

**West Virginia Office of Miners' Health Safety and
Training**

February 7, 2013

**Report of Investigation
Underground Coal Mine Fatality
(CRUSHING)**

**Pocahontas Coal Company
Affinity Mine
Permit Number U00015282A**

**Region IV Office
550 Industrial Drive
Oak Hill, West Virginia 25901
McKennis Browning, Inspector-at Large**

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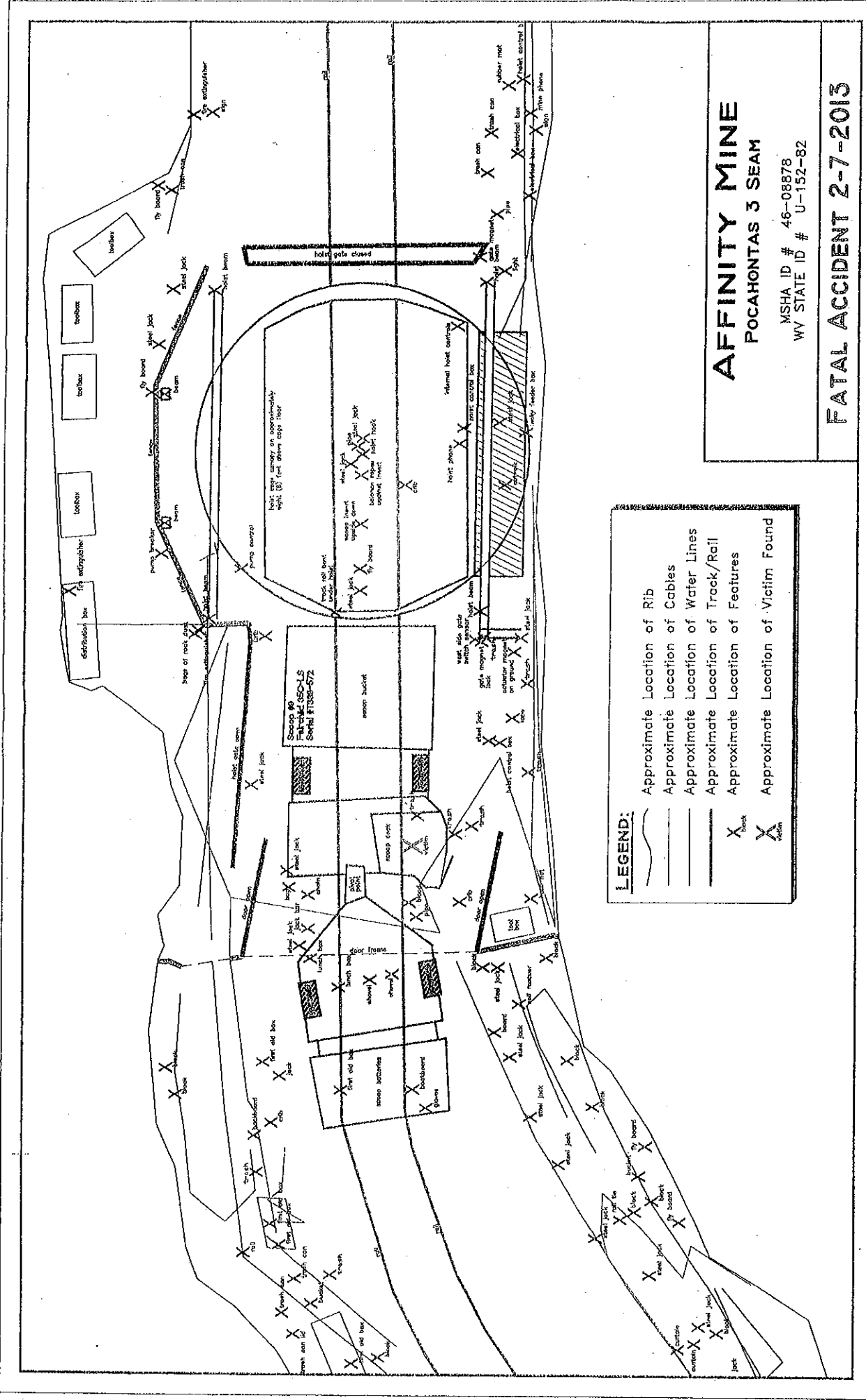
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AFFINITY MINE
POCAHONTAS 3 SEAM
 MSHA ID # 46-08878
 WV STATE ID # U-152-82
FATAL ACCIDENT 2-7-2013

LEGEND:

- Approximate Location of Rib
- Approximate Location of Cables
- Approximate Location of Water Lines
- Approximate Location of Track/Rail
- Approximate Location of Features
- X_{Victim} Approximate Location of Victim Found

**Report of Investigation
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Affinity Mine, Permit Number U00015282A**

GENERAL INFORMATION

This report is based on an investigation conducted in accordance with Chapter 22A, Article 1, Section 14 of the Mining Laws of the State of West Virginia.

Edward Finney, an employee of Pocahontas Coal Company, LLC, Affinity Mine was fatally injured in an accident at approximately 9:18 p.m. on February 7, 2013. Mr. Finney was working as a scoop operator on the shaft bottom of the #3 utility shaft when he was crushed under the operator's deck of the scoop.

Jan-Care ambulance was notified of the accident at 9:20 p.m. on February 7, 2013 by Zachary Bowman, evening shift communications person at Affinity Mine. McKennis Browning, Region 4, Inspector-at-Large of the West Virginia Office of Miners' Health, Safety and Training was notified of the accident by the WV Operations Center at approximately 9:26 p.m. A joint investigation with Mine Safety and Health Administration (MSHA) began immediately.

DESCRIPTION

The Pocahontas Coal Company, LLC, Affinity Mine is located on Affinity Road near Sophia, West Virginia in Raleigh County. This underground mine has 3 working sections mining in the Pocahontas No. 3 Seam. The coal seam is approximately 44" thick with an average mining height of 5 1/2 to 6 feet. The mine has 214 employees and operates five (5) days per week. Normally, the day and evening shifts are production shifts with the midnight shift conducting maintenance activities and performing section belt and power moves.

The Affinity Mine evening shift started at 3:00 p.m. on Thursday, February 7, 2013. Edward Finney, Chris Donaldson, and Brian Southern were assigned by Steve Colo (out-by foreman) to pick-up trash and send it to the surface. The trash was loaded into a metal insert and carried to the bottom of the elevator shaft in the bucket of a scoop. The insert was then loaded onto the elevator and sent to the surface. Upon reaching the surface, the insert was unloaded and returned to the shaft bottom to be refilled with trash. (Drawings – page 4)

Initially, the scoop was brought to the shaft bottom with the batteries first requiring it to be trammed across the elevator and the insert pushed on from the east gate side. This was done in this manner until questioned by Steve Colo as to why the scoop did not approach the elevator from the west gate side. This would save time in that the scoop would not be required to cross the elevator deck. When the scoop crossed the elevator both elevator gates were required to be open in order for the scoop to cross.

According to witness statements, on trip No. 4, the scoop approached the elevator from the west gate side bucket end first. The west gate of the elevator was open, and the air lock door nearest the elevator was open. As the scoop operator was pushing the insert out of the scoop

bucket onto the floor of the elevator, the operation signal (5 second alarm that sounds prior to the elevator moving) started flashing. The operation signal meant that the elevator had been called to the top by Michael Roberts. Chris Donaldson immediately yelled at Edward Finney to get off the scoop or back up the scoop because it was going to go to the top.

The elevator began to ascend and raised the scoop to an almost vertical position. Once the elevator reached a height greater than the length of the scoop, the scoop and insert were released. The scoop fell back to the mine floor. It is not clear if Mr. Finney tried to exit the scoop or was thrown out, but he was found crushed under the deck of the scoop. The insert landed in the sump below the elevator.

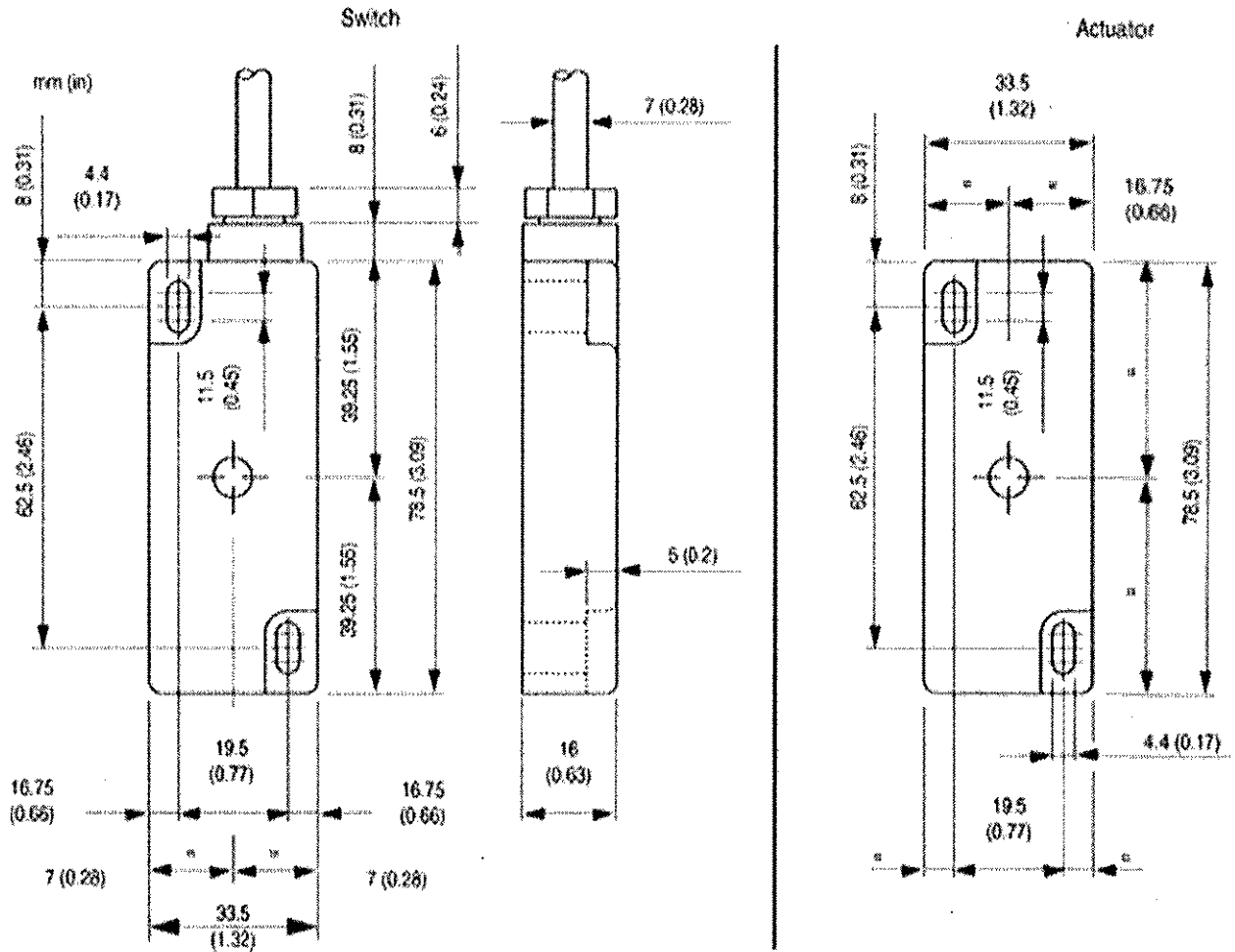
Chris Donaldson and Brian Southern immediately called on the radio for an ambulance and additional help and stated that there had been a serious accident. Zachary Bowman (communications person) immediately called for an ambulance. He then stopped the belts and began to summon help from various locations in the mine.

Immediately responding to the accident were, Dwight Lucas, Glen Paugh, Steve Colo, Josh Canaday, and Larry Reedy. First aid equipment was retrieved and the victim was removed from under the scoop. He was loaded on a stretcher transported to the 19 man hoist on a rubber tired ride. He was then transported to the surface in the 19 man hoist and loaded into the awaiting ambulance at approximately 10:27 p.m. Patient evaluation was started immediately. After patient evaluation, a DNR (do not resuscitate) order was obtained at 10:34 p.m. from Dr. Stout the CMP (Medical Command Physician) at Raleigh General Hospital due to obvious signs of death. Jan-Care Ambulance Service transported the victim to Blue Ridge Funeral Home arriving at 10:55 p.m.

At some time during these events, Glen Paugh observed the safety switch from the bottom landing west gate attached (taped) to the bottom landing west gate sensor mounted on the west gate post. Glen Paugh proceeded to remove the tape securing the safety switch to the post and let the safety switch and the tape fall to the mine floor. When the west gate safety switch actuator magnet was taped to the sensor on the west gate post, it defeated the fail-safe circuit designed to prevent the elevator from moving if the gate is open. After the tape and switch were removed from the gate post, the elevator would not move. (See sketch – page 7)

Approximate Dimensions

Dimensions are shown in mm (in.). Dimensions are not intended to be used for installation purposes.



Gate Safety Switch

FINDING OF FACTS

1. Edward Finney was employed as a utility man at Affinity Mine on the evening shift.
2. Edward Finney had 13 years of mining experience and 30 weeks of experience at this mine.
3. Edward Finney, Chris Donaldson, and Brian Southern were assigned to remove trash and debris from the area around the shaft bottom.
4. A Fairchild scoop (Co. No. 100 serial No. 239572) and a metal insert designed to fit inside the scoop bucket of the scoop were used for the collection of trash and debris.
5. The scoop insert could be pushed from the scoop bucket onto the floor of the elevator.
6. Edward Finney was operating Fairchild scoop (Co. No. 100 serial No. 239572) near the mine level landing of the main supply hoist/elevator on February 7, 2013.
7. The scoop (Co. No. 100 serial No. 239572) bucket was partially across the deck of the elevator with the west gate (bottom landing) of the elevator open.
8. The battery end of the scoop (Co. No. 100 serial No. 239572) was partially through the out-by (nearest to the elevator) air lock door on the west side of the elevator shaft.
9. All four (4) of the elevator gates are equipped with a magnetic safety switches to prevent the hoist from operating if any gate is in the open position.
10. The magnetic safety switch actuator was missing from the bottom landing west gate.
11. The missing safety switch actuator was lying on the mine floor near the bottom landing west gate post.
12. The elevator will automatically ascend to the surface after a five (5) minute delay if the bottom landing gates are opened and closed upon arrival at the bottom landing.
13. Operation of the elevator is preceded by the activation of flashing lights on the surface and bottom and an audible alarm on the surface for a period of five (5) seconds.
14. Mine electrical tape was lying on the mine floor near the bottom landing west gate post.
15. Inspection of the mine hoist revealed no violations contributing to this accident beyond the missing west gate safety switch.
16. Inspection of the Fairchild scoop (Co. No. 100 serial No. 239572) revealed four (4) violations, none were contributory to this accident.
17. As per witness testimony the safety switch for the west gate had been removed from the west gate and been taped to the sensor mounted on the west gate post, this action defeated the fail-safe circuit designed to prevent the elevator from moving if the gate is open.

CONCLUSION

The elevator's bottom landing west gate safety switch had been intentionally defeated. This act allowed the elevator to operate with the bottom landing west gate open. The initial two (2) loads of trash were placed on the elevator with both (east and west) gates open. Because the east gate safety switch was working properly, the elevator was not able to start. The third (3rd) load was placed on the elevator without incident. It is not known if the elevator had been sent to the bottom without a recycle trigger or if the insert was placed on the elevator in less than 5 minutes. Immediately prior to the accident, the elevator was sent to the bottom and a loaded flat

car was taken off the east side. As soon as the east gate was closed (recycle trigger) by the supply crew, the utility crew had 5 minutes to load the insert and clear the elevator before it started to ascend. As the fourth (4th) load was placed on the elevator, the east gate was closed and the west gate was open. Because the west gate safety switch was defeated the elevator was free to ascend by being sent from the bottom, called from the surface, or automatically recycled to the top after 5 minutes. The elevator ascended because it was called to the surface. However, this accident is a direct result of the intentional defeating of the west gate safety switch.

ENFORCEMENT ACTION

A non-assessed control order was issued in accordance with Chapter 22A, Article 2, Section 68 of the West Virginia Mining Laws in order to preserve the scene of the accident and complete an investigation.

During this investigation, the Office of Miners' Health, Safety and Training issued thirty-three (33) violations. Six (6) violations and three (3) special assessment violations were issued at the accident scene, and twenty-four (24) violations were issued at other parts of the mine. The following enforcement actions were issued in conjunction with the accident:

Notice of Violation: Chapter 22A, Article 2, Section 40(29) Special Assessment: The energized electrical/magnetic safety switch in use on the west gate of the main hoist at the mine level is not being properly maintained. This safety switch was intentionally defeated by removing the activator/magnet portion of the switch from the west gate and taping it to the electrical stationary portion of the switch located on the west gate frame assembly.

This created the condition whereby the control system was provided a false indication that the gate was closed when the gate was actually open.

A fatal accident occurred as a result of this switch being defeated when the hoist/elevator ascended unexpectedly while being loaded with material using a scoop, even though the gate was open which would normally not have allowed the hoist to operate. The scoop was raised to a near vertical position by the unexpected movement of the hoist/elevator as it ascended toward the surface. The scoop subsequently released from the hoist/elevator and fell back to the mine floor fatally injuring the operator who had exited the scoop as it was being raised.

During the accident investigation by The West Virginia Office of Miners' Health, Safety and Training, information was provided and testimony given by the person who removed the tape and separated the switch parts soon after the accident occurred. The activator/magnet which was taped to the west gate stationary/electrical portion of the switch to defeat the switch was found on the mine floor near the gate.

This finding was consistent with the information provided and testimony given.

This violation was observed on 2-11-2013 at 10:45 a.m. Under 22A-1-21(b)(2)(A) . This condition violates a health or safety rule and is of a serious nature and involves a fatality. This elevator was involved in a fatal accident on 2-7-2013

Notice of Violation: Chapter 22A, Article 2, Section 36(a) Special Assessment: Proper examination was not made on the main hoist. Records indicate that no exam has been performed on the gates, controls, e-stops and safety checks at the bottom landing. No records were available to indicate these checks having been performed in the past year. This examination is required every 24 hours. This violation was observed on 2-11-2013 at 11:00 a.m. Under 22A-1-21(b)(2)(A) . This condition violates a health or safety rule and is of a serious nature and involves a fatality. This elevator was involved in a fatal accident on 2-7-2013.

Notice of Violation: Chapter 22A, Article 2, Section 40(20) Special Assessment: Proper electrical examination was not made on the main hoist. Records indicate that no exam has been performed on the gates, controls, e-stops and safety checks at the bottom landing. No records were available to indicate these checks having been performed in the past year. This examination is required on a weekly basis. This violation was observed on 2-11-2013 at 11:10 a.m. Under 22A-1-21(b)(2)(A) . This condition violates a health or safety rule and is of a serious nature and involves a fatality. This elevator was involved in a fatal accident on 2-7-2013.

RECOMMENDATIONS

In accordance with Title 56, Series 8, Section 9.4 of the WV Mining Laws, the comprehensive mine safety program for the Pocahontas Coal Company LLC, Affinity Mine shall be modified to include the following:

1. The set of airlock doors on the west side of the service hoist shaft shall be removed.
2. Every employee shall be re-trained regarding the proper procedures for safely operating the hoist.
3. The service hoist control circuit will be modified as follows to provide redundant protection to all four gates (two switches per gate) this will be completed by February 18, 2013 as follows:
 - a. One gate switch will open when the gate is closed giving the PLC an open permissive.
 - b. One gate switch will open when the gate is closed giving a hardwired circuit to the relay for the PLC permissive.
4. All gate switches of the service hoist will be mounted using tamper resistant hardware.
5. The duration of the service hoist visual and audible alarm (surface and bottom) will be increased from five (5) to fifteen (15) seconds.
6. Install a camera system one on each gate, top and bottom that can continuously monitor the gates and display them on a monitor on the surface and underground. If this system becomes inoperable, a hoist man will be stationed in the service hoist house to operate the service hoist. If only one camera is out the associated gate will be locked to prevent its use.

7. Eliminate the automatic return to surface function of the service hoist and incorporate the manual hold function. This function requires the run hold switch to be cycled on the control panel outside the cage area after each use to place the hoist back in service.
8. While these actions are being implemented Affinity will operate the service hoist with a qualified hoist man running the service hoist.
9. 22A-2-36 shall be complied with.

ACKNOWLEDGEMENT

The West Virginia Office of Miners' Health, Safety and Training gratefully acknowledges the cooperation of the employees and management of Pocahontas Coal Company and the Mine Safety and Health Administration during this investigation.

APPENDIX

- Mine Information Sheet
- Victim Information Sheet

MINE INFORMATION

COMPANY Pocahontas Coal Company LLC

MINE NAME Affinity Mine

WV PERMIT U00015282A MSHA PERMIT NO. 4608878

ADDRESS PO Box 267, Midway, WV 25878

COUNTY Raleigh PHONE NO. 304-683-9097

DATE PERMIT ISSUED September 6, 2006

WORKING STATUS Active

LOCATION Affinity Road, near Sophia, WV

UNION _____ NON-UNION Yes

DAILY PRODUCTION 6737

TOTAL EMPLOYEES 214

NUMBER OF SHIFTS 3

COAL SEAM AND THICKNESS Pocahontas #3 44"

ACCIDENT INCIDENT RATE 2.34 LOST TIME ACCIDENTS 3

TYPE OF HAULAGE Shuttle Car / Belt

WV OMHST INSPECTOR Gene Stewart

DATE OF LAST INSPECTION February 5, 2013

NOTIFIED BY WVDHSEM

NOTIFICATION TIME 9:26 p.m.

CMSP – ANNIVERSARY DATE September 15, 2013

CMSP – CONTACT PERSON Rick Ashley