COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

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MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION)	
)	CASE NO.
)	2010-00375
ALLEGED FAILURE TO COMPLY WITH)	
KRS 278.042)	

ORDER

Meade County Rural Electric Cooperative Corporation ("Meade County"), 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 unreasonable, unsafe, improper or inadequate practices by Order.

Commission Staff submitted an Electric Utility Personal Injury Incident Report ("Report") to the Commission dated September 3, 2009 and attached as an Appendix to this Order. The Report alleges that, on August 12, 2009 at 315 South Highway 259, Harned, in Breckinridge County, Kentucky, Patrick Haste, an employee of Bowlin Energy Services ("BES"), sustained severe burn injuries as a result of an incident at the site of a Meade County electric construction project.

According to the Report, at the time of the August 12, 2009 incident, BES was working under contract with Meade County, installing new conductors on an existing three-phase circuit on Meade County's system. The first-level supervisor or person in charge at the construction site on the day of the incident was BES employee Ronald Douglas.

Before pulling up the new conductor to install it on Meade County's system, the BES crew failed to effectively ground the new conductor. In the process of pulling it up for installation, the new conductor made contact with an existing, energized conductor on Meade County's system. Because of the BES crew's failure to effectively ground the new conductor, it became energized to approximately 7,200 volts.

The new conductor was attached to a tensioner (also called a "brake")—a piece of construction equipment made of steel and other materials. The purpose of a tensioner is to keep the new conductor under control and to prevent it from making contact with any energized equipment during the installation. This tensioner was mounted onto the bed of a utility truck that was constructed of steel and wood. Neither

the tensioner nor the utility truck was effectively grounded by the BES crew prior to the incident. As a result of the failure to effectively ground the tensioner or the utility truck, when the new conductor became energized, it energized both the tensioner and the bed of the utility truck.

While attempting to adjust the tension on the new conductor, Mr. Haste touched the energized truck bed and received very serious shock and burn injuries to his right hand, right arm, and right side. Mr. Haste received emergency medical treatment at the scene of the incident and was later transported to the University of Louisville Hospital, where his right arm was amputated above the elbow. He also received skin grafts for the burns to his right arm and side.

Pursuant to 807 KAR 5:006, Section 26(2), Meade County provided a summary written report ("summary report") regarding the August 12, 2009 incident to Commission Staff on August 18, 2009, which is appended to Commission Staff's Report as Attachment A. According to the summary report, Mr. Haste was wearing fire-retardant clothing at the time of the incident. However, according to the Report, he was not wearing other personal protective equipment such as rubber gloves or rubber sleeves that could have insulated him from the electric charge.

Based on Commission Staff's investigation of the accident and the information provided by Meade County in its summary report, Commission Staff alleges that Meade County has violated KRS 278.042 by violating the following provisions of the most recent edition (2007) of the NESC:

NESC Section 42: General Rules for Employees:

Violation 1. 420. Personal General Precautions C. Safeguarding Oneself and Others 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.

Violation 2: 420. Personal General Precautions
D. Energized or Unknown Conditions

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

Violation 3: 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.

Violation 4: 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.

Violation 5: 422. Overhead Line Operation Procedures
C. Installing and Removing Wires or Cables

1. Precautions shall be taken to prevent wires or cables that are being installed or removed from contacting energized wires or equipment. Wires or cables that are not bonded to an effective ground and which are being installed or removed in the vicinity of energized conductors shall be considered as being energized.

NESC Section 44. Additional Rules for supply employees

Violation 6: 441. Energized Conductors or Parts

NESC Section 44, 441-A-1: Employees shall not approach or bring any conductive object within the minimum approach distance listed in <u>Table 441-12</u> 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; or
- c. The energized line or part is insulated from the employee and from any other line or part at a different voltage.

Violation 7: 443. Work on Energized Lines and Equipment A. General Requirements

6. Equipment or material of a non insulating substance that is not bonded to an effective ground and which extends into an energized area, and which could approach energized equipment closer than the distance specified in Rule 441A, shall be treated as though it is energized at the same voltage as the line or equipment to which it is exposed.

Based on its review of the Report and being otherwise sufficiently advised, the Commission finds that prima facie evidence exists that Meade County has failed to comply with KRS 278.042. 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 reasonableness of Meade County's practices related to the construction, installation, and repair of electric facilities as they relate to the facts of this case.

² See Report at 6.

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

Meade County shall submit a written response to the allegations contained
in the Penert to the Commission within 20 days of the date of this Order.

in the Report to the Commission within 20 days of the date of this Order.

2. Meade County shall appear on December 2, 2010 at 10:00 a.m., Eastern

Standard Time, in Hearing Room 1 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 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, Meade County shall also present

evidence on the adequacy, safety, and reasonableness of its practices related to the

construction, installation, and repair of electric facilities as they relate to the facts of this

case and whether such practices require revision.

4. The December 2, 2010 hearing shall be recorded by videotape only.

5. The Report in the Appendix 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

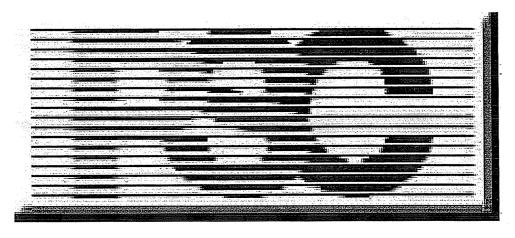
OCT -6 2010

KENTUCKY PUBLIC

Executive Director

APPENDIX

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2010-00375 DATED OCT - 6 2010



INCIDENT INVESTIGATION ~ Staff Report

Report Date ~ September 4, 2009

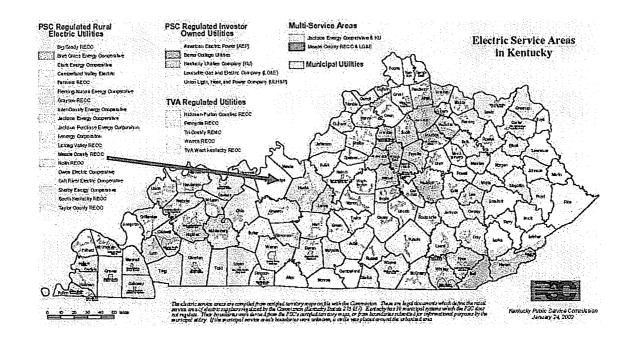
Incident Date ~ August 12, 2009

Serving Utility ~ Meade County RECC

Incident Location ~ Harned, Kentucky

Victim ~Patrick Haste

PSC Investigator ~ Steve Kingsolver





Kentucky Public Service Commission

Electric Utility Personal Injury Incident Report

Utility:

Meade County RECC

Reported By:

David Poe, VP of Engineering

Incident Occurred:

August 12, 2009

Approximately 4:30PM

Utility Notified:

August 12, 2009

Approximately 5:04PM

PSC Notified:

August 12, 2009

Approximately 5:25PM

PSC Investigated:

August 13, 2009

Approximately 9:00AM

Report Received:

August 19, 2009

Incident Location:

315 South Hwy 259 Harned, KY Breckinridge County

Incident Description:

Bowlin Energy Services is an electrical line contractor working for Meade County RECC. A Bowlin Energy Services crew was installing new conductors on an existing three phase circuit for Meade County RECC when the new de-energized and not grounded 3/0 ACSR made contact with an existing energized conductor of this circuit. During the process of pulling this new conductor and before the new conductor was accidentally energized, it was noticed that the tension on the conductor needed to be increased. An employee of Bowlin Energy, Patrick Haste, was instructed to go to the wire truck and increase the tension on the conductor being pulled in. Tension is applied to the new conductor being pulled in by what is called a tensioner or brake. This keeps the new conductor under control, and is less likely to become energized, and is less of a safety hazard during the process of pulling in the new conductor. When the victim, Patrick Haste, reached into the bed of the truck to increase the tension on the new conductor, the new conductor had already become energized to approximately 7200 volts and in turn, energized the tensioner or brake. The victim, Patrick Haste, received serious burns to his right hand, right arm and right side.

Victim:

Name:

Patrick Haste

Lineman, A

Bowlin Energy

Address:

122 Railroad Street, Hustonville, KY 40437

Employer:

Bowlin Energy

Injuries:

Burns to right hand, right arm and right side.

Fatality:

Shock and Burn:

Yes

Age:

30 years old.

Witnesses:	Name:	Address:	<u>Employer:</u>
1.)	Ronald Douglas	Gravel Switch, KY	Bowlin Energy
2.)	Bobby Gooch	Waynesburg, KY	Bowlin Energy
3.)	Jerry Conder	Gravel switch, KY	Bowlin Energy
4.)	Kyle Smither	Sanders, KY	Bowlin Energy
5.)	Dallas York	Sanders, KY	Bowlin Energy
6.)	Mike Tucker	Monticello, KY	Bowlin Energy
7.)	Willie Sheppard	Unknown	Bowlin Energy
8.)	Tyler Hale	Unknown	Bowlin Energy
9.)	Brandon Hale	Unknown	Bowlin Energy

Information From: Name:	Position:	Employer:
1.) David Poe	VP of Engineering	Meade Co. RECC
2.) Greg Morgan	Member System Safety	Big Rivers Electric
3.) Ronald Douglas	Lineman/Foreman	Bowlin Energy
4.) Bobby Gooch	Lineman, A	Bowlin Energy
5.) Jerry Conder	Groundman	Bowlin Energy
6.) Kyle Smither	Groundman	Bowlin Energy
7.) Dallas York	Lineman, A	Bowlin Energy
8.) Mike Tucker	Lineman, A	Bowlin Energy

Probable Violations:

KAR 278.042

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

Section 42. General rules for Employees

<u>#1</u>

420. Personal General Precautions

C. Safeguarding Oneself and Others

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.

#2 420. Personal General Precautions

D. Energized or Unknown Conditions

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

#3 420. 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

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.

#5

422. Overhead Line Operation Procedures

- C. Installing and Removing Wires or Cables
- 1. Precautions shall be taken to prevent wires or cables that are being installed or removed from contacting energized wires or equipment. Wires or cables that are not bonded to an effective ground and which are being installed or removed in the vicinity of energized conductors shall be considered as being energized.

Section 44. Additional Rules for supply employees

#6

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 Distance⁴ (See Rule 441 in its entirety.)

	Distance to employee					
Voltage in kilovolts phase to phase ¹²	Phase-	to-ground	Phase-to-phase			
	(m)	(ft-in)	(m)	(ft-in)		
0 to 0.0501	not s	not specified avoid contact		pecified		
0.051 to 0.300¹	avoid			contact		
0.301 to 0.750¹	0.31	0.31 1-0		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	1.00³	3–3³	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.

<u>#7</u>

443. Work on Energized Lines and Equipment

A. General Requirements

6. Equipment or material of a non insulating substance that is not bonded to an effective ground and which extends into an energized area, and which could approach energized equipment closer than the distance specified in <u>Rule 441A</u>, shall be treated as though it is energized at the same voltage as the line or equipment to which it is exposed.

Temp & Weather:

Clear and Sunny

Approximately 80°

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.

Investigated By:	Name:	Company:
Signed: Date:	Hentin poli 9-3-09) e ·
Reviewed By:	Name:	Gompany:
Signed: Date:	John Sh	1
Attachments:	A. Meade County RECC A B. KPSC Accident Location C. KPSC Photographs of	on Maps

Attachment A

Meade County RECC Accident Report

Meade County RECC

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

8/18/09

Mr. Steve Kingsolver Kentucky Public Service Commisssion 211 Sower Blvd. Frankfort, KY 40602

Steve,

Enclosed with this cover letter is the 7-day report resulting from the investigation concerning the electrical contact of an employee of Bowlin Energy, our electrical contractor. You will find drawings, maps, tailgate session description, outage report, and pictures with a CD of those pictures with the report. If you should need further information or have questions, you may contact me at (270) 422-2911, ext. 3149.

Sincerely,

David R. Poe, P.E. Vice President of Operations & Engineering

Enclosures

ACCIDENT INVESTIGATION

of an electrical contact

Date		Augus	t 12, 2009	Y	Time	A.M.	4:59 P.M. (EDT)
Location	315 South	Hwy 259			e y y y y y y y y y y y y y y y y y y y		<u>ia na ny anany ilay ao </u>
	Harned, Ky	y 40144		20,000 mm			
	war gareer in the Process					ing panganan darah dara	
Photographs	YES	<u> </u>	(to be attche	ed to report)		NO	
Diagram:	Measure s	cene, doc	ument all obj	ects involved			
Person(s) mal	king measur	ements/di	agrams:	Jim Miller	<u> Angellon (fra fra fra 1</u>		
			•	<u></u>			Alta esta esta esta esta esta esta esta es
INJURIES:							
	NAME	Patrick H	aste			i jaritany kaominina dia mandri dia kaominina	engament of the state of the st
							garaga ya kata kata kata kata kata kata kata
Photographs Diagram: Meas Person(s) making me INJURIES: N Add DOB Hospital Unive Na Number of witnesses Witne		Hustonvi	lle, KY 4043	7	- may in the second		- Palasaksi - Palasaksi - Palasaksi - Palasaksi - Palasaksi - Pa
				<u></u>			
	DOB/AGE	3	0	Occu	oation Class A I	ineman	Version de la companyación
	Injury	Burns to	the right hand	d, arm, and side	egen in lagar Resp. Transco.		
Hospita	I University	of Louisvi	<u>lle</u>	e ere e status este e restat estat se e		EMS YES	NO
	Name o	f provider	Janaan Maja	and Control of the Co		<u> </u>	and the same of th
		Address	530 S. Jac	kson St.	<u> </u>		personal programme and the second
			Louisville,	KY 40202			
Number of wil	Inesses	La colonial de desarro	9	<u>.</u>			
	Witness#		1				
		Epiteriologica (S. 1911)			- lineman/forer	nan with Richardson	Bowlin since 1986
			Address	2491 Elk Cave I	Branch Rd.		
				Gravel Switch, I	(Y 40328		
			Phone:	Home			e Barana
				Cell	ents de la		<u> 1980aan ja kanta kanta kanta 1982 ang kanta kanta</u>
	Statement	Was stri	nging new wir	re in. B-phase ha	nd just been co	mpleted, started on C	-phase. It was going in
Photographs Diagram: Me Person(s) making NJURIES: DO Hospital Ur		taunt, su	ddenly it wen	it slack. He aske	d someone to t	ighten up the brake.	Patrick went over to do
		so. Mr. I	Douglas hear	d nothing and kn	ew nothing goir	ng on until he seen th	e smoke coming from
		the wire	truck. Did no	t know where or	how the wire go	t into any hot phase	wire. He called Billy (the
		foreman	for the secor	nd crew, who was	at the tensione	er end) to come and I	nelp. He stated that the
		previous	pull was at 7	'00# tension and	this one should	have been the same	e. He stated that his
		truck wa	s approximat	ely 10' - 12' from	the wire truck.	Had just removed th	e supply reclosurer at

	the substation from nor	reclose around 3:50 EDT. Willie Sheppard pulled Patrick off of the truck
	with a extendo stick.	
Witness#	<u></u>	
n n a 2,000 -	Name I	Bobby Gooch - Class A lineman, 7 years experience (8 weeks with Bowlin)
	· ·	12300 Hwy 1247
	•	Waynesburg, KY 40489
	Phone:	Home
	ते विस्तित करिय	Cell
Statement	Mr. Gooch was in the b	ucket. Ron, the foreman, asked him to check the slack in the rope/wire.
a partir dispersion adaptively of the	San a superior and a region of representation of	im that there was about 3' of clearance between it and the hot phase below
	and headed down in the	e bucket. Patrick went over to tighten it. Then he heard Ron say "its got him!"
	Mr. Gooch was still in ti	ne bucket when Willie Sheppard pulled Patrick away with the extendo
	stick. Mr. Gooch grabb	ed a fire extenguisher and put out the fire on the truck and grass while the
	others attended to Patr	ick.
Witness#	3.	
	Name <u>.</u>	Jerry Conder - groundman/operator (31 years experience)
		2279 Elk Cave Rd.
	₩	Gravel Switch, Ky 40328
	Phone:	Home
		Cell]
Statement	Mr. Conder stated that	Ron (forman) asked someone to tighten up the brake. Mr. Conder headed
	across the road to the	other truck to get the rubber gloves to adjust the brake when he heard
	Patrick grunt and then	ne seen a small flash/fire @ Patrick's hand. Mr. Conder headed back towards
	the accident scene and	seen Willie Sheppard pull Patrick away from the truck with an extendo
	stick. He stated that Pa	atrick was conscious the entire time.
Witness#	4	
	Name	Kyle Smither - groundman (9-10 months experience)
	Address :	282 Sparta/Sanders Rd.
		Sanders, KY 41083
	Phone:	Home.
		Cell
Statement	Mr. Smither stated that	he and the rest of the crew (with the exception of Bobby Gooch) was standing
	behind the bucket truck	when Ron yelled for someone to tighten up the wire. Mr. Smither left to do
	it himself when Patrick	cut in front of him and went over to do it himself. Patrick yelled when he

touched the brake. Willie Sheppard pulled him away from the truck using a 'finger' (extendo) stick.

Wilness	<u> </u>	
	Name	Dallas York - Class A lineman (30 years experience - 24 with Richardson/Bowlin)
	Address	284 Sparta/Sanders Rd.
		Sanders, Ky 41083
	Phone:	Home Republic
		Cell
Stateme	ent Mr. York was flagging	traffic about 250 from the accident scene. He looked over and seen Bob by
	Gooch using the fire e	xtenguisher around the truck and the truck was smoking. He heard someone
	yell on the radio for Bil	lly to come and that someone was hurt (Mr. York had a handheld radio with
	him for flagging purpo	ses.
	and the state of t	
Witness	A STATE OF S	1988 - Martin Brand, 1987 - Start Brand, 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 -
		Mike Tucker - Class A lineman (lineman since 1974, ~ 1 month with Bowlin)
	Address	437 Hwy 1805
		Monticello, Ky 42733
	Phone:	
•		Cell Control C
Stateme		ng away from the accident location towards Mr. York when he happened to
	look back and see sm	oke around the wire truck. He seen Willie Sheppard pull Patrick away from
	the truck with a stick	
Witness	# 7,8,9	-
	Names	Willie Sheppard, Tyler Hale, Brandon Hale
	Address	
	Phone:	Home
		Cell
Statem	ent Witnesses were not	available; they were at the hospital with the victim during the investigation.
Law		
Enforcement	BreckInridge County	Sherriff Department
Fire		
Department	Harned Volunteer Fire	e Department
EMS	Breckinridge County	EMS
LINO	Discussion of the second of th	

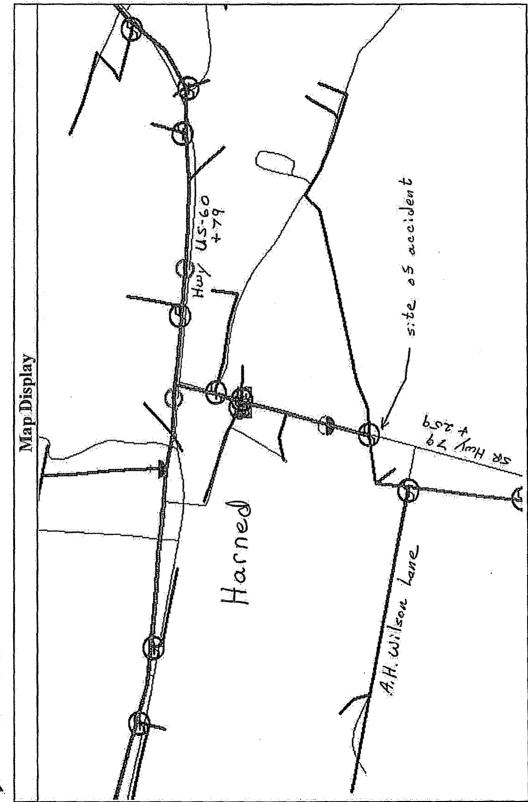
	Name/typ	e Wire stringing truck
	*	Examples: antenna, auger, crane, construction equipment
Manufacturer	name	1988 GMC 7000 Series
	Model#	Serial # 5MADN4024AA017089 trailer
Cooperative/C	Contractor F	Foreman at scene: Bowlin: Ron Douglas, MCRECC: Keith Mattingly, David Poe, Billy Wardrip
STATE	MENT	
	The cre	ews were upgrading an existing three-phase line near Harned, KY extending south along Hwy 259/79.
	The three	energized phase wires were set out on arms away from the new wire that were being pulled in with
•	the excep	ition of one that was left attached to the verticle pole the wire truck was next to. The foreman (Ronald
	Attention of the reclosure at the substation which was done at approximately 3:50 PM, EDT. The first phase wire was apparently pulled into place without any issues. The second phase-wire was being pulled in when the foreman asked Mr. Gooch, who was in the bucket at the time, to check on the clearance between the new wire being pulled and the hot phase wire located beneaths it. Mr. Gooch reported there was about 3' of clearance. Ron, who was in his pickup near the wire truck, yelled to the crew, who was standing behind the bucket truck, to tighten the brake. The pulled wire contacted the energized one at that time and Mr. Haste became energized along with the brake. Because the wire truck was not grounded, there was no electrical flash or any high fault currents available to operate the reclosure. The 7200 Volts began breaking down the tires on the truck only after the wood of the truck bed began to degrade along with the current that was passing through Patrick allowed. Willie Sheppard, one of the nearby linemen, grabbed an extendo stick and pulled Patrick allowed. Willie Sheppard, one of the nearby linemen, grabbed an extendo stick and pulled Patrick allowed. Willie Sheppard, one of the nearby linemen, grabbed an extendo stick and pulled Patrick away from the energized force members that the first wire was pulled in at a tension of Louisville Hospital where his right arm was amputated above his elbow. He also suffered burns on his right side where he is receiving skin grafts. It was noted by the foreman and a couple of crew members that the first wire was pulled in at a tension of	
	Examples: antenna, auger, crane, construction equipment arer name 1988 GMC 7000 Series Model # Serial # 5MADN4024AA017089 trailer VeriContractor Foreman at scene: Bowlin: Ron Douglas, MCRECC: Keith Mattingly, David Poe, Billy Wardrip The crews were upgrading an existing three-phase line near Harned, KY extending south along Hwy 259/79. The three energized phase wires were set out on arms away from the new wire that were being pulled in with the exception of one that was left attached to the verticle pole the wire truck was next to. The foreman (Ronald Douglas) notified Keith Mattingly (MCRECC's district foreman) that it was clear to remove the non-reclose. function from the reclosure at the substation which was done at approximately 3:50 PM, EDT. The first phase wire was apparently pulled into place without any issues. The second phase-wire was being pulled in when the foreman asked Mr. Gooch, who was in the bucket at the time, to check on the clearance between the new wire being pulled and the hot phase wire located beneaths it. Mr. Gooch reported there was about 3' of clearance. Ron, who was in his pickup near the wire truck, yelled to the crew, who was standing behind the bucket truck, to tighten up the wire being pulled in. Patrick Haste, a Class A lineman, went over to the wire truck to tighten the brake. The pulled wire contacted the energized one at that time and Mr. Haste became energized along with the brake. Because the wire, brake, or the truck was not grounded, there was no electrical flash or any high fault currents available to operate the reciosure. The 7200 Volts began breaking down the tires on the truck only after the wood of the truck bed began to degrade along with the current that was passing through Patrick allowed. Willie Sheppard, one of the nearby linemen, grabbed an extendo sitck and pulled Patrick away from the energized truck. Patrick was tended to by his crew members until the local EMS arrived. The helicopter was called soon after that and he was transported to the University	
	wire was	Examples: antenna, auger, crane, construction equipment 188 GMC 7000 Series 18 Serial # 5MADN4024AA017089 trailler tor Foreman at scene: Bowlin: Ron Douglas, MCRECC: Keith Mattingly, Devid Poe, Billy Wardrip e crews were upgrading an existing three-phase line near Harned, KY extending south along Hwy 259/79, hree energized phase wires were set out on arms away from the new wire that were being pulled in with exception of one that was left attached to the verticle pole the wire truck was next to. The foreman (Ronald las) notified Keith Mattingly (MCRECC's district foreman) that it was clear to remove the non-reclose on from the reclosure at the substation which was done at approximately 3:50 PM, EDT. The first phase was apparently pulled into place without any issues. The second phase-wire was being pulled in when preman asked Mr. Gooch, who was in the bucket at the time, to check on the clearance between the wire being pulled and the hot phase wire located beneathe it. Mr. Gooch reported there was about 3' of ance. Ron, who was in his pickup near the wire truck, yelled to the crew, who was standing behind the at truck, to tighten up the wire being pulled in. Patrick Haste, a Class A lineman, went over to the wire to tighten the brake. The pulled wire contacted the energized one at that time and Mr. Haste became placed along with the brake. Because the wire, brake, or the truck was not grounded, there was no ficel flash or any high fault currents available to operate the reclosure. The 7200 Volts began breaking the lires on the truck only after the wood of the truck bed began to degrade along with the current that beassing through Patrick allowed. Willie Sheppard, one of the nearby linemen, grabbed an extendo and pulled Patrick away from the energized truck. Patrick was tended to by his crew members until the EMS arrived. The helicopter was called soon after that and he was transported to the University of ville Hospital where his right arm was amputated above his elbow. He also suffered burns on his right s
	the forem	an asked Mr. Gooch, who was in the bucket at the time, to check on the clearance between the
	new wire	being pulled and the hot phase wire located beneathe it. Mr. Gooch reported there was about 3' of
	clearance	Ron, who was in his pickup near the wire truck, yelled to the crew, who was standing behind the
	bucket tru	ick, to tighten up the wire being pulled in. Patrick Haste, a Class A lineman, went over to the wire
	truck to tig	ghten the brake. The pulled wire contacted the energized one at that time and Mr. Haste became
	energized	l along with the brake. Because the wire, brake, or the truck was not grounded, there was no
	electrical	flash or any high fault currents available to operate the reclosure. The 7200 Volts began breaking
	down the	tires on the truck only after the wood of the truck bed began to degrade along with the current that
	was pass	ing through Patrick allowed. Willie Sheppard, one of the nearby linemen, grabbed an extendo
	stick and	pulled Patrick away from the energized truck. Patrick was tended to by his crew members until the
	local EMS	arrived. The helicopter was called soon after that and he was transported to the University of
	Louisville	Hospital where his right arm was amputated above his elbow. He also suffered burns on his right side
	where he	is receiving skin grafts.
	It was	noted by the foreman and a couple of crew members that the first wire was pulled in at a tension of
	700 lb. in	order to supply an adequate amount of tension on the wire and prevent it from sagging. It was also
	stated tha	at the wire brake on the wire truck was not adjusted between pulls. During the investigation, the
	tension w	as informally tested; the wire was easily pulled by one hand through the rollers of the brake.
	Other	miscellaneous information: All Bowlin personnel were wearing Fire-Retardant clothing (pants and shirts)
	shirts). T	he total length of the wire pull was 1200 ft. Mr. Steve Kingsolver of the Kentucky Public Service
	Commiss	ion was called and notified of the incident at 5:33 PM EDT, approximately 30 minutes after MCRECC

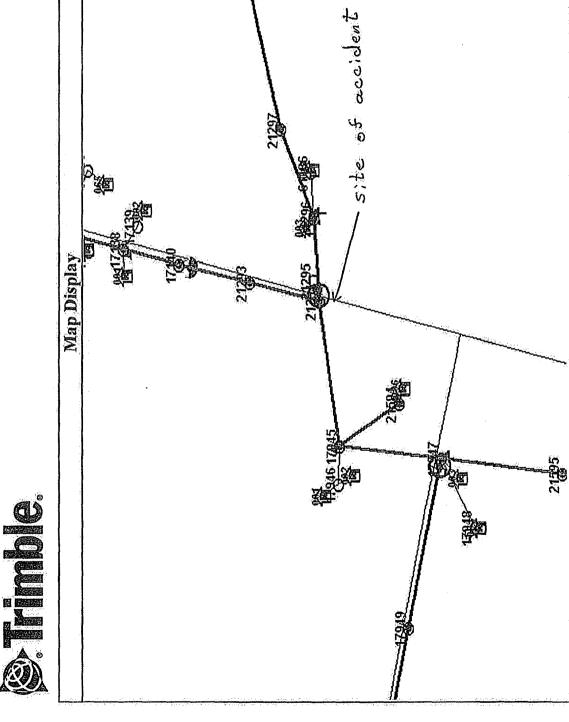
Measurements/Diagrams:

Accompanying the report.

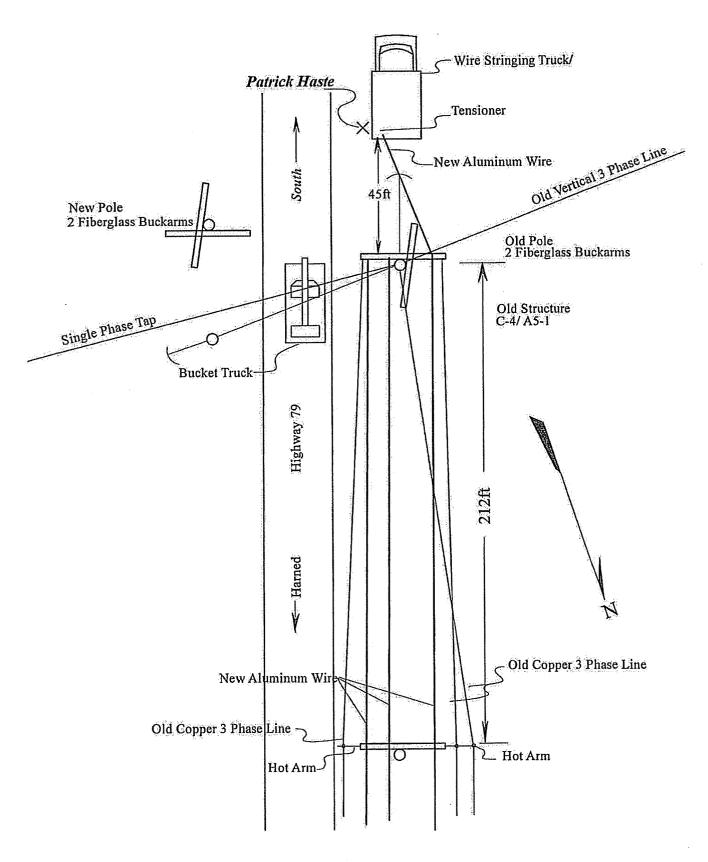
was notified by Ron Douglas.











Bowlin Contact 8/12/2009

BOWLIN ENERGY SERVICES, LLC DAILY TIME

RZ733.B DATE 8-18.09 CO-OP meade Cr JOB# 500) H CITYHONINS A - POLE CHANGE D - Chg TRANSFORMER COUNTYREE HAS CL B CONVERSION E = UNDER GROUND C = RETIREMENT F = OTHER HOURS EMPLOYEE # NAME CODE TOTAL EQUIP# 12 1130 カイろ 12 12 12 Rope Machine 12 12 2 ATTENDING EMPLOYEE INITIALS APPROVAL Jic. FOREMAN (**OP'S MANAGER** JOB# TIME ON SITE SAFETY MEETING NO YES CHECK ONE SAFETY RULES REVIEWED YES NO CHECK ONE TRUCKS AND EQUIPMENT REVIEWED YES NO CHECK ONE SPECIFIC LIMITATIONS DISCUSSED PPE INSPECTED BEFORE STARTING YES NO CHECK ONE NO CHECK ONE YES SPECIAL CONDITIONS AT SITE useim Buckets COMMENTS: Hozards live lines Traffic Diesers slip + Fulls

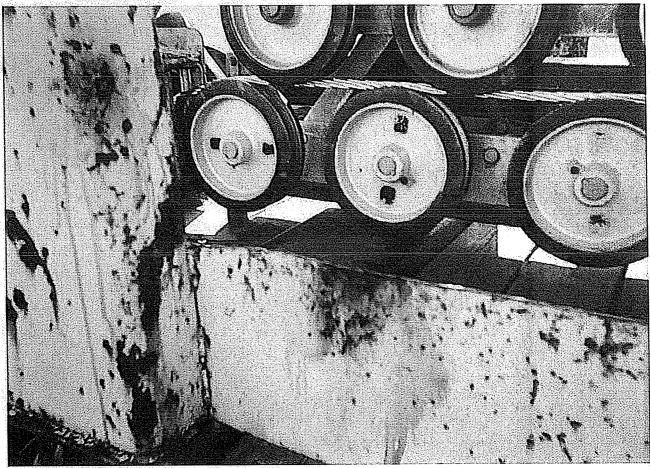
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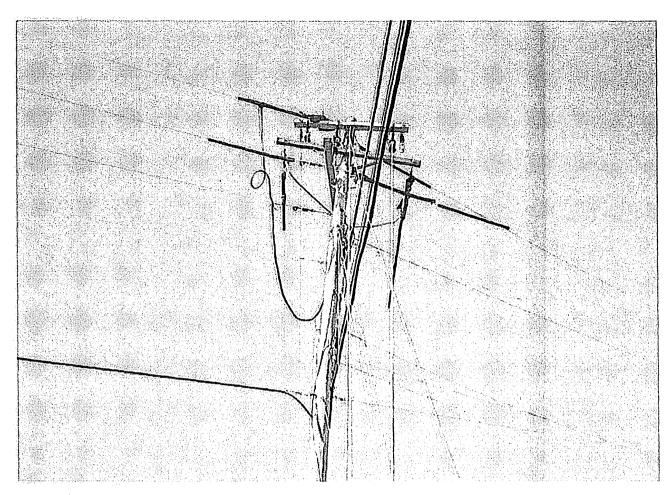
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001	Adapters	-,		310	Eye Nuts	124 - H121-H1	
005	Anchors			320	Cross Arm PINS	47.5.	
010	Crossarms			325	Clamp Type Pins		
015	Arrestors			_ 330	Pole Top Pins		-
020	Carriage Bolts	•	4 + 10 (4.5)	335	Stick Pins		
035	Eye Bolts Machine Bolts	•		615	Anchor Rods		
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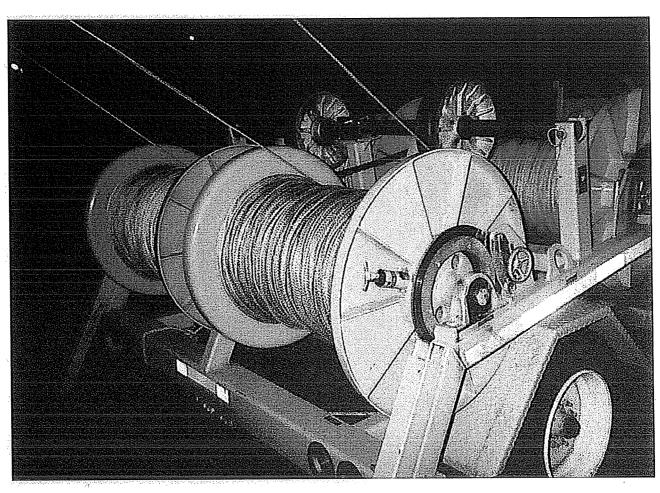


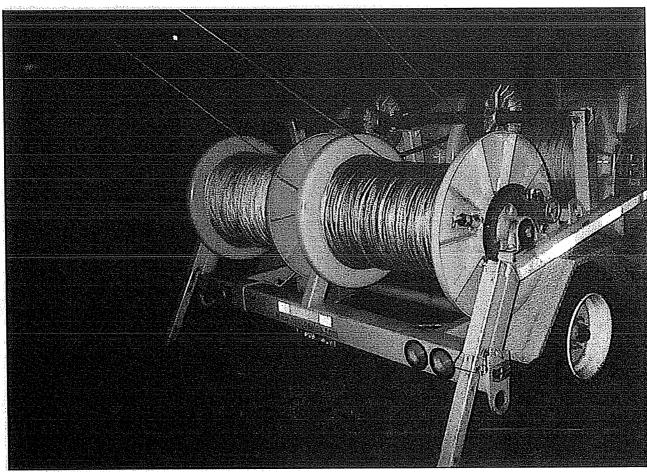


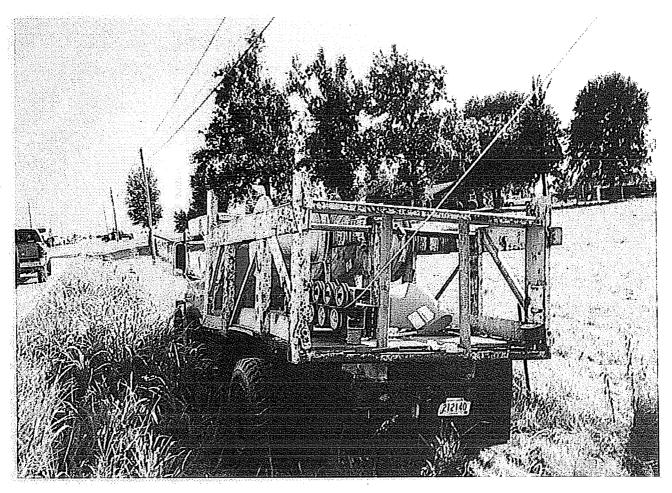


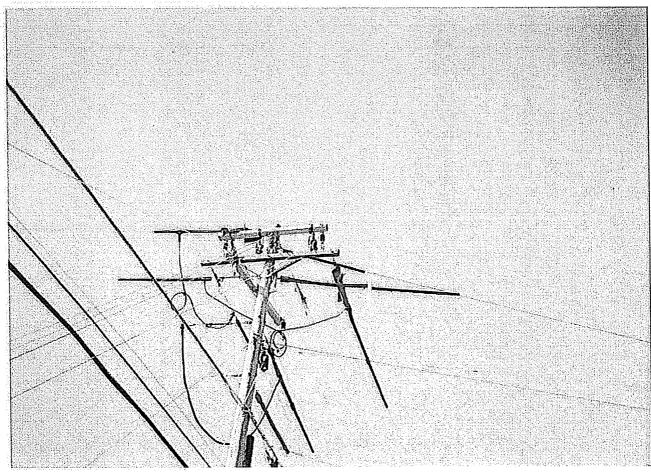


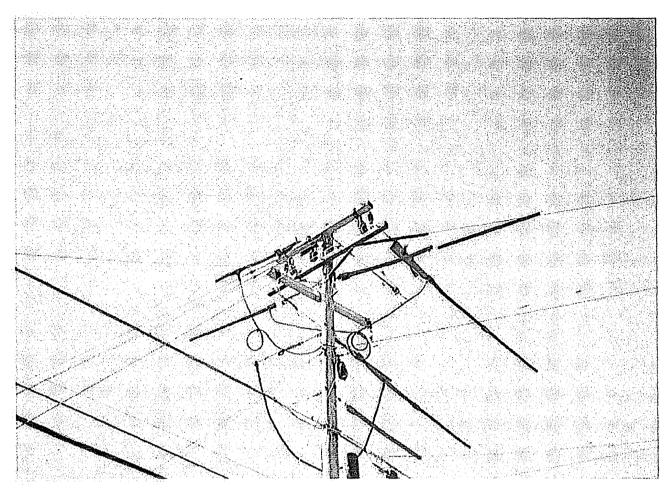


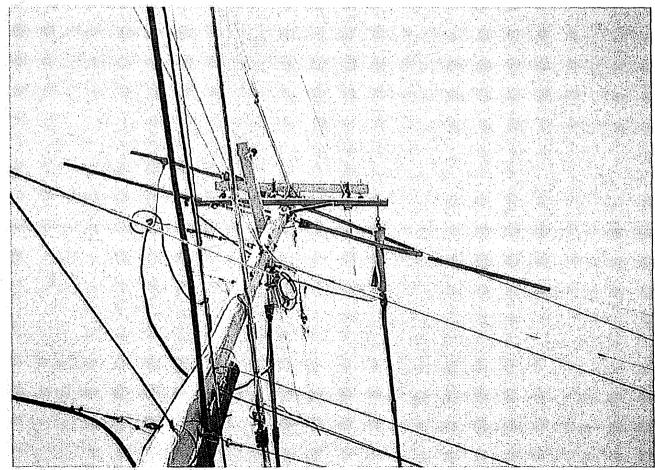


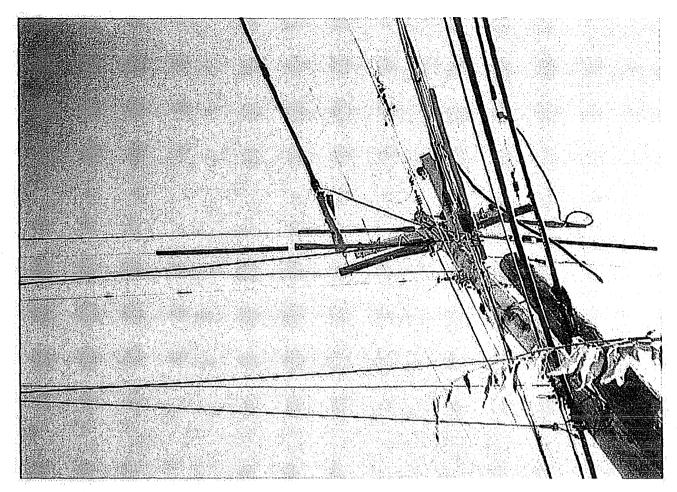




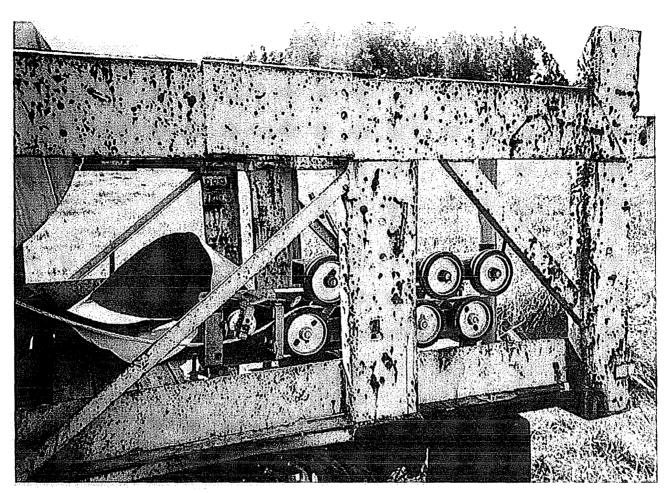


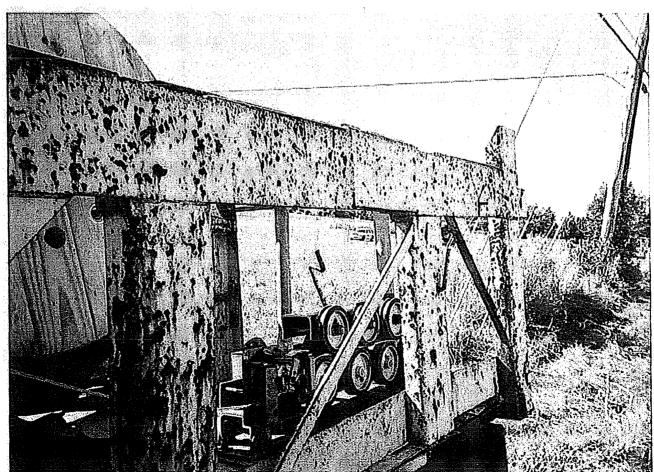




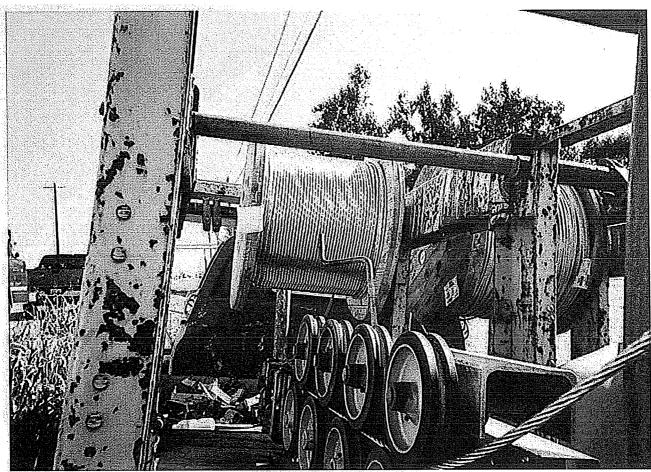


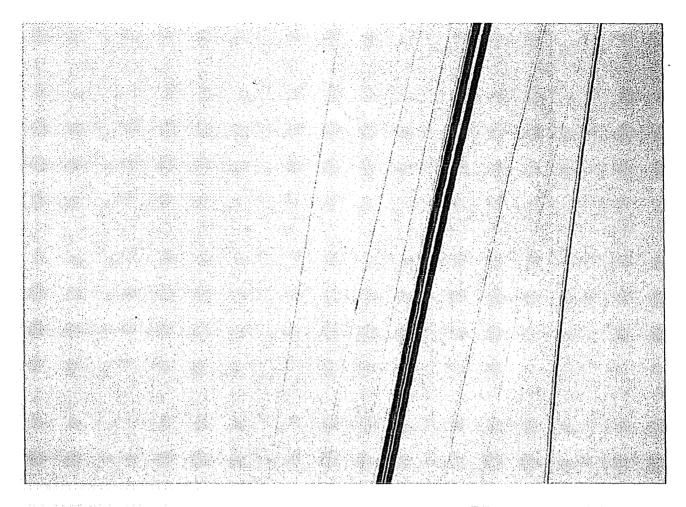




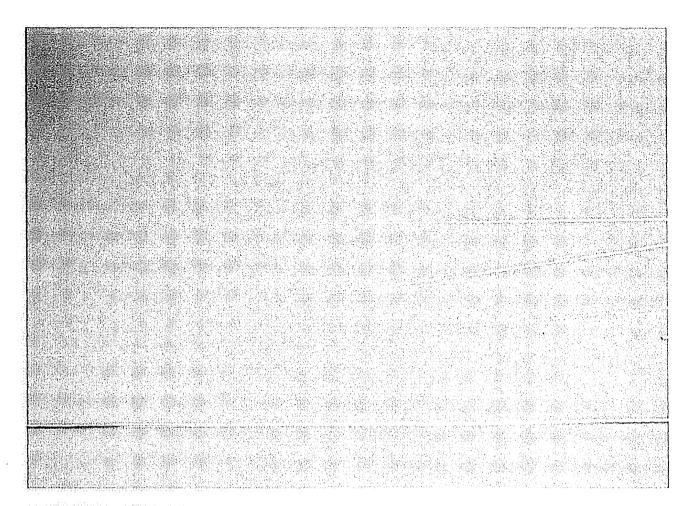


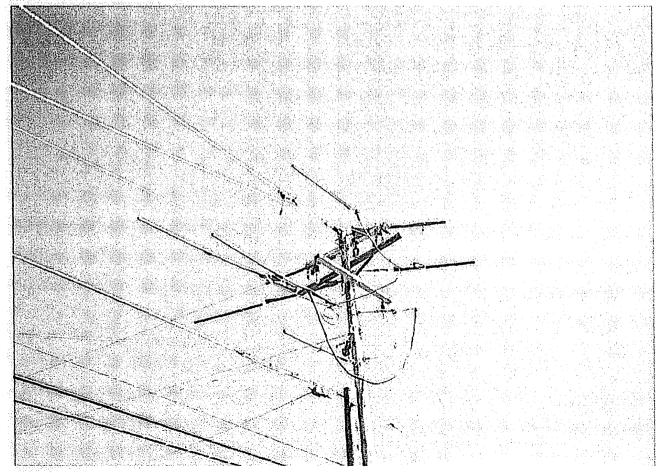


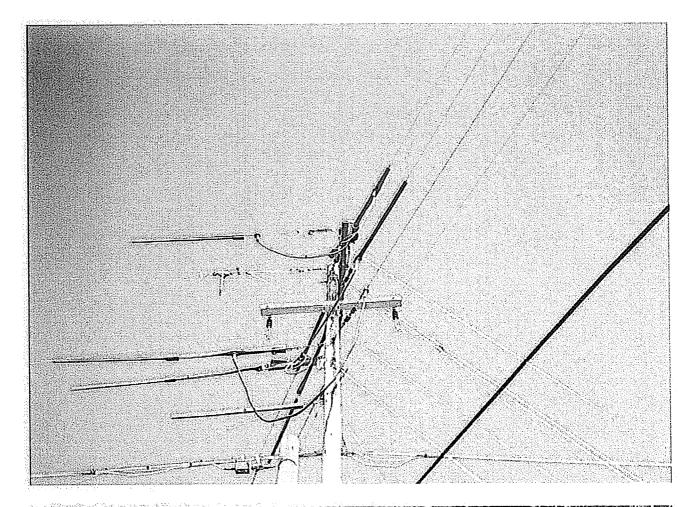




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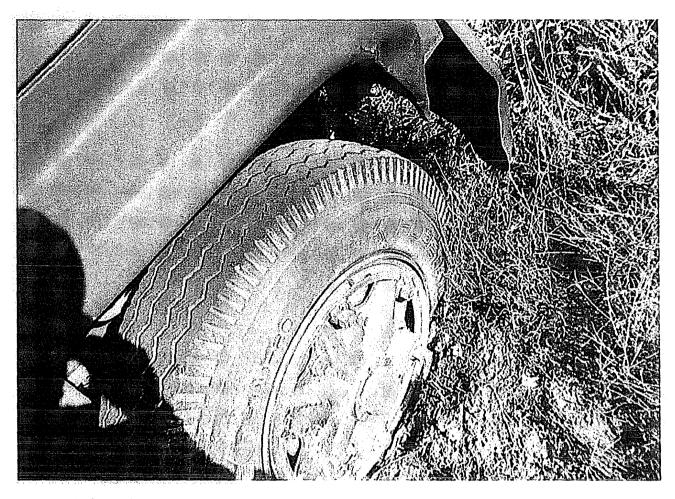




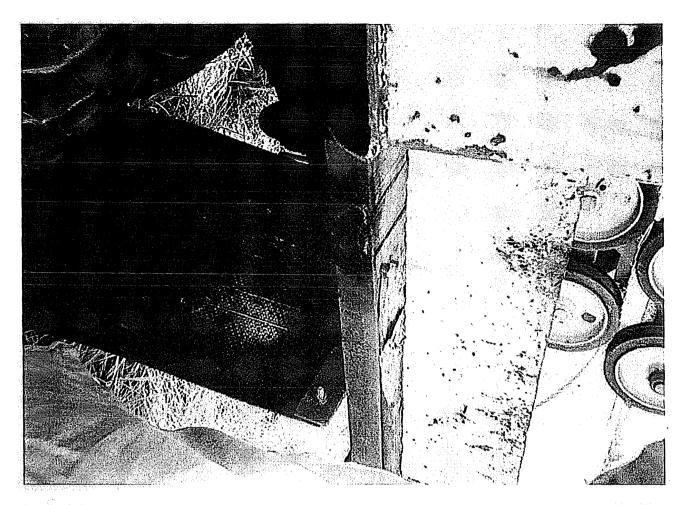








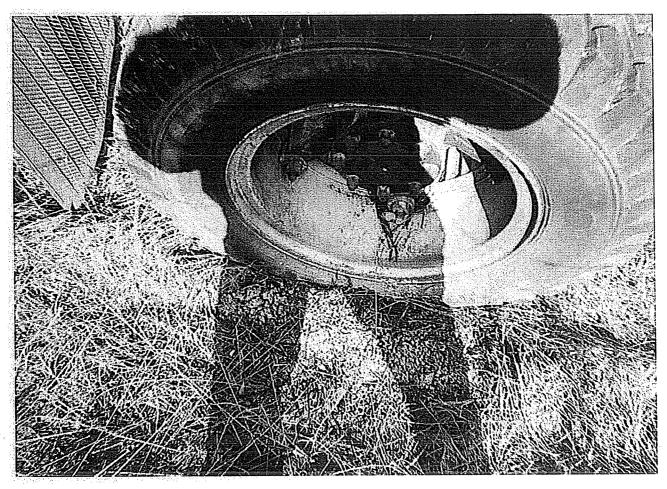


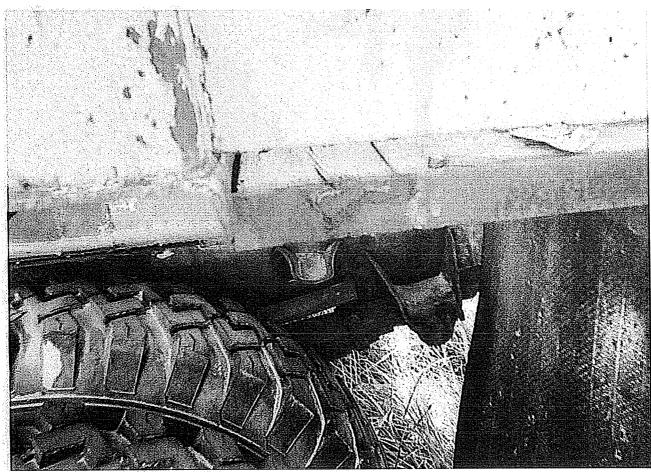


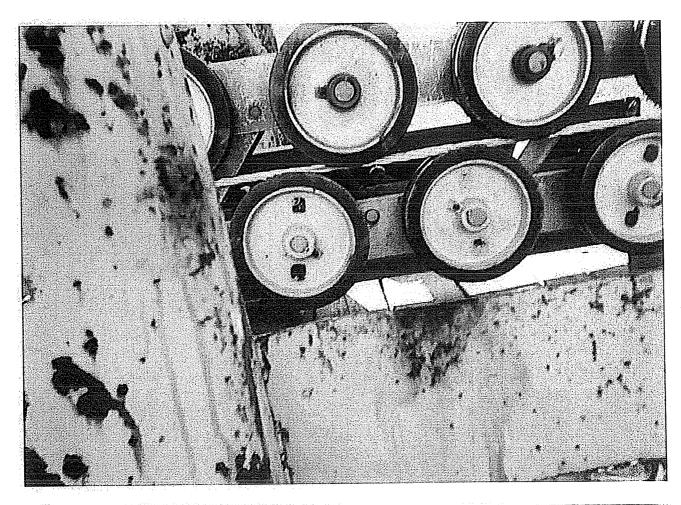


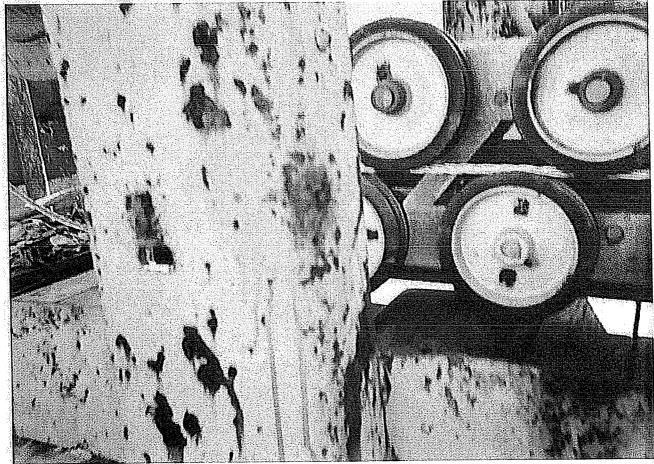


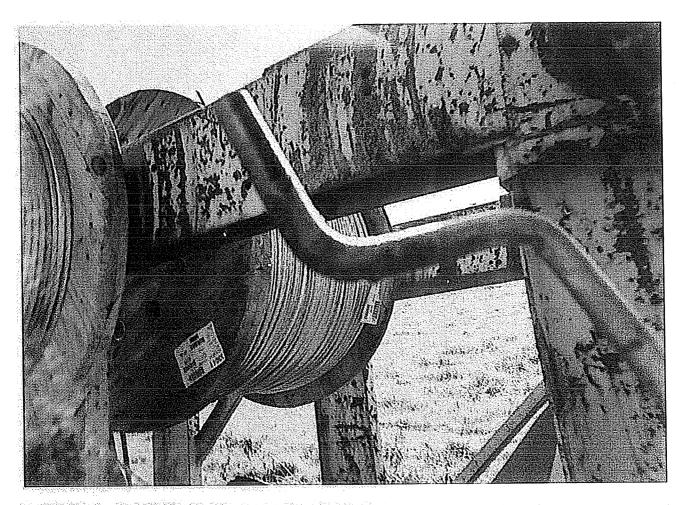


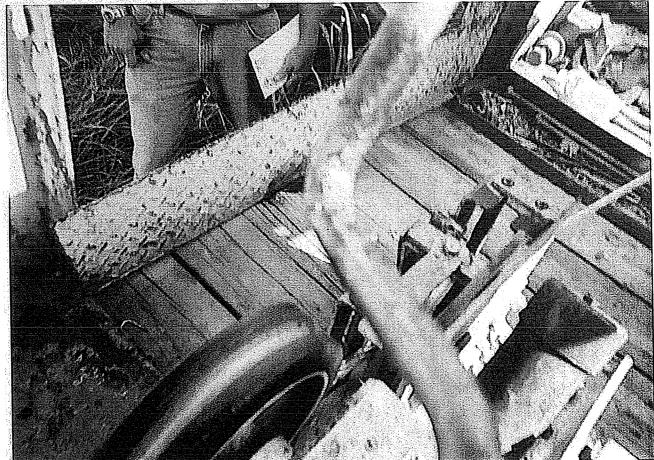










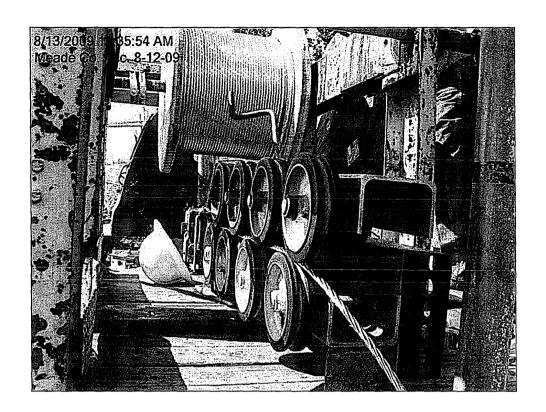


Attachment B

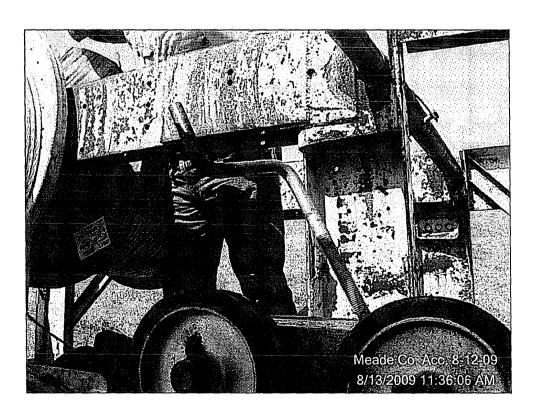
KPSC Accident Location Maps

Attachment C

KPSC Photographs of Accident Site



<u>#1</u>





<u>#3</u>





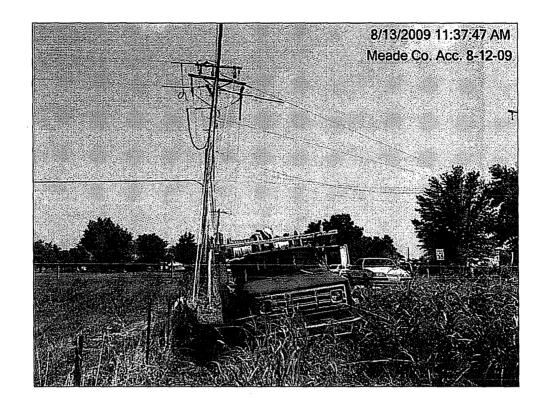
<u>#5</u>





<u>#7</u>





<u>#9</u>

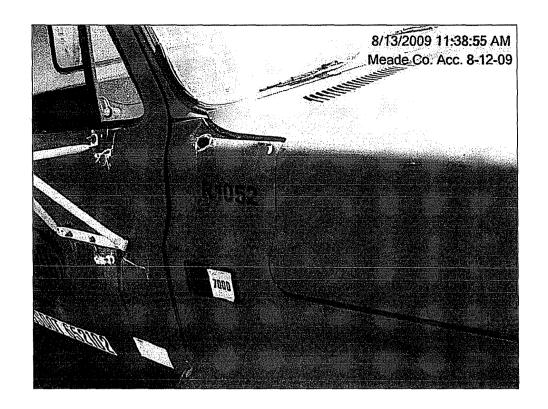


<u>#10</u>



<u>#11</u>

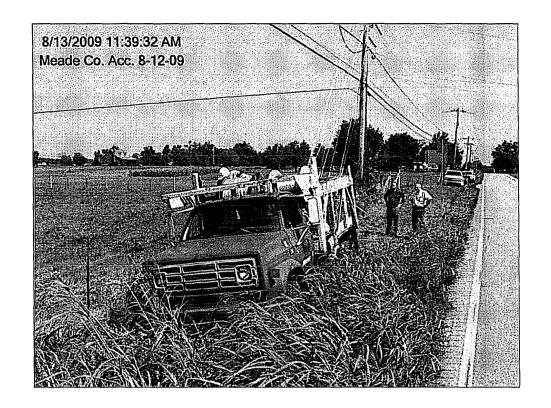




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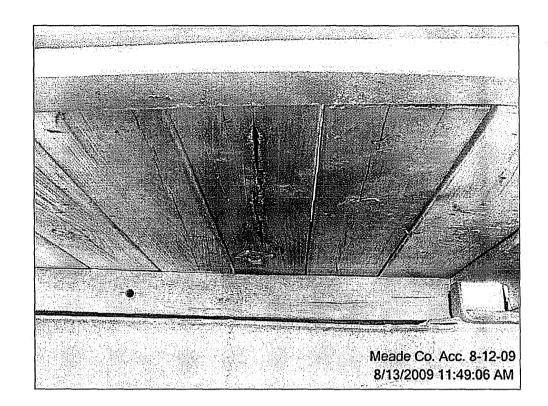
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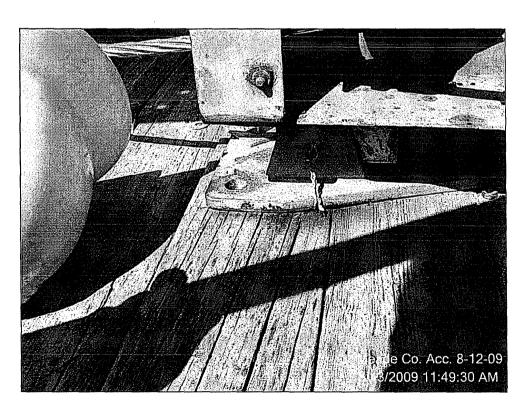
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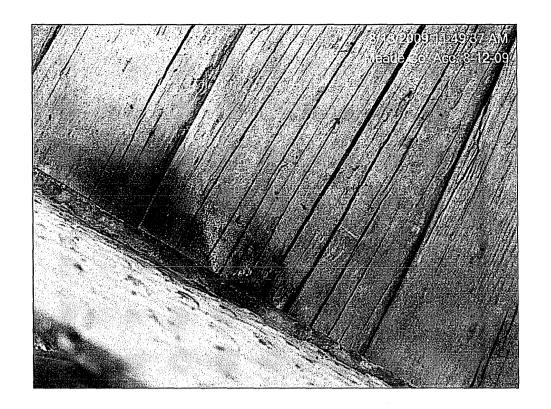
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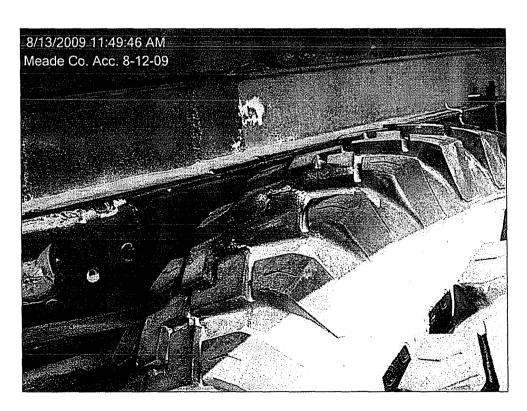
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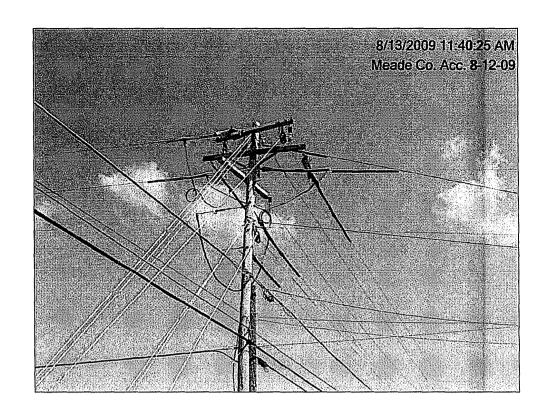
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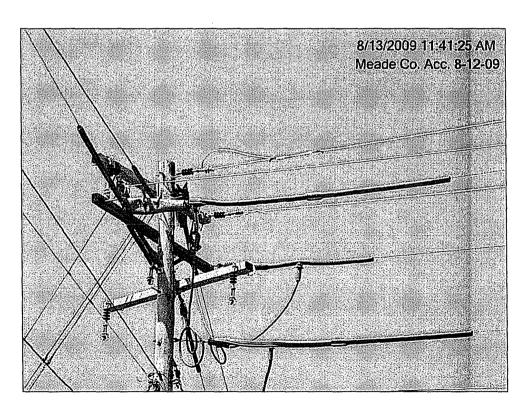
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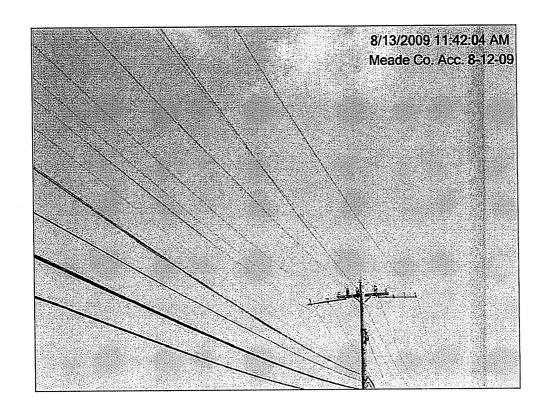
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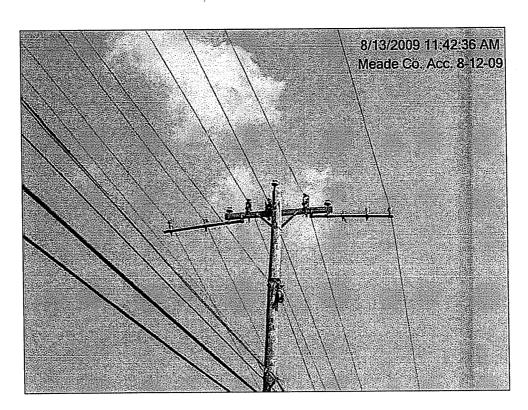
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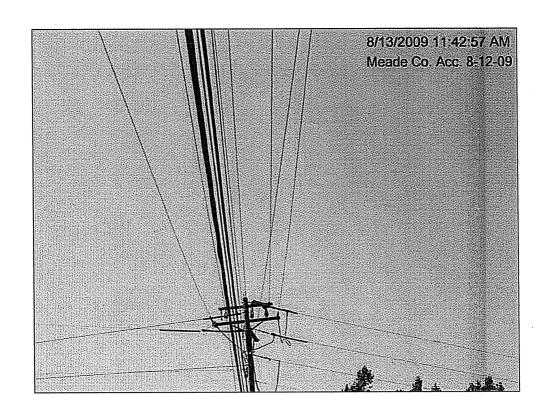
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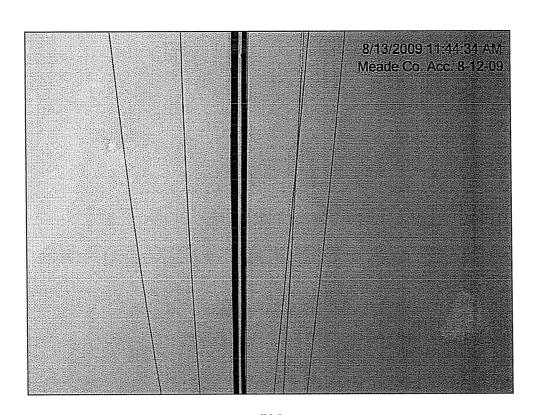
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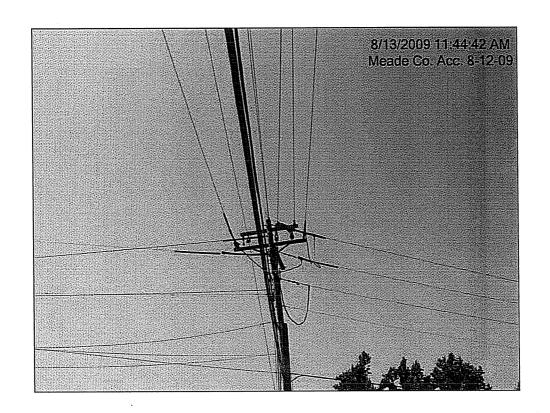
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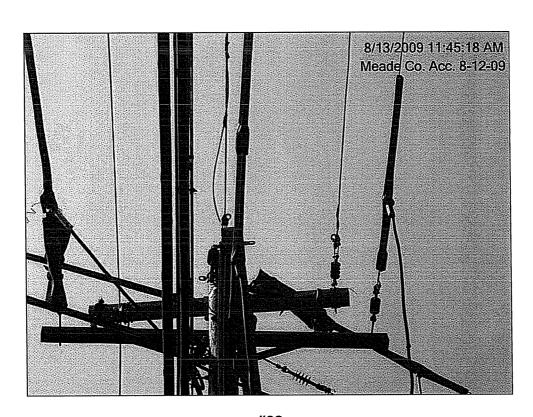
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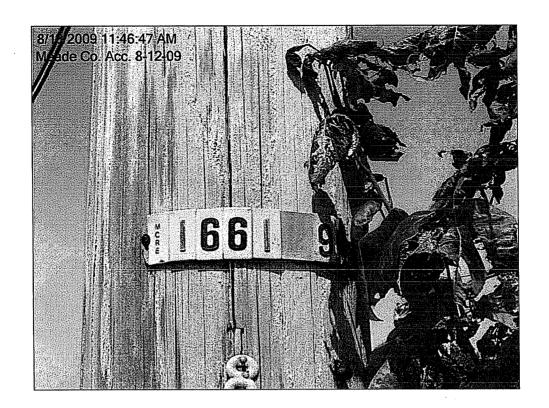
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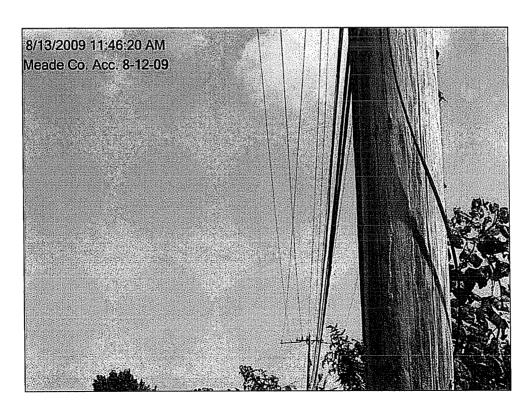
<u>#27</u>



<u>#28</u>



<u>#29</u>



<u>#30</u>

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