UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

District 2

REPORT OF INVESTIGATION
(UNDERGROUND COAL MINE)

FATAL ELECTRICAL ACCIDENT

Clyde (ID No. 36 00967)
BCNR Mining Corporation
Fredericktown, Washington County, Pennsylvania

June 30, 1986

by

Gerald F. Moody, Jr.
Coal Mine Safety and Health Inspector

and

Gerald E. Davis
Coal Mine Safety and Health Inspector (Electrical)

Originating Office - Mine Safety and Health Administration
200 James Place, Monroeville, Pennsylvania 15146
Donald L. Sheasley, Acting Subdistrict Manager

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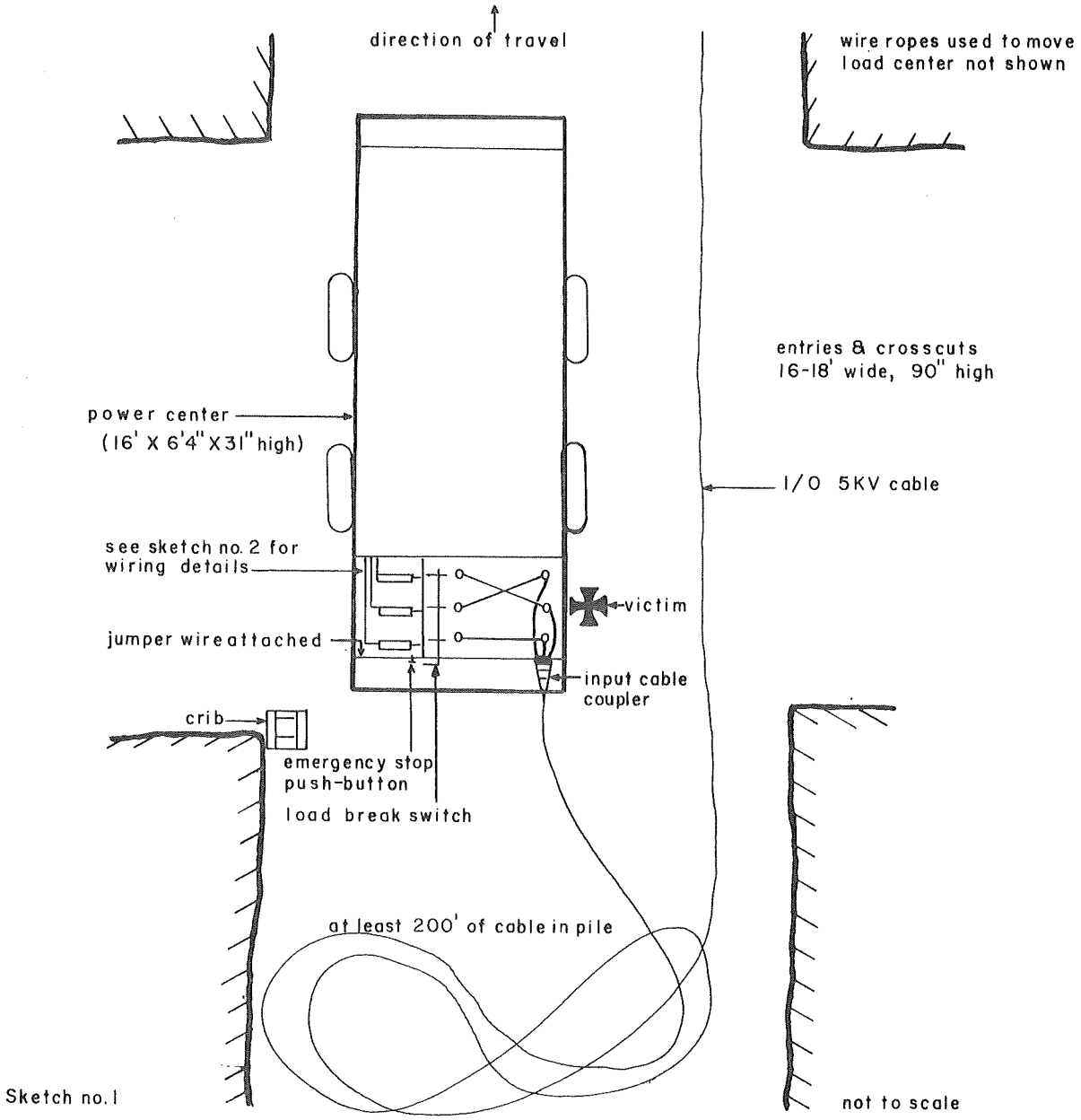


Sketch of
FATAL ELECTRICAL ACCIDENT

Clyde (ID No. 36 00967)
BCNR Mining Corporation
Fredericktown, Washington County, Pennsylvania

June 30, 1986

Abstract of Investigation

U.S. Department of Labor
Mine Safety and Health Administration

Authority—This report is based on an investigation made pursuant to the Federal Mine Safety and Health Act of 1977, Public Law 91-173, as amended by Public Law 95-164.

Section A—Identification Data

1. Title of investigation:	2. Date MSHA investigation started:
Fatal Electrical Accident	June 30, 1986
3. Report release date:	4. Mine:
September 29, 1986	Clyde
5. Mine ID number:	6. Company:
36 00967	BCNR Mining Corporation
7. Town, County, State:	8. Author(s):
Fredericktown, Washington County, PA	Gerald F. Moody, Jr. and Gerald E. Davis

Section B—Mine Information

9. Daily production:	10. Surface employment:
1,700 Tons	36
11. Underground employment:	12. Name of coalbed:
136	Pittsburgh
13. Thickness of coalbed:	
72 Inches	

Section C—Last Quarter Injury Frequency Rate (HSAC) for:

14. Industry:	15. This operation:
6.92	4.19
16. Training program approved:	17. Mine Profile Rating:
Yes	DNA

Section D—Originating Office

18. Mine Safety and Health Administration	Address:
Coal Mine Health and Safety District No. : 2	200 James Place, Monroeville, PA 15146

Section E—Abstract

On Monday, June 30, 1986, at about 8:00 p.m., an electrical accident occurred in the 8 Left (022) section of BCNR Mining Corporation's Clyde mine, resulting in Charles Wilson being fatally injured. Wilson, a qualified electrician, was 40 years of age and had a total of 15-1/2 years mining experience, with 12 years 7 months as a mechanic first class. Wilson was in the process of disconnecting energized high voltage lead wires, which were inside a section power center, when he contacted one of the leads and was electrocuted (see sketch No. 1).

The accident and resultant fatality occurred because management and the victim failed to deenergize, disconnect, lock out, tag and ground the affected portion of the underground high voltage circuit while working in and around the section power center.

Section F—Mine Organization

Company officials:	Name	Address
19. President:	Mr. J. D. Chady	P.O. Box 500, 455 Race Track Road Meadow Lands, PA 15347
20. Superintendent:	Mr. J. W. Connor	Clyde Mine, P.O. Box 578 Fredericktown, PA 15333
21. Safety Director:	Mr. R. F. Semancik	Clyde Mine, P.O. Box 578 Fredericktown, PA 15333
22. Principle officer—H&S:	Mr. J. W. Connor	Clyde Mine, P.O. Box 578 Fredericktown, PA 15333
23. Labor Organization:	U.M.W.A.	
24. Chairman—H&S Committee:	Mr. Ronald Revi	224 2nd Street Vestaburg, PA 15368

COMMENTARY

On Monday, June 30, 1986, at about 4:00 p.m., Joe Katruska, Section Foreman; Lewis Fike, Belt Mechanic; and Rodney Lockette, Pipeman, entered the mine at the No. 1 portal and traveled via track mounted personnel carrier to the No. 3 portal. After obtaining a 20-ton track locomotive, the three men proceeded to the 8 Left section where they were going to remove the section power center. When they arrived on the section, Katruska walked to the power center, depressed the emergency push button, and tripped the load break switch on the power input end of the section power center. The humming noise from inside the power center stopped and Katruska disconnected two portable water pump trailing cables from the power output end of the load center. The three men then tried unsuccessfully to disconnect the high voltage cable coupler from the input end of the power center. One end of a wire rope was attached to the output end of the power center and the other end was attached to a 20-ton locomotive and the power center was pulled about 23 feet towards the nearby track entry. The wire rope broke several times because the output end of the power center kept plowing into the mine floor. Katruska contacted Wilson, who was working on telephone lines outby No. 3 portal, and asked for help in removing the high voltage power input cable coupler. While Wilson was traveling to the 8 Left section, Katruska, Fike, and Lockette obtained another piece of wire rope to move the section power center, but material piled in front of the power center prevented further movement.

Shortly before 8:00 p.m., Wilson arrived on the 8 Left section. He and Katruska attempted to remove the power input cable coupler, while Fike and Lockette were working to raise the output end of the power center. Wilson informed Katruska that he couldn't remove the cable coupler from the end of the power center. Katruska asked Wilson if there was another way of removing the coupler and Wilson said he could disconnect the cable leads from the inside of the power center and remove the cable coupler. At about 8:00 p.m., Wilson and Katruska raised the cover of the input end of the power center. Wilson prepared to disconnect the lead wires and Katruska walked to the output end of the power center where Fike and Lockette were working. Moments later, Wilson yelled and slumped to the mine floor. Katruska, Fike, and Lockette examined Wilson and began administering first-aid. Other mine personnel were notified of the accident and summoned to the accident scene.

Approximately thirty minutes had elapsed before help arrived and Wilson was transported to the surface at No. 3 portal. Wilson was then transported by Clarksville Volunteer Fire Department ambulance to the Greene County Memorial Hospital, Waynesburg, Pennsylvania, where he was pronounced dead-on-arrival. Frank J. Behm, Greene County Coroner, established the time of death at 8:00 p.m., and the cause of death as electrocution.

DISCUSSION AND EVALUATION

The investigation revealed the following factors relevant to the occurrence of the accident:

1. The 8 Left (022) section had been placed in a nonproducing status as of June 20, 1986. All electrical equipment had been removed from the section except for an old shuttle car, two water pumps, a belt conveyor power center, and a section power center. The section power center was located near survey station 4+76.76, about 120 feet off of the 8 left track entry. The entries and crosscuts were 16 to 18 feet in width and about 7-1/2 feet in height. The mine floor was dry where the section power center was located, however, there were areas inby and outby where water had accumulated.

2. Power for Clyde mine was purchased at 25 KV and transformed to 4.1 KV at a surface substation for underground distribution. The electrical configuration at the surface was delta/wye. Power entered the mine at No. 3 portal through No. 4/0 Awg, three conductor, type SHD-GC, 5 KV cable and was protected against short circuit, overcurrent, ground phase, and under-voltage conditions by an oil circuit breaker. Fault current in the grounding circuit was limited to 25 ampere at the source by a 96 ohm current limiting resistor. The Westinghouse CO relay was set on a 2 amp tap and connected to the grounding circuit by a ground fault current transformer with a ratio of 45:5. Approximately 6,500 feet of No. 4/0, 5 KV mine power feeder cable was installed between the surface and the 8 Left section single oil circuit breaker switchhouse, Serial No. 492, that protected the 8 left belt conveyor and section power centers (see sketch No. 3).

General Electric IAC very inverse relays, set on 6 amp tap, time dial 10 and instantaneous trip setting of 20 amps, were connected to the circuit by 150:5 current transformer in all three phases. Westinghouse CO-11 relay was set on .5 amp tap and time dial 1 and connected to the grounding circuit by a 45:5 window current transformer. The mine power feeder cable went from the oil circuit breaker switchhouse through the Ensign 150 KVA belt conveyor power center to the section load center (see sketches Nos. 3 and 4).

3. The 4160 volt alternating current was conducted from the belt conveyor load center to the input end of the section load center by a 1/0, 5 KV, Vulkane cable. The 4160 volts entered the 750 KVA load center through a 8 KV, 500 amp, Model SFL66AA0, high voltage coupler manufactured by Line Power Manufacturing Corporation. The coupler was then connected to the load break disconnecting device which was equipped with one normally open and one normally closed interlock switch that would operate when the disconnect linkage was actuated. The ground continuity pilot check wire entered through the high voltage cable coupler and was connected to the emergency stop push button switch with the top, side cover and load break disconnect interlock switches connected in series to ground (see sketch No. 2). The rubber-tire mounted load center, Serial No. 037070-02, specification No. WD5158WD000, was manufactured by Hubbel Ensign. The unit was 16 feet in length, 6 feet 4 inches in width and about 31 inches in height. The top of the load center was covered by four metal lids that were 6 feet 4 inches in width and 37 inches in

length. The 4,160 volts alternating current was reduced in the load center to a nominal 575 volt alternating current.

4. According to Katruska, they were going to move the power center to the track entry and load it onto a rail car for movement out of the section. When they arrived on the section, Katruska and Fike, not a qualified electrician, walked to the input end of the section power center and Katruska depressed the emergency stop push button and opened the load break switch. The humming noise in the power center ceased and several unsuccessful attempts were made to remove the input cable coupler. One end of a wire rope was attached to the power center and the other end was laced through a sheave wheel and attached to a 20-ton locomotive. While the locomotive was pulling the power center about 23 feet, the wire rope broke twice because the front end of the power center kept plowing into the mine floor. Katruska contacted Wilson for help in removing the input cable coupler and then proceeded to the 8 left belt conveyor entry. While traveling past the belt power center, he noticed the transformer humming, indicating the power was on. Water had accumulated in front of the belt power center so Katruska took a trolley pole and pushed the emergency stop button and the transformer continued to hum. He then opened the visible load break switch and the transformer stopped humming. He then returned to the 8 left section power center with Fike and Lockette after obtaining a piece of belt conveyor wire rope. They attached the wire rope to the power center and to the locomotive. However, further movement of the power center was prevented by the material in front of it.

5. Shortly before 8:00 p.m., Wilson arrived at the scene and attempted to remove the input cable coupler. When Wilson informed Katruska that he couldn't disconnect the coupler, Katruska asked if there was another way it could be disconnected. Wilson told Katruska that the only other thing he could do was disconnect the lead wires and coupler from the inside of the power center. The cover was removed and Wilson obtained a marker from Katruska to mark the leads. Katruska starting walking toward the output end of the power center when he heard Wilson yell and saw him slump to the mine floor.

6. According to Katruska, he had moved a power center at least once during the past three months. Prior to either move, he would depress the emergency stop push button and open the load break switch on the power center. When the humming noise inside the power center stopped, Katruska believed that the incoming 4,160 volt circuit was deenergized. When the cable coupler could not be disconnected, it was decided to move the power center with the cable coupler attached. When Wilson, a qualified electrician, arrived on the scene, he did not ask Katruska if the circuit was deenergized, nor did he determine visually that the circuit was disconnected, locked out, tagged, and that the affected portion of the high voltage circuit was grounded. Fike and Lockette had moved load centers on various occassions during the past 11 - 13 years, however, they would not be responsible for deenergizing the circuit. Dave Hamilton, General Maintenance Foreman, stated that the standard procedure when moving power centers was to depress the emergency stop push button on the input end of the power center and when you hear the transformer go off (the humming noise stops), you make sure the outby oil circuit breaker was open, remove the output cable coupler at the oil circuit breaker switchhouse, tag and lock out.

7. On July 1, 1986, MSHA's examination of the single oil circuit breaker switchhouse, located at the front end of 8 left section, revealed that the output high voltage cable coupler had been removed prior to the start of MSHA's investigation. The belt conveyor power center was located in the 8 left section approximately 800 feet inby the oil circuit breaker switchhouse at the entrance of a crosscut adjacent to the track entry. The mine floor sloped from the crosscut into the track entry with the input (high voltage) end of the power center at the lowest point. Water had accumulated in this area and entered the high voltage cable couplers (input and feed through). Both high voltage cable couplers were removed, cleaned and dried before the high voltage circuit from the single oil circuit breaker switchhouse to the section power center could be energized.

8. An examination of the section power center revealed that the emergency stop push button was depressed. The load break switch lever was in the open position and the input cable coupler had numerous hammer type marks on the outside of it. These marks indicated that while attempting to remove the screw on/off coupler, it had been turned in both directions. One of the top covers had been removed, thus exposing the interior of the high voltage end of the power center. On the fuse side of this compartment, a No. 14 Awg insulated jumper wire with alligator clips was observed. One end of the wire was attached to an inside mounting bolt and the other end was on the floor of the compartment. An examination of the wire terminals of the emergency stop push button switch revealed scratches that would occur while attaching and removing the alligator type clips at the terminals. Two of the top cover switches (TC1 and TC3) were jumpered out. The interlock switches mounted to operate with the load break switch were out of adjustment due to bent linkage. These interlock switches would not open the ground continuity pilot check circuit when the load break switch was activated.

9. Tests were conducted with the jumper attached to the emergency stop push button switch on July 11, 1986. This resulted in all the top and side cover switches, load break interlock and emergency stop switches to be inoperative in the circuit. It could not be established that the jumper was attached to the emergency stop switch terminal prior to the accident. According to Dave Hamilton, the jumper wire found inside the section power center was possibly left there for testing purposes. The mine examination record book indicated that the last examination of all electrical equipment was made on June 21, 1986.

10. On July 11, 1986, the oil circuit breaker switchhouse was examined at the surface repair shop and the following tests were conducted:

A. The control circuit was energized and the oil circuit breaker was activated. The breaker operated smoothly without binding or sticking.

B. The overcurrent, short circuit and ground phase relays were tested for operation and calibration with a Multi-Amp 75 circuit breaker tester and were found to be operating within the manufacturer's specifications.

C. Current leakage tests were conducted on the oil circuit breaker with a Biddle Hipot tester and was found to be within acceptable limits.

D. Oil inside the circuit breaker was tested in accordance with ASTM method D-877-64 and found to be adequate for use.

E. The oil tank was removed from the Westinghouse circuit breaker and the contacts were inspected by Chuck Wyncoop, Westinghouse Electric Corp. Engineer. The arcing contacts showed signs of light arcing and piting, while the current contacts were clean and smooth and showed no indications of being burned closed.

At no time while testing the oil circuit breaker switchhouse did the oil circuit breaker fail to open.

11. Further investigation of the belt conveyor power center revealed a jumper wire across the pilot check terminal block (TB1). This rendered the top and side cover switches, load break interlock, and emergency stop switches inoperable. The pilot circuit was also short circuited as the result of water that was found inside the three interlock switches. These switches are operated by the load break switch linkage (see sketch No. 3). It could not be determined if the water entered the interlock switches before or after the accident.

12. Wilson had been qualified under MSHA's regulations to perform work on low, medium, and high voltage circuits on September 21, 1985. He had a danger tag inside his miners hard hat and a padlock was found on his miners belt. He was not wearing gloves; however, he was wearing rubber boots that were in good condition.

13. According to Frank Behm, Greene County Coroner, the electric current entered the victims body through the right hand and exited through his left hand. MSHA's investigators calculated the capacitive energy stored in the high voltage cable was insufficient to cause a lethal current discharge.

14. It was the opinion of the MSHA investigators that when Katruska activated the emergency stop push button switch and load break switch on the 8 Left section power center, the oil circuit breaker in the switchhouse failed to open because:

A. The pilot circuit was short circuited as the result of water that was found inside the three interlock switches or,

B. The jumper wire found inside the section power center was attached to the line side of the emergency stop push button switch.

Either of the above conditions could have maintained the ground continuity pilot check circuit and held the oil circuit breaker inside the oil circuit breaker switchhouse in the closed position. Thus the high voltage circuit from the oil circuit breaker switchhouse remained energized. When Wilson was in the process of removing the high voltage lead wire inside the power center, he contacted the energized circuit and was subjected to 2,300 volts phase to ground.

FINDINGS OF FACT

1. Electric work was performed on energized electric circuits. High voltage electric circuits were not deenergized by means of a visual disconnecting device opened by a qualified person. Also, the ungrounded phase conductors were not grounded to the system grounding medium of the 4,160 volts 3 phase a.c. resistance grounded system. A violation of Section 75.705-1(b).

2. The section load center on 8 Face Left section had been moved from one location to another without ascertaining that the incoming 4,160 volt a.c. power was deenergized. The load center had been moved for a distance of 23 feet. A violation of Section 75.812.

3. Mine management permitted an accident scene to be altered, in that on June 30, 1986, the high voltage cable plug was disconnected from the oil switch located at the mouth of 8 Face Left section and on July 2, 1986, the four original interlocking switches were replaced on the mine power load center located in the 8 Face Left section and a jumper wire of No. 14 size, measuring 46 inches in length with two aligator clips attached to the ends of the wire were removed before the completion of an MSHA investigation of the accident. A violation of Section 50.12.

4. Weekly examinations and tests were not being made on all electrical equipment throughout the mine. Record books indicate that the last examination of all electrical equipment was made on June 21, 1986. A violation of Section 75.512-2.

5. Electrical work was performed on the high voltage (4,160 a.c., 3 phase) circuit inside a high voltage power center located in the 8 Left section and the system was not visibly disconnected and the disconnecting device was not locked and tagged out. A violation of Section 75.511.

6. The high voltage (4,160, 3 phase) power center located in 8 Left section was not being maintained in a safe operating condition. A jumper had been installed from the line side of the emergency stop switch, lid switches, and the auxiliary switch serving the load break switch and its associated pilot check (ground monitor) circuit. A violation of Section 75.1725(a).

CONCLUSION

The accident and resultant fatality occurred because management failed to assure that proper deenergizing procedures were being followed and the victim's failure to deenergize, disconnect, lock out, tag, and ground the affected portion of the underground high voltage circuit before working in and around the section power center. Contributing factors were management's failure to establish a suitable procedure for moving section power centers and failure to examine and maintain the equipment in safe operating condition.

Approved by:

Donald L. Sheasley
Acting Subdistrict Manager--Coal Mine
Safety and Health District 2

Gerald F. Moody, Jr.

Gerald E. Davis

Donald W. Huntley
District Manager--Coal Mine
Safety and Health District 2

APPENDIX

List of persons furnishing information and/or present during the investigation:

Kitt Energy Corportion/BCNR Mining Corporation

J. W. Connor	Superintendent
W. P. Callahan	Mine Foreman
Michael Giovanelli	Shift Foreman
Joe Katruska	Section Foreman
Bruce McDowell	Manager/Engineering
Dave Hamilton	General Maintenance Foreman
Dennis Cole	Mining Health Engineer
Robert F. Semancik	Safety Supervisor
Dale Williams	Personnel Supervisor
Michael O'Day	Director Safety (Old Ben Coal)
John Schmidt	Chief Electrical Maintenance Engineer (Old Ben Coal)
Ronald L. Clark	Maintenance Foreman

BCNR Mining Corporation Employees

Lewis E. Fike	Belt Mechanic
Rodney Lockette	Pipeman
Charles Stiemmiller	Mechanic First Class

Representatives of Miners

Clemmy Allen	Executive Assistant to the International President - UMWA
Donald D. Redman	President, District 5 - UMWA
Barry Mylan	Health and Safety Rep. District 5 - UMWA
Bud Abbott	Board Member, District 5 - UMWA
Joseph R. Timcheck	President, Local Union No. 688 UMWA
Ronald C. Revi	Chairman, Health and Safety Committee, Local Union No. 688, UMWA
Albert Starastanko	Member, Health and Safety Committee, Local Union No. 688, UMWA
Gary Mylan	Member, Mine Committee, Local Union No. 688, UMWA
Jim Smith	Member, International Executive Board, UMWA

Greene County Coroner

Frank Behm	County Coroner

Equipment Manufacturing Representatives

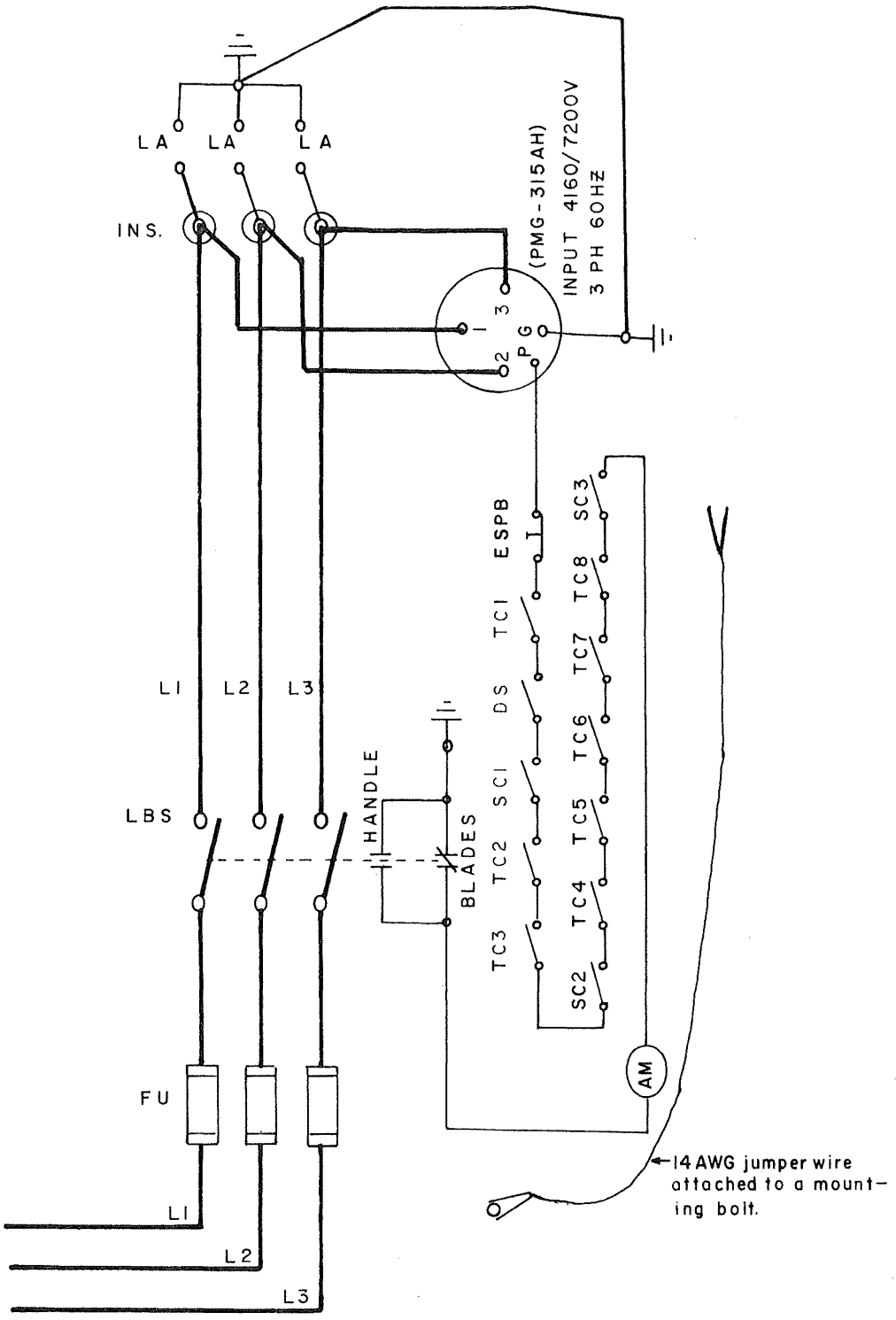
Chuck Wyncoop	Westinghouse Electric Corp.
Tom Kouski	Ensign Electric Div., Hubbell Corp.
Charles Godgluck	Ensign Electric Div., Hubbell Corp.

Pennsylvania Department of Environmental Resources

W. L. Reynolds	Bituminous Deep Mine Inspector
Lonnie L. Miller	Bituminous Electrical Deep Mine Inspector
Mike Scarton	Bituminous Electrical Deep Mine Inspector
Alan Martin	Bituminous Electrical Deep Mine Inspector
John Funka	Bituminous Electrical Deep Mine Inspector

Mine Safety and Health Administration

Val Cullen	Education and Training Specialist
Gerald E. Davis	Coal Mine Safety and Health Inspector (Electrical)
Gerald F. Moody, Jr.	Coal Mine Safety and Health Inspector
James L. Potiseck	Coal Mine Safety and Health Inspector (Electrical)
Robert E. Swarrow	Coal Mine Safety and Health Inspector
Tom Barkand	Electrical Engineer
Robert Zarochak	Electrical Engineer



Sketch no. 2 Partial wiring diagram of section power center not to scale

Sketch of
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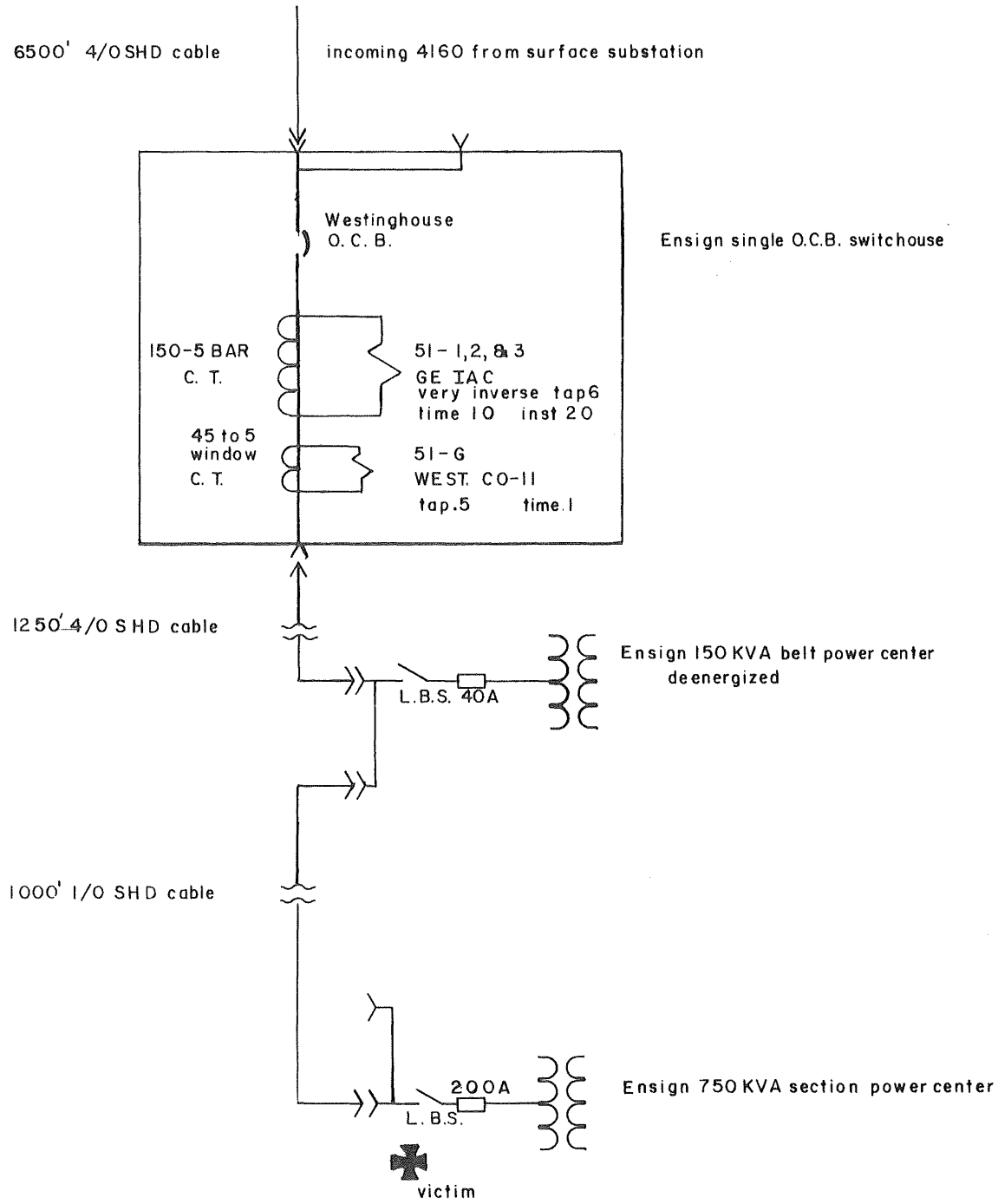
Fredericktown, Washington County, Pennsylvania

June 30, 1986



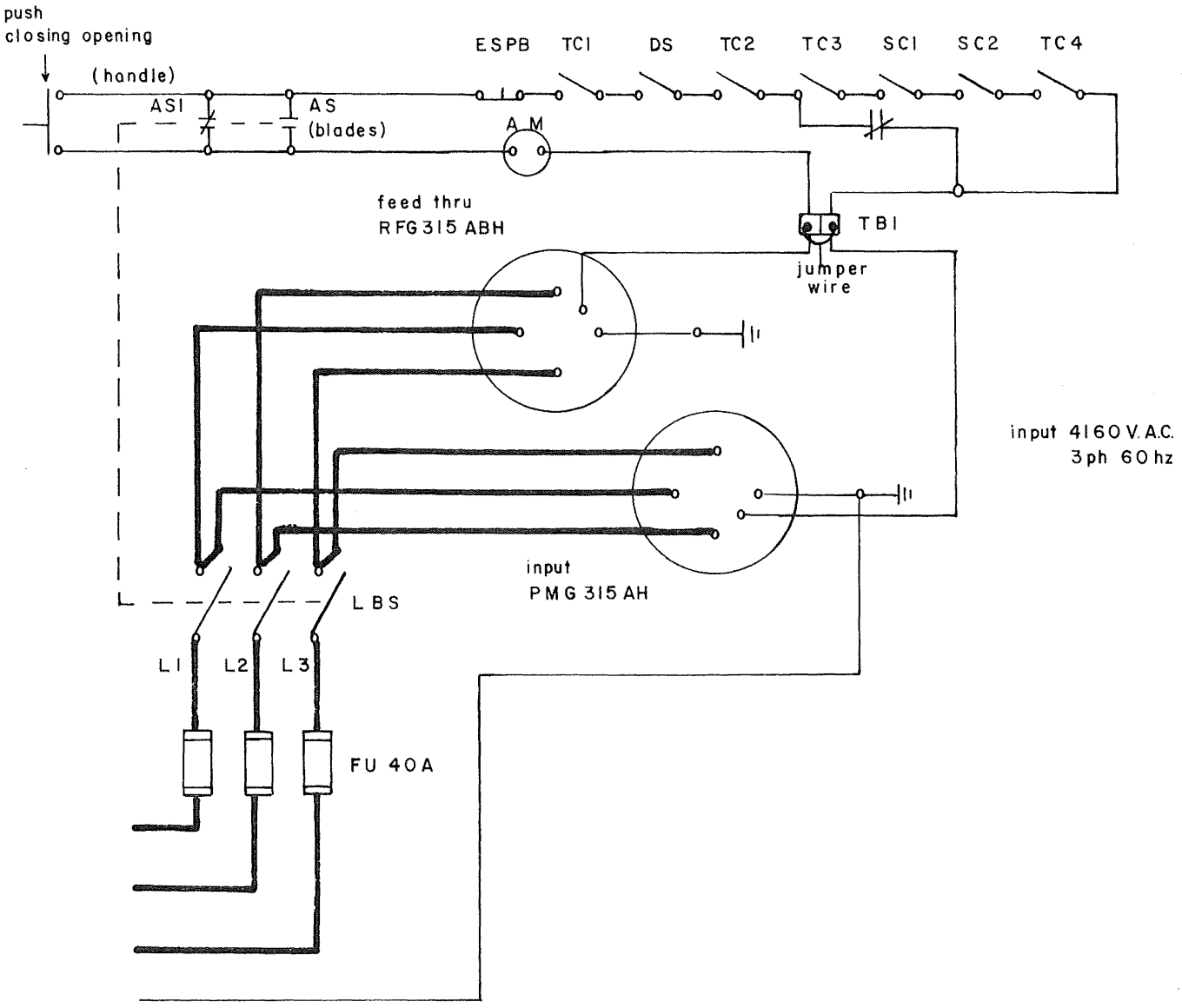
Sketch of
FATAL ELECTRICAL ACCIDENT

Sketch no. 3

not to scale

Clyde (ID No. 36 00967)
BCNR Mining Corporation
Fredericktown, Washington County, Pennsylvania

June 30, 1986



Sketch no. 4 Partial wiring diagram of belt power center not to scale

Sketch of
FATAL ELECTRICAL ACCIDENT

Clyde (ID No. 36 00967)
BCNR Mining Corporation
Fredericktown, Washington County, Pennsylvania

June 30, 1986

Special Data Sheet

U.S. Department of Labor
Mine Safety and Health Administration

Section A—Information Required in Electrical Accident Reports

1. Voltage of Circuit Involved

4,160 volts alternating current

2. Voltage to Which Victim was Exposed

4,160 volts alternating current

3. Type of Supply Circuitry (trolley wire, portable rectifier, wye connected secondary, delta connected secondary)

Resistance grounded wye connected secondary

4. Type, Size and Insulation Rating of Conductor Involved

4/0 15KV insulation unshielded

5. Electrical Protection for Circuit

G.E. IAC relays for overcurrent and short circuit

6. Ground Fault Trip Value (3 phase only)

Westinghouse C011 Relay - 7 amps

7. Wiring Diagram of Circuit Involved (attach separate drawing)

Ensign Electric Dwg. No. 5158WD000

8. Condition of Mine Floor

Dry

9. Was victim wearing rubber boots?

☒ Yes ☐ No

9a. Condition of Boots

Good

10. Was victim wearing gloves?

☐ Yes ☒ No

10a. Type

10b. Condition

11. Type of Grounding for Equipment

25 amp resistance grounded system

Section B—Information Required in Accidents Involving Equipment

12. Name of Manufacturer of Machine Involved

13. Model, Approval Number and Type of Machine

14. Machine Voltage

15. Did design of machine contribute to accident?

☐ Yes ☐ No

16. Did maintenance deficiencies contribute to accident?

☐ Yes ☐ No

17. Name of official responsible for maintenance of equipment.

18. Experience of Operator

19. Was machine being operated within safe limits of its capability? (if no, explain why)

☐ Yes ☐ No

Section C—Remarks

Data Sheet

U.S. Department of Labor
Mine Safety and Health Administration

Section A—Victim Data

1. Name	2. Sex	3. Social Security Number
Charles Wilson	☒ Male ☐ Female	[redacted]

4. Age	5. Job Classification
40 Years	Mechanic 1st Class Underground

6. Experience at this Classification	7. Total Mining Experience
12 Years 7 Months	15 Years 6 Months

8. What activity was being performed at time of accident?	9. Victim's Experience at this Activity	10. Was victim trained in this task?
Mechanic duties	12 Years 7 Months	Yes

Section B—Victim Data for Health and Safety Courses/Training Received *(related to accident)*	Date Received
11. L/M/H Voltage Underground	09/21/85
12. L/M Voltage Surface	10/10/85
13. H Voltage Surface	09/21/85
14. Annual Refresher	01/03/86

Section C—Supervisor Data *(supervisor of victim)*

15. Name	16. Certified
Joseph Katruska	☒ Yes ☐ No

17. Experience as Supervisor	18. Total Mining Experience
6 Years 1 Month	12 Years 4 Months

Section D—Supervisor Data for Health and Safety Courses/Training Received *(related to accident)*	Date Received
19. Supervisor Safety Workshop	06/07/86
20. Part 75	04/23/86 05/28/86 06/07/86
21.	
22.	

23. When was the supervisor last present at accident scene prior to the accident?	24. What did he do when he was there?
Present at time of accident.	Supervise workmen.

25. When was he last in contact with the victim?	26. Did he issue instructions relative to the accident?
At time of accident.	No

27. Was he aware of or did he express an awareness of any unsafe practice or condition?

No

Section I (Coal Only) Charles Wilson

MSHA and/or State Certification and/or Qualification Mine ID 36 00967

	Date Training Plan Approved / Date Training Received		Date Training Received
* ☐ Certified Person (Underground)		☐ Dust (Sampling)	
* ☐ Certified Person (Surface)		☐ Dust (Calibration)	
* ☐ Methane & Oxygen Deficiency Testing		☐ Noise	
* ☒ Electrical	L & M Voltage 09/21/85 H Volt UG & S 09/21/85 L & M Volt S 10/10/85	* ☐ Impoundments	
* ☒ Energized Surface High Voltage	09/21/85	* ☐ Hoisting Engineer	

* Annual Retraining Required

Section II (Metal-Non-metal and Coal)
MSHA Training Programs Completed

Part 48
Initial - 01/25/79
Rev. 03/14/84-03/01/84

Date of Hire 01/04/71 Date Training Plan Approved

Required Training (Victim)	Date Training Received	☐ Required Training (Victim)	Date Training Received
☐ New Miner (U.B.)		☐ Hazard Training (U.G.)	
☐ New Miner (Sur.)		☐ Hazard Training (Sur.)	
☐ Newly Employed Experienced (U.G.)			
☐ Newly Employed Experienced (Sur.)		Task Training Specify Type:	
☒ Annual Refresher (U.G.)	01/03/86		
☐ Annual Refresher (Sur.)			

Section III

Company Training Program Completed:

Training	OJT/Formal	Instructor	Date Completed

Section IV

Charles Wilson

DID VICTIM HAVE TRAINING SPECIFICALLY RELATED TO THE TASK BEING PERFORMED AT THE TIME OF THE ACCIDENT?

[X] YES [ ] NO WHEN? 09/21/85

BY WHOM? Tri-State Safety John S. Peton HOW WAS TRAINING GIVEN? Classroom

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Section V

RECOMMEND TRAINING PLAN EVALUATION BY EDUCATION & TRAINING OFFICE

[ ] YES [X] NO
