COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION	)	
	)	CASE NO. 97-493
ALLEGED FAILURE TO COMPLY WITH COMMISSION REGULATION 807 KAR 5:041, SECTION 3	)	

O R D E R

Meade County Rural Electric Cooperative Corporation ("Meade County") is a Kentucky corporation engaged in the distribution of electricity for compensation for lights, heat, power, and other uses and is a utility subject to Commission jurisdiction. KRS 278.010, 279.210. KRS 278.280(2) directs the Commission to prescribe rules and regulations for the performance of services by utilities. Pursuant to the statutory directive, the Commission promulgated 807 KAR 5:041, Section 3(1), which requires utilities to construct and maintain their facilities in accordance with the National Electric Safety Code ("NESC").

Commission Staff submitted to the Commission a Utility Accident Investigation Report ("Report"), attached hereto as Appendix A, which alleges that on May 19, 1997 John Crosier and four other Meade County employees, including a foreman, were repairing a downed single phase 7,200 volt overhead line on Grady Frymire Road, Stephensport, Kentucky. Mr. Crosier was on the pole adjacent to the broken phase wire while the other employees were on the ground splicing the broken phase wire. After completing the splice, the phase wire was pulled up to Mr. Crosier. Upon contacting the

phase wire, Mr. Crosier received an electrical shock resulting in burns to his left hand. At the time of the incident, Mr. Crosier was wearing neither his protective rubber gloves nor the proper fire retardant clothing, and the line he was attempting to repair was not grounded.

The report notes five probable violations of Commission Regulation 807 KAR 5:041, Section 3(1), all arising under the NESC 1990 Edition as follows: (1) Rule 420.H - failure to use personal protective equipment; (2) Rule 430.I - failure to wear clothing suitable for the assigned tasks and work environment; (3) Rule 421.A.1 - failure of first level supervisor to adopt such precautions as are within his authority to prevent accidents; (4) Rule 421.A.2 - failure of first level supervisor to see that safety rules and operating procedures are observed by employees under his direction; and (5) Rule 444.D - failure to ground the line which is being worked on.

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

1. Meade County 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. Meade County shall appear on February 3, 1998 at 9:00 a.m., Eastern Standard Time, in Hearing Room 1 of the Commission's offices at 730 Schenkel Lane, Frankfort, Kentucky, to present evidence concerning the incident which is the subject of the Report, specifically the five alleged violations of Commission Regulation 807 KAR 5:041, Section 3(1), and to show cause, if any it can, why it should not be subject to the penalties of KRS 278.990 for the alleged failure to comply with the aforementioned Commission Regulation.

3. The Report in Appendix A is made a part of the record in this case.

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

Done at Frankfort, Kentucky, this 12th day of December, 1997.

PUBLIC SERVICE COMMISSION

Chairman

Vice Chairman

Commissioner

ATTEST:

Executive Director

UTILITY ACCIDENT INVESTIGATION REPORT

Utility:	Meade County RECC
Reported By:	Bill Corum - Director of Operations
Dates & Times	
Accident Occurred:	05/19/97 - Approximately 6:20 p.m.
Utility Notified:	05/19/97 - Approximately 6:30 p.m.
PSC Notified:	05/19/97 - 6:50 p.m.
Investigated:	05/20/97
Written Report Rcvd:	05/23/97
Location of Accident:	Ball farm at Yellow Bank Recreation Area, Route 1, Box 20, Grady Frymire Road, Stephensport, Kentucky
Description of Accident:	John Crosier was injured when the single phase 7200 Volt overhead line he was working on inadvertently became energized. Crosier and four other Meade County employees; one of them being Ronnie Knott, a foreman, were in the process of repairing a broken primary line when the incident took place. Several events led up to this incident. John Crosier and Mike Ford had been working several cases of trouble due to a thunderstorm, which had disrupted service in several locations on Meade County's system. Crosier and Ford had been at the general line location prior to the incident and removed a small limb and refused the two line fuses and thought they had the trouble resolved. They then called the dispatcher and asked that the consumer on the end of the line be contacted to see if they had service. Crosier and Ford were informed by the dispatcher that the consumer said lights came back on for a minute or two and went off again. Crosier and Ford went back into the area and patrolled the line again. Crosier and Ford noted that one of the line fuses they had previously replaced had blown again but the fuse door had not dropped down. They continued to patrol the line where they discovered a large limb had broken the primary line. Prior to their discovery, the consumer at this location had called in and told the dispatcher that the line had been broken by a large tree limb. Dispatcher was unable to contact Crosier and Ford due to bad reception in the general location of the consumer. Ronnie Knott, Roger Hurt, and Dennie Barr had also been working outages. They picked up the message from the dispatcher and proceeded into the area where Crosier and Ford were, to let them know what the dispatcher had said. Upon arriving at the down line location, the five employees discussed the job at hand and how they would repair it. No one thought to open the blown fuse disconnect and no one thought to ground the line out. The voltage that was on the primary line was believed to have been caused due to the fuse barrel tracking over at Pole #13808, during a small rain shower. Inspection of the fuse barrel indicated possible path of line voltage. Crosier was not wearing the proper fire retardant clothing or his rubber gloves at the time of the incident.

Victims:					
Name:	John Crosier	**Fatal:**	No	**Age:**	26
Addr./Empl.:	Jet HWY 1051 & HWY 79, P O Box 489, Brandenburg, Kentucky 40108/Meade County RECC				
Injuries:	Small burns on finger of left hand.				

Witnesses:	**Name**	**Address/Employment**
	Ronnie Knott	Meade County RECC, Brandenburg, KY
	Roger Hurt	Meade County RECC, Brandenburg, KY
	Mike For	Meade County RECC, Brandenburg, KY
	Dennie Barr	Meade County RECC, Brandenburg, KY
Sources of Information:	**Name**	**Address/Employment**
	Bill Corum	Meade County RECC, Brandenburg, KY
	Ronnie Knott	Meade County RECC, Brandenburg, KY
	Roger Hurt	Meade County RECC, Brandenburg, KY
	Mike Ford	Meade County RECC, Brandenburg, KY
	Dennie Barr	Meade County RECC, Brandenburg, KY
	John Crosier	Meade County RECC, Brandenburg, KY
	John W. Land	PSC Engineering Staff, On-Site Investigation

Probable Violations:	NESC, 1990 Edition, Rule 420.H & I. General Rules for Employees; Rule 421.A.1 & 2. General Operating Rules; and Rule 444.D. De-Energizing Equipment or Lines to Protect Employees.

Line Clearances At Point of Accident:	**Measured**	**Minimum Allowed by NESC**	**Applicable NESC Edition[1] 1990**	**Volt.**	**Constr. Date**
Phase Conductor to Ground Elevation:	25' - 0"	18' - 6"	1990	7200 V	Unknown

[1] Current edition adopted by the Commission. If clearances are not in compliance with the current edition, then the edition in effect when the facilities were last constructed or modified would apply.

Neutral Conductor to Ground Elevation:	20' - 4"	15' - 6"	1990	N/A	Unknown
Comm. Conductor to Ground Elevation:	14' - 3"	15' - 6"	1990	N/A	Unknown
Date of Measurement:	05/20/97				
Approximate Temp.:	80°F				
Measurements Made By:	Jeff Embrey, Meade County RECC and John W. Land, PSC Engineering Staff				
Investigated By:	John W. Land				
Signed:	John W Land				

Attachments A. Meade County RECC's Accident Report
B. Photographs of Accident Site

NESC Training Programs and Publications from the IEEE

The IEEE sponsors a training program in the National Electrical Safety Code, including a seminar on the NESC. For program dates and locations, please contact the Standards Seminar Manager, TOLL-FREE, at 1-800-678-IEEE. Ask for Seminars on Standards. Or write to the Standards Seminar Manager at the address below.

National Electrical Safety Code, 1990 Edition (Product Number: SH12641)

The National Electrical Safety Code covers rules safeguarding persons during the installation, operation, and maintenance of electric supply and communication lines.

One of the most significant changes in the 1990 Code involves a system of uniform clearances, and a philosophical shift in the way such clearances are established.

If you're using the 1990 Code, make sure you have its companion document, Tables from the National Electrical Safety Code, 1990 Edition.

Tables from National Electrical Safety Code, 1990 Edition (Product Number: SH12658)

Printed in a large, easy-to-read format, this work includes all of the tables referenced in the Code. The rule illustrated by each table is cross-indexed in a clear, concise manner — so it's easy to read the Code and look at the corresponding tables at the same time.

National Electrical Safety Code Interpretations, 1984-1987 Inclusive (Product Number: SH11999)

Interpretations are prepared by the NESC Interpretations Subcommittee in response to formal requests received by the NESC Secretariat. Topics covered include: general rules, grounding requirements, electric supply stations, clearances for overhead electric supply and communication lines, strength of supporting structures, burial depth and grounding of underground lines, and work rules. Also included is a complete listing of interpretations requests from 1943-1987, in Rule Number order.

National Electrical Safety Code Interpretations, 1981-1984 (Product Number: SH09902)

Contains 77 official interpretations on the NESC issued between 1981 and 1984.

National Electrical Safety Code Interpretations, 1978-1980 (Product Number: SH08292)

Contains 131 official interpretations on the NESC issued between 1978 and 1980 and prior to 1961.

National Electrical Safety Code Interpretations, 1961-1977 (Product Number: SH07112)

Contains 91 official interpretations on the NESC issued between 1961 and 1977, together with text of the requests and accompanying figures.

To order from the the IEEE, call us TOLL-FREE, at 1-800-678-IEEE.

The Institute of Electrical and Electronics Engineers, Inc
445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331 USA

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AMERICAN NATIONAL STANDARD

ANSI C2-1990

NATIONAL ELECTRICAL SAFETY CODE

1990 Edition

Published by
The Institute of Electrical and Electronics Engineers, Inc

August 1, 1989

NESC

SH12641

E. Ungrounded Metal Parts

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

F. Arcing Conditions

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

G. Liquid Cell Batteries

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

H. Tools and Protective Equipment

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

I. Clothing

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

J. Ladders and Supports

1. Employees shall not support themselves, or any material or equipment, on any portion of a tree, pole structure, scaffold, ladder, walkway, or other elevated structure or aerial device, etc, without it first being determined, to the extent practical, that such support is adequately strong, in good condition, and properly secured in place.

2. Portable wood ladders intended for general use shall not be painted except with a clear nonconductive coating, nor shall they be longitudinally reinforced with metal.
3. Portable metal ladders intended for general use shall not be used when working on or in the vicinity of energized parts.
4. If portable ladders are made partially or entirely conductive for specialized work, necessary precautions shall be taken to ensure that their use will be restricted to the work for which they are intended.

K. Safety Straps

1. An employee working in an elevated position shall use a suitable safety strap or other approved means to prevent falling.
2. Safety straps or other similar devices shall be inspected before use by the employee to assure that they are in safe working condition.
3. Before employees trust their weight to safety straps or other devices, the employees shall determine that the snaps or fastenings are properly engaged and that the employees are secure in their body belts and safety straps.

L. Fire Extinguishers

In fighting fires or in the vicinity of exposed energized parts of electric supply systems, employees shall use fire extinguishers or materials which are suitable for the purpose. If this is not possible, all adjacent and affected equipment should first be de-energized.

M. Machines or Moving Parts

Employees working on normally moving parts of remotely controlled equipment shall be protected against accidental starting by proper tags installed on the starting devices, or by locking or blocking where practical. Employees shall, before starting any work, satisfy themselves that these protective devices have been installed. When working or in the vicinity of automatically or remotely operated equipment such as circuit breakers which may operate suddenly, employees shall avoid being in a position where they might be injured from such operation.

N. Fuses

When fuses must be installed or removed with one or both terminals energized, employees shall use special tools or gloves insulated for the voltage involved. When installing expulsion-type fuses, employees shall wear personal eye protection and take precautions to stand clear of the exhaust path of the fuse barrel.

O. Cable Reels

Cable reels shall be securely blocked so they cannot roll or rotate accidentally.

P. Street and Area Lighting

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

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

421. General Operating Routines

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

This individual shall:

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

B. Area Protection

1. Areas Accessible to Vehicular and Pedestrian Traffic
   a. Before engaging in work that may endanger the

public, warning signs or traffic control devices, or both, shall be placed conspicuously to alert approaching traffic. Where further protection is needed, suitable barrier guards shall be erected. Where the nature of work and traffic requires it, a person shall be stationed to warn traffic while the hazard exists.

   b. When openings or obstructions in the street, sidewalk, walkways, or on private property are being worked on or left unattended during the day, danger signals, such as warning signs and flags, shall be effectively displayed. Under these same conditions at night, warning lights shall be prominently displayed and excavations shall be enclosed with protective barricades.

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

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

C. Escort

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

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 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 Tables 441-1 to 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 single point 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 Tables 441-1, 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.

E. Proceeding with Work

1. After the equipment or lines have been de-energized and grounded, the employee in charge, and those under the direction of the employee in charge, may proceed with work on the de-energized parts.

   Equipment may be re-energized for testing purposes only under the supervision of the employee in charge and subject to authorization by the designated person.

2. Each additional employee in charge desiring the same equipment or lines to be de-energized for the protection of that person, or the persons under direction, shall follow these procedures to secure similar protection.

F. Reporting Clear—Transferring Responsibility

1. The employee in charge, upon completion of the work

and after assuring that all persons assigned to this employee in charge are in the clear, shall remove protective grounds and shall report to the designated person that all tags protecting that person may be removed.

2. The employee in charge who received the permission to work may, if specifically permitted by the designated person, transfer the permission to work and the responsibility for persons by personally informing the affected persons of the transfer.

G. Removal of Tags

1. The designated person shall then direct the removal of tags and the removal shall be reported back to the designated person by the persons removing them. Upon the removal of any tag, there shall be added to the record containing the name of the designated person, or title, or both, and the person who requested the tag, the name of the person requesting removal, the time of removal, and the name of the person removing the tag.
2. The name of the person requesting removal shall be the same as the name of the person requesting placement, unless responsibility has been transferred according to Rule 444F.

H. Sequence of Re-Energizing

Only after all protective grounds have been removed from the circuit or equipment and after protective tags have been removed in accordance with Rule 444G at a specific location, may the designated person direct the operation of switches and disconnectors at that location.

445. Protective Grounds

A. Installing Grounds

When placing protective grounds on a previously energized circuit, the following sequence and precautionary measures shall be observed.

1. Size of Grounds

   The grounding device shall be of such size as to carry the induced current and anticipated fault current that could flow at the point of grounding for the time necessary to clear the line.

Attachment A

Meade County RECC's Accident Report

MEADE COUNTY
RURAL ELECTRIC COOPERATIVE CORPORATION

P.O. Box 489 Brandenburg, Kentucky 40108 (502) 422-2162

May 23, 1997

MR. JOHN LAND
KENTUCKY PUBLIC SERVICE COMMISSION
730 SCHENKEL LANE
P. O. BOX 615
FRANKFORT, KY 40602

Dear Mr. Land:

As per your request, and pursuant to 807:KAR 5:011, Section 26, concerning reporting of accidents, we are filing the Crosier accident report for May 19, 1997. The accident was first reported to Meade County RECC at approximately 6:30 p.m. EDT and the first call to the PSC was made to Martha Morton, Chief Engineer, (606) 299-0568 AT 6:50 p.m., EDT with a message to her answering machine. The second call was made to you at 7:25 p.m., EDT that same day. Arrangements were made for the field investigation on Tuesday, May 20, 1997. Please find enclosed the field investigation report prepared by Greg Morgan, Big Rivers System Safety Trainer and Coordinator.

John, we appreciate your response and assistance with the field investigation of this accident. If I can be of further assistance, please feel free to contact me anytime.

Sincerely,

Burns E. Mercer
President/CEO

BEM:chc

attachments

JOHN CROSIER ACCIDENT

26 year old
7 years experience
electric contact

Witnesses: Ronnie Knott, Roger Hurt, Mike Ford, Dennie Barr

Date: 5/19/97 Time: Approximately 6:30 p.m., EDT

Location: Ball farm at Yellow Bank Recreation Area, Rt. 1, Box 20, Grady Frymire Road
Stephensport, KY

Accident description, as related by John Crosier and the above named witnesses:

Due to thunderstorm related outages, the two-man crew of John Crosier and Mike Ford were dispatched from one outage to a line outage at map location 46-011-001, where, at approximately 6:00 p.m., they discovered a blown line disconnect fuse.

They attempted to refuse the disconnect and it blew a second time. They proceeded to patrol a line section to the west and north, along the single phase line.

They discovered a second blow fuse at map location 46-010-003. They removed a limb, which was on the phase and making contact with the phase. They assumed they had found the problem and replaced the fuse at pole #13808 with a 15 amp expulsion fuse. They returned to pole #14822 and replaced the 30 amp fuse at this location for the second time.

The fuse at map location 46-011-001, pole #14822, held and they assumed they had solved the problem. They started back toward Brandenburg and called in to the radio dispatcher to inform her that the fuse held and asked her to contact the end consumer to confirm power was restored.

The dispatcher reported by radio that the end consumer had power for a minute or two, but it had gone out a second time. The crew drove back into the area and eventually found a limb had broken through the 8A copper-weld phase wire in map section 46-007-009, between pole #14837 and pole #14836.

During the time they last spoke with the dispatcher and the time it took for them to find the conductor down, the member at 13810 telephoned the dispatcher to report where the wire had been broken by the tree limb.

The dispatcher was unable to make radio contact with Mike and John in vehicle #252 because of the cliffs on the south side of the Ohio River and their location in the bottom land along the river.

A second crew, having heard the radio transmission telling where the problem was, proceeded into the area to inform John and Mike what they had been told.

The second crew, in service truck #272, consisted of three men: Ronnie Knott, Roger Hurt, and Dennis Barr, proceeded directly to the outage fault location at pole #14836 to inform John and Mike what they heard.

When the crew in #272 arrived, they discussed with the crew in #252, who had already found the problem, what was to be done to restore service. They agreed with the plan in progress. John Crosier was to climb the A-3 fixture, pole #14837, and pull the broken phase wire from between the neutral and telephone conductors, where it had fallen. Truck #252 was driving to pole #14837, so the winch could be used to pull conductor up to John, who was to catch the 8A conductor in a strap hoist.

The crew on the ground spliced the conductor and pulled the conductor to John, on the pole. However, the conductor was found to be too short and was lowered so that it

could be respliced. A second attempt was made to raise the conductor, but the grip was found to be in the wrong place. The conductor was lowered a third time and sent up again. A second grip was thrown up to John by Roger.

When the conductor reached John and he touched it, he received a shock and immediately sat back in his belt with arms to his side. The witnesses variously reported the sound of the arc "contact" and the sight of the arc.

Ronnie Knott and Mike Ford drove to pole #13808 in truck #272 and removed the fuse barrel. Roger Hurt climbed pole #14837 to assist John, who was conscious and found to have minor burns on the left little finger and the left thumb. Roger assisted John, who climbed down on his own.

On returning to the scene, Ronnie Knott called for an ambulance and called the office to report the incident. The phone calls were made from the farm residence at 13810.

At the time of the contact, the employees thought the voltage on the line was due to a consumer back feeding the line with a stand by generator. The source of the voltage on the line was undoubtedly line voltage, which conducted across the fuse barrel at pole #13808. Inspection of the fuse barrel on 5/20/97 indicates a carbon track consistent with this hypothesis.

FINDINGS:

1) The work crew did not apply safety grounds in any form at the work location

2) The work crew did not use protective gloves while working with trees, down conductor, or while on the pole, where ungrounded high voltage conductors were involved.

3) The crew of truck #252 was ill prepared for work, due to the shortage of tools and protective equipment on truck #252.

   a. Grounds were not on the truck, as they had been removed after having tested bad and were not immediately replaced.

   b. Mike Ford did not have his gloves or work tools with him on #252. His tools and tools and gloves were on #261 at the office.

4) The crew was in the habit of working on conductor without having protective grounds in place.

When John and Mike drove into the area on their second attempt to find the fault, they drove to the area of pole #13808 and observed the fuse in that location to be blown, but the fuse barrel had not fallen in the blown position as would be expected. The crew did not remove the stuck barrel at this time. Subsequently, they did not have a visible open in the conductor even though they believed the fuse had blown.

This was the key to the whole accident. This was an unexpected, unplanned event, we call an accident. They did not expect the insulation of the fuse barrel to break down and allow a current path.

We are extremely fortunate the barrel did not break down while two or three men were working on the conductor while standing on the ground. Hopefully, all employees will take protective grounding seriously with all future work.

Treatment of John Crosier, relatively minor injuries, is ongoing.

A review of the work location was made by John Land, PSC, Bill Corum and Tim Gossett of Meade County RECC, and Greg Morgan, Big Rivers, on 5/20/97.

Greg Morgan

Greg Morgan, Big Rivers System Safety Coordinator

5-23-97

Date

BRECKINRIDGE MEMORIAL HOSPITAL

HARDINSBURG, KY. PHONE: (502) 756-2124

FOR John Crossies DATE 5-19-97

℞ ADDRESS

Released to return to work - no restrictions

LABEL ☐

REFILL 0 TIMES Allen Lewis DO ~~M.D.~~

DEA

ADDRESS Allen Lewis, DO

BMH-45

BRECKINRIDGE MEMORIAL HOSPITAL
BOX 133 A
HARDINSBURG KY 40143

GRAHAM, DAVID, M.D.
Medical Director

*** * R E P O R T B Y P A T I E N T * ***

Room: ER - Patient#: [redacted] Dob: [redacted] Date: 05/19/97 Time: 18 57
Patient:CROSIER, JOHN Age: 26 Sex: M Phys1:
Phys2:
Medical Record #:

DATE	TIME	TEST NAME	ABNORMAL F	NORMAL	OTHER/RANGE	UNITS
05/19	18:45	URINALYSIS				
		SPECIMEN TYPE			CLEAN CATCH	
		COLOR			YELLOW	
		CLARITY			CLEAR	
		GLUCOSE, URINE			NEGATIVE	
		BILIRUBIN, URINE			NEGATIVE	
		KETONE			NEGATIVE	
		SPECIFIC GRAVITY			1.025	
		pH		7.0	5.5-8.0	
		PROTEIN			NEGATIVE	
		UROBILINOGEN			NORMAL	
		NITRITE			NEGATIVE	
		OCCULT BLOOD, URINE			NEGATIVE	
		LEUKOCYTES			NEGATIVE	
		WBC			0-1	
		RBC, URINE			NEGATIVE	
		SQUAMOUS EPITH CELLS			RARE	
		BACTERIA			TRACE	
		AMORPH PHOS CRYSTALS			TRACE	

* = stat H = high L = low R = rising F = falling C = critical value

Room: ER - Patient#: [redacted] Dob: [redacted] Date: 05/19/97 Time: 18 57
Patient:CROSIER, JOHN Age: 26 Sex: M Phys1:
Phys2:

CRISTER, JOHN [redacted] 19-May-1997 18:24:05 BRECKINRIDGE MEMORIAL HOSPITAL

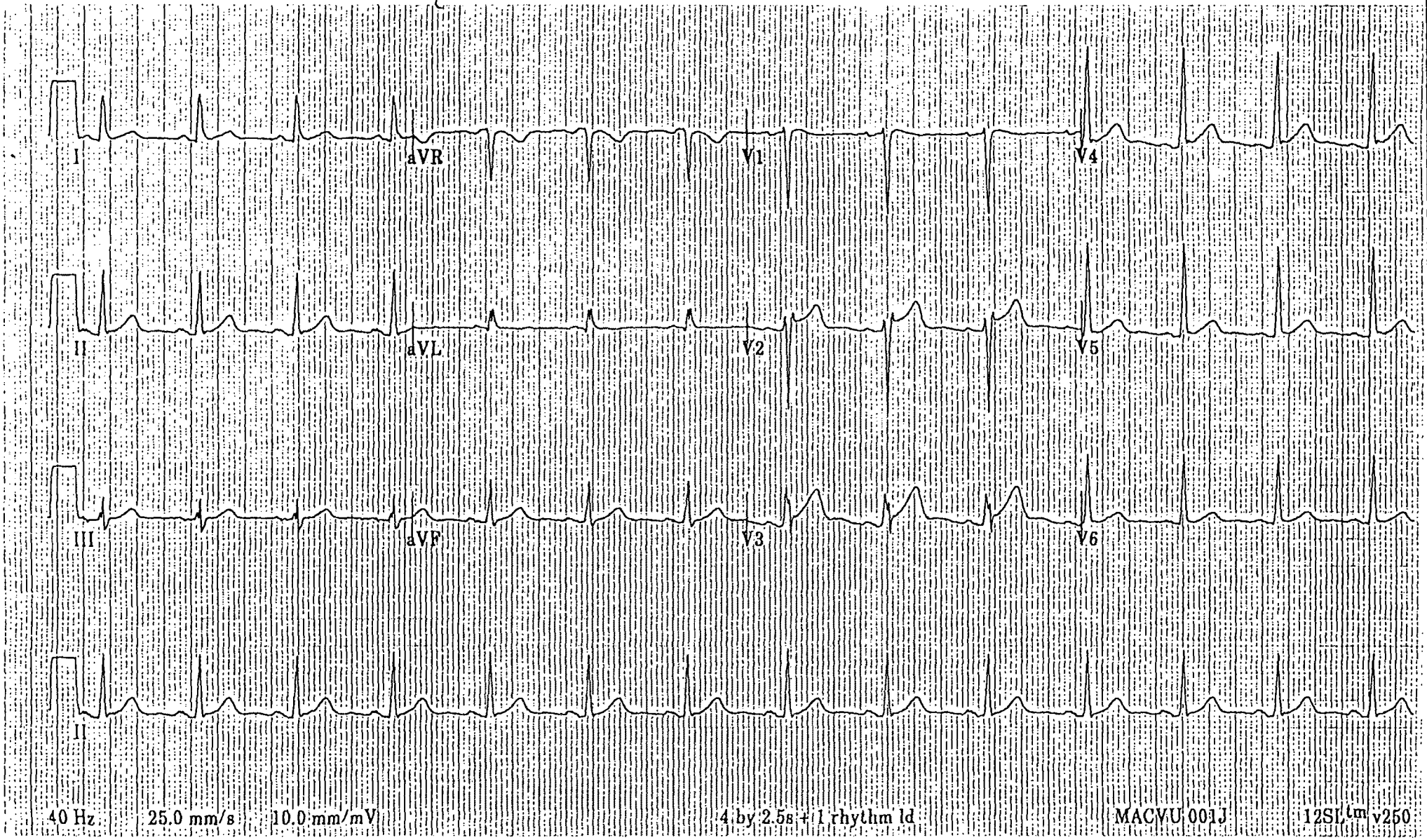
26years		Vent. rate	82 bpm
Male	Caucasian	PR interval	138 ms
71in	165lbs	QRS duration	88 ms
Room: ER 2		QT/QTc	342/399 ms
		P-R-T axes	40 44 60
		BP	132/86mmHg

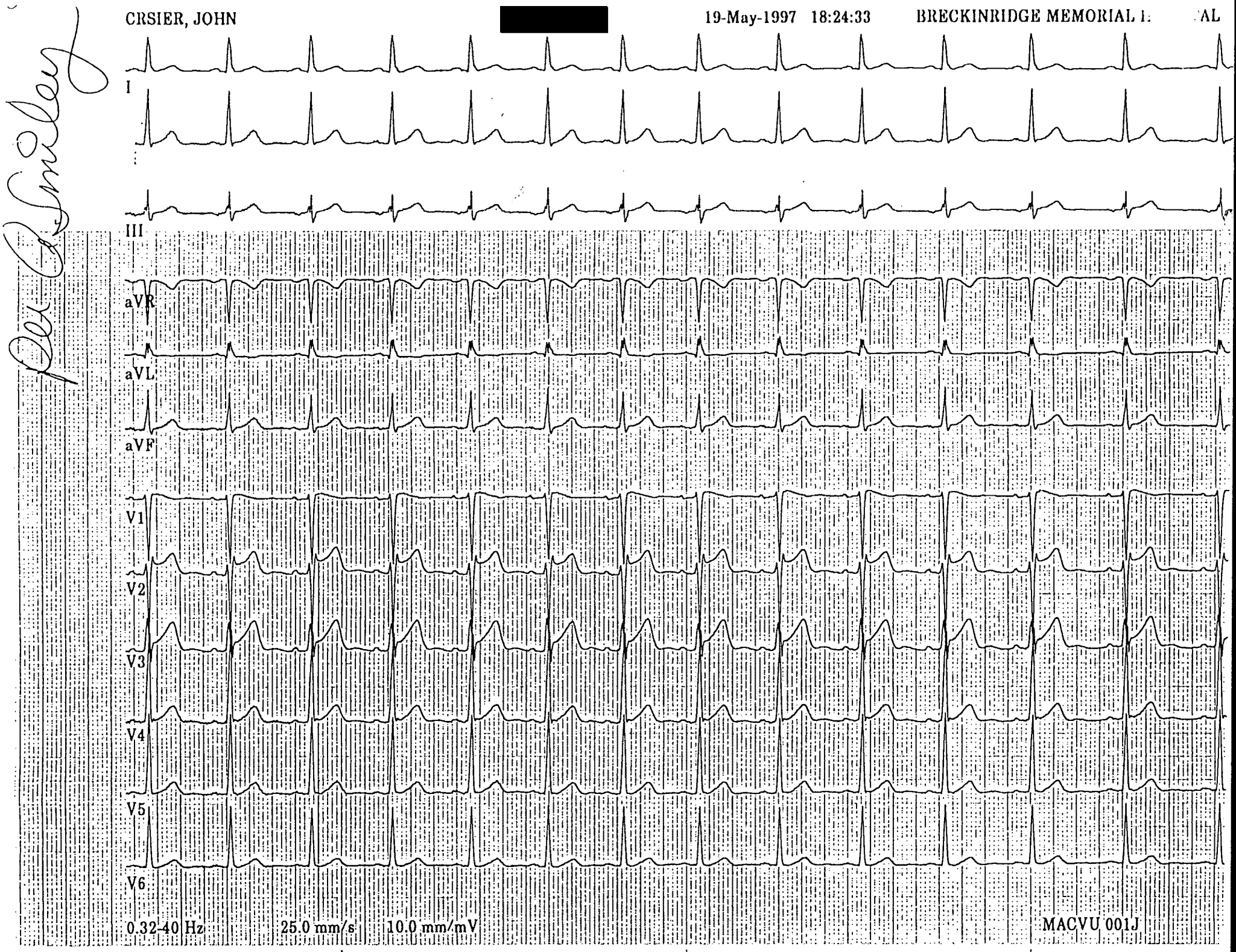
Normal sinus rhythm
Normal ECG

Technician: ANGELA SMILEY
Test ind: ROUTINE EKG

Referred by: LEWIS, ER DR

Reviewed by: CPKDO




CRSIER, JOHN
[redacted]
19-May-1997 18:24:33
BRECKINRIDGE MEMORIAL
I
III
aVR
aVL
aVF
V1
V2
V3
V4
V5
V6
0.32-40 Hz
25.0 mm/s
10.0 mm/mV
MACVU 001J

?/19/97

BRECKINRIDGE MEMORIAL HOSPITAL
EMERGENCY ROOM RECORD

REGISTERED BY: S
TT

PAT NO- [redacted]
ARRIVAL TIME- 18:06
MEADE CO RECC

CROSIER, JOHN LESLIE
1775 CROSIER RD
BATTLETOWN KY 40104

MED REC NUMBER- 1604
[redacted]

PRIVATE MD ! E.R. MD ! TIME ! ARRIVED BY ! TIME ! [redacted] SEX AGE
PRINCIPE ! A LEWIS ! ! Ambulance ! 18: ! [redacted] M 026
CONTACTED 1:___ 2:___ 3:___ REFERRAL MD:___ CONTACTED 1:___ 2:___ 3:___
ALLERGIES: NKA
LAST TT:

ADMISSION COND:
ACCIDENT: BURNED BY ELEC.WIRES

MEDICATIONS: None
COMPLAINT: BURNS

! ACUITY ! DRUG
! OD ! SCREEN !_!
! OS !
! OU ! INITIAL:___

NOTIFIED: RELATIVE:___ CORONER:___ POLICE:___ TIME:___

NURSING ASSESSMENT:
EXAM TIME: 26 y.o. WM presents to ER c̄ c/o electrical shock while working on electrical high voltage lines p̄ a storm. A+O x 3. No obvious burns x very sm white marks on (L) pinky finger. No c/o numbness/tingling. States "I just feel tired." WEIGHT C Garrett RN

HISTORY & EXAM: S: 26 y/o/ ♂ c̄ above H.P. working outside when came into contact c̄ wire. Pt Line had 7200 V of Electricity but pt did not receive a full dose of Electricity. Pt relates he felt some tingling in his Lt arm and some tightness in his chest that resolved upon arrival to ED.

O: Eyes: PERL and Convergence, (-) Papilledema
Ears: TM (-) bilaterally
Mouth + Throat: (-) Inflammation or Exudate
Lungs: CTAB
Heart: S1 + S2 s̄ murmurs, rubs or gallops
Ext: (-) Pedal Edema, Pulses 2/4 at DP
Skin: Pt c̄ 2 small ~~exit wound~~ entrance burns on Lt Hand (Two marks on 5th digit, 1 mark on Thumb)
EKG: Normal EKG, Normal Sinus Rhythm

Neuro: CN 2-12 intact + functional
Lab: UA: Negative for Occult Blood
Negative cells.

A: Exposure to Electrical Shock. No other sequelae
DIAGNOSIS: R Burns to Fingers on Lt hand
P: Pt to F/u c̄ PCP in 5 days sooner if Slowing of fingers involved & current burns severe
↑ H2O intake

TIME	T	P	R	BP
Arrival		80	16	132/8?

CBC !_! SMA6 !_! SMA7 !_!
CHEM PROF !_! UA !_! C&S !_!
AMYLASE !_! PT/PTT !_! DIG !_!
CPK MB !_! PREG !_! EKG !X
OTHER: ~~Dipstick~~ enzymes + UA AS

XRAY:

MEDS & TREATMENT

DISPOSITION: DISCHARGE X DECEASED ___
ADMIT___ ROOM #___ TRANSFER___
TIME 19:05
DISCHARGE CONDITION Stable

AMA !_! POLICE NOTIFIED:___ TIME:___ FUNERAL HOME:___ REFERRED TO:___
AUTOPSY ORDERED:___ M.E. NOTIFIED:___ TIME:___

DISCHARGE INSTRUCTIONS: Return to ED if Wound becomes Red or Swollen Otherwise F/u c̄ PCP in 5 days

[signature] DO ! C Garrett RN
DOCTORS SIGNATURE ! NURSES SIGNATURE

!BY SIGNING THIS FORM, I CER
!THAT I HAVE RECEIVED AND UND
!STAND THE INSTRUCTIONS GIVEN T
!ME

OUTAGE ORDER
MEADE COUNTY RURAL ELECTRIC

DATE OFF 5/19/97 TIME OFF 4:42 (AM) (PM) DATE ON 5/19/97 TIME ON 7:09 (AM) (PM) BY J.C.

NAME James Harrington ACCOUNT NUMBER [redacted]

PHONE # [redacted] METER # _____ LOCATION _____

TROUBLE CALLED IN: Current off (lines down) Paul Mitchell # [redacted]

ACTION TAKEN: _____

Pre-arranged		Conductor		LINE SECTION (S)	
Trees		Birds & Animals			
Cutout/OCB		Line Hardware			
Storm		Broken Pole			
Trees		Pulled Guy			
Conductor	✓	Other		# CONSUMERS AFFECTED	
Insulators		(Specify:)			
Rain		Power Supply		OUTAGE HOURS	
Transformer		(Big Rivers only)			

MATERIAL (S) USED: Yes _____ No _____

INV CODE	DESCRIPTION	QUANTITY	RET'D
001	Adapters		
005	Anchors		
010	Crossarms		
015	Arrestors		
020	Cariage Bolts		
035	Eye Bolts		
040	Machine Bolts		
050	S. U. Bolts		
065	Wood/Steel Braces Pr		
071	Stirrup Basket		
075	Service Clamps		
095	D. E. Clamps		
105	3-Bolt Clamps		
110	Hot Line Clamps		
190	K-11 Clevis		
195	J-6 Clevis		
210	Connectors		
225	Cutout/Arrestor Comb		
230	Cutouts		
235	Disconnect Switch		
240	Guy Attachments		
252	Urgd Cable Guards 8"		
270	2½" Insulators		
275	3" Insulators		
280	Pin Type Insulators		
290	Susp & Bell Ins.		
310	Eye Nuts		
320	Crossarm Pins		
325	Clamp Type Pins		
330	Pole Top Pins		
335	Stick Pins		

INV CODE	DESCRIPTION	QUANTITY	RET'D
615	Anchor Rods		
625	Armor & Raplock Tie rods		
650	175 Security Lights		
655	400 Security Lights		
685	Copper Sleeves		
690	Aluminum Sleeves		
695	Guy Wire		
700	Square Washers		
905	K-10 Wireholders		

WIRE CODE	DESCRIPTION	QUANTITY	RET'D

OTHER:

Substation: _____

Feeder: _____

Phase: _____

Breaker: _____

Display Device . . . . . : OP10XPCSS2
User . . . . . : CAROLC

14:40:25 SEARCH SELECT MBL105 5/20/97
MBL105FM

Search Value BALL/BOBBY

2 45 079 002 01	BALL/BOBBY J	[redacted]	
ACTIVE		STEPHENSPORT KY	40170-0000
2 45 079 006 00	BALL/BOBBY J	HCR 72 BOX 20	
ACTIVE	GRADY FRYMIRE RD	STEPHENSPORT KY	40170-0000
2 45 079 008 01	BALL/BOBBY J	HCR 72 BOX 20	
ACTIVE	GRADY FRYMIRE RD	STEPHENSPORT KY	40170-0000
1 31 147 041 00	BALL/CARL N	HARDINSBURG KY	
ACTIVE			40143-0000
2 05 029 111 04	BALL/CHRISTY W	BOX 210 KNOLLWOOD EST	
PENDING CONNECT		BRANDENBURG KY	40108-0000
2 41 072 018 01	BALL/DAVID L	ACCOUNT# HAS BEEN CHANGED	
DISCONNECT		LOUISVILLE KY	40272-0000
2 41 088 004 01	BALL/DAVID L	13317 TENNIS BLVD	
ACTIVE		LOUISVILLE KY	40272-0000
1 27 103 001 00	BALL/DEBBIE	104 SHIRLEY DR	
DISCONNECT		FORDSVILLE KY	42343-0000
3 10 046 016 03	BALL/DWIGHT D	RT 1 BOX 409	
ACTIVE		HARDINSBURG KY	40143-0000
4 21 006 010 01	BALL/FLORA MAE	RT 2 BOX 33	
DISCONNECT		VANZANT KY	40119-0000

Help Available - Help Key

DOB – 10/18/70

Application For Employment

Applicants are considered for all positions without regard to race, color, religion, sex, national origin, age, marital or veteran status, or the presence of a non-job-related medical condition or handicap.

(PLEASE PRINT)

Date of Application July 23, 1988

Position(s) Applied For _____

Referral Source: ☐ Advertisement ☒ Friend ☐ Relative ☐ Walk-In ☐ Employment Agency ☐ Other _____

Name Crosier (LAST) John (FIRST) Leslie (MIDDLE)

Address Star Route #1 Box 273A (NUMBER STREET) Battletown, (CITY) Kentucky (STATE) 40104 (ZIP CODE)

Telephone [redacted] (Area Code) Social Security Number [redacted]

If employed and you are under 18, can you furnish a work permit? ☐ Yes ☐ No

Have you filed an application here before? ☐ Yes ☒ No If Yes, give date _____

Have you ever been employed here before? ☐ Yes ☒ No If yes, give date _____

Are you employed now? ☐ Yes ☒ No May we contact your present employer? ☐ Yes ☐ No

Are you prevented from lawfully becoming employed in this country because of Visa or Immigration Status? ☐ Yes ☒ No
(Proof of citizenship or immigration status may be required upon employment.)

On what date would you be available for work? Now

Are you available to work ☒ Full Time ☐ Part-Time ☐ Shift Work ☐ Temporary

Are you on a lay-off and subject to recall? ☐ Yes ☒ No

Can you travel if a job requires it? ☒ Yes ☐ No

Have you been convicted of a felony within the last 7 years? ☒ No ☐ Yes
(Conviction will not necessarily disqualify applicant from employment.)

If Yes, please explain _____

AN EQUAL OPPORTUNITY EMPLOYER M/F/V/H

Veteran of the U.S. Military service? ☐ Yes ☒ No If Yes, Branch _____

Indicate languages you speak, read, and/or write.

	FLUENT	GOOD	FAIR
SPEAK	English		
READ	English		
WRITE	English		

List professional, trade, business or civic activities and offices held.
(You may exclude those which indicate race, color, religion, sex or national origin): _____

Give name, address and telephone number of three references who are not related to you and are not previous employers.

Mary Louise Jenkins, 222 Lawrence St., Brandenburg, Ky. [redacted]

Robert Pollock, Winsor Drive, Brandenburg, Ky. [redacted]

Bernard Gagel, Star Route #1, Battletown, Ky. 40104, [redacted]

Special Employment Notice to Disabled Veterans, Vietnam Era Veterans, and Individuals With Physical Or Mental Handicaps.

Government contractors are subject to 38 USC 2012 of the Vietnam Era Veterans Readjustment Act of 1974 which requires that they take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam Era, and Section 503 of the Rehabilitation Act of 1973, as amended, which requires government contractors to take affirmative action to employ and advance in employment qualified handicapped individuals.

If you are a disabled veteran, or have a physical or mental handicap, you are invited to volunteer this information. The purpose is to provide information regarding proper placement and appropriate accommodation to enable you to perform the job to the best of your ability in a proper and safe manner. This information will be treated as confidential. Failure to provide this information will not jeopardize or adversely affect your consideration for employment.

If you wish to be identified, please sign below.

☐ Handicapped Individual ☐ Disabled Veteran ☐ Vietnam Era Veteran

Signed _____

Employment Experience

Start with your present or last job. Include military service assignments and volunteer activities. Exclude organization names which indicate race, color, religion, sex or national origin.

1	Employer: Self — Telephone: [redacted]	Dates Employed From:	To: Present	Work Performed: Raising pigs, cows, corn, hay, grain
	Address: Star Route #1			
	Job Title: Manager	Hourly Rate/Salary Starting:	Final:	
	Supervisor: None			
	Reason for Leaving:			
2	Employer: James B. Showens — Telephone: [redacted]	Dates Employed From:	To:	Work Performed: Harvesting hay, corn
	Address: Star Route #1			
	Job Title: Farm labor	Hourly Rate/Salary Starting:	Final:	
	Supervisor: James B. Showens			
	Reason for Leaving: Still working part time			
3	Employer: — Telephone: ( )	Dates Employed From:	To:	Work Performed:
	Address:			
	Job Title:	Hourly Rate/Salary Starting:	Final:	
	Supervisor:			
	Reason for Leaving:			
4	Employer: — Telephone: ( )	Dates Employed From:	To:	Work Performed:
	Address:			
	Job Title:	Hourly Rate/Salary Starting:	Final:	
	Supervisor:			
	Reason for Leaving:			

If you need additional space, please continue on a separate sheet of paper.

Special Skills and Qualifications

Summarize special skills and qualifications acquired from employment or other experience: Because I have always lived and worked on a farm, I know how to drive a tractor, dig a post hole and other routine farm procedures.

FOR PERSONNEL DEPARTMENT USE ONLY

Position(s) Applied For Is Open: ☑ Yes ☐ No

Position(s) Considered For: Groundsman

Date _____

NOTES:

DETACH HERE

Applicant Data Record

Applicants are considered for all positions, and employees are treated during employment without regard to race, color, religion, sex, national origin, age, marital or veteran status, medical condition or handicap.

As employers/government contractors, we comply with government regulations and affirmative action responsibilities.

Solely to help us comply with government record keeping, reporting and other legal requirements, please fill out the Applicant Data Record. We appreciate your cooperation.

This data is for periodic government reporting and will be kept in a Confidential File separate from the Application for Employment.

(PLEASE PRINT)

Date July 23, 1988

Position(s) Applied For _____

Referral Source: ☐ Advertisement ☒ Friend ☐ Relative ☐ Walk-In
☐ Employment Agency ☐ Other _____

Name Crosier (LAST) John (FIRST) Leslie (MIDDLE) Phone [redacted] (Area Code)

Address Star Route #1 (NUMBER) Box 273A (STREET) Battletown, (CITY) Kentucky (STATE) 40104 (ZIP CODE)

Affirmative Action Survey

Government agencies require periodic reports on the sex, ethnicity, handicapped and veteran status of applicants. This data is for analysis and affirmative action only. Submission of information is voluntary.

Check one:

☒ Male ☐ Female

Check one of the following:

Race/Ethnic Group: ☒ White ☐ Black ☐ Hispanic
☐ American Indian/Alaskan Native ☐ Asian/Pacific Islander

Check if any of the following are applicable:

☐ Vietnam Era Veteran ☐ Disabled Veteran ☐ Handicapped Individual

DETACH HERE

Education

	Elementary	High	College/University	Graduate/Professional
School Name	Battletown	Meade County		
Years Completed (Circle)	[4] [5] [6] [7] [8]	[9] [10] [11] [12]	1 2 3 4	1 2 3 4
Diploma/Degree		High School Diploma		
Describe Course Of Study				

Describe Specialized Training, Apprenticeship, Skills and Extra-Curricular Activities	Two [2] years program of Electronics at Meade County High Vocational School Three [3] years Meade County High School baseball team, Two [2] years Vocational Industrial Club of America

Honors Received: Special certificate for work in electronics

State any additional information you feel may be helpful to us in considering your application.

Applicant's Statement

I certify that answers given herein are true and complete to the best of my knowledge.

I authorize investigation of all statements contained in this application for employment as may be necessary in arriving at an employment decision. I understand that this application is not and is not intended to be a contract of employment.

In the event of employment. I understand that false or misleading information given in my application or interview(s) may result in discharge. I understand, also, that I am required to abide by all rules and regulations of the Company.

Signature of Applicant _____ Date 7-31-88

For Personnel Department Use Only

Arrange Interview ☑ Yes ☐ No

Remarks Passing Medical Certification 1-17-89

_____ _____ 1-12-89
INTERVIEWER DATE

Employed ☑ Yes ☐ No Date of Employment _____

Job Title Groundsman (2nd year) Hourly Rate/Salary $8.10 Department OPERATIONS

By _____ 1-12-89
NAME AND TITLE DATE

MEADE COUNTY
RURAL ELECTRIC COOPERATIVE CORPORATION

P.O. Box 489 Brandenburg, Kentucky 40108 (502) 422-2162

I hereby acknowledge receipt of a copy of the Safety Manual for an Electric Utility, prepared by the Bureau of Safety, Middle West Service Company, in conjunction with the Safety Committee, American Public Power Association, copyright by American Public Power Association, Eighth Edition, 1988. (Note: Meade County Rural Electric Cooperative Corporation policy dated May 1, 1992 and Exceptions to the Safety Manual rules established in said copy, are a part of this manual.)

I agree to familiarize myself with the entire contents of this manual and acknowledge the provisions of same to be the minimum level of safety rules which I agree to comply with in the performance of the duties and responsibilities of my job. I further acknowledge that my failure to comply with any of said safety rules could result in disciplinary action being taken against me and/or the termination of my employment.

This the 22nd day of April 19 97.

Delivered by Carol Cundiff
System Safety Coordinator

Received by John P. Crowe
Employee

INTRODUCTION TO TRANSMISSION AND DISTRIBUTION SYSTEMS

Quiz

Name: JOHN L. CROSIER Date: 1-5-96

1. When companies buy and sell power from each other, the companies are interconnected in what is known as a POWER GRID.

2. (True) or False. The overall purpose of a transmission and distribution system is to supply consumers with power.

3. List, in order, the major components included in a typical transmission and distribution system, starting at the power plant.
   a. SWITCHYARD
   b. TRANSMISSION LINES
   c. SUBSTATION
   d. DISTRIBUTION LINES

4. True or (False) Voltage is the flow of electricity through a line.

5. A complete path for current flow is an electric CIRCUIT.

6. List three common types of power plants used in the production of electricity.
   a. FOSSIL
   b. NUC.
   c. HYDRO ELECTRIC

7. The one component that is common to all power plants is the GENERATOR.

8. A unit transformer is used to increase VOLTAGE before power is sent to the switchyard.

INTRODUCTION TO TRANSMISSION AND DISTRIBUTION SYSTEMS
Quiz (continued)

9. (True) or False. A typical switchyard can be used to route power to different transmission lines through several different paths.

10. Circle the correct answer.
Circuit breakers are used to
a. Interrupt electrical circuits
b. Open electrical circuits
c. Close electrical circuits
(d.) All of the above
e. None of the above

11. A typical disconnect switch is used to ISOLATE equipment or lines for maintenance or repair.

12. True or (False) Transmission lines carry electricity from the power source directly to the residential consumer.

13. Overhead transmission conductors are normally bare (~~bare~~, insulated) wires.

14. Structures are broadly classified into two main groups: (a) POLES and (b) TOWERS.

15. Circle the correct answer.
Of the three insulators listed below, the one most commonly used in transmission lines is the
a. Pin insulator
b. Post insulator
(c.) Suspension insulator

16. Substations are typically used to reduce (a) TRANSMISSION (transmission, distribution) voltage to (b) DISTRIBUTION (transmission, distribution) voltage.

17. True or (False) The main difference between substations and switchyards is that substations contain transformers.

18. Residential consumers typically receive voltage at 120/240 (120/240, 240/480) volts from a distribution transformer.

19. The two types of distribution systems are overhead systems and underground systems.

20. Circle the correct answer.

The conductors that carry electricity directly to houses are referred to as

a. Primary feeders

b. Primary taps

c. Secondary mains

(d.) Service drops

MEADE COUNTY
RURAL ELECTRIC COOPERATIVE CORPORATION

P.O. Box 489 Brandenburg, Kentucky 40108 (502) 422-2162

POLE CLIMBING CERTIFICATE

I BELIEVE THAT I AM QUALIFIED TO CLIMB WOOD UTILITY POLES, COMMON TO THE ELECTRIC UTILITY INDUSTRY AND THAT I HAVE SATISFACTORILY DEMONSTRATED MY CLIMBING SKILLS TO MEADE COUNTY RECC SUPERVISORY PERSONNEL.

I FURTHER BELIEVE I HAVE BEEN FULLY TRAINED IN PROPER CLIMBING TECHNIQUES AND THE PROPER CARE OF CLIMBING EQUIPMENT.

DATE 11-20-95

SIGNATURE John R. Gwin

SUPERVISOR'S SIGNATURE

-2

CLIMBING WOODEN POLES

Quiz

Name: JOHN CROSIER Date: 11-20-95

1. (True) or False. The "D" rings on a body belt should be positioned just outside the prominent bones of the hips.

2. The proper length for a climber is determined by measuring the distance from a point one inch (a) below (above, (below)) the knee joint to the top of the (b) Arch of the foot.

3. Circle the correct answer.
   To determine the waist size of a body belt,
   (a.) Measure around the body at the hips
   (b.) The measurement should correspond to the distance from the roller on the belt buckle to the middle hole on the belt tongue
   c. Measure from the heel of one "D" ring to the heel of the other "D" ring and add two inches
   d. Measure from the prominent bone of the hips around the back
   e. Both a and b

4. (True) or False. A safety strap is essentially an adjustable belt with safety snaps at each end.

5. List four important considerations associated with putting on climbers.
   a. R ON R Long
   b. FOLD PANTS LEGS UP AND AROUND BOT
   c. MAKE SURE STRAPS ARE SECURE
   d. THE LONG PIECE OF CLIMBER IS ON THE SIDE

6. When sharpening gaffs, you should only file on the UNDERSIDE (underside, top) of the gaff.

14. When a safety strap is stored on a body belt, the safety snap on the adjustable end of the belt should be attached to a "D" ring with the keeper facing (a) out (out, in); the other end of the strap should be attached to the "D" ring with the keeper facing (b) IN (out, in).

15. List two guidelines for determining if a safety strap is the proper length for climbing.
    a. Reach with both hands without leaning
    b. measure from fist on pole to elbow on stomach

16. When a climber is maneuvering around a utility pole to the right, his left leg should be higher (higher, lower) than his right leg.

17. Circle the correct answer.
    When safetying-on,
    a. A climber should visually verify that the safety snap is properly attached to the "D" ring before using the safety strap for support
    b. The safety snaps should be attached to their respective "D" rings with the keepers facing in
    c. The safety strap should be adjusted to the proper length by passing the adjustable end through the "D" ring and securing it to the buckle
    d. The safety strap should be passed around the pole, and both safety snaps should be attached to the same "D" ring, with keepers facing out
    (e) Both a and d

18. (True) or False. One way of adjusting the length of a safety strap is to hold yourself in position on the pole with one hand while repositioning the buckle on the safety strap with the other hand.

19. True or (False), It is good practice to use hardware and components on a pole for support during a climb.

DATE: 11-20-95

NAME: JOHN CROSIER

EVALUATOR: Greg Morgan

POLE CLIMBING QUALIFICATION AND CLIMBING EQUIPMENT INSPECTION FORM.

(Score the equipment inspection & climbing skills with 1 being poor & 5 being excellent).

{1 2 3 4 5} Body belt.
{1 2 3 4 5} Safety strap.
{1 2 3 4 5} Climbers.
{1 2 3 4 5} Gaffs.
{1 2 3 4 5} Straps.
{1 2 3 4 5} Hand tools.

Comments: _____

SAFETY EQUIPMENT

{1 2 3 4 5} Rubber gloves.
{1 2 3 4 5} Stored properly.
{1 2 3 4 5} Tested (date).
{1 2 3 4 5} Used appropriately.
{1 2 3 4 5} Hard hat.
{1 2 3 4 5} Safety glasses.
{1 2 3 4 5} Proper clothing (shirt or jacket and boots).
{1 2 3 4 5} Handline.
{1 2 3 4 5} Test pole and inspect line before climbing.

Comments: _____

CLIMBING Proper position (high side of the pole) & gaff placement.

{1 2 3 4 5} Proper size Step (6" - 8" for average-size individual).
{1 2 3 4 5} Correct gaff spacing (2"- 3" on class 4 or 5 pole).
{1 2 (3) 4 5} Correct gaff angle.
{1 2 3 4 5} Proper knee position.
{1 2 3 4 5} Correct body angle.

Lock/tagout quiz

Name: JOHN CROSICK Date: 6-1-95 Coop: MCRECC

Please answer each question with true or false as appropriate.

1. True/false. OSHA 1910.269 subpart M deals with deenergizing lines and equipment.

2. True/false. If no system operator is in charge, then one member of the crew shall be designated as being in charge of the clearance.

3. True/false. All energy control devices with access by the public shall be locked.

4. True/false. A designated employee shall obtain a clearance from the system operator.

5. True/false. All sources of energy feeding a line or piece of equipment must be rendered inoperable, unless their design doesn't permit it and tagged , & tested before being worked on.

6. True/false. Tags shall prohibit operation & shall indicate employees are at work.

7. True/false. If two or more independent crew are to work the same line they are required to have their own clearance.

8. True/false. To release a clearance, the employee in charge shall determine all personnel are clear, grounds are clear, and tags are removed, after contacting the system supervisor.

9. True/false. The person releasing the clearance shall be the same person who obtained the clearance.

10. True/false. All tags must be removed before a line can be reenergized.

11. True/false. The designated employee in charge may under emergency conditions operate control devices without a clearance.

12. True/false. Every jackass thinks he has horsesense.

JOHN CROSIER

LOCKOUT/TAGOUT
HAZARDOUS ENERGY CONTROL

1. T F If an energy isolating device is not capable of being locked out, the employer's program shall use a tagout system.

2. T F When a tag is attached to an energy isolating means, it may be removed without authorization from the person responsible for it, if he/she has gone to the coffee shop.

3. T F Tags may evoke a false sense of security and their meaning needs to be understood as part of the overall energy control program.

4. T F When a tag is removed, document the information on the daily log - discard the tag.

5. T F A yellow tag with weather protection may be used in the lockout/ tagout procedure.

6. T F Each lockout device or tagout device shall include provisions for the identification of the employee applying the device.

7. T F All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from energy sources.

8. T F Affected employees shall be notified by the employer or authorized employee of the application and removal of lockout or tagout devices. Before procedures are mandatory. Removal procedures are optional.

9. T F A tag on a line device out of order attached to a line no longer in service can be ignored.

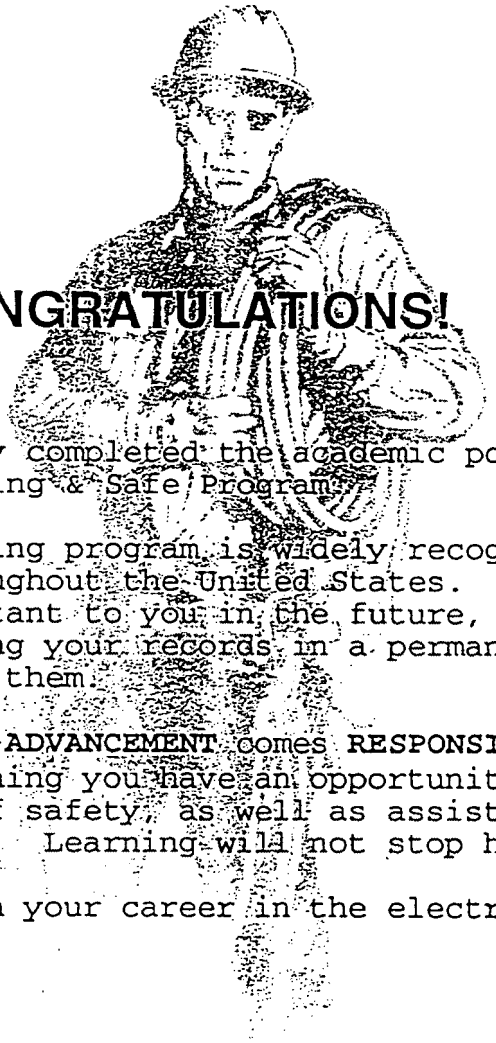
10. T F In a major storm with emergency situations, all lockout/tagout procedures are put on hold by the central dispatch or office of the authorized crew.

MERCHANT

Job Training & Safety
International Correspondence Program

Dennis Merchant
1001 E. 5th Ave. • Mitchell, SD 57301
Phone (605) 996-3922 • Fax (605) 996-8827

November 27, 1995



Name: John Crosier
Record #1480

CONGRATULATIONS!

You have successfully completed the academic portion of the MERCHANT - Job Training & Safe Program.

Our power line training program is widely recognized as a quality program throughout the United States. Your record with us may be important to you in the future, so with this in mind we are holding your records in a permanent file should you ever need them.

Remember--along with **ADVANCEMENT** comes **RESPONSIBILITY.** Along with your training you have an opportunity to set an example in the use of safety, as well as assisting those with lesser training. Learning will not stop here.

Good luck to you with your career in the electrical industry.

Thank You!

Work Safe!

Dennis Merchant

Dennis Merchant,
Instructor

Good final John!

Certificate of Completion

This is to certify that:

John L. Crosier

Has achieved the academic competence to become

Journeyman Lineman

This 23rd *Day of* October, *19* 95

Power Lineman
Certified MERCHANT Instructor
Job Training and Safety

Dennis Merchant
Administrator/Instructor

STATEMENT OF EMPLOYEE QUALIFICATION

This is to certify that JOHN CROSIER, JOURNEYMAN LINEMAN
employee/classification

is a "qualified employee" of ***Meade County Rural Electric,*** *having been trained to perform job skills established in the Cooperative's employee manual. With the use of personal protective equipment and continued training in the industry, the employee will be evaluated and reclassified using written and job skill performance assessments.*

I have read and understand the above statement and the relationship it has to the job description and requirements for my present classification.

John K. Crosier
Employee Signature

This certification issued and signed this 30 *day of* 11 *month by*

[signature] *and* [signature]
President/CEO *District Superintendent*

with training verification from Greg Morgan
Greg Morgan, Safety Training Coordinator for Member Systems of Big Rivers Electric Corporation

Witness [signature] *Date* November 30, 1995

NAME John L Crosier

TOPIC Strategic Planning

Date 1-11-95 **Time In** 2 30 **Time Out** 3 30

TOPIC Strategic Planning

Date 1-26-95 **Time In** 2 30 **Time Out** 3 30

TOPIC PPE

Date 1 23 95 **Time In** 8 **Time Out** 9 30

TOPIC Merchants

Date 1-19-95 **Time In** 8 **Time Out** 12

TOPIC Merchants

Date 2-16-95 **Time In** 8 **Time Out** 12

TOPIC Single Point Grnd / Lockout Tagout

Date 2-14-95 **Time In** 13 **Time Out** 4

TOPIC Fall Protection

Date 3-7-95 **Time In** 8 **Time Out** 93

TOPIC Hearing Protection

Date 3 20 95 **Time In** 8 **Time Out** 9

TOPIC H/C Health Haz

Date 3 13 95 **Time In** 11 **Time Out** 2

TOPIC Working

Date 2-3-95 **Time In** _____ **Time Out** _____ 2 hrs

TIME OUT

Registrations, schools, workshops, etc.

NBUR

ear.

7-26-56

John Crosier

Merchants West

1-1-95 Time In _____ Time Out _____ Total Time 3 1/2

Merchants

7/95 Time In _____ Time Out _____ Total Time 3 1/2

Meter Safety

7-17-95 Time In _____ Time Out _____ Total Time 1hr 50min

TOPIC Transformer Trouble Shooting

Date 8-17-95 Time In _____ Time Out _____ Total Time 1 1/2

TOPIC Hot Stick & Care

Date 8-21-95 Time In _____ Time Out _____ Total Time 45min

TOPIC Merchants

Date 6/95 Time In _____ Time Out _____ Total Time 3 1/2

TOPIC Merchants

Date 7/95 Time In _____ Time Out _____ Total Time 3 1/2

TOPIC Merchants

Date 7/95 Time In _____ Time Out _____ Total Time 3 1/2

TIME OUT

Registrations, schools, workshops, etc.

NAME John Crozier

TOPIC Working

Date 2-17-95 Time In _____ Time Out _____ Total Time 2 hrs

TOPIC "

Date 3-3-95 Time In _____ Time Out _____ Total Time 2 hrs

TOPIC "

Date 3-17-95 Time In _____ Time Out _____ Total Time 2 hrs

TOPIC "

Date 4-13 Time In _____ Time Out _____ Total Time "

TOPIC Fire Safety

Date 4-26-95 Time In _____ Time Out _____ Total Time 1½

TOPIC Loc Out - Tag Out Procedures

Date 6-1-95 Time In _____ Time Out _____ Total Time 2

TOPIC Merchants Test

Date 6-19-95 Time In _____ Time Out _____ Total Time 3½

TOPIC Meter Safety

Date 7-17-95 Time In _____ Time Out _____ Total Time 1Hr. 50 min

MATERIAL SAFETY DATA SHEETS

OBJECTIVES

After completing this program, the student will be able to

- Describe the types of information provided by material safety data sheets.
- Explain some of the practical, on-the-job uses of the information covered in material safety data sheets.

Working safely around hazardous chemicals requires a great deal of information, including proper safety gear and handling procedures for each chemical. This information is available from a number of sources, but one good source is the material safety data sheets located in your work place. Material safety data sheets come in a variety of forms, but they all include the following information.

Identity

THE PRODUCT'S NAME—usually brand names and common synonyms.

AN EMERGENCY TELEPHONE NUMBER—can be used 24 hours a day to acquire information in an emergency. Sometimes, a second telephone number is given, to be used to acquire general information.

THE DATE—the material safety data sheet (MSDS) was prepared.

Ingredients

A LIST OF HAZARDOUS INGREDIENTS—includes the names of the chemicals and, sometimes, a Chemical Abstract Service (CAS) number.

EXPOSURE LIMITS—the concentrations of the chemicals to which you can be repeatedly exposed without being harmed. Basically, the lower the exposure limit and the lower the measuring unit, the more toxic the chemical.

Physical Properties

BOILING POINT—a chemical with a relatively low boiling point should be stored in a cool, shady spot.

VAPOR DENSITY—(measured against air = 1.0). A chemical vapor with a density greater than 1.0 will sink toward the ground.

CHARACTERISTIC APPEARANCE AND ODOR—can be used to help detect leaks.

Fire and Explosion Data

FLAMMABILITY—flash point, lower explosion limit (LEL), and upper explosion limit (UEL) are all measurements of flammability. Basically, the lower the numbers, the greater the flammability.

EXTINGUISHING MEDIA AND SPECIAL FIRE-FIGHTING PROCEDURES—the types of extinguishing agents and correct procedures to be used in case of fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS—unusual conditions that could cause a fire or an explosion. For instance, mixing water with some chemicals can cause an explosion.

Reactivity

STABILITY—how easily the material reacts with other materials to create toxic vapors, fires, or explosions.

POLYMERIZATION—whether a material will react with itself to create hazards. Also, shows the conditions, such as overheating, that cause polymerization.

Health Hazard Data

ROUTES OF EXPOSURE—ways that a chemical gets into your body. Routes include absorption through the skin, inhalation, and ingestion.

SIGNS AND SYMPTOMS OF OVEREXPOSURE—symptoms of acute or immediate overexposure may include nausea, dizziness, skin rashes, and unconsciousness. Chronic, or long-term, overexposure may lead to lung damage, liver damage, and heart damage.

HAZCOM LABELING

OBJECTIVE

After completing this program, the student will be able to

- Identify and explain the information contained on typical hazardous chemical labels and warning signs.

INTRODUCTION

For many years, both federal and state governments have had laws and regulations governing the labeling of hazardous materials. On the federal level, some of these laws and regulations include the Hazard Communication Standard (Hazcom), which governs labels on hazardous chemicals entering or leaving a work place; and Department of Transportation (DOT) regulations that cover labels, placards, and warning signs for shipping hazardous chemicals. Each of these types of labels serves a different purpose, so the designs are different. It is important to know how each type is used and the information it contains. This program covers Hazcom labels, labeling systems, and DOT warning labels and placards.

HAZCOM LABELS

Labels for hazardous chemical containers entering or leaving a work place are governed by federal regulations. These labels show the identity of the hazardous chemical, the name and address of the chemical's manufacturer or importer, and appropriate hazard warnings. In addition, emergency telephone numbers, first aid procedures, and leak or spill procedures are sometimes shown on hazardous chemical containers.

An appropriate hazard warning is a written warning such as "corrosive" or "flammable." The label may also include a pictograph, which is a drawing that provides information. As an example, a pictograph of a flame symbol provides the same information as the word "flammable." A number of warnings are often used on hazardous chemical containers, including the following:

Corrosive (causes chemical burns)
Flammable (ignites and burns)
Toxic (poisonous)
Oxidizer (supports combustion)
Dangerous when wet (reacts with water and explodes or produces toxic fumes)

Most of these written warnings have matching pictographs. For example, the "corrosive" pictograph shows drops of a chemical eating a hole in a person's hand. In addition to written warnings and pictographs, many chemical labels also use color codes to identify hazards. Yellow is sometimes used to help identify oxidizers, red and white vertical stripes identify flammable solids, and the color red is often used to help identify flammable materials.

LABELING SYSTEMS

Most labeling systems also use color codes. Labeling systems are often used in facilities to provide information about the hazardous materials contained in tanks or other vessels. Two such systems are the **National Fire Protection Association (NFPA)** labels and **Hazardous Materials Identification System (HMIS)** labels. HMIS is a copyright of the National Paint and Coating Association.

NFPA labels are often referred to as fire diamonds, because they are in the shape of a diamond. Four small diamonds make up a fire diamond. The smaller diamonds are colored red, blue, yellow, and white. Numbers inside of these diamonds are used to identify the severity of different types of hazards. The numbers range from 0 to 4. The higher the number, the more hazardous the material.

Examples:

The **RED** diamond identifies the **FIRE HAZARD**. A "0" in the red diamond indicates that the material in the tank or vessel will not burn, while a "4" shows that the material is extremely flammable.

The **BLUE** diamond shows a material's **HEALTH HAZARD**. A "0" indicates that the material is not toxic, while a "4" indicates that the material can be deadly.

The numbers in the **YELLOW** diamond indicate a material's **REACTIVITY**. A "0" shows that the material is not reactive, while a "4" shows that the material may explode if it is heated.

The **WHITE** diamond provides **SPECIAL INFORMATION**. Letters or symbols, rather than numbers, are used in this diamond. For example, the letters COR in the white diamond indicate that the material is corrosive, while a W with a line through it means to use no water, because the material reacts with water and explodes or produces toxic fumes.

INTRODUCTION TO HAZCOM

OBJECTIVE

After completing this program, the student will be able to

- List and explain the major components of the OSHA Hazard Communication Standard.

HAZCOM

One of the laws that guarantees the right to information about hazardous chemicals in a work place is the Hazard Communication Standard, which is frequently referred to as HazCom. It is administered by OSHA, the Occupational Safety and Health Administration. Basically, HazCom establishes requirements in the following four areas:

1. Determining the chemical hazards in a work place
2. Labeling chemicals that are hazardous
3. Maintaining material safety data sheets that provide information about the hazardous chemicals
4. Providing a written hazardous chemical training program

DETERMINING HAZARDOUS CHEMICALS

Basically, determining the hazardous chemicals in a work place consists of listing all of the chemicals used and then determining the hazards associated with each chemical. There are many different hazardous chemicals. HazCom groups hazardous chemicals into two types: physical hazards and health hazards.

Chemicals that are physical hazards are flammable, corrosive, or reactive. Flammable chemicals can cause fires; corrosive chemicals can cause chemical burns; and reactive chemicals can cause explosions or release toxic fumes.

Toxic chemicals are poisonous. They are health hazards. Overexposure to some of them can cause acute, or immediate, effects such as nausea or vomiting. Overexposure to others can cause chronic, or long-term, effects such as liver or lung damage.

LABELING

HazCom requires that all containers of hazardous chemicals entering or leaving a work place must be labeled. The label must show the identity of the hazardous chemical, appropriate hazard warnings (such as toxic or corrosive), and the name and address of the manufacturer or importer. The label may also include pictographs or picture symbols. Pictographs help identify the hazard and show the proper personal safety equipment to use when working with the chemical.

In general, portable containers filled with chemicals from other containers must also be labeled, and tanks or other non-movable containers may be labeled, often by using National Fire Protection Association (NFPA) fire diamonds or Hazardous Materials Identification System (HMIS) labels. The HMIS system is copyrighted by the National Paint and Coating Association.

MATERIAL SAFETY DATA SHEETS

Material safety data sheets are also required by HazCom. Among other things, these sheets contain emergency telephone numbers, emergency and first aid procedures, and lists of hazardous ingredients.

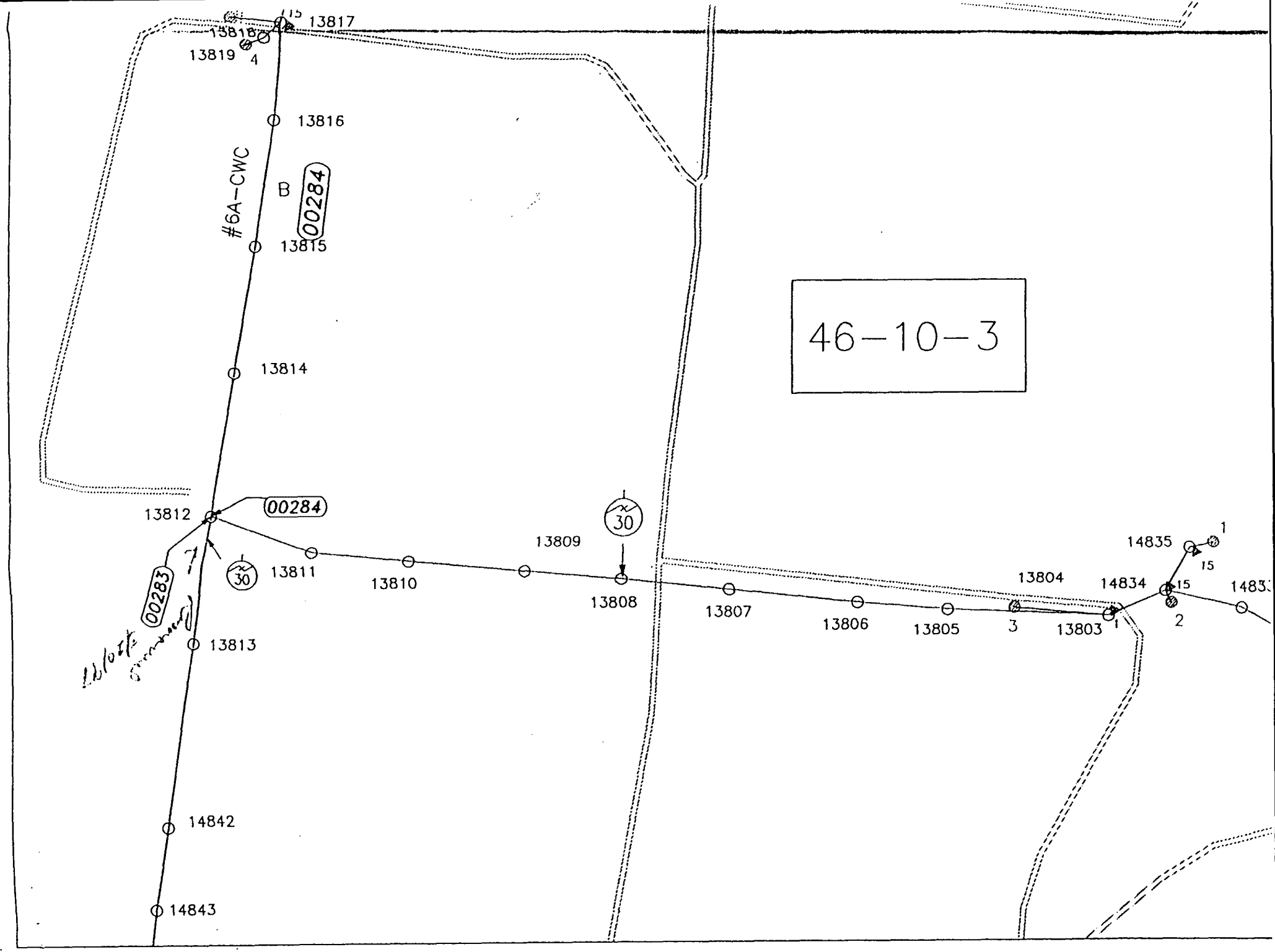
Material safety data sheets can be arranged in a variety of formats, but each material safety data sheet, or MSDS, contains the following information:

1. The identity of the material
2. An emergency telephone number
3. A list of hazardous ingredients
4. Fire and explosion data
5. Health hazard data
6. Precautions for safe handling and use
7. Proper employee protection measures

Material safety data sheets for the hazardous chemicals used in your work place are available to you.

WRITTEN TRAINING PROGRAM

Written training programs are required by HazCom. The program shows how a company intends to implement HazCom, and the kinds of training the company intends to conduct.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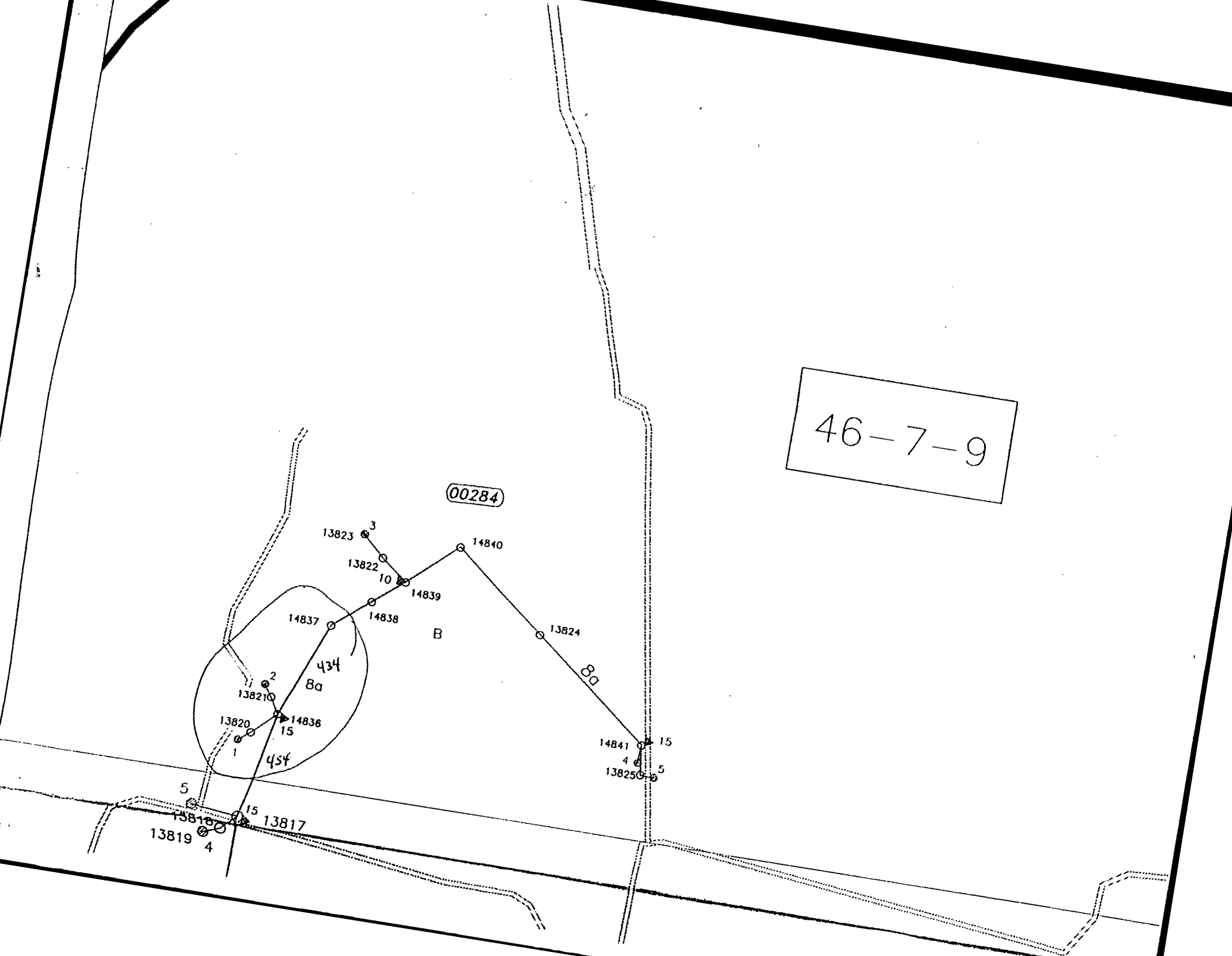
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Attachment B

Photographs of Accident Site