



Ernie Fletcher
Governor

LaJuana S. Wilcher, Secretary
Environmental and Public
Protection Cabinet

Christopher L. Lilly
Commissioner
Department of Public Protection

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

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

Mark David Goss
Chairman

Teresa J. Hill
Vice Chairman

September 29, 2006

RE: Case No. 2006-00353

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

Sincerely,

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

Beth O'Donnell
Executive Director

BOD/sh
Enclosure

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

LOUISVILLE GAS AND ELECTRIC COMPANY)
_____) CASE NO. 2006-00353
ALLEGED FAILURE TO COMPLY WITH)
KRS 278.042)

O R D E R

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

Commission Staff submitted to the Commission an Incident Investigation Report ("Incident Report") dated June 2, 2006, attached hereto as Appendix A, which alleges that on May 23, 2006 Willie Durbin, an employee of Peterson, Inc., was attempting to paint the exterior wall of a building at 1155 South Shelby Street, Louisville, Kentucky. Mr. Durbin was on the roof of the building, using an aluminum pole with a paint roller at the end, when he contacted a 4 kV primary conductor running parallel to the rooftop at a horizontal distance of 2 feet 2 inches from the rooftop. Mr. Durbin suffered fatal injuries.

KRS 278.042 requires that an electric utility construct and maintain its plant and facilities in accordance with the most recent edition of the National Electrical Safety Code, which is the 2002 Edition ("NESC"). The NESC, Section 23, Rule 234.C.1.a, and Table 234-1 require that there be a minimum horizontal clearance of 7.5 feet for unguarded or accessible wires, conductors, cables, or rigid live parts that are located adjacent to buildings.


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

1. LG&E shall submit to the Commission, within 20 days of the date of this Order, a written response to the allegations contained in the Incident Report.
2. LG&E shall appear on November 15, 2006 at 1:30 p.m., Eastern Standard Time, in Hearing Room 1 of the Commission's offices at 211 Sower Boulevard, Frankfort, Kentucky to present evidence concerning the incident which is the subject of the Incident Report, specifically the one alleged violation of KRS 278.042 and NESC Rule 234.C.1.a, and to show cause, if any it can, why it should not be subject to the penalties of KRS 278.990 for the probable violation of the aforementioned statute.
3. The official record of this proceeding shall be by video, unless otherwise requested by LG&E.
4. The Incident Report dated June 2, 2006 is hereby made a part of the record in this case.
5. Any request by LG&E for an informal conference with the Commission Staff shall be set forth in writing and filed with the Commission within 20 days of the date of this Order.

Done at Frankfort, Kentucky, this 29th day of September, 2006.

By the Commission

ATTEST:



Executive Director

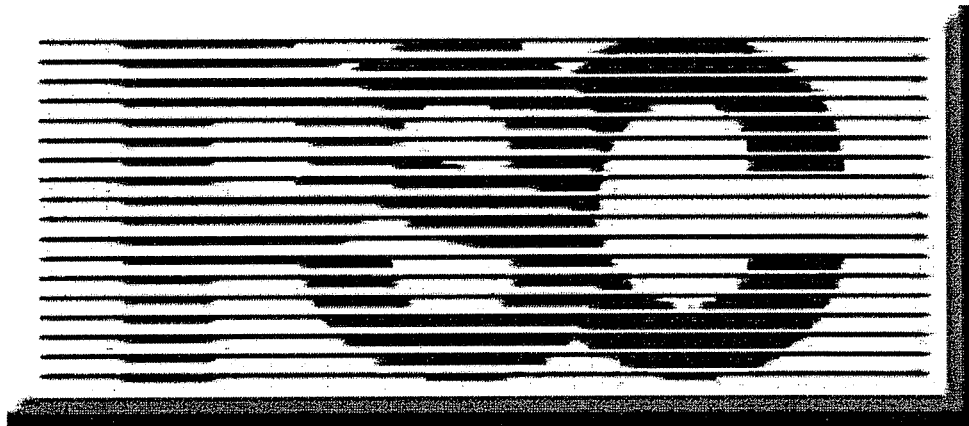
APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE
COMMISSION IN CASE NO. 2006-00353 DATED September 29, 2006.



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report



INCIDENT INVESTIGATION ~ Staff Report

Incident Location ~ Jefferson County, Kentucky

Report Date ~ June 2, 2006

Incident Date ~ May 23, 2006

PSC Investigator ~ Jeff Moore

Utility ~ Louisville Gas and Electric

Victim ~ Willie Durbin

PSC Regulated Rural Electric Utilities

- Big Sandy RECC
- Blue Grass Energy Cooperative
- Chart Energy Cooperative
- Cumberland Valley Electric
- Fairfax RECC
- Fleming-Mason Energy Cooperative
- Grayson RECC
- Inter-County Energy Cooperative
- Jackson Energy Cooperative
- Jackson Purchase Energy Corporation
- Kenegy Corporation
- Licking Valley RECC
- Meadow County RECC
- Noble RECC
- Owen Electric Cooperative
- Salt River Electric Cooperative
- Shelby Energy Cooperative
- South Kentucky RECC
- Taylor County RECC

PSC Regulated Investor Owned Utilities

- American Electric Power (AEP)
- Berea College Utilities
- Kentucky Utilities Company (KUC)
- Louisville Gas and Electric Company (LGE)
- Union Light, Heat and Power Company (ULHEP)

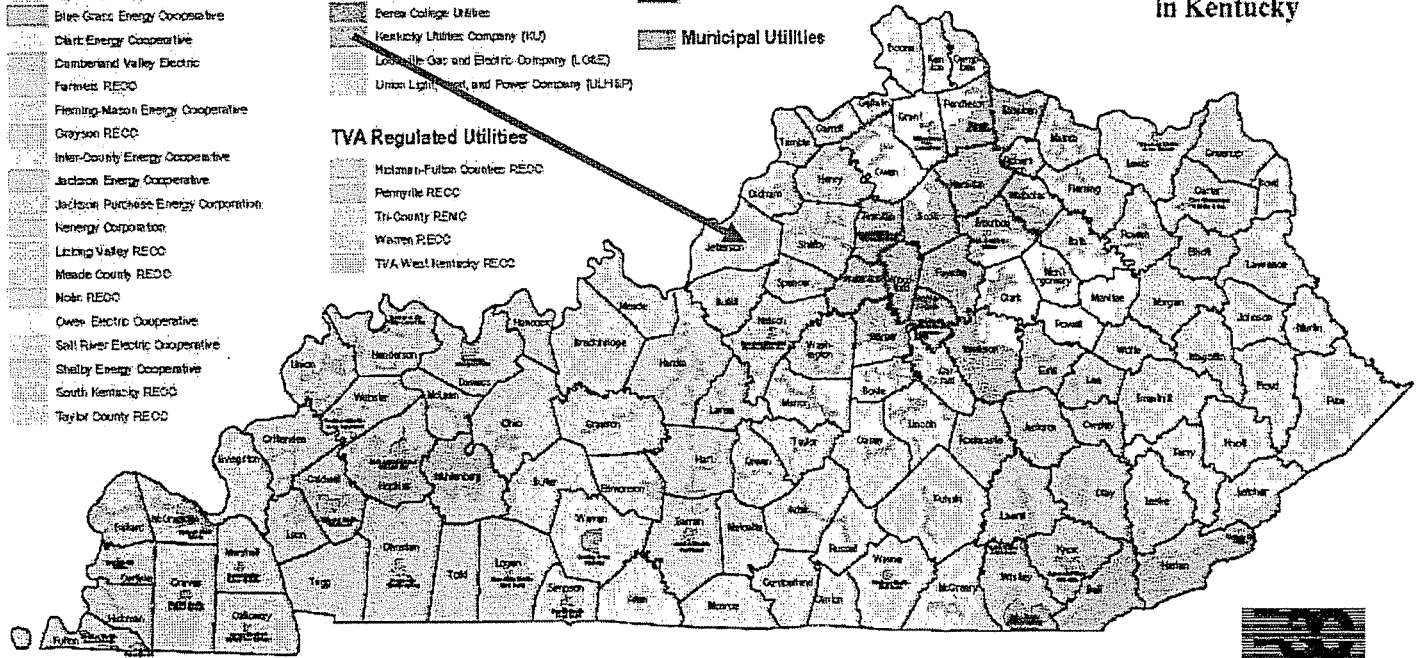
Multi-Service Areas

- Jackson Energy Cooperative & IGE
- Meadow County RECC & LG&E
- Municipal Utilities

TVA Regulated Utilities

- Michigan-Fulton Counties RECC
- Perryville RECC
- Tri-County RECC
- Western RECC
- TVA West Kentucky RECC

Electric Service Areas in Kentucky



0 10 20 30 40 50 Miles

The electric service areas are compiled from certified territory maps on file with the Commission. These are legal documents which define the retail service area of electric suppliers regulated by the Commission (Kentucky Statute 275.013). Kentucky has 30 municipal systems which the PSC does not regulate. These boundaries were derived from the PSC's certified territory maps, or from boundaries submitted for informational purposes by the municipal utility. If the municipal service area's location were unknown, a circle was placed around the unbounded area.

Kentucky Public Service Commission
January 24, 2002



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

Utility:	Louisville Gas and Electric / LG&E	
Reported By:	Ken Sheridan, Safety Director	
Accident Occurred	May 23, 2006	Approximately: 8:45 AM
Utility Notified:	May 23, 2006	Approximately: 8:46 Am
PSC Notified:	May 23, 2006	Approximately: 9:15 AM
PSC Investigated:	May 23, 2006	Approximately: 12:30 PM
Report Received:	May 26, 2006	
Accident Location:	1155 South Shelby Street, Louisville, Kentucky	
Accident Description:	<p>On May 23, 2006, I received a call from LG&E of a possible electrocution at 1155 South Shelby Street in Louisville. I met utility personnel at the accident site. According to utility personnel, Willie Durbin, an employee of Peterson Inc., was attempting to paint the exterior wall of the building from the roof top. While trying to paint the wall of this building from the roof using an aluminum pole with a paint roller at the end Mr. Durbin then contacted the 4kv primary conductor running parallel near the roof top. Mr. Kevin Broyles, another employee working at the accident site, indicated he was not a witness to the contact. He heard the pole and roller hit the sidewalk. Mr. Broyles then climbed the ladder and found Mr. Durbin unconscious. Louisville Fire and Rescue was called to the accident site. Mr. Durbin was pronounced deceased on arrival at University Hospital.</p>	



Kentucky Public Service Commission

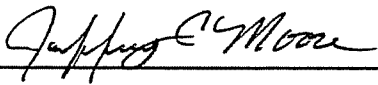
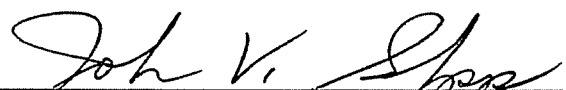
Electric Utility Personal Injury Accident Report

Victim(s):	Name		Address	Employer
	Willie Durbin		1106 South Shelby Street, Louisville, Kentucky 40203	Peterson Inc.
	Fatality	Age		
	Yes	Unknown		
I n j u r y	Electrocution			
Witness(es):	Name		Address	Employer
	N/A		N/A	N/A
Information From:	Name		Position	Employer
	Ken Sheridan		Safety Director	LG&E
	Keith McBride		Fire & Safety	LG&E
	Kevin Broyles		Unknown	Peterson Inc.
Probable Violations	<u>KRS 278.042 Service Adequacy and Safety Standards</u>			
	1. NESC Section 23: (234-C-1-a) Clearances			



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

Line/Equipment Measurements/Clearances					
Line Clearances At Point of Accident:	Measured	Minimum Allowed by NESC	Applicable NESC Edition ¹ 2002	Voltage	Construct Date
Vertical: A Phase to Elevation	33'-10"	18'- 6"	2002 Edition	2.4 kv	Unknown
Horizontal: Phase to Structure	2'-2"	7'- 6"	2002 Edition	2.4 kv	Unknown
Date of Measurement:	May 23, 2006				
Temp & Weather:	55° Calm and Sunny				
Measurements Made By:	Name		Company		
	Keith McBride		LG&E		
Investigated By:	Name		Company		
	Jeff Moore		Public Service Commission		
Signed:				Date:	7-13-06
Reviewed By:	Name		Company		
	John Shupp		Mgr., PSC Engineering Staff		
Signed:				Date:	7/14/06

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



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

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



Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

Attachment A
Utility Accident Report



an e-on company

RECEIVED

MAY 26 2006

PUBLIC SERVICE
COMMISSION

May 26, 2006

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

Re: 1155 South Shelby Street
North/East Corner of Shelby and Oak Streets
Louisville, Kentucky 40203

Dear Mr. Shupp:

I am forwarding the attached "Investigation Report" prepared by Keith McBride regarding the incident at 1155 South Shelby Street that occurred in the Louisville Gas and Electric area on May 23, 2006. Louisville Gas and Electric Company is providing this report to the KPSC in accordance with the applicable seven-day reporting requirement.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Jim Dimas', is written over a printed name and title.

Jim Dimas
Senior Corporate Attorney

Attachment

C: Keith McBride

**Louisville Gas & Electric
Company**
Corporate Law
220 W. Main St.
Louisville, Kentucky 40202
www.eon-us.com

Jim Dimas
Sr. Corporate Attorney
T 502-627-3712
F 502-627-3367
jim.dimas@eon-us.com

KPSC External / INVESTIGATION REPORT

Public Electrical Contact / Electrocution

Type of Report

06-E-015

Report Number

Keith McBride

Investigator

May 23, 2006

Date of Incident

**Location: 1155 South Shelby Street
North/East Corner of Shelby and Oak Streets
Louisville, Kentucky 40203**

Incident / Notification

On May 23, 2006 at 8:46 a.m. Louisville Gas and Electric Company ("LG&E") Distribution Control Center received a call from the Louisville Fire and Rescue Dispatch notifying LG&E that there were fire crews responding to a possible electrocution at 1155 South Shelby Street in Louisville, Kentucky. Distribution Control dispatched a Trouble Technician. I also responded and arrived on the scene first for LG&E and immediately made contact with the Fire Dept. District Chief. He advised that there was a member of the public unconscious on the roof of the building and who appeared to have made contact with a 4 kV power line located next to the building.

I notified Ken Sheridan, Manager of Safety and Technical Training, E.ON U.S., who notified the Kentucky Public Service Commission of the incident.

Investigation

On May 23, 2006 shortly before 8:45 a.m., Willie Durbin, who was working for Peterson Inc., a construction and restoration company, was attempting to paint the exterior of a building at 1155 South Shelby Street in Louisville. Mr. Durbin had gained access to the roof of the building via a fiberglass extension ladder positioned on the east side of the building.

Mr. Durbin appeared to have been lying on his stomach and reaching over the edge of the roof while using an aluminum pole with a paint roller attached at the end. While either raising or lowering the pole and roller, Mr. Durbin contacted the A-phase of the 3-phase 4 kV system with the aluminum pole. Mr. Kevin Broyles, a co-worker of Mr. Durbin, stated to the LMPD Investigator that he heard the pole and roller fall and hit the sidewalk; he indicated he was not a witness to the contact. When Mr. Broyles climbed the ladder to see what was wrong, he found Mr. Durbin unconscious.

Louisville Fire and Rescue were called to the scene to recover Mr. Durbin from the roof. Louisville EMS transported Mr. Durbin to University Hospital. Mr. Durbin was pronounced deceased on arrival at University Hospital.

Willie Durbin – deceased
1106 South Shelby Street
Louisville, Kentucky 40203

Kevin Broyles – co-worker on scene / did not witness / heard pole/roller fall
2009 Hamburg Pike
Jeffersonville, Indiana
Home- (812) 288-0831
Cell- (812) 810-7444

David Clark – third co-worker / not on scene / did not witness
1230 Rammers
Louisville, Kentucky

LFD report # 25004
FD dispatched – 8:45 a.m.
FD on scene – 8:50 a.m.
LG&E notified – 8:46 a.m.
Sub-station – Logan
Circuit - #2 (LG0002)

Measurements

Burn mark on phase to earth –	33ft 10in
Burn mark on phase to south roof edge (horz) –	2ft 2in
Burn mark on phase to south roof edge (vert) –	2ft 9in
Burn mark on phase to south roof edge (diagonal) –	3ft 8in
Burn mark on phase to east roof edge –	2ft 3in
Height of building (south roof edge to earth) –	30ft 11in

Date last KPSC inspection – February 15, 2005

Conductor size – 336 ACSR

Date of construction – (route) – 1925

Date last known work in area – 1980 (pole change-out)

The following items will be produced at a later date:

- Copy of inspection print and associated paperwork
- Copy of LMPD report
- Photograph of horizontal/vertical/diagonal measurements
- Copy of scene photographs

END OF REPORT

DATE OF REPORT: MAY 26, 2006



an *e-on* company

RECEIVED

JUN 5 2006

PUBLIC SERVICE
COMMISSION

July 5, 2006

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

Re: 1155 South Shelby Street
North/East Corner of Shelby and Oak Streets
Louisville, Kentucky 40203

Dear Mr. Shupp:

In follow-up to the Investigation Report that was filed by Louisville Gas and Electric Company on May 26, 2006 concerning the electrocution of Willie Durbin, enclosed are the additional items that were requested by the KPSC:

1. Copy of the inspection print and associated paperwork;
2. Photographs of horizontal/vertical/diagonal measurements; and
3. Complete copy set of scene photographs taking by Keith McBride.

Additionally, we have requested a copy of the report of the Louisville Metro Police Department. A copy will be sent once it is received by LG&E.

During a review of our records, we determined that an incorrect measurement was provided to the KPSC in our Investigation Report. The burn mark on phase to south roof edge (vertical) was **2 feet 11 inches** (not 2 feet 9 inches, as stated in the report). We regret the misinformation, and stand by all other measurements as stated in the report.

Louisville Gas and Electric
Company
Corporate Law
220 W Main St.
Louisville, Kentucky 40202
www.eon-us.com

Jim Dimas
Sr. Corporate Attorney
T 502-627-3712
F 502-627-3367
Jim.dimas@eon-us.com

If you need additional information concerning this incident, please contact me at (502) 627-3712.

Sincerely,

A handwritten signature in black ink that reads "Jim Dimas" followed by a stylized flourish that looks like "1518".

Jim Dimas
Senior Corporate Attorney

Enclosures

cc: Keith McBride

Open #103434

RSC Bosworth

LG0001 719 CAMP cross arms need to be replaced - bucket LQRDEC

319331

LG0001 1400 S. Shelby ST s/w corner - span of deenergized secondary hanging down - pole - bucket LRSIS

319332

LG0002 801 E. OAK ST (1st pole w of Chester) lightning arre. blown - bucket LRLA91

319336

LG0002 915 E. OAK ST 8ft cross arms need to be replaced - bucket LQRDEC

319338

LG0002 1045 E. OAK ST 8ft cross arms need to be replaced - bucket LQRDEC

319340

LG0001 800 E Kentucky ST.

L-RP3P6...

3 55 ft LGE pole # 43091-8751? is defective has two circuits of 3 phase - under arm disc. switches TLM # 121431 - transf - secondary - flood - bucket - category 2

LG0001 1109 S. Shelby ST 8ft cross arm on 4KV needs to be replaced bucket LQRDEC

319344

PSC Bosworth

30003

opp 1072 Highland Ave
lightning arre. blown - bucket LRLAAD

(1)

319346

60003

933 St. Catherine St.
service knob pulled out of house LQRDEC

2

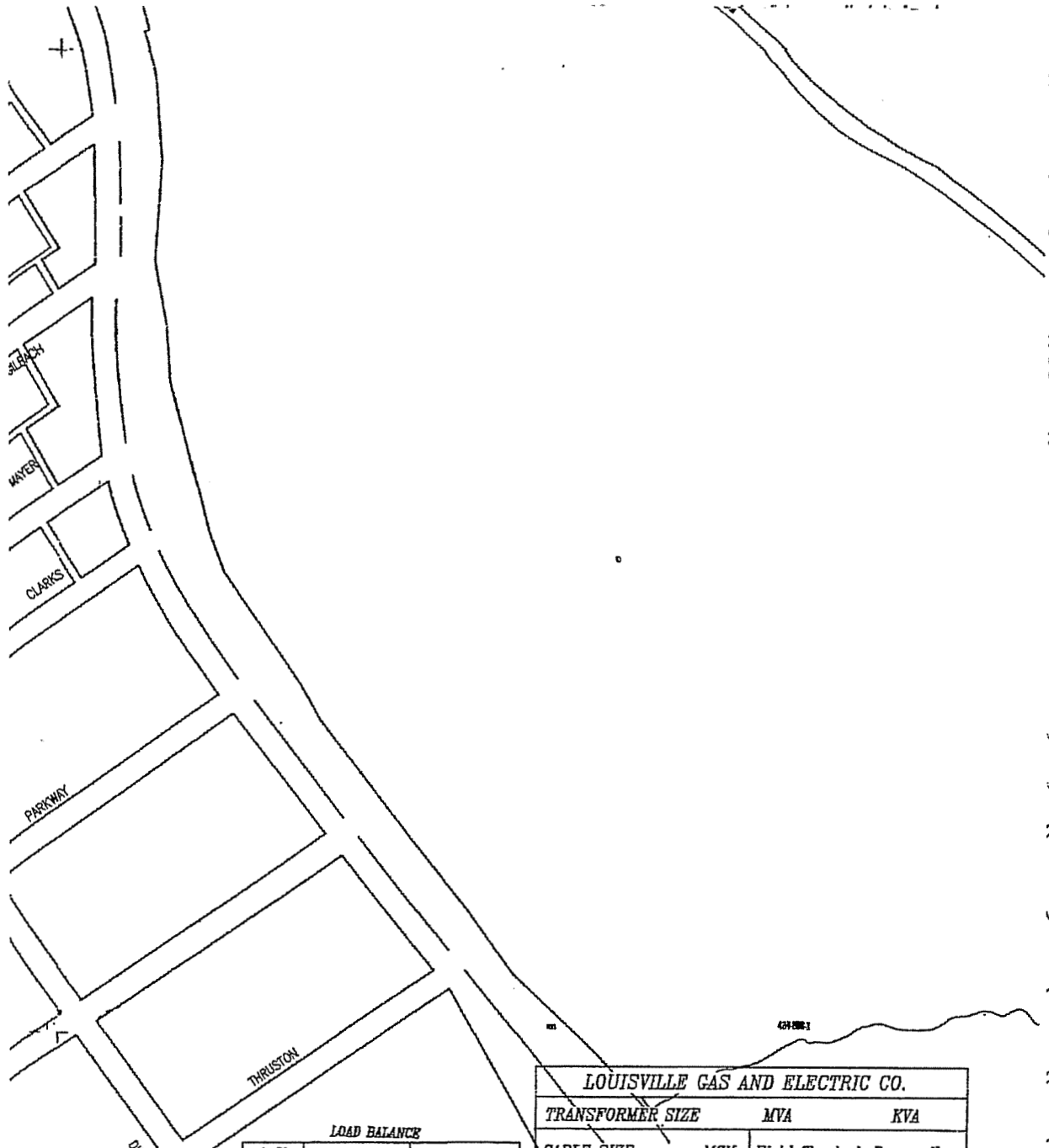
319347

60004

1200 Spratt
2nd ~~post~~ pole s/ Samuel - bottom soft cross arm
needs to be replaced - bucket LQRDEC

1

319347



LOAD BALANCE	
A Ø	
B Ø	
C Ø	
TOTAL LOAD	

~~2-14-05~~
~~2-15-05~~
~~2-15-05~~
 2-14-05
 Bosworth

LOUISVILLE GAS AND ELECTRIC CO.		
TRANSFORMER SIZE	MVA	KVA
CABLE SIZE	MCM	Field Checked: Bosworth
1" = 400'	KV	Plot Date: 02/02/2005

Circuit # LG0001, 2, 3, 4

01 hrs 4 CO'S 4 02 hrs 4 CO'S 3 03 hrs 4 CO'S 2 04 hrs 4 CO'S 1

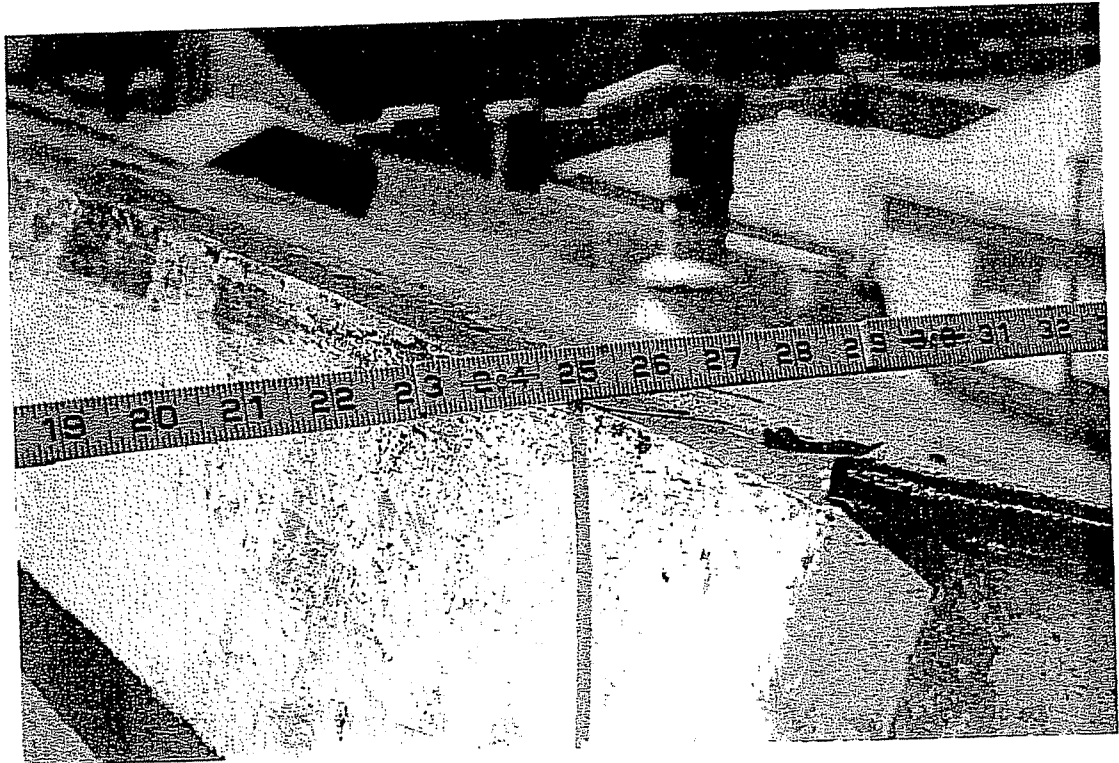
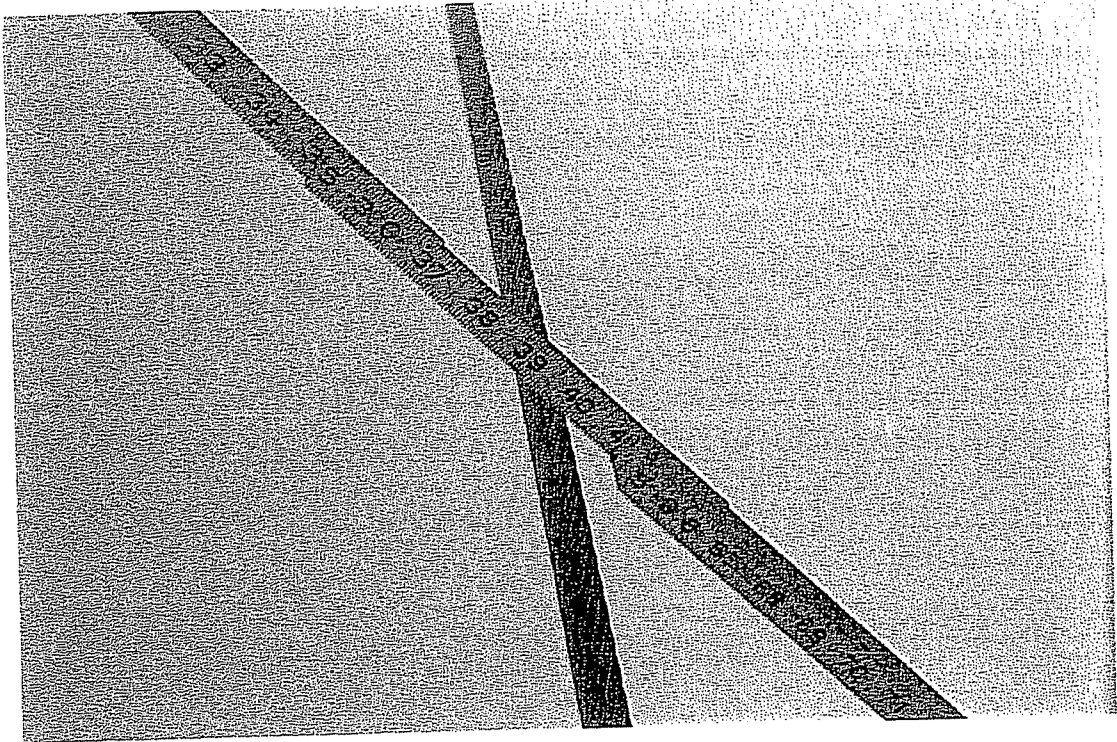


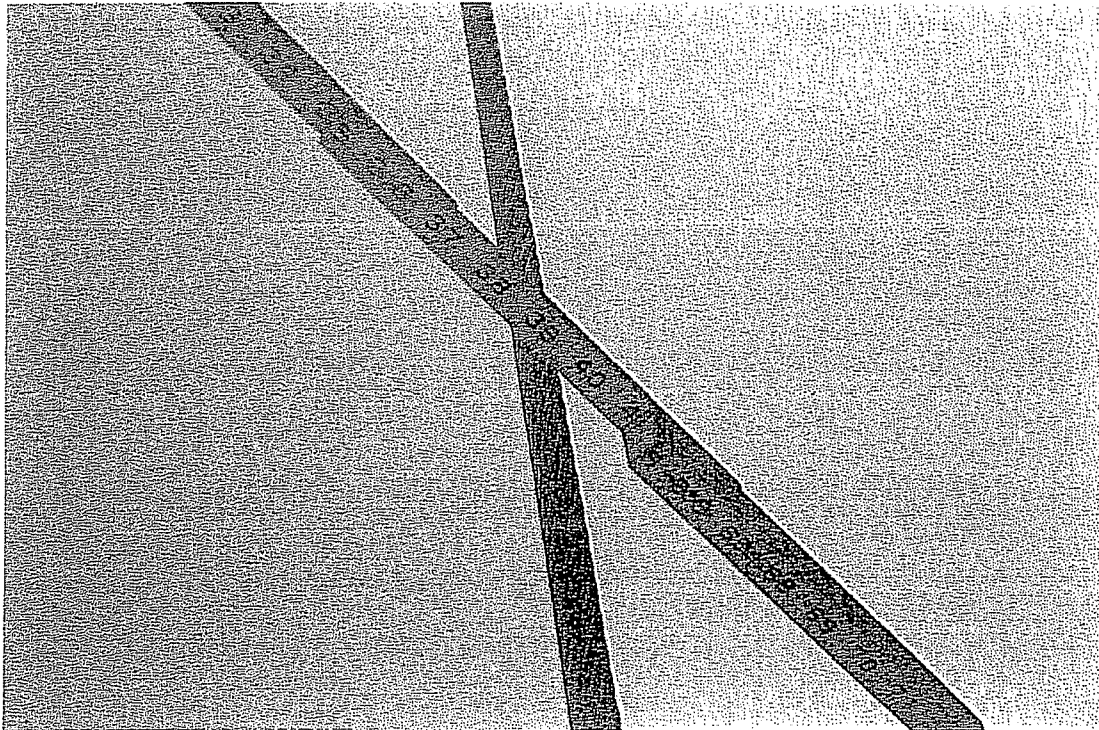
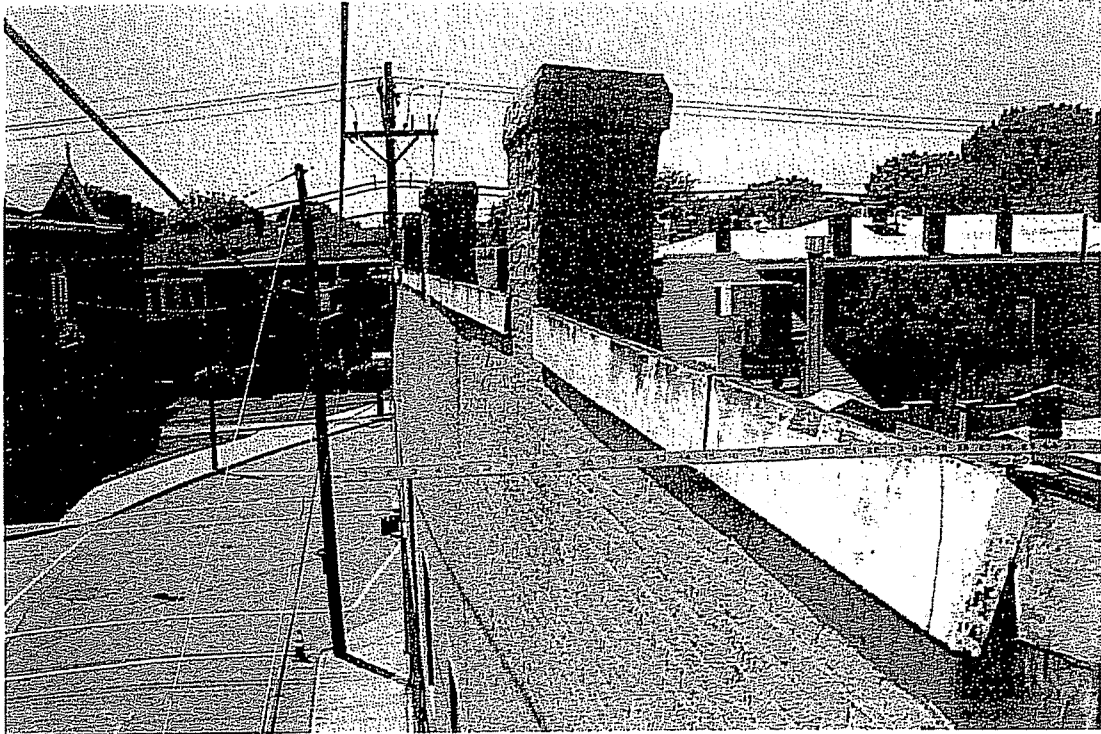
Kentucky Public Service Commission

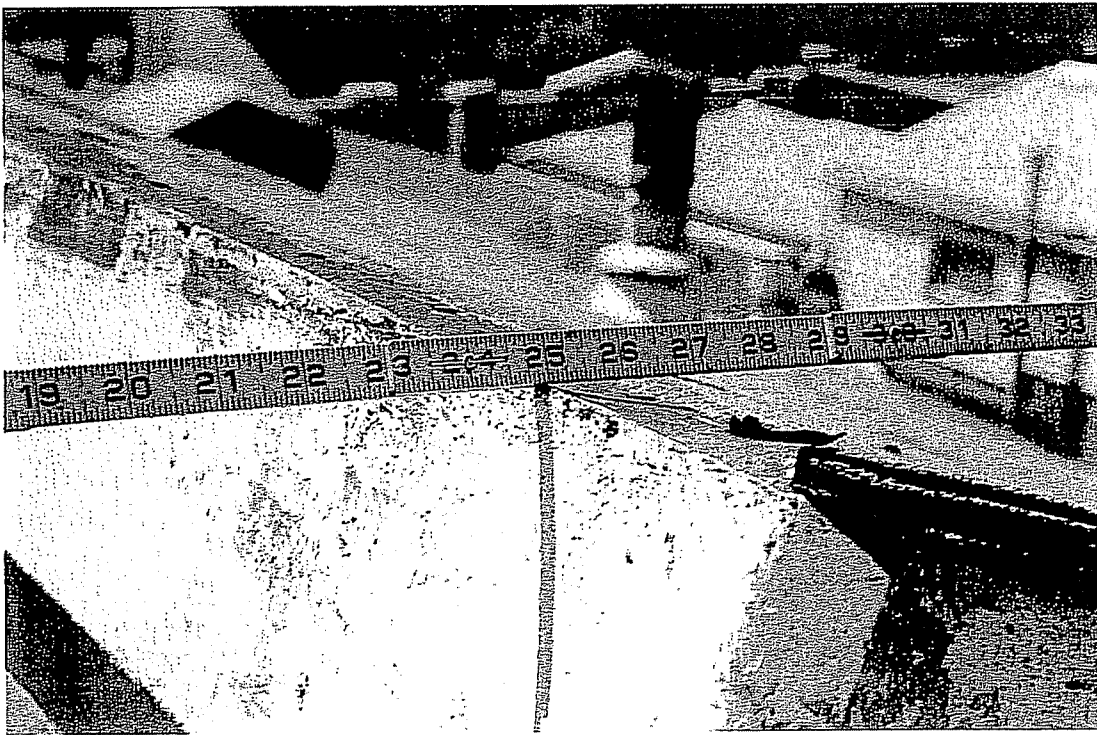
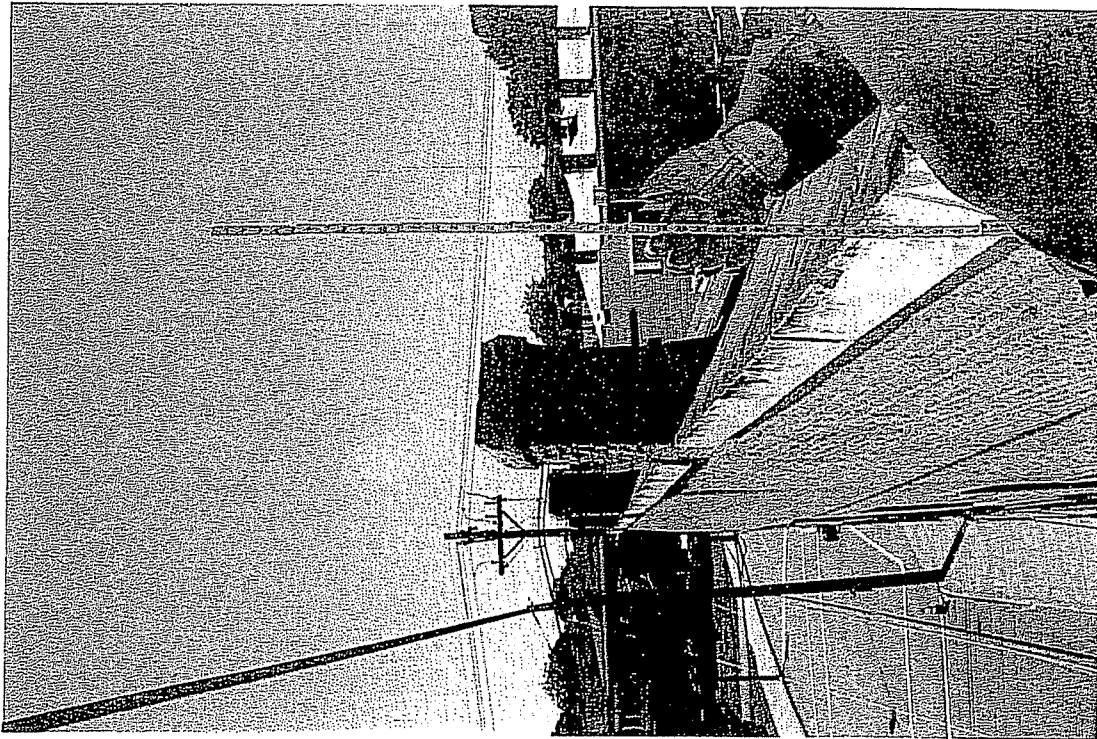
Electric Utility Personal Injury Accident Report

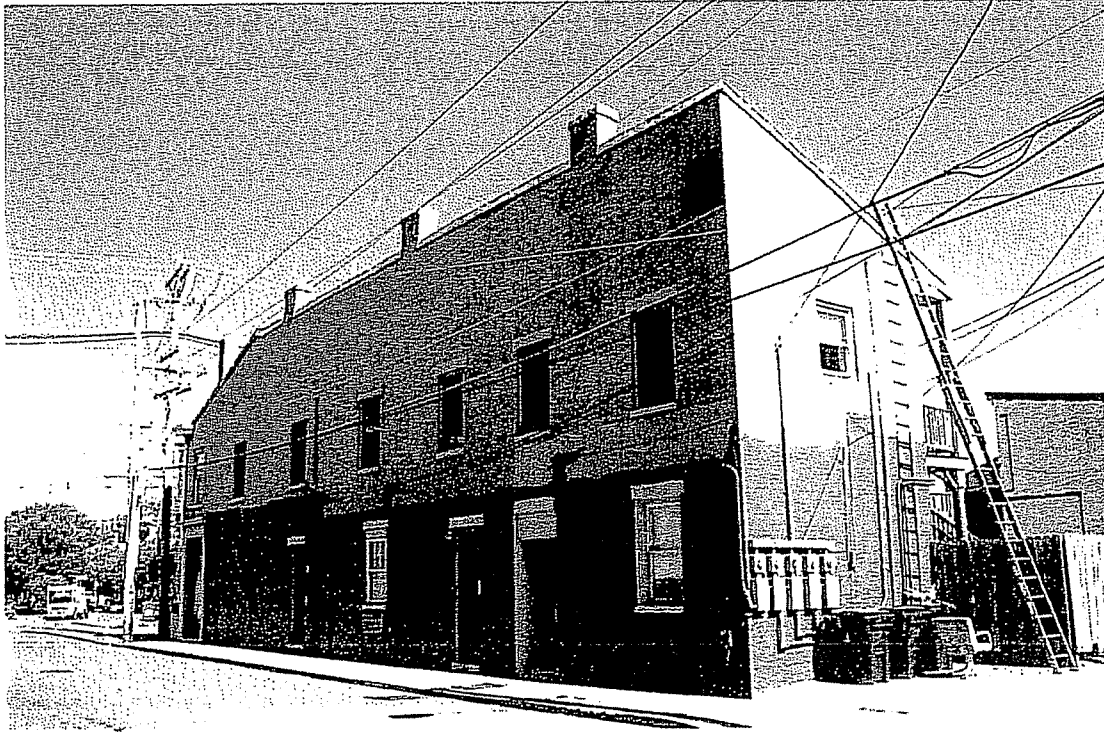
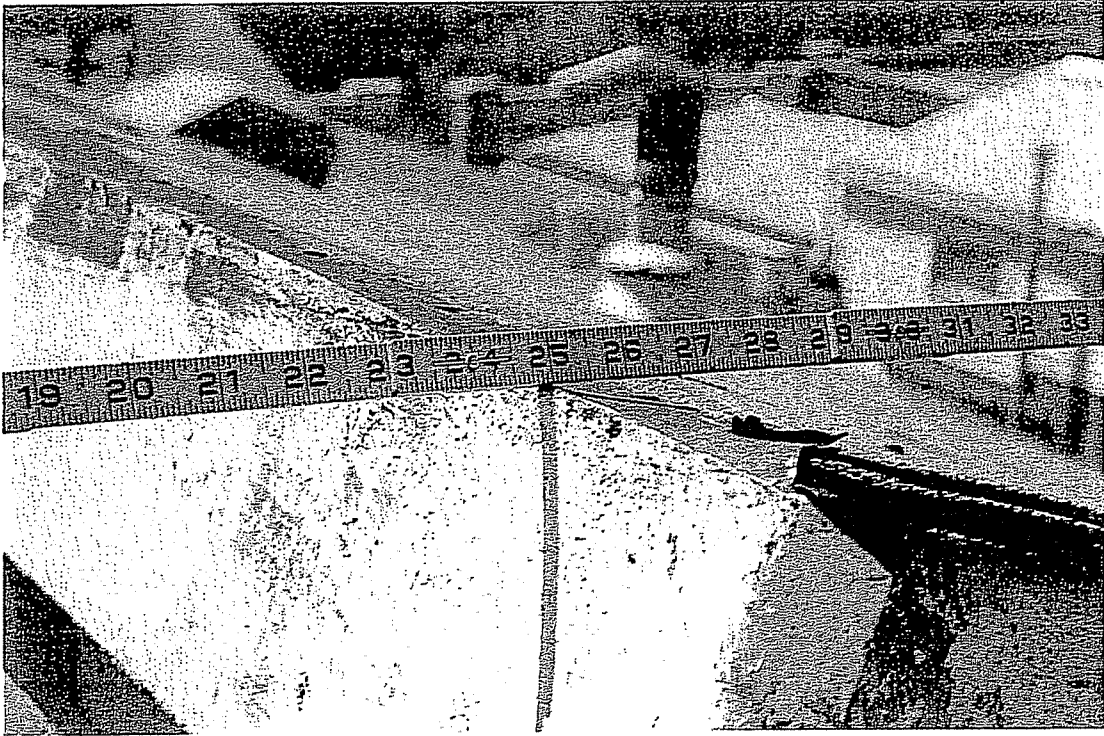
Attachment B

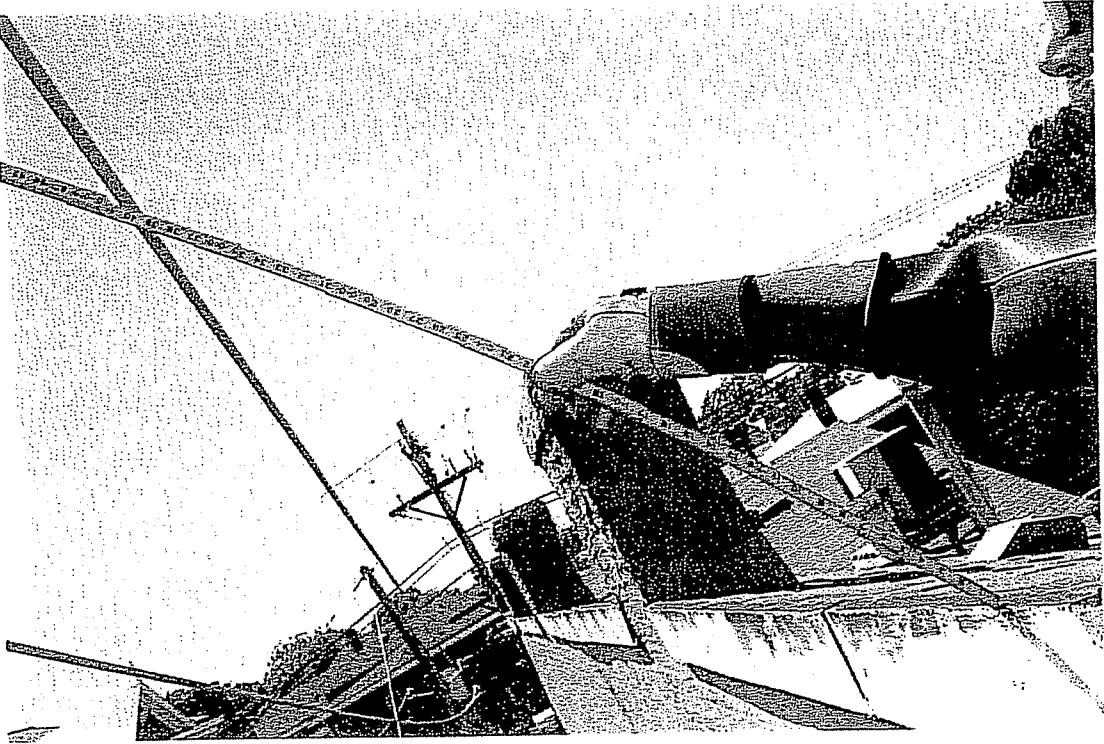
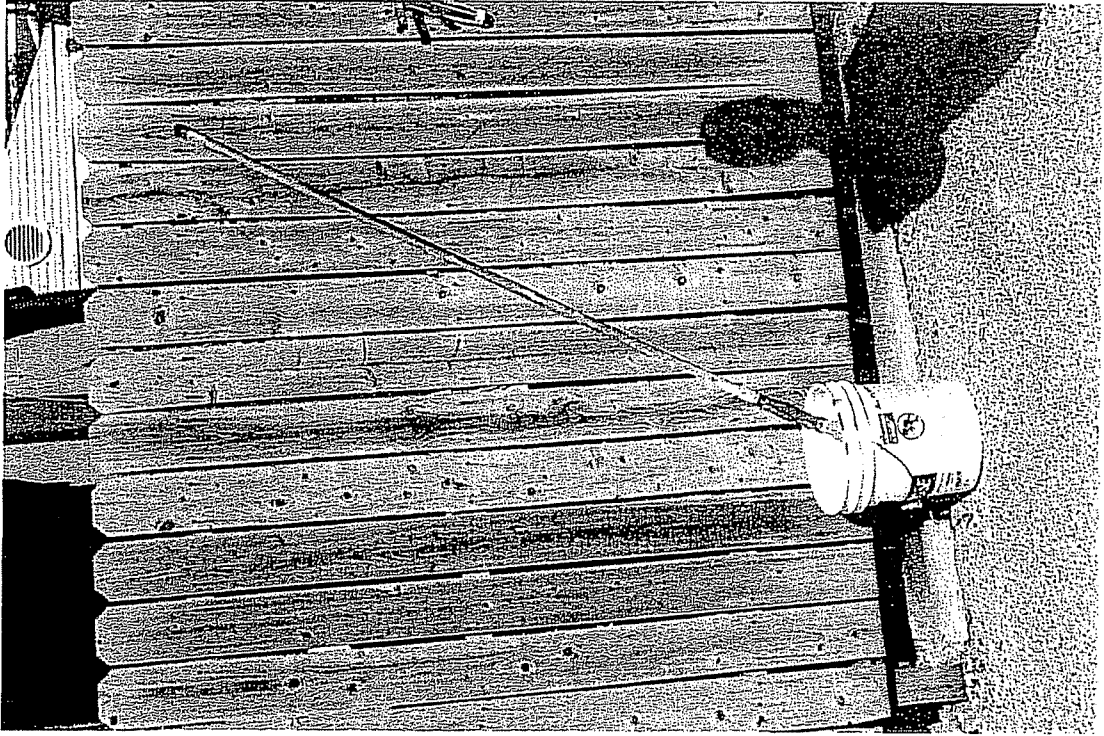
Utility Photographs of Accident Site



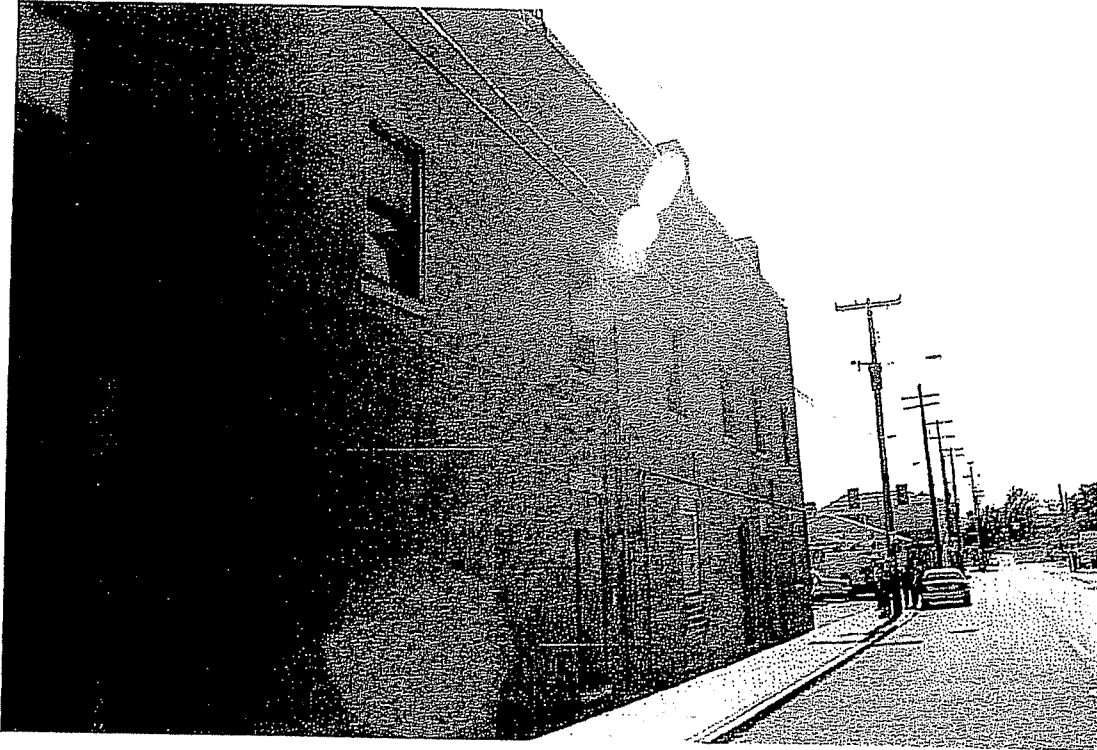


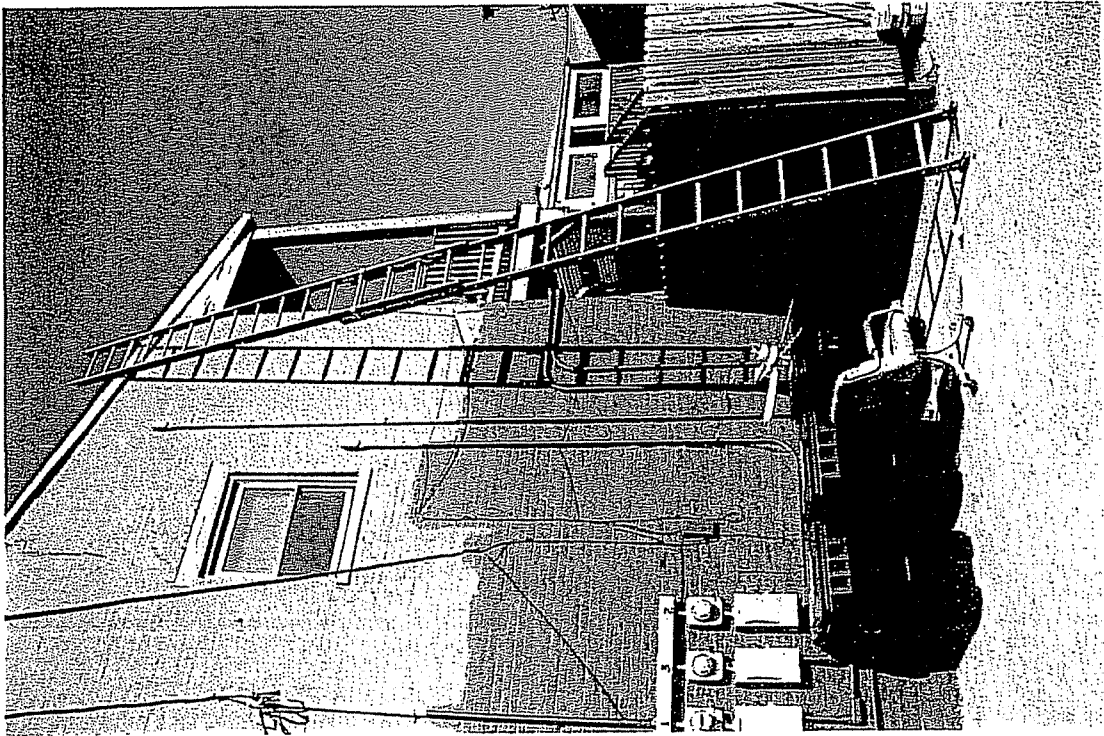
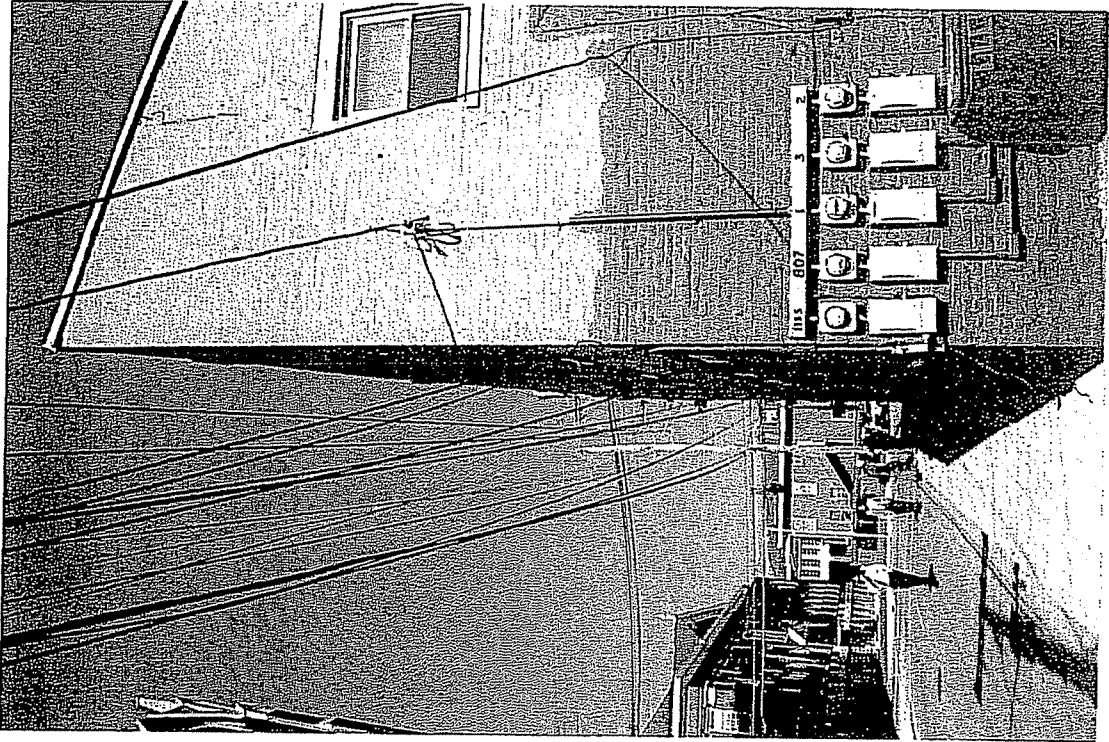


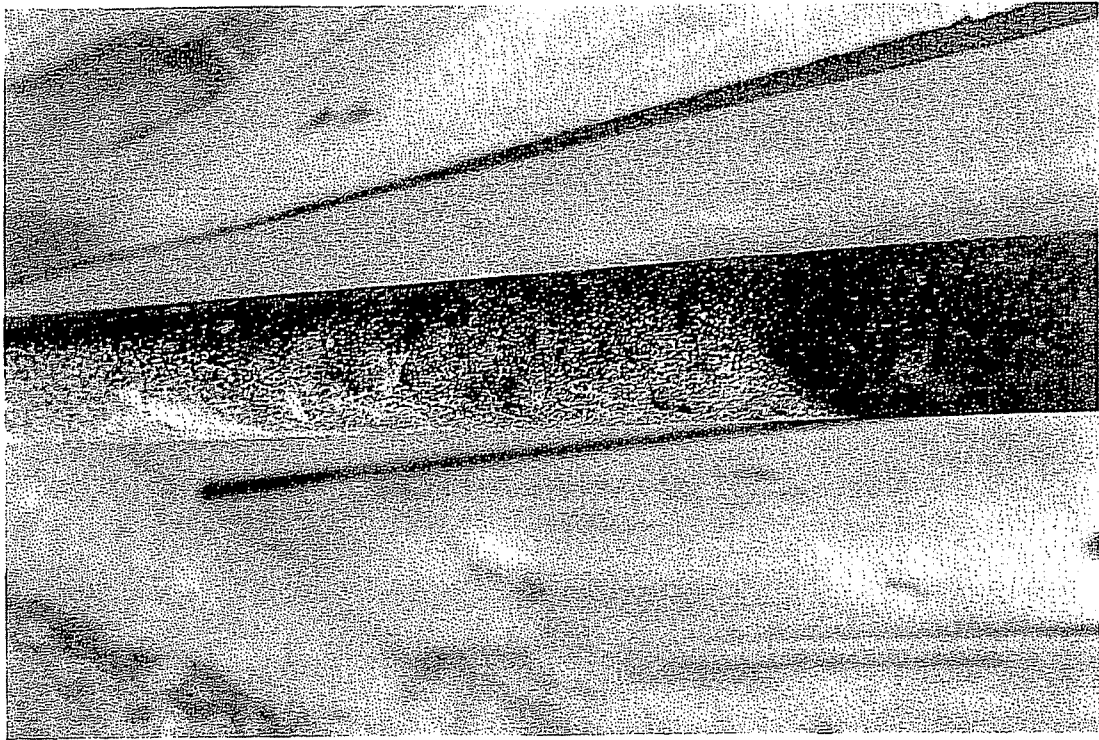


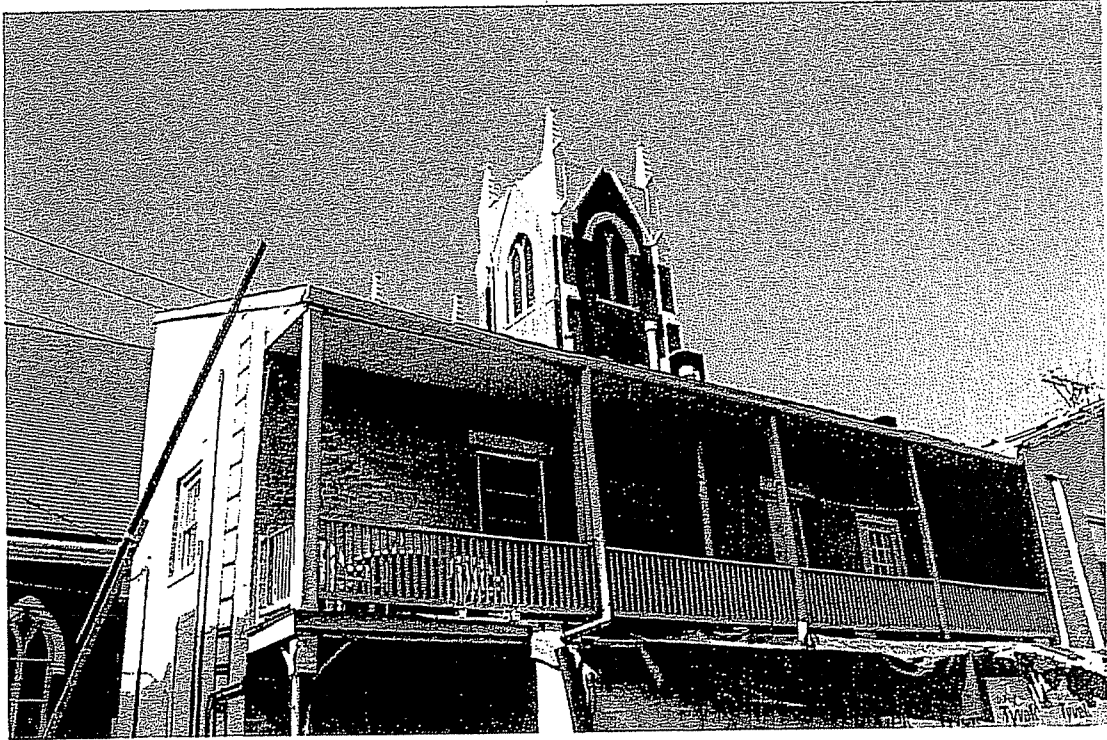
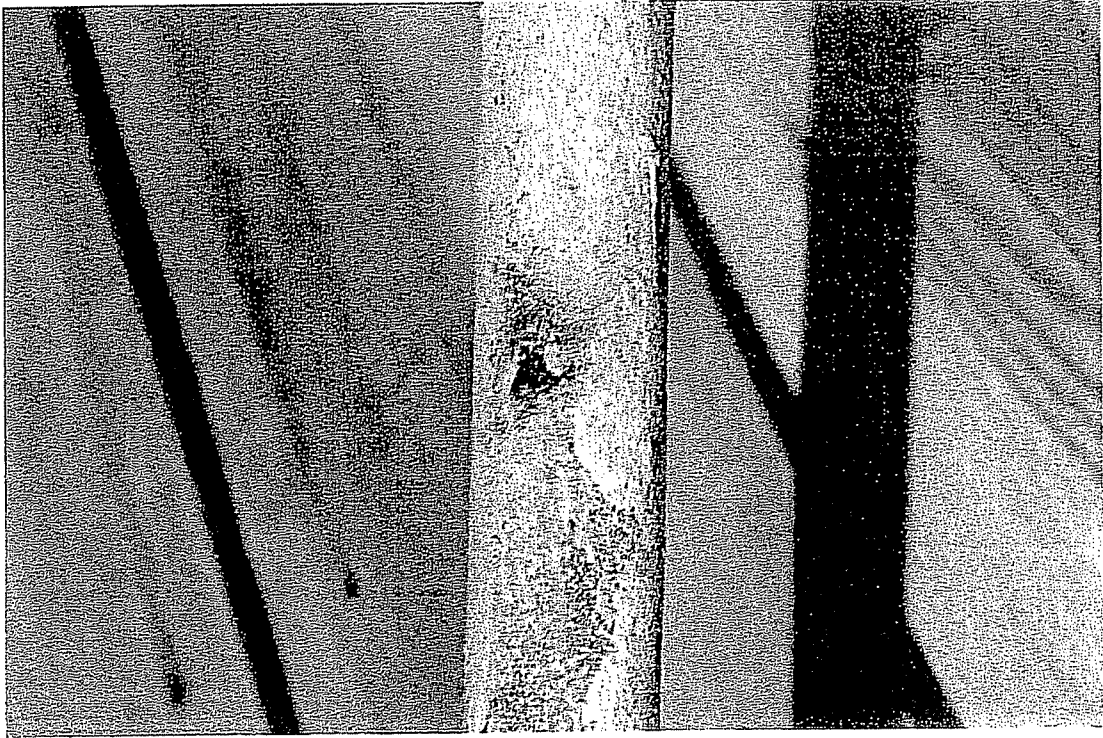


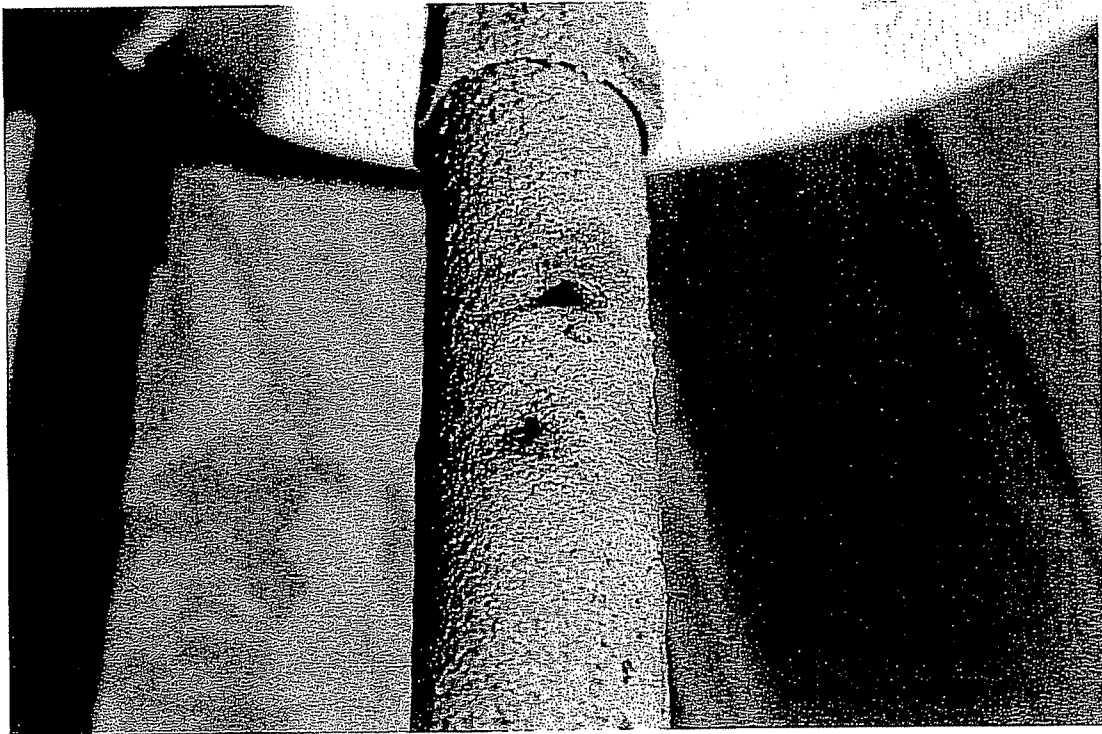


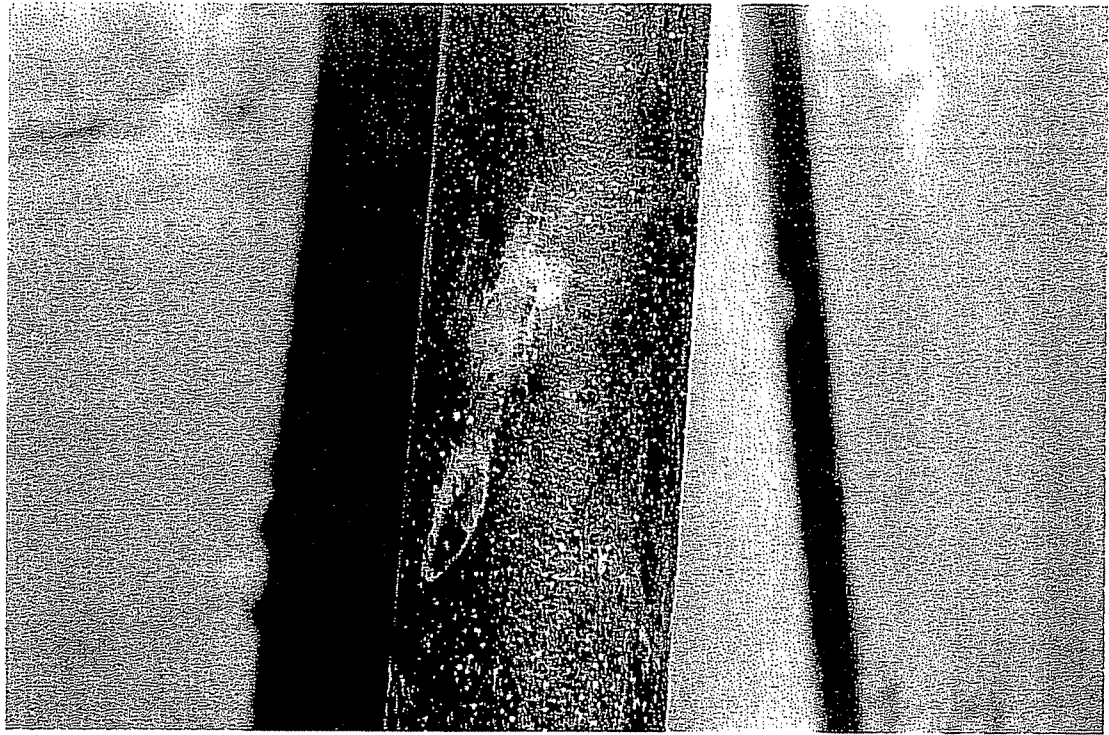


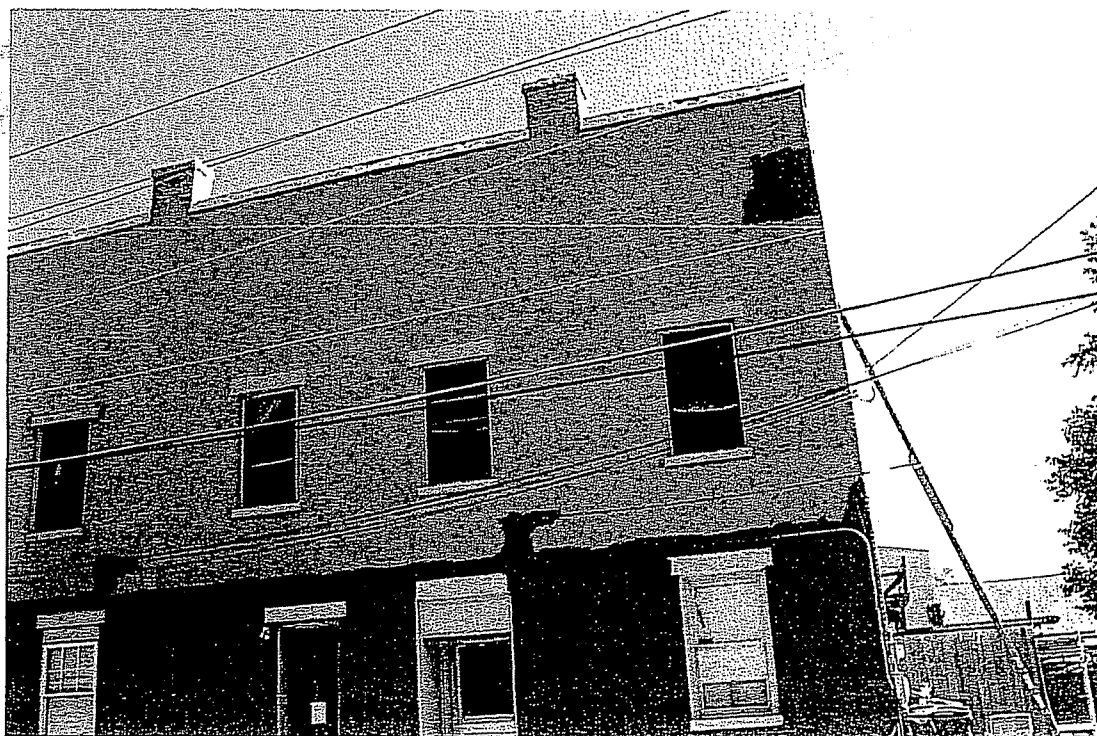
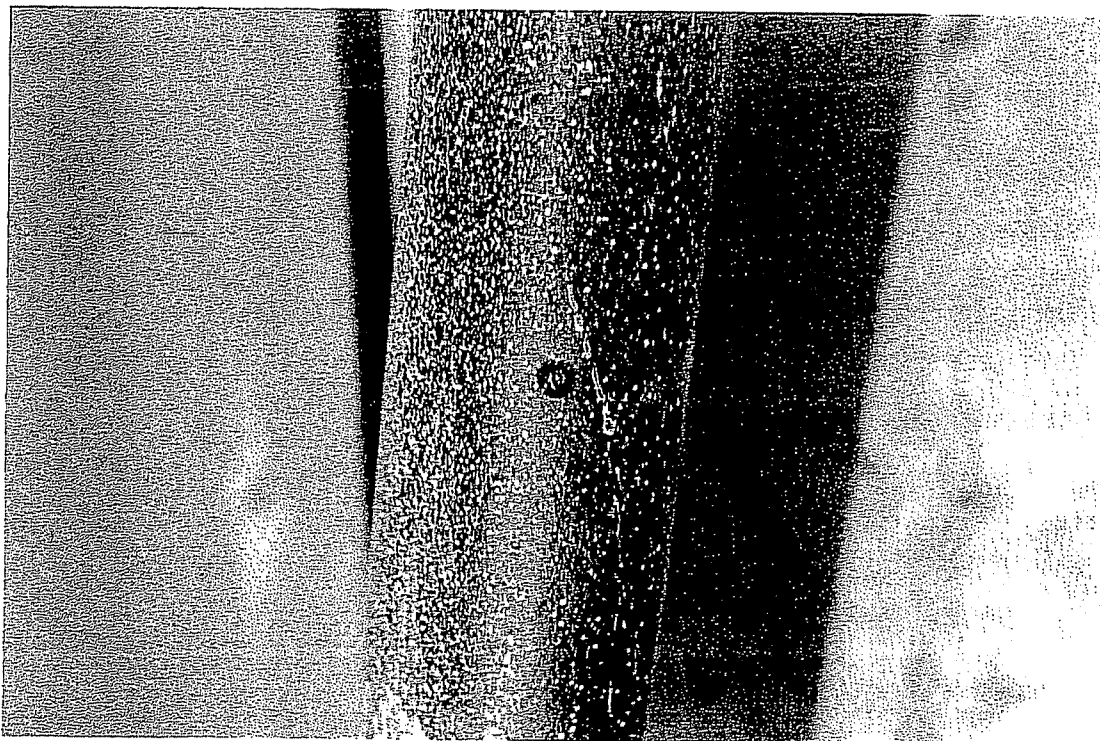


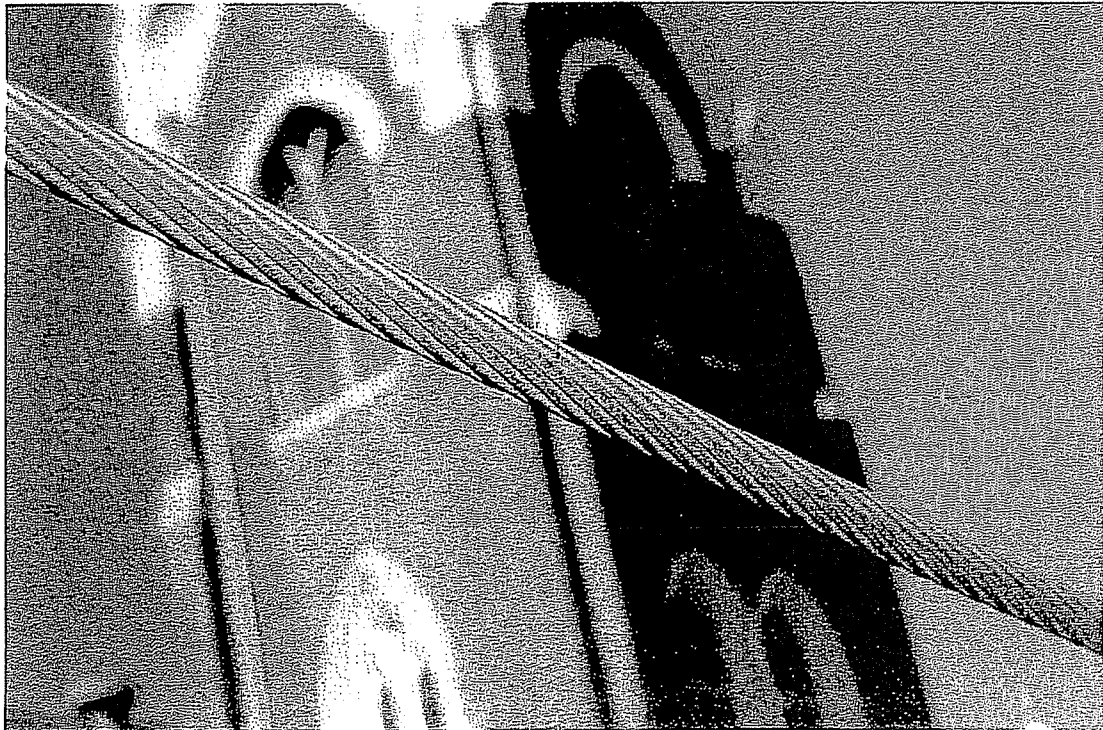
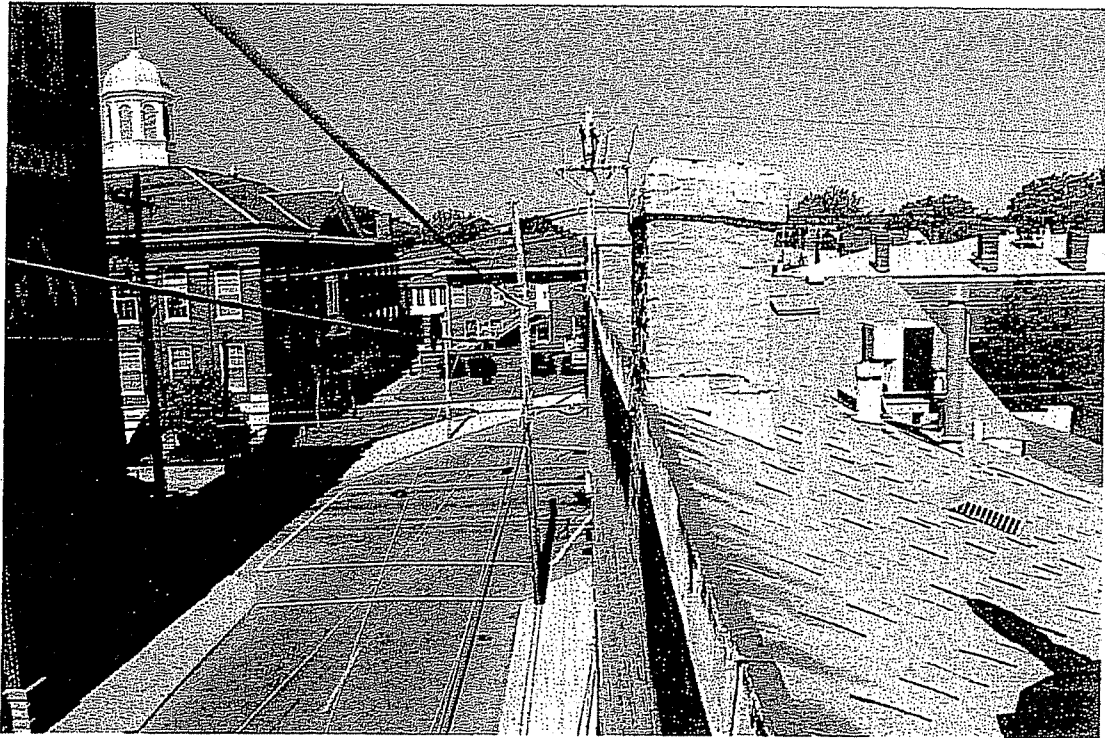




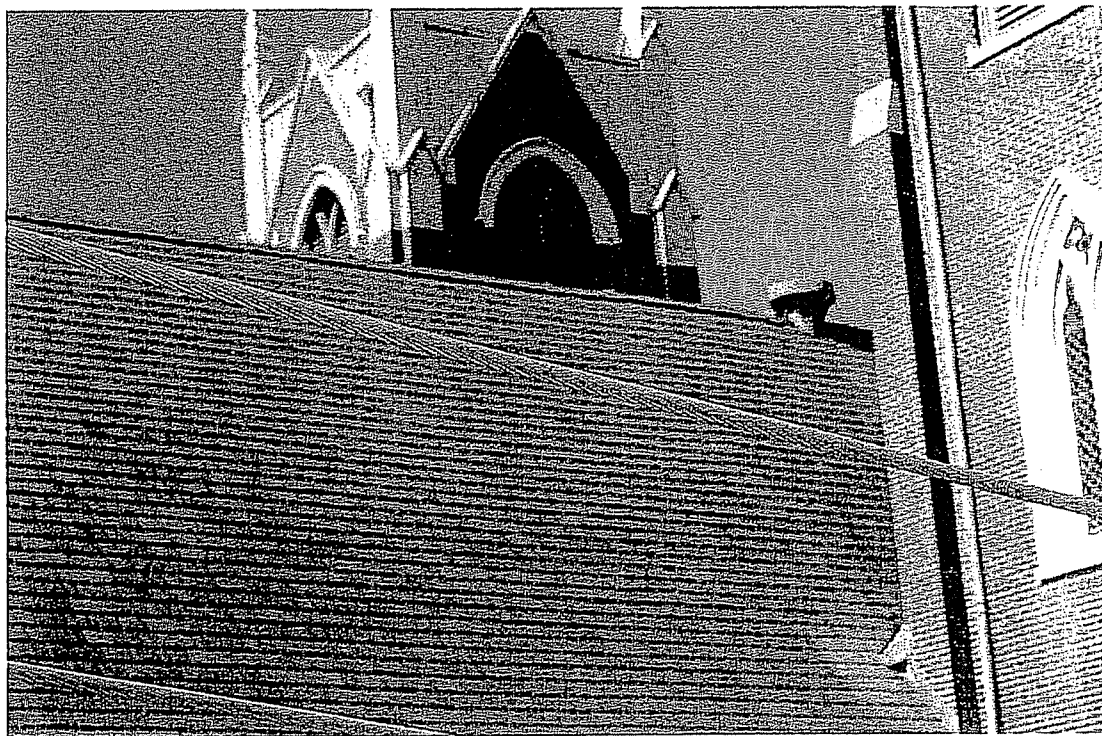
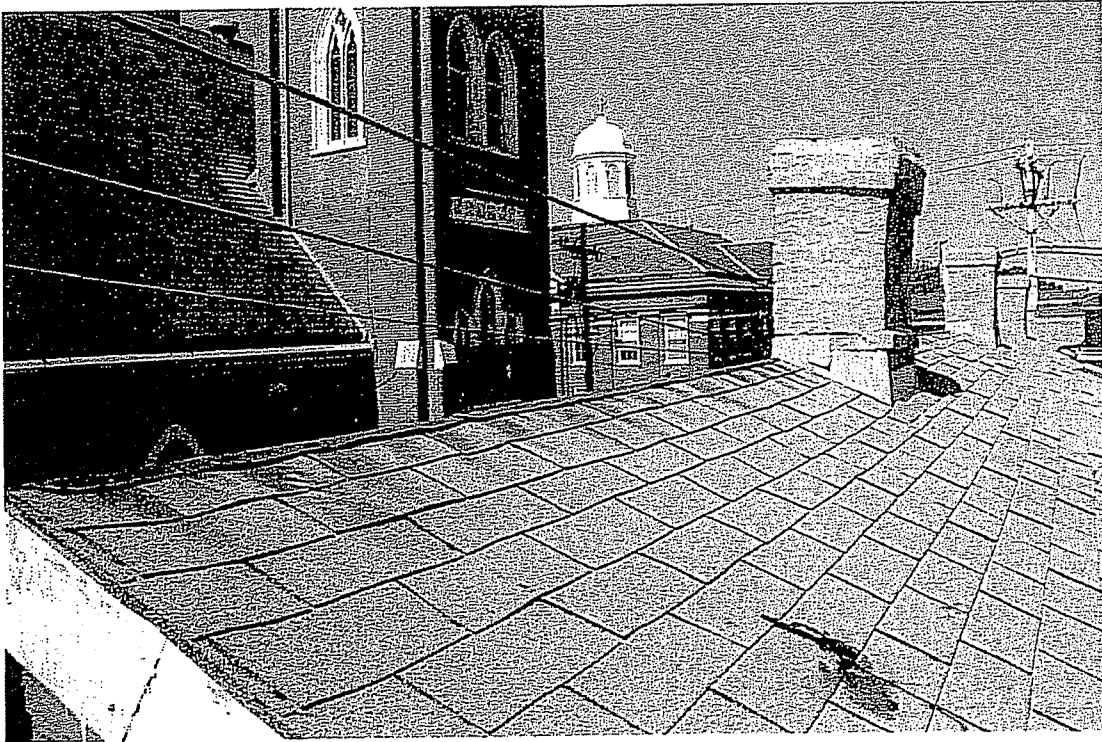


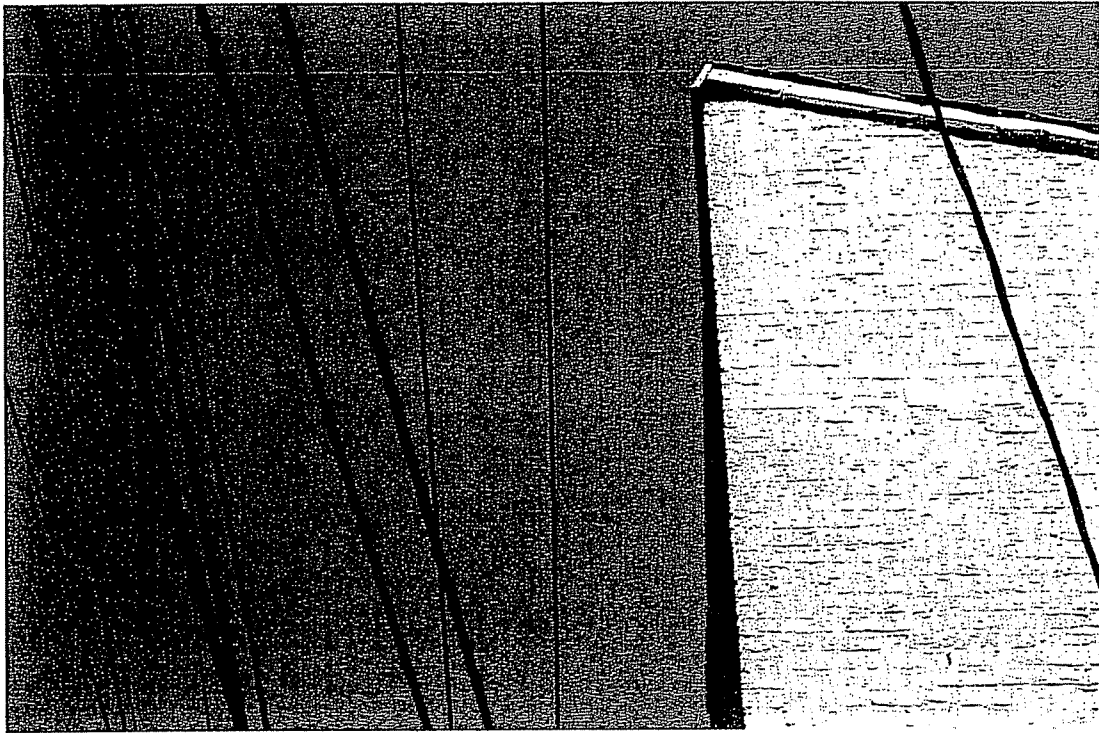
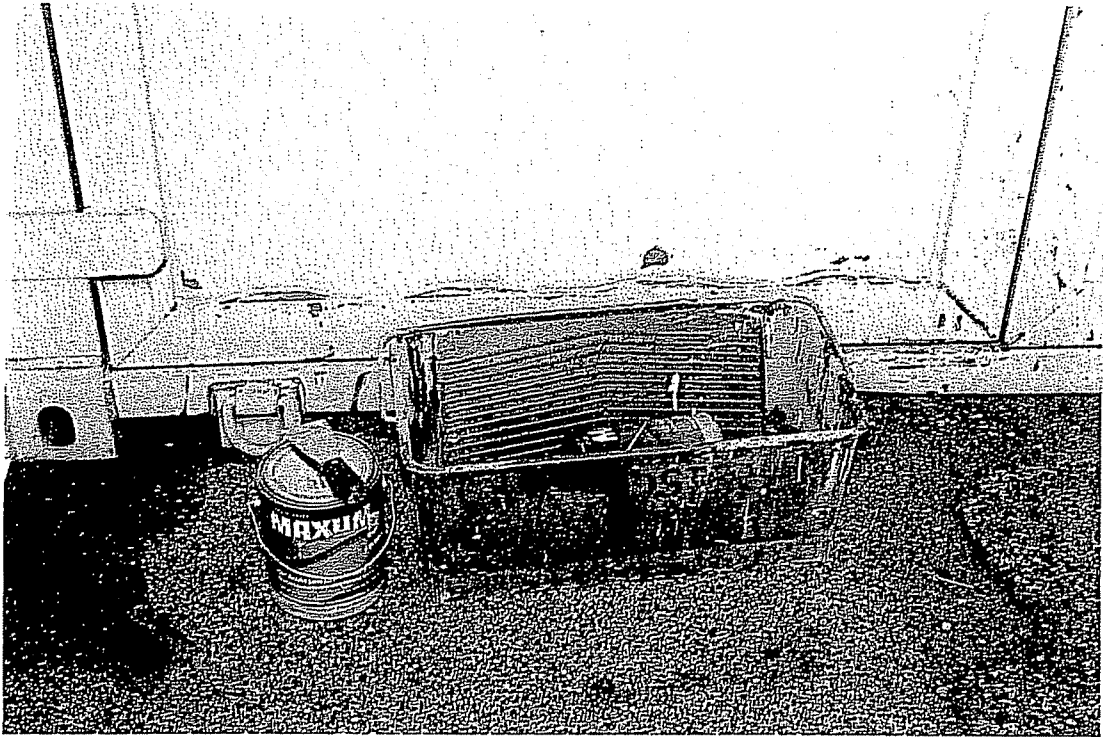
















Kentucky Public Service Commission

Electric Utility Personal Injury Accident Report

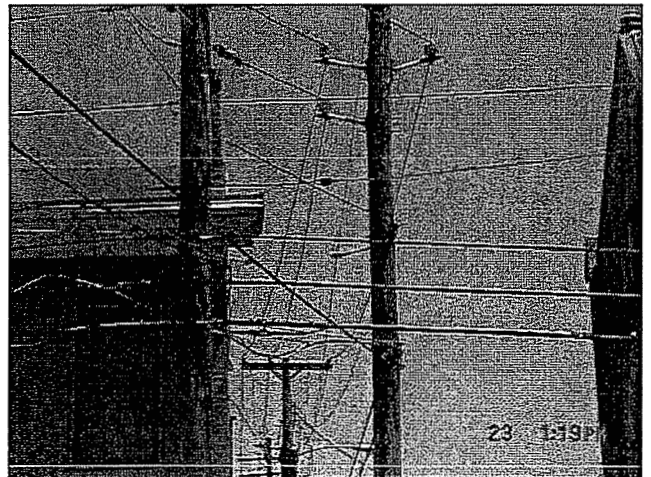
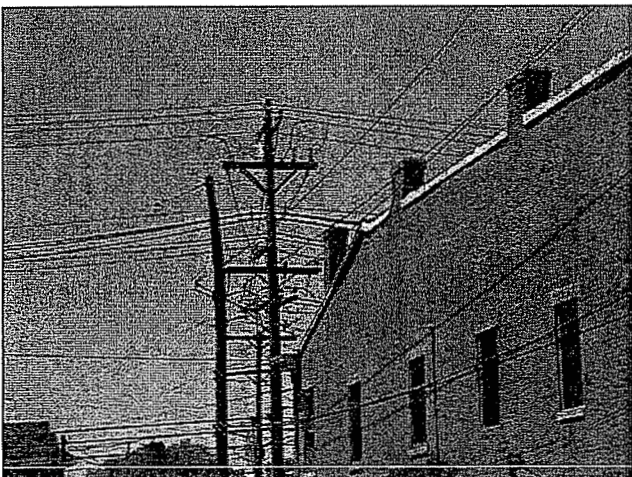
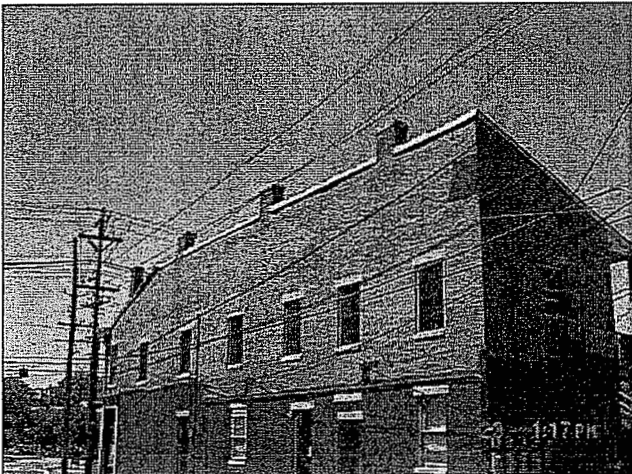
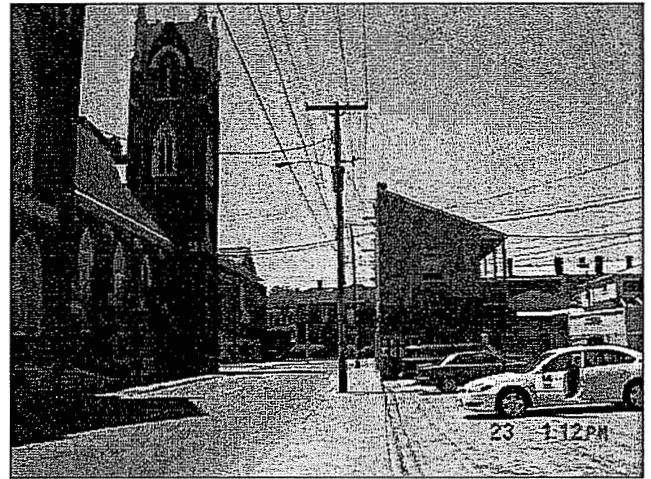
Attachment C

PSC Photographs of Accident Site



Kentucky Public Service Commission

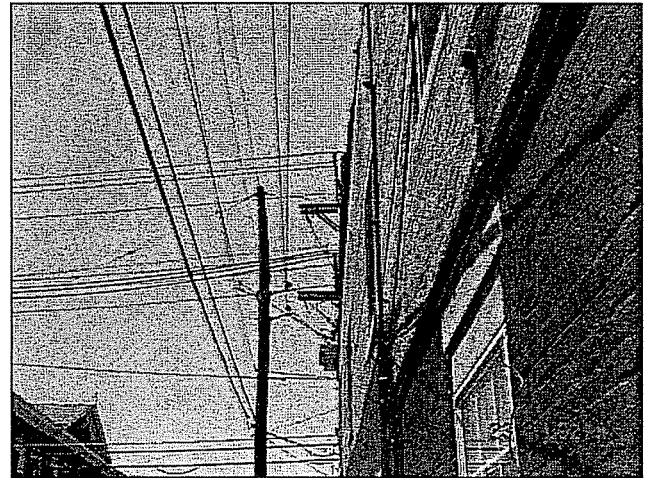
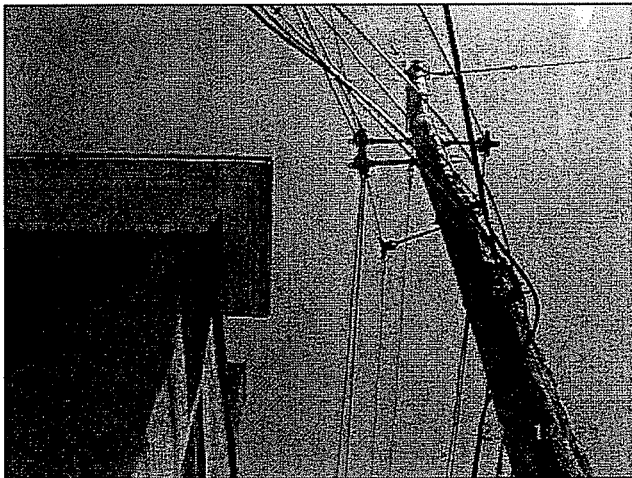
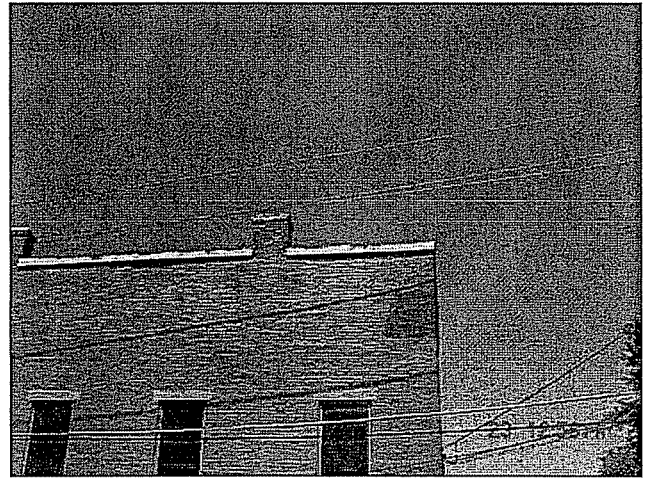
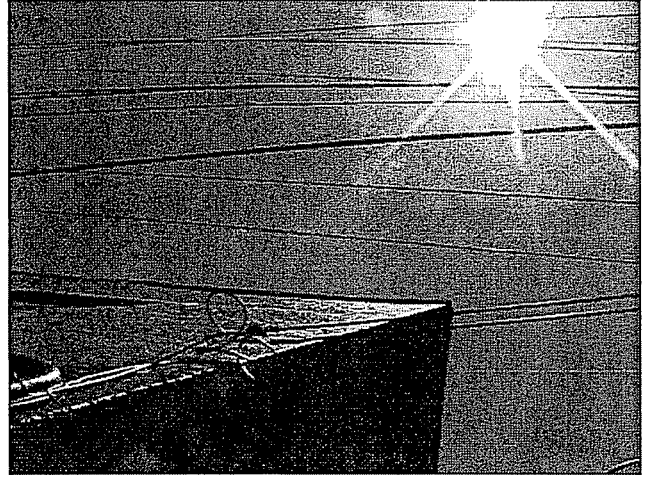
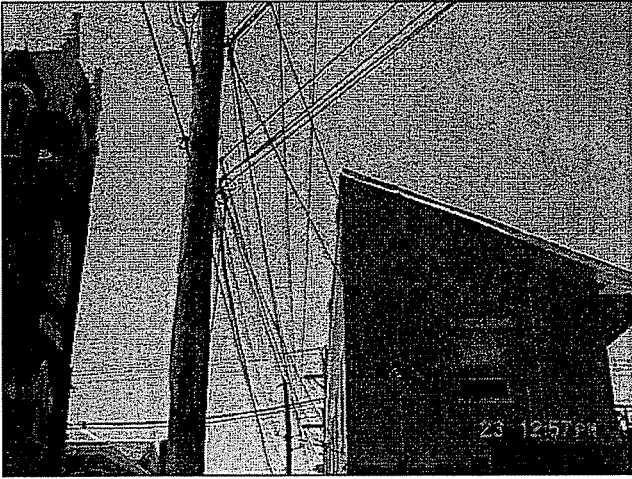
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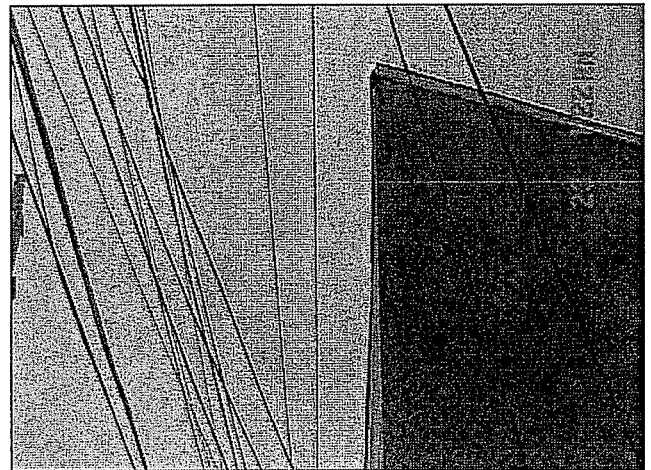
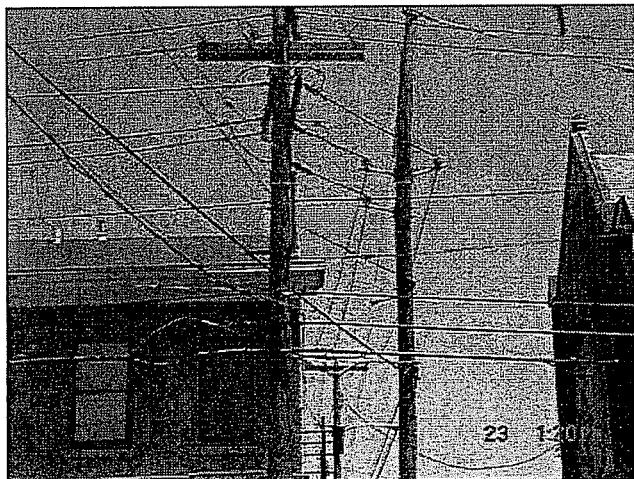
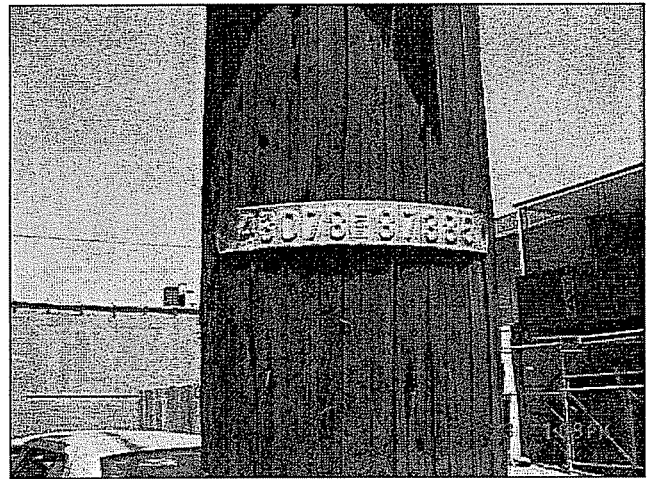
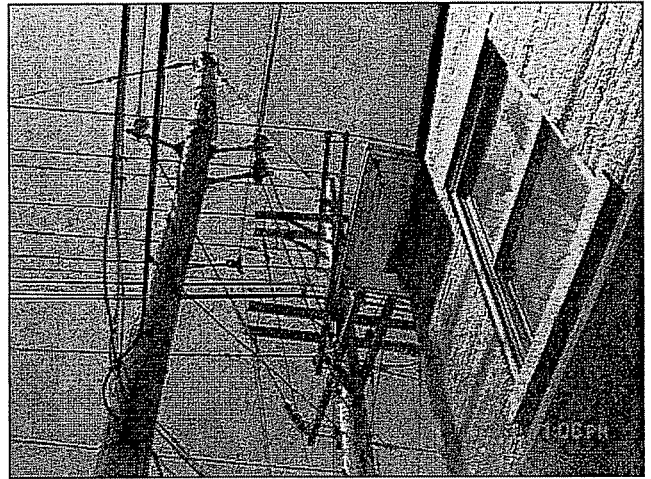
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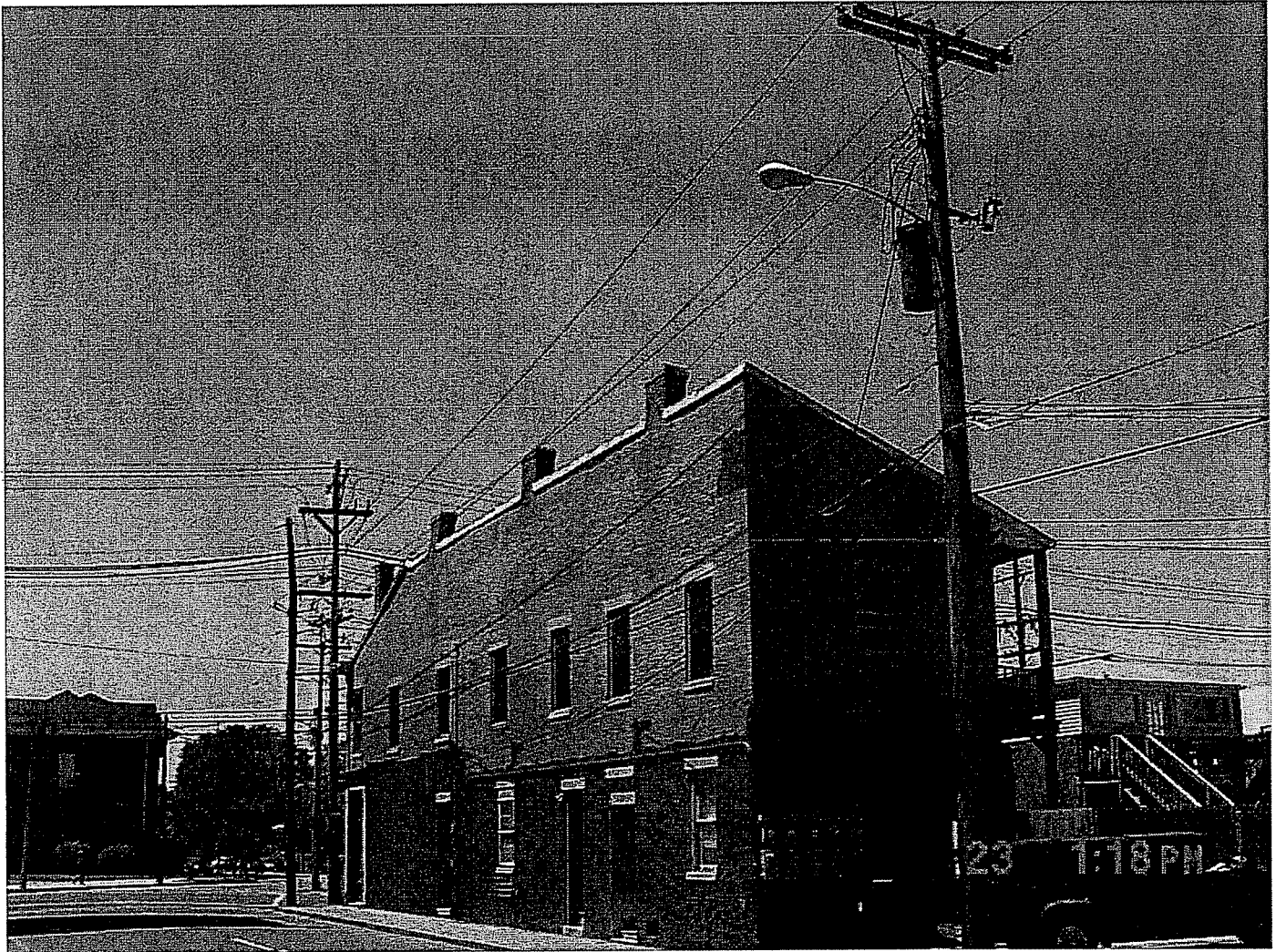
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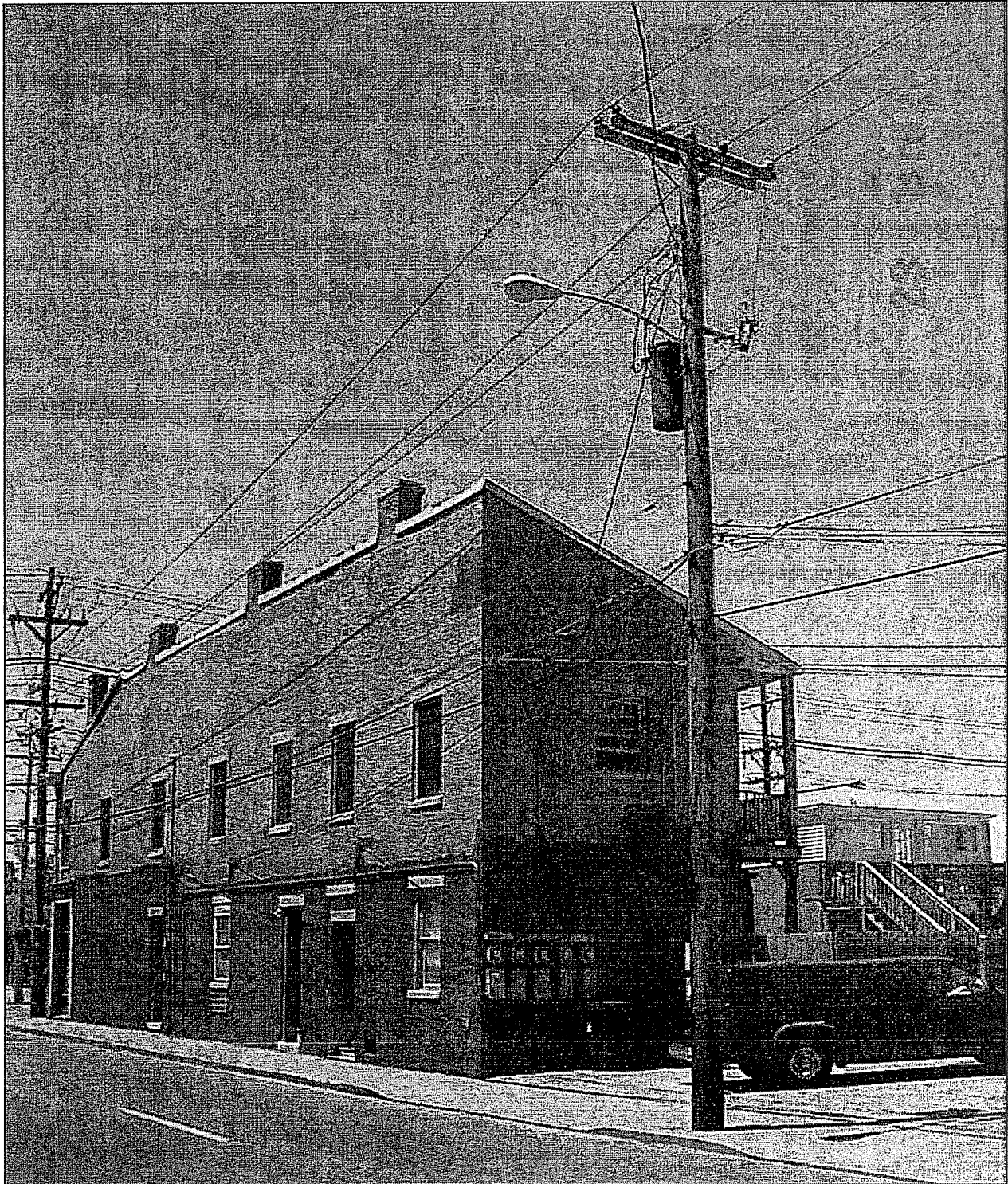
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Attachment D

Copy of Cited Violation

NOTE: Clearances of wires, conductors, and cables from adjacent line structure guy wires are given in Rule 233

EXCEPTION 2: The vertical clearances may be reduced by 600 mm (2 ft) if both of the following conditions are met:

- a. The wires, conductors, or cables above and the supporting structure of another line below are operated and maintained by the same utility.
- b. Employees do not work above the top of the supporting structure unless:
 - (1) The upper circuit is de-energized and grounded per Rule 444D or temporarily insulated or repositioned, or
 - (2) Other equivalent measures are taken.

C. Clearances of Wires, Conductors, Cables, and Rigid Live Parts From Buildings, Signs, Billboards, Chimneys, Radio and Television Antennas, Tanks, and Other Installations Except Bridges

1. Vertical and Horizontal Clearances

a. Clearances

Unguarded or accessible wires, conductors, cables, or rigid live parts may be located adjacent to buildings, signs, billboards, chimneys, radio and television antennas, tanks, and other installations and any projections therefrom. The vertical and horizontal clearances of such rigid and nonrigid parts shall be not less than the values given in Table 234-1 when at rest under the conditions specified in Rule 234A1. These facilities may be installed beside, over or under buildings, building projections and other installations, as illustrated in Figs 234-1(a), 234-1(b), and 234-1(c)

b. Horizontal Clearances Under Wind Displacement Conditions

When the following conductors and cables are displaced from rest under the wind conditions of Rule 234A2, horizontal clearances from such conductors or cables to buildings, signs, billboards, chimneys, radio and television antennas, and other installations shall be not less than those shown below:

Conductor or cable	Horizontal clearance required when displaced by wind	
	(m)	(ft)
Open supply conductor, 0 to 750 V	1.1	3.5
230C2 cable, above 750 V	1.1	3.5
230C3 cable, above 750 V	1.1	3.5
Open supply conductors, over 750 V to 22 kV	1.4	4.5

See footnotes 9 and 10 to Table 234-1

2. Guarding of Supply Conductors and Rigid Live Parts

Where the clearances set forth in Table 234-1 cannot be obtained, supply conductors and rigid live parts shall be guarded.

NOTE: Supply cables meeting Rule 230C1 are considered to be guarded within the meaning of this rule

3. Supply Conductors Attached to Buildings or Other Installations

Where the permanent attachment of supply conductors of any class to a building or other installation is necessary for an entrance, such conductors shall meet the following requirements over or along the installation to which the conductors are attached:

- a. Energized service drop conductors, including splices and taps, shall be insulated or covered in accordance with the following:
 - (1) For 0 to 750V, Rules 230C or 230D
 - (2) For over 750 V, Rule 230C1

This rule does not apply to neutral conductors meeting Rule 230E1.

- b. Conductors of more than 300 V to ground shall not be carried along or near the surface of the installation unless they are guarded or made inaccessible.

ft

Table 234-1

**Clearance of Wires, Conductors, Cables, and Unguarded Rigid Live Parts
Adjacent but Not Attached to Buildings and Other Installations Except Bridges¹²**

(Voltages are phase to ground for effectively grounded circuits and those other circuits where all ground faults are cleared by promptly de-energizing the faulted section, both initially and following subsequent breaker operations. See the definitions section for voltages of other systems. Clearances are with no wind displacement except where stated in the footnotes below.

See Rules 234C1a, 234C2, and 234H4.)

Clearance of	Insulated communication conductors and cables; messengers; surge-protection wires; grounded guys; ungrounded guys exposed to 0 to 300 V ¹³ ; neutral conductors meeting Rule 230E1; supply cables meeting Rule 230C1 ⁵ (ft)	Supply cables of 0 to 750 V meeting Rules 230C2 or 230C3 (ft)	Unguarded rigid live parts, 0 to 750 V; non-insulated communication conductors; ungrounded equipment cases, 0 to 750 V; ungrounded guys exposed to open supply conductors of over 300 V to 750 V ⁵ (ft)	Supply cables over 750 V meeting Rules 230C2 or 230C3; open supply conductors, 0 to 750 V (ft)	Unguarded rigid live parts, over 750 V to 22 kV; ungrounded equipment cases, 750 V to 22 kV; ungrounded guys exposed to over 750 V to 22 kV ⁵ (ft)	Open supply conductors, over 750 V to 22 kV (ft)
I. Buildings						
a. Horizontal						
(1) To walls, projections, and guarded windows	4.5 ^{1, 2, 7}	5.0 ^{1, 2}	5.0 ^{1, 2}	5.5 ^{1, 2, 9}	7.0 ^{1, 2}	7.5 ^{1, 2, 10, 11}
(2) To unguarded windows ⁸	4.5	5.0	5.0	5.5 ⁹	7.0	7.5 ^{10, 11}
(3) To balconies and areas readily accessible to pedestrians ³	4.5	5.0	5.0	5.5 ⁹	7.0	7.5 ^{10, 11}
b. Vertical¹⁴						
(1) Over or under roofs or projections not readily accessible to pedestrians ³	3.0	3.5	10.0	10.5	12.0	12.5
(2) Over or under balconies and roofs readily accessible to pedestrians ³	10.5	11.0	11.0	11.5	13.0	13.5
(3) Over roofs accessible to vehicles but not subject to truck traffic ⁶	10.5	11.0	11.0	11.5	13.0	13.5
(4) Over roofs accessible to truck traffic ⁶	15.5	16.0	16.0	16.5	18.0	18.5

ft

Table 234-1 (Continued)
Clearance of Wires, Conductors, Cables, and Unguarded Rigid Live Parts
Adjacent but Not Attached to Buildings and Other Installations Except Bridges¹²
 (Voltages are phase to ground for effectively grounded circuits and those other circuits where all ground faults are cleared by promptly de-energizing the faulted section, both initially and following subsequent breaker operations. See the definitions section for voltages of other systems. Clearances are with no wind displacement except where stated in the footnotes below.
 See Rules 234C1a, 234C2, and 234H4.)

Clearance of	Insulated communication conductors and cables; messengers; surge-protection wires; grounded guys; ungrounded guys exposed to 0 to 300 V ¹³ ; neutral conductors meeting Rule 230E1; supply cables meeting Rule 230C1 ⁵ (ft)	Supply cables of 0 to 750 V meeting Rules 230C2 or 230C3 (ft)	Unguarded rigid live parts, 0 to 750 V; non-insulated communication conductors; ungrounded equipment cases, 0 to 750 V; ungrounded guys exposed to open supply conductors of over 300 V to 750 V ⁵ (ft)	Supply cables over 750 V meeting Rules 230C2 or 230C3; open supply conductors, 0 to 750 V (ft)	Unguarded rigid live parts, over 750 V to 22 kV; ungrounded equipment cases, 750 V to 22 kV; ungrounded guys exposed to over 750V to 22 kV ⁵ (ft)	Open supply conductors, over 750 V to 22 kV (ft)
2. Signs, chimneys, billboards, radio and television antennas, tanks, and other installations not classified as buildings or bridges						
a. Horizontal ⁴						
(1) To portions that are readily accessible to pedestrians ³	4.5	5.0	5.0 ^{1,2}	5.5 ⁹	7.0 ^{1,2}	7.5 ^{10,11}
(2) To portions that are not readily accessible to pedestrians ³	3.0	3.5	5.0 ^{1,2}	5.5 ^{1,2,9}	7.0 ^{1,2}	7.5 ^{1,2,10,11}
b. Vertical						
(1) Over or under catwalks and other surfaces upon which personnel walk	10.5	11.0	11.0	11.5	13.0	13.5
(2) Over or under other portions of such installations ⁴	3.0	3.5	5.5	6.0 ¹	7.5	8.0