

Aracoma Coal Company

Alma No. 1 Mine

Fatal Investigation

January 19, 2006

Permit No.: U-5006-99



West Virginia Office of Miners' Health, Safety and Training

January 19, 2006

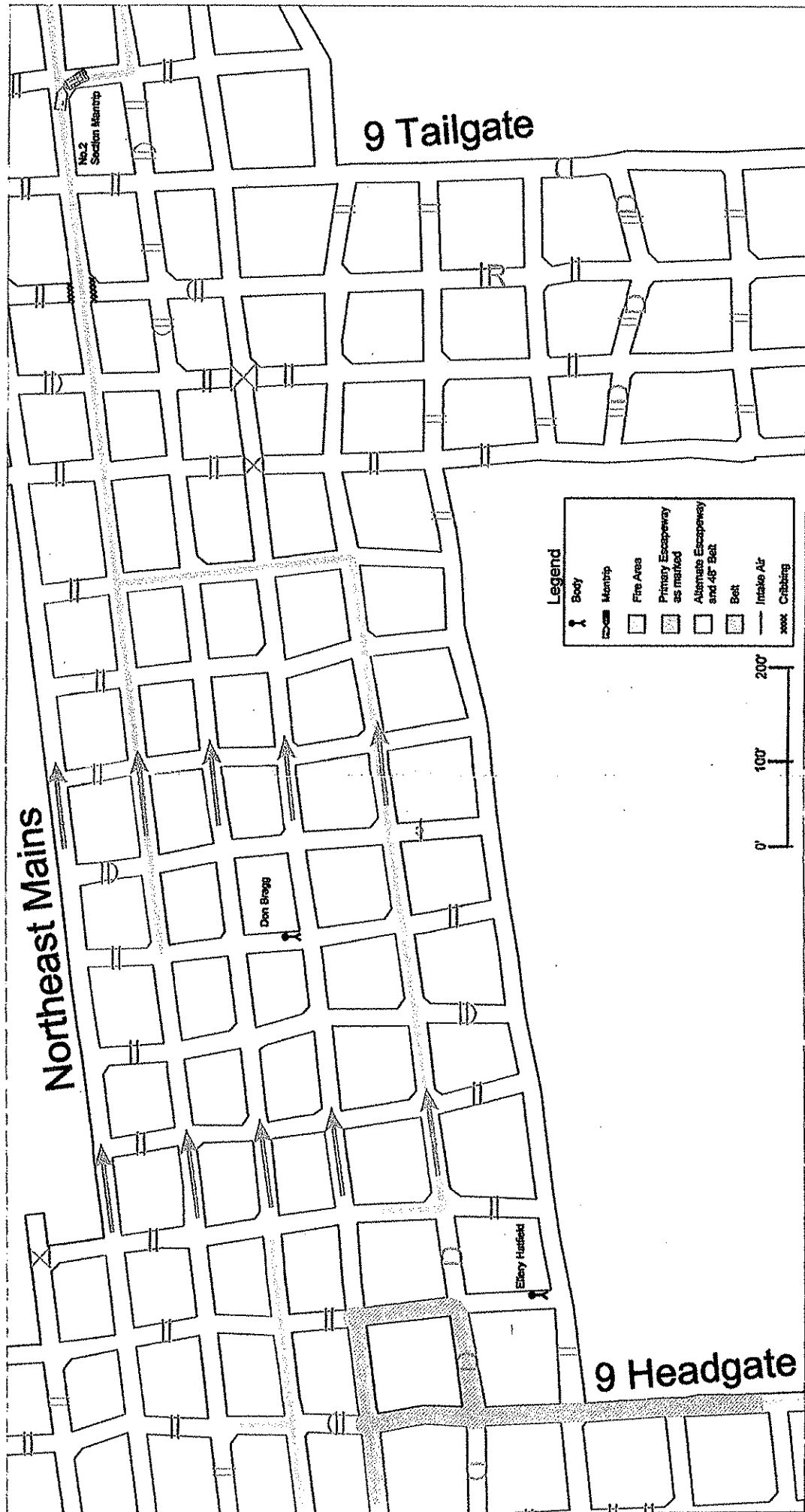
Conveyor Belt Fire/Double Fatality
Aracoma Coal Company, Inc.
Aracoma Alma No. 1
Permit No. U-5006-99

Region Three – Danville Office
137 Peach Court, Suite 2
Danville, West Virginia 25053
Harry Linville, Inspector-at-Large

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Aracoma Coal Company
 Alma No. 1 Mine
 State ID# U-5006-99



**Conveyor Belt Fire/Double Fatality
Aracoma Coal Company, Inc.
Aracoma Alma No. 1
Permit No. U-5006-99**

GENERAL INFORMATION

Aracoma Coal Company, Inc. was permitted to operate the Aracoma Alma No. 1 mine (Permit No. U-5006-99) on January 25, 2000. The mine employs 182 people on three shifts and utilizes Apollo Mine Services, Inc. (Permit No. C-3920) contractor employees to assist in manpower needs at the Aracoma Alma No. 1 mine (hereafter referred to as Alma No. 1). The mine utilizes swing shift rotation on two-week intervals for all production employees. Two underground continuous mining units, one longwall mining unit and one construction section are currently in operation. Coal is being mined in the Alma seam. Transportation of supplies and personnel to the continuous miner sections, longwall section and the construction section is by rubber-tired diesel-powered equipment. Track is utilized along the Rum Creek belts.

An underground conveyor belt fire occurred on January 19, 2006 at the Alma No. 1 mine located near Stollings in Logan County, West Virginia.

Mr. Don Israel Bragg and Mr. Ellery Elvis Hatfield, roof bolter operators on the active No. 2 section, were fatally injured when they became separated from their crew while attempting to evacuate from the No. 2 section. Both victims expired as a result of asphyxiation due to, or as a consequence of, an underground mine fire with suffocation and carbon monoxide intoxication. The men were recovered from the mine on January 21, 2006.

Mr. Don Israel Bragg, age 33, had been employed at the Alma No. 1 mine since January 5, 2004 and had approximately 9½ years total mining experience. Mr. Don Israel Bragg resided at Accoville, Logan County, West Virginia and is survived by his wife, Delorice.

Mr. Ellery Elvis Hatfield, age 46, had been employed at the Alma No. 1 mine since August 31, 2001 and had approximately 11½ years total mining experience. Mr. Ellery Elvis Hatfield resided near Simon, Wyoming County, West Virginia and is survived by his wife, Freda.

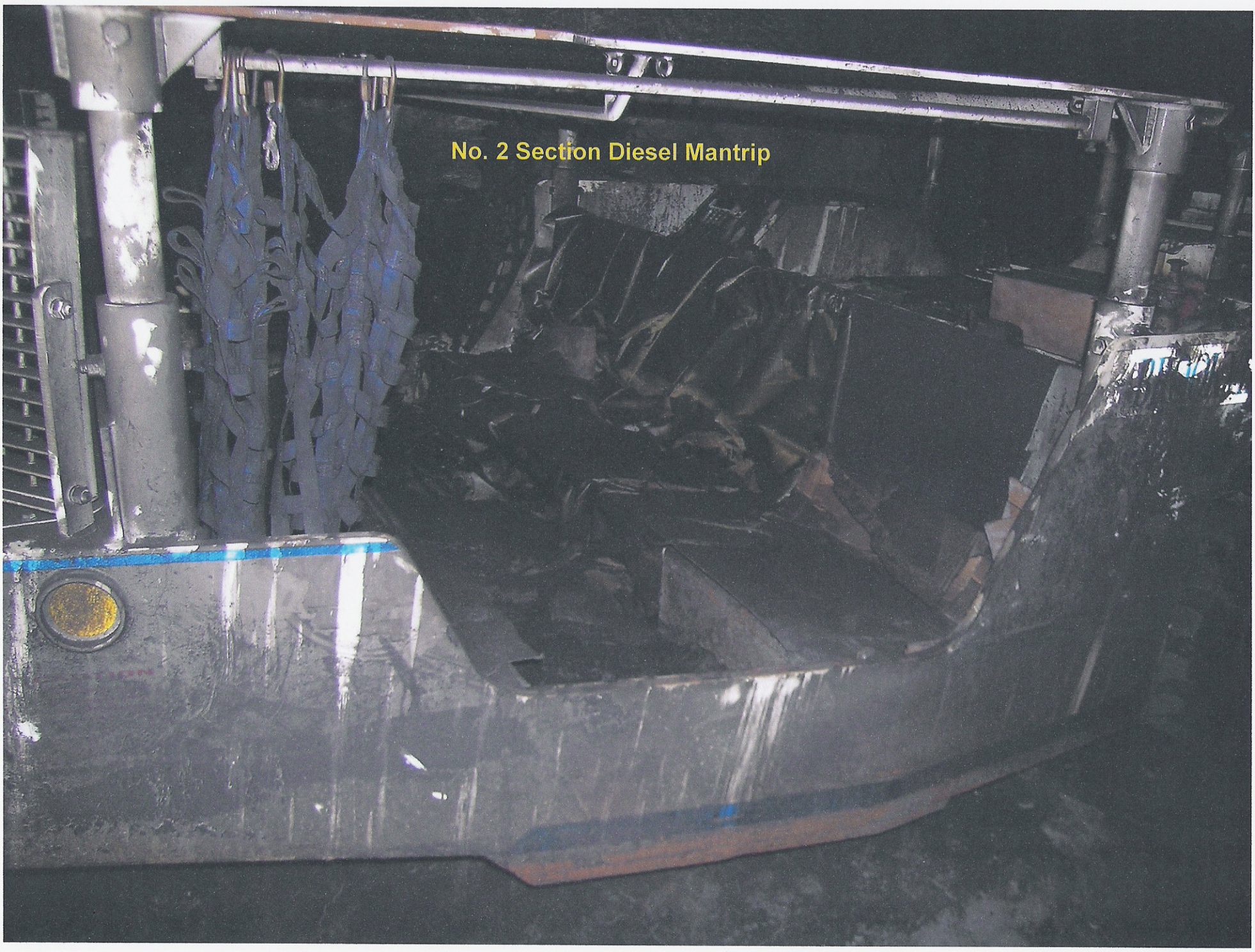
Mr. Don Israel Bragg and Mr. Ellery Elvis Hatfield received annual refresher training on January 14, 2006.

Mr. Eddie Lester, Vice President of Operations for Alma No. 1 mine, notified Mr. Richard Boggess, District Inspector for the Office of Miners' Health, Safety and Training, at approximately 7:33 p.m. on January 19, 2006 of the conveyor belt fire and that two miners were unaccounted for. A mine rescue/fire fighting operation was started immediately.

DESCRIPTION

The No. 2 Northeast Mains evening shift crew entered the Alma No. 1 mine on January 19, 2006 at their normal starting time of 2:30 p.m. under the direction of Section Foreman Mr. Michael Plumley. The No. 2 section crew included the following persons – Mr. Steve Hensley, Continuous Miner Operator; Mr. Billy Mayhorn, Continuous Miner Operator; Mr. Elmer Mayhorn, Roof Bolter Operator; Mr. Ellery Elvis Hatfield, Roof Bolter Operator; Mr. Don Israel

No. 2 Section Diesel Mantrip



Bragg, Roof Bolter Operator; Mr. Randall Crouse, Roof Bolter Operator; Mr. Michael Shull, Electrician; Mr. Joe Hunt, Shuttle Car Operator; Mr. Pat Kinser, Shuttle Car Operator; Mr. Gary Baisden, Shuttle Car Operator; Mr. Duane Vanover, Scoop Operator; and Mr. Michael Plumley, Section Foreman.

The crew entered the mine from the box cut portal on a Brookville 14-man, rubber-tired diesel mantrip (Serial No. 9059). They proceeded along their normal travel route to the No. 1 four-way through the airlock doors into the North Mains intake escapeway travelway, turning right along the North East Mains to the airlock doors at the No. 9 longwall headgate conveyor belt. The crew traveled through the outby set of doors under the No. 9 longwall conveyor belt to the inby set of doors where Mr. Carl White, Dayshift Belt Examiner, opened and shut the airlock doors, allowing the mantrip to enter the Northeast Mains intake escapeway travel way.

The No. 2 section crew proceeded from spad 3333 in the No. 8 entry of North East, traveling seven crosscuts then turning left traveling three crosscuts to the No. 5 entry, then turning right, traveling five crosscuts to spad 3546, turning right traveling one crosscut to spad 3547 in the No. 4 entry, then turning left traveling approximately twenty-three crosscuts (approx. 2325 ft.) to the mouth of the No. 2 section. This is the normal daily travel route from the box cut to the No. 2 section.

Upon arrival on the No. 2 section the evening shift crew met the dayshift crew along with Mr. Terry Shadd (No. 2 Section Mine Foreman/Superintendent) at the mantrip staging area. The dayshift crew had just finished rock dusting the section. While waiting for the rock dust to clear the face areas, a brief meeting was held with both crews concerning a new proposed work schedule. The discussion of the proposed work schedule lasted approximately ten to fifteen minutes.

At the conclusion of the meeting, the dayshift coal crew exited the mine without delay and did not notice anything unusual during their travel out of the mine. The evening shift coal crew proceeded to their assigned duties.

The No. 2 section utilizes split ventilation with four working faces. The No. 3 entry is intake. Two remote control continuous miners, three shuttle cars, two roof bolting machines and two battery-operated scoops are utilized on this section.

Mr. Steve Hensley, Continuous Miner Operator, completed a partial scrap cut in the No. 1 face. Mr. Steve Hensley then trammed the continuous miner to the No. 2 entry and mined 2 break right through into the No. 3 entry. Upon completing 2 break right, Mr. Steve Hensley trammed the continuous miner down the No. 2 entry and was waiting on the roof bolt crew. Section Foreman Mr. Michael Plumley mined 3 break right. Continuous Miner Operator Mr. Billy Mayhorn and Shuttle Car Operator Mr. Gary Baisden at the start of the shift had been instructed to get a scoop and a load of crib blocks and set some cribs at an area at the mouth of the No. 2 section.

Mr. Carl White, Dayshift Belt Examiner, was stationed at the No. 9 headgate longwall mother drive on January 19, 2006 to watch over the No. 9 headgate longwall belt. The No. 9 longwall belt shut down several times during his shift. Mr. Carl White said he could see a hazy mist around the mother drive and storage unit but could not find any problems. He checked drive motors and bearing temperatures with a heat temperature gun and found no problems. Mr. Dustin Dotson, Mine Foreman, arrived at the No. 9 headgate and briefly talked with Mr. Carl White. Mr. Dustin Dotson then proceeded to the belt starter box, opened a door on the box and



This photograph shows a complex industrial setup in a rocky, possibly underground, environment. A large, dark, horizontal pipe runs across the left side of the frame. A smaller pipe branches off from it towards the right. In the upper center, a vertical pipe is visible. To the right, a mechanical component, likely a valve or part of a pump, is attached to the horizontal pipe. The ground is covered with loose rocks and debris. Two yellow arrows with text labels point to specific pipes: one points left towards the top of the main horizontal pipe, and the other points down towards the ground on the right side.

No. 7 Belt Water Supply Line

No. 9 Headgate Water
Supply Line

Fire Suppression Valve for
No. 9 Mother Drive



shortly thereafter left the area. The belt continued to run uninterrupted the remainder of the day shift.

At the end of Mr. Carl White's shift, he was still concerned with the condition at the longwall belt. Therefore, he contacted Mr. Bryan Cabell, Evening Shift Belt Examiner/Fireboss, who was located at the No. 7 belt head and asked him to report to the No. 9 headgate longwall belt as soon as possible. Mr. Carl White then traveled outby, down the No. 9 headgate longwall belt and met with the longwall dayshift crew and proceeded to the surface. They arrived on the surface at approximately 4:00 p.m.

Mr. Bryan Cabell, Belt Examiner/Fireboss, stated that a carriage was wrecked in the mother drive storage unit causing a misalignment of the beltline and allowing the belt to rub a bearing. Mr. Bryan Cabell unsuccessfully tried to train the beltline and align the carriage unit. Mr. Bryan Cabell called Mr. Fred Horton, Evening Shift Mine Foreman, to inform him of the belt condition and to request chain ratchets. Mr. Bryan Cabell was at the No. 9 headgate mother drive unit when the fire started.

The evening shift longwall crew, under the direction of Mr. David R. Runyon, arrived at the No. 9 longwall section at approximately 3:50 p.m. When the crew arrived the No. 9 longwall belt was off. The evening shift crew started the No. 9 longwall belt to clear the face chain so slack could be removed from the chain. Also at this time two setups of belt structure were removed.

According to Mr. Gary Richardson, Longwall Headgate Operator, the second shift started producing coal at 4:25 p.m. The conveyor belt ran uninterrupted until 5:05 p.m. Mr. Gary Richardson, when calling about the belt conveyor, was told by Mr. Bryan Cabell that he had shut the belt conveyor down due to smoke and would get it running again as soon as possible.

At this time, Mr. Pat Calloway and Mr. Jonah Rose arrived on the scene on the No. 714 Wallace 5-man diesel powered, rubber-tired vehicle, parking it in the main travel way that crosses under the mother drive beltline. An attempt was made by Mr. Pat Calloway to move the No. 714 diesel mantrip. The mantrip would not start and was completely destroyed in the fire. Mr. Bryan Cabell received a fire extinguisher from Mr. Pat Calloway and proceeded to fight the fire, Mr. Jonah Rose gathered additional fire extinguishers. At least three fire extinguishers were discharged on the fire with no success. Mr. Bryan Cabell stated that he attempted to attach a fire hose to the fire valve at the storage unit but was unsuccessful because the fire hose and fire valve fittings were incompatible.

Mr. Bryan Cabell then attempted to open the fire valve and direct water onto the fire area but no water was present in the water supply line. Mr. Bryan Cabell instructed Mr. Pat Calloway to check the water supply line to determine why no water was being supplied and to correct the problem. Mr. Bryan Cabell then tried to locate the cutoff valve for the yellow two-inch water supply line by traveling along the No. 7 belt toward the No. 9 longwall belthead. He was unable to get within 75 feet of the discharge roller where the cut off valve is located due to heavy black smoke. The fire was burning out of control and no means was available to fight the fire.

Mr. Jonah Rose was left at the outby set of double airlock doors to look and listen for miners retreating from the No. 2 section.

Mr. Gary Richardson, Longwall Headgate Operator, was listening on the mine phone and heard someone tell the dispatcher, Mr. Gary (Mike) Brown, to contact the No. 2 section and have them come off the section and tell the longwall crew if they encountered smoke to get into the







intake and come off the section. He also heard conversation between Mr. Bryan Cabell and Mr. Fred Horton concerning the fire at the mother drive.

At approximately 5:55 p.m. Mr. Gary Richardson attempted to call out his two-hour report when he discovered that the mine phone was inoperative. After he updated the longwall crew, the Section Foreman Mr. David R. Runyon and Chief Electrician Mr. Jamie Adkins, decided to go see what was going on. Approximately ten minutes after they left, the longwall section lost power. It was at this time that the longwall crew took it upon themselves to evacuate. They traveled off the No. 9 headgate longwall section through the cut through into the North Mains primary intake escapeway.

After several unsuccessful attempts to contact the section by mine phone, Mr. Gary (Mike) Brown, Dispatcher, who is located on the surface, shut down the No. 2 section conveyor belts at approximately 5:39 p.m. to get the attention of someone on the crew. Shortly thereafter, Section Foreman Mr. Michael Plumley called outside to see why his belt was not running when Dispatcher Mr. Gary (Mike) Brown and Shift Foreman Mr. Fred Horton notified Mr. Michael Plumley of a fire and for him to assemble his crew and leave the section.

Section Foreman Mr. Michael Plumley then instructed the crew to meet at the mantrip. A headcount of the crew was conducted and the crew proceeded to exit the mine, not knowing the extent or seriousness of the fire.

Mr. Steve Hensley, Mantrip Operator, stopped the mantrip and picked up Mr. Billy Mayhorn and Mr. Gary Baisden at spad 4177. The No. 2 section coal crew proceeded out their normal travel route down the No. 5 entry to spad 3547, turning right and traveling through the crosscut to the No. 4 entry at spad 3546.

The No. 2 section coal crew encountered a burning smell during their travel in the No. 5 entry at the mouth of the No. 10 headgate construction work site and shortly thereafter could actually see light smoke. As the crew proceeded along the No. 5 entry roadway, some crew members pulled their shirts up over their mouths and noses to help with breathing.

When Mr. Steve Hensley, Mantrip Operator, turned left into the No. 4 entry at spad 3546, the crew encountered a wall of thick black smoke that traveled up the primary intake escapeway toward the No. 2 section as a result of a missing ventilation control at the No. 7 conveyor belt tailpiece. Mr. Steve Hensley immediately stopped the mantrip and informed the crew he could not see to go any farther.

At this point, a panic situation occurred. A decision was made to go through the mandoor located three crosscuts outby spad 3546, which was installed by members of the No. 2 section coal crew approximately three weeks prior to the fire. The No. 2 section crew was familiar with this area and stopped at this location to allow Section Foreman Mr. Michael Plumley to fireboss the seal. Physical evidence (self-rescuer tops and bottoms) indicated that the No. 2 section coal crew traveled outby the manbus approximately one or two crosscuts before donning their self-rescuer devices.

The coal crew felt their way along the coal ribs for approximately three crosscuts in heavy, dense black smoke with zero visibility.

When the crew entered through the mandoor into the 48-inch belt secondary escapeway, the air was clear. Once the crew entered into the belt entry, Section Foreman Mr. Michael Plumley conducted a headcount and, at this time, the crew realized that Mr. Don Israel Bragg and Mr. Ellery Elvis Hatfield were missing.

Section Foreman Mr. Michael Plumley, Mr. Steve Hensley and Mr. Billy Mayhorn traveled back through the mandoor and into the smoke filled No. 4 entry roadway, trying to locate Mr. Don Israel Bragg and Mr. Ellery Elvis Hatfield. They traveled outby and inby for a short distance, shouting for the missing miners. They soon retreated due to thick heavy smoke and after receiving no response from the missing miners.

The No.2 section crew regrouped and proceeded down the 48-inch belt secondary escapeway toward the mouth of Northeast Mains outby the No. 9 headgate mother drive belt. The No. 2 section crew stated that the air was clear on the 48-inch belt and that some of the crew had removed their mouthpieces but kept their rescuers on. The No. 2 section crew exited the secondary escapeway into North Mains primary intake escapeway through mandoor at spads 2859 and 2866 where they were met by Mr. Bryan Cabell, Evening Shift Belt Examiner, and Mr. Pat Calloway, Foreman

A headcount was taken and Mr. Pat Calloway instructed the crew to stay together. Mr. Bryan Cabell and Mr. Pat Calloway were informed by the No. 2 section crew at this time that two of the crew members were unaccounted for. The No. 2 section crew and longwall crew met at the mouth of the cut through in the North Mains primary intake escapeway.

Section Foreman Mr. Michael Plumley, Mr. Steve Hensley and Mr. Joe Hunt attempted to travel back up the 48-inch belt secondary escapeway to try and locate Mr. Don Israel Bragg and Mr. Ellery Elvis Hatfield but were stopped due to smoke entering the belt escapeway at the area of No. 9 headgate mother drive.

Mr. Fred Horton, Evening Shift Mine Foreman, and Mr. Billy Hall, Evening Shift Maintenance Chief, arrived and instructed Mr. Pat Calloway to stay with the No. 2 section crew and to keep everybody together. Mr. Raymond Grimmitt, Grader Operator, arrived at the top of the hill and was instructed by Mr. Pat Calloway to park the grader in a crosscut and stay with the No. 2 section crew.

Mr. Fred Horton and Mr. Billy Hall traveled through the cut through and up the No. 9 headgate longwall belt to determine if the fire could be accessed from this location, but because of heavy smoke roll back they had to retreat.

Mr. Dustin Dotson, Mr. Terry Shadd, Mr. Bob Massey and other company officials arrived and were informed of the two missing crew members and the severity of the fire.

A decision was made to travel back to the longwall face to retrieve extra rescuers and line curtain. They cut the No. 9 longwall belt inby the cut through and removed the belt structure. Ventilation controls were installed in an attempt to remove air from the fire. Members of the No. 2 section crew and the longwall crew assisted with this work.

After ventilation controls were installed, Mr. Fred Horton, Evening Shift Mine Foreman, directed Mr. Pat Calloway and Mr. Michael Plumley to take all of the hourly employees to the surface. A headcount was taken and they proceeded to the surface on two diesel rubber-tired mantrips, arriving on the surface at approximately 8:00 p.m.

The following persons remained in the mine and attempted unsuccessfully to locate the missing miners: Mr. Dwayne Francisco, Mr. Fred Horton, Mr. Chris Adkins, Mr. Peppy Lester, Mr. Terry Shadd, Mr. Bob Massey, Mr. Edward Ellis, Mr. Dustin Dotson, Mr. Rodney Morrison, Mr. Billy Hall, Mr. David R. Runyon, and Mr. Gary Goff.

Mine rescue teams had arrived at the mine therefore, a decision was made to bring all persons to the surface. At approximately 10:30 p.m., all non-mine rescue personnel had been removed from the mine.

FINDINGS OF FACT

1. The Aracoma Coal Company's Alma No. 1 Mine is ventilated by three main fans, one blowing and two exhaust.
2. On January 19, 2006 one hundred fifty-seven (157) persons reported for work at the Alma No. 1 Mine, one hundred twenty-five (125) employees and thirty-two (32) contractor employees.
3. This mine utilizes one longwall mining section and two continuous miner sections for coal production.
4. Mine transportation recently switched from a battery operated track system to rubber-tired diesel equipment.
5. CSE SR-100 self-rescuer devices are utilized at this mine.
6. The No. 9 headgate longwall section was utilizing the tailgate blockage plan on January 19, 2006 as a result of a roof fall.
7. The No. 3 continuous miner section was idle on the evening shift on January 19, 2006.
8. An accurate map of the mine was not provided on January 19, 2006.
9. The fire hose outlets provided at the mother drive storage unit area for the No. 9 longwall belt could not be utilized because the shut-off valve for the water supply for the fire hose outlets was found in the closed position.
10. The water sprinkler fire suppression system installed on the No. 9 headgate longwall belt conveyor drive area could not activate in the event of a fire or a rise in temperature because the water supply valve was found in the closed position.
11. The air direction on the longwall belt was not traveling in the proper direction in that air was traveling outby toward the discharge instead of inby toward the longwall working sections.
12. The No. 2 section was utilizing air that ventilated the No. 2 section 48-inch belt conveyor as a supplement to face ventilation. No device was provided on the section to alert persons of rising carbon monoxide levels.
13. The No. 9 headgate mother belt storage unit was not properly maintained thus allowing the belt to run out of alignment.
14. Ventilation controls were missing, allowing smoke to enter the primary intake escape-way for the No. 2 section.
15. Nine subpoenas were issued during this investigation.
16. Eighty-three (83) interviews were conducted.

CONCLUSION

Mr. Don Israel Bragg, age 33, and Mr. Ellery Elvis Hatfield, age 46, were fatally injured when they became separated from their crew after encountering thick black smoke in their primary intake escapeway while attempting to evacuate from the No. 2 section during a conveyor belt fire at the No. 9 headgate mother drive. Both expired as a result of asphyxiation due to or as a consequence of an underground mine fire with suffocation and carbon monoxide intoxication.

ENFORCEMENT ACTION

During the course of this extended investigation, several inspections were conducted. A total of one hundred and sixty-eight (168) notices of violations were issued. Seven (7) of the violations were determined to have contributed to the occurrence of this accident. Sixteen (16) individual personal assessments were also issued. Seven (7) recommendations for withdrawal or suspension of certifications were issued.

The Office of Miners' Health, Safety & Training issued a control order under Chapter 22A, Article 2, Section 68. The order was issued at 8:45 p.m. on January 19, 2006 to preserve the accident scene and was terminated at 12:50 p.m. on July 17, 2006.

The following is a list of the contributing violations:

(V-1) Title 36, Series 6, Section 4 4.1(j): Based on testimony and evidence received during an investigation following a fatal mine fire, the approved longwall mining plan was not being complied with on the No. 9 longwall headgate section in that the mother drive beltline ventilating air current that is normally used to supplement the intake air current to the longwall face was traveling in the opposite direction. The ventilating air current that is required to travel toward the longwall face along the beltline was reversed, resulting in the air current traveling toward the mother drive head.

(V-2) Chapter 22A, Article 2, Section 58 (d)(1): Based upon testimony received and evidence obtained during an investigation of a fatal mine fire that occurred on January 19, 2006, it has been determined that no water was available at the fire hose outlets on the mother drive belt for the No. 9 headgate longwall section. The fire hose outlet valve on the two-inch supply waterline at the fire location was opened and no water was available. The main cutoff valve for the two-inch water supply line for the longwall belt was found in the closed position. The cutoff valve is located near the longwall belt discharge roller.

(V-3) Chapter 22A, Article 2, Section 58 (f): Based on testimony and evidence obtained during a fatal mine fire investigation, it was determined that a fire hose with fittings suitable for connection with each belt conveyor waterline system was not provided at or near the No. 9 headgate longwall belt drive and take-up area. The connector on the fire hose provided was too large in diameter for the fire hose outlet and could not be attached to allow water to be used to fight a mine fire. Additionally, the same problem existed on the No. 9 headgate longwall belt on December 23, 2005 according to testimony provided by Brandon Conley, a smoldering fire occurred December 23, 2005 and he could not get the fire hose to connect to the water hose outlet. He stated this condition was reported to management at that time.

(V-4) Chapter 22A, Article 2, Section 60(b): Based on testimony and evidence obtained during a fatal mine fire investigation, a separate and distinct intake air escapeway is not provided from the active North East Mains No. 2 Section to the surface. Required ventilation controls were not provided at the No. 7 belt tailpiece area. This condition allowed heavy black smoke to enter the primary intake escapeway following a belt fire that occurred on January 19, 2006.

(V-5) Chapter 22A, Article 2, Section 37(o): According to testimony and evidence received during a mine fire/fatal investigation, the No. 9 headgate mother drive conveyor belt was not maintained in a safe operating condition. The storage unit drop-off carriage system contained damaged, missing or improperly installed components, which caused the drop-off carriages to improperly unlatch. This condition contributed to the belt running out of alignment causing a fire at the storage unit area.

(V-6) Chapter 22A, Article 2, Section 39(j): Based on evidence obtained and testimony received during a fatal mine fire investigation, it was determined that the water sprinkler system designed to be automatically activated in the event of a fire or rise in temperature failed to activate on the No. 9 headgate longwall belt drive on January 19, 2006. The water supply valve for the fire suppression system was found in the off position.

(V-7) Chapter 22A, Article 2, Section 17: Based upon testimony and evidence obtained through a fatal mine fire investigation, it has been determined that a belt fire occurred at the mother drive area of the No 9 headgate longwall belt on January 19, 2006 at approximately 5:00 p.m. and all persons whose safety was endangered were not promptly notified to remain clear of the area where the dangerous condition existed. The No. 2 section crew was not notified until approximately 5:40 p.m. The crew traveled down their intake escapeway and travel way leading straight to the fire where they encountered heavy black smoke. Two of the crew members became separated from the crew and eventually succumbed while trying to escape.

RECOMMENDATIONS OF

ARACOMA COAL COMPANY, INC.

P.O. BOX 1120

HOLDEN, WV 25625

304-752-6194

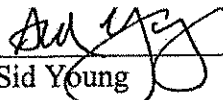
Aracoma Coal Company, Inc. is committed to the safety of its employees and everyone on its property. Notwithstanding this commitment to safety, on January 19, 2006, the Alma Mine, MSHA Id. No. 46-08801 and State Id. U-5006-99, suffered a fatal accident when two members died as a result of a fire at the mine.

Aracoma continues to investigate this matter and while its investigation is not concluded, the Company can, with its preliminary findings, make the following proposals. To prevent a re-occurrence of this accident, Aracoma has undertaken the following remedial measures, some of which are beyond state and federal mine safety requirements:

1. The mine has checked and repaired all stoppings along beltlines in the Alma Mine. Further, all belt examiners and other examiners have been re-instructed to check stoppings during their exams, and to further work with the mine foreman to make any changes necessary to make the 75.1200 map reflect the situation of all ventilation controls.

2. The mine has checked all fire fighting nozzles, lines, and hoses and ensured they are in proper working order.
3. The mine has installed a new custom designed sprinkler system on the belt head and belt storage unit for the longwall mother belt.
4. The mine has conducted a thorough inspection of the belt system to ensure it is in proper working order. Further, belt examiners and electricians have been re-instructed on belt maintenance.
5. The mine has re-instructed all members on the requirements of the Emergency Evacuation and Fire Fighting Plan and taken steps to ensure that the immediate withdrawal of all inby personnel takes place when a fire occurs. Specifically, the contents of the Emergency Evacuation and Fire Fighting Plan have been discussed with members and it has been the subject of weekly safety talks. Further, the mine has conducted emergency evacuation drills for all members, including the walking of escapeways. All new hires walk the escapeways for their work area when they are hired.

These items will be incorporated into the mine's West Virginia Comprehensive Safety Program. All members have been retrained on these provisions.


Sid Young
President, Aracoma Coal Company
July 14, 2006

Comprehensive Mine Safety Program

Modifications as required by WVOMHS&T

The following changes are required in the Comprehensive Mine Safety Program due to a fatal accident on January 19, 2006.

1. Management shall provide training, at a minimum of eight hours, for all persons who are required to conduct mandatory fireboss examinations as required by law. This training shall include all persons conducting the required examinations, as well as others who may be used in that capacity even if on an infrequent basis. The content of this training will be approved by the WVOMHS&T prior to the training being conducted. A representative of the WVOMHS&T will be present during this training.
2. Deluge type water sprays, water sprinklers, dry chemical sprinkler systems or foam generators (designed to be automatically activated in the event of a fire or rise in the temperature) shall be installed at each main and secondary belt drive, take-up and storage unit system installed underground. This mine shall also

comply with all provision of 30 CFR from the Federal Register, pertaining to fire protection along beltlines.

3. The mine's emergency response plan shall include a means to assure that adequate water is available for fire fighting purposes at all times, particularly during times of power outages.
4. On all sprinkler-type fire suppression systems, a water pressure gauge will be installed at or near the end of the water line and in a position that the gauge can be readily seen. The belt examiner shall note and record the pressure reading when making his examination.
5. Mine management will designate a competent individual at the mine to be responsible for reviewing and counter signing the electrical examination books to assure that all required equipment is being properly examined.
6. Mine management will train all mine personnel in the response requirements of the Co monitoring system. Also, all new employees, contractors, vendors, etc., will be trained on this same system prior to entering the mine.
7. The Emergency Evacuation and Fire Fighting Plan as required by 30 CFR 75.1502 from the Federal Register shall be incorporated into the Comprehensive Mine Safety Program.
8. All belt storage units for the longwall belts will be examined by a representative of the manufacturing company for proper installation prior to the belts being placed in operation.
9. A checklist will be developed to determine exactly what items are to be checked to satisfy the monthly examination of fire suppression equipment on belt lines.
10. A functional examination of all belt fire-fighting equipment will be conducted every 6 months. This examination will require opening fire valves, assuring fire hose will couple to fire hose, fire hose and fire outlets are compatible, fire nozzles are compatible with fire hose and visually check fire extinguishers. A written record of this examination will be maintained at the mine.
11. Main water lines used to deliver water for fire fighting purposes shall not be located in the same entry at conveyor belt drives, take-ups and storage units.

APPENDIX

- Mine Information Sheet
- Victim Information Sheets
- Persons Present During Investigation
- Attachments A, B, C, D, E & F

MINE INFORMATION

COMPANY Aracoma Coal Company, Inc.

MINE NAME Aracoma Alma No. 1

WV PERMIT U-5006-99 MSHA PERMIT NO. 46-08801

ADDRESS P. O. Box 1120 Holden, WV 25625

COUNTY Logan PHONE NO. 304-752-6195

DATE PERMIT ISSUED January 25, 2000

WORKING STATUS Active

LOCATION Rt. 17 and Airport Road at Stollings, WV

UNION _____ NON-UNION X

DAILY PRODUCTION 1569 tons ANNUAL PRODUCTION TO DATE 25,112 tons

TOTAL EMPLOYEES 180

NUMBER OF SHIFTS 3

COAL SEAM NAME AND THICKNESS Alma - 42 inches to 68 inches

ACCIDENT INCIDENT RATE 10.44 LOST TIME ACCIDENTS 2

TYPE OF HAULAGE Belt

WVOMHST INSPECTOR Richard Boggess

DATE OF LAST INSPECTION January 19, 2006

NOTIFIED BY Eddie Lester

NOTIFICATION TIME 7:33 p.m. January 19, 2006

CMSP - ANNIVERSARY DATE February 7, 2006

CMSP - CONTACT PERSON Charles Conn

INVESTIGATION

The following persons were present for the initial onsite investigation conducted on January 31, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|----------------|---|
| Drexel Short | Senior Vice President, Group Operations |
| Frank Foster | Corporate Safety Coordinator |
| Keith Hainer | Manager of Maintenance |
| Robert Ellis | Chief of Maintenance (Aracoma Alma No. 1) |
| Bill Stapleton | Mine Engineer |
| Chad Evans | Diesel Tractor Operator |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|------------------|--|
| Bill Corroco | Accident Investigation Program Manager |
| Kenny Murray | Accident Investigator - Leader |
| Anthony Webb | Investigator |
| Dennis A. Beiter | Technical Support |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|-------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Willie Barker | Safety Instructor |

INTERVIEWS

(* Denotes those interviewed)

The following persons were present during interviews conducted on February 8, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|---------------------|---------------------------|
| Randall Crouse * | Roof Bolter Operator |
| Steve Hensley * | Continuous Miner Operator |
| Patrick W. Kinser * | Shuttle Car Operator |
| H. Michael Shull * | Electrician |
| Mark E. Heath | Attorney |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|--------------|--------------------------------|
| Kenny Murray | Accident Investigator – Leader |
|--------------|--------------------------------|

| | |
|-----------------------|----------------------------------|
| Michael Finnie | Investigator |
| Ronald W. Stahlhut | Investigator |
| Charles W. Pogue | Investigator |
| Arlie A. Webb | Investigator |
| Anthony J. Burke | Investigator |
| Dennis A. Beiter | Technical Support |
| William J. Francart | Technical Support |
| Derrick Tjernlund | Technical Support |
| Rodney Brown | Inspector |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Keith A. Bell | Solicitor – U. S. Dept. of Labor |
| Marne Mitskog | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|------------------|---------------------------------|
| C. A. Phillips | Deputy Director |
| Terry Farley | Health and Safety Administrator |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Steve Cox | Investigator |
| Timothy Bradford | Attorney |

The following persons were present during the interviews conducted on February 9, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|---------------------|----------------------------|
| Joseph F. Hunt * | Shuttle Car Operator |
| Thomas D. Vanover * | Scoop Operator |
| Brandon U. Conley * | Beltman |
| Candice Conley | B. Conley's Representative |
| Mark E. Heath | Attorney |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|---------------------|--------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Michael Finnie | Investigator |
| Ronald W. Stahlhut | Investigator |
| Charles W. Pogue | Investigator |
| Arlie A. Webb | Investigator |
| Anthony J. Burke | Investigator |
| Dennis A. Beiter | Technical Support |
| William J. Francart | Technical Support |
| Derrick Tjernlund | Technical Support |
| Jeffrey Waggett | Technical Support |
| Rodney Brown | Inspector |

Daniel M. Barish
Keith A. Bell
Marne Mitskog
Autumn D. Furby-Pritt

Solicitor – U. S. Dept. of Labor
Solicitor – U. S. Dept. of Labor
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
Terry Farley
William Tucker
Eugene White
Steve Cox
Timothy Bradford

Deputy Director
Health and Safety Administrator
Investigator
Investigator
Investigator
Attorney

The following persons were present during the interviews conducted on February 10, 2006.

ARACOMA COAL COMPANY, INC.

Elmer "Blue" Mayhorn *
Billy Mayhorn*
Brian Cabell *
David J. Hardy

Roof Bolter Operator
Continuous Miner Operator
Belt Examiner
Attorney

MINE SAFETY AND HEALTH ADMINISTRATION

Kenny Murray
Anthony J. Burke
Charles W. Pogue
Ron Stahlhut
Arlie A. Webb
Dennis A. Beiter
William Francart
Derrick Tjernlund
Daniel M. Barish
Keith A. Bell
Autumn D. Furby-Pritt

Accident Investigator – Leader
Investigator
Investigator
Investigator
Investigator
Technical Support
Technical Support
Technical Support
Solicitor – U. S. Dept. Labor
Solicitor – U. S. Dept. Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
Terry Farley
William Tucker
Eugene White
Steve Cox
Danny Cook

Deputy Director
Health and Safety Administrator
Investigator
Investigator
Investigator
Investigator

The following persons were present during the interviews conducted on February 16, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|--------------------|-----------------|
| Patrick Calloway * | Section Foreman |
| David J. Hardy | Attorney |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Anthony Burke | Investigator |
| Arlie A. Webb | Investigator |
| Dennis A. Beiter | Technical Support |
| William J. Francart | Technical Support |
| Jeffrey Waggett | Technical Support |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Keith Bell | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Steve Cox | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on February 23, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|-------------------|-----------------------------|
| Gary Richardson * | Longwall Head Gate Operator |
| Kirby Puett * | Day Shift Dispatcher |
| Gary D. Baisden * | Shuttle Car Operator |
| David J. Hardy | Attorney |
| Mark E. Heath | Attorney |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|------------------|--------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Anthony Burke | Investigator |
| Ronald Stahlhut | Investigator |
| Charles Pogue | Investigator |
| Arlie A. Webb | Investigator |
| Michael Finnie | Technical Support |
| Dennis A. Beiter | Technical Support |

William Francart
Derrick Tjernlund
Daniel M. Barish
Autumn D. Furby-Pritt

Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Eugene White
Steve Cox
J. Davitt McAteer
Beth Spence

Deputy Director
Investigator
Investigator
Investigator
Representative – Governor's Office
Representative – Governor's Office

The following persons were present during interviews conducted on February 24, 2006.

ARACOMA COAL COMPANY, INC.

Jonah Rose *
Gary (Mike) Brown *
Mike Plumley *
Michael M. Fisher
Mark Heath

Roof bolter Operator
Dispatcher, Second Shift
Section Foreman, Second Shift
Attorney
Attorney

MINE SAFETY AND HEALTH ADMINISTRATION

Kenny Murray
Arlie A. Webb
Ronald W. Stahlhut
Charles W. Pogue
Anthony Burke
Michael Finnie
William J. Francart
Dennis A. Beiter
Derrick Tjernlund
Jeffrey Waggett
Daniel M. Barish
Autumn D. Furby-Pritt

Accident Investigator – Leader
Investigator
Investigator
Investigator
Investigator
Investigator
Technical Support
Technical Support
Technical Support
Technical Support
Solicitor – U. S. Dept of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Eugene White
Steve Cox
Beth Spence

Deputy Director
Investigator
Investigator
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on February 28, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|-----------------------|-----------------------------|
| Jesse J. Jude II * | Electrician |
| Timothy Dingess * | Electrician |
| James L. B. Shelton * | Dispatcher |
| David J. Hardy | Attorney |
| Jennifer Shelton | J. Shelton's Representative |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Arlie A. Webb | Investigator |
| Anthony Burke | Investigator |
| Michael Finnie | Investigator |
| Ronald W. Stahlhut | Investigator |
| William J. Francart | Technical Support |
| Dennis A. Beiter | Technical Support |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Danny Cook | Investigator |
| Steve Cox | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 2, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|-----------------------|-----------------------------------|
| Darrick Vannatter * | Longwall Move Crew |
| Larry Browning * | Longwall Head Gate Operator |
| Wyatt Robinson, Jr. * | Beltman |
| David J. Hardy | Attorney |
| Rebecca Robinson | W. Robinson, Jr.'s Representative |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|--------------------|--------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Ronald W. Stahlhut | Investigator |
| Michael Finnie | Investigator |

| | |
|-----------------------|----------------------------------|
| Charles Pogue | Investigator |
| Anthony Burke | Investigator |
| Arlie A. Webb | Investigator |
| William J. Francart | Technical Support |
| Dennis A. Beiter | Technical Support |
| Derrick Tjernlund | Technical Support |
| Jeffrey Waggett | Technical Support |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Danny Cook | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 3, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|-------------------|----------------------------|
| Shane Stanley * | Dispatcher |
| Bucky D. Harvey * | Longwall Headgate Operator |
| David J. Hardy | Attorney |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Anthony Burke | Investigator |
| Ronald W. Stahlhut | Investigator |
| Charles Pogue | Investigator |
| Michael Finnie | Investigator |
| Arlie A. Webb | Investigator |
| Derrick Tjernlund | Technical Support |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Danny Cook | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 6, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|----------------|----------|
| Carl White * | Beltman |
| David J. Hardy | Attorney |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|---------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Ronald W. Stahlhut | Investigator |
| Michael Finnie | Investigator |
| Charles Pogue | Investigator |
| Anthony Burke | Investigator |
| Arlie A. Webb | Investigator |
| William J. Francart | Technical Support |
| Dennie A. Beiter | Technical Support |
| Derrick Tjernlund | Technical Support |
| Keith Bell | Solicitor – U. S. Dept of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Steve Cox | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 7, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|-----------------------|----------------------|
| Nicholas D. Baisden * | Construction Crew |
| Joshua W. F. Noe * | Roof bolter Operator |
| Steve A. Marcum * | Electrician |
| David J. Hardy | Attorney |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|---------------------|--------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Ronald W. Stahlhut | Investigator |
| Michael Finnie | Investigator |
| Anthony Burke | Investigator |
| Arlie A. Webb | Investigator |
| William J. Francart | Technical Support |

Dennis A. Beiter
Derrick Tjernlund
Keith Bell
Autumn D. Furby-Pritt

Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Eugene White
John Kinder
Steve Cox
Beth Spence

Deputy Director
Investigator
Investigator
Investigator
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on March 8, 2006.

MSHA MINE EMERGENCY TEAM

Ronald Hixson *
Jan Lyall *

Team Member
Team Member

MINE SAFETY AND HEALTH ADMINISTRATION

Kenny Murray
Anthony Burke
Ronald Stahlhut
Charles Pogue
Michael Finnie
William J. Francart
Dennis A. Beiter
Keith Bell
Autumn D. Furby-Pritt

Accident Investigator – Leader
Investigator
Investigator
Investigator
Investigator
Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Eugene White
Steve Cox
Beth Spence

Deputy Director
Investigator
Investigator
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on March 9, 2006.

ARACOMA COAL COMPANY, INC.

Donald R. Hagy, Jr. *

Construction Crew Foreman

David J. Hardy

Attorney

PYOTT-BOONE ELECTRONICS, INC.

Joey A. Davis *
Doug Kuhn

Computer Technician
Sales/Engineering Director

MINE SAFETY AND HEALTH ADMINISTRATION

Kenny Murray
Michael Finnie
Ronald W. Stahlhut
Charles Pogue
Arlie A. Webb
Anthony Burke
William J. Francart
Dennis A. Beiter
Keith Bell
Autumn D. Furby-Pritt

Accident Investigator – Leader
Investigator
Investigator
Investigator
Investigator
Investigator
Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Danny Cook
Eugene White
Steve Cox
Beth Spence

Deputy Director
Investigator
Investigator
Investigator
Investigator
Representative – Governor's office

The following persons were present for the interviews conducted on March 14, 2006.

ARACOMA COAL COMPANY, INC.

Gary M. Brown *
Brian Cabell *
Rod Morrison *
David J. Hardy

Dispatcher
Belt Examiner
Longwall Superintendent
Attorney

LOGAN COUNTY MINE SERVICES

Roy S. Stepp *

Engineer

MINE SAFETY AND HEALTH ADMINISTRATION

Ron Stahlhut
Michael Finnie

Investigator
Investigator

| | |
|-----------------------|---------------------------------|
| Arlie A. Webb | Investigator |
| Anthony Burke | Investigator |
| Charles W. Pogue | Investigator |
| William J. Francart | Technical Support |
| Dennis A. Beiter | Technical Support |
| Keith Bell | Solicitor – U. S. Dept of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Steve Cox | Investigator |
| Monte Hieb | Chief Engineer |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 15, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|--------------------|--------------------|
| Jesse J. Jude II * | Electrician |
| Patrick Callaway * | Production Foreman |
| John McNeely * | Airway Walker |
| David J. Hardy | Attorney |
| Mark E. Heath | Attorney |

SOUTHERN COALFIELD MINE RESCUE TEAM

| | |
|----------------------|-------------|
| C. Bradley Justice * | Team Member |
|----------------------|-------------|

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Arlie A. Webb | Investigator |
| Ronald W. Stahlhut | Investigator |
| Charles W. Pogue | Investigator |
| Anthony Burke | Investigator |
| Michael Finnie | Investigator |
| William J. Francart | Technical Support |
| Dennis A. Beiter | Technical Support |
| Keith Bell | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Danny Cook | Investigator |
| Steve Cox | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 16, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|-----------------------|--------------------------------|
| Edward R. Ellis * | Assistant Longwall Coordinator |
| Raymond L. Grimmett * | Road Grader Operator |
| Gary L. Richardson * | Headgate Operator |
| Renee Grimmett | R. Grimmett's Representative |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Arlie A. Webb | Investigator |
| Anthony Burke | Investigator |
| Ronald Stahlhut | Investigator |
| Charlie Pogue | Investigator |
| Michael Finnie | Investigator |
| William J. Francart | Technical Support |
| Dennis A. Beiter | Technical Support |
| Derrick Tjernlund | Technical Support |
| Keith Bell | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Steve Cox | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 17, 2006.

PINNACLE MINING COMPANY

| | |
|--------------------|-------------------------|
| Richard Crockett * | Mine Rescue Team Member |
|--------------------|-------------------------|

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Arlie A. Webb | Investigator |
| Anthony Burke | Investigator |
| Charles Pogue | Investigator |
| Ronald Stahlhut | Investigator |
| Michael Finnie | Investigator |
| William J. Francart | Technical Support |
| Dennis A. Beiter | Technical Support |
| Keith Bell | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING MINE EMERGENCY TEAM

| | |
|--------------------|----------------------------|
| Clarence Dishman * | Mine Emergency Team Member |
|--------------------|----------------------------|

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Steve Cox | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 20, 2006.

MINE SAFETY AND HEALTH ADMINISTRATION MINE EMERGENCY TEAM

| | |
|----------------------|----------------------------|
| Franklin D. Thomas * | Mine Emergency Team Member |
|----------------------|----------------------------|

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Charlie Pogue | Investigator |
| Michael Finnie | Investigator |
| Ronald Stahlhut | Investigator |
| William J. Francart | Technical Support |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|-------------------|--------------------|
| Richard Boggess * | District Inspector |
| C. A. Phillips | Deputy Director |

William Tucker
Beth Spence

Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on March 21, 2006.

ARACOMA COAL COMPANY, INC.

Charles E. Conn *
Mark E. Heath

Massey Energy East Ky. Mine Rescue Captain
Attorney

ELK RUN COAL COMPANY

Robert Asbury *
Mark E. Heath

Mine Rescue Team Captain
Attorney

MINE SAFETY AND HEALTH ADMINISTRATION MINE EMERGENCY TEAM

Mack Wright *

Mine Emergency Team Member

MINE SAFETY AND HEALTH ADMINISTRATION

Kenny Murray
Ronald L. Stahlhut
Charles Pogue
Anthony Burke
William J. Francart
Derrick Tjernlund
Dennis A. Beiter
Daniel M. Barish
Autumn D. Furby-Pritt

Accident Investigator –Leader
Investigator
Investigator
Investigator
Technical Support
Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Eugene White
Beth Spence

Deputy Director
Investigator
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on March 22, 2006.

ARACOMA COAL COMPANY, INC.

Brandon Lusk *

Roof Bolter Operator

CONSOLIDATION COAL COMPANY

James Kelly *
C. E. "Spike" Bane

Consol of Kentucky Mine Rescue Captain
Safety Director

MINE SAFETY AND HEALTH ADMINISTRATION

Kenny Murray
Charles Pogue
Ronald Stahlhut
William J. Francart
Dennis A. Beiter
Derrick Tjernlund
Daniel M. Barish
Autumn D. Furby-Pritt

Accident Investigator – Leader
Investigator
Investigator
Technical Support
Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING MINE EMERGENCY TEAM

John Scott *

Mine Emergency Team Member

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Eugene White
Beth Spence
J. Davitt McAteer

Deputy Director
Investigator
Investigator
Representative – Governor's office
Representative – Governor's office

The following persons were present during the interviews conducted on March 23, 2006.

WHITE COUNTY COAL COMPANY

Michael Emery *
Phillip Kettinger

Alliance Coal Mine Rescue Team Captain
M. Emery's Representative

MINE SAFETY AND HEALTH ADMINISTRATION

Richard J. Kline *
Vicki L. Mullins *
Kenny Murray
Ronald W. Stahlhut
Michael Finnie
Jeffrey Waggett
Charles Pogue
William J. Francart
Dennis A. Beiter
Daniel M. Barish

Assistant District Manager
MSHA Specialist
Accident Investigator – Leader
Investigator
Investigator
Investigator
Investigator
Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor

Autumn D. Furby-Pritt

Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Beth Spence

Deputy Director
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on March 24, 2006.

LOGAN COUNTY OFFICE OF EMERGENCY MANAGEMENT

Roger Bryant *

Director

LOGAN COUNTY 911

Marilyn Crosby *

Director

MINE SAFETY AND HEALTH ADMINISTRATION MINE EMERGENCY TEAM

James W. Langley *

Mine Emergency Team Member

MINE SAFETY AND HEALTH ADMINISTRATION

Luther Marrs *
Kenny Murray
Arlie A. Webb
Ronald W. Stahlhut
Michael Finnie
Charles Pogue
William J. Francart
Dennis A. Beiter
Daniel M. Barish
Autumn D. Furby-Pritt

Assistant District Manager
Accident Investigator –Leader
Investigator
Investigator
Investigator
Investigator
Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Steve Cox
Beth Spence

Deputy Director
Investigator
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on March 27, 2006.

ARACOMA COAL COMPANY, INC.

Jerry Workman *
Elbert J. Clay *
Mark E. Heath

Longwall Set up/Tear down
Headgate Operator
Attorney

CONTINENTAL CONVEYOR AND EQUIPMENT

Michael R. Williams *
Philip J. Carroll III

Service Representative
Attorney

MINE SAFETY AND HEALTH ADMINISTRATION

Kenny Murray
Arlie A. Webb
Michael Finnie
Ronald W. Stahlhut
Charles Pogue
Anthony Burke
Dennis A. Beiter
Derrick Tjernlund
Daniel M. Barish
Autumn D. Furby-Pritt

Accident Investigator –Leader
Investigator
Investigator
Investigator
Investigator
Investigator
Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Danny Cook
Beth Spence

Deputy Director
Investigator
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on March 29, 2006.

ARACOMA COAL COMPANY, INC.

Charles W. Acord *
Roger Ooten *
Kevin S. Ferguson *
Mark E. Heath

Move Crew
Beltman
Mechanic/Beltman
Attorney

MINGO LOGAN COAL COMPANY

Eddie Lawson *
Joe Estep

Mine Rescue Captain
Safety Manager

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Anthony Burke | Investigator |
| Arlie A. Webb | Investigator |
| Ronald W. Stahlhut | Investigator |
| Charles Pogue | Investigator |
| Michael Finnie | Investigator |
| Jeffrey Waggett | Investigator |
| Dennis A. Beiter | Technical Support |
| Derrick Tjernlund | Technical Support |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 30, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|--------------------|-----------------|
| Brian R. Caserta * | Shield Operator |
| Brad Maynard * | Utility Man |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|---------------------------|----------------------------------|
| Minness C. Justice, Jr. * | Coal Mine Inspector |
| Kenny Murray | Accident Investigator – Leader |
| Arlie A. Webb | Investigator |
| Anthony Burke | Investigator |
| Charles Pogue | Investigator |
| Dennis A. Beiter | Technical Support |
| Jeffrey Waggett | Technical Support |
| Derrick Tjernlund | Technical Support |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Steve Cox | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on March 31, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|--------------------|----------------|
| Billy Brown, Jr. * | Longwall Setup |
| Mark E. Heath | Attorney |

LAUREL CREEK COMPANY

| | |
|----------------|------------------------------|
| Ronnie Ooten * | Riverton Mine Rescue Captain |
|----------------|------------------------------|

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Bill J. Gillenwater * | Supervisor |
| Timothy L. Justice * | Coal Mine Inspector |
| Kenny Murray | Accident Investigator – Leader |
| Arlie A. Webb | Investigator |
| Charles Pogue | Investigator |
| Dennis A. Beiter | Technical Support |
| Derrick Tjernlund | Technical Support |
| Daniel M. Barish | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| William Tucker | Investigator |
| Beth Spence | Representative – Governor's office |

The following persons were present during the interviews conducted on April 11, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|------------------|-------------------------|
| Gary C. Neil * | Longwall Electrician |
| Chadwick Evans * | Supply Tractor Operator |
| David J. Hardy | Attorney |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|---------------------|----------------------------------|
| Arlie A. Webb | Investigator |
| Anthony Burke | Investigator |
| Ronald Stahlhut | Investigator |
| Charles Pogue | Investigator |
| Michael Finnie | Investigator |
| William J. Francart | Technical Support |
| Derrick Tjernlund | Technical Support |
| Keith Bell | Solicitor – U. S. Dept. of Labor |

Autumn D. Furby-Pritt

Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Eugene White
Beth Spence

Deputy Director
Investigator
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on April 12, 2006.

ARACOMA COAL COMPANY, INC.

Billy J. Maynard *
Kevin R. Evans *
Shawn J. Sturgell *
Mark E. Heath

Continuous Miner Operator
Longwall Move Crew
Roof bolter Operator
Attorney

CONSOLIDATION COAL COMPANY

Dennis C. Perry *
Michael Canada

V. P. Eight Mine Rescue Team Captain
D. Perry's Representative

MINE SAFETY AND HEALTH ADMINISTRATION

Kenny Murray
Charles Pogue
Ronald Stahlhut
Michael Finnie
Anthony Burke
William J. Francart
Derrick Tjernlund
Dennis A. Beiter
Keith Bell
Autumn D. Furby-Pritt

Accident Investigator - Leader
Investigator
Investigator
Investigator
Investigator
Technical Support
Technical Support
Technical Support
Solicitor – U. S. Dept. of Labor
Court Reporter

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

C. A. Phillips
William Tucker
Eugene White
Beth Spence

Deputy Director
Investigator
Investigator
Representative – Governor's office

The following persons were present during the interviews conducted on April 13, 2006.

ARACOMA COAL COMPANY, INC.

| | |
|-------------------|---------------------------|
| Jason T. Adkins * | Continuous Miner Operator |
| David M. Runyon * | Outby Beltman |

MINE SAFETY AND HEALTH ADMINISTRATION

| | |
|-----------------------|----------------------------------|
| Kenny Murray | Accident Investigator – Leader |
| Ronald Stahlhut | Investigator |
| Charles Pogue | Investigator |
| Arlie A. Webb | Investigator |
| William J. Francart | Technical Support |
| Dennis A. Beiter | Technical Support |
| Derrick Tjernlund | Technical Support |
| Keith Bell | Solicitor – U. S. Dept. of Labor |
| Autumn D. Furby-Pritt | Court Reporter |

OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING

| | |
|----------------|------------------------------------|
| C. A. Phillips | Deputy Director |
| William Tucker | Investigator |
| Eugene White | Investigator |
| Beth Spence | Representative – Governor's office |

MINE RESCUE EFFORTS

When mine officials determined that the fire was beyond their ability to control, calls were made for mine rescue assistance. The mine has primary mine rescue coverage by A. T. Massey's Southern West Virginia team and the East Kentucky team. These were the first two teams notified and the first two teams to report to the mine site. Additional teams were requested and they reported to the mine over the next forty-two hours. This report will identify the mine rescue teams and their work in recovering the two victims and in fighting the mine fire.

At approximately 11:37 p.m. on Thursday, January 19, 2006, the first mine rescue teams, Southern West Virginia and East Kentucky, entered the mine. The two teams traveled from the box-cut on the surface into the North Mains area and the mouth of the old 4 Right Panel by diesel mantrip. One team was to remain at the mouth of the 4 Right Panel while the other team explored inby in the 4 Right Panel. There was a belief by many Aracoma management personnel that the two men may have attempted to come outside by way of the 10 Headgate entries. The team had to stop exploring due to heavy smoke and impassable water. Additional information was obtained from the No. 2 section crew by mine management, and mine rescue efforts were then directed toward the fire area. The teams re-assembled at the mouth of the 4 Right Panel and were told to wait there until joined by the Mingo Logan and Riverton Mine Rescue Teams.

Once all four teams were assembled at the mouth of the 4 Right Panel, the four teams were told to advance toward the fire area. Once they had arrived near the fire location, they were instructed to assess the fire's condition. When a determination had been made on the extent and level of the fire, it was decided to proceed with exploration inby in search of the two missing miners. Plans were then made for the Southern West Virginia team to prepare to fight the fire while being backed up by the Riverton team. The East Kentucky team was to prepare to explore the North East Mains inby the fire area to a point near where the section mantrip was abandoned by the No. 2 Section crew on their retreat from the mine; the Mingo Logan team was to serve as their backup. The Southern West Virginia team was preparing to fight the fire but did not have any water to do so. The East Kentucky team attempted to locate the abandoned No. 2 Section mantrip but they were unable to locate it due to the dense smoke and extreme heat in the area.

To aid in the fire-fighting efforts, it was determined that the fresh water pumps located near the mouth of the 4 Right Panel would need to be energized and started. However, the power source for the pumps would actually take power to other areas of the mine because of the power configuration. A decision was made to send Aracoma electricians into the mine and have them separate the power supply at the pumps so no power went farther into the mine. To assist the electricians in this project, the Pinnacle Mine Rescue team was sent underground with them.

Over the course of the next few hours, additional teams were sent underground to assist in the fire fighting and exploration activities. Water was delivered by pressure pumps to the fire area around 10:45 a.m. on January 20, 2006. Water and foam were being applied to the fire by 11:00 a.m. by the Pinnacle team. For approximately the next twenty-eight hours, various teams were involved in fighting the fire at the longwall belt drive and storage unit. In addition, teams were

exploring areas of the mine in an attempt to locate the missing miners. Initial efforts for the exploration occurred in the area where the section crew left the mantrip; the next area checked was the No. 2 Section and associated face areas. From here attempts were made to locate the individuals in the 10 Headgate areas. The area immediately inby the fire was one of the last areas checked due to heavy smoke concentrations and extreme heat.

The Southern Coalfields team found the first victim at 2:40 p.m. on January 21, 2006 approximately four crosscuts inby the fire area. This victim was identified as Donald Bragg. The second victim, Ellery Hatfield, was found forty minutes later at approximately 3:20 p.m. by the Consol of Kentucky Mine Rescue team. Mr. Hatfield was found one break inby spad number 3267 between the No. 8 and No. 9 entries of Northeast Mains. Once both bodies were located, the mine rescue teams were told to stop exploration and return to the fresh air bases.

Arrangements were made to transport the victims to the surface of the mine. All rescue teams were brought to the surface with exception of the Lone Mountain and VP-8 Mine Rescue teams. These two teams were left to monitor the fire area. Efforts to monitor the fire continued until sometime during the early hours of January 24, 2006. The fire was extinguished on January 21, 2006 but rescue teams continued to monitor and cool the fire area to prevent restarting through the early hours of January 24, 2006. Additional activities continued by the mine rescue teams of exploring and recovering all areas of the mine.

Mine rescue teams involved in this rescue and recovery are listed below.

The following mine rescue teams responded to the Aracoma Coal Company, Alma No. 1 mine fire.

MASSEY ENERGY

Massey Energy Southern West Virginia Team
Massey Energy East Kentucky Team

FOUNDATION COAL

Riverton Mine Rescue Team
Emerald Mine Rescue Team
Cumberland Mine Rescue Team

ARCH COAL COMPANY

Mingo Logan Mountaineer Team
Lone Mountain Mine Rescue Team

JEWELL SMOKELESS COAL CORPORATION

Jewell Smokeless No. 1
Jewell Smokeless No. 2

CONSOLIDATION COAL COMPANY

Buchanan Mine Rescue
VP-8 Mine Rescue
Consol of Kentucky

EASTERN ASSOCIATED COAL CORPORATION

Harris Southern Appalachian Team

Federal No. 2 Team

EXCEL MINING COMPANY

Excel Kentucky

Excel Illinois

PINNACLE MINING COMPANY

Pinnacle Blue Team

Pinnacle Gray Team

PARAMOUNT COAL COMPANY

Paramount Mine Rescue

DICKENSON-RUSSELL COAL COMPANY

Dickenson-Russell Mine Rescue

MOUNTAINEER NO. 1 MINE RESCUE ASSOCIATION, INC.

MOUNTAINEER NO. 2 MINE RESCUE ASSOCIATION, INC.

SOUTHERN COALFIELD MINE RESCUE ASSOCIATION

POCAHONTAS MINE RESCUE ASSOCIATION, INC.

MINE SAFETY AND HEALTH ADMINISTRATION MINE EMERGENCY TEAM

**OFFICE OF MINERS' HEALTH, SAFETY AND TRAINING MINE EMERGENCY
TEAM**

CO MONITORING SYSTEM

The carbon monoxide or CO monitoring system used at the Aracoma Alma No. 1 mine is a Pyott-Boone system. Since belt air is used in the face ventilation at this mine the CO system must meet the MSHA requirements for using belt air in the face regions. Upon observation of the system master station on January 25, 2006 the computer clock was found to be improperly set. By comparing several wristwatches at the scene it was agreed upon by WVOMHST and MSHA officials that the computer clock was twenty-three (23) minutes fast. This condition must be considered for all times stated in the CO system event log. All times listed are +23 minutes of the actual times. On March 2, 2006 an effort was made to retrieve additional information and it was found that the computer clock had been updated and the event log erased.

EVENT LOG HIGHLIGHTS 1/19/06

| TIME | SENSOR | SIGNAL | LOCATION |
|----------|--|---------|---------------------------------|
| 17:36:34 | 82 | WARNING | STORAGE UNIT |
| 17:36:55 | 82 | ALARM | STORAGE UNIT |
| 17:38:44 | 81 | WARNING | INBY 7 BELT TAIL |
| 17:39:05 | 81 | ALARM | INBY 7 BELT TAIL |
| 18:02:22 | Belt Boss –STOP-Remote (from master station) | | No. 1 – 2 SECTION BELT |
| 18:02:26 | Belt Boss –STOP- Sequence | | No. 2 – 2 SECTION BELT |
| 18:02:34 | Belt Boss –STOP- Sequence | | No. 3 – 2 SECTION BELT |
| 18:33:50 | 71 | WARNING | 1200 ft. No. 1 – 2 SECTION BELT |
| 18:34:05 | 71 | ALARM | |
| 18:39:19 | 73 | WARNING | 2600 ft. No. 1 – 2 SECTION BELT |
| 18:39:50 | 73 | ALARM | |
| 18:53:19 | 74 | WARNING | 3800 ft. No. 1 – 2 SECTION BELT |
| 18:54:35 | 74 | ALARM | |
| 19:03:21 | 72 | WARNING | 4500 ft. No. 1 – 2 SECTION BELT |
| 19:31:22 | 77 | WARNING | No. 3 – 2 SECTION BELT |
| 19:31:35 | 76 | WARNING | No. 2 – 2 SECTION BELT |
| 19:32:40 | 76 | ALARM | |
| 19:33:23 | 77 | ALARM | |
| 19:36:33 | 79 | WARNING | No. 3 – 2 SECTION BELT |
| 19:38:18 | 79 | ALARM | |

With the time corrected and simplified, events happened as follows:

1. 5:13 p.m. – sensor 82 at storage unit gives warning and alarm
2. 5:16 p.m. – sensor 81 at 7 belt tail gives warning and alarm
3. 5:39 p.m. – 2 section belts were shut down remotely from outside
4. 6:11 p.m. – sensor 71 on no. 1 – 2 section belt gives warning and alarm
5. 6:16 p.m. – sensor 73 on no. 1 – 2 section belt gives warning and alarm
6. 6:30 p.m. – sensor 74 on no. 1 – 2 section belt gives warning and alarm
7. 6:40 p.m. – sensor 72 on no. 1 – 2 section belt gives warning

8. 7:08 p.m. – sensor 76 and 77 at 2 tail and 3 head give warning and alarm

9. 7:13 p.m. – sensor 79 at 2 section tailpiece gives warning and alarm

Warning at (5 ppm) CO

Alarm at (10 ppm) CO

Warning and Alarms are given at the surface location.

The use of belt air in the face regions requires a CO sensor to be located at or near the working section tailpiece. An audible and visual alarm of sufficient magnitude to be seen and heard by miners working at the location is also required on the section. This alarm should be activated when any sensor reaches the alarm level (10 ppm), or when any two consecutive sensors reach the warning level (5 ppm).

The No. 2 working section was not provided with the audible/visual alarm.

The 9 Headgate longwall section was provided with an 805C audible/visual alarm and a CO sensor. According to the event log this alarm did not function at the January 19 fire. The sensor and alarm was removed from the mine and tests were conducted by MSHA at the Approval and Certification Center in Triadelphia, WV. It was determined that the battery in the 805C alarm was not connected. Results showed that with the battery disconnected the alarm would give an audible/visual signal but at a much reduced rate. A light meter was used to check the brightness of one of the LEDs used to provide the visual alarm. At the 24-volt level with the battery disconnected and the audible and visual test buttons engaged, 1.12 LUX was measured. At the 24-volt level with the battery connected and the audible and visual test buttons engaged, 69.51 LUX was measured. All LEDs on the alarm appeared to have the same level of intensity.

As noted earlier the CO system did give a warning and alarm for the sensors listed above. However, several problems were found with the system and the requirements to use the system as used at this mine.

1. Miners at this mine were inadequately trained as to the basic operating principle of the AMS or Atmospheric Monitoring System.
2. AMS operators (dispatchers) were inadequately trained as to the proper operation of the AMS.
3. The written record of alerts and alarms does not give all information required. Numerous alarms were not recorded in the log event book
4. Calibrations of CO sensors were inadequate in that the event log does not reflect the proper amount of CO used to calibrate the sensors.
5. Working sections ventilated from a belt air course did not have CO monitors in the primary escapeway.
6. The No. 2 section was not provided with an audible/visual alarm on the CO monitoring system.
7. The 9 Headgate longwall section audible/visual alarm on the CO monitoring system did not activate.
8. The battery was disconnected in the 9 Headgate longwall section audible/visual CO alarm.
9. Miners were not removed from affected areas of the mine during CO alarm conditions that occurred prior to January 19, 2006.

10. The Approved Roof Control Plan for this mine required that a CO sensor be located at the mouth of the panel in each intake entry if the longwall tailgate becomes impassible. The longwall was impassible at this time and no CO sensor was provided in this position.

Currently West Virginia Code does not include provisions that require the CO monitoring system and thus the only violation issued was pertaining to item No. 10 as required in the Approved Roof Control Plan.

LONGWALL BELT AND STORAGE UNIT

The 9 Headgate longwall mother belt is a 60-inch Continental Conveyor system with a Continental Conveyor belt storage unit. Due to adverse roof conditions and a roof fall that covered a large portion of the storage unit, a thorough inspection of the storage unit was not possible. A pinch roller unit is attached to the outby end of the storage unit to assist in removing belt from the storage unit. The 150-horsepower vector motor is connected to a winch at the outby end of the storage unit.

The storage unit is approximately 150-175 feet in length and has a guide on the top rails for the main carriage and drop-off carriages to ride. All carriages are provided with V-groove wheels to ride on this guide. Carriage keeper brackets are bolted to the carriages and extend to the bottom of the rail to prevent the carriages from lifting off the rail. Two of the four carriage keeper brackets for the main carriage are missing. The main carriage is connected to the winch by a 1½ inch wire rope. With the storage unit empty and fully collapsed, the outby drop-off carriage is connected to the main carriage by a latching system and each drop-off carriage is connected to the adjoining drop-off carriage by the same type of latching mechanism. These latches differ in height and must be in the proper order and have the proper trip lever posts in place to unlatch the drop-off carriages in the proper location. A preliminary inspection of the storage unit before the roof collapse revealed that five trip lever posts are missing and one is bent and broken.

The winch maintains a constant tension on the wire rope, the main carriage and the drop-off carriages. As the longwall advances, belt is taken into the unit and the carriages move on the guide rails until the belt is tight or the storage unit is full. At approximately 25-foot intervals, trip lever posts are placed on each side of the storage unit. These posts must correspond to the height of the trip levers on the latching mechanism for the intended drop-off carriage. As the trip levers on the drop-off carriage come in contact with the trip lever posts, the trip levers are raised and unlatched from the adjoining carriage. This should take place at approximately 25-foot intervals until the unit is full and all drop-off carriages are dropped off in their proper location. These drop-off carriages have rollers, which when properly spaced, are intended to keep the belt being stored in the storage unit in alignment and separated.

The 9 headgate storage unit was installed on a 9.32 percent grade that sloped downward toward the face. Upon installation the inby end of the storage unit was raised and metal legs installed to try to compensate for the grade. This sloping condition caused a problem with drifting on the drop-off carriages from their intended location. Continental Conveyor provided a bolt to act as a braking system for the drop-off carriages, but according to testimony, drifting remained a problem with some carriages. Also, according to testimony, the drop-off carriages would have to be chained in place to prevent drifting.

Testimony revealed that the drop-off carriage system was not in working order and that the carriages routinely had to be manually set in the proper location and many times chained in place. Also, according to testimony, the drop-off carriages would unlatch on one side and not on the other side causing the carriage to become cocked in the storage unit and forcing the belt to

run out of alignment. According to testimony, at the time of the fire at the storage unit, a drop-off carriage became misaligned when it was unlatched on one side and remained latched on the other side.

As mentioned earlier, during a preliminary inspection of the storage unit before the roof collapse, five trip lever posts were observed missing and one broken and bent. According to testimony, at least three of these trip lever posts were destroyed when the unit was first placed in service in October 2005 and these post were never replaced.

Testimony and evidence indicate that the belt had run out of alignment prior to the January 19 fire. Deep grooves cut into the frame of the drive and storage unit, frayed belt edges, a large pile of belt trimming, bottom belt hangers that had been cut into by belt rubbing, all point to prior alignment problems. Also, testimony revealed and the CO event log confirmed a similar event occurred on December 23, 2005 at the 9 Headgate mother drive location.

WATER SYSTEM

The water system servicing the Aracoma Alma No. 1 mine is supplied from a holding tank located above the Melville box cut portals by a 12-inch steel line from the tank to the portal.

An 8-inch supply line extends underground to the No. 4 seventy-two inch conveyor that follows the belt conveyor for a distance of 4800 feet to the Rum Creek portal. The 8-inch supply line extends along the no. 5 seventy-two inch conveyor belt for a distance of 4800 feet; at that point the supply line branches off to the No. 3 section into a 4-inch line that extends onto the 48-inch No. 1, No.2, and No. 3 conveyor belts for a total length of 5340 feet. The elevation where the supply line enters the mouth of the No. 3 section is a drop of 12 feet outby to the box cut portal. The 8-inch water supply line continues on to the No. 5 seventy-two inch belt conveyor for a distance of 4800 feet. At a location at the mouth of the No. 5 tailgate two 60 horsepower pumps are in line to boost the water pressure inby due to the extreme elevations in the mine terrain.

At this pump location the water supply is directed into a 4-inch line and an 8-inch line that continues inby to the No. 6 seventy-two inch belt conveyor that is approximately 2000 feet in length. The water supply is also branched into a 6-inch line at the No. 1 four-way that supplies the longwall section.

The 8-inch supply line continues along the No. 7 seventy-two inch belt conveyor that extends a distance of 969 feet and is maintained with an 8-inch water supply line up to the point where the tailpiece is located inby spad no. 3249. The No. 7 tailpiece is a 271.24 foot elevation increase from the box cut portal.

The water supply for the fire hose outlets that extends along the No. 9 mother drive belt conveyor is maintained with a 2-inch water supply line that is branched off from the No. 7 belt conveyor 8-inch supply line at the No. 9 mother drive discharge. The 2-inch water supply line that extends inby to the longwall monorail system provides water only for the fire hose outlets along the longwall conveyor and is capped off with a shut-off valve inby the monorail system.

Each conveyor belt drive at this mine is provided with a water sprinkler type fire suppression system that is designed to activate in the event of a fire or rise in temperature.

The water supply lines that extend from the surface along each belt conveyor and to each working section are provided with 1½-inch standard thread fire hose outlets.

Attachment E

ELECTRICAL

The electrical equipment used at the 9 Headgate mother belt area included:

- One AEEI 12,470 volt dual line splitter
- One AEEI 12,470 to 480 volt power center
- One Continental Conveyor belt starter with two 750 horsepower DC motors
- One Continental Conveyor single 150 horsepower constant
- Tension winch controller with a 150 horsepower vector motor and a 1½ horsepower vector blower motor (cooling motor)
- One hydraulic power pack used to operate the pinch roller

The substation at the Melville portal is provided with two high voltage breakers. One breaker supplies the continuous miner sections and the other supplies the 9 Headgate longwall section and 10 Headgate longwall setup. 12,470 volts is supplied to the dual splitter and the power center is supplied by the feed-through connection at the input end of the splitter.

Circuit No. 1 of the splitter supplies the 9 Headgate longwall section and circuit No. 2 supplies the 10 Headgate longwall setup. The power center supplies 480 volts to the belt controller and the constant tension winch controller. Two 500 MCM cables are provided for each of the 750 horsepower belt drive motors as per the electrical print requirements. The vector controller provides power to the 150 horsepower vector motor and the 1½ horsepower vector blower.

The splitter, power center, belt starter, and winch controller were not burned but did receive extensive heat and smoke damage. Little could be done to test the circuitry of these controls but a visual examination was conducted. The ground monitor for the 1½ horsepower vector blower was bridged out with a wire across the relay contacts. Also, the ground monitor for the No. 2 belt drive motor had a short wire installed on one side of the relay contacts that appeared to have at one time been connected to the other side of the relay contacts but was not connected at the time of inspection.

A Pyott-Boone Old Faithful 235 deluge control box was mounted to the side of the belt starter and provided the control and the alarm for the sprinkler system installed at the belt drive.

Attachment F

The accident investigation teams along with mine management personnel conducted several onsite investigations between February 1 and February 8, 2006.

OMHS&T ACCIDENT INVESTIGATION TEAM

| | |
|------------------|--------------------------------------|
| C. A. Phillips | Deputy Director |
| Terry Farley | Health and Safety Administrator |
| Monte Hieb | Chief Engineer |
| Dennie Ballard | Assistant Inspector-at-Large, Reg. 3 |
| William Tucker | Assistant Inspector-at-Large, Reg. 4 |
| Richard Boggess | District Inspector |
| Eugene White | District Inspector |
| John Kinder | District Inspector |
| Danny Cook | Electrical Inspector |
| Steve Cox | Safety Instructor |
| Willie Barker | Safety Instructor |
| Timothy Bradford | Attorney |

MSHA ACCIDENT INVESTIGATION TEAM

| | |
|---------------------|--|
| Kenneth Murray | District 6 Manager |
| Arlie A. Webb | Staff Assistant, District 6 |
| Anthony Burke | Coal Mine Inspector, District 6 |
| Charles Pogue | Roof Control Specialist, District 2 |
| Ronald Stahlhut | Electrical Supervisor, District 8 |
| Michael Finnie | Supervisor, Special Investigations, District 10 |
| Dennis A. Beiter | Supervisory Mining Engineer, Technical Support |
| William J. Francart | Mining Engineer, Ventilation Div., Tech. Support |
| Derrick Tjernlund | Senior Fire Protection Engineer, Technical Support |
| Jeffrey Waggot | Technical Support |
| Keith Bell | Senior Trial Attorney, U. S. Dept. of Labor |
| Daniel M. Barish | Senior Trial Attorney, U. S. Dept. of Labor |