

UNDERGROUND MINE FATALITY  
HAULAGE ACCIDENT

MAY 16, 2016

ACI TYGART VALLEY  
LEER MINE  
PERMIT NO. U00200406A

REGION ONE  
14 COMMERCE DRIVE, SUITE ONE  
WESTOVER, WEST VIRGINIA 26501  
EDWARD PEDDICORD, INSPECTOR-AT-LARGE

**TABLE OF CONTENTS**

MAPS .....1

GENERAL INFORMATION .....2

DESCRIPTION .....2, 3

TIMELINE.....4

FINDINGS OF FACT .....5, 6, 7

CONCLUSION .....7

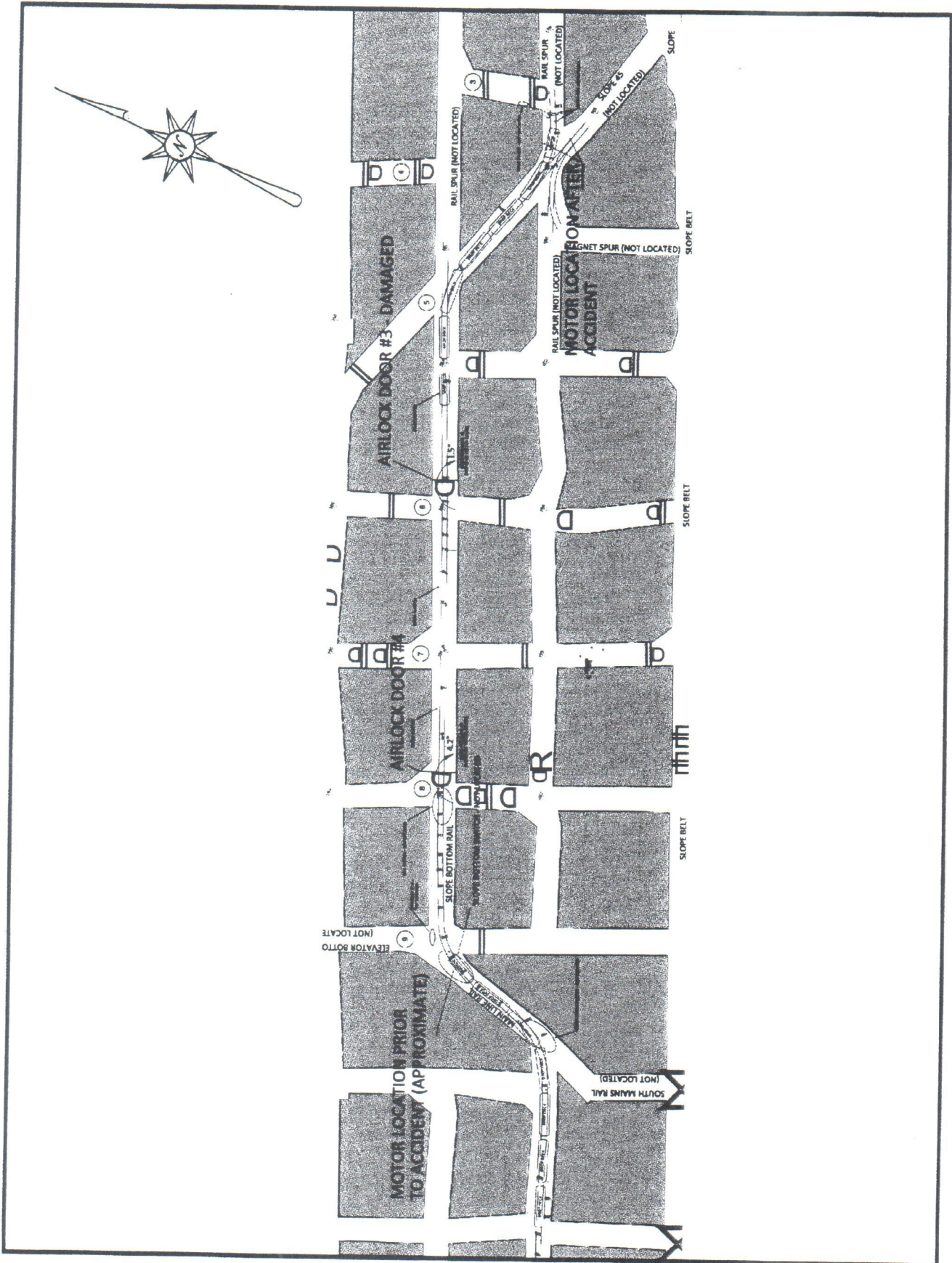
ENFORCEMENT ACTION .....7

RECOMMENDATIONS (Submitted by management).....8

ACKNOWLEDGEMENT .....9

VICTIM INFORMATION .....10

MINE INFORMATION .....11



## GENERAL INFORMATION

The ACI Tygart Valley, Leer Mine, Permit No. U00200406A is a shaft and slope mine, which produces coal in the Lower Kittanning seam, located near Grafton in Taylor County, West Virginia. The underground mine employs approximately 456 miners. The mine produces approximately 3.4 million tons of coal annually from one (1) longwall unit and four (4) continuous miner units. Coal is transported from the working sections in the mine via conveyor belt to the slope belt, located near the coal preparation plant. Employees access the mine from the elevator shaft located adjacent to the bath house. Employees and supplies are transported by rail.

## DESCRIPTION

On May 16, 2016, at 4:41 a.m., the Mine and Industrial Accident Response System was notified by Jeffrey Underwood, dispatcher, that a miner was reported as having a suspected heart attack at ACI Tygart Valley, Leer Mine in Taylor County. West Virginia State Mine Inspectors; Bobbie Harper, Jeffrey Bennett and John Scott were instructed by Edward Peddicord, Inspector-at-Large and John Meadows, Assistant Inspector-at-Large of the West Virginia Office of Miners' Health, Safety & Training to go directly to the Leer Mine. During informal interviews conducted at the mine, it was revealed that the victim was operating a diesel track locomotive and had collided with a closed air lock door. A joint investigation with the Mine Safety and Health Administration, ACI Tygart Valley and Arch Coal, Inc. began immediately.

On midnight shift, Sunday, May 15, 2016, Eric Meddings and Tom Beeman, Jr., motormen, were instructed to take two (2) Irwin supply cars, loaded with longwall conveyor chain from the slope bottom to the 2D Longwall setup. They were instructed to unload the two (2) cars, and bring them along with four (4) other empty cars to the slope bottom.

When leaving the 2D Longwall setup, Mr. Meddings was operating the company No. 5, 25 ton Brookville diesel track locomotive as the lead/outby locomotive pulling six (6) cars toward the slope bottom. Two (2) of the cars were loaded with empty chain bins, one (1) was loaded with a chain bin and partially filled with trash, the remaining three (3) cars were empty. Mr. Beeman was operating the company No. 4, 25 ton Brookville diesel track locomotive as the tail/inby locomotive, following Mr. Meddings but not coupled to the trip.

Mr. Meddings arrived at the Slope Bottom track switch at approximately 3:58 a.m. and stopped the locomotive/trip at the switch. It is normal procedure for the Slope Bottom track switch to be aligned for the straight. It is believed that Mr. Meddings exited the locomotive, threw the switch toward the slope bottom and opened the inby air lock door. The electric, push button door switch for the inby door is located approximately ten (10) feet outby the Slope Bottom track switch. During this time Mr. Beeman stopped his tail locomotive near the end of the trip Mr. Meddings was pulling. Mr. Beeman was located in a turn in the track entry and was out of sight of Mr. Meddings at this time. Mr. Beeman exited his tail locomotive in order to align the couplers on the outby end of his locomotive and the inby end of the car located at the end of Mr.

Medding's trip. This would allow the splitting of the trip and coupling of enough cars as necessary for the lead locomotive and the remainder of cars to fit between the two (2) air lock doors on the slope bottom. Mr. Beeman and Mr. Meddings had performed this procedure on numerous occasions and their practice was that neither locomotive would move until they communicated with each other by radio or cap light signals.

At approximately 4:00 a.m., according to testimony obtained from Mr. Beeman, the locomotive that Mr. Meddings was operating, while still coupled to the six (6) cars unexpectedly and without prior warning started traveling outby toward the slope bottom. The trip that Mr. Meddings was operating traveled through the inby open door then collided with and passed through the closed outby door. The trip continued through two (2) track switches and stopped in the Motor Barn Spur track switch to the left near the slope bottom. The trip Mr. Meddings was operating came to a stop after traveling a distance of approximately six-hundred (600) feet. Mr. Beeman then trammed the No. 4 locomotive through the Slope Bottom track switch and parked just inby the inby air lock door. Mr. Beeman noticed excessive dust and airflow and immediately proceeded on foot toward the slope bottom. Mr. Beeman then observed the damaged outby air lock door which the locomotive Mr. Meddings was operating had collided with.

Mr. Beeman found Mr. Meddings sitting in the operator's seat of the No. 5 locomotive leaning toward his right side. Mr. Beeman tried to get a response and felt for a pulse from Mr. Meddings, but both were unsuccessful. Mr. Beeman immediately went to the mine phone that was in close proximity and, at approximately 4:10 a.m., communicated with Jeffrey Underwood, dispatcher, telling him that there was a man down and requested assistance. Mr. Beeman then returned to Mr. Meddings and found he was still unresponsive. James Beafore, fireboss/EMT, was working nearby and after hearing a loud noise, went to the mine phone to find out what had happened. Mr. Beafore heard Mr. Beeman say that there was a "man down on the slope bottom" and ran toward the bottom area. Mr. Beeman turned off the engine of the locomotive and applied the parking brake. Upon his arrival, Mr. Beafore did not detect a pulse from Mr. Meddings and both miners then removed Mr. Meddings from the operator's compartment. They positioned him on the mine floor near the locomotive and began CPR. During this time, Ron Fowler, belt man and Craig Curry, assistant maintenance foreman, were in close proximity and having learned of a man down traveled to the accident site. Mr. Fowler assisted in CPR efforts and Mr. Curry retrieved medical supplies. Louie Chelli, midnight shift foreman, was informed of the accident and traveled directly to the site and assisted.

Mr. Meddings was placed on a backboard and transported to the slope car located at the bottom of the slope track. CPR and oxygen were administered while he was being transported to the surface. Despite their efforts, Mr. Meddings did not regain consciousness. Taylor County EMS arrived at the mine site at 4:30 a.m. and Mr. Meddings was placed in their care. Mr. Meddings was transported to Grafton City Hospital where he was later pronounced deceased by the physician on duty.

**FINDINGS OF FACT**

1. Eric Meddings received annual refresher training on 01/29/2016.
2. Mr. Meddings received the required eight (8) hours of annual diesel equipment operator refresher training for 25 ton Brookville diesel track locomotives on 02/26/2016.
3. The midnight shift begins at 11:00 p.m.
4. The mine height in the accident area was approximately eight (8) to nine (9) feet with dry conditions.
5. The company No. 5, 25 ton Brookville diesel track locomotive, that Mr. Meddings was operating, was being utilized to pull six (6) Irwin supply cars from the 2D Longwall setup section to the slope bottom where supplies are taken into and out of the mine.
6. The total weight of the six (6) empty cars was approximately eighty-five (85) tons.
7. Three (3) of the cars were transporting steel chain boxes, two (2) were empty and one (1) was partially filled with trash. The chain boxes measure fourteen (14) feet long, five and one half (5 ½) feet wide, and fifty-three and one half (53 ½) inches high. The weight of an empty chain box is approximately two thousand (2,000) pounds.
8. The tail/inby company No. 4, 25 ton Brookville diesel track locomotive, that Mr. Beeman was operating was not coupled to the trip, and was following the No. 5 locomotive to where the trip stopped.
9. This mine utilizes an IWT tracking and communication system that allows the employees to be tracked and also provides two-way communication by a hand held device. Mr. Meddings and Mr. Beeman were equipped with these devices. At approximately 3:58 a.m., Mr. Meddings called the dispatcher for clearance from the South track switch to the slope bottom and this was the last communication from Mr. Meddings. The Slope Bottom track switch is located approximately thirty-four (34) feet outby the South track switch.
10. There are two (2) air lock doors located in this track entry between the Slope Bottom track switch and the slope bottom.
11. Evidence indicates that the No. 5 locomotive and the six (6) cars, being operated by Mr. Meddings, left the Slope Bottom track switch, traveled through the open inby door and collided with, then continued through the closed outby air lock door. The trip continued through two (2) track switches, stopping in the Motor Barn Spur track switch to the left near the slope bottom just outby spad station No. 180.
12. The accident occurred at approximately 4:00 a.m. on May 16, 2016.
13. There was considerable damage to the outby air lock door.
14. Neither the No. 5 locomotive nor the six (6) cars were derailed.
15. The distance from the Slope Bottom track switch to where the No. 5 locomotive stopped was approximately six-hundred (600) feet. The distance between the Slope Bottom track switch and the damaged outby door is approximately three-hundred forty (340) feet. The distance from the damaged outby door to where the No. 5 locomotive stopped was approximately two-hundred sixty (260) feet.
16. The track from the Slope Bottom track switch toward the slope bottom where the No. 5 locomotive stopped, was dry, well maintained and had a slight estimated four point eight six (4.86) percent down grade toward the slope bottom.

17. There was slight damage to the corner of a top metal cover that is located inby the operator side of the operator's compartment of the No. 5 locomotive. The corner was bent upward.
18. Parts of the windshields, located on the outby end of the operator's compartment of the No. 5 locomotive, were broken and found in the floor of the operator's compartment. No parts of the broken windshields were discovered on the mine floor.
19. The thin metal guard that covers the de-coupler buttons, located in the operator's compartment of No. 5 locomotive, was bent in and downward.
20. The forward and reverse directional lever, located in the operator's compartment of the No. 5 locomotive, was found in the neutral position.
21. The car nearest the No. 5 locomotive was un-coupled and separated with only a D-ring chain securing the car to the locomotive.
22. The pre-operational check list for the No. 5 locomotive, dated 05/15/2016 at 11:50 p.m., was signed by Mr. Meddings indicating that no defects were noted.
23. Stray electrical current examinations were conducted at the air lock door switches, located in the accident area, and on the No. 5 locomotive, and no stray electrical current was detected.
24. Operational and mechanical examinations were conducted during the investigation on 5/16/2016 of the No. 5 locomotive, and no defects were observed.
25. There were no eyewitnesses to this accident.
26. A re-enactment of the accident was conducted on 5/24/2016, at the accident site. The No. 5 locomotive and six (6) cars were positioned at the Slope Bottom track switch. It was determined during this reenactment that with the transmission in neutral, all brakes released and the deadman switch depressed, the trip did drift toward the slope bottom with increasing speed due to a drop in elevation. While drifting, the operator was able to apply the service brake and come to a controlled stop. A video of the reenactment is included in the fatal file.
27. The air lock doors located near the slope bottom that were involved in the accident are manufactured by Krist Door Service.
28. These doors are both solid single doors hinged at the top and open from bottom to top with electrical powered hydraulic jacks that lift the doors up to open.
29. The measurements of the air lock doors are approximately seven (7) feet three (3) inches high and fifteen (15) feet and five (5) inches wide, and are constructed of a light gauge metal with an approximate weight of six-hundred thirty (630) pounds per door.
30. The air lock doors are wired so that only one door can be opened at a time. Both of the air lock doors open toward the inby area of the mine. These doors take approximately twenty-one (21) seconds to open completely and approximately six (6) seconds to completely close.
31. The distance between the closed air lock doors is approximately two hundred six (206) feet.
32. The No. 5 locomotive with the six (6) cars coupled was approximately two hundred twelve (212) feet in length.

33. The intake fresh air in the main line track entry of this mine travels inby, toward the working sections, therefore due to the location of the operator's compartment, emissions of the diesel engine exhaust would not pass over Mr. Meddings while traveling outby.

## **CONCLUSION**

For an undetermined reason, the locomotive that Mr. Meddings was operating with its six (6) car trip, unexpectedly began traveling down the Slope Bottom track. The trip passed through the open inby air lock door then collided with and passed through a closed outby air lock door. Mr. Meddings received fatal blunt force trauma injuries due to contact with the closed air lock door.

## **ENFORCEMENT ACTION**

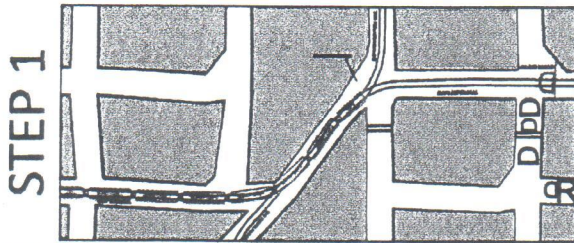
A non-assessed order was issued in accordance with West Virginia Code Chapter 22A, Article 2, Section 68 to preserve evidence until an investigation by the Office of Miners' Health, Safety and Training is completed.

- 1) A special-assessed violation was issued in accordance with West Virginia Code Chapter 22A, Article 2, Section 66 stating that the operator did not make the call within the allotted time to Mine and Industrial Accident Emergency Operations Center, in that after the fatal accident at the mine which occurred at approximately 4:00 a.m., the dispatcher contacted 911 at 4:12 a.m. and again at 4:18 a.m. The mine operator is required to call the Mine and Industrial Accident Emergency Operation Center within 15 minutes of completing the telephone call to the local organization for emergency services. The operator did not make the required call the Mine and Industrial Accident Emergency Operations Center until 4:41 a.m.

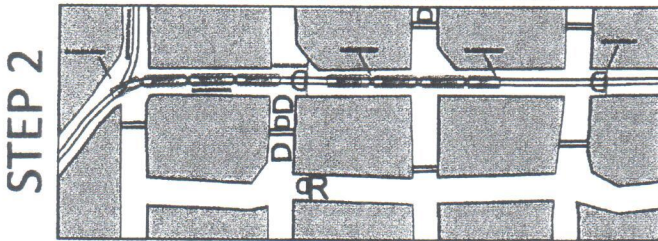


## RECOMMENDATIONS

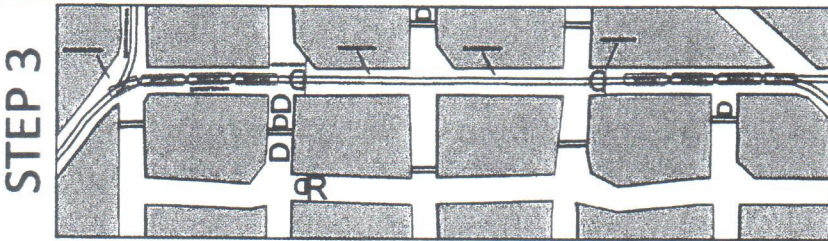
### LEER MINE PROCEDURE FOR SPLITTING SUPPLY TRAIN AT SLOPE BOTTOM DOORS



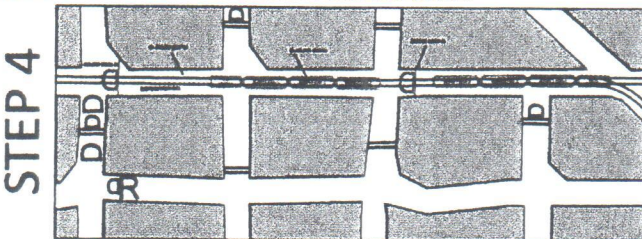
**STEP 1 PROCEDURE:**  
 HEAD MOTOR MAN THROW SWITCH TO SLOPE % OPEN AIRLOCK DOOR #4  
 TAIL MOTOR MAN ALIGN COUPLERS & COUPLE TAIL MOTOR TO TRAIN  
 TAIL MOTOR MAN RADIO HEAD MOTOR MAN WHEN TAIL MOTOR IS COUPLED TO TRAIN  
 HEAD & TAIL OPERATORS WALK TO CENTER OF TRAIN AND SPLIT TRAIN



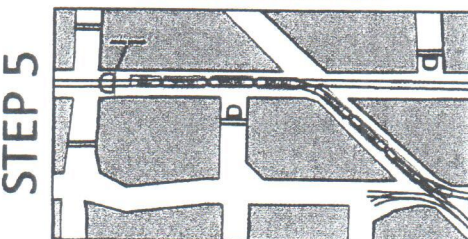
**STEP 2 PROCEDURE:**  
 HEAD MOTOR MAN PULL THROUGH AIRLOCK DOOR #4 TO AIRLOCK DOOR #3 SWITCH  
 TAIL MOTOR MAN MOVE TO AIRLOCK DOOR #4 SWITCH  
 HEAD MOTOR MAN CLOSE AIRLOCK DOOR #4  
 HEAD MOTOR MAN OPEN AIRLOCK DOOR #3



**STEP 3 PROCEDURE:**  
 HEAD MOTOR MAN PULL THROUGH AIRLOCK DOOR #3  
 HEAD MOTOR MAN CLOSE AIRLOCK DOOR #3  
 TAIL MOTOR MAN OPEN AIRLOCK DOOR #4 ONCE #3 IS CLOSED



**STEP #4 PROCEDURE:**  
 TAIL MOTOR MAN MOVE THROUGH AIRLOCK DOOR #4 TO AIRLOCK DOOR #3 SWITCH  
 TAIL MOTOR MAN CLOSE AIRLOCK DOOR #4  
 TAIL MOTOR MAN OPEN AIRLOCK DOOR NUMBER #3



**STEP 5 PROCEDURE:**  
 TAIL MOTOR MAN MOVE THROUGH AIRLOCK DOOR #3  
 TAIL MOTOR MAN CLOSE AIRLOCK DOOR #3

## **ACKNOWLEDGEMENT**

The West Virginia Office of Miners' Health, Safety and Training gratefully acknowledges the cooperation of the management and employees of ACI Tygart Valley, Arch Coal, Inc. and the Mine Safety and Health Administration during this investigation.

