the Owner that such irregularities or errors were made through inadvertence. Any such irregularities or errors so waived must be corrected on the Proposal in which they occur prior to the acceptance thereof by the Owner.
14. **Bid Rejection.** The Owner reserves the right to reject any or all Proposals.
15. **Discrepancy in Unit Prices.** Where the unit prices in the Contractor's Proposal are separated into three columns designated as "Labor," "Materials," and "Labor and Materials," and where a discrepancy appears between the sum shown in the "Labor and Materials" column and the correct addition of the sums appearing in the "Labor" column and the "Materials" column, the correct addition of the sums appearing in the "Labor" column and the "Materials" column shall control. Similarly, the quantities appearing in the "No. of Units" column multiplied by the correct addition of the sums in the "Labor" column and the "Materials" shall control the amounts appearing in the "Extended Price - Labor & Materials" column. Likewise, the correct extensions shall control the amounts appearing in the "Total, Part ___" line for each respective part.
16. **Definition of Terms.** The terms "Administrator," "Engineer," "Completion of Construction," and "Completion of the Project" as used throughout this Contract shall be as defined in Article VI, Section 1, of the Proposal.

17. The Owner Represents:

- a. *If by provisions of the Proposal the Owner shall have undertaken to furnish any materials for the construction of the project, such materials are on hand at locations specified or if such materials are not on hand they will be made available by the Owner to the successful Bidder at the locations specified before the time such materials are required for construction.*
- b. *All titles, easements and rights-of-way, except as shown on maps included in the Plans and Specifications, have been obtained from the owners of the properties on which the project is to be constructed (including tenants who may reasonably be expected to object to such construction). The remaining easements and rights-of-way, if any, will be obtained as required to avoid delay in construction.*
- c. *All staking, except as shown on the maps included in the Plans and Specifications, has been completed and sufficient staking crews will be available to maintain stakes at all times in advance of construction.*
- d. *Where underground distribution construction is required, permission has been obtained from state and local highway and road authorities to install underground distribution power facilities and set pedestals, if any, on the highway and road right-of-way in the project area. Notwithstanding such permission granted to the Owner, each Bidder is responsible for ascertaining that the equipment, methods of construction, and repair proposed to be used on the project will meet all requirements of public authorities having jurisdiction over highway and road right-of-way. The successful Bidder will be required to furnish proof satisfactory to the Owner of compliance with this requirement. If required by highway or road authorities, the successful Bidder will furnish to such authorities a bond or meet other guaranty requirements to assure the prompt repair of all damages to highways and roads and their associated rights-of-way caused by the Bidder during construction of the project. This requirement is in addition to and independent of the Contractor's Bond required under this Contract. The acceptance of a bid from any Bidder is not to be construed as approval of the Bidder's equipment or proposed construction methods by or on behalf of the highway and road authorities. Bidders may obtain information concerning the requirements of highway and road authorities by communicating with the following:*

Scott Coppage, District 4, Elizabethtown KY (800) 459-3566

- e. *All funds necessary for prompt payment for the construction of the project will be available.*

If the Owner shall fail to comply with any of the undertakings contained in the foregoing representation or if any of such representations shall be incorrect, the Bidder will be entitled to an extension of time of completion for a period equal to the delay, if any, caused by the failure of the Owner to comply with such undertakings or by any such incorrect representation; provided the Bidder shall have promptly notified the Owner in writing of its desire to extend the time of completion in accordance with the foregoing; provided, however, that such extension, if any, of the time of completion shall be the sole remedy of the Bidder for the Owner's failure, because of conditions beyond the control and without the fault of the Owner, to furnish materials in accordance with subparagraph a. above.

MEADE COUNTY RECC

Owner

David R. Poe

By _____

VP, Operations & Engineering

Title

8/12, 2005

Date

PROPOSAL

TO:

MEADE COUNTY RECC

(hereinafter called the "Owner").

ARTICLE I—GENERAL

Section 1. Offer to Construct. *The undersigned (hereinafter called the "Bidder") hereby proposes to receive and install such materials and equipment as may hereinafter be specified to be furnished by the Owner, and to furnish all other materials and equipment, all machinery, tools, labor, transportation and other means required to construct the project in strict accordance with the Plans, Specifications and Construction Drawings for the prices hereinafter stated. The Bidder understands and agrees that the Project will consist of line extensions and additions and line changes or similar work usually associated with overhead or underground distribution system improvement or extension work all located within the area served or ultimately to be served by the Owner and that the exact location and scope of individual sections of the Project (hereinafter called "Sections") will be made known to the Bidder from time to time as provided in Article II, Section I hereof*

The total length of the project lines shall be determined by taking the sum of all straight horizontal span distances between pole stakes or from center to center of poles, or centerline of structures, carrying conductors, plus the length of service drops, if any, measured horizontally from center of last pole to the point of attachment to the consumer's building.

Section 2. Materials and Equipment. *The Bidder agrees to furnish and use in the construction of the project under this Proposal, in the event the Proposal is accepted, only such "fully accepted," "conditionally accepted," and "technically accepted" materials and equipment which have been accepted by RUS as indicated in the current RUS Informational Publication 202-1, "List of Materials Acceptable for Use on Systems of RUS Electrification Borrowers," including revisions adopted prior to the Bid Opening. The use of "conditionally accepted" or "technically accepted" materials and equipment requires prior consent by the Owner or Engineer.*

The Bidder agrees that the prices for wood poles, wood crossarms, and other timber products set forth herein shall include the cost of preservative treatment and inspection, insured warranty, or quality assurance. The Bidder further agrees to obtain from the supplier inspection and treatment reports or insured warranties, for checking against the delivered timber, and to submit such reports or warranties to the Owner as one of the prerequisites to monthly and final payments.

The Bidder will purchase all materials and equipment (other than Owner Furnished Materials) outright and not subject to any conditional sales agreements, bailment, lease or other agreement reserving unto the seller any right, title or interest therein. All such materials and equipment shall be new and shall become the property of the Owner when erected in place.

Section 3. Owner Furnished Materials. *The Bidder understands and agrees that, if this Proposal is accepted, the Owner will furnish to the Bidder the material set forth in the attached "List of Owner Furnished Materials." For those items not yet delivered, the Bidder will, on behalf of the Owner, accept delivery of such of the materials as may be subsequently delivered and will promptly forward to the Owner for payment the supplier's invoice. The Bidder will acknowledge in writing the receipt of all materials received as indicated on the List. The materials referred to are on hand at, or will be delivered to, the locations specified in the List and the Bidder will use such materials in constructing the project.*

~~*The value of the completed Construction Units certified by the Bidder each month pursuant to Article III, Section 1 a of the Proposal shall be reduced by an amount equal to the value of the materials installed by the Bidder during the preceding month which have been furnished by the Owner*~~

~~or the delivery of which has been accepted by the Bidder on behalf of the Owner. Only ninety percent (90%) of the remainder shall be paid prior to the completion of the project. The value of such materials shall be computed on the basis of the unit prices stated in the Lists. Materials, if any, not required for the project, which have been furnished to the Bidder by the Owner or delivery of which has been accepted by the Bidder on behalf of the Owner, shall be returned to the Owner by the Bidder upon completion of construction of the project. The value of all materials not installed in the project nor returned to the Owner shall be deducted from the final payment to the Bidder.~~

The Owner shall not be obligated to furnish materials in excess of the quantities, size, kind and type set forth in the attached Lists. If the Owner furnishes, and the Bidder accepts, materials in excess thereof, the values of such excess materials shall be their actual cost as stated by the Owner.

Information on the shipping schedules of materials on the "List of Owner Furnished Materials" will be furnished to the Bidder as necessary during progress of the work.

Upon delivery, the Bidder shall promptly receive, unload, transport and handle all materials and equipment on the "List of Owner Furnished Materials" at its expense and shall be responsible for demurrage, if any.

Section 4. Proposal on Unit Basis. The Bidder understands and agrees that the various Construction Units on which bids are made are defined by symbols and descriptions in this Proposal, that all said bids are on a unit basis, and that the Owner may specify any number or combination of Construction Units that the Owner may deem necessary for the construction of the project. Separate Construction Units are designated for each different arrangement which may be used in the construction of the project. This Proposal is based on a consideration of each unit in place and includes only the materials listed on the corresponding Construction Drawings or description of unit where no drawing exists.

Section 5. Description of Contract. The Notice and Instructions to Bidders, Plans, Specifications, and Construction Drawings, which by this reference are incorporated herein, together with the Proposal and Acceptance constitute the Contract. The Plans, Specifications, and Construction Drawings, including maps, special drawings, and approved modifications in standard specifications are attached hereto and identified as follows:

Standard 7.2/12.47 KV RUS Construction

Specifications

Section 6. Due Diligence. The Bidder has made a careful examination of the site of the project to be constructed and of the Plans, Specifications, Construction Drawings, and form of Contractor's Bond attached hereto, and has become informed as to the location and nature of the proposed construction, the transportation facilities, the kind and character of soil and terrain to be encountered, and the kind of facilities required before and during the construction of the project, and has become acquainted with the labor conditions, federal, state, and local laws, rules, and regulations applicable to its performance.

Section 7. License. The Bidder warrants that a Contractor's License is , is not required, and if required,

it possesses Contractor's License No. _____ for the State of _____

in which the project is located and said license expires on _____, 20__.

Section 8. Warranty of Good Faith. *The Bidder warrants that this Proposal is made in good faith and without collusion or connection with any person or persons bidding for the same work.*

Section 9. Financial Resources.

- a. *The Bidder warrants that it has or will obtain the financial resources necessary to ensure completion of the project.*
- b. *The Bidder agrees that in the event this Proposal is accepted and a Contractor's Bond is required, it will furnish a Contractor's Bond in the form attached hereto, in a penal sum not less than the maximum Contract price, with a surety or sureties listed by the United States Department of Treasury as Acceptable Sureties.*

Section 10. Taxes. *The unit prices for Construction Units in this Proposal include provisions for the payment of all monies which will be payable by the Bidder or the Owner in connection with the construction of the project on account of taxes imposed by any taxing authority upon the sale, purchase or use of materials, supplies and equipment, or services or labor of installation thereof, to be incorporated in the project as part of such Construction Units. The Bidder agrees to pay all such taxes, except taxes upon the sale, purchase or use of Owner Furnished Materials and it is understood that, as to Owner Furnished Materials, the values stated in the attached "List of Owner Furnished Materials" include taxes upon the sale, purchase or use of Owner Furnished Materials, if applicable. The Bidder will furnish to the appropriate taxing authorities all required information and reports pertaining to the project, except as to the Owner Furnished Materials.*

Section 11. Changes in Quantities. *The Bidder understands and agrees that the quantities called for in this Proposal are approximate, and that the total number of units upon which payment shall be made shall be as set forth in the inventory. If the Owner changes the quantity of any unit or units specified in this Proposal by more than fifteen percent (15%) and the materials cost to the Bidder is increased thereby to an extent which would not be adequately compensated by application of the unit prices in this Proposal to the revised quantity of such unit or units, such change, to the extent of the quantities of such units in excess of such fifteen percent (15%) shall be regarded as a change in the construction within the meaning of Article II, Section 1(d) of this proposal.*

ARTICLE II—CONSTRUCTION

Section 1. Time and Manner of Construction.

- a. *The Bidder agrees to commence construction of the project on a date (hereinafter called the "Commencement Date") which shall be determined by the Engineer after notice to the bidder in writing of acceptance of the proposal by the Owner and notice in writing from the Bidder that the Bidder has sufficient materials to warrant commencement and continuation of construction, but in*

no event will the Commencement Date be later than twenty-one (21) calendar days after acceptance of the proposal by the Owner. The Bidder further agrees to prosecute diligently and to complete construction in strict accordance with the Plans, Specifications and

Construction Drawings within -0- calendar days after Commencement Date: Provided, however, that the Bidder will not be required to dig holes, set poles, install anchors, install underground conduit, perform any plowing for the installation of underground cable, or dig trenches if there are more than six (6) inches of frost on the ground nor to perform any construction on such days when in the judgment of the Engineer snow, rain, or wind, or the results of snow, rain, or frost make it impracticable to perform any operation of the construction; provided further that the Bidder will not be required to perform any plowing for the installation of underground cable on public roads or highways if there are more than two (2) inches of frost in the ground. To the extent of the time lost due to the conditions described herein and approved in writing by the Engineer, the time of completion set out above will be extended if

the Bidder makes a written request therefore to the Owner as provided in subsection b of this Section 1.

- b. *The time for Completion of Construction shall be extended for the period of any reasonable delay which is due exclusively to causes beyond the control and without the fault of the Bidder, including Acts of God, fires, floods, inability to obtain materials and acts or omissions of the Owner with respect to matters for which the Owner is solely responsible: Provided, however that no such extension of time for completion shall be granted the Bidder unless within ten (10) days after the happening of any event relied upon by the Bidder for such an extension of time the Bidder shall have made a request therefore in writing to the Owner, and provided further that no delay in such time of completion or in the progress of the work which results from any of the above causes except acts or omissions of the Owner, shall result in any liability on the part of the Owner.*
- c. *The sequence of construction shall be as set forth below, the number or names being the designations of extensions or areas (hereinafter called the "Sections") corresponding to the numbers or names shown on the maps attached hereto, or if no Sections are set forth below, the sequence of construction shall be as determined by the Bidder, subject to the approval of the Engineer.*

N/A

- d. *The Owner, acting through the Engineer, may from time to time during the progress of the construction of the project make such changes, additions or subtractions from the Plans, Specifications, Construction Drawings, List of Materials and sequence of construction provided for in the previous paragraph which are part of the Contractor's Proposal as conditions may warrant: Provided, however, that if any change in the construction to be done shall require an extension of time, a reasonable extension will be granted if the Bidder shall make a written request therefore to the Owner within (10) days after any such change is made. And provided further, that if the cost to the Bidder of construction of the project shall be materially increased by any such change or addition, the Owner shall pay the Bidder for the reasonable cost thereof in accordance with a Construction Contract Amendment signed by the Owner and the Bidder, but no claim for additional compensation for any such change or addition will be considered unless the Bidder shall have made a written request therefore to the Owner prior to the commencement of work in connection with such change or addition.*
- e. *It is understood and agreed that, notwithstanding any other provisions of this Contract, the Bidder will not be required to commence any construction after the expiration of 3 year(s)¹ following acceptance of this Proposal by the Owner.*

Section 2. Environmental Protection. *The Bidder shall perform the work in compliance with all applicable Federal, State, and local Environmental Laws. For purposes of this Agreement, the term "Environmental Laws" shall mean all Federal, state, and local laws including statutes, regulations, ordinances, codes, rules, and other governmental restriction and requirements relating to the environment or solid waste, hazardous substances, hazardous waste, toxic or hazardous material, pollutants or contaminants including, but not limited to the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9601, et seq., the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251, et seq., and the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, et seq., now or at any time hereafter in effect.*

Section 3. Tools, Equipment, and Qualified Personnel. *The Bidder agrees that in the event this Proposal is accepted it will make available for use in connection with the proposed construction all necessary tools and equipment and qualified supervisors and workers.*

¹ Owner to insert a number from 1 to 4.

Section 4. Changes in Construction. *The Bidder agrees to make such changes in construction previously installed in the project by the Bidder as required by the Owner for prices arrived at as follows:*

- a. *For substations and other units where only a portion of the complete unit is affected by the change, the compensation for such change shall be as agreed upon in writing by the Bidder and the Owner prior to the commencement of work in connection with such change.*
- b. *For all other units, the compensation for such change shall be the reasonable cost thereof as agreed upon by the Bidder and the Owner, but in no event shall it exceed two (2) times the labor price quoted in the Proposal for the installation of the unit to be changed. Such compensation shall be in lieu of any other payment for the installation and removal of the original unit. (If a new or replacing unit is installed, payment for such new or replacing unit shall be made as shown in the final inventory.)*

No payment shall be made to the Bidder for materials or labor involved in correcting errors or omissions on the part of the Bidder which result in construction not in accordance with the Plans and Specifications.

Section 5. Construction Not in Proposal. *The Bidder also agrees that when it is necessary to construct units not shown in the Proposal, in absence of other mutual agreement, it will construct such units for a price arrived at as follows:*

- a. *The cost of materials shall be determined by the invoices.*
- b. *The cost of labor shall be the reasonable cost thereof, but in no event shall it exceed an amount determined by calculating the ratio of the total labor costs to the total material costs in the section of the Proposal involved, and multiplying the cost of materials for the unit in question by this ratio.*

Section 6. Supervision and Inspection.

- a. *The Bidder shall give sufficient supervision to the work, using its best skill and attention. The Bidder will carefully study and compare all drawings, specifications and other instructions and will at once report to the Owner any error, inconsistency or omission which it may discover. The Bidder shall cause the construction work on the project to receive constant supervision by a competent superintendent (hereinafter called the "Superintendent") who shall be present at all times during working hours where construction is being carried on. The Bidder shall also employ, in connection with the construction of the project, capable, experienced and reliable supervisors and such skilled workers as may be required for the various classes of work to be performed. The Bidder shall be solely responsible for the means and methods of construction and for the supervision of the Bidder's employees.*
- b. *The Owner reserves the right to require the removal from the project of any employee of the Bidder if in the judgment of the Owner such removal shall be necessary in order to protect the interest of the Owner. The Owner shall have the right to require the Bidder to increase the number of its employees and to increase or change the amount or kind of tools and equipment if at any time the progress of the work shall be unsatisfactory to the Owner; but the failure of the Owner to give any such directions shall not relieve the Bidder of its obligations to complete the work within the time and in the manner specified in this Proposal.*
- c. *The construction of the project and all materials and equipment used therein, shall be subject to the inspection, tests, and acceptance by the Owner and the Administrator and the Bidder shall furnish all information required by the Owner or by the Administrator concerning the nature or source of any materials incorporated or to be incorporated in the project. All Bidder procedures and records pertaining to the work shall be made available to the Owner and the Administrator for review prior to such inspections and tests. The Bidder shall provide all reasonable facilities necessary for such inspection and tests and shall maintain an office at the site of the project, with telephone service where obtainable and at least one office employee to whom communications*

from the Owner may be delivered. Delivery of such communications in writing to the employee of the Bidder at such office shall constitute delivery to the Bidder. The Bidder shall have an authorized agent accompany the Engineer when final inspection is made and, if requested by the Owner, when any other inspection is made. The performance of such inspections or tests by the Owner or the Administrator shall not relieve the Bidder of its obligations to perform the work in accordance with the requirements of this Contract.

- d. In the event that the Owner, or the Administrator, shall determine that the construction contains or may contain numerous defects, it shall be the duty of the Bidder and the Bidder's Surety or Sureties, if any, to have an inspection made by an engineer approved by the Owner and the Administrator, if approval by the Administrator is required, for the purpose of determining the exact nature, extent and location of such defects.
- e. The Engineer may recommend to the Owner that the Bidder suspend the work wholly or in part for such period or periods as the Engineer may deem necessary due to unsuitable weather or such other conditions as are considered unfavorable for satisfactory prosecution of the work or because of the failure of the Bidder to comply with any of the provisions of the Contract: Provided, however, that the Bidder shall not suspend work pursuant to this provision without written authority from the Owner so to do. The time of completion hereinabove set forth shall be increased by the number of days of any such suspension, except when such suspension is due to the failure of the Bidder to comply with any of the provisions of this Contract. In the event that work is suspended by the Bidder with the consent of the Owner, the Bidder before resuming work shall give the Owner at least twenty-four (24) hours notice thereof in writing.

Section 7. Defective Materials and Workmanship.

- a. The acceptance of any materials, equipment (except Owner Furnished Materials) or any workmanship by the Owner or the Engineer shall not preclude the subsequent rejection thereof if such materials, equipment, or workmanship shall be found to be defective after delivery or installation, and any such materials, equipment or workmanship found defective before final acceptance of the construction shall be replaced or remedied, as the case may be, by and at the expense of the Bidder. Any such condemned material or equipment shall be immediately removed from the site of the project by the Bidder at the Bidder's expense. The Bidder shall not be entitled to any payment hereunder so long as any defective materials, equipment or workmanship in respect to the project, of which the Bidder shall have had notice, shall not have been replaced or remedied, as the case may be.
- b. Notwithstanding any certificate which may have been given by the Owner or the Engineer, if any materials, equipment (except Owner Furnished Materials) or any workmanship which does not comply with the requirements of this Contract shall be discovered within one (1) year after Completion of Construction of the project, the Bidder shall replace such defective materials or equipment or remedy any such defective workmanship within thirty (30) days after notice in writing of the existence thereof shall have been given by the Owner. If any such defective materials, equipment, or workmanship so replaced or repaired is found to be defective within one year after the completion of the replacement or repair, the Bidder shall replace or remedy such defective materials, equipment, or workmanship. If the Bidder shall be called upon to replace any defective materials or equipment or to remedy defective workmanship as herein provided, the Owner, if so requested by the Bidder shall deenergize that section of the project involved in such work. In the event of failure by the Bidder so to do, the Owner may replace such defective materials or equipment or remedy such defective workmanship, as the case may be, and in such event the Bidder shall pay to the Owner the cost and expense thereof.

- e. *No payment shall be due while the Bidder is in default in respect of any of the provisions of this Contract and the Owner may withhold from the Bidder the amount of any claim by a third party against either the Bidder or the Owner based upon an alleged failure of the Bidder to perform the work hereunder in accordance with the provisions of this Contract.*
- f. *The Owner and the Administrator shall have the right to inspect all payrolls, invoices of materials, and other data and records of the Bidder and of any subcontractor, relevant to the construction of the project.*

Section 2. Release of Liens and Certificate of Contractor. *Upon the completion by the Bidder of the construction of the project (or any Section thereof if the Bidder shall elect to receive payment in full for any Section when completed as provided above) but prior to final payment to the Bidder, the Bidder shall deliver to the Owner, in duplicate, releases of all liens and of rights to claim any lien, in the form attached hereto from all manufacturers, material suppliers, and subcontractors furnishing services or materials for the project or such Section and a certificate in the form attached hereto to the effect that all labor used on or for the project or such Section has been paid and that all such releases have been submitted to the Owner.*

Section 3. Payments to Material Suppliers and Subcontractors. *The Bidder shall pay each material supplier, if any, within five (5) days after receipt of any payment from the Owner, the amount thereof allowed the Bidder for and on account of materials furnished or construction performed by each material supplier or each subcontractor.*

ARTICLE IV—PARTICULAR UNDERTAKINGS OF THE BIDDER

Section 1. Protection to Persons and Property. *The Bidder shall at all times take all reasonable precautions for the safety of employees on the work and of the public, and shall comply with all applicable provisions of federal, state, and local laws, rules, and regulations and building and construction codes, in addition to the safety rules and procedures of the Owner.*

The following provisions shall not limit the generality of the above requirements:

- a. *The Bidder shall at no time and under no circumstances cause or permit any employee of the Bidder to perform any work upon energized lines, or upon poles carrying energized lines, unless otherwise specified in the Notice and Instructions to Bidders.*
- b. *The Bidder shall transport and store all material in facilities and vehicles which are designed to protect the material from damage. The Bidder shall ensure that all vehicles, trailers, and other equipment used comply with all applicable licensing, traffic, and highway requirements.*
- c. *The Bidder shall so conduct the construction of the project as to cause the least possible obstruction of public highways.*
- d. *The Bidder shall provide and maintain all such guard lights and other protection for the public as may be required by applicable statutes, ordinances and regulations or by local conditions.*
- e. *The Bidder shall do all things necessary or expedient to properly protect any and all parallel, converging and intersecting lines, joint line poles, highways and any and all property of others from damage, and in the event that any such parallel, converging and intersecting lines, joint line poles, highways or other property are damaged in the course of the construction of the project the Bidder shall at its own expense restore any or all of such damaged property immediately to as good a state as before such damage occurred.*
- f. *Where the right-of-way of the project traverses cultivated or grazing lands, the Bidder shall limit the movement of its crews and equipment so as to cause as little damage as possible to crops, orchards or property and shall endeavor to avoid marring the lands. All fences which are necessarily opened or moved during the construction of the project shall be replaced in as good*

condition as they were found and precautions shall be taken to prevent the escape of livestock. Except as otherwise provided in the descriptions of underground plowing and trenching assembly units, the Bidder shall not be responsible for loss of or damage to crops, orchards or property (other than livestock) on the right-of-way necessarily incident to the construction of the project and not caused by negligence or inefficient operation of the Bidder. The Bidder shall be responsible for all other loss of or damage to crops, orchards, or property, whether on or off the right-of-way, and for all loss of or damage to livestock caused by the construction of the project.

The right-of-way for purposes of this said section shall consist of an area extending _____ feet on both sides of the center line of the poles along the route of the project lines, plus such area reasonably required by the Bidder for access to the route of the project lines from Public roads to carry on construction activities.

- g. The project, from the commencement of work to completion, or to such earlier date or dates when the Owner may take possession and control in whole or in part as hereinafter provided shall be under the charge and control of the Bidder and during such period of control by the Bidder all risks in connection with the construction of the project and the materials to be used therein shall be borne by the Bidder. The Bidder shall make good and fully repair all injuries and damages to the project or any portion thereof under the control of the Bidder by reason of any act of God or other casualty or cause whether or not the same shall have occurred by reason of the Bidder's negligence.
- (i) To the maximum extent permitted by law, Bidder shall defend, indemnify, and hold harmless Owner and Owner's directors, officers, and employees from all claims, causes of action, losses, liabilities, and expenses (including reasonable attorney's fees) for personal loss, injury, or death to persons (including but not limited to Bidder's employees) and loss, damage to or destruction of Owner's property or the property of any other person or entity (including but not limited to Bidder's property) in any manner arising out of or connected with the Contract, or the materials or equipment supplied or services performed by Bidder, its subcontractors and suppliers of any tier. But nothing herein shall be construed as making Bidder liable for any injury, death, loss, damage, or destruction caused by the sole negligence of Owner.
- (ii) To the maximum extent permitted by law, Bidder shall defend, indemnify, and hold harmless Owner and Owner's directors, officers, and employees from all liens and claims filed or asserted against Owner, its directors, officers, and employees, or Owner's property or facilities, for services performed or materials or equipment furnished by Bidder, its subcontractors and suppliers of any tier, and from all losses, demands, and causes of action arising out of any such lien or claim. Bidder shall promptly discharge or remove any such lien or claim by bonding, payment, or otherwise and shall notify Owner promptly when it has done so. If Bidder does not cause such lien or claim to be discharged or released by payment, bonding, or otherwise, Owner shall have the right (but shall not be obligated) to pay all sums necessary to obtain any such discharge or release and to deduct all amounts so paid from the amount due Bidder.
- (iii) Bidder shall provide to Owner's satisfaction evidence of Bidder's ability to comply with the indemnification provisions of subparagraphs i and ii above, which evidence may include but may not be limited to a bond or liability insurance policy obtained for this purpose through a licensed surety or insurance company.
- h. Any and all excess earth, rock, debris, underbrush and other useless materials shall be removed by the Bidder from the site of the project as rapidly as practicable as the work progresses.
- i. Upon violation by the Bidder of any of the provisions of this section, after written notice of such violation given to the Bidder by the Engineer or the Owner, the Bidder shall immediately correct such violation. Upon failure of the Bidder so to do the Owner may correct such violation at the Bidder's expense: Provided, however, that the Owner may, if it deems it necessary or advisable, correct such violation at the Bidder's expense without such prior notice to the Bidder.

- j. *The Bidder shall submit to the Owner monthly reports in duplicate of all accidents, giving such data as may be prescribed by the Owner.*
- k. *The Bidder shall not proceed with the cutting of trees or clearing of right-of-way without written notification from the Owner that proper authorization has been received from the owner of the property, and the Bidder shall promptly notify the Owner whenever any landowner objects to the trimming or felling of any trees or the performance of any other work on its land in connection with the project and shall obtain the consent in writing of the Owner before proceeding in any such case.*
- l. *The Bidder will furnish, prior to the commencement of underground distribution construction, proof, satisfactory to the Owner, of compliance with requirements of highway and road authorities having jurisdiction, including without limitation, the furnishing of a bond or other guaranty, and approval by such authorities of the equipment and methods of construction and repair to be used by the Bidder.*

Section 2. Insurance. *The Bidder shall take out and maintain throughout the period of this Agreement the following types and minimum amounts of insurance:*

- a. *Workers' compensation and employers' liability insurance, as required by law, covering all its employees who perform any of the obligations of the Bidder under the contract. If any employer or employee is not subject to the workers' compensation laws of the governing state, then insurance shall be obtained voluntarily to extend to the employer and employee coverage to the same extent as though the employer or employee were subject to the workers' compensation laws.*
- b. *Public liability insurance covering all operations under the contract shall have limits for bodily injury or death of not less than \$1 million each occurrence, limits for property damage of not less than \$1 million each occurrence, and \$1 million aggregate for accidents during the policy period. A single limit of \$1 million of bodily injury and property damage is acceptable. This required insurance may be in a policy or policies of insurance, primary and excess including the umbrella or catastrophe form.*
- c. *Automobile liability insurance on all motor vehicles used in connection with the contract, whether owned, nonowned, or hired, shall have limits for bodily injury or death of not less than \$1 million per person and \$1 million each occurrence, and property damage limits of \$1 million for each occurrence. A single limit of \$1 million of bodily injury and property damage is acceptable. This required insurance may be in a policy or policies of insurance, primary and excess including the umbrella or catastrophe form.*

The Owner shall have the right at any time to require public liability insurance and property damage liability insurance greater than those required in subsection "b" and "c" of this Section. In any such event, the additional premium or premiums payable solely as the result of such additional insurance shall be added to the Contract price.

The Owner shall be named as Additional Insured on all policies of insurance required in subsections "b" and "c" of this Section.

The policies of insurance shall be in such form and issued by such insurer as shall be satisfactory to the Owner. The Bidder shall furnish the Owner a certificate evidencing compliance with the foregoing requirements which shall provide not less than (30) days prior written notice to the Owner of any cancellation or material change in the insurance.

Section 3. Delivery of Possession and Control to Owner.

- a. *Upon written request of the Owner the Bidder shall deliver to the Owner full possession and control of any portion of the project provided the Bidder shall have been paid at least ninety percent (90%) of the cost of construction of such portion. Upon such delivery of the possession and control of any portion of the project to the Owner, the risk and obligations of the Bidder as*

set forth in Article IV, Section 1.g hereof with respect to such portion of the project so delivered to the Owner shall be terminated; Provided, however, that nothing herein contained shall relieve the Bidder of any liability with respect to defective materials and workmanship as contained in Article II, Section 7 hereof.

- b. Where the construction of a Section as hereinbefore defined in Article II, Section 1.c shall have been completed by the Bidder, the Owner agrees, after receipt of a written request from the Bidder, to accept delivery of possession and control of such Section upon the issuance by the Engineer of a written statement that the Section has been inspected and found acceptable by the Engineer. Upon such delivery of the possession and control of any such Section to the Owner, the risk and obligations of the Bidder as set forth in Article IV, Section 1.g hereof with respect to such Section so delivered to the Owner shall be terminated: Provided, however, that nothing herein contained shall relieve the Bidder of any liability with respect to defective materials or workmanship as contained in Article II, Section 7 hereof.

Section 4. Energizing the Project.

- a. Prior to Completion of the project the Owner, upon written notice to the Bidder, may test the construction thereof by temporarily energizing any portion or portions thereof. During the period of such test the portion or portions of the project so energized shall be considered as within the possession and control of the Owner and governed by the provisions of Section 3 of this Article. Upon written notice to the Bidder by the Owner of the completion of such test and upon deenergizing the lines involved therein said portion or portions of the project shall be considered as returned to the possession and control of the Bidder unless the Owner shall elect to continue possession and control in the manner provided in Section 3 of this Article.
- b. The Owner shall have the right to energize permanently any portion or portions of the project delivered to its possession and control pursuant to the provisions of Section 3 of this Article.

Section 5. Assignment of Guarantees. All guarantees of materials and workmanship running in favor of the Bidder shall be transferred and assigned to the Owner prior to the time the Bidder receives final payment.

ARTICLE V—REMEDIES

Section 1. Completion on Bidder's Default. If default shall be made by the Bidder or by any subcontractor in the performance of any of the terms of this Proposal, the Owner, without in any manner limiting its legal and equitable remedies in the circumstances, may serve upon the Bidder and the Surety or Sureties, if any, upon the Contractor's Bond or Bonds a written notice requiring the Bidder to cause such default to be corrected forthwith. Unless within twenty (20) days after the service of such notice upon the Bidder such default shall be corrected or arrangements for the correction thereof satisfactory to both the Owner and the Administrator shall be made by the Bidder or its Surety or Sureties, if any, the Owner may take over the construction of the project and prosecute the same to completion by Contract or otherwise for the account and at the expense of the Bidder, and the Bidder and its Surety or Sureties, if any, shall be liable to the Owner for any cost or expense in excess of the Contract price occasioned thereby. In such event the Owner may take possession of and utilize, in completing the construction of the project, any materials, tools, supplies, equipment, appliances, and plant belonging to the Bidder or any of its subcontractors, which may be situated at the site of the project. The Owner in such contingency may exercise any rights, claims or demands which the Bidder may have against third persons in connection with this Contract and for such purpose the Bidder does hereby assign, transfer and set over unto the Owner all such rights, claims and demands.

Section 2. Cumulative Remedies. Every right or remedy herein conferred upon or reserved to the Owner or the Government or the Administrator shall be cumulative, shall be in addition to every right and remedy now or hereafter existing at law or in equity or by statute and the pursuit of any right or remedy shall not be construed as an election.

ARTICLE VI--MISCELLANEOUS

Section 1. Definitions.

- a. *The term "Administrator" shall mean the Administrator of the Rural Utilities Service of the United States of America and his or her duly authorized representative or any other person in whom or authority in which may be vested the duties and functions which the Administrator is now authorized by law to perform.*
- b. *The term "Engineer" shall mean the Engineer employed by the Owner, to provide engineering services for the project and said Engineer's duly authorized assistants and representatives.*
- c. *The term "Completion of Construction" shall mean full performance by the Bidder of the Bidder's obligations under the Contract and all amendments and revisions thereof except the Bidder's obligations in respect of (1) Releases of Liens and Certificate of Contractor under Article III, Section 2 hereof, (2) the inventory referred to in Article III, Section 1 hereof, and (3) other final documents. The term "Completion of the Project" shall mean full performance by the Bidder of the Bidder's obligations under the Contract and all amendments and revisions thereof. The Certificate of Completion, signed by the Engineer and approved in writing by the Owner shall be the sole and conclusive evidence as to the date of Completion of Construction and as to the fact of Completion of the Project.*

Section 2. Materials and Supplies. *In the performance of this contract there shall be furnished only such unmanufactured articles, materials, and supplies as have been mined or produced in the United States or in any eligible country, and only such manufactured articles, materials, and supplies as have been manufactured in the United States or in any eligible country substantially all from articles, materials, or supplies mined, produced or manufactured, as the case may be, in the United States or in any eligible country; provided that other articles, materials, or supplies may be used in the event and to the extent that the Administrator shall expressly in writing authorize such use pursuant to the provisions of the Rural Electrification Act of 1938, being Title IV of Public Resolution No. 122, 75th Congress, approved June 21, 1938. For the purposes of this section, an "eligible country" is any country that applies with respect to the United States an agreement ensuring reciprocal access for United States products and services and suppliers to the markets of that country, as determined by the United States Trade Representative. The Bidder agrees to submit to the Owner such certificates with respect to compliance with the foregoing provision as the Administrator from time to time may require.*

Section 3. Patent Infringement. *The Bidder shall hold harmless and indemnify the Owner from any and all claims, suits and proceedings for the infringement of any patent or patents covering any materials or equipment used in construction of the project.*

Section 4. Permits for Explosives. *All permits necessary for the handling or use of dynamite or other explosives in connection with the construction of the project shall be obtained by and at the expense of the Bidder.*

Section 5. Compliance with Laws. *The Bidder shall comply with all federal, state, and local laws, rules, and regulations applicable to its performance under the contract and the construction of the project. The Bidder acknowledges that it is familiar with the Rural Electrification Act of 1936, as amended, the Anti Kick-Back Act of 1986 (41 U.S.C. 51 et seq), and 18 U.S.C. §§ 286, 287, 641, 661, 874, 1001, and 1366, as amended.*

The Bidder represents that to the extent required by Executive Orders 12549 (3 CFR, 1985-1988 Comp., p. 189) and 12689 (3 CFR, 1989 Comp., p. 235), Debarment and Suspension, and 7 CFR part 3017, it has submitted to the Owner a duly executed certification in the form prescribed in 7 CFR part 3017.

The Bidder represents that, to the extent required, it has complied with the requirements of Pub. L. 101-121, Section 319, 103 Stat. 701, 750-765 (31 U.S.C. 1352), entitled "Limitation on use of

appropriated funds to influence certain Federal contracting and financial transactions," and any rules and regulations issued pursuant thereto.

Section 6. Equal Opportunity Provisions.

a. Bidder's Representations.

The Bidder represents that:

It has ___, does not have ___, 100 or more employees, and if it has, that it has ___, has not ___, furnished the Equal Employment Opportunity-Employers Information Report EEO-1, Standard Form 100, required of employers with 100 or more employees pursuant to Executive Order 11246 of September 24, 1965, and Title VII of the Civil Rights Act of 1964.

The Bidder agrees that it will obtain, prior to the award of any subcontract for more than \$10,000 hereunder to a subcontractor with 100 or more employees, a statement, signed by the proposed subcontractor, that the proposed subcontractor has filed a current report on Standard Form 100.

The Bidder agrees that if it has 100 or more employees and has not submitted a report on Standard Form 100 for the current reporting year and that if this Contract will amount to more than \$10,000, the Bidder will file such report, as required by law, and notify the owner in writing of such filing prior to the Owner's acceptance of this Proposal.

b. Equal Opportunity Clause. During the performance of this Contract, the Bidder agrees as follows:

- (1) The Bidder will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Bidder will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotions or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection of training, including apprenticeship. The Bidder agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this Equal Opportunity Clause.*
- (2) The Bidder will, in all solicitations or advertisements for employees placed by or on behalf of the Bidder, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.*
- (3) The Bidder will send to each labor union or representative of workers, with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the Bidder's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.*
- (4) The Bidder will comply with all provisions of Executive Order 11246 of September 24, 1965, and the rules, regulations and relevant orders of the Secretary of Labor.*
- (5) The Bidder will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.*

(6) *In the event of the Bidder's noncompliance with the Equal Opportunity Clause of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part, and the Bidder may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as provided by law.*

(7) *The Bidder will include this Equal Opportunity Clause in every subcontract or purchase order unless exempted by the rules, regulations, or order of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Bidder will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; Provided, however, that in the event Bidder becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Bidder may request the United States to enter into such litigation to protect the interests of the United States.*

c. *Certificate of Nonsegregated Facilities. The Bidder certifies that it does not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The Bidder certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it will not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The Bidder agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this Contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The Bidder agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause, and that it will retain such certifications in its files.*

Section 7. Franchises and Rights-of-Way. *The Bidder shall be under no obligation to obtain or assist in obtaining: Any franchises, authorizations, permits or approvals required to be obtained by the Owner from Federal, State, County, Municipal or other authorities; any rights-of-way over private lands; or any agreements between the Owner and third parties with respect to the joint use of poles, crossings, or other matter incident to the construction and operation of the project.*

Section 8. Nonassignment of Contract. *The Bidder shall perform directly and without subcontracting not less than twenty-five percent (25%) of the construction of the project, to be calculated on the basis of the total Contract price. The Bidder shall not assign the Contract effected by an acceptance of this Proposal or any interest in any funds that may be due or become due hereunder or enter into any contract with any person, firm or corporation for the performance of the Bidder's obligations hereunder or any part thereof, without the approval in writing of the Owner and of the Surety or Sureties, if any, on any bond furnished by the Bidder for the faithful performance of the Bidder's obligations hereunder. If the Bidder, with the consent of the Owner and any Surety or Sureties on the Contractor's Bond or Bonds, shall enter into a subcontract with any subcontractor for the performance of any part of this Contract, the Bidder shall be as fully responsible to the Owner and the Government for the acts and omissions of such subcontractor and of persons employed by such subcontractor as the Bidder would be for its own acts and omissions and those of persons directly employed by it.*

Section 9. Successors and Assigns. Each and all of the covenants and agreements herein contained shall extend to and be binding upon the successors and assigns of the parties hereto. The Owner and Bidder acknowledge that this Contract is assigned to the Government, acting through the Administrator, for security purposes under the Owner's mortgage and security instrument.

Section 10. Independent Contractor. The Bidder shall perform the work as an independent contractor, not as a subcontractor, agent, or employee of the Owner. Upon acceptance of this Proposal, the successful Bidder shall be the Contractor and all references in the Proposal to the Bidder shall apply to the Contractor.

Section 11. Acceptance by the Owner: The acceptance of a Proposal for a contract shall become effective the date of acceptance by the Owner.

ATTEST:

Ang & Opewol
Secretary

Dated 3-27-06

Richardson Contracting
Bidder

Blair Paul
President

P.O. Box 250 Owenton, Ky 40359
Address

The Proposal must be signed with the full name of the Bidder. If the Bidder is a partnership, the Proposal must be signed in the partnership name by a partner. If the Bidder is a corporation, the Proposal must be signed in the corporate name by a duly authorized officer and the corporate seal affixed and attested by the Secretary of the Corporation.

ACCEPTANCE

The Owner hereby accepts the foregoing Proposal of the Bidder, RICHARDSON

CONTRACTING, for the construction of the following:

2006 - 2008 CONSTRUCTION WORK PLAN (new construction)

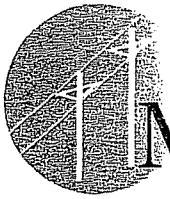
MEADE COUNTY RECC

Owner

By *James E. Jensen*
President

Secretary

3/27, 2006
Date of Contract



Meade County RECC

P.O. Box 489
Brandenburg, KY 40108-0489
(270) 422-2162
Fax: (270) 422-4705

NEW CONSTRUCTION - 2006
(Project Title)

HOLD HARMLESS AGREEMENT

Richardson Contracting agrees to defend, pay on behalf of and hold harmless Meade County Rural Electric Cooperative Corporation and its directors, officers, agents and employees from all claims of whatsoever nature or kind, including those brought by those employees of Richardson Contracting or subcontractors, and also including any civil penalties imposed upon the Meade County Rural Electric Cooperative Corporation by any administrative agency or other tribunal that is a result of the violation of any safety code or regulation by Richardson Contracting, its employees, agents and subcontractors, provided that Meade County Rural Electric Cooperative Corporation makes every reasonable effort for Davis H. Elliot Company, Inc. the opportunity to participate and defend itself in the proceeding or investigation which results in the imposition of such civil penalties, arising out of or as a result of any act or failure to act, whether or not negligent, in connection with the performance of the work to be performed pursuant to this contract by Richardson Contracting, its employees, agents and subcontractors. Richardson Contracting agrees to defend and to pay all costs in defending these claims, including attorney fees of Meade County Rural Electric Cooperative Corporation.

Further, Richardson Contracting agrees to maintain public liability and property damage insurance (including automobile, public liability and property damage insurance) to cover the obligations set forth above. The minimum insurance limits of liability shall be \$1,000,000.00 bodily injury and property damage. Meade County Rural Electric Cooperative Corporation shall receive a minimum thirty (30) day notice in the event of cancellation of insurance required by this agreement. Richardson Contracting shall furnish a certificate of insurance to Meade County Rural Electric Cooperative Corporation showing that the above obligations and requirements are provided for by a qualified insurance carrier, and showing Meade County Rural Electric Cooperative Corporation is an additional insured on such insurance.

Blewin Boulton
Contractor signature

Date 3-23-06

Dave J. [Signature]
Authorized Cooperative Employee

Date 3-28-06

CERTIFICATION for CONTRACTS, LOANS, and COOPERATIVE AGREEMENTS

2006 - 2008 CONSTRUCTION WORK PLAN - NEW CONSTRUCTION
The undersigned certifies, to the best of his or her knowledge and belief, that:

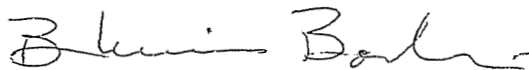
- 1) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an office or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer of employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- 3) The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all TIERS (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certifies a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code. any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

Richardson Contracting
Organization Name

President
Authorized Official

3-23-06
Date


Signature

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND
VOLUNTARY EXCLUSION – LOWER TIER COVERED TRANSACTIONS**

This certification is required by the regulations, implementing Executive Order 12549, Debarment and Suspension, 7 CFR Part 3017, Section 3017.510, Participant(s) responsibilities. The regulations were published as Part IV of the January 30, 1989, FEDERAL REGISTER, (pages 4722 – 4733).

- 1) The prospective lower participant certifies, by submission of this proposal that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.
- 2) Where the prospective lower TIER participant is unable to certify to any of the statements in this certification, such prospective participant(s) shall attach an explanation to this proposal.

RICHARDSON CONTRACTING
Organization Name

2006 - 2008 CONSTRUCTION WORK PLAN
3-year workplan (Meade County RECC)
PR/Award Number or Project Name

Blevins Bonlin
Name and Title of Authorized Representative

President

Blevins Bonlin
Signature

3-23-06
Date



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

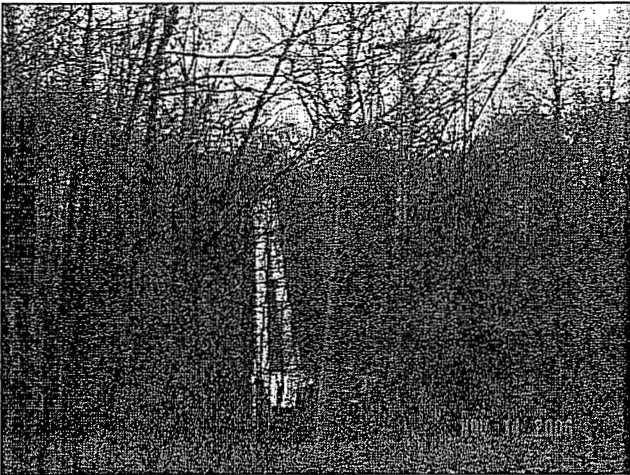
Attachment B

Utility Photographs of Accident Site



Kentucky Public Service Commission

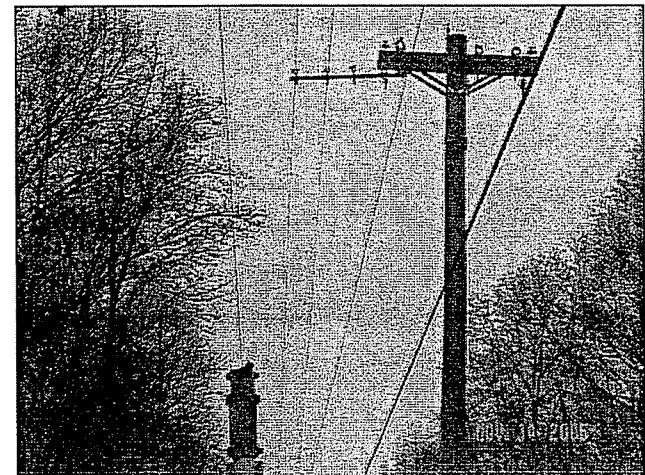
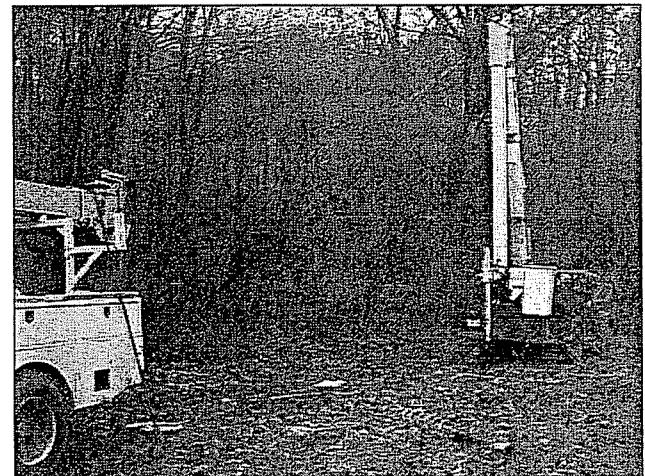
Electric Utility Personal Injury Accident Report

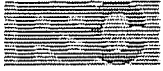




Kentucky Public Service Commission

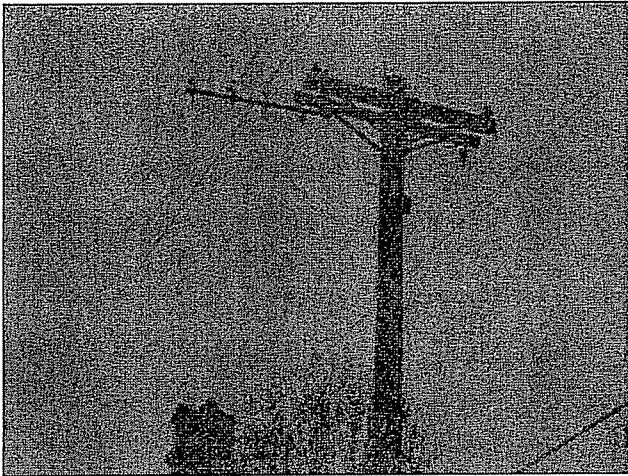
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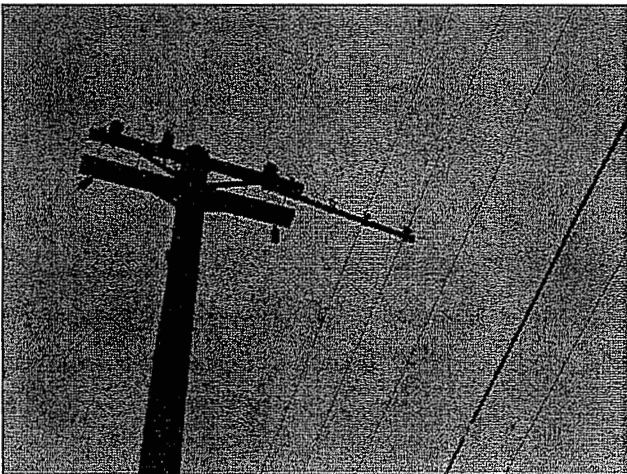
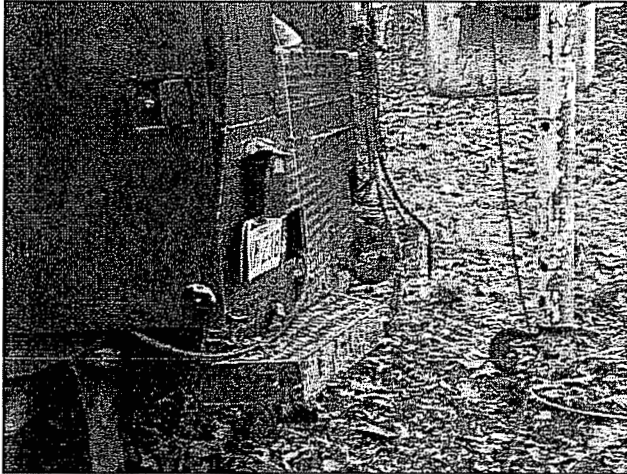
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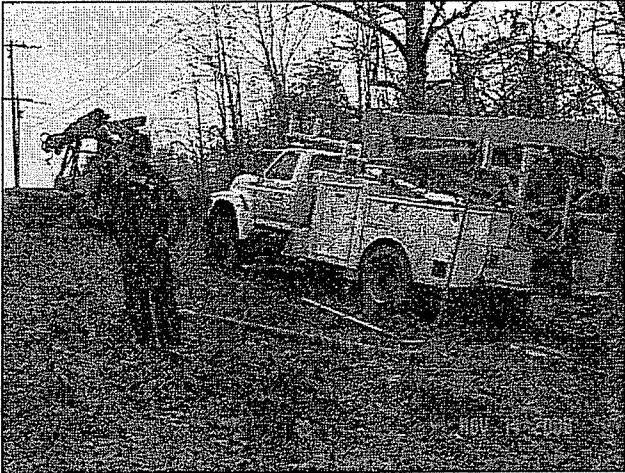
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Kentucky Public Service Commission

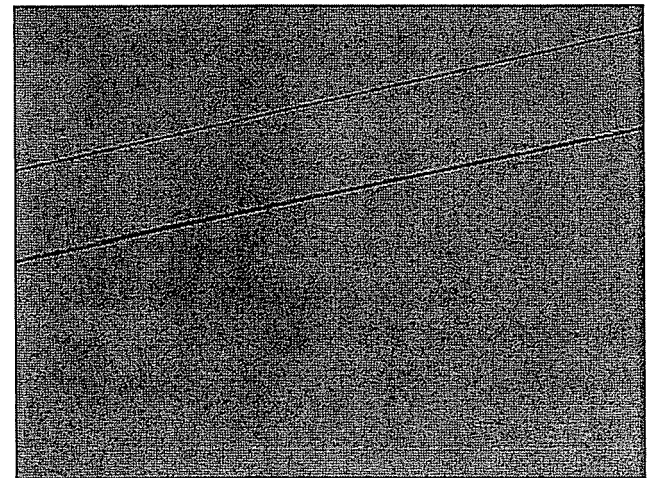
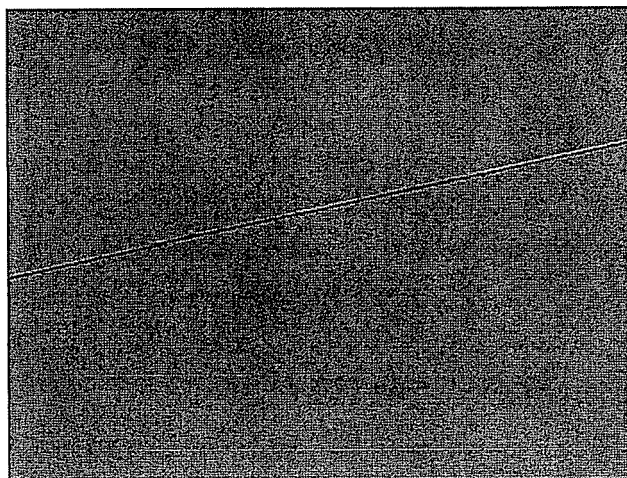
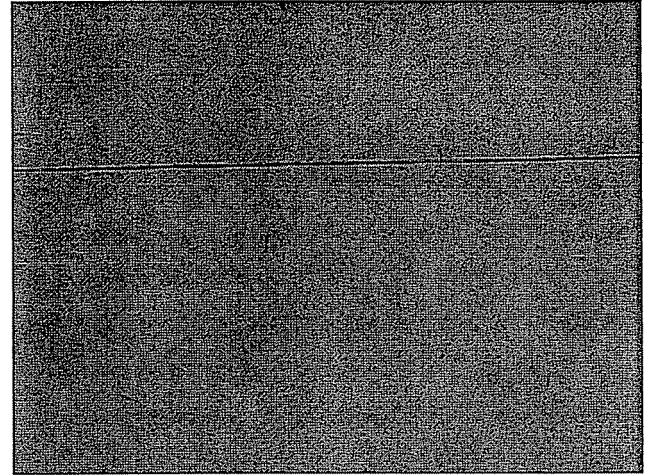
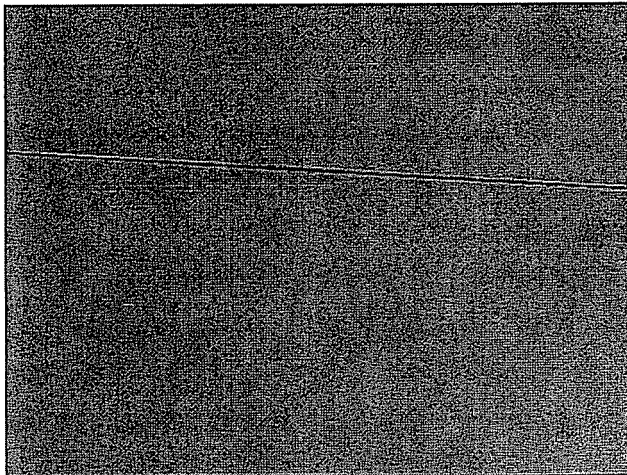
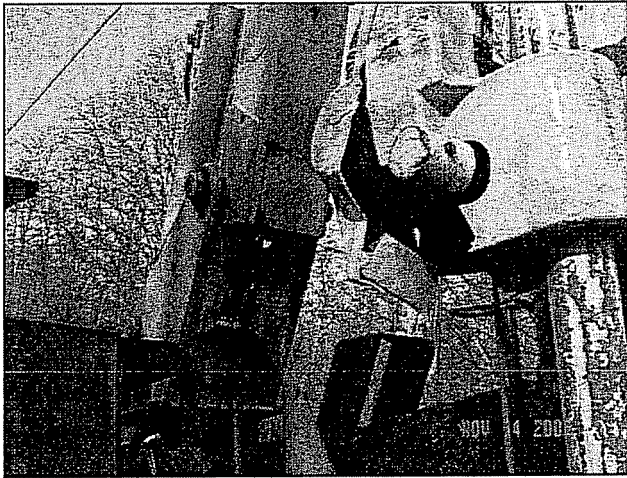
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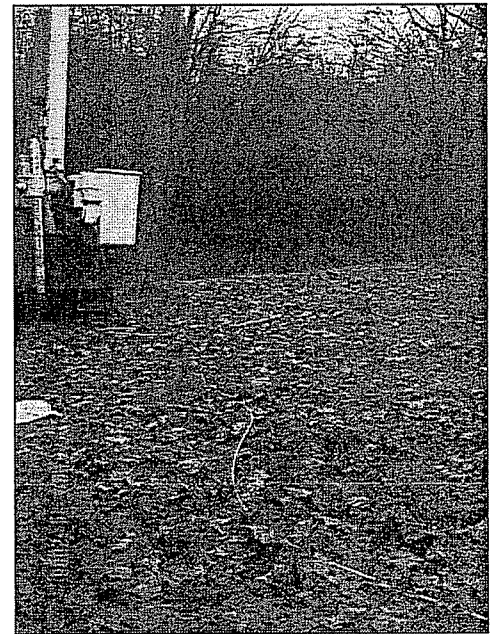
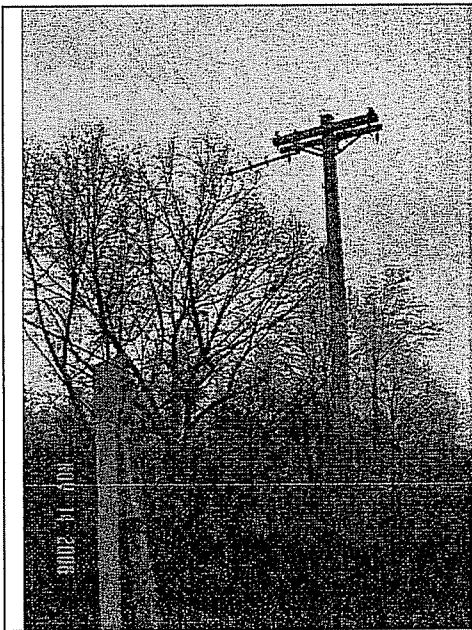
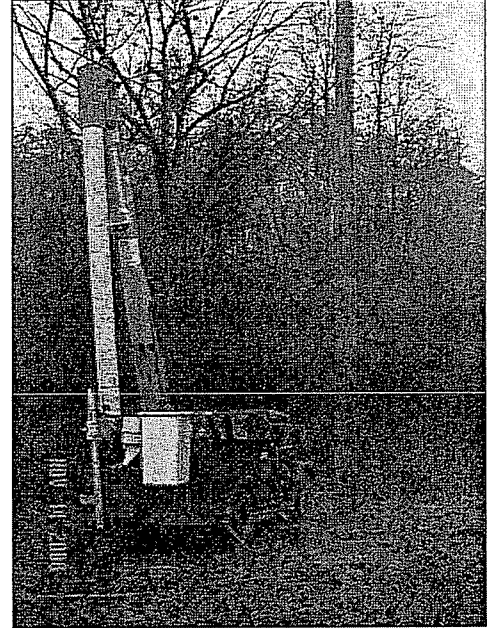
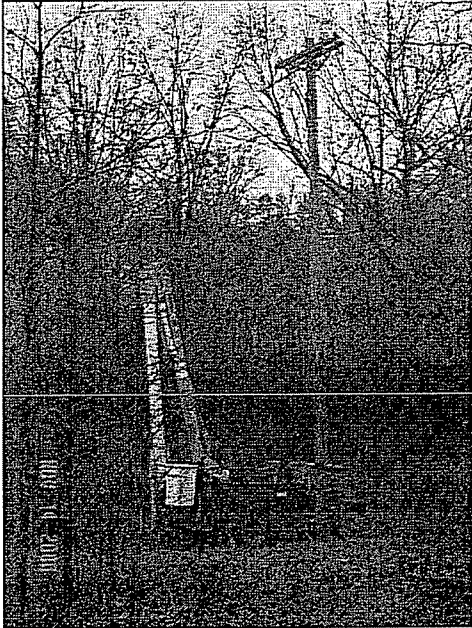
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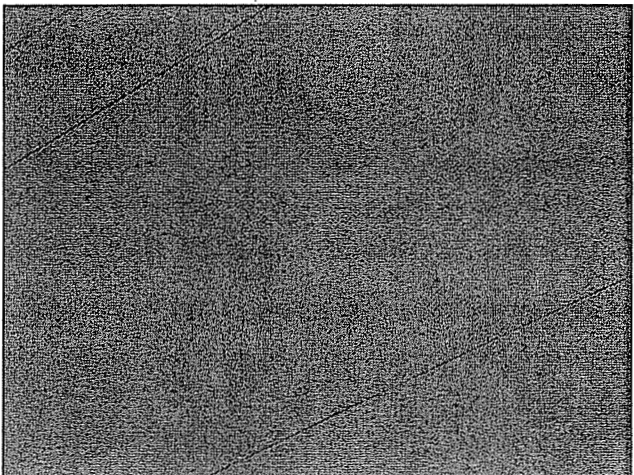
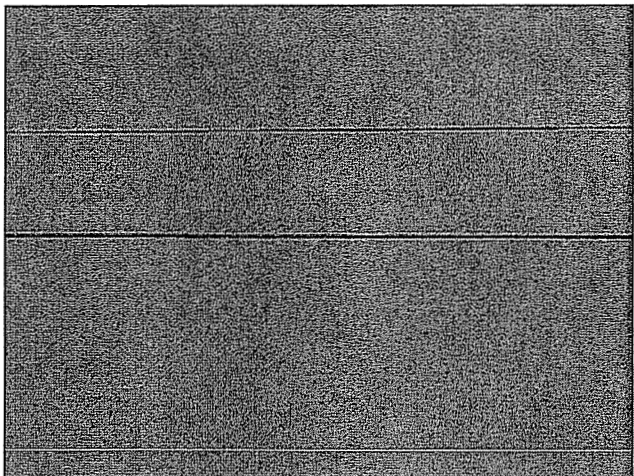
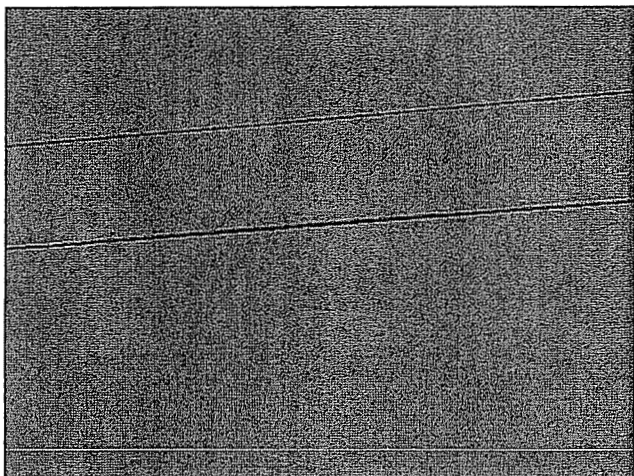
Electric Utility Personal Injury Accident Report





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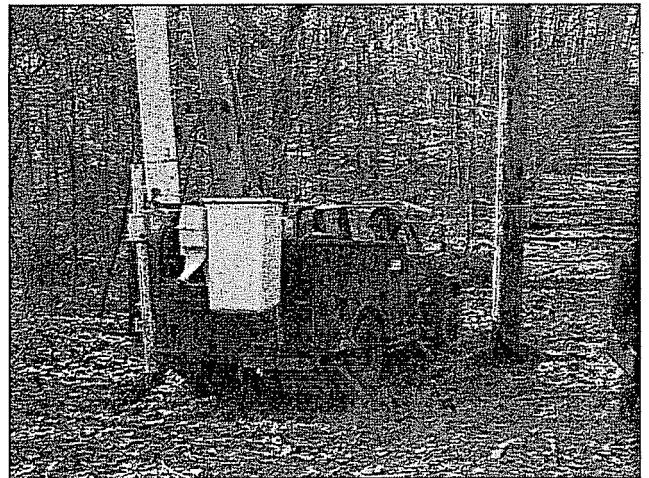
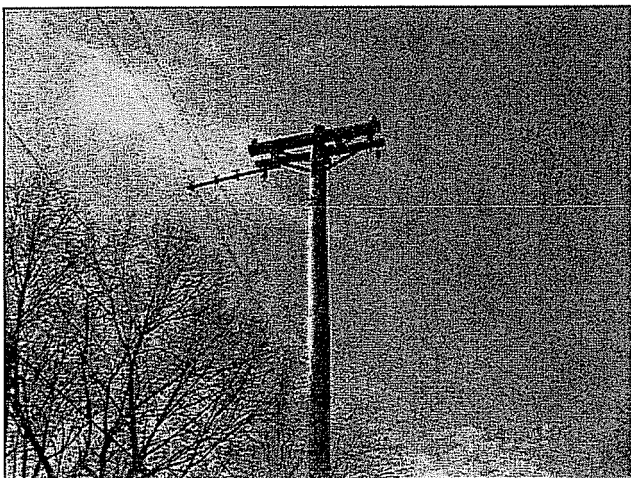
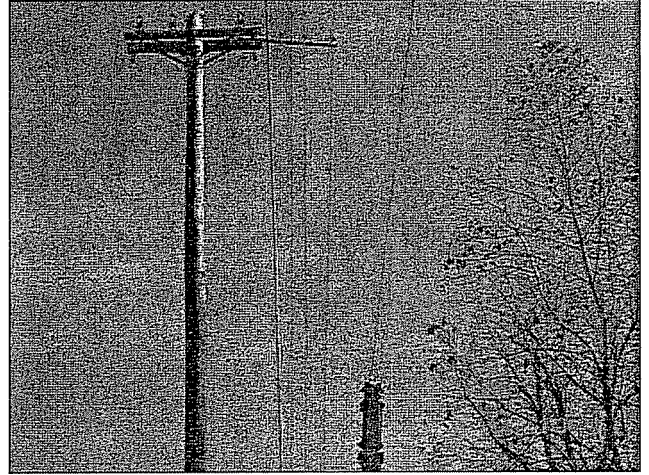
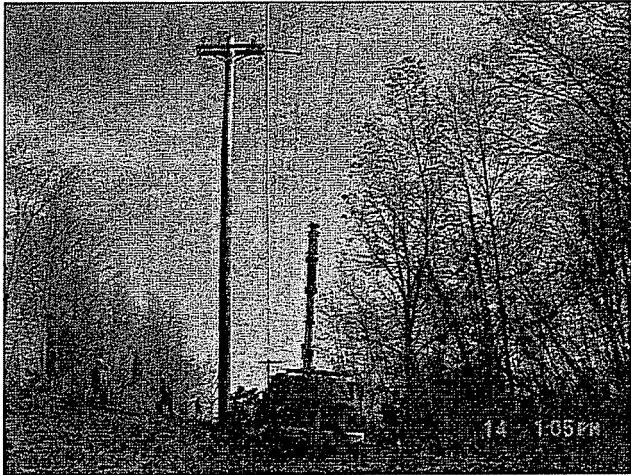
Attachment C

PSC Photographs of Accident Site



Kentucky Public Service Commission

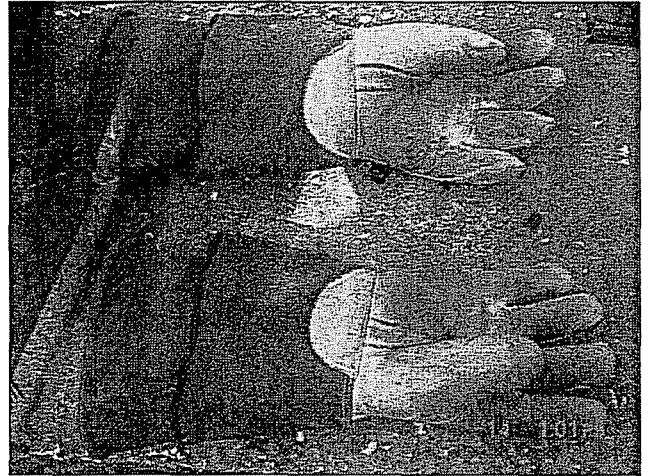
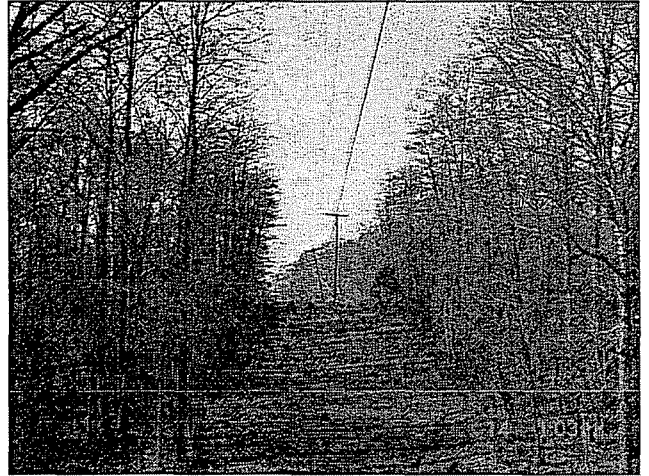
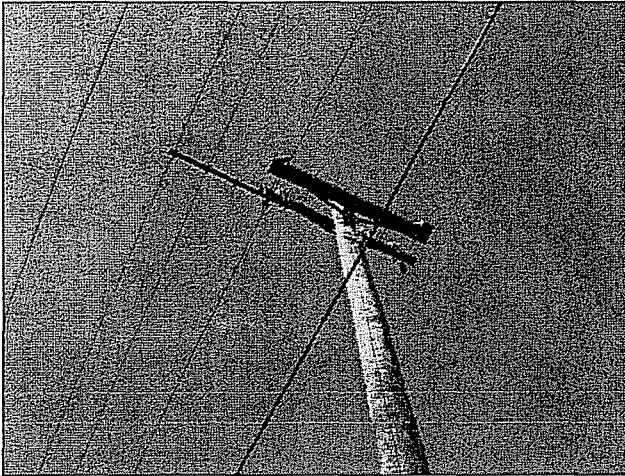
Electric Utility Personal Injury Accident Report





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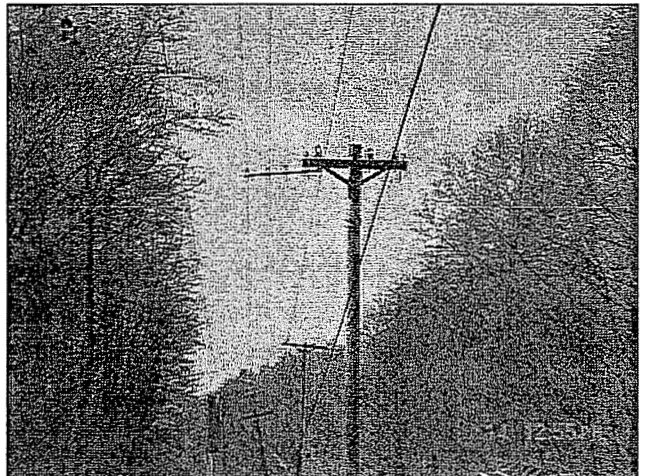
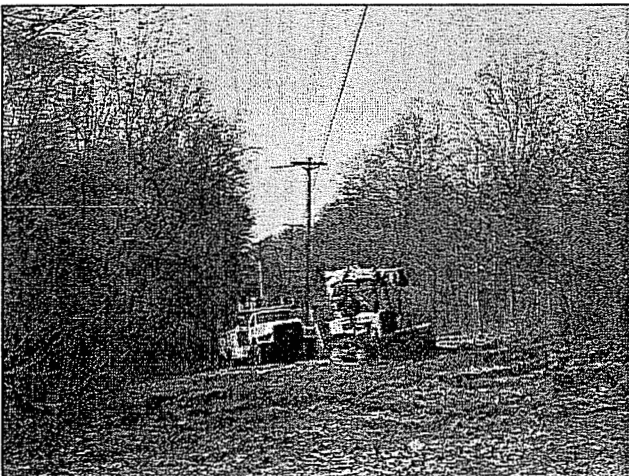
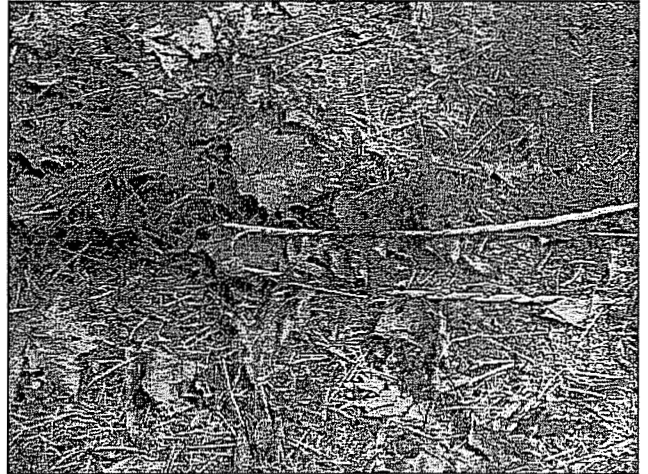
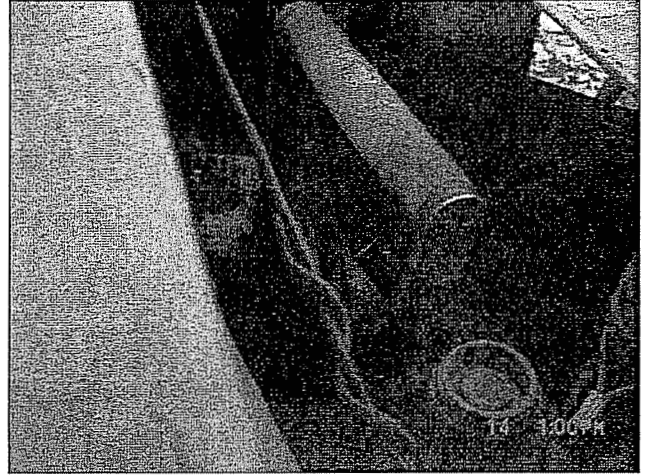
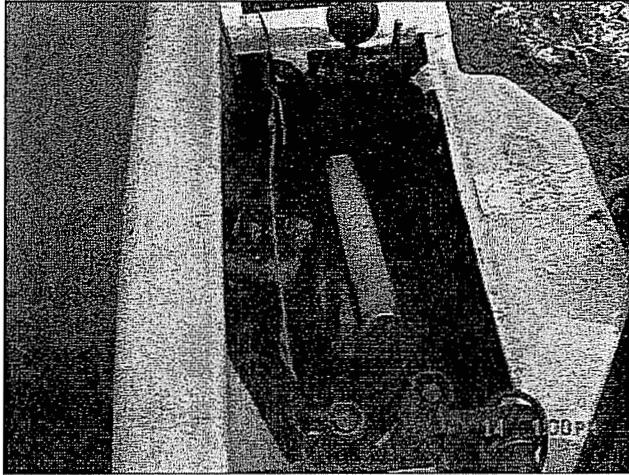
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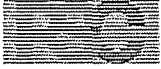




Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report





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Electric Utility Personal Injury Accident Report

Attachment D

Copy of Cited Violation(s)

Section 41.
Supply and Communications Systems—
Rules for Employers

410. General Requirements

A. General

1. The employer shall inform each employee working on or about communications equipment or electric supply equipment and the associated lines, of the safety rules governing the employee's conduct while so engaged.

When deemed necessary, the employer shall provide a copy of such rules.

2. The employer shall provide training to all employees who work in the vicinity of exposed energized facilities. The training shall include applicable work rules required by this Part and other mandatory referenced standards or rules. The employer shall ensure that each employee has demonstrated proficiency in required tasks. The employer shall provide retraining for any employee who, as a result of routine observance of work practices, is not following work rules.
3. Employers shall utilize positive procedures to secure compliance with these rules. Cases may arise, however, where the strict enforcement of some particular rule could seriously impede the safe progress of the work at hand; in such cases the employee in charge of the work to be done should make such temporary modification of the rules as will accomplish the work without increasing the hazard.
4. If a difference of opinion arises with respect to the application of these rules, the decision of the employer or the employer's authorized agent shall be final. This decision shall not result in any employee performing work in a manner that is unduly hazardous to the employee or to the employee's fellow workers.

B. Emergency Procedures and First Aid Rules

1. Employees shall be informed of procedures to be followed in case of emergencies and rules for first aid, including approved methods of resuscitation. Copies of such procedures and rules should be kept in conspicuous locations in vehicles and places where the number of employees and the nature of the work warrants.
2. Employees working on communications or electric supply equipment or lines shall be regularly instructed in methods of first aid and emergency procedures, if their duties warrant such training.

C. Responsibility

1. A designated person shall be in charge of the operation of the equipment and lines and shall be responsible for their safe operation.
2. If more than one person is engaged in work on or about the same equipment or line, one person shall be designated as in charge of the work to be performed. Where there are separate work locations, one person may be designated at each location.

411. Protective Methods and Devices

A. Methods

1. Access to rotating or energized equipment shall be restricted to authorized personnel.
2. Diagrams, showing plainly the arrangement and location of the electric supply equipment and lines, shall be maintained on file and shall be readily available to authorized personnel for that portion of the system for which they are responsible.
3. Employees shall be instructed as to the character of the equipment or lines and methods to be used before any work is undertaken thereon.
4. Employees should be instructed to take additional precautions to ensure their safety when conditions create unusual hazards.

Section 42. General Rules for Employees

420. Personal General Precautions

A. Rules and Emergency Methods

1. Employees shall carefully read and study the safety rules, and may be called upon at any time to show their knowledge of the rules.
2. Employees shall familiarize themselves with approved methods of first aid, rescue techniques, and fire extinguishment.

B. Qualifications of Employees

1. Employees whose duties require working on or in the vicinity of energized equipment or lines shall perform only those tasks for which they are trained, equipped, authorized, and so directed. Inexperienced employees shall: (a) work under the direction of an experienced and qualified person at the site, and (b) perform only directed tasks.
2. If an employee is in doubt as to the safe performance of any assigned work, the employee shall request instructions from the employee's supervisor or person in charge.
3. Employees who do not normally work on or in the vicinity of electric supply lines and equipment but whose work brings them into these areas for certain tasks shall proceed with this work only when authorized by a qualified person.

C. Safeguarding Oneself and Others

1. Employees shall heed safety signs and signals and warn others who are in danger or in the vicinity of energized equipment or lines.
2. Employees shall report promptly to the proper authority any of the following:
 - a. Line or equipment defects such as abnormally sagging wires, broken insulators, broken poles, or lamp supports
 - b. Accidentally energized objects such as conduits, light fixtures, or guys
 - c. Other defects that may cause a dangerous condition
3. Employees whose duties do not require them to approach or handle electric equipment and lines shall keep away from such equipment or lines and should avoid working in areas where objects and materials may be dropped by persons working overhead.
4. Employees who work on or in the vicinity of energized lines shall consider all of the effects of their actions, taking into account their own safety as well as the safety of other employees on the job site, or on some other part of the affected electric system, the property of others, and the public in general.
5. No employee shall approach or bring any conductive object, without a suitable insulating handle, closer to any exposed energized part than allowed by Rule 431 (communication) or Rule 441 (supply), as applicable.
6. Employees should exercise care when extending metal ropes, tapes, or wires parallel to and in the proximity of energized high-voltage lines because of induced voltages. When it is necessary to measure clearances from energized objects, only devices approved for the purpose shall be used.

D. Energized or Unknown Conditions

Employees shall consider electric supply equipment and lines to be energized, unless they are positively known to be de-energized. Before starting work, employees shall perform preliminary inspections or tests to determine existing conditions. Operating voltages of equipment and lines should be known before working on or in the vicinity of energized parts.

E. Ungrounded Metal Parts

Employees shall consider all ungrounded metal parts of equipment or devices such as transformer cases and circuit breaker housings, to be energized at the highest voltage to which they are exposed, unless these parts are known by test to be free from such voltage.

F. Arcing Conditions

Employees should keep all parts of their bodies as far away as practical from switches, brushes, commutators, circuit breakers, or other parts at which arcing may occur during operation or handling.

G. Liquid-Cell Batteries

1. Employees shall ascertain that battery areas are adequately ventilated before performing work.
2. Employees should avoid smoking, using open flames, or using tools that may produce sparks in the vicinity of liquid-cell batteries.
3. Employees shall use eye and skin protection when handling an electrolyte.
4. Employees shall not handle energized parts of batteries unless necessary precautions are taken to avoid short circuits and electrical shocks.

H. Tools and Protective Equipment

Employees shall use the personal protective equipment, the protective devices, and the special tools provided for their work. Before starting work, these devices and tools shall be carefully inspected to make sure that they are in good condition.

I. Clothing

1. Employees shall wear clothing suitable for the assigned task and the work environment. See Rule 410A2.
2. When working in the vicinity of energized lines or equipment, employees should avoid wearing exposed metal articles.

J. Ladders and Supports

1. Employees shall not support themselves, or any material or equipment, on any portion of a tree, pole structure, scaffold, ladder, walkway, or other elevated structure or aerial device, etc., without it first being determined, to the extent practical, that such support is adequately strong, in good condition, and properly secured in place.
2. Portable wood ladders intended for general use shall not be painted except with a clear nonconductive coating, nor shall they be longitudinally reinforced with metal.
3. Portable metal ladders intended for general use shall not be used when working on or in the vicinity of energized parts.
4. If portable ladders are made partially or entirely conductive for specialized work, necessary precautions shall be taken to ensure that their use will be restricted to the work for which they are intended.

K. Fall Protection

1. At elevated locations above 3 m (10 ft), climbers shall be attached to equipment or structures by a fall protection system while at the worksite, at a rest site, in aerial devices, helicopters, cable carts, and a boatswain's chair.
2. Qualified climbers may be permitted to be unattached to equipment or structures while climbing, transferring, or transitioning across obstacles on structures. Unqualified climbers shall be attached while performing these activities.
3. Fall protection equipment shall be inspected before use by the employee to ensure that the equipment is in safe working condition.
4. Fall arrest equipment shall be attached to a suitable anchorage.
5. The employee shall determine that all components of the fall protection system are properly engaged and that the employee is secure in the line-worker's body belt, harness, or any other fall protection system.

NOTE: Climbers need to be aware of accidental disengagement of fall protection components. Accidental disengagement is the sudden, unexpected release of a positioning strap snaphook from the D-ring of the line-worker's body belt without the user directly manipulating the latch of the snaphook. In general, there are two primary reasons for this occurrence.

P. Street and Area Lighting

1. The lowering rope or chain, its supports, and fastenings shall be examined periodically.
2. A suitable device shall be provided by which each lamp on series-lighting circuits of more than 300 V may be safely disconnected from the circuit before the lamp is handled.

EXCEPTION: This rule does not apply where the lamps are always worked on from suitable insulated platforms or aerial lift devices, or handled with suitable insulated tools, and treated as under full voltage of the circuit concerned.

421. General Operating Routines

A. Duties of a First-Level Supervisor or Person in Charge

This individual shall:

1. Adopt such precautions as are within the individual's authority to prevent accidents.
2. See that the safety rules and operating procedures are observed by the employees under the direction of this individual.
3. Make all the necessary records and reports, as required.
4. Prevent unauthorized persons from approaching places where work is being done, as far as practical.
5. Prohibit the use of tools or devices unsuited to the work at hand or that have not been tested or inspected as required.

B. Area Protection

1. Areas Accessible to Vehicular and Pedestrian Traffic

- a. Before engaging in work that may endanger the public, safety signs or traffic control devices, or both, shall be placed conspicuously to alert approaching traffic. Where further protection is needed, suitable barrier guards shall be erected. Where the nature of work and traffic requires it, a person shall be stationed to warn traffic while the hazard exists.
- b. When openings or obstructions in the street, sidewalk, walkways, or on private property are being worked on or left unattended during the day, danger signals, such as warning signs and flags, shall be effectively displayed. Under these same conditions at night, warning lights shall be prominently displayed and excavations shall be enclosed with protective barricades.

2. Areas Accessible to Employees Only

- a. If the work exposes energized or moving parts that are normally protected, safety signs shall be displayed. Suitable barricades shall be erected to restrict other personnel from entering the area.
- b. When working in one section where there is a multiplicity of such sections, such as one panel of a switchboard, one compartment of several, or one portion of a substation, employees shall mark the work area conspicuously and place barriers to prevent accidental contact with energized parts in that section or adjacent sections.

3. Locations With Crossed or Fallen Wires

An employee, finding crossed or fallen wires that are creating, or may create, a hazard, shall remain on guard or adopt other adequate means to prevent accidents. The proper authority shall be notified. If the employee is qualified, and can observe the rules for safely handling energized parts by the use of insulating equipment, this employee may correct the condition.

C. Escort

Persons accompanying nonqualified employees or visitors or in the vicinity of electric equipment or lines shall be qualified to safeguard the people in their care, and see that the safety rules are observed.

Section 44. Additional Rules for Supply Employees

440. General

Supply employees shall observe the following rules in addition to the rules contained in Section 42.

441. Energized Conductors or Parts

Employees shall not approach, or knowingly permit others to approach, any exposed ungrounded part normally energized except as permitted by this rule.

A. Minimum Approach Distance to Live Parts

1. General

Employees shall not approach or bring any conductive object within the distances to exposed parts that operate at the voltages listed in Table 441-1 or Table 441-4 unless one of the following is met:

- a. The line or part is de-energized and grounded per Rule 444D.
- b. The employee is insulated from the energized line or part. Electrical protective equipment insulated for the voltage involved, such as tools, gloves, rubber gloves, or rubber gloves with sleeves, shall be considered effective insulation for the employee from the energized part being worked on.
- c. The energized line or part is insulated from the employee and from any other line or part at a different potential.

2. Precautions for Approach— Voltages from 51 V to 300 V

Employees shall not contact exposed energized parts operating at 51 V to 300 V, unless the provisions of Rule 441A1 are met.

3. Precautions for Approach— Voltages from 301 V to 72.5 kV

At voltages from 301 V to 72.5 kV, employees shall be protected from phase-to-phase and phase-to-ground differences in electric potential.

- a. When exposed grounded lines, conductors, or parts are in the work area, they shall be guarded or insulated.
- b. When the Rubber Glove Work Method is employed, rubber insulating gloves, insulated for the maximum use voltage as listed in Table 441-6, shall be worn whenever employees are in the vicinity of energized conductors or parts, supplemented by one of the following two protective methods:

- (1) The employee shall wear rubber insulating sleeves, insulated for the maximum use voltage as listed in Table 441-6, in addition to the rubber insulating gloves.

EXCEPTION: When work is performed on electric supply equipment energized at 750 V or less, rubber sleeves are not required if only the live parts being worked on are exposed.

- (2) All exposed energized lines or parts, other than those temporarily exposed to perform work and maintained under positive control, located within maximum reach of the employee's work position, shall be covered with insulating protective equipment.

EXCEPTION: When work is being performed on parts energized between 300 V and 750 V within enclosed spaces, (e.g., control panels and relay cabinets), insulating or guarding of all exposed grounded lines, conductors, or parts in the work area is not required provided that employees use insulated tools and/or gloves and that exposed grounded lines, conductors, or parts are covered to the extent feasible.

- c. When the Rubber Glove Work Method is employed at voltages above 15 kV phase-to-phase, supplementary insulation (e.g., insulated aerial device or structure-mounted insulating work platform), tested for the voltage involved shall be used to support the worker.
- d. Cover-up rated for the voltage involved, when used, shall be applied to the exposed facilities

as the employee first approaches the facilities from any direction, be that from the structure or from an aerial device, and shall be removed in the reverse order. This protective cover-up shall extend beyond the reach of the employee's anticipated work position or extended reach distance.

4. Transient Overvoltage Control Above 72.5 kV

- a. For 121 kV to 362 kV single break per pole switching devices with three phase reclosing into trapped charges the maximum per-unit values given in the table (3 per unit for 121 to 362 kV) may increase significantly. Minimum approach distances for these devices shall be determined by a transient overvoltage study.

NOTE: These overvoltages will not exceed the values of Table 441-1 if reclosing is blocked.

- b. For voltages above 72.5 kV, the minimum approach distance may be reduced if the maximum anticipated transient overvoltage is known for the work site. Engineering analysis is required when transient overvoltage control techniques are employed. When *preinsertion resistors* are employed, they shall be operational. The minimum approach distances derived from Tables 441-2, 441-3, and 441-4 may be used. When a *reduced clearance distance* from Tables 441-2, 441-3, and 441-4 is used for a specific per-unit transient overvoltage, the maximum transient overvoltage shall be controlled at the work site by one of the following methods:
 1. The operation of a circuit breaker or other switching device shall be modified, including blocking reclosing.
 2. The overvoltage itself shall be forcibly held to an acceptable level by the installation of temporary transient voltage protective devices such as surge arresters or temporary protective gaps.
 3. The operation of the system shall be changed to restrict potential overvoltages resulting from the effect of activity on the system (e.g., capacitor switching, tap changing, cable de-energization, etc.).

5. Altitude Correction

The distances in Tables 441-1, 441-2, 441-3, and 441-4 shall be used at elevations below 900 m (3000 ft). Above that altitude, the minimum approach distance shall be increased by:

- a. Multiplying the electrical component of the minimum approach distance by the applicable altitude correction factors of Table 441-5, and
- b. Adding the result to the values for inadvertent movement required by Rule 441A6a(3).

NOTE: The electrical component of clearance included in Tables 441-1, 441-2, 441-3, and 441-4 is the table value less the value for inadvertent movement for that voltage shown in Rule 441A6a(3).

6. Calculation of Approach Distances

- a. Minimum approach distances shown in Tables 441-2, 441-3, and 441-4 are calculated in feet to two decimal places. The second decimal place is rounded up if the third decimal place is other than zero. The metric values shown in these tables are derived directly from rod gap data originally recorded in metric measurements. For this reason, the english-unit tables do not exactly convert into the values shown in the metric tables. Because the original rod gap data for voltages from 1.1 to 72 kV is measured in metric units, the values in Table 441-1 are derived from metric and converted to feet and inches. The following processes are used:
 1. When converting to feet and inches, the decimal part of a foot is converted to inches and rounded up if the first decimal place is other than zero.
 2. When converting from feet to metric, the feet dimension from Rule 441A5a above is converted to meters. The second decimal place shall be rounded up if the third decimal place is other than zero.



on energized equipment or circuits, a tag shall be placed at the reclosing device location.

EXCEPTION: If the automatic reclosing feature of a reclosing device is disabled by a Supervisory Control and Data Acquisition System (SCADA), the system shall provide for the following:

- a. At the SCADA Operating Point
 - (1) A signal is received by the SCADA operator confirming that the disabling operation has occurred at the reclosing device location, and
 - (2) A readily visible tag or electronic display is used to inform any potential SCADA operator that a disabling operation has been initiated, and
 - (3) The tag or electronic display is removed before action is taken to reenable the automatic reclosing feature.
- b. At the Reclosing Device Location
 - (1) The reclosing feature is disabled in such a manner as to prevent manual override of the normal control by any potential on-site operator, or
 - (2) A signal, flag, or other display is used in such a manner as to alert any potential on-site operator that the reclosing feature has been disabled.
3. The required tags shall be placed to clearly identify the equipment or circuits on which work is being performed.

F. Restoration of Service After Automatic Trip

1. When circuits or equipment upon which tags have been placed open automatically, the circuits or equipment shall be left open until reclosing has been authorized.
2. When circuits open automatically, local operating rules shall determine in what manner and how many times they may be closed with safety.

G. Repeating Oral Messages

Each employee receiving an oral message concerning the switching of lines and equipment shall immediately repeat it back to the sender and obtain the identity of the sender. Each employee sending such an oral message shall require it to be repeated back by the receiver and secure the latter's identity.

443. Work on Energized Lines and Equipment

A. General Requirements

1. When working on energized lines and equipment, one of the following safeguards shall be applied:
 - a. Insulate employee from energized parts
 - b. Isolate or insulate the employee from ground and grounded structures, and potentials other than the one being worked on.
2. Employees shall not place dependence for their safety on the covering (nonrated insulation) of wires. All precautions (see Section 44) for working on energized parts shall be observed.
3. All employees working on or in the vicinity of lines or equipment exposed to voltages higher than those guarded against by the safety protective equipment provided shall assure themselves that the equipment or lines on which they are working are free from dangerous leakage or induction, or have been effectively grounded.
4. *Cutting Into Insulating Coverings of Energized Conductors*
 - a. A supply cable to be worked on as de-energized that cannot be positively identified or determined to be de-energized shall be pierced or severed at the work location with a tool designed for the purpose.
 - b. Before cutting into an energized supply cable, the operating voltage shall be determined and appropriate precautions taken for handling conductors at that voltage.