Ernie Fletcher Governor

LaJuana S. Wilcher, Secretary Environmental and Public Protection Cabinet

Christopher L. Lilly Commissioner Department of Public Protection

Kent Blake
Director- State Regulation and Rates
Louisville Gas and Electric Company
220 W. Main Street
P. O. Box 32010
Louisville, KY 40232-2010



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

September 29, 2006

Teresa J. Hill

Vice Chairman

Chairman

Mark David Goss

RE: Case No. 2006-00352

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

Sincerely,

Beth O'Donnell Executive Director

BOD/sh Enclosure



# COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

LOUISVILLE GAS AND ELECTRIC COMPANY	)	CASE NO. 2006-00352
ALLEGED FAILURE TO COMPLY WITH	)	
KRS 278.042 AND COMMISSION	)	
REGULATION 807 KAR 5:006, SECTION 24	)	

### ORDER

Louisville Gas and Electric Company ("LG&E") is a Kentucky corporation engaged in the generation, transmission, and distribution of electricity to the public for compensation for lights, heat, power, and other uses and is a utility subject to Commission jurisdiction. KRS 278.010.

Commission Staff submitted to the Commission an Incident Investigation Report ("Incident Report") dated June 22, 2006, attached hereto as Appendix A, which alleges that on June 14, 2006 two LG&E employees were trying to locate a fault on an underground secondary conductor at 8 Brownsboro Hill Road, Louisville, Kentucky. After locating the suspected fault, one of the LG&E employees began pulling on what he thought was the neutral conductor, but it was actually a secondary supply conductor energized with 120 volts for testing purposes. His hand then contacted an uninsulated splice and he received a secondary shock and was hospitalized.

KRS 278.042 requires that an electric utility construct and maintain its plant and facilities in accordance with the most recent edition of the National Electrical Safety

Code, which is the 2002 Edition ("NESC"). The Staff's Incident Report notes one probable violation of KRS 278.042, which is NESC Section 42, Rule 420.D, by the failure of the LG&E employees to: (a) consider electric supply equipment and lines to be energized, unless they are positively known to be de-energized; and (b) perform preliminary inspections or tests to determine existing conditions. In addition, KRS 278.280(2) directs the Commission to prescribe rules and regulations for the performance of service by utilities and, pursuant thereto, the Commission promulgated 807 KAR 5:006, Section 24, which requires a utility to adopt and execute a safety program, including the establishment of a safety manual with written guidelines for safe working practices and procedures to be followed by utility employees. The Staff's Incident Report also notes one probable violation of LG&E's Health and Safety Manual ("Safety Manual"), Section E 5.2, which requires employees working on cables or apparatus carrying less than 600 volts to take extra precautions in using necessary rubber protective equipment, in observing adequate clearances, and by using approved insulated tools in order to prevent short circuits.

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

- LG&E shall submit to the Commission, within 20 days of the date of this
   Order, a written response to the allegations contained in the Incident Report.
- 2. LG&E shall appear on November 15, 2006 at 9:30 a.m., Eastern Standard 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 Incident Report, specifically one alleged violation of KRS 278.042, which is NESC Rule 420.D, and one alleged violation of 807 KAR 5:006, Section 24, which is LG&E's

Safety Manual Section E 5.2; and to show cause, if any it can, why it should not be subject to the penalties of KRS 278.990 for the two probable violations of the aforementioned statutes.

- 3. The official record of this proceeding shall be by video, unless otherwise requested by LG&E.
- 4. The Incident Report dated June 22, 2006 is hereby made a part of the record in this case.
- 5. Any request by LG&E for an informal conference with the 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 29th day of September, 2006.

By the Commission

ATTEST:

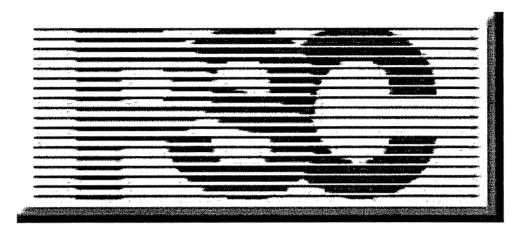
Executive Director

### APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2006-00352 DATED September 29, 2006.

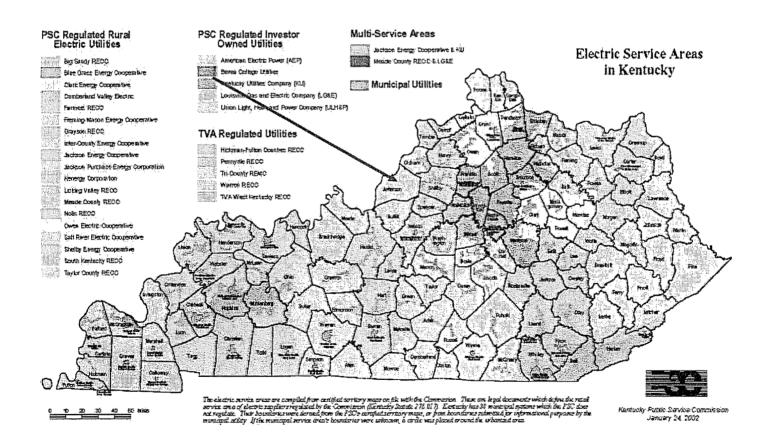


Electric Utility Personal Injury Accident Report



### **INCIDENT INVESTIGATION** ~ Staff Report

Incident Location ~ Jefferson County, Kentucky
Report Date ~ June 22, 2006
Incident Date ~ June 14, 2006
PSC Investigator ~ Jeff Moore
Utility ~ Louisville Gas and Electric
Victim ~ Rick Carey





Electric Utility Personal Injury Accident Report

Utility:	Louisville Gas and Electric / LG&E			
Reported By:	Ken Sheridan, Safety Director			
Accident Occurred	June 14, 2006 Approximately: 6:00 PM			
Utility Notified:	June 14, 2006 Approximately: 6:30 PM			
PSC Notified:	June 14, 2006	Approximately: 6:50 PM		
PSC Investigated:	June 15, 2006	Approximately: 10:30 AM		
Report Received:	June 21, 2006			
Accident Location:	8 Brownsboro Hill Road			
Accident Description:	On June 15, 2006, I arrived at the address above. According to the utility employees, Mr. Carey and Mr. Ackerman were working at 8 Brownsboro Hill Road. They had received reports of the customer's lights flickering. Mr. Carey and Mr. Ackerman were trying to locate a fault on an underground secondary conductor. After locating the fault, the two employees uncovered what they thought was the neutral and two supply conductors. Thinking they had located the neutral, they began work on this conductor and found an old splice. The old conductor had been repaired with a splice, and at one end of the splice the conductor had failed due to corrosion. After removing the old splice and making a temporary jumper, the employees retested the conductor and found they still had an open neutral. At this time the crew noticed that the conductor in the ditch and the conductor in the splice box were two different sizes. This meant that the conductor had another splice somewhere. Mr. Carey returned to the ditch and began to pull on what they thought was the neutral conductor. While pulling on the conductor his hands slipped, and the split bolt connector came in contact with his right wrist. The two employees thought he was pulling on the neutral conductor, when actually he was pulling on a secondary supply conductor. The conductor had to be energized with 120 volts while testing. Mr. Carey received a secondary shock. EMS was called to the accident site and transported Mr. Carey to University Hospital. He was released from the hospital the next day.			



Electric Utility Personal Injury Accident Report

	Na	me	Address	Employer		
Victim(s):	Rick Carey					
	Fatality	Age	Unknown	LG&E		
	No	Unknown				
	I n j u Secondary Shock 120 volts					
	Na	me	Address	Employer		
Witness(es):	Ron Ackerman		Unknown	LG&E		
	Name		Position	Employer		
Information From:	Keith McBride		Fire & Safety Investigator	LG&E		
	Ken S	heridan	Safety Director	LG&E		
KRS 278.042 Service Adequacy and Safety Standards						
Probable Violations	NESC Section 42: General Rules for Employees     (420 D) Energized or Unknown Conditions					
	807 KAR 5:006 Section 24, Safety Program					
	LG&E Health & Safety Manual:     E.5 Work on Energized Equipment-URD (E.5.2)					



Electric Utility Personal Injury Accident Report

Temp & Weather:	85° Calm Sunny				
Investigated By:	Name Co			Company	
mvesagated by.	Jeff Moore	PSC Engineering Staff			
Signed:	Juffrey & More			7-13.06	
Reviewed By:	Name	Company			
	John Shupp	Mgr., PSC Engineering Staff			
Signed:	Joh V. Stope		Date	7/14/06	
				· · · · · · · · · · · · · · · · · · ·	

Attachments:

A. Utility Accident Report
B. Utility Photographs of Accident Site
C. PSC Photographs of Accident Site

D. Copy of Cited Violation



Electric Utility Personal Injury Accident Report

Attachment A
Utility Accident Report



Mr. John Shupp
Manager Electrical Branch
Division of Engineering
Kentucky Public Service Commission
211 Sower Blvd.
P.O. Box 615
Frankfort, KY 40602

June 21, 2006

Re: Louisville Gas and Electric Company Employee Shock/Admitted to Hospital received

JUN 2 1 2006

PUBLIC SERVICE COMMISSION Louisville Gas and Electric Company Legal Department 220 W. Main St. Louisville, Kentucky 40202 www.eon-us.com



Dear Mr. Shupp:

I am forwarding the attached "Investigation Report" prepared by Keith McBride regarding the incident in the above mentioned Louisville Gas & Electric service territory on June 14, 2006. Louisville Gas & Electric is providing this report to the KPSC in accordance with the applicable seven-day reporting requirement.

If you need additional information concerning this incident, please contact me at (502) 627-3712 so I can direct your request to the appropriate person.

Sincerely.

Jim Dimas

Senior Corporate Attorney

Attachment

C: Keith McBride

### KPSC External / INVESTIGATION REPORT

Louisville Gas and Electric Company

Employee Received Shock/Admitted to Hospital 06-E-021

Type of Report Number

Keith McBride June 14, 2006

Investigator Date of Incident

Location: #8 Brownsboro Hill Road Louisville, Kentucky 40207

### Outage / Notification

On June 14, 2006 at 3:31 p.m., I, Keith McBride, was notified that there was an LG&E crew that had called for EMS to respond to a job site at #8 Brownsboro Hill Road where there was an employee reported to be in distress. I arrived on scene at 3:38 p.m. St. Matthews Fire and Rescue was already on scene and the Firefighter/EMT's were working on the employee. Louisville EMS arrived a short time later and transported the employee to University Hospital. The incident investigation later found that the employee had received a secondary shock. The employee was admitted to the hospital for overnight observation. Ken Sheridan, Manager of Safety and Technical Training, notified the Kentucky Public Service Commission.

### Investigation

On June 14, 2006 at approximately 11:30 a.m., Ron Ackerman and Rick Carey, both Line Technician A's, were investigating a flickering light call at #8 Brownsboro Hill Road. The two man crew pulled the meter at the base and installed a neutral tester. A neutral tester is a device that, by using the secondary voltage from the transformer, can be operated to produce a slight secondary load. This load resembles electrical usage by the customer. To do this, the service needs to be energized. Once the load produced by the neutral tester is placed on the system, voltage shift / drop is noted. A large shift or drop in voltage is an indicator that the neutral is open. The open neutral can cause flickering lights and/or a high or low voltage condition.

This particular test at the meter base indicated that there was an open neutral. The crew then went to the splice box and disconnected the service from the system. The secondary system dead-ended at this splice box. Once the service was disconnected, a second test was performed on the secondary system itself. Again,

using the 120 volt energized secondary, a load was placed on the system. This test also showed that there was an open neutral. Now knowing that there was a bad place on the neutral, the crew needed to dig up the service to repair the cable.

To locate the bad spot on the cable, the crew used a tool called a Dina-Tel. This is a cable locating device that would indicate where the possible open was. Once the area of the possible open was located, the crew dug up the secondary service. Three cables, all similar in size, were uncovered, and it was assumed that these three cables were the secondary cables. One of the cables had a splice in it, which was thought to be bad. The other two cables appeared to be in good shape and had no splices in them. Based on the tester indicating a bad neutral, the Dina-Tel indicating that the open neutral was in this area, and there being a splice in one cable, it was assumed that the spiced cable was the neutral.

Unknown to the crew, the two similar sized, undamaged cables were actually the TV and phone cables. The third cable with the splice was one of the energized 120 volt secondary cables. Thinking they were on the neutral, the crew cut the splice out of the cable and installed a temporary jumper using two split bolt connectors and retested the system. Again, tests results showed an open neutral situation.

The crew noticed that the cable they were working on had two different sizes showing in the excavation and in the splice box. This would mean that there was at least one more splice in this cable. To try and find this splice, Mr. Carey entered the excavation and started to pull on the cable the crew thought was the system neutral. Since this was thought to be the de-energized neutral, Mr. Carey was wearing his leather work gloves. As he was pulling on the cable, the cable slid through his hands and the split bolt connecter contacted his right wrist.

Unknown to the crew, the cable Mr. Carey was pulling was actually an energized 120 volt secondary system cable. Because all testing had to be done while energized, the secondary cable was energized with 120 volts. When the split bolt connector touched Mr. Carey's wrist he received a secondary shock. Mr. Carey was transported to University Hospital via EMS. He was released from the hospital the next day, June 15, 2006, with no work restrictions.

Rick Carey – Line Technician A (injured) LG&E Employee number – E009648 Hire date – April 8, 2002 Classification date – July 4, 2005

Ron Ackerman Line Technician A (Lead)



an @.OM company

Mr. John Shupp Manager Electrical Branch Division of Engineering Kentucky Public Service Commission 211 Sower Blvd. P.O. Box 615 Frankfort, KY 40602

RECEIVED

JUL

7 2006

Louisville Gas and

Electric Company Legal Department

220 W. Main St.

www.eon-us.com

Louisville, Kentucky 40202

PUBLIC SERVICE COMMISSION

July 7, 2006

Re:

Louisville Gas and Electric Company Rick Carey - Employee Shock on 6/14/06

Dear Mr. Shupp:

In follow-up to the Investigation Report that was filed by Louisville Gas and Electric Company on June 21, 2006 concerning the shock sustained by Rick Carey in Louisville, Kentucky, enclosed is are the additional items that were requested by the KPSC:

- 1. Copy of the system print; and
- 2. Complete copy set of scene photographs taken by LG&E of the scene on June 14, 2006.

We have researched our records and have found that the LG&E URD equipment where Mr. Carey was working was installed in 1984. It is our belief that the KPSC now has all documents that have been requested from LG&E concerning this incident. If you need additional information concerning this incident, please contact me at (502) 627-3712.

Sincerely,

Jim Dimas

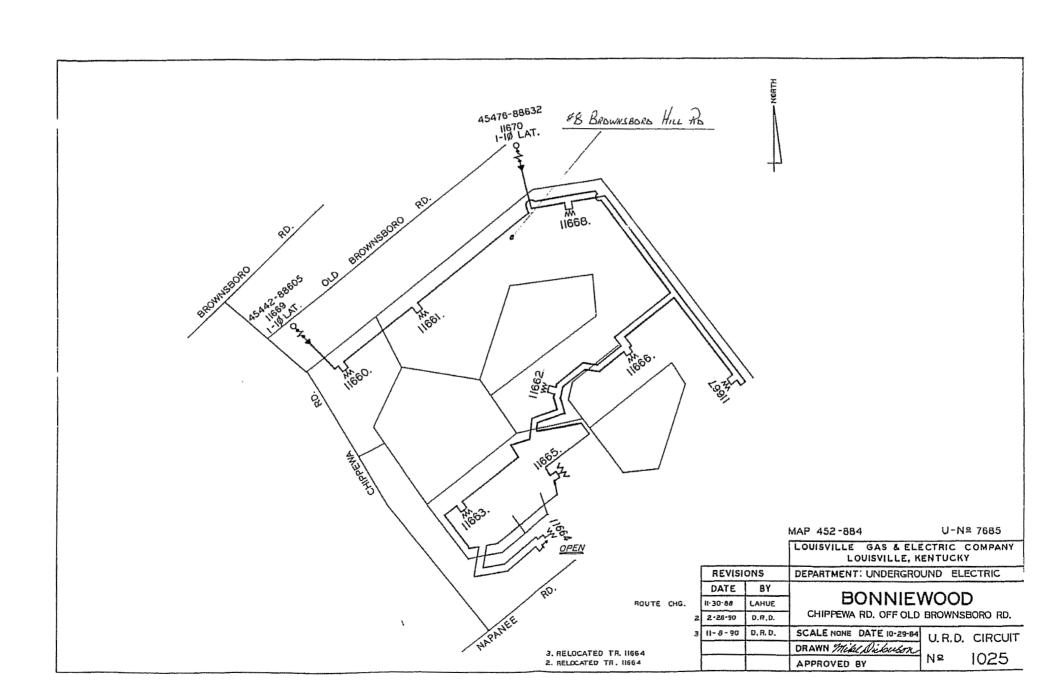
Senior Corporate Attorney

mldinas/800

Attachment

cc: Keith McBride

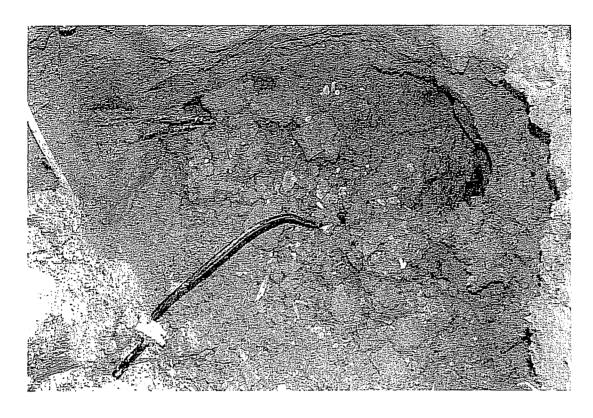


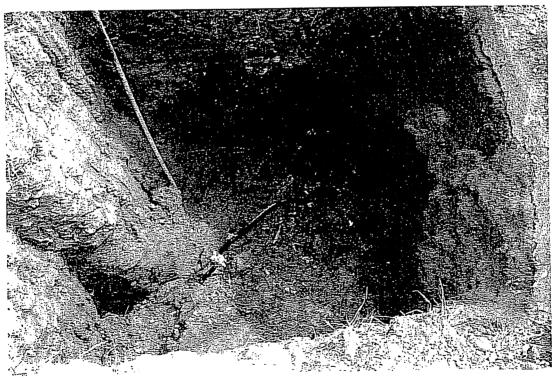


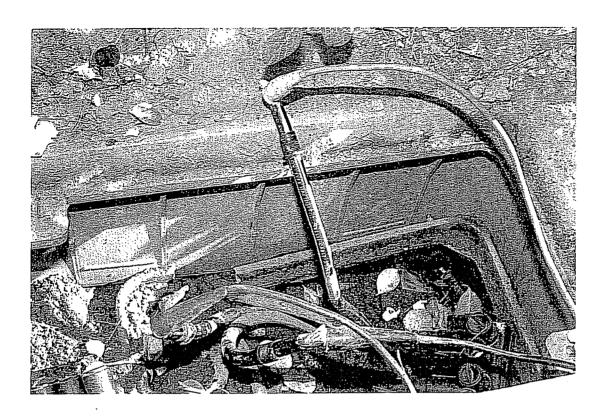


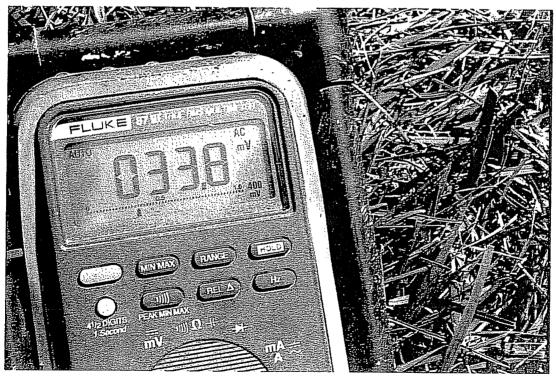
Electric Utility Personal Injury Accident Report

Attachment B
Utility Photographs of Accident Site





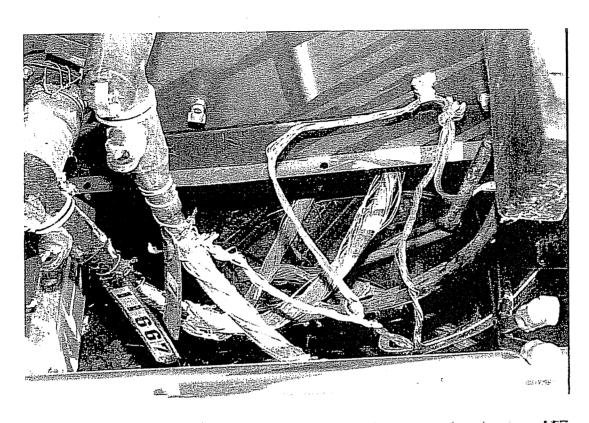




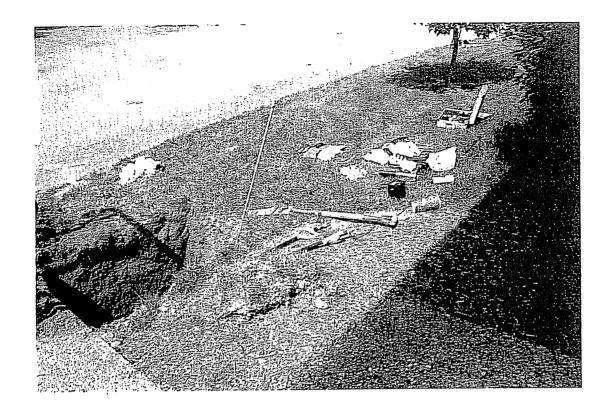


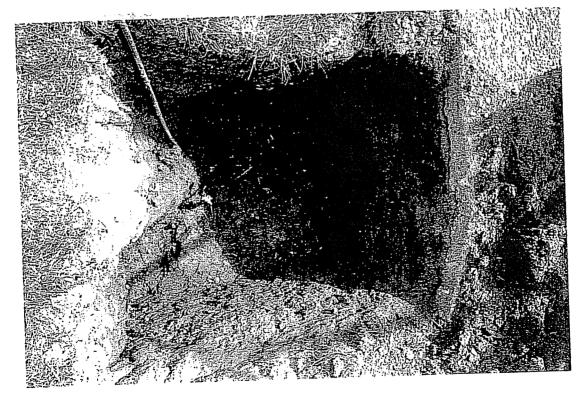


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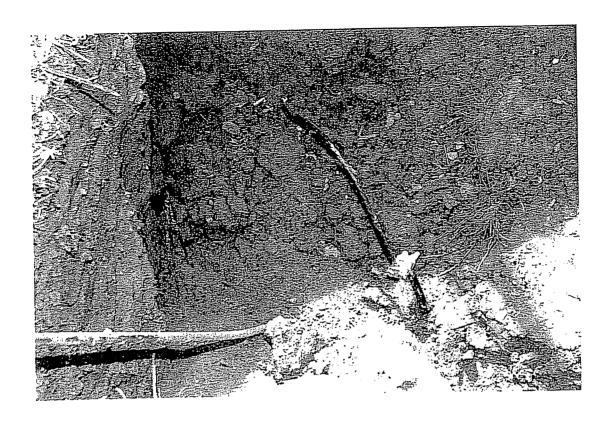






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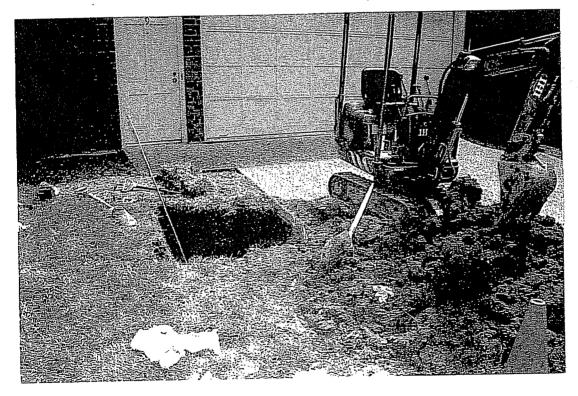








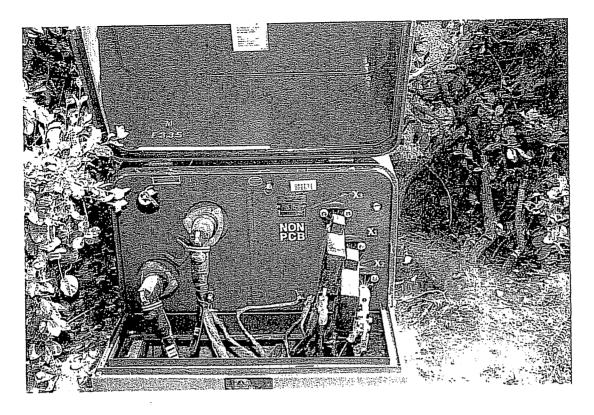


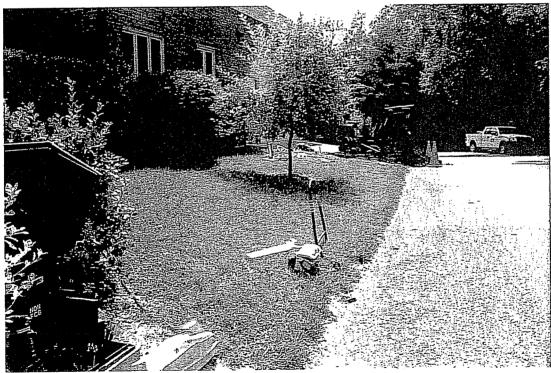


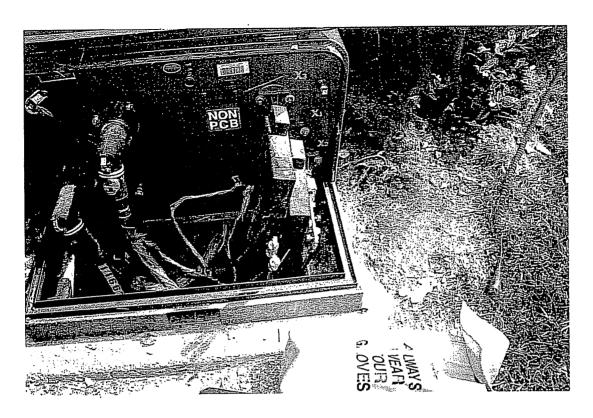




1,27.











Electric Utility Personal Injury Accident Report

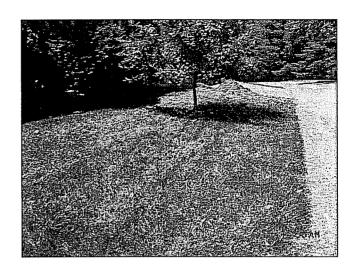
**Attachment C** 

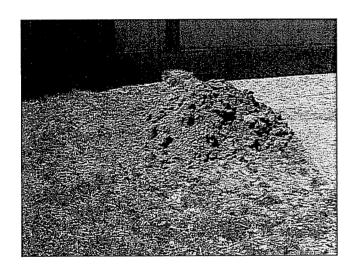
**PSC Photographs of Accident Site** 

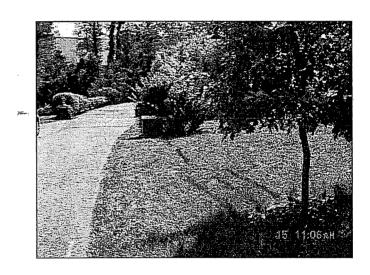


Electric Utility Personal Injury Accident Report















Electric Utility Personal Injury Accident Report

### **Attachment D**

Copy of Cited Violation

### E.4 Grounding-URD

- Note: A capacitance charge can remain in a URD cable after it has been disconnected from the circuit and a static type arc can occur when grounds are applied to such cables.
- E 4 1 All URD cables and equipment, including services, that have been energized or could become energized from any source, shall be considered as energized until the equipment is positively proven to be de-energized by approved voltage detector and has been grounded.
- E 4 2 Before doing work on de-energized primary circuits or equipment: (1) a visible open break shall be provided, (2) a voltage test shall be made; and (3) the equipment shall be grounded
- E 4.3 When work is to be done on equipment or cables of an underground system, precautions to prevent backfeed shall be taken. This shall include grounding of the secondary conductors where applicable.
- E 4 4 De-energized cables shall be grounded at a point as close to the work as possible before work is started
- E 4.5 All underground cables and apparatus carrying current at voltages above 600 volts shall be de-energized and grounded before cables are worked

### E.5 Work on Energized Equipment-URD

- E 5 1 All underground cables and apparatus carrying current at voltages above 600 volts shall be de-energized before work is done on the conductor or before the cables are cut into or spliced
- E.5.2 When work is performed on cables or apparatus carrying less than 600 volts, employees shall take extra precautions in the use of necessary rubber protective equipment, in observing adequate clearances, and by using approved insulated tools in order to prevent short circuits.
- E 5 3 When energized pad-mounted transformers are unlocked and opened, they shall be directly attended by a qualified employee. They shall be kept closed and locked at all other times.
- E 5 4 A primary or secondary system neutral on any energized circuit shall not be opened under any circumstances
- E 5.5 Elbow connectors provide a great deal of flexibility in switching and system sectionalizing. However, only those connectors designed and approved for load break use shall be used to connect or disconnect an energized circuit.
- E 5.6 Only tools with 1KV insulated handles shall be used for making energized secondary connections 600V or less, or when work is

# 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

- 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
- 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.
- 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.

