COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

KENERGY CORPORATION	)	
	)	
	)	CASE NO. 2009-00430
ALLEGED FAILURE TO COMPLY WITH KRS 278.042	)	
	)	
	)	

ORDER

Kenergy Corporation ("Kenergy"), a Kentucky cooperative corporation which engages in the distribution of electricity to the public for compensation for lights, heat, power, and other uses, and which was formed pursuant to KRS 279.010 to 279.220, is a utility subject to Commission jurisdiction.[1]

KRS 278.042 requires the Commission to ensure that each electric utility constructs and maintains its plant and facilities in accordance with accepted engineering practices as set forth in the Commission's administrative regulations and Orders and in the most recent edition of the National Electrical Safety Code ("NESC").

KRS 278.030 requires every utility to furnish adequate, efficient and reasonable service. KRS 278.260 permits the Commission, upon its own motion, to investigate any act or practice of a utility that affects or is related to the service of a utility. KRS 278.280(1) further permits the Commission, after conducting such investigation and finding that a practice is unreasonable, unsafe, improper, or inadequate, to determine

[1] KRS 278.010(3)(a); KRS 279.210.

the reasonable, safe, proper, or adequate practice or methods to be observed and to correct the same by Order.

Pursuant to 278.280(2), which directs the Commission to prescribe rules and regulations for the performance of services by utilities, the Commission has promulgated 807 KAR 5:006, Section 24, which requires all utilities to adopt and execute a safety program.

Commission Staff submitted to the Commission an Electric Utility Personal Injury Accident Report ("Report"), dated March 27, 2009, attached as the Appendix to this Order. The report alleges that, on February 27, 2009, on Brasher Lane near Kuttawa, Kentucky, within Lyon County, Donnie Hunt, an employee of Kenergy, sustained burn injuries as a result of an accident at the site of a Kenergy electric construction project.

According to the Report, the victim was working with Billy Joe Parker, another Kenergy employee, on the day of the accident as part of a two-man construction crew. Mr. Hunt and Mr. Parker were changing a utility pole on a single-phase 7,200-volt tap line. Mr. Hunt was the foreman and the person in charge at the job site that day.

The Report states that, prior to beginning the change-out of the old utility pole for the new utility pole, Mr. Hunt tried to de-energize the tap line on which they would be working. Mr. Parker stayed at the work site preparing to set the pole. When the victim got to the location to de-energize the tap line, he proceeded to open the cutout with an "extendo" stick while standing on the ground. However, the victim failed to realize that the cutout he opened was feeding a transformer on the three-phase takeoff pole. The tap line was still energized due to a jumper with a hot line clamp connecting it to the main line three-phase circuit.

Believing that he had de-energized the tap line, the victim returned to the work site and began work to remove a transformer from the pole that they were replacing. The crew members failed to test and ground the tap line before proceeding to work on the tap line as if it were de-energized. While performing this task, the victim contacted an energized conductor, causing the shock-and-burn accident. Furthermore, according to statements made by both Mr. Hunt and Mr. Parker, Mr. Hunt failed to wear his safety harness while in the aerial lift device in which he was working.

The victim was transported by ambulance to Western Baptist Hospital in Paducah, Kentucky, where he was evaluated. Later that day, Mr. Hunt was transported to the Vanderbilt Hospital Burn Center in Nashville, Tennessee. He received treatment and was released the following day, February 28, 2009.

Based on Commission Staff's investigation of the accident and the information provided by Kenergy in its seven-day summary report (Attachment A to the Report), Commission Staff alleges that Kenergy has violated the following provisions of the NESC:

> 1. NESC Section 41, 411-A-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.
>
> 2. NESC Section 42, 420-C-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.
>
> 3. NESC Section 42, 420-H: 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.

4. NESC Section 42, 420-K-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.

5. NESC Section 42, 421-A-1 and 2: A First-Level Supervisor or Person in Charge shall: 1. Adopt such precautions as are within the individual's authority to prevent accidents and 2. See that the safety rules and operating procedures are observed by the employees under the direction of this individual.

6. NESC Section 44, 441-A-1: Employees shall not approach or bring any conductive object within the minimum approach distance listed in Table 441-1 or Table 441-4 to exposed parts 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 voltage.

7. NESC Section 44, 444-D: When all the switches and disconnectors designated have been operated, rendered inoperable where practical, and tagged in accordance with Rule 444C, and the employee has been given permission to work by the designated person, the employee in charge should immediately proceed to make the employee's own protective grounds or verify that adequate grounds have been applied (see Rule 445) on the disconnected lines or equipment. During the testing for potential and/or application of grounds, distances not less than those shown in Table 441-1 to Table 441-3, as applicable, shall be maintained.

Grounds shall be placed at each side of the work location and as close as practical to the work location, or a worksite ground shall be placed at the work location. If work is to be performed at more than one location on a line section, the line section shall be grounded and short-circuited at one location in the line section and the conductor to be worked on shall be grounded at each work location.

The distance in Table 441-1, Table 441-2, or 441-3, as applicable, shall be maintained from ungrounded conductors at the work location. Where the making of a ground is impractical, or the conditions resulting therefrom are more hazardous than working on the lines or equipment without grounding, the ground may be omitted by special permission of the designated person.

8. NESC Section 44, 445-A-3: The previously energized parts that are to be grounded shall be tested for voltage except where previously installed grounds are clearly in evidence. The employee shall keep every part of the body at the required distance by using insulating handles of proper length or other suitable devices.

The Report also notes 11 probable violations of 807 KAR 5:006, Section 24(1), which requires each jurisdictional 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 workers. The alleged violations arise under the American Public Power Association: (APPA Safety Manual 13th Edition), which was adopted by the Kenergy Board of Directors on March 8, 2005. Commission Staff alleges that Kenergy has violated the following provisions:

1. 607(a): All conductors and equipment shall be treated as energized until tested and grounded.

2. 615(a): All previously energized conductors shall be considered energized until tested and properly grounded.

3. 601(j): Electrical equipment and lines shall always be considered "live" unless they are positively known to be dead by testing and grounding. Before starting work, preliminary inspection or testing shall be made to determine what conditions exist. Care shall be exercised to handle neutral wires with the same caution that is used with energized wires.

4. 626(a)(2): All switches, disconnectors, jumpers, taps, and other means through which known sources of electric energy may be supplied to the particular lines and equipment to be de-energized shall be opened. Such means shall be rendered inoperable, unless its design does not so permit, and tagged to indicate that employees are at work.

5. 626(a)(5): After the above steps have been taken, the equipment to be worked shall be tested to ensure it is de-energized.

6. 626(a)(6): Protective grounds shall be installed (refer to OSHA standard 29 CFR 1910.269(n)).

7. 312(k): Employees shall not belt to an adjacent pole or structure. When working from an aerial lift, a body belt or harness shall be worn and a lanyard attached to the boom, basket or other acceptable attachment point.

8. 601(e): No employee may approach or take any conductive object without an insulating handle closer to exposed energized parts than the minimum approach distances set forth in Tables 6.1 through 6.5 unless the employee is insulated from the energized part or the energized part is insulated from the employee and any other conductive object at a different potential, or the employee is insulated from any other conductive object, as during live-line bare-hand work. Refer to paragraphs 602, 606, 609, and 906 for related information. Refer to OSHA Standard 29 CFR 1910.137.[2]

9. 601(l): Employees must evaluate existing conditions that relate to the safety of the work to be performed before work is started.

10. 1405(a): The employee in charge shall conduct a job briefing with the employees involved before the start of each job. The job briefing will at least cover the following subjects: hazards associated with the job, work procedures involved, special precautions, energy source controls, and personal protective equipment requirements.

11. Kenergy's Amendments to the APPA Safety Manual: C-1-c: When working on lines or equipment energized above 600 volts from an aerial device, rubber gloves and sleeves shall be worn from cradle to cradle.

Based on its review of the Report and being otherwise sufficiently advised, the Commission finds that prima facie evidence exists that Kenergy has failed to comply with KRS 278.042 and 807 KAR 5:006, Section 24(1). We further find that a formal investigation into the incident that is the subject matter of the Report should be conducted and that this investigation should also examine the adequacy, safety, and

[2] Table 6.1 Phase to ground- 7.2 kW-2'2" Clearance.

reasonableness of Kenergy's practices related to the construction, installation and repair of electric facilities.

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

1. Kenergy shall submit to the Commission, within 20 days of the date of this Order, a written response to the allegations contained in the Report.

2. Kenergy shall appear on January 27, 2010 at 10:00 a.m., Eastern Standard Time, in Hearing Room 2 of the Commission's offices at 211 Sower Boulevard in Frankfort, Kentucky, for the purpose of presenting evidence concerning the alleged violations of KRS 278.042 and 807 KAR 5:006, Section 24, and of showing cause why it should not be subject to the penalties prescribed in KRS 278.990(1) for these alleged violations.

3. At the scheduled hearing in this matter, Kenergy shall also present evidence on the adequacy, safety, and reasonableness of its practices related to the construction, installation and repair of electric facilities and whether such practices require revision.

4. The January 27, 2010 hearing shall be recorded by videotape only unless, on or before January 13, 2010, a party to the proceeding timely moves for a stenographic transcript of the proceedings to be made.

5. The Report in the Appendix to this Order is made a part of the record in this case.

6. 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.

By the Commission

ENTERED EW
DEC - 8 2009
KENTUCKY PUBLIC
SERVICE COMMISSION

ATTEST:

Executive Director

APPENDIX

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2009-00430 DATED DEC - 8 2009

INCIDENT INVESTIGATION ~ Staff Report

Report Date ~ March 27, 2009

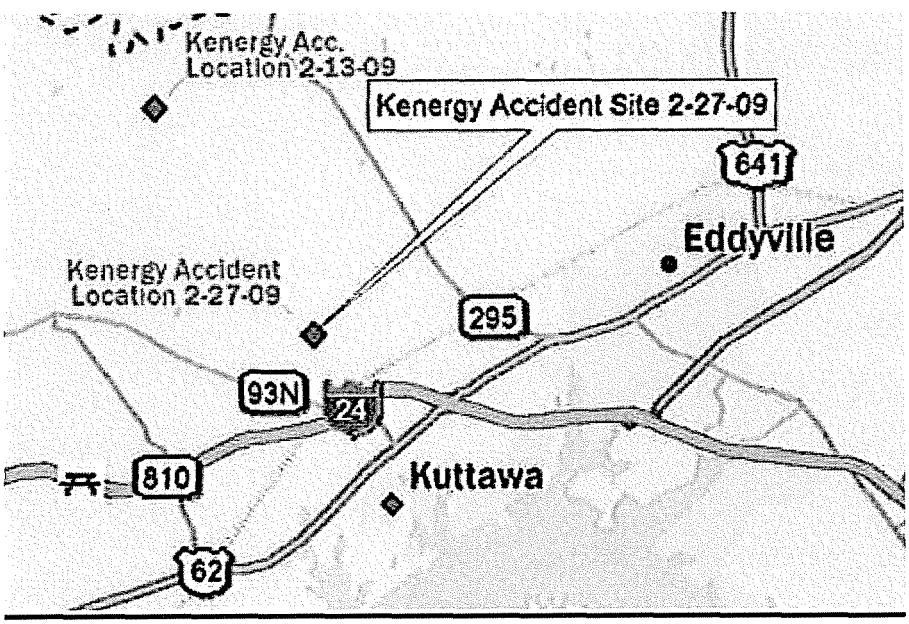
Incident Date ~ February 27, 2009

Serving Utility ~ Kenergy Corp.

Incident Location ~ Near Kuttawa, Kentucky

Victim ~ Mr. Donnie Hunt

PSC Lead Investigator ~ Steve Kingsolver



Kentucky Public Service Commission

Electric Utility Personal Injury Incident Report

Utility:

Kenergy Corp.

Reported By:

Tammy Montgomery, Administrative Assistant, Kenergy Corp.

Incident Occurred:

February 27, 2009, 9:31 AM, CST

Utility Notified:

February 27, 2009, 9:49 AM, CST

PSC Notified:

February 27, 2009, 10:21 AM, CST

PSC Investigated:

February 27, 2009, 5:00 PM, EST

Report Received:

February 5, 2009, 5:01 PM, EST (E-mail)

Incident Location:

Brasher Lane, Lyon County, Near Kuttawa, Kentucky

Incident Description:

The victim, Donnie Hunt, and the witness, Billy Joe Parker, are employees of Kenergy Corp. They were given the job to change out a pole on Brasher Lane in Lyon County. The victim was the person in charge of this job. They arrived at the job site, and the victim decided to go and de-energize the tap line on which they would be working. The other crew member, the witness, stayed at the work site preparing to set the pole. When the victim got to the location to de-energize the tap line, he proceeded to open the cutout with an extendo stick while standing on the ground. The victim failed to realize that the cutout he opened was feeding a transformer on the three-phase takeoff pole. The tap line was energized by a jumper with a hot line clamp connecting it to the main line three-phase circuit. Thinking that he had de-energized the tap line, the victim returned to the worksite where he worked to remove a transformer from the pole that they were replacing. While performing this task it appears the victim made contact with an energized conductor causing this shock and burn accident. It appears that the crew failed to test and ground this tap line before proceeding to work on the tap line as if it were de-energized. The information in this description was given to me by the witness, Billy Joe Parker, during an interview at the accident site the day of the accident. It appears from information received during this accident investigation that the victim, Donnie Hunt, failed to wear his harness that attaches him to the aerial lift device in which he was working.

Victim:	Name:	Address:	Employer:
	Donnie Hunt	4070 State Route 365 Sturgis, Kentucky 42459	Kenergy Corp.

Fatality: No
Injuries: Shock and Burn

Witnesses:	Name:	Address:	Employer:
	Billy Joe Parker	2186 Highway 41A Dixon, Kentucky 42409	Kenergy Corp.

Information From: Name:	Position:	Employer:
Gerald Ford	VP of Operations	Kenergy Corp.
Donnie Phillips	Manager, Marion District	Kenergy corp.
Greg Morgan	Member Systems Safety	Big Rivers Electric
Billy Joe Parker	Lineman	Kenergy Corp.
Steve Collins	AIT Member	Kenergy Corp.
Kevin Board	AIT Member	Kenergy Corp.

Probable Violations:

KAR 278.042 Service adequacy and safety standards for electric utilities- National Electric Safety Code

National Electric Safety Code:

#1 Possible Violation:

411. Protective Methods and Devices

A. Methods

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.

#2 Possible Violation:

420. Personal General Precautions

C. Safeguarding Oneself and Others

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.

#3 Possible Violation:

420. Personal General Precautions

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.

#4 Possible Violation:

420. Personal General Precautions

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.

#5 Possible Violation:

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.

#6 Possible Violation:

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 minimum approach distance listed in Table 441-1 or Table 441-4 to exposed parts 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 voltage.

Table 441-1: AC Live Work Minimum Approach Distance[4]

(See Rule 441 in its entirety.)

Voltage in kilovolts phase to phase[2]	Distance to employee			
	Phase-to-ground		Phase-to-phase	
	(m)	(ft–in)	(m)	(ft–in)
0 to 0.050[1]	not specified		not specified	
0.051 to 0.300[1]	avoid contact		avoid contact	
0.301 to 0.750[1]	0.31	1–0	0.31	1–0
0.751 to 15	0.65	2–2	0.67	2–3
15.1 to 36.0	0.77	2–7	0.86	2–10
36.1 to 46.0	0.84	2–9	0.96	3–2
46.1 to 72.5	1.00[3]	3–3[3]	1.20	3–11

1 For single-phase systems, use the highest voltage available.
2 For single-phase lines off three phase systems, use the phase-to-phase voltage of the system.
3 The 46.1 to 72.5 kV phase-to-ground 3–3 distance contains a 1–3 electrical component and a 2–0 inadvertent movement component.
4 Distances listed are for standard atmospheric conditions. The data used to formulate this table was obtained from test data taken with standard atmospheric conditions. Standard atmospheric conditions are defined as temperatures above freezing, wind less than 15 mi per hr or 24 km per hr, unsaturated air, normal barometer, uncontaminated air, and clean and dry insulators. If standard atmospheric conditions do not exist, extra care must be taken.

#7 Possible Violation:

444. De-energizing Equipment or Lines to Protect Employees

D. Employee's Protective Grounds

When all the switches and disconnectors designated have been operated, rendered inoperable where practical, and tagged in accordance with Rule 444C, and the employee has been given permission to work by the designated person, the employee in charge should immediately proceed to make the employees own protective grounds or verify that adequate grounds have been applied (see Rule 445) on the disconnected lines or equipment. During the testing for potential and/or application of grounds, distances not less than those shown in Table 441-1, Table 441-2, and Table 441-3, as applicable, shall be maintained.

Grounds shall be placed at each side of the work location and as close as practical to the work location, or a worksite ground shall be placed at the work location. If work is to be performed at more than one location on a line section, the line section shall be grounded and short-circuited at one location in the line section and the conductor to be worked on shall be grounded at each work location.

The distance in Table 441-1, Table 441-2, or Table 441-3, as applicable, shall be maintained from ungrounded conductors at the work location. Where the making of a ground is impractical, or the conditions resulting therefrom are more hazardous than working on the lines or equipment without grounding, the ground may be omitted by special permission of the designated person.

#8 Possible Violation:

445. Protective Grounds

A. Installing Grounds

3. Test for Voltage

The previously energized parts that are to be grounded shall be tested for voltage except where previously installed grounds are clearly in evidence. The employee shall keep every part of the body at the required distance by using insulating handles of proper length or other suitable devices.

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807 KAR 5:006 Section 24, Safety Program

American Public Power Association: (APPA Safety Manual 13th Edition).
Kenergy Corp. Board of Directors adopted this manual on March 8, 2005.

#1 Possible Violation:

607: Working on De-energized lines and Equipment

a. General

All conductors and equipment shall be treated as energized until tested and grounded.

#2 Possible Violation:

615: Grounding-General

a. All previously energized conductors shall be considered energized until tested and grounded.

#3 Possible Violation:

601: Working on or Near Exposed energized Lines and Equipment

j. Electrical equipment and lines shall always be considered "live" unless they are positively known to be dead by testing and grounding. Before starting work, preliminary inspection or testing shall be made to determine what conditions exist. Care shall be exercised to handle neutral wire with the same caution that is used with energized wires.

#4 Possible Violation:

626: Hazardous Energy Control

2. All switches, disconnectors, jumpers, taps, and other means through which sources of electric energy may be supplied to the particular lines and equipment to be opened. Such means shall be rendered inoperable, unless its design does not so permit, and tagged to indicate that employees are at work.

#5 Possible Violation:

626: Hazardous Energy Control

5. After the above steps have been taken, the equipment to be worked shall be tested to ensure it is de-energized.

#6 Possible Violation:

626: Hazardous Energy Control

6. Protective grounds shall be installed (refer to OSHA standard 29 CFR 1910.269(n)).

#7 Possible Violation:

312: Aerial Devices

k. Employees shall not belt to an adjacent pole or structure. When working from an aerial lift, a body belt or harness shall be worn and a lanyard attached to the boom, basket or other acceptable attachment point.

#8 Possible Violation:

601: Working on or Near Exposed energized Lines and Equipment

e. No employee may approach or take any conductive object without an insulating handle closer to exposed energized parts than the minimum approach distance set forth in Table 6.1 through 6.5 unless the employee is insulated from the energized part or the energized part is insulated from the employee and any other conductive object at a different potential, or the employee is insulated from any other conductive object, as during live-line bare-hand work. Refer to paragraph 602, 606, 609, and 906 for related information. Refer to OSHA Standard 29 CFR 1910.137. Table 6.1 Phase to ground- 7.2 kW-2'2" Clearance.

#9 Possible Violation:

601: Working on or Near Exposed energized Lines and Equipment

L. Employees must evaluate existing conditions that relate to the safety of the work to be performed before work is started.

#10 Possible Violation:

1405: Job Briefing

a. The employee in charge shall conduct a job briefing with the employees involved before the start of each job. The job briefing will at least cover the following subjects: hazards associated with the job, work procedures involved, special precautions, energy source controls, and personal protective equipment requirements.

#11 Possible Violation:

Kenergy Corp's Amendments to the APPA Safety Manual

C. Protective Apparel

1. Rubber Gloves

c. When working on lines or equipment energized above 600 volts from an aerial device, rubber gloves and sleeves shall be worn from cradle to cradle.

Line/Equipment Measurements/Clearances

Line Clearances At Point of Incident:	Measured	Minimum Allowed by NESC	Applicable NESC Edition 2007*	Voltage	Construct Date
Primary (Single Phase) to Ground Elevation:	30'-3"	18'-6"	2007 EDITION	7200	Unknown
Primary Neutral to Ground Elevation:	25'-9"	15'-6"	2007 EDITION	N/A	Unknown

*** If clearances were not in compliance with the current edition, then the edition in effect when the facilities were last constructed or modified would apply.**

Date of Measurement:

2-27-09

Temp & Weather:

45° Windy, Cold and Overcast

Measurements Made By: **Name:** Kevin Board, Accident Investigation Team Member **Company:** Kenergy Corp

Investigated By:	Name:	Company:
	Steve Kingsolver Utility Regulatory & Safety Investigator IV	KPSC

Signed: Steve Kingsolver

Date: 3-27-09

Reviewed By:	Name:	Company:
	John Shupp Manager, Electric Branch	KPSC

Signed: John V. Shupp

Date: 3/27/09

Attachments:

A. Kenergy Corp. Summary Report
B. Kenergy Corp. Photographs
C. KPSC Photographs
D. KPSC Site Maps

Kenergy

P.O. Box 1389 • 3111 Fairview Drive
Owensboro, Kentucky 42302-1389
(270) 926-4141 • FAX (270) 685-2279
(800) 844-4732

March 5, 2009

Mr. Steve Kingsolver
Electric Branch
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, KY 40602

RE: Donnie Hunt Injury – 7-Day Summary Report

Dear Mr. Kingsolver:

Relative to the electrical contact Tammy Montgomery reported to you on February 27, 2009, at 11:21 a.m. EST, I report the following.

On February 27, 2009, Kenergy employees Donnie Hunt and Billy Joe Parker were assigned to change a pole damaged during the January ice storm at map location 448-32-18 on Brasher Lane in Lyon County.

En route to the job site Donnie conducted a job briefing of the assignment with Billy Joe. When they arrived at the location they framed a 35' VA-1 with transformer and a security light and dug a hole for the new pole. Donnie called the control center to advise that he was de-energizing the tap at 448-33-pole 9 to change the pole at 448-32-18. Donnie went to the take-off pole at 448-33-9 approximately three spans away to de-energize the line. Billy Joe could see Donnie with the hot stick in hand.

When Donnie returned to the pole change location, they decided to remove the transformer from the old pole to create adequate clearance to set the new pole and to operate the digger's bucket. Donnie in the bucket was raised above the triplex to disconnect the pole ground from the transformer. Donnie, with his back to Billy Joe, leaned over the top of the transformer and with Klein pliers in his right hand attempted to cut loose the ground. His left hand was on the primary bushing of the transformer. His right shoulder made contact with the pole. At this time he made contact and fell into the floor of the bucket. Donnie blacked out and woke up to hearing Billy Joe shouting "What Happened"? Donnie announced to Billy Joe, "I've been shocked". Billy Joe hurriedly lowered the bucket to the ground. Donnie complained of severe pain and numbness in his left hand. At 9:48 a.m., CST, Billy Joe called 911 and Donnie removed himself from the bucket. Billy Joe contacted Casey Hopper, Staff-Assistant-Marion.

While waiting for the ambulance, Donnie requested that Billy Joe drive him back to the take-off pole location to see what he had done wrong. Billy Joe drove Donnie back to the location and they discovered that Donnie had disconnected the fuse feeding the transformer instead of the line. Billy Joe was instructed by Donnie to close the fuse so the residence would regain power. The ambulance arrived and transported Donnie to the Western Baptist Hospital in Paducah, KY where he was evaluated. Donnie was later transported to the Vanderbilt Hospital Burn Center where he was treated and released on Saturday, February 28. Donnie reported for work on Monday, March 2, with lifting restrictions.

Casey Hopper secured the accident site until the Kenergy appointed Accident Investigation Team (AIT) arrived. Keith Ellis, VP of Human Resources and I arrived shortly after the (AIT). See report attached.

On Saturday, February 28, Kendall Bush, KAEC Safety Instructor, conducted an interview with Donnie. See report attached.

Also attached are the photographs, facility map of area involved, a statement of recent work performed on facilities involved, and witness statements you requested.

If this information does not adequately satisfy KPSC requirements, please contact me for further information.

Sincerely,

Gerald R. Ford, P.E.
Vice President of Operations

Enclosures: AIT Report
Kendall Bush Interview
Facility Map
Statement of Recent Work Performed on Facilities Involved
Photographs
Witness Statements

Donnie Hunt was asked to review this document at the Marion office on 3-3-09 and agreed to its content, with no corrections to be made. He was asked if he had his fall protection on at the time of the contact and he stated "No. I violated every rule there is."

Kenergy

ACCIDENT INVESTIGATION TEAM REPORT

PART I

Name of Injured: Donnie Hunt

Job Title: Line man

Department: Operations Date of Employment: —

PART II

Accident Classification and Type (Check All Applicable Boxes)

☐ Fatality ☒ Electrical Contact ☐ Lost Workday

Weather Conditions: Cold - partly Cloudy

Date of Incident: 2-27-09 Time: approx. 9:47 am

Incident Reported to: Casey Hopper Date: 2-27-09 Time: 9:48

Where did incident occur? (Be specific, give physical address):
448-33-9 Take off at 419 & Brasher Lane
448-32-18 Burn location

Names of Witnesses to Incident:
Billy Joe Parker

Name and Classification of Supervisor in Charge of Work:

Donnie Phillips, Area Supervisor

Brief Description of Incident:

While removing a 15 KVA Transformer from a VA1 fixture electric contact was made probably from the 7200 V transformer stinger to the pole or ~~to~~ the back of the upset bolt at the pole.

PART III

Names and Title(s) of individuals interviewed:

Donnie Hunt, Lineman (contact Victim)
Billy Joe Parker, Lineman

Does the investigating committee feel it has a clear picture of just what caused the accident? X Yes ___ No

If yes, why did this incident occur? (If no, please explain):

Not following through with Lockout/Tagout procedures and testing, then grounding the distribution line.

Recommended Action

Recommended Action:

Review this incident with employees as a reminder for the need to always follow correct procedures.

Accident Investigation Team Committee

Signature	Title	Date
[signature]	Member Systems Safety	3-3-09

Date: 2-27-09

Location: Lyon County, KY
Highway 819 and Brasher Lane

Purpose: AIT Members report

Team Members: Steve Collins, Kevin Board, and Greg Morgan

Time 1:30 pm

At the request of Gerald Ford and Keith Ellis of Kenergy Corp the Accident Investigation Team (AIT) consisting of Steve Collins, Kevin Board and Greg Morgan initiated an incident investigation into the cause of electrical burns to Kenergy employee, Donnie Hunt.

The incident review started at the work location with an interview of Billy Joe Parker who was the only witness to an electric contact made by Donnie Hunt. The physical location of the line is 48-33-9 for the take off pole at Highway 419 and Brasher Lane) and 48-33-18 is the transformer pole location of the electric contact on Brasher Lane in Rural Lyon County, Kentucky. The three member AIT was all present for the interview of Mr. Parker. Mr. Parker was asked to relate the details of the incident and gave the following statement:

The job was to change out a damaged pole and the (new) pole was almost framed and was hooked almost on balance, when Donnie decided to kill the line. (He drove unit 440) to the takeoff about 3 or 4 spans away and I could see him with the hot stick disconnecting the line.

The pole (being set) was facing the wrong direction so while he was gone I tried to reposition it so we could set the top in place when he came back. I laid the pole down so it could be re-hooked. When he came back Donnie wanted to take the transformer off the old pole so we would have room to set the new pole and be able to reach it with the digger's bucket.

Donnie got into the pin-on bucket of the digger derrick and I raised him up to take the transformer loose. He had his back to me and was working above the triplex and leaning over the top of the transformer cutting the ground loose.

Donnie said something and I asked him what is wrong and he said, "I've been shocked".

I hurriedly brought the bucket to the ground and with Donnie still in the bucket at ground level; I looked at his finger and turned to call 911 that's when Donnie got himself out of the bucket.

(Donnie had taken his leather work glove off and had thrown them on the ground about ten feet from the bucket) Donnie was rubbing his finger (left, index finger) and said it was hurting and numb and when I looked at it I made the decision to call 911. Then I called in to Casey (Hopper).

Donnie wanted to go back to the take-off pole to see what he had done wrong, stating that he thought he had disconnected the transformer rather than the line being worked on. I drove the bucket back to the take off and sure enough he had opened the fuse feeding the transformer. Donnie had me close the fuse so the house would have its power back. When the ambulance got there they stopped at the bucket and asked were the burned man was and they went to work on Donnie.

Donnie would not let them cut the shirts off so he took them off. And they took him by ambulance to Western Baptist in Paducah.

Billy Joe was adamant that there had been no arc or any other indication that an electric contact had occurred. His only clue to any injury was Donnie's statement that he had been burnt. Billy Joe was very firm in his recollection of the position of the bucket and Donnie at the time of the electric contact. The bucket was positioned above the triplex service conductor against the security light and Donnie had his back to the operator while leaning forward from the bucket. Donnie would have to have his body between the high side bushing and the pole.

Billy Joe stated he had called the ambulance at 9:48 as he had checked the time on his cell phone.

Donnie was later driven to the burn center at Vanderbilt, stayed there Saturday and was released from there on Sunday 3-1-09. Donnie reported for work on Monday 3-2-09 with lifting restrictions and wearing bandages on his left index finger and right shoulder.

{This statement was reviewed by Billy Joe Parker on 3-3-09 who agreed to its accuracy}.

We had a follow-up interview with Billy Joe Parker related to the committee's original review.

Billy Joe, can you tell me what safety rules were being violated at the time of the incident?

"Not testing and grounding. We would have known the line was still on."

Was any other rule violated?

"Donnie didn't have his harness on."

If you had been the one in the bucket would you have had your harness on?

"Yes."

Why didn't you say something to Donnie about grounding or wearing his harness?

"I just have a lot of respect for Donnie and he is older and if I had it to do again I would have."

Billy Joe do you think the hours worked prior to this incident have an effect on the incident?

"Yes."

Did Donnie follow the (safety) rules earlier in the week?

"Yes. We did a similar job and he grounded and we did one with a two-way feed that he grounded the end he was working and I grounded the end I was working so we would have been between grounds."

Billy Joe was thanked for his honesty and cooperation.

Donnie Hunt was asked to step into the room and Donnie discussed what happened again.

Donnie was asked why he didn't ground the line.

"I don't know. 99% of the time I would've grounded. I just don't know. I just don't know."

Earlier in the week would you have grounded?

"Probably. We built that line into Olney and the first thing we did was to ground it. I just don't know why I didn't. Casey had told us we didn't need to get all the work done and I wasn't in any special hurray to get the work done as I knew we couldn't get it all done. I would like to think I would have grounded. I have been told for 30 years if it ain't grounded it ain't dead. It just never crossed my mind.

"I can't blame this on the hours worked it was just my own stupidity."

Can you think of anything to be done to keep this from happening in the future?

"I think the G9 transformer caused me a problem. I should have grounded (the line) but that transformer confused things." (The transformer at the take-off pole was fused but the tap wasn't which is counter to practice in the area).

"Use your grounds and tester and be sure of your feeds. I think the cutout was in the wrong spot and I think we would've had the tap on a cutout."

Had you worked on this line before?

"Yes but it had been 20 years ago and the line was different."

"I'm glad I was the man in the bucket. If I had been responsible for Billy Joe getting hurt I don't think I could have stood it. Everyone should have ICE numbers in their phone (in case of emergency). You should also have a list of your medication with you as that was the first thing those nurses asked for."

Donnie was thanked for his cooperation with the committee and he returned to work.

It is the belief of the AIT that the exact contact points on the primary and ground potentials will never be known for certain as Donnie does not recall for sure what he was doing exactly when contact was made and the only witness was blocked from seeing what happened by Donnie's position at the pole. It can be surmised that Donnie's left, index finger contacted the transformer stinger above the squirrel guard at the top of the transformer and that his right shoulder contacted ground potential probably at the back of the neutral, single upset bolt, or in that general area of the pole. It is the belief of the committee that it was a high resistance fault (such as from the phase to the wood pole) and that is why Billy Joe Parker did not hear or witness an arc and that injuries to Donnie Hunt are very mild considering that it was a high voltage contact.

The circuit at 43-18-9 was feed from the Lyon County Substation and was controlled by a VWE breaker --Feeder 1- Sunnyside with a 120amp ground trip and a 400 amp phase to ground trip.

Energy transfer at the leather, left work glove and on the right shoulder of the FR shirt was very minor on the outside and that would indicate a relatively small amount of energy was involved at the contact points. Had the contact been 7,200 volts to ground potential at the neutral the likelihood of a more severe outcome is virtually certain.

The AIT believes that the following safety rules were violated allowing the injuries to Donnie Hunt:

607 WOPRKING ON DE-ENERGIZED LINES AND EQUIPMENT
a) General: All conductors and equipment shall be treated as energized until tested and grounded.

312 AERIAL DEVICES
(k) Employees shall not belt to an adjacent pole or structure. When working from an aerial lift, a body belt or harness shall be worn and a lanyard attached to the boom, basket or other acceptable attachment point.

615 GROUNDING – GENERAL
a) All previously energized conductors shall be considered energized until tested and properly grounded.

619 DERRICK TRUCKS, CRANES, ETC.
With the exception of equipment certified for work on the proper voltage, mechanical equipment shall not be brought closer to any energized line or equipment that the clearances set forth in tables 6.1 through 6.4 unless:
(2) The mechanical equipment is grounded.

626 HAZARDOUS ENERGY CONTROL
(2) All switches, disconnectors, jumpers, taps, and other means through which known sources of energy may be supplied to the particular lines and equipment to be de-energized shall be opened.

(5) After the above steps have been taken, the equipment to be worked shall be tested to ensure it is de-energized.

(6) Protective grounds shall be installed.

It is the opinion of the AIT that violation of the safety rules was not a common practice of the employees involved in this incident but was a condition of oversight on this one particular workday.

Kenergy Incident
2-27-09

The following is an interview of Donnie Hunt by Kendall Bush. Kendall Bush is a safety instructor for the Kentucky Association of Electric Cooperatives. Kendall was asked to act as the interviewer by the Kenergy Corporation. Donnie Hunt was a victim of a contact incident that happened on 2-27-09. This interview took place while Donnie was under medical care at Vanderbilt Hospital located in Nashville, Tenn. on Saturday 2-28-09. Present during the interview was Casey Hopper.

1. What is your name?
Donnie Hunt

2. Are you employed by Kenergy, an electric distribution cooperative with offices in Owensboro, Henderson, and Marion, Ky.?
Yes

3. Were you involved in an electric contact incident yesterday, 2-27-09?
Yes

4. What was the location of the incident?
We were working in Lyon County on Brasher Rd

.

5. Were you alone?
No

6. Who was with you?
Billy Joe Parker

7. Were you the person in charge at the job site?
Yes

8. What was the job that you were sent to this location to perform?
Change out an A1 that was damaged during the recent Ice storm

9. Please describe the sequence of events from the time that you were given the responsibility to perform the job until the time that you arrived at the hospital.
Casey Hopper handed out the work orders that morning. We loaded the poles and fueled up the trucks before leaving for Lyon County. We had a job briefing by talking about the job at hand. The control of electrical sources was not discussed, except that we would work the job de-energized. When arriving at the Job site, we set up the trucks and framed the pole. After framing the pole I told Billy Joe to stay put and I would go de-energize the line. I took a long stick and opened the cut-out on the take off, thinking that I de-energized the line. When I returned to the job site, Billy Joe had hooked up the pole to the winch. I told him that we needed to take down the transformer, service, and security light in order to have clearance for the

bucket that was attached to the digger derrick. I took the winch loose from the pole and lowered the bucket on the digger derrick. I then went up in the bucket to remove the transformer, service and security light. The controls were manned by Billy Joe. He raised me up to the work position. The position was the back side of the pole with the transformer to my left. The first thing that I did was to cut the pole ground from the neutral. I used my Kliens in my right hand. I then switched the Kliens to my left hand and reached around the pole to gut the service neutral loose and made contact. I do not know what I made contact with. Later on I understood the mistake that I made in not de-energizing the line but still don't understand with what I made contact. Upon making contact, I fell to the bottom of the bucket and blacked out for what I estimate was about 15 seconds. I awoke to Billy Joe shouting "what Happened" I shouted back that I had been shocked. The pain and numbness in my hand was severe. Billy Joe lowered the bucket to the ground and I got out under my own power. I took off my leather glove and examined my hand and told Billy Joe that I needed an ambulance. Billy Joe called 911 and the called Casey Hopper on her cell phone and told her what happened. I wanted to know what I had done, so Billy Joe drove me up to the take off pole and I discovered that I had not de-energized the tap but the transformer that was on the take off pole. After a few minutes the ambulance came and asked where the shock victim was and I said "that would be me" We the went to the hospital.

10. Did you contact dispatch when you de-energized the line?
Yes

11. Did you test and ground the line after opening the cut-out?
No

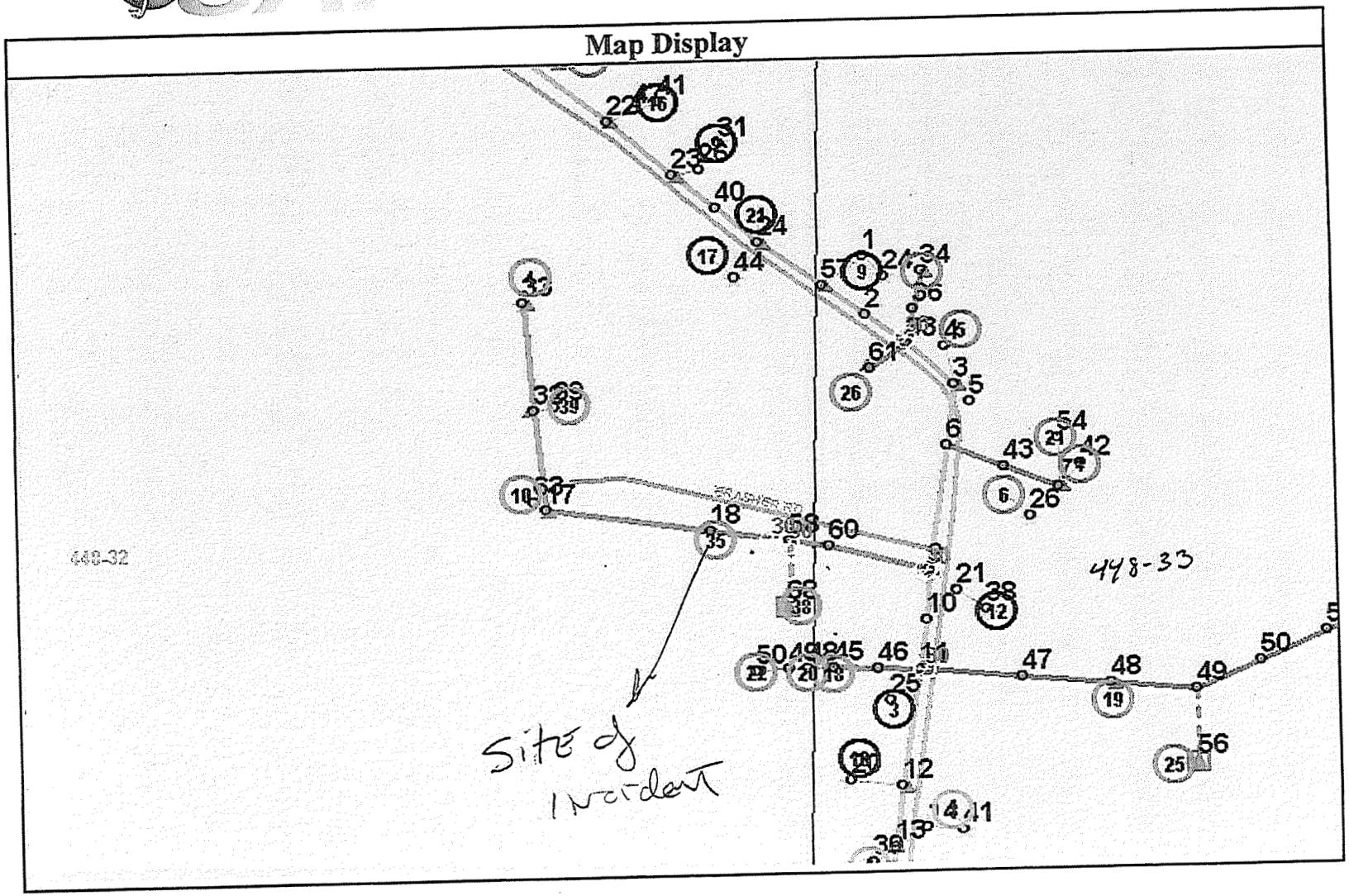
12. Did you discuss grounding the line in the job briefing?
No, we discussed the job and that we would de-energize the line, but not grounding.

13. Did you have rubber gloves and sleeves on when you where shocked?
No, leather gloves only.

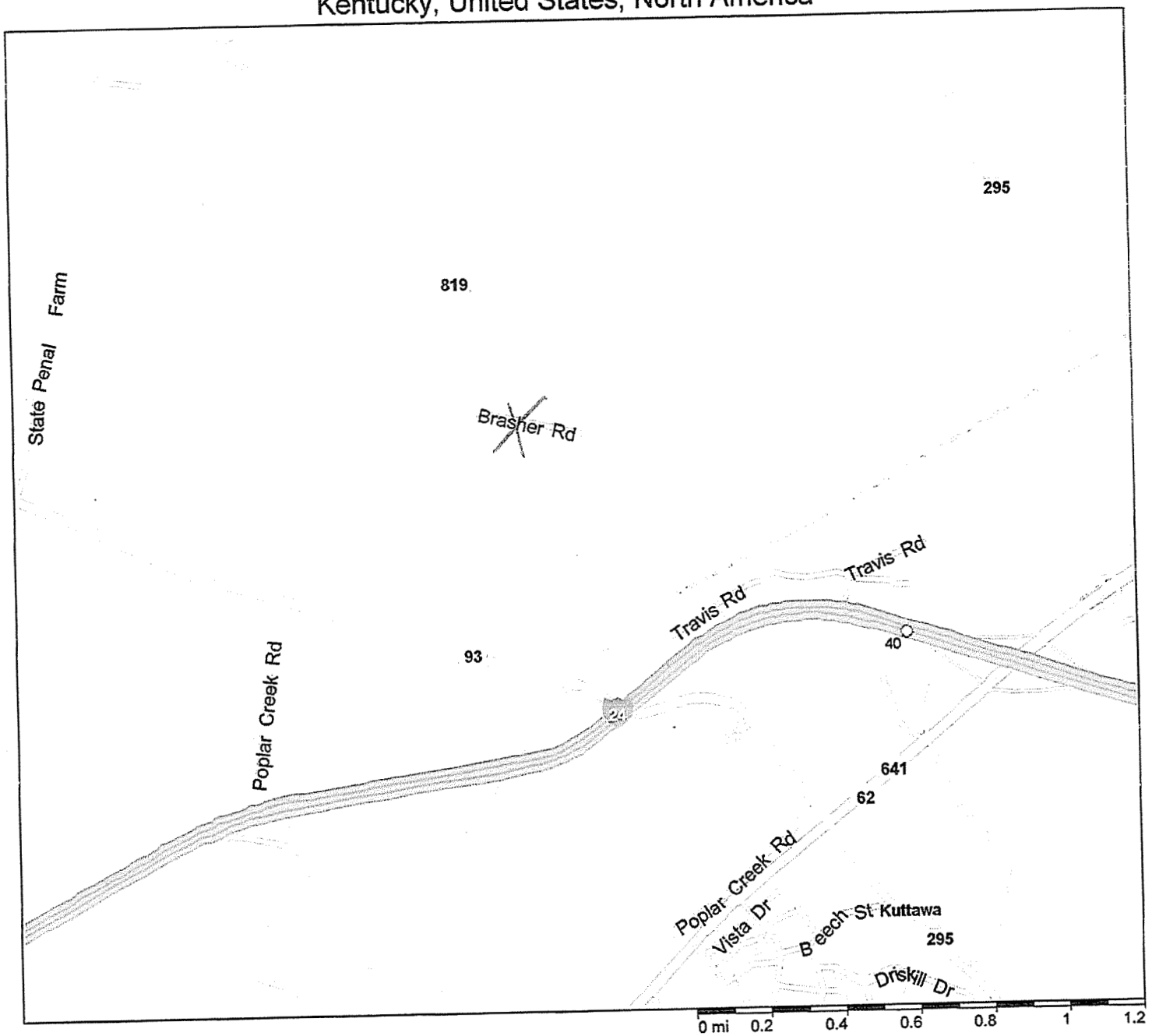
14. Do you normally just use a two man crew to change a pole?
No, we usually have 3 or more. We only used two because of being de-energized and spread thin because of the Ice storm. I was comfortable with two men changing a de-energized pole.

15. Why did you have a bucket and not use it?
I didn't think the bucket truck would reach from where it would have to be set up. We were limited on ways of getting into the pole.

16. Donnie, do you have anything to add?
I know that we have been told time after time to test and ground. I hope to be an example to the boys at work so they may not make the same mistakes as I did. I am just glad it was me and not Billy Joe.


Map Display
448-32
448-33
Site of Incident
2-27-09

Kentucky, United States, North America



Statement of recent work performed on facilities involved:

The take-off pole at 448-33-9 was changed out during the ice storm. The pole was reconfigured from a three-phase pole with a fused tap and a CSP transformer to a three-phase pole with an unfused tap and a conventional transformer without a cutout.

Friday Feb. 27, 2009 started out just like Any day. We got our job assignments, loaded the trucks, talked about where we are going, and what we had to do. We got to our first job, unload 3 poles one was for the job we was going to do and the others were for a different location. We framed a 35' VA-1 with transformer and a light. When then we dug a new hole. Donnie clean the Augger when the hole wuz dug. He then Hooked the strap up for me to craddle up the Augger and then he said he was going to the take off pole to deenergize the line take were working on. He said when I get back we will set the new pole. When he got back, we agreed that we needed to get the old transformer off the pole before we set the new pole. We were going to have to use the bucket on the digger to work out of Cause bucket truck would not reach pole. I was running the controls. Donnie got in the bucket. I put him up the pole, he cut the pole ground first. Then I had to put him over the service wire which were coming off the back of the where we were set up. The transformer was also on the back side of the pole. He was now over the service and next to the transformer. He leaned over between the pole and tramformer and was going to

cut grounds loose where we could remove transformer At that time, I heard Donnie say something and then he looked back over the bucket at me. I asked what was wrong and he tolded me he had been shocked. I got him down using the digger controls within one minute after he told me that. As soon as he got on the ground I went over to him at that time I told him I was going to call 911. That call was made At 9:48Am. After the call Donnie was walking around thinking what went wrong. He told me I pulled the cut-out door, I bet it was for the transformer which was on the take off pole on same side of pole that the line we were working on come off of. We went back up to this pole to find out he was right the cut-out fead the transformer, tap was made up with stinger & Hot line Clamp. This pole had been changed just a few weeks ago and years before this pole had a transformer on it that did not require a cut-out, and the cut-out fead the tap.

Written Statement By
Billy Joe Parker
Billy J Parker

3-2-09

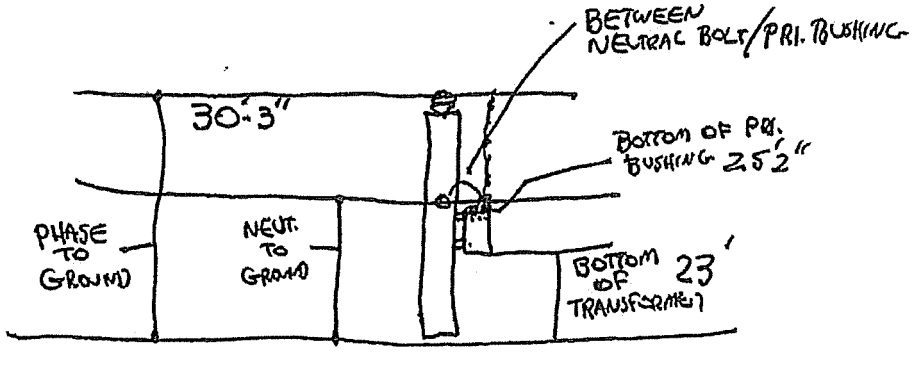
FRIDAY - FEB. 27, 2009

Approx. 10:20 AM. KEITH ELLIS called ME by phone and notified me we had an employee with an electrical contact. He said details were sketchy, but to head to Lyon Co. to investigate this Accident. The employee was DONNIE Hunt.

I contacted CASEY Hooper and she informed me in more details of WHO, WHAT, WHERE. I Arrived at the SCENE about 11:35 A.M. According to CASEY, DONNIE HUNT and BILLY JOE PARKER were sent to 448-33-POLE 18 to change out A UA1 with TRANS., S.C. SEC. While Framing the pole BILLY JOE and DONNIE were discussing the job. DONNIE decided to kill the line. THE cuto was in sight. Billy JOE said he watched him pull the cut-out with A long-stic THE truck that were using had to be operated on the ground. DONNIE WAS i he bucket, and Billy JOE WAS operating from the ground. ~~DONNIE~~ Billy JOE stated he as on the left side of the transformer. B.J. said DONNIE looked At me ~~he~~ said "I'VE BEEN SHOCKED."

B.J. Dropped the bucket and looked DONNIE OVER. And IMMEDIATELY decided to call 911. DONNIE WAS rubbing his left hand (index finger). B.J. en notified CASEY.

DONNIE WANTED to go BACK to the TAKE-OFF to see what he had done. Upon ARRIVAL he noticed the TRANSFORMER WAS fused, not the tap. HE sked B.J. to set the lights BACK ON. So he closed the cut-out BACK IN THE AMBULANCE ARRIVED and they both rode to Western Baptist Hospital in PADUCAH, KY.



STEVE COLLINS
3/3/09

ON Friday Feb. 27-2009 at about 10:00 am Casey called me & told me that Donnie Hunt had made contact with a energed line. Then about 11:00 am Donnie Phillips called & ask me to go to Brasher LN in Lyon County to the scene of the accident. Upon arriveing at the scene I found that Billy Joe & Donnie Hunt had already left in the Ambulance. Myself & Steve Collins looked at the scene & then later talked to Billy Joe, We found that Billy Joe & Donnie Hunt were going to change out a VA-1 with a TXF & security light. They had already framed the pole & then Donnie went to Kill the line to work the job dead. Donnie returned & went up in the bucket on 332 to take down the TXF before sitting the pole & made contact. Billy Joe Ask what was wrong & Donnie said that he had been shocked. Billy Joe then lowered Donnie to the ground & called 911. Donnie got out of the bucket on his own, then told Billy Joe to take him back to the take-off to see what he had done wrong. After they got to the take-off he show that the cut-out he opened feed the TXF Not the line they where working on. The take-off pole had just been replaced due to Icestorm & the CSP TXF was replaced with a conventional TXF & the cut-out that feed the line was Not replaced. There are some meesurments on back.

Kevin Board
3-3-09

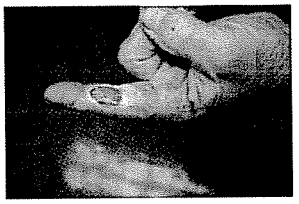
Phase to Ground was 30' 3"

Neutral to ground was 25' 9"

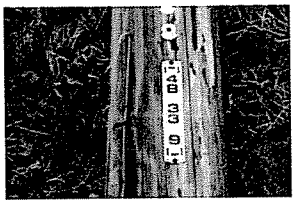
Bottom of TXF to ground was 23'.

Bottom of Pry. Bushing to ground was 25' 2".

From Neutral bolt to top of Pry bushing on TXF was 12 1/2"



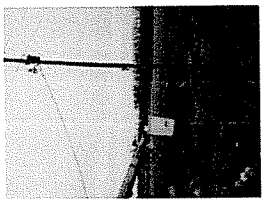
3-3-09 a.JPG



48-33-9.jpg

Bucket @ takeoff.JPG

Cotton insulated top outside.jpg



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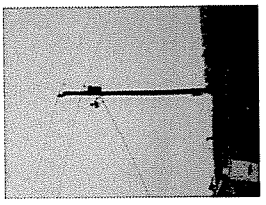

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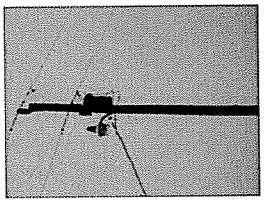

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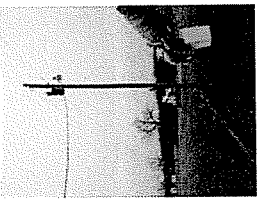

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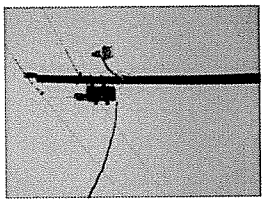

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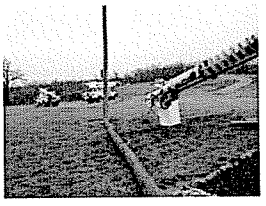

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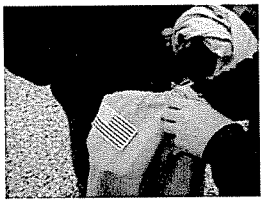

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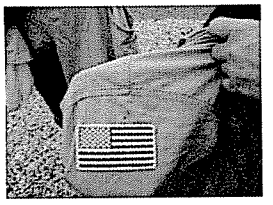

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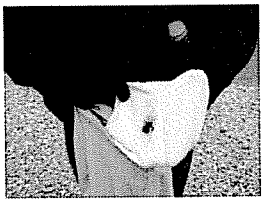

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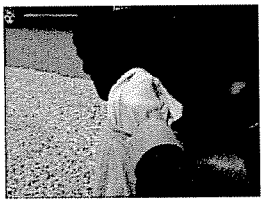

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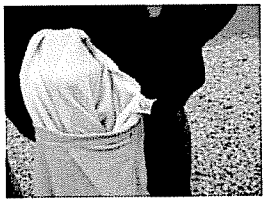

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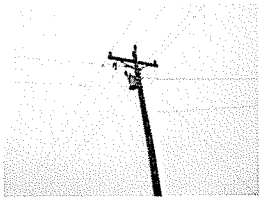

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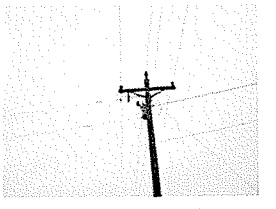

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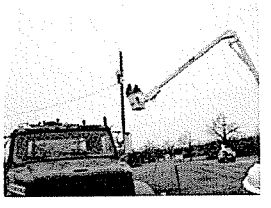

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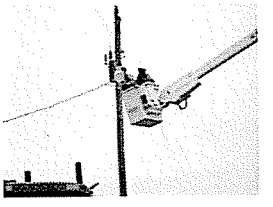

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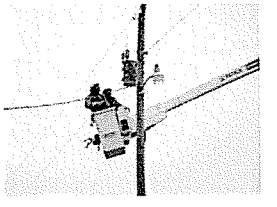

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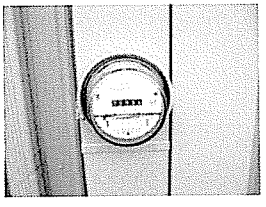

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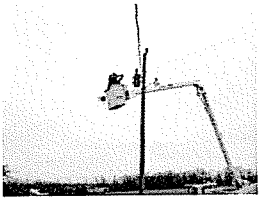

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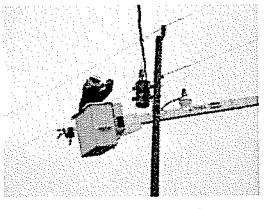

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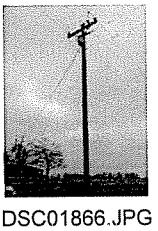

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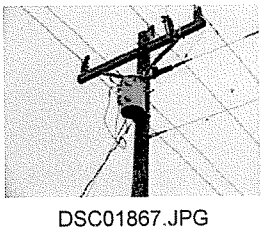

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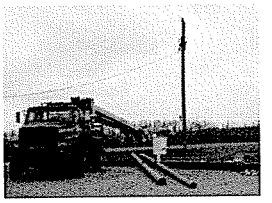
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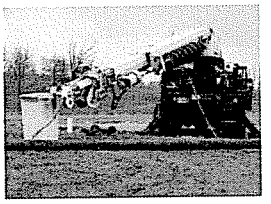
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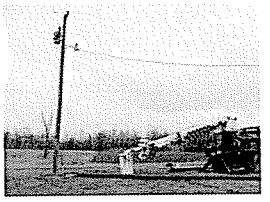
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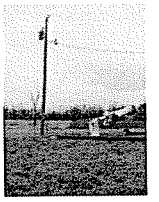
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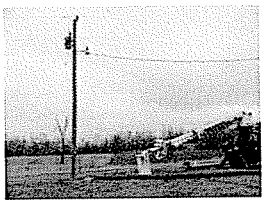
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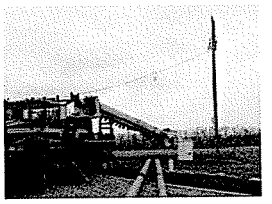
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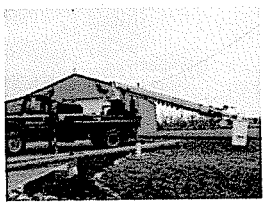
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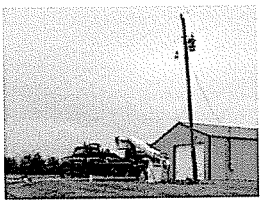
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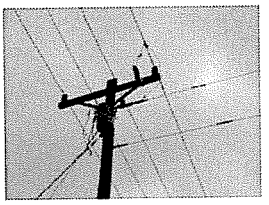
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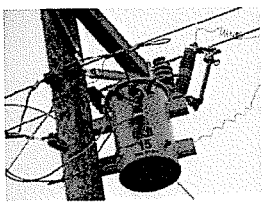
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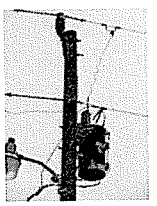
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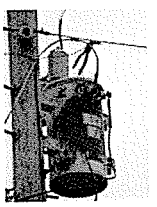
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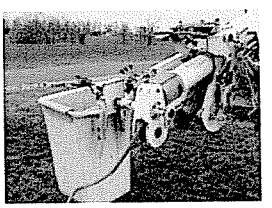
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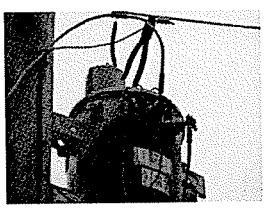
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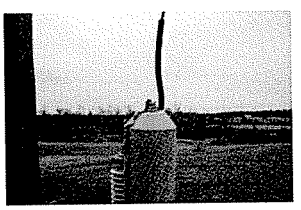
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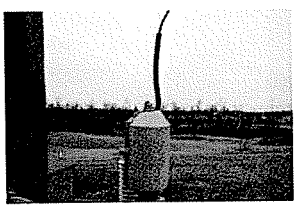
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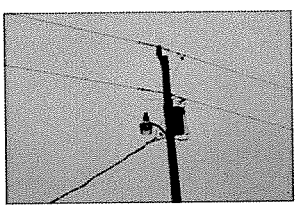
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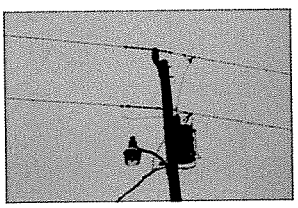
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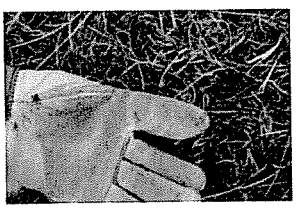
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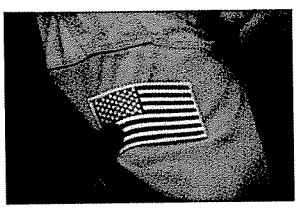
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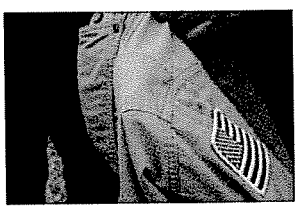
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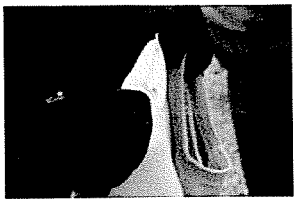
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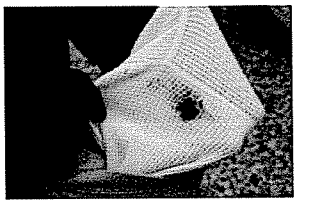
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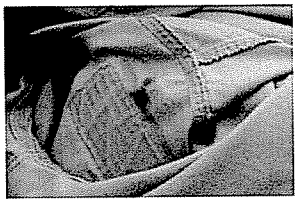
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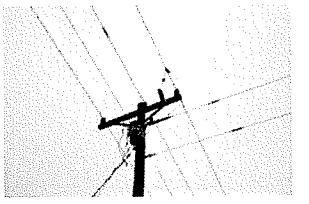
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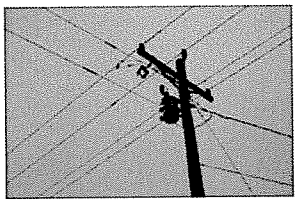
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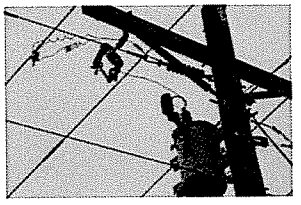
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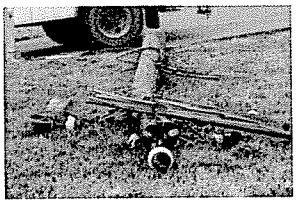
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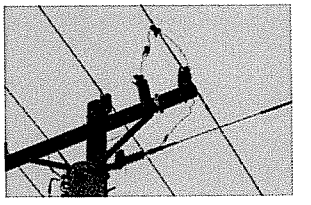
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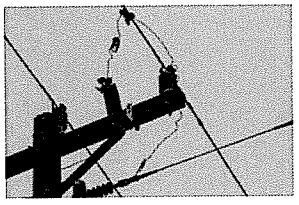
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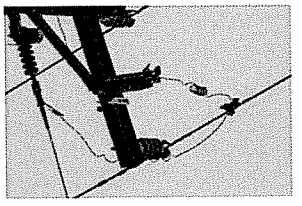
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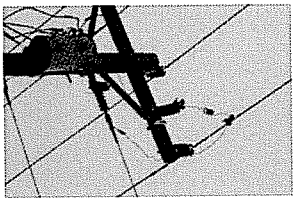
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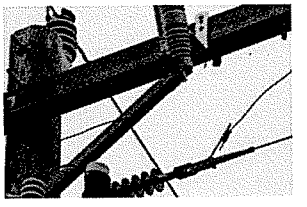
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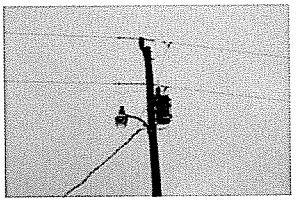
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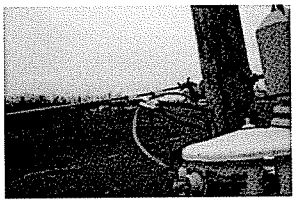
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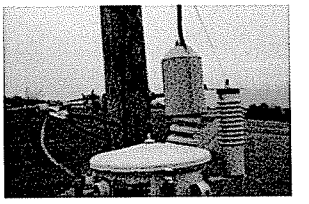
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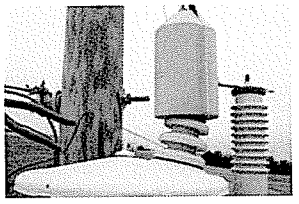
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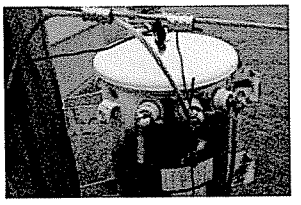
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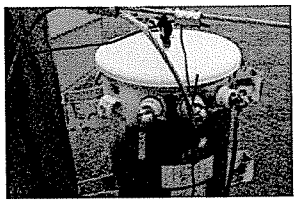
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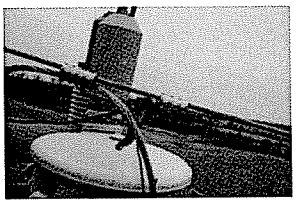
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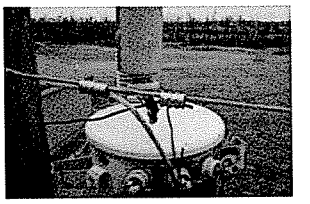
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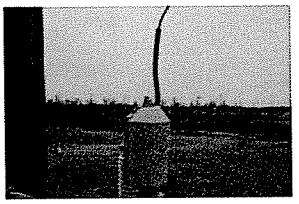
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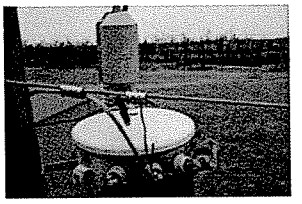
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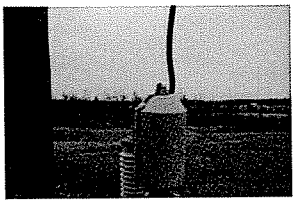
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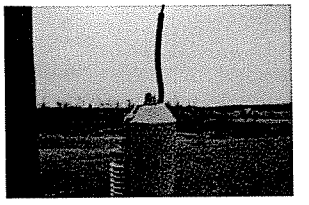
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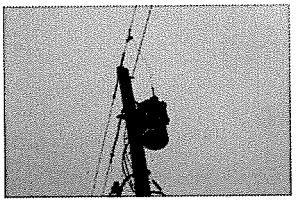
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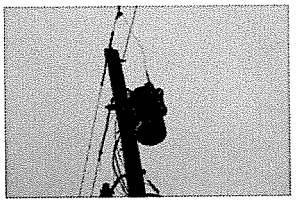
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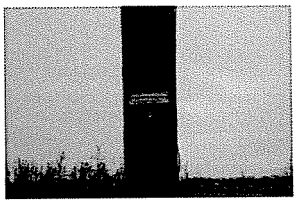
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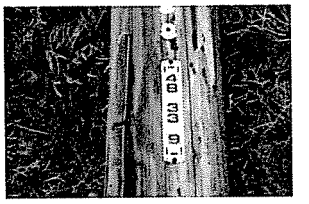
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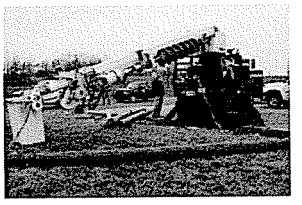
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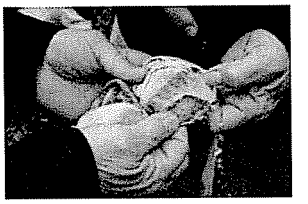
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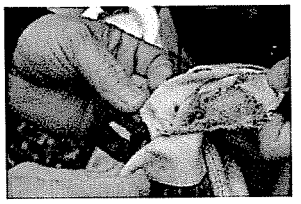
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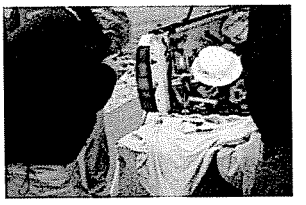
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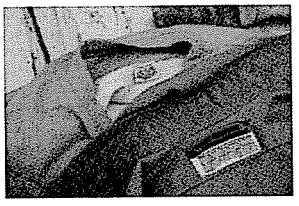
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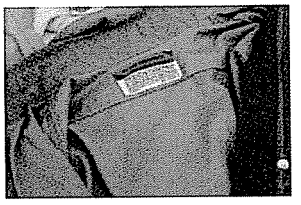
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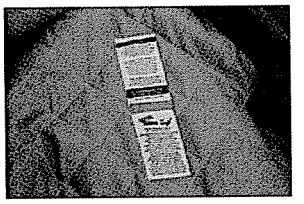
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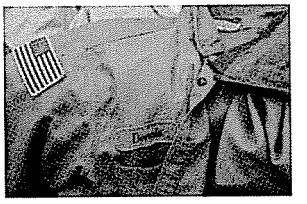
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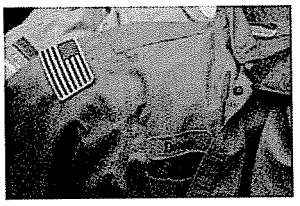
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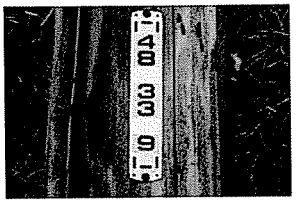
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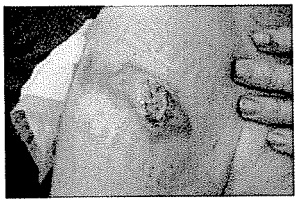
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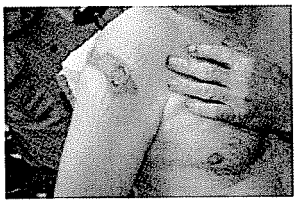
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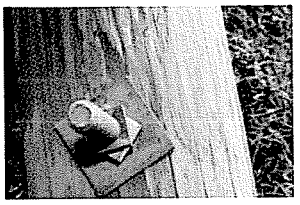

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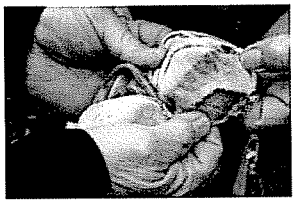
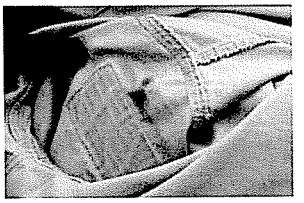


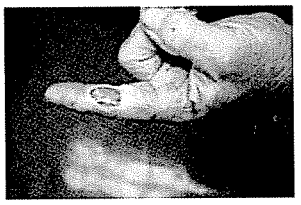
Inside L glove.jpg

inside second layer.jpg

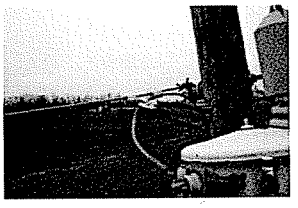


Insided FR shirt R shoulder.jpg

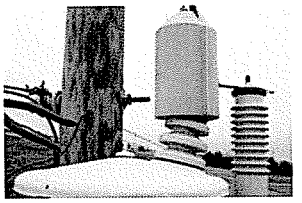
Left glove.jpg



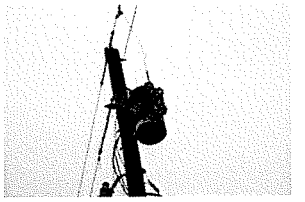
Left index finger.jpg



Pliers 2.jpg

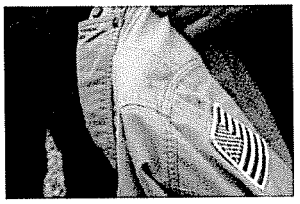


Pliers 3.jpg

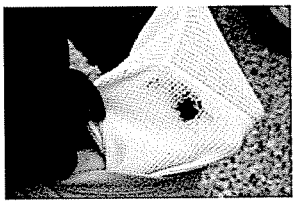


Pliers 4.jpg

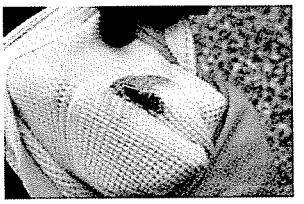
Pliers.jpg



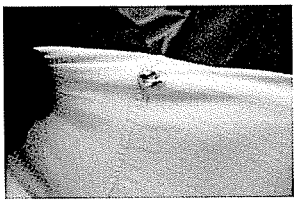
R Shoulder FR Shirt.jpg



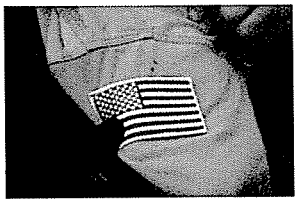
Right shoulder .jpg



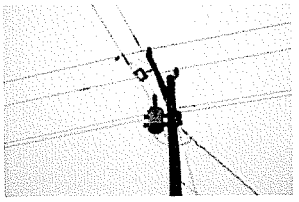
Right shoulder 2.jpg



Right shoulder second layer.jpg

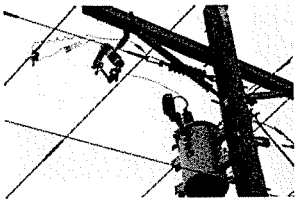


Right sleeve.jpg

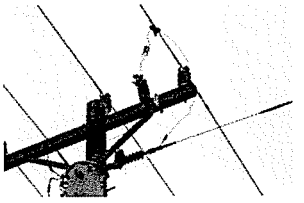


Take off 2.jpg

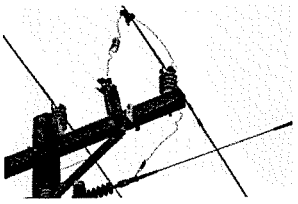
Take off 3.jpg



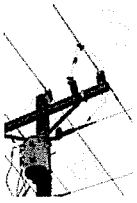
Take off 4.jpg



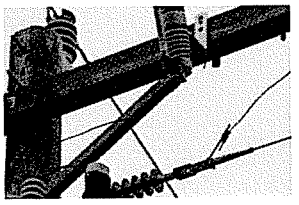
Take off 5.jpg



Take off 6.jpg

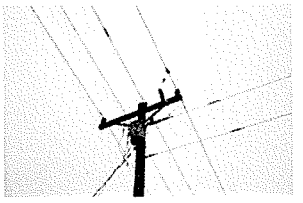


Take off 7.jpg

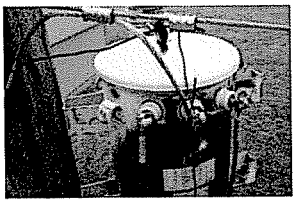


Take off 8.jpg

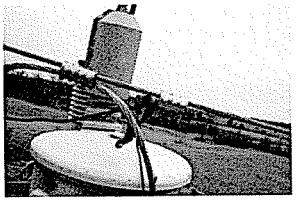
Take off 9.jpg



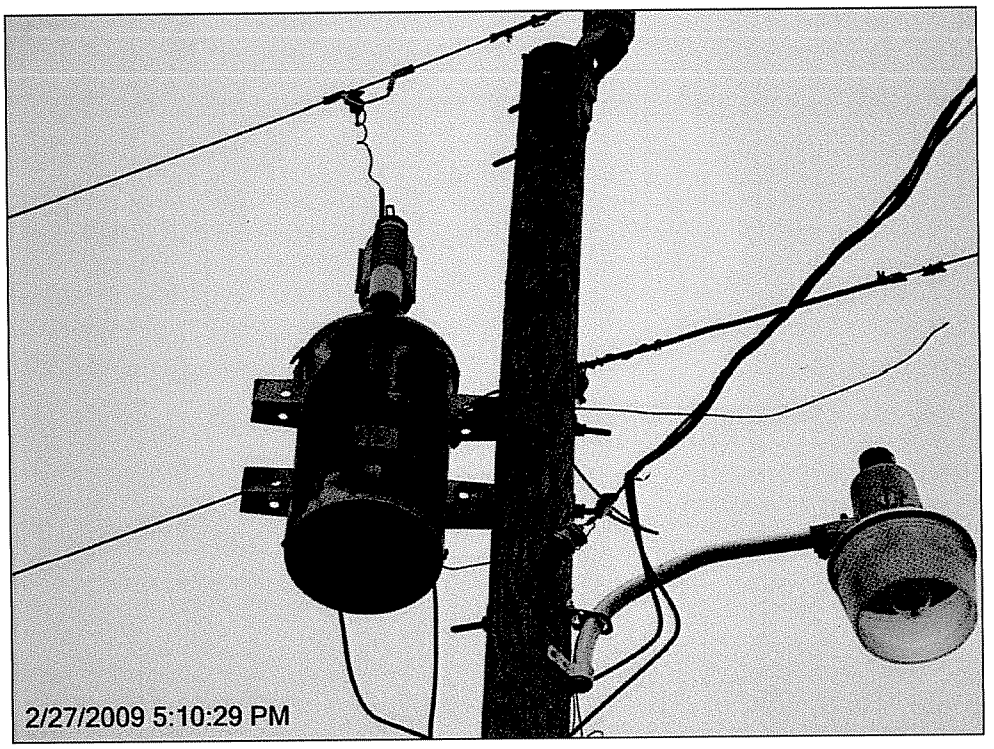
Take off.jpg



Transformer .jpg



transformer 2.jpg



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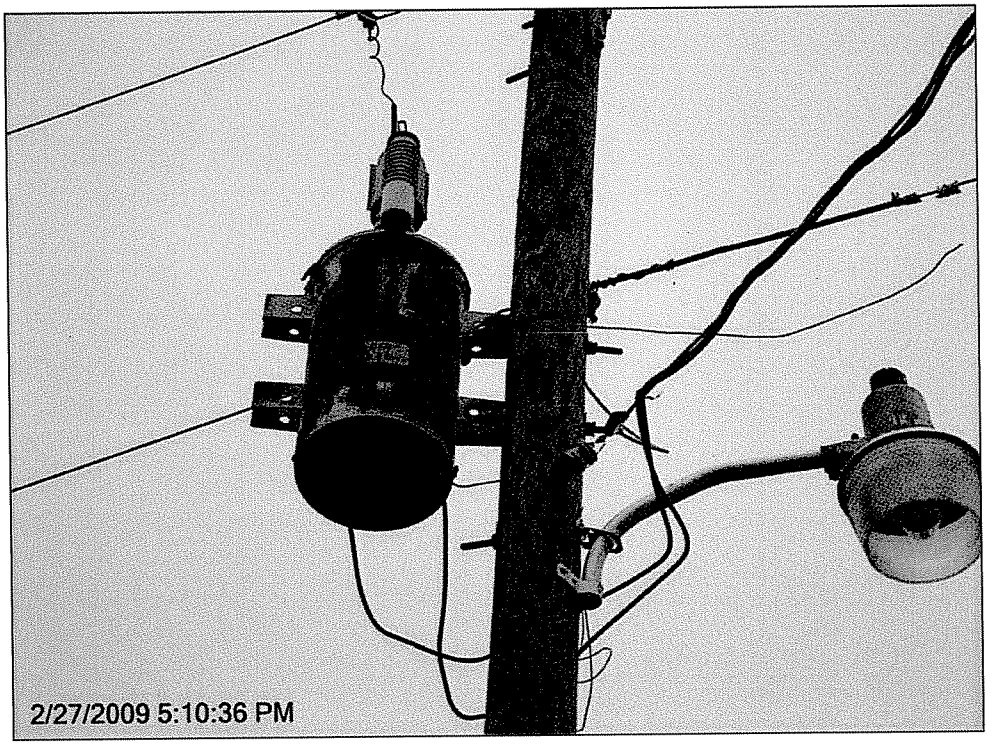

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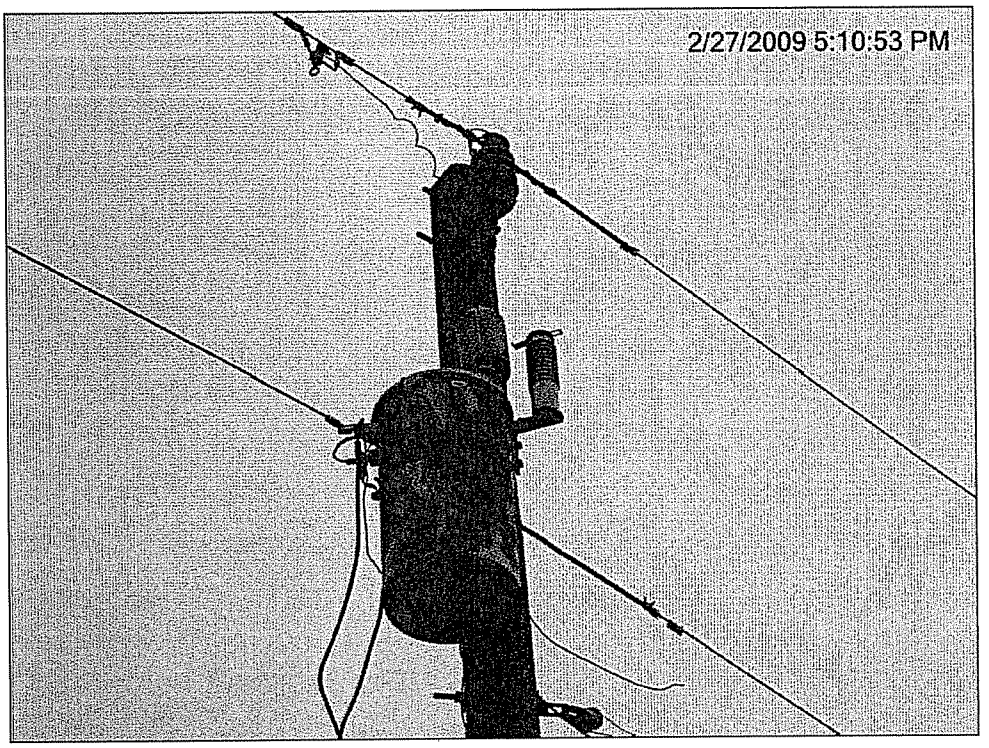

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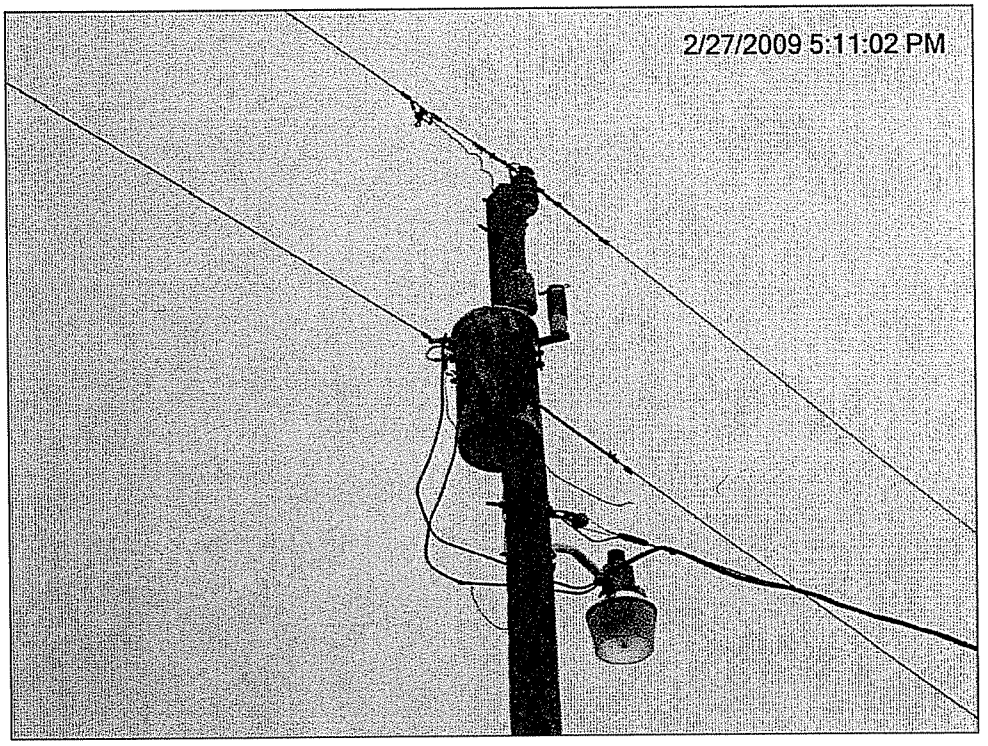

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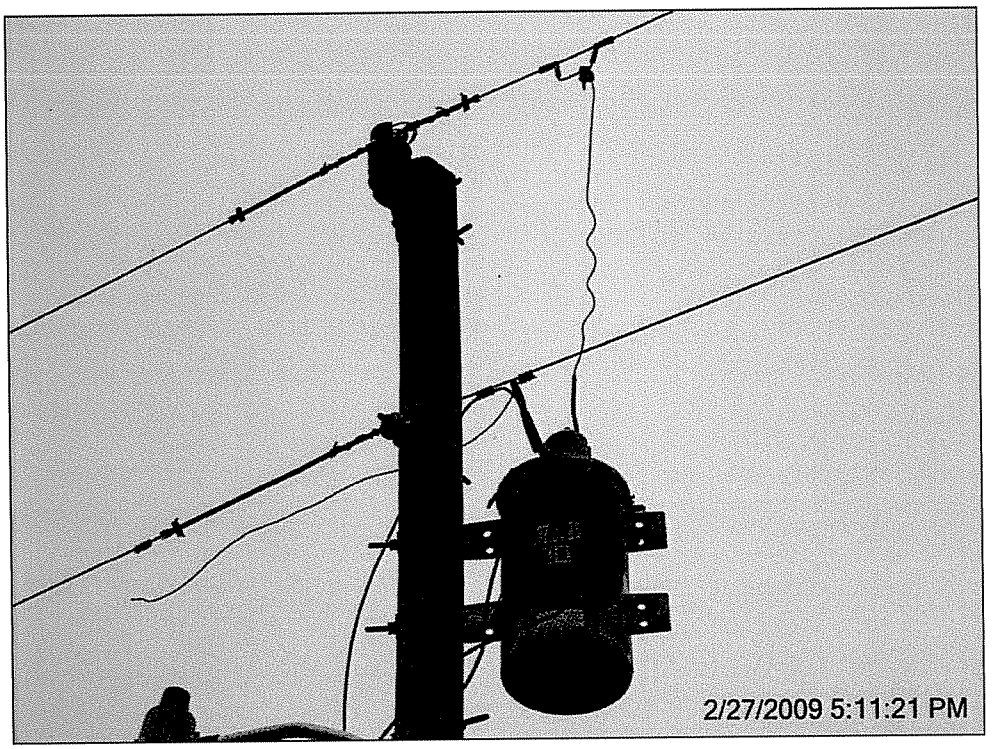

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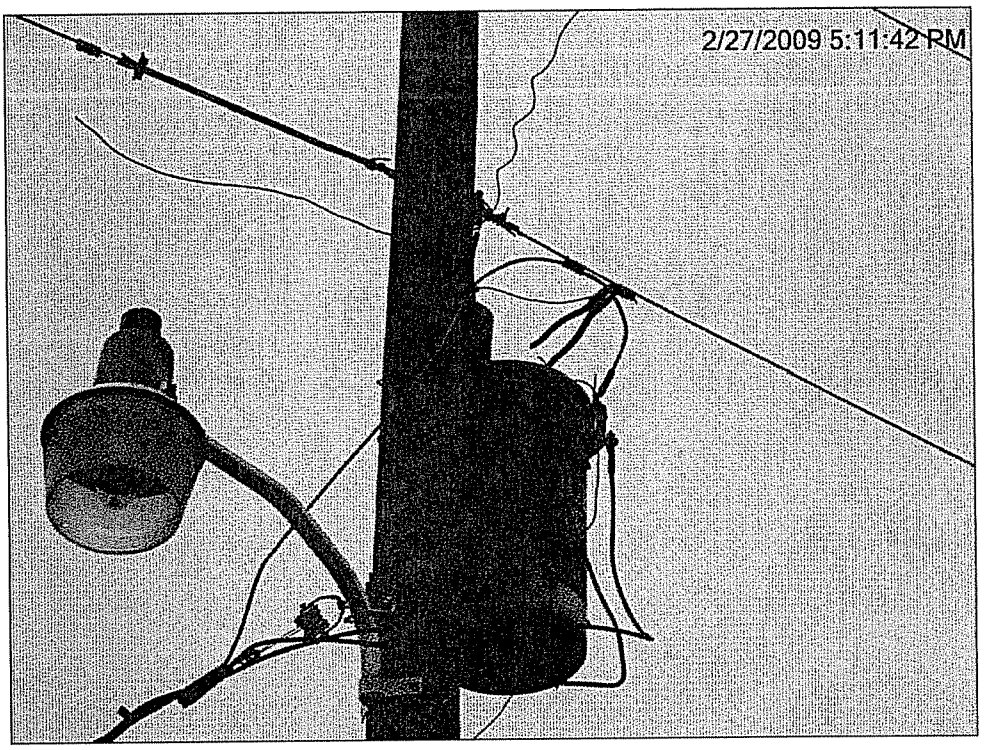

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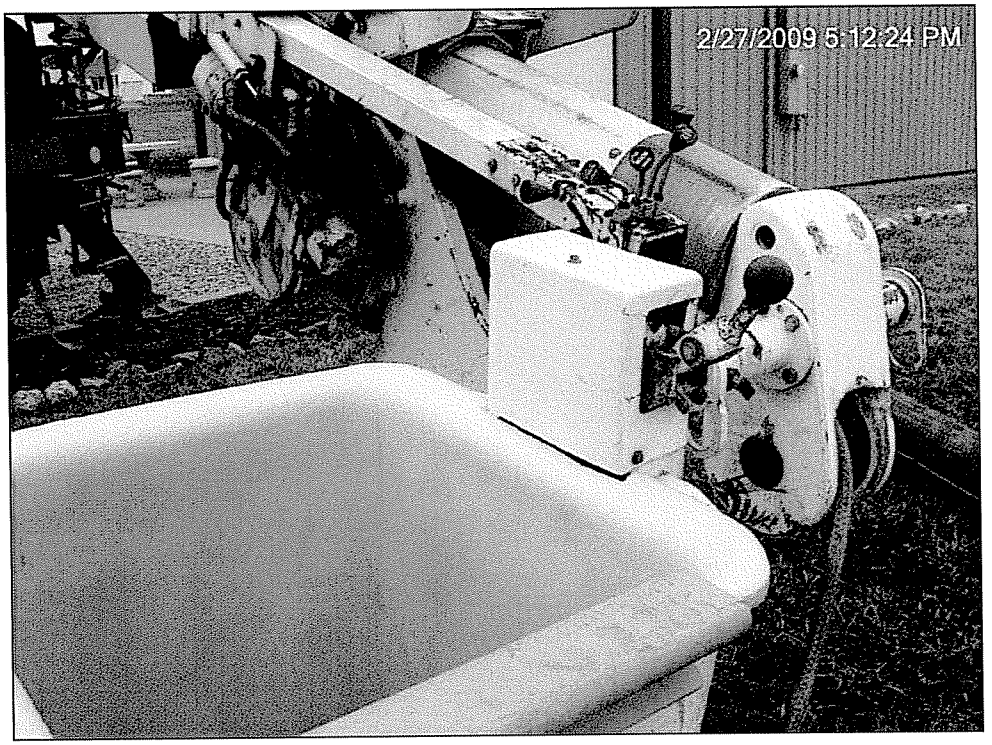
#8

#9



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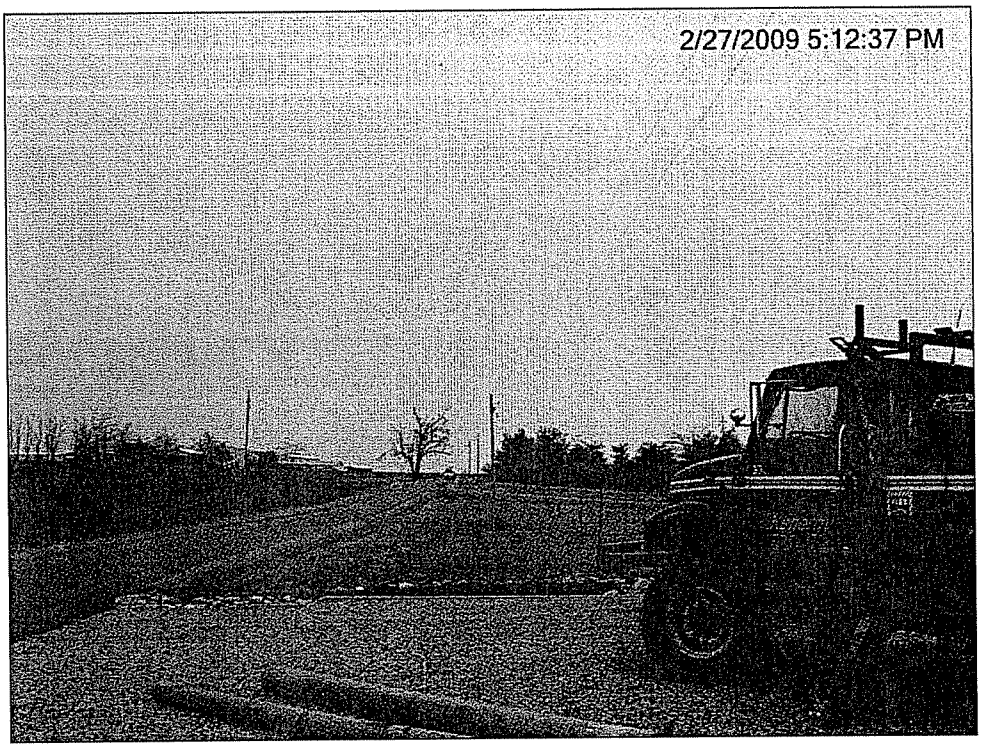

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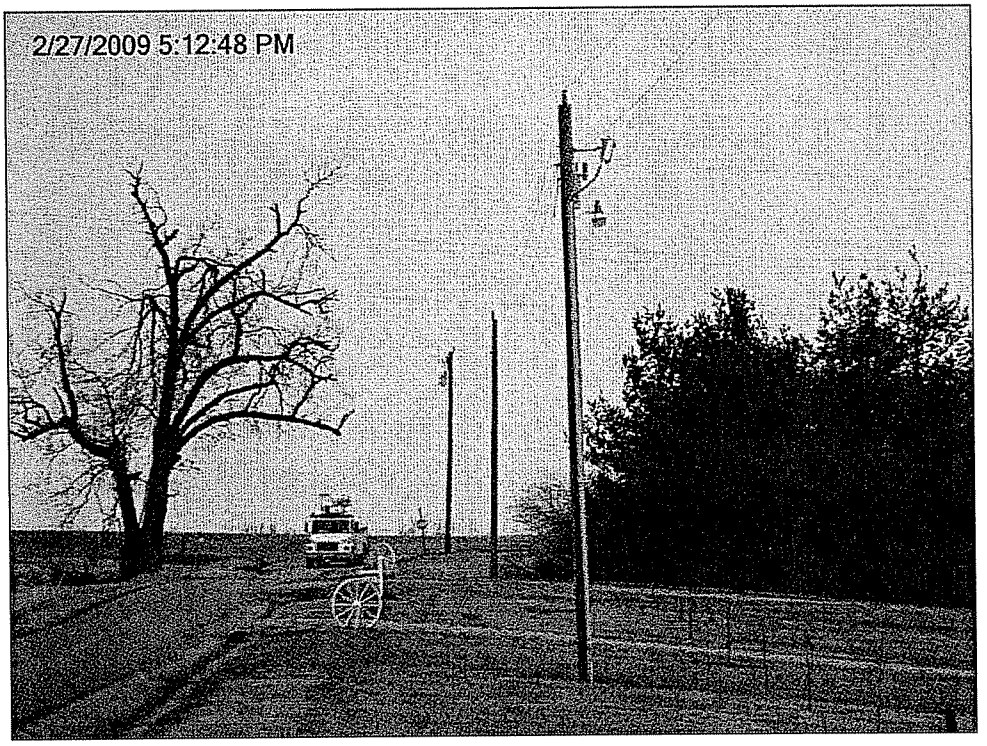

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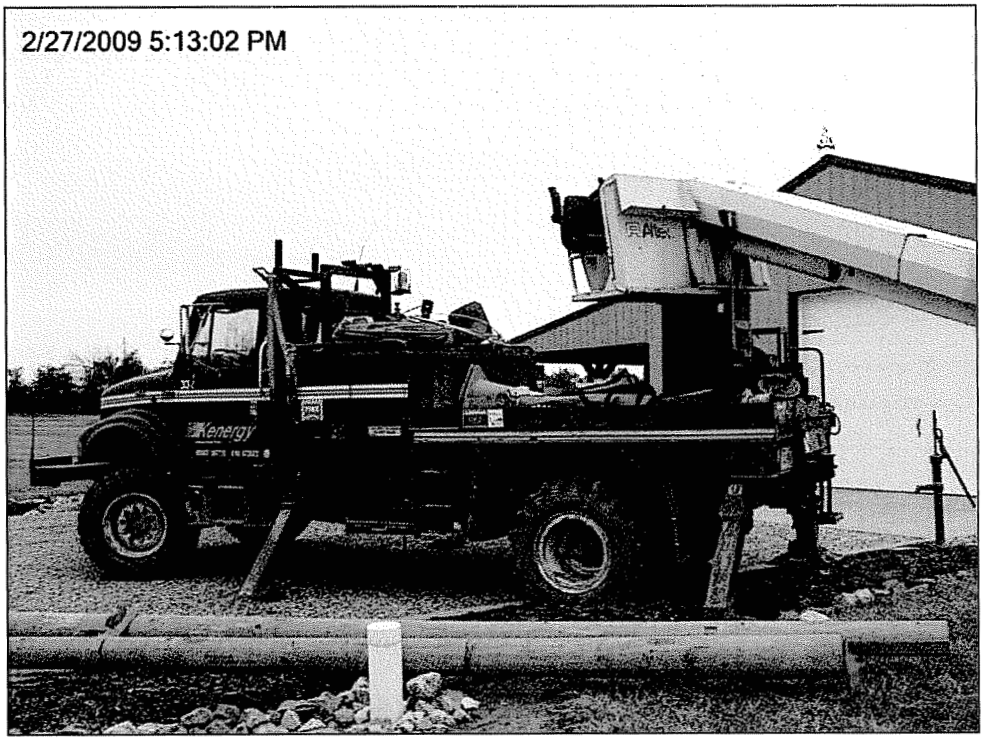

2/27/2009 5:13:02 PM
Kenergy

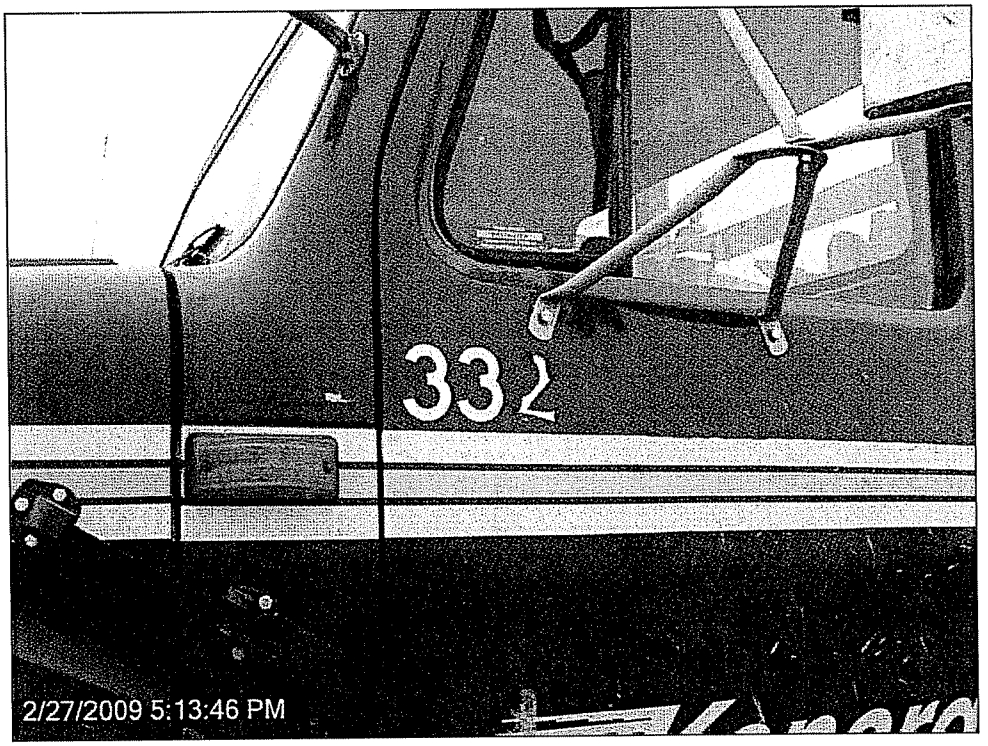
#13


If It's NOT Grounded
It's NOT Dead!
HASTINGS
2/27/2009 5:13:18 PM

#14


33
2/27/2009 5:13:27 PM
Kenergy
A Touchstone Energy® Partner
USDOT 397772 KYU 073522
HYDRAULIC

#15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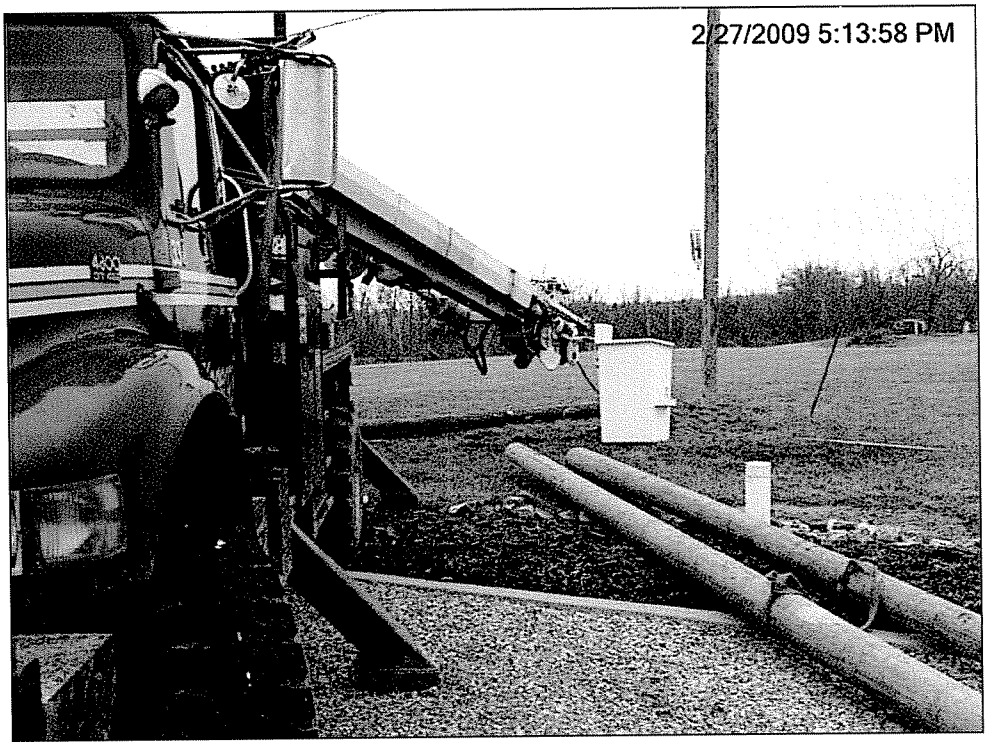

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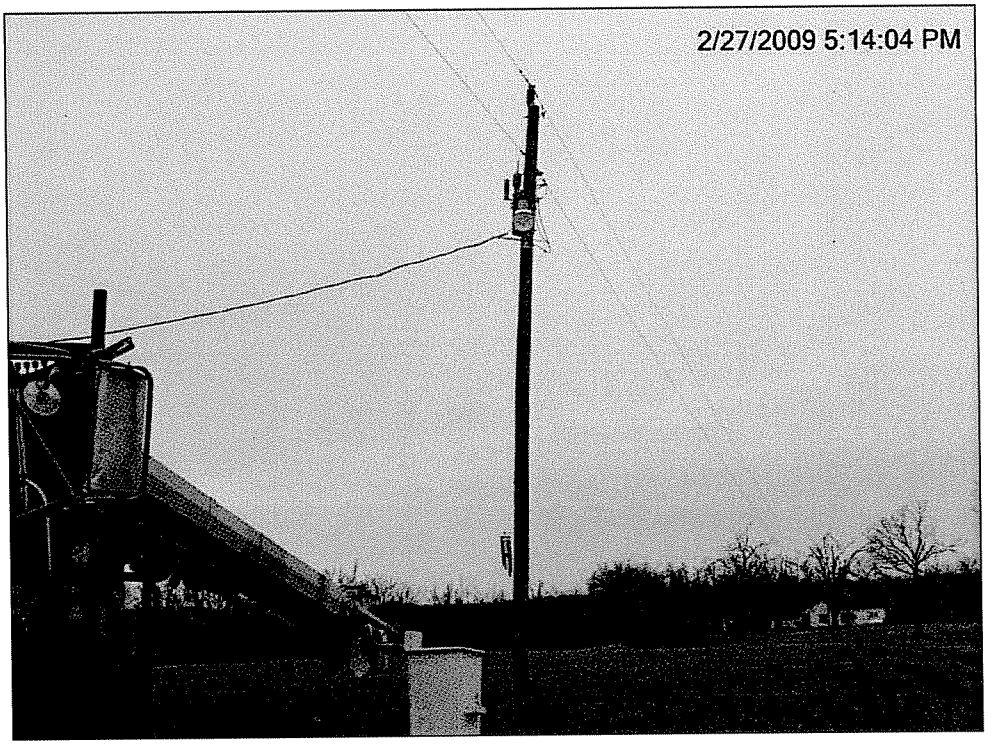
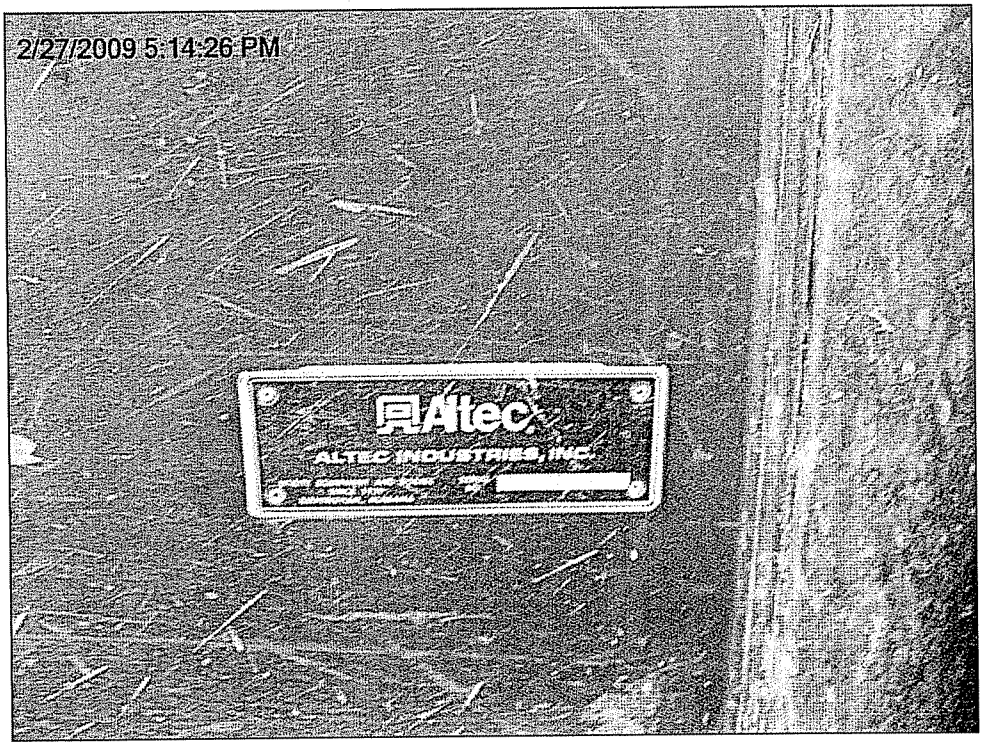


#18


Altec
2/27/2009 5:14:20 PM

#19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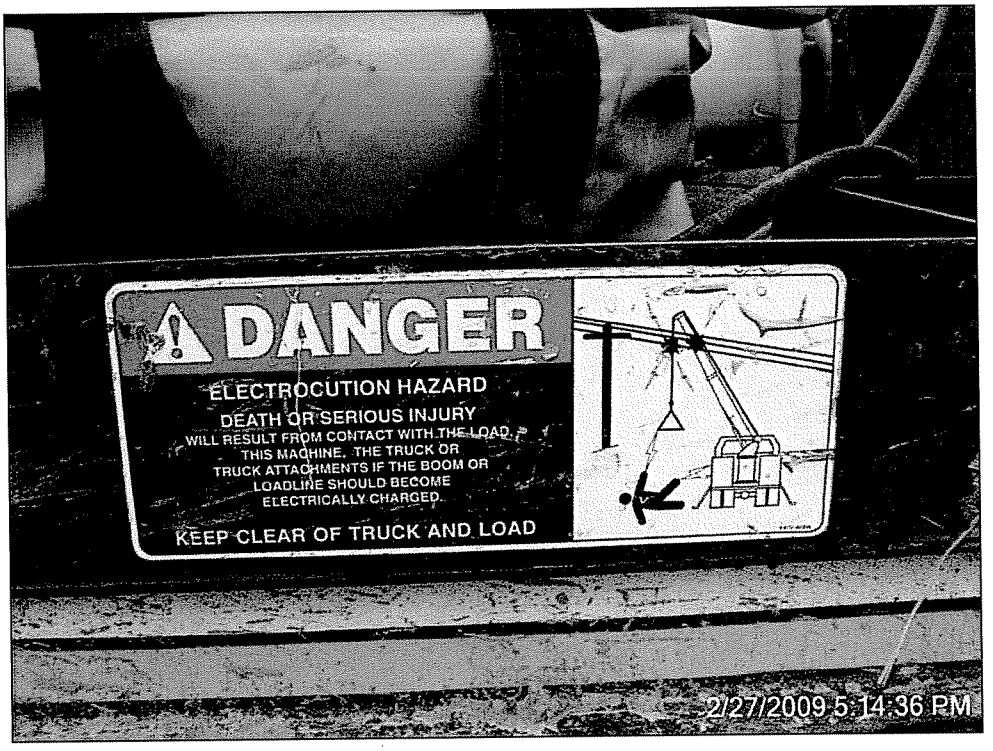
Altec
ALTEC INDUSTRIES, INC.

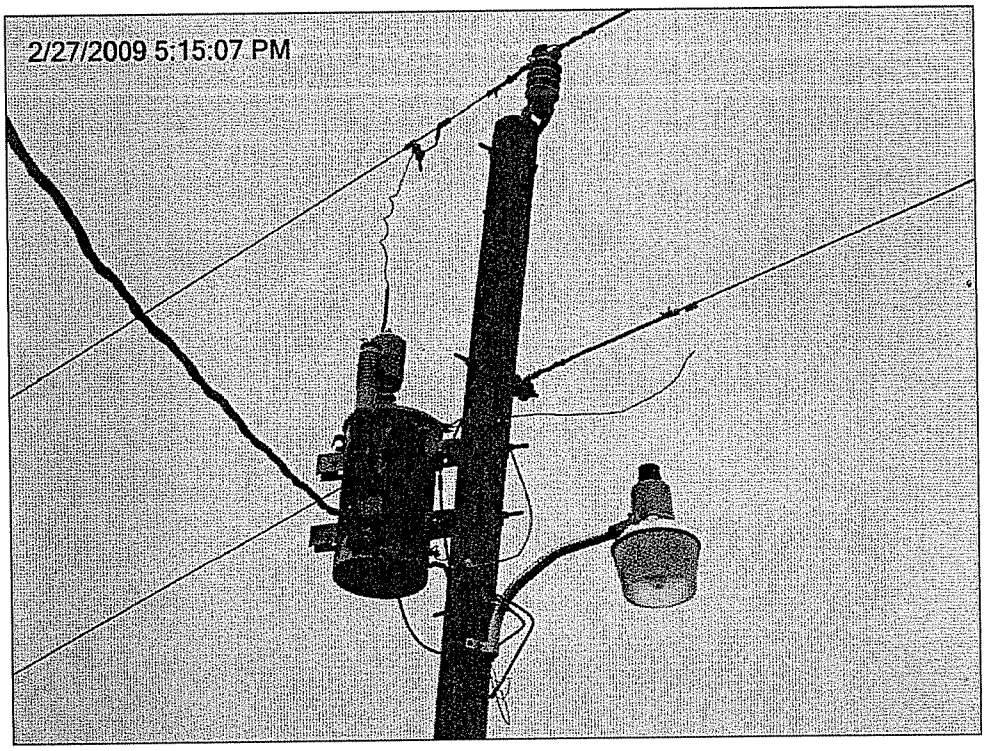
#20


DANGER
ELECTROCUTION HAZARD
DEATH OR SERIOUS INJURY
WILL RESULT FROM CONTACT WITH THE LOAD, THIS MACHINE, THE TRUCK OR TRUCK ATTACHMENTS IF THE BOOM OR LOADLINE SHOULD BECOME ELECTRICALLY CHARGED.
KEEP CLEAR OF TRUCK AND LOAD
2/27/2009 5:14:36 PM

#21


2/27/2009 5:14:51 PM

#22



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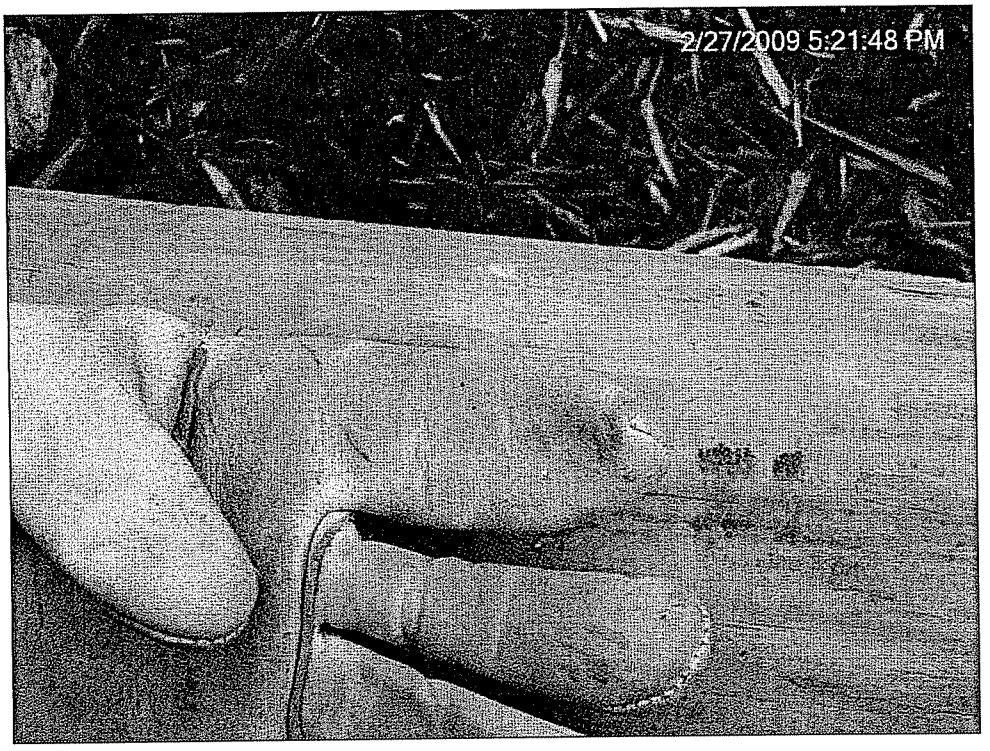
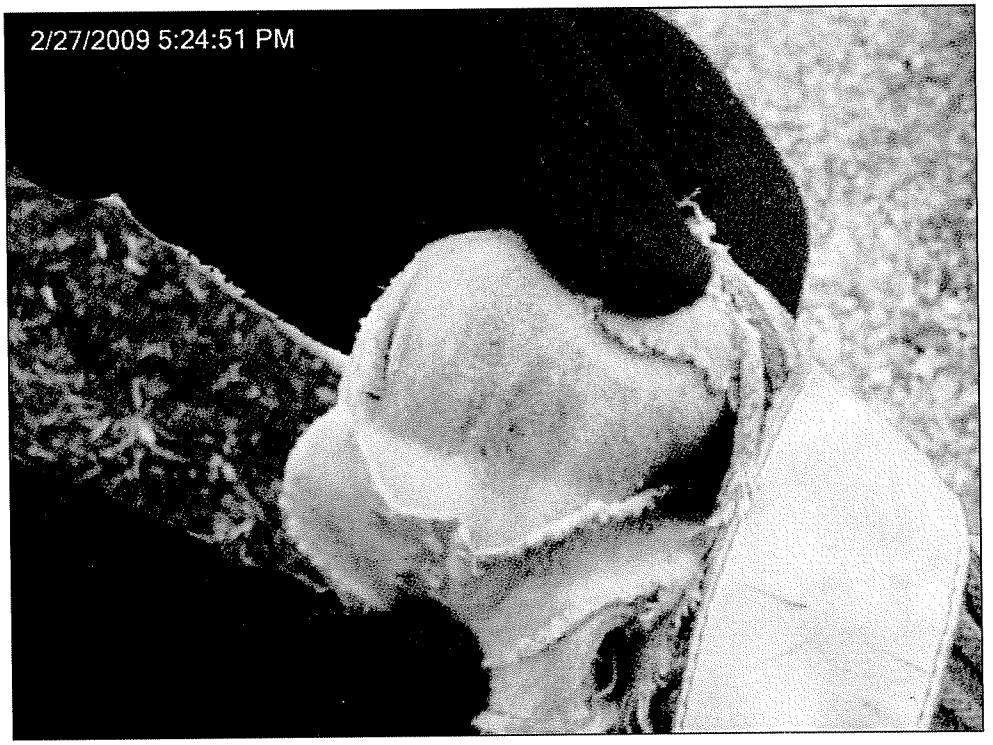


#24

#25



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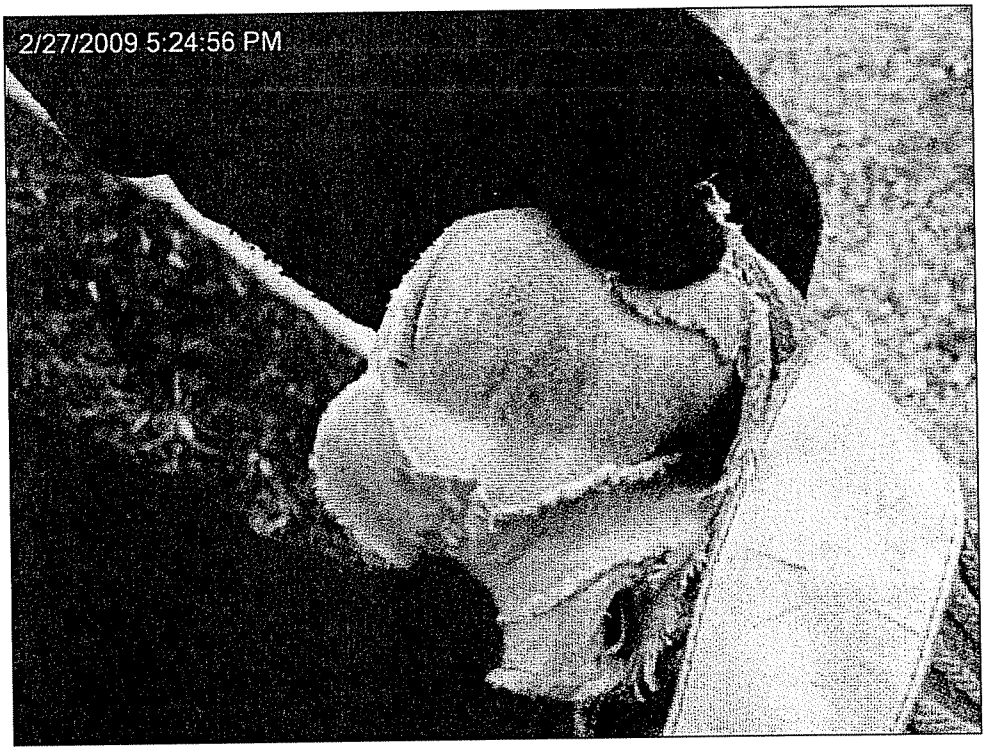
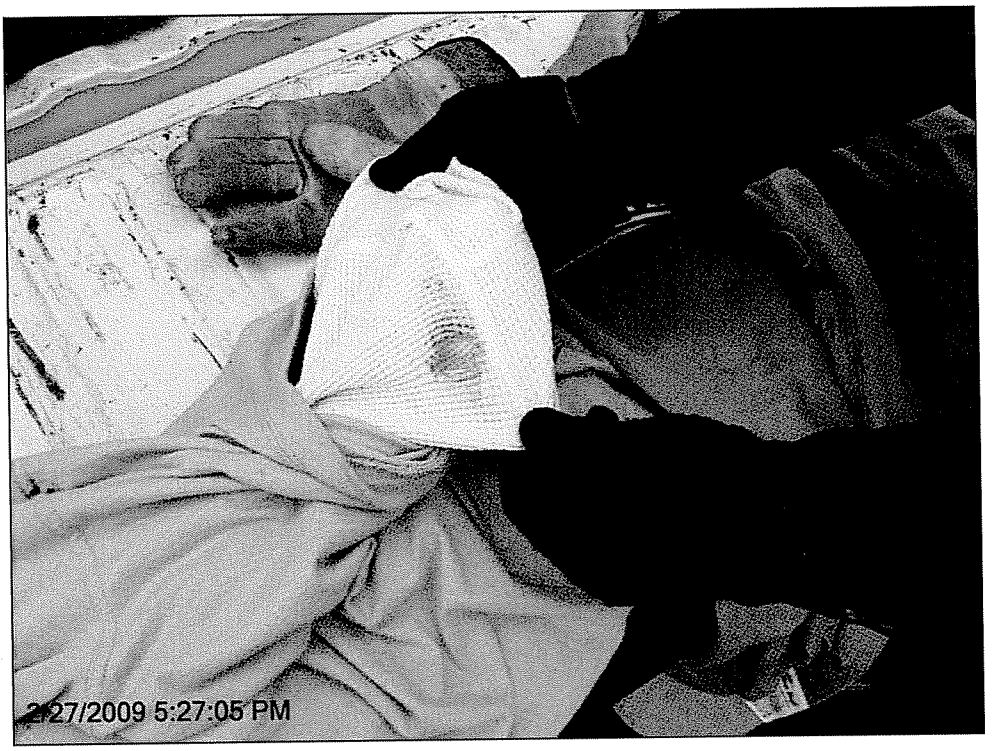


#27

#28



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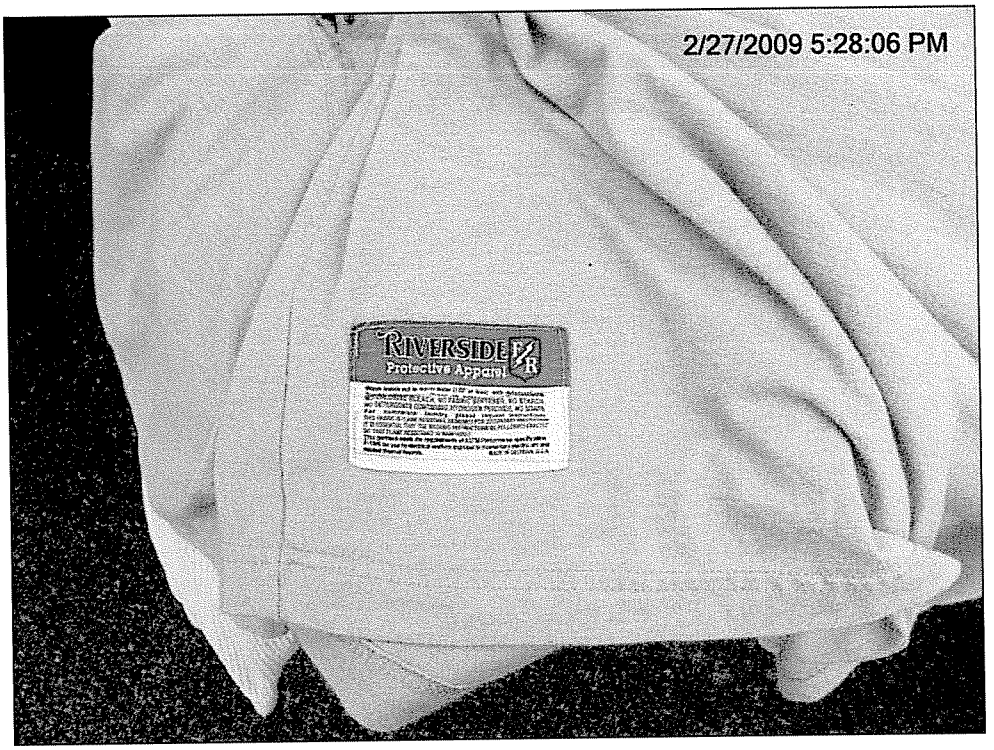
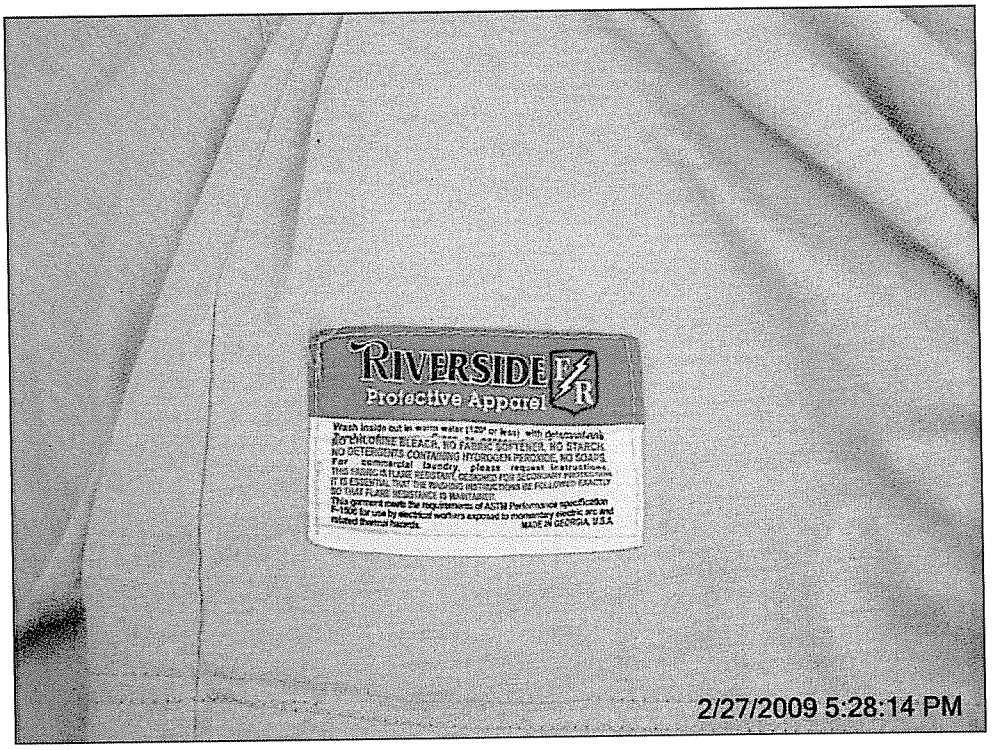
#31

#32

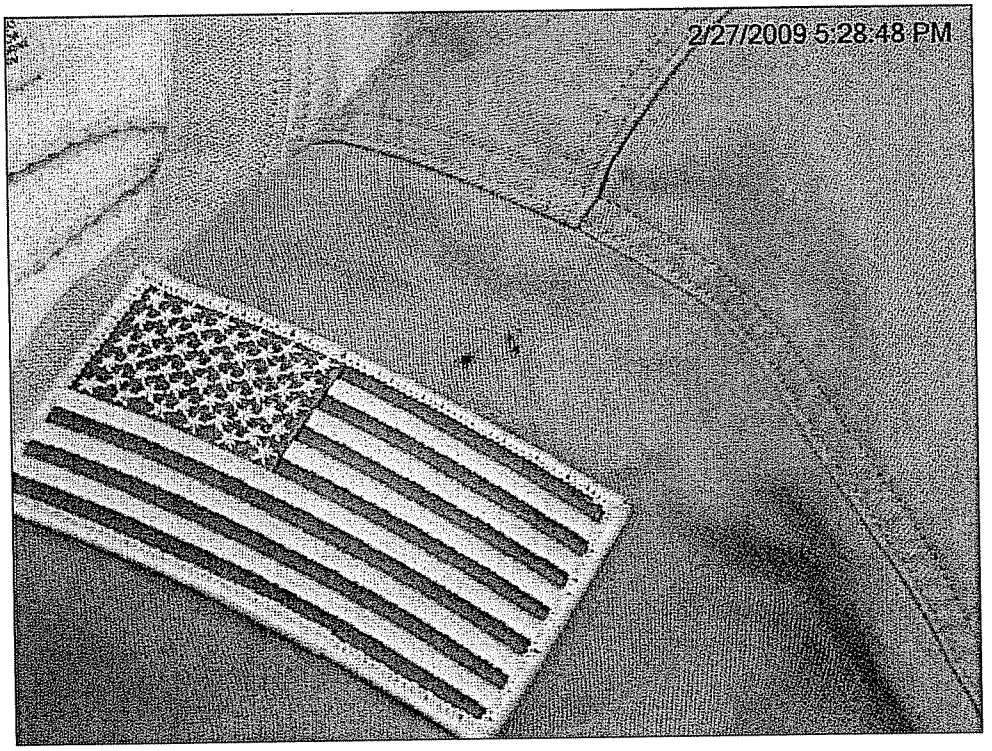

2/27/2009 5:28:06 PM
RIVERSIDE F/R
Protective Apparel

#33


RIVERSIDE F/R
Protective Apparel
2/27/2009 5:28:14 PM

#34

#35



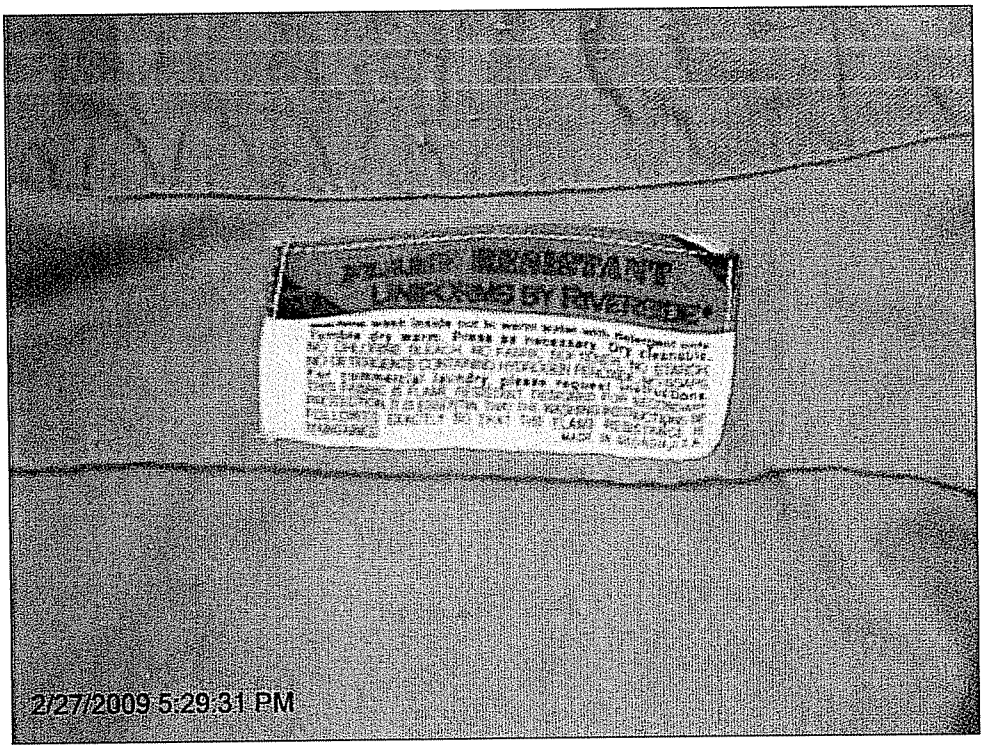
#36


2/27/2009 5:29:03 PM
Donnie

#37


2/27/2009 5:29:21 PM
FLAME RESISTANT
UNIFORMS BY RIVERSIDE

#38

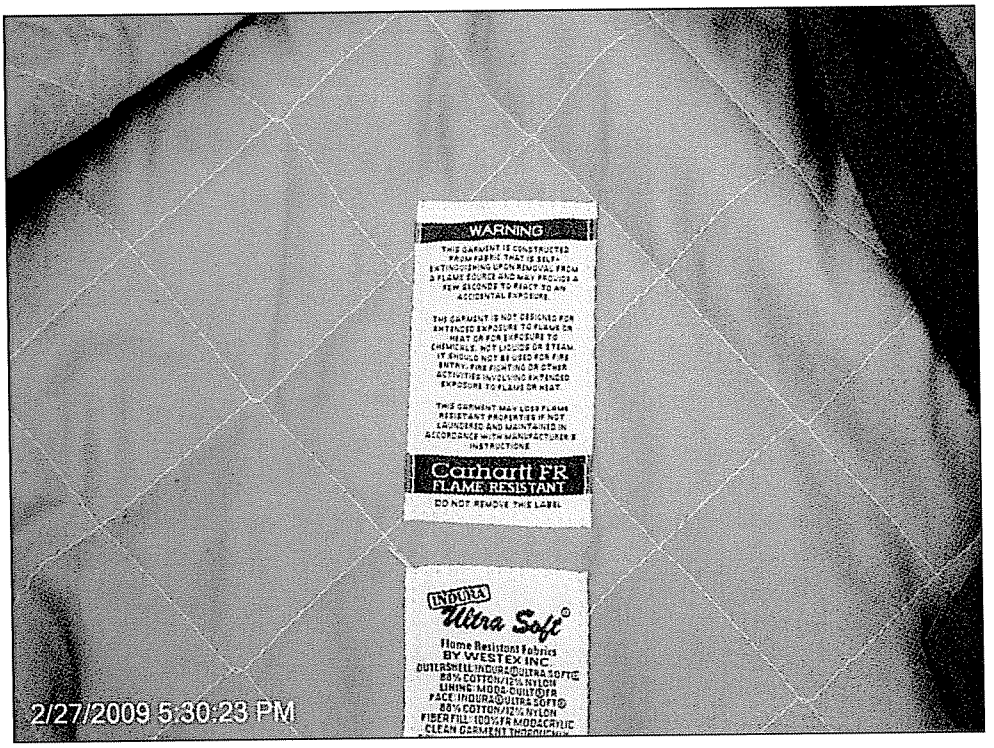


#39

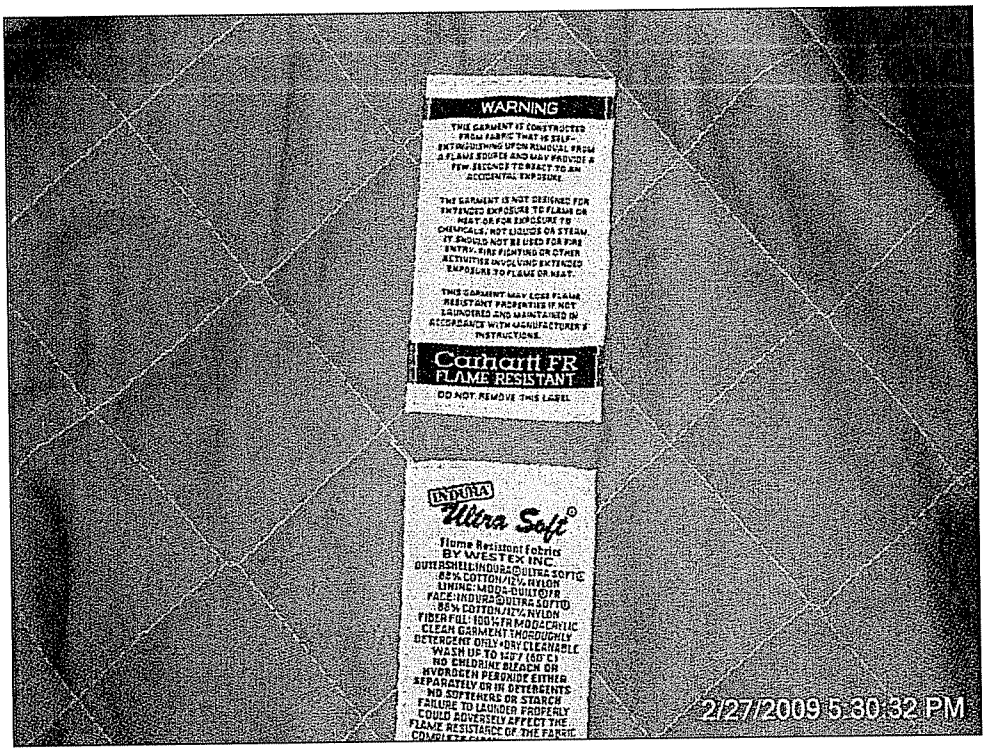
#40


2/27/2009 5:30:04 PM
Donnie
Kenergy

#41


WARNING
Carhartt FR
FLAME RESISTANT
INDURA
Ultra Soft
Flame Resistant Fabrics
BY WESTEX INC.
2/27/2009 5:30:23 PM

#42


WARNING
THIS GARMENT IS CONSTRUCTED FROM FABRIC THAT IS SELF-EXTINGUISHING UPON REMOVAL FROM A FLAME SOURCE AND MAY PROVIDE A FEW SECONDS TO REACT TO AN ACCIDENTAL EXPOSURE.
THIS GARMENT IS NOT DESIGNED FOR EXTENDED EXPOSURE TO FLAME OR HEAT OR FOR EXPOSURE TO CHEMICALS, HOT LIQUIDS OR STEAM. IT SHOULD NOT BE USED FOR FIRE ENTRY, FIRE FIGHTING OR OTHER ACTIVITIES INVOLVING EXTENDED EXPOSURE TO FLAME OR HEAT.
THIS GARMENT MAY LOSE FLAME RESISTANT PROPERTIES IF NOT LAUNDERED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
Carhartt FR
FLAME RESISTANT
DO NOT REMOVE THIS LABEL
INDURA
Ultra Soft
Flame Resistant Fabric
BY WESTEX INC.
OUTERSHELL: INDURA® ULTRA SOFT®
65% COTTON/12% NYLON
LINING: MOISS-BUST® FR
FACE: INDURA® ULTRA SOFT®
65% COTTON/12% NYLON
FIBER FILL: 100% FR MODACRYLIC
CLEAN GARMENT THOROUGHLY
DETERGENT ONLY • DRY CLEANABLE
WASH UP TO 140°F (60° C)
NO CHLORINE BLEACH OR HYDROGEN PEROXIDE EITHER SEPARATELY OR IN DETERGENTS
NO SOFTENERS OR STARCH
FAILURE TO LAUNDER PROPERLY COULD ADVERSELY AFFECT THE FLAME RESISTANCE OF THE FABRIC
2/27/2009 5:30:32 PM

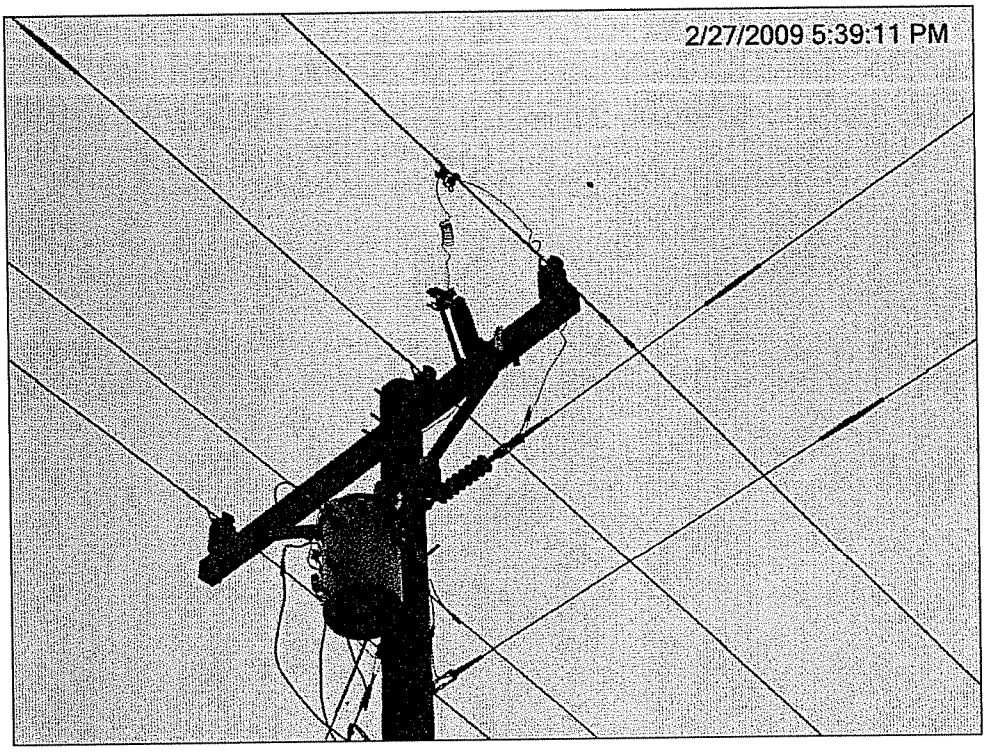
#43


2/27/2009 5:30:43 PM
FR
carhartt

#44

#45

#46



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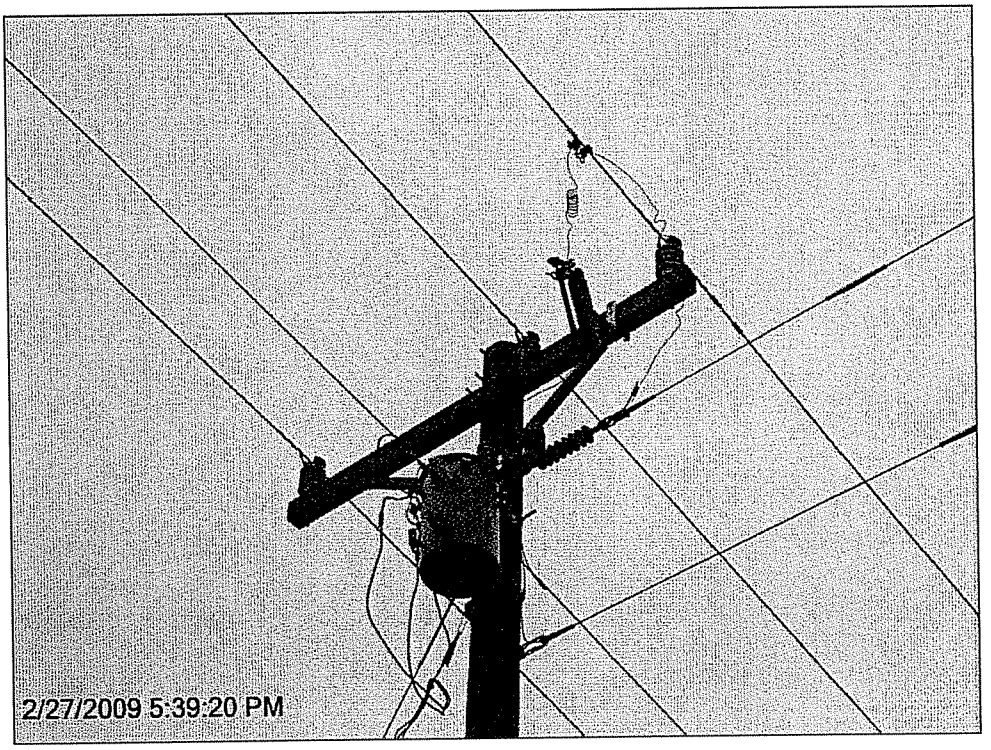

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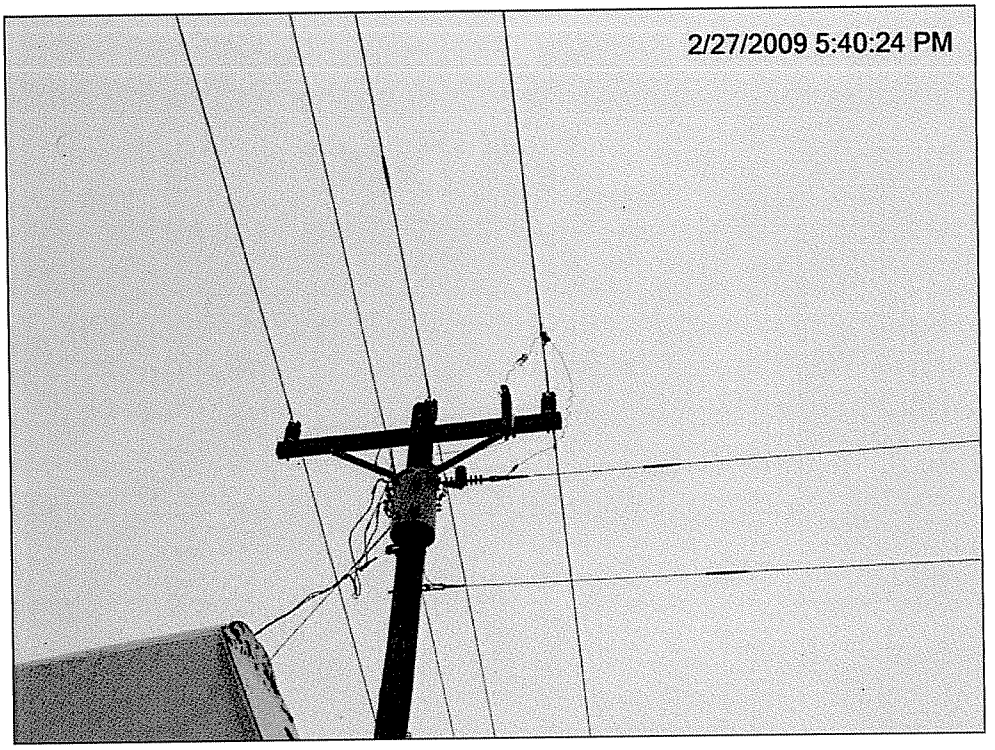

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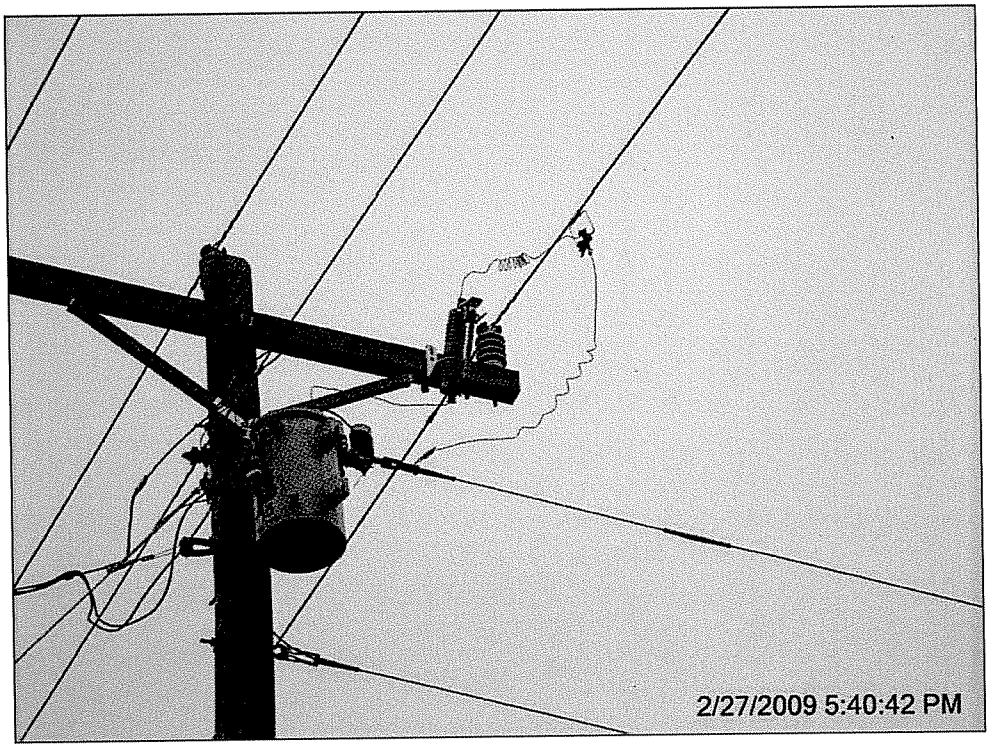

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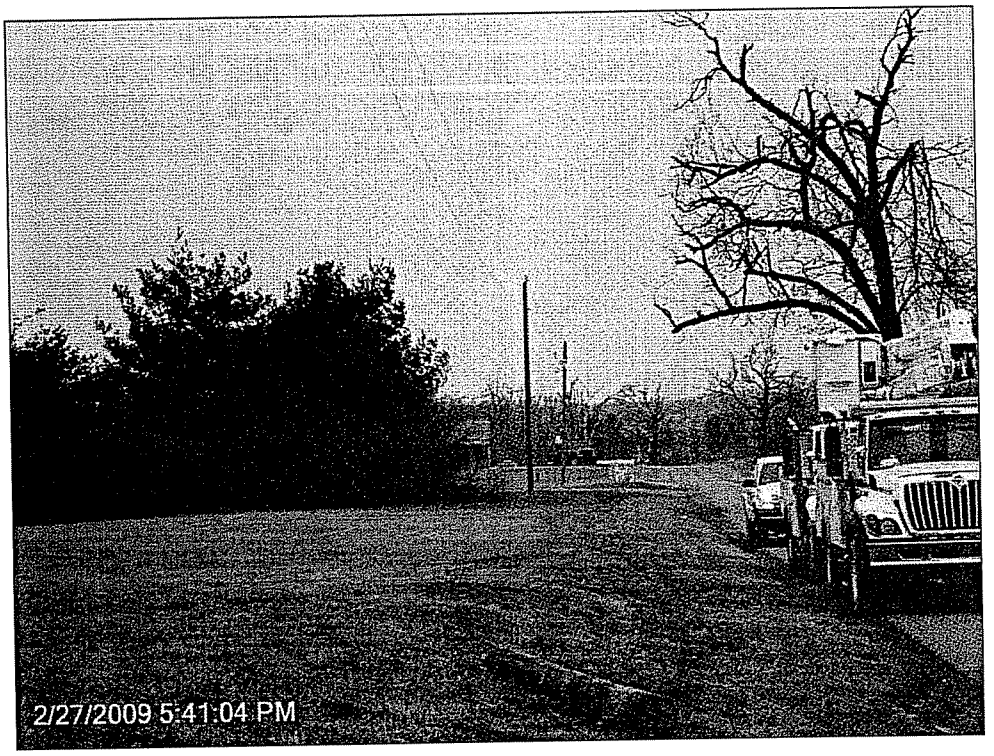

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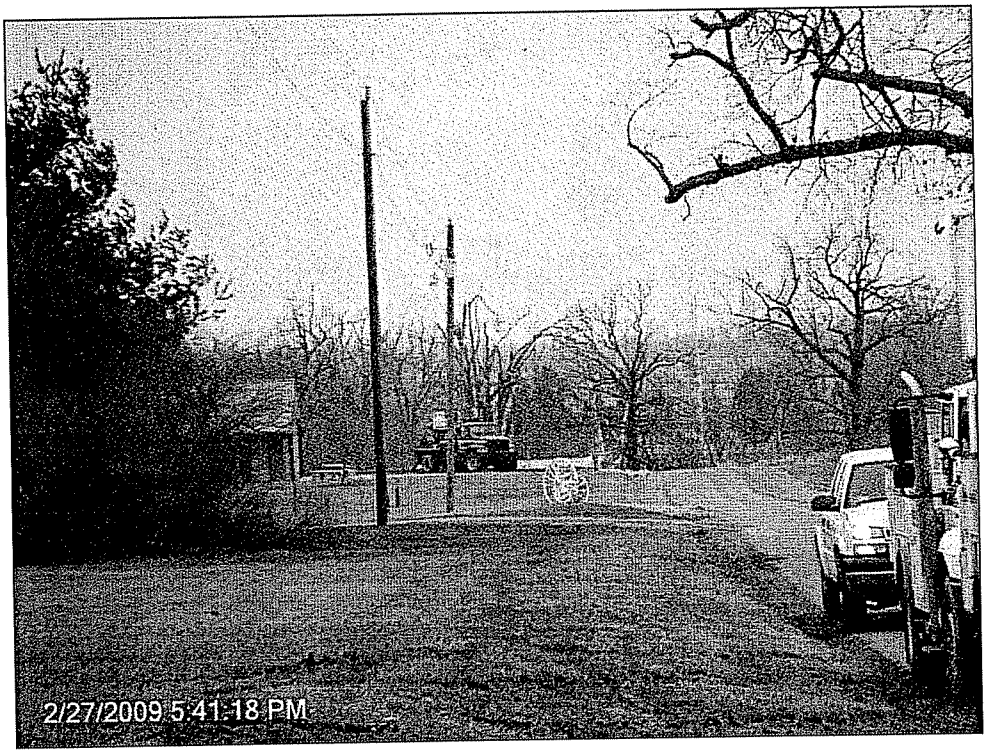

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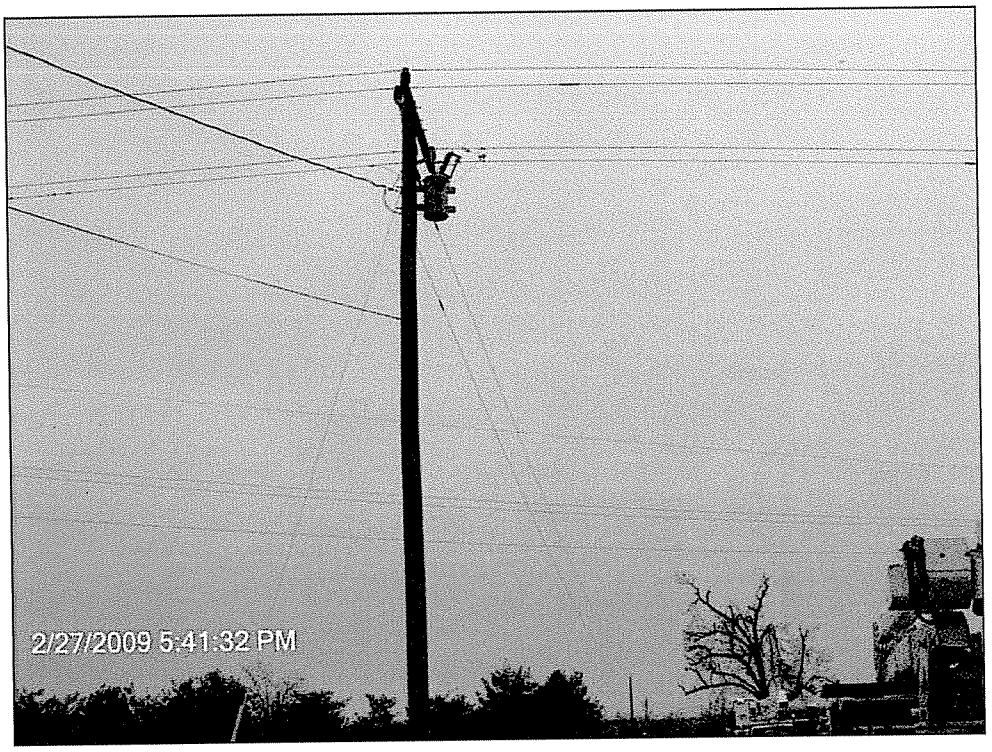

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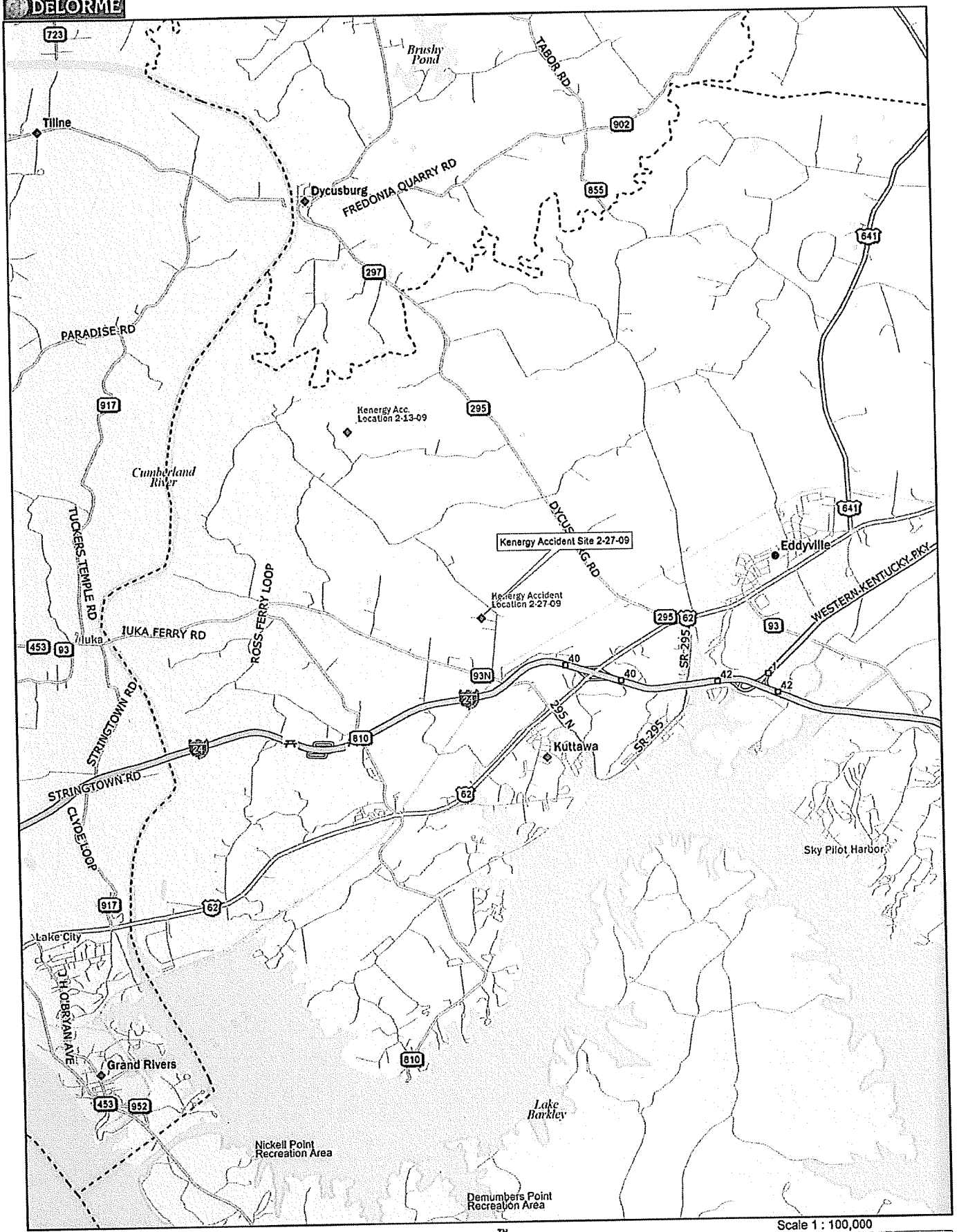


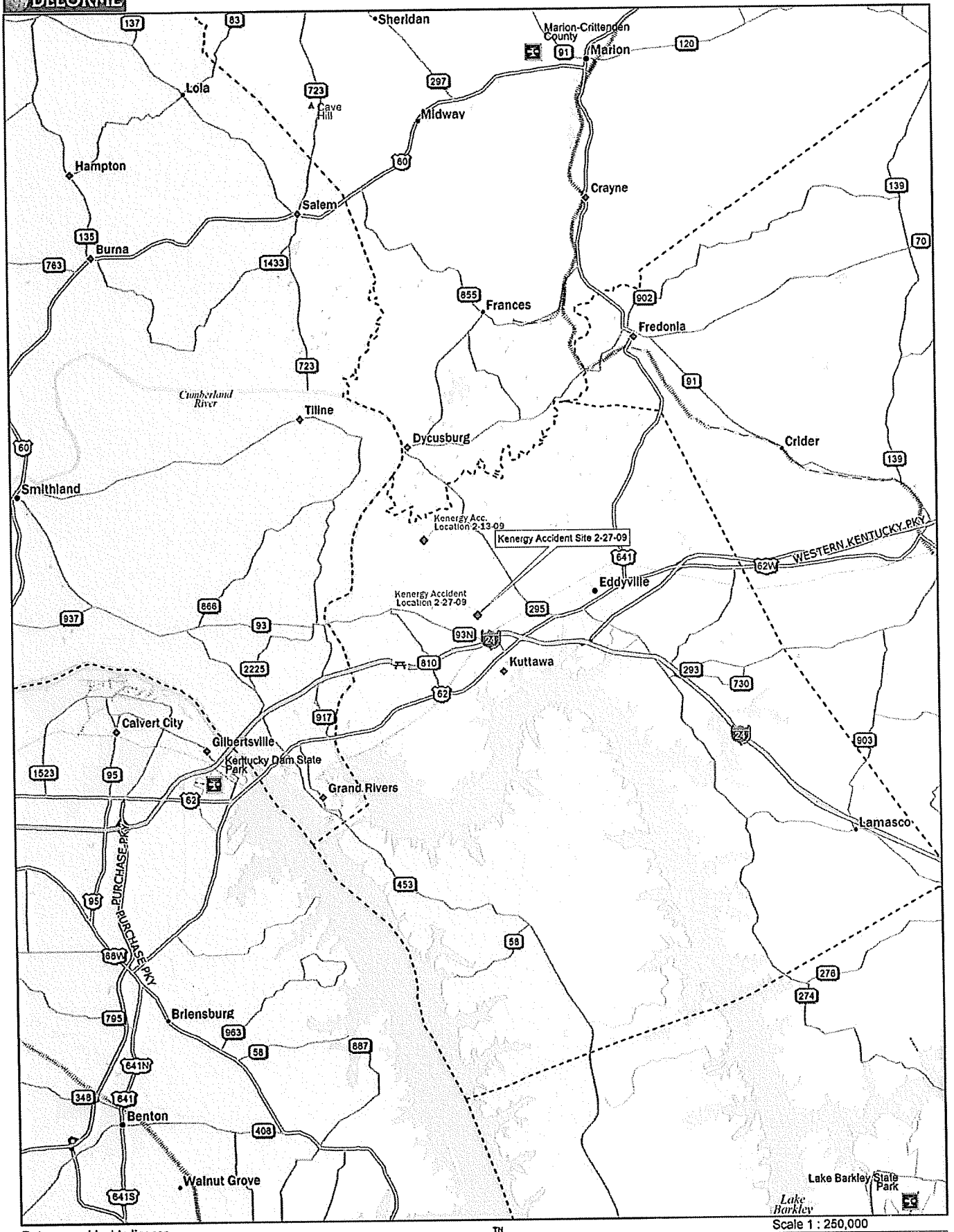
TN

MN (2.1°W)

Scale 1 : 100,000

1" = 1.58 mi

Data Zoom 11-0



TN

MN (2.1°W)

Scale 1 : 250,000

1" = 3.95 mi

Data Zoom 9-6

Sanford Novick
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