## Virginia Department of Mines, Minerals & Energy Division of Mines

## Accident Investigation Report Underground Coal Mine

## Powered Haulage Fatal Accident September 26, 2004

## Consolidation Coal Company Buchanan Mine No. 1 Mine Index No. 11912AA Buchanan County, Virginia

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Fatal Accident Scene Consolidation Coal Company Buchanan Mine No. 1 Mine Index No. 11912AA September 26, 2004

.9-27-04

Deformed replacement belt scraper with no chain attached

Victim entangled in replacement belt scraper metal support bracket

Old bottom belt scraper removed from 3 East Mains No. 1 belt conveyor tailpiece

Fatal Accident Scene Consolidation Coal Company Buchanan Mine No. 1 Mine Index No. 11912AA September 26, 2004





#### POWERED HAULAGE FATALITY INVESTIGATION REPORT CONSOLIDATION COAL COMPANY BUCHANAN MINE NO. 1 MINE INDEX NO. 11912AA

On September 26, 2004, at approximately 7:00 p.m., an underground powered haulage accident occurred at the Consolidation Coal Company, Buchanan Mine No. 1, Mine Index No. 11912AA. Mr. Hassel Gene Payne, utilityman, received fatal injuries when he became entrapped between the top and bottom belts inside the 3 East Mains No. 1 belt conveyor tailpiece. Mr. Payne and two coworkers were attempting to install a replacement bottom belt scraper at the 3 East Mains No. 1 belt conveyor tailpiece while the belt conveyor was operating. Mr. Payne, age 46, had 12 years total mining experience and five months employment with Consolidation Coal Company, Buchanan Mine No. 1. Mr. Payne had not worked in the mining industry since 1989, prior to employment at this mine. On September 26, 2004, at approximately 7:42 p.m., the Department of Mines, Minerals and Energy's Division of Mines was notified of the accident, and a joint investigation with the Federal Mine Safety and Health Administration was initiated the same day. This mine is scheduled to receive two regular inspections every six months. A regular inspection was ongoing at the time of the accident.

#### COMMENTARY

Consolidation Coal Company, Buchanan Mine No. 1, has two surface portal shafts located along State Route 632 and State Route 680, near Oakwood, Virginia, in Buchanan County. The underground shaft mine utilizes continuous mining and longwall mining methods, producing approximately 12,000 tons of clean coal daily from the Pocahontas No. 3 coal seam. The mine utilizes various coal haulage systems consisting of 27 underground belt conveyor systems, two underground coal bunker storage facilities and a production skip hoist. Diesel powered track haulage systems are used to transport personnel and materials underground. Mine personnel work rotating schedules and are utilized to operate three coal production shifts per day, seven days per week. This mine employs 418 personnel.

Before entering the mine on September 26, 2004, Mr. Payne received the second shift belt maintenance work assignments from Mr. Donald Hager, second shift fill-in belt mine foreman. The belt maintenance assignments included replacing a number of bottom belt scrapers on main line belts at various underground locations. Mr. Everett Cole and Mr. Don Graham, both classified as utilitymen, were instructed to assist Mr. Payne with the belt maintenance work. At approximately 3:30 p.m., Mr. Payne entered the mine with the second shift production crews to obtain a diesel mantrip for transportation. At approximately 3:40 p.m., Mr. Cole, Mr. Graham and Mr. Hager entered the mine on the second mantrip cage. After traveling to the shaft bottom, Mr. Hager provided work instructions to other mining personnel while the belt crew, consisting of Mr. Payne, Mr. Cole and Mr. Graham, departed to gather belt tools and supplies. The belt supply tool boxes were located on the 4 North Mains at crosscut No. 89.

After obtaining the belt tools, the belt crew traveled first to the 4 North Mains No. 4 belt conveyor tailpiece to install a bottom belt scraper. Upon their arrival at the 4 North Mains No. 4 belt conveyor tailpiece, the belt crew deenergized this belt using the remote belt control switch

and proceeded to install a bottom belt scraper, that had previously been removed. While attempting to install the bottom belt scraper at this location, the belt crew determined that the belt scraper attachment rod was not the proper size. The bottom belt scraper was removed from between the top and bottom belts and the 4 North Mains No. 4 belt conveyor was restarted. While being unable to complete installation of this scraper, the belt crew departed the 4 North Mains No. 4 belt tailpiece and searched for belt scraper parts at a number of locations before traveling toward the 3 East Mains No. 2 belt conveyor tailpiece to change the bottom belt scraper.

After arriving at the entrance of the 3 East Mains trackway, the belt crew met Mr. Donald Hylton, second shift mine foreman, who was traveling in a diesel mantrip from the shaft bottom enroute to the 7 Left longwall development section. After switching out on the trackway, Mr. Payne informed Mr. Hylton that they were searching for belt scraper parts to make a belt scraper. Mr. Hylton instructed Mr. Payne to contact Mr. Hager if they did not find the scraper parts and that Mr. Hager was authorized to order the scraper parts. Mr. Hylton also instructed Mr. Payne to notify the coal bunker operators and longwall section personnel prior to turning the belts off to replace belt scrapers. Mr. Hylton departed and traveled to the 7 Left section. Mr. Payne and the belt crew proceeded to travel toward the 3 East Mains No. 2 belt conveyor tailpiece.

While enroute, the belt crew stopped at the 6 Right longwall belt conveyor drive and Mr. Payne spoke with Mr. Glen Wright, second shift longwall utilityman. Before departing, Mr. Payne informed Mr. Wright that they were enroute to work on bottom belt scrapers at various locations in the mine. The belt crew continued traveling toward the 3 East Mains No. 2 belt conveyor tailpiece.

Upon their arrival at the 3 East No. 2 belt conveyor tailpiece, the belt crew deenergized this belt using the remote belt control switch and the bottom belt scraper was removed and reversed to provide a new scraping surface for the 3 East No. 2 belt conveyor tailpiece. The 3 East Mains No. 2 belt conveyor was restarted and the belt crew departed and traveled toward the 3 East Mains No. 3 belt conveyor tailpiece.

Upon their arrival at the 3 East Mains No. 3 belt conveyor tailpiece, the belt crew determined that the location and position of the belt scraper would not allow adequate access to replace this scraper. The belt scraper was located approximately four inches off the mine floor restricting clearance. Other structures were present in the area that prevented adequate access to remove the scraper. The belt crew decided to travel on to the next work assignment located at the 3 East Mains No. 1 belt conveyor tailpiece.

After departing the 3 East Mains No. 3 belt conveyor tailpiece, the belt crew obtained a replacement bottom belt scraper for the 3 East Mains No. 1 belt tailpiece that was delivered by a motor supply crew. While enroute, the belt crew stopped again at the 6 Right longwall belt conveyor drive and Mr. Payne asked Mr. Wright how much coal was in the coal storage bunker. Mr. Wright informed Mr. Payne that it would be a while before the bunker was full. When the bunker was full, the 3 East Mains and 4 North Mains belts would stop operating while allowing ample time for performing belt maintenance work. Mr. Payne informed Mr. Wright that he had to leave because he had other work that he needed to complete.

After arriving at the 3 East Mains No. 1 belt conveyor tailpiece, Mr. Payne, Mr. Cole and Mr. Graham discussed the work procedures that they would follow while replacing the bottom belt scraper with the belt operating. Mr. Payne then provided work instructions to Mr. Cole and Mr. Graham on how they would change the bottom belt scraper with the belt operating. Mr. Cole and Mr. Graham recommended to Mr. Payne that they should deenergize the belt to replace the scraper. Mr. Payne replied that he thought it would be all right and that they could replace the scraper with the belt operating.

Mr. Payne and Mr. Cole were positioned on the trackside of the 3 East Mains No. 1 belt conveyor tailpiece while Mr. Graham traveled to the off trackside of the tailpiece and removed the scraper safety support chain from the hanger device. Mr. Graham handed the safety chain to Mr. Payne across the top of the belt. The safety support chain, equipped with a chain hook, consisted of a section of belt chain, approximately five feet in length. Mr. Cole removed the attachment rod from the scraper mounting assembly and Mr. Payne pulled the old scraper out on the trackside of the belt. The old, detached belt scraper was positioned beside the belt structure rail on the trackside of the 3 East Mains No. 1 belt conveyor.

Mr. Payne took the scraper safety support chain, provided by Mr. Graham, and fastened it to another section of belt chain to make a chain and hook assembly, approximately 10 feet in length, that would be long enough to reach across between the top and bottom belts. Mr. Payne attached the chain and hook assembly to one end of the replacement bottom belt scraper while it was located on the trackside of the tailpiece. Mr. Payne intended to throw the section of 10 foot chain and hook assembly between the top and bottom belts to Mr. Graham who was located on the off trackside of the tailpiece. Mr. Graham's task was to catch the chain and hook assembly and pull the replacement scraper between the top and bottom belts to the off trackside of the tailpiece for installation. Mr. Cole's task was to insert the scraper attachment rod to secure the scraper to the tailpiece structure after the scraper was pulled into the proper location.

Mr. Payne was positioned on his knees, with the replacement scraper located on the mine floor inby him, as he attempted to throw the chain and hook assembly between the moving top and bottom belts to Mr. Graham, who was located on the off trackside of the belt. Mr. Payne's first attempt to throw the chain between the belts to Mr. Graham was unsuccessful. After retrieving the chain and hook assembly, Mr. Payne attempted to throw the chain between the belts a second time. At this time, Mr. Cole was turning back toward the track to pick up the attachment rod to fasten the scraper to the tailpiece when he heard <u>a loud crashing noise</u>. Mr. Cole immediately turned back toward the tailpiece to see what had happened but he could not see Mr. Payne or the replacement belt scraper. Uncertain as to what had happened, Mr. Cole ran to a remote belt control switch, located approximately 15 feet outby the tailpiece, and turned this switch to the off position but this switch was used to control the 3 East Mains No. 2 belt conveyor. The 3 East Mains No. 1 belt conveyor stopped a few seconds later due to activation of the belt fault electrical circuit that controls the belt slippage and sequence switch functions.

As Mr. Cole was traveling back to the tailpiece, he observed Mr. Payne entangled between the top and bottom belts inside the tailpiece structure. By this time, Mr. Graham had traveled from the off trackside of the belt to the trackside of the tailpiece to join Mr. Cole. Upon observing Mr. Payne entrapped inside the tailpiece structure, Mr. Cole and Mr. Graham ran approximately 100 feet inby to the 3 East Mains No. 2 belt conveyor drive assembly where they met Mr. McConley Byrd, utilityman, who was performing clean-up work along the 3 East Mains No. 2 belt conveyor. The three men searched for a mine telephone to call for assistance but were unsuccessful.

While Mr. Cole, Mr. Graham, and Mr. Byrd were searching for a mine telephone, Mr. Daniel Damewood and Mr. Jerry Molino, second shift mine examiners, arrived on a diesel mantrip and were informed of the accident. Mr. Damewood and Mr. Molino traveled immediately to the 6 Right longwall belt conveyor drive to report the accident and to call for help. Mr. Damewood initially notified mine personnel to deenergize the underground belt conveyor systems and then called for assistance, first aid materials and emergency transportation. At this time, Mr. Damewood informed the 6 Right longwall crew and other underground mine foremen about the accident and instructed the longwall crew to call surface personnel requesting an ambulance.

At this time, Mr. Hager and Mr. Cleve Curry, second shift maintenance foreman, were located on the 4 North Mains, near the 5 Left section, when they were notified of the accident. They traveled immediately toward the scene of the accident, using the diesel mantrip being operated by Mr. Curry. When near the shaft bottom, Mr. Hager and Mr. Curry met Mr. Nelson Horne, second shift beltman. Mr. Horne provided more accident details to Mr. Hager and Mr. Curry and told them that he was enroute to lock-out and tag the 3 East Mains No. 1 belt conveyor electrical power disconnecting device. Mr. Curry informed Mr. Horne that he would lock-out the belt and Mr. Hager got in the mantrip with Mr. Horne and they proceeded to the accident scene. Mr. Curry traveled to the 3 East Mains No. 1 belt conveyor control transformer and locked out the electrical power disconnecting device to deenergize the 3 East Mains No. 1 belt conveyor.

During this time, Mr. Hylton had departed the 7 Left development section enroute to the 7 Right development section. After arriving at a location near the new coal storage bunker, Mr. Hylton was informed of the accident by Mr. Damewood. Mr. Hylton immediately traveled to the bunker accessing the public telephone system to notify management personnel of the accident. Mr. Hylton also instructed surface security personnel to request an ambulance.

As Mr. Hager and Mr. Horne were approaching the 3 East Mains No. 1 belt conveyor tailpiece, Mr. Hager observed several mine personnel congregated in the crosscut at the 2 Right track switch, located two crosscuts outby the 3 East Mains No. 1 belt tailpiece. There were no mine personnel present at the 3 East Mains No. 1 belt conveyor tailpiece when Mr. Hager and Mr. Horne arrived. As Mr. Hager examined the tailpiece area, he observed Mr. Payne entangled in the deformed belt scraper inside the tailpiece structure. Mr. Hager instructed Mr. Horne to cut the 3 East Mains No. 1 belt conveyor to provide access and extrication of Mr. Payne. Mr. Hager removed a section of tailpiece side guard located on the trackside of the tailpiece to gain access to Mr. Payne. Mr. Hager realized that first aid equipment would be needed and instructed Mr. Horne to travel to the shaft bottom to get a stretcher.

At this time, Mr. Craig Dickerson, second shift longwall section foreman, Mr. Sakshi Ganesh, second shift longwall maintenance foreman, and Mr. Dennis Ward, longwall systems operator, arrived at the scene with first aid equipment. Mr. Hager directed the extrication of Mr. Payne from entanglement in the belt tailpiece structure and the replacement belt scraper. Mr. Payne was transported to the surface where the Dismal River Volunteer Rescue Squad transported him to the Buchanan General Hospital. Dr. Dala Akoury, emergency room physician, pronounced Mr. Payne dead at 9:51 p.m.

#### STATEMENTS FROM MINE PERSONNEL AND OTHER FACTORS

Statements from mine personnel interviews and other factors determined during the investigation revealed the following:

- 1. Statements by mine personnel indicated the underground powered haulage accident occurred at approximately 7:00 p.m.
- 2. Mr. Cole and Mr. Graham stated that they did not actually witness the accident but were located in the immediate vicinity when the accident occurred.
- 3. Mr. Cole and Mr. Graham stated that they were performing belt maintenance work with Mr. Payne when the accident occurred. Mr. Cole and Mr. Graham stated that they considered Mr. Payne as the crew leader and that Mr. Payne often supervised belt maintenance work when the belt foreman was absent. Mr. Cole stated that he had been employed at the mine for approximately one month and that he had routinely worked

with Mr. Payne while performing belt maintenance work. Mr. Graham stated that he had been employed at the mine for approximately five months and that he had worked with Mr. Payne on numerous occasions while performing belt maintenance work.

- 4. Mine personnel stated that the evening shift began at 3:30 p.m.
- 5. Mr. Cole and Mr. Graham stated that they accompanied Mr. Payne and traveled to the 4 North Mains No. 4 belt conveyor tailpiece to install a bottom belt scraper but were unable to complete the task because the scraper attachment rod was not the proper size. Mr. Graham stated that the attachment rod was approximately four inches too short. Mr. Cole stated that they searched for belt scraper parts at a number of locations after departing the 4 North Mains No. 4 belt tailpiece.
- 6. Mr. Hylton stated that he entered the mine at approximately 5:30 p.m. and departed the shaft bottom enroute to the 7 Left longwall development section. He stated that he met Mr. Payne and the belt crew at the entrance of the 3 East Mains trackway. He stated that after they switched out on the trackway, Mr. Payne informed him that they were searching for belt scraper parts to make a belt scraper. He stated that he instructed Mr. Payne to contact Mr. Hager if they did not find the scraper parts and that Mr. Hager was authorized to order the scraper parts. Mr. Hylton stated that he instructed Mr. Payne to notify the coal bunker operators and longwall section personnel prior to turning the belts off to replace belt scrapers. Mr. Hylton stated that he departed and traveled to the 7 Left longwall development section.
- 7. Mr. Cole stated that after departing the 4 North Mains No. 4 belt conveyor tailpiece, they searched for belt scraper parts at a number of locations. Mr. Cole stated that they met Mr. Hylton at the entrance of the 3 East mains trackway and that Mr. Hylton and Mr. Payne had a brief conversation. Mr. Cole stated that although he did not hear all of the conversation, he thought he heard Mr. Hylton tell Mr. Payne something about turning the belts off.
- 8. Mr. Cole and Mr.. Graham stated that they traveled to the 3 East Mains No. 2 belt conveyor tailpiece where the bottom belt scraper was removed, reversed and reinstalled on the 3 East Mains No. 2 belt conveyor tailpiece and the belt was restarted. They stated that they departed and traveled to the 3 East Mains No. 3 belt conveyor tailpiece to change out the bottom belt scraper but were unable to complete this task due to not having sufficient work space and adequate access to the scraper. Mr. Graham stated that this belt scraper was located approximately four inches off the mine floor restricting access to the scraper and other structures were present that limited access to the scraper. Mr. Graham stated that they access to the scraper and other structures were present that limited access to the scraper. Mr. Graham stated that they decided to travel on to the next work assignment at the 3 East Mains No. 1 belt conveyor tailpiece.
- 9. Mr. Cole and Mr. Graham stated that the remote belt control switches were used to deenergize the 4 North Mains No. 4 and the 3 East Mains No. 2 belts prior to performing maintenance work on the bottom belt scrapers.
- 10. Mr. Cole and Mr. Graham stated that upon their arrival at the 3 East Mains No. 1 belt tailpiece, they and Mr. Payne discussed the work procedures that they would follow for replacing the bottom belt scraper with the belt operating. They stated that Mr. Payne provided work instructions on how they would replace the bottom belt scraper with the belt operating. Mr. Cole and Mr. Graham stated that they recommended to Mr. Payne that they should deenergize the belt, prior to attempting to replace the scraper. They stated that Mr. Payne replied that it would be all right and that they could replace the scraper with the belt operating.
- 11. Mr. Cole and Mr. Graham stated that Mr. Payne intended to throw a section of chain and hook assembly, that was attached to the replacement scraper, between the top and

bottom belts to Mr. Graham who was located on the off trackside of the tailpiece. Mr. Graham stated that he intended to catch the chain and pull the replacement scraper between the top and bottom belts to the offside of the tailpiece for installation. Mr. Cole stated that his task was to insert the scraper attachment rod to secure the scraper to the tailpiece structure after the scraper was pulled into position.

- 12. Mr. Cole stated that he was positioned with Mr. Payne on the trackside of the 3 East Mains No. 1 belt conveyor tailpiece, and Mr. Graham stated that he was positioned on the off trackside of the belt tailpiece. Mr. Graham stated that he unfastened the scraper safety support chain from the hanger device located on the off trackside of the tailpiece and handed the section of chain to Mr. Payne across the top of the belt.
- 13. Mr. Graham stated that he unfastened the scraper safety support chain on the off trackside of the tailpiece, and Mr. Cole stated that he removed the scraper attachment rod from the old, existing scraper. Mr. Cole stated that Mr. Payne removed the old, detached belt scraper from the trackside of the tailpiece.
- 14. Mr. Cole and Mr. Graham stated that Mr. Payne connected two sections of belt chain and applied tape to secure the connection. Mr. Graham stated that the two sections of chain fastened together made a chain and hook assembly, approximately 10 feet in length, that made it long enough to reach across, and between the top and bottom belts, as the belt was 54 inches in width. Mr. Cole stated that the chain and hook assembly was attached to one end of the replacement bottom belt scraper while the scraper was located on the trackside of the tailpiece.
- 15. Mr. Cole and Mr. Graham stated that the replacement bottom belt scraper was positioned on the trackside of the tailpiece. They stated that Mr. Payne was positioned on his knees, crouched down, with the replacement scraper located on the inby side of him, when he attempted to throw the 10 foot section of the chain and hook assembly between the top and bottom belts.
- 16. Mr. Graham stated that the first attempt by Mr. Payne to throw the chain between the belts was unsuccessful and that on the second attempt, Mr. Payne was pulled in between the moving belts. Mr. Graham stated that he saw the end of the chain, on the top of the bottom belt on the second throw, but he was unable to grasp the chain. Mr. Graham stated that he thought the long chain became entangled in the belt conveyor tail roller and pulled the replacement belt scraper and Mr. Payne in between the belts and into the tail roller.
- 17. Mr. Cole stated, that at the time of the accident, he had turned back toward the track to pick up the scraper attachment rod. He stated that he heard a loud crash and when he turned around to see what had happened, he could not see Mr. Payne or the replacement belt scraper.
- 18. Mr. Graham stated that when the accident occurred, he looked up and asked Mr. Cole where Mr. Payne was and that Mr. Cole stated that Mr. Payne was caught in the tail roller.
- 19. Mr. Cole stated that when the accident occurred, he was not certain what had happened and that he ran to a remote belt control switch, located approximately 15 feet outby the tailpiece, and turned a remote belt control switch to the off position. This switch was used to control the 3 East Mains No. 2 belt conveyor and did not denergize the 3 East Mains No. 1 belt conveyor. He stated that the 3 East Mains No. 1 belt conveyor stopped a few seconds later. The 3 East Mains No. 1 belt conveyor apparently had stopped due to activation of the belt fault electrical circuit that controls the belt slippage and sequence switch functions. Mr. Cole stated that as he was traveling back to the tailpiece, from the remote belt control switch, he observed Mr. Payne entangled

between the top and bottom belts inside the tailpiece structure. Mr. Cole stated that he and Mr. Graham ran approximately 100 feet inby to the 3 East Mains No. 2 belt conveyor remote drive assembly where they described the accident to Mr. Byrd, who was performing clean-up work along the No. 2 belt conveyor. Mr. Cole and Mr. Graham stated that they searched for a mine telephone to call for help but were unsuccessful. Mr. Cole and Mr. Graham stated that two other mining personnel arrived, whom they thought were mine examiners. These two mine examiners were later identified as Mr. Damewood and Mr. Molino. They stated that Mr. Damewood and Mr. Molino departed the accident location immediately to go to a mine telephone to report the accident and to call for help.

- 20. Mr. Damewood stated that upon being notified of the accident, he and Mr. Molino traveled immediately to the 6 Right longwall belt conveyor drive where he initially notified mine personnel to deenergize the underground belt conveyor systems, and then he called for assistance, first aid materials and emergency transportation. Mr. Damewood stated that he informed the 6 Right longwall crew and other underground mine foremen about the accident and instructed the longwall crew to call surface personnel requesting an ambulance.
- 21. Mr. Hylton stated that he had departed the 7 Left development section enroute to the 7 Right development section when he arrived at a location near the new coal storage bunker where Mr. Damewood contacted him on the mine telephone informing him of the accident. Mr. Hylton stated that he immediately traveled to the bunker to access the public telephone system to notify management personnel of the accident. Mr. Hylton stated that he instructed surface security personnel to request an ambulance at this time. Mr. Hylton stated that he traveled to the accident scene.
- 22. Mr. Cole and Mr. Graham stated that on one occasion, Mr. Payne stopped at the 6 Right longwall conveyor belt drive and spoke briefly with Mr. Wright. Mr. Cole and Mr. Graham stated that they did not hear the conversation between Mr. Payne and Mr. Wright but they did hear Mr. Payne tell Mr. Wright that he would call him later.
- 23. Mr. Wright stated that Mr. Payne was traveling with Mr. Cole and Mr. Graham when he stopped at the 6 Right longwall conveyor belt drive and spoke briefly with him. He stated that Mr. Payne informed him that they were enroute to work on bottom belt scrapers at various locations in the mine. He stated that when Mr. Payne departed, the belt crew traveled inby toward the 3 East Mains No. 2 belt conveyor tailpiece. Mr. Wright stated that a short time later, Mr. Payne and his crew returned to his location. Mr. Wright stated that Mr. Payne asked him how much coal was in the coal storage bunker. Mr. Wright stated that Mr. Payne stated he had to go because he had other work to complete. When the bunker was full, the 3 East Mains and 4 North Mains belts would stop operating, which would allow ample time for completing belt maintenance work such as changing scrapers. Mr. Wright stated that he did not see or talk to Mr. Payne again after he departed.
- 24. Mr. Wright stated that the belts stopped approximately 15 minutes after Mr. Payne departed his location. He stated that when the belts stopped, he assumed Mr. Payne had deenergized the belts. He stated that he was shoveling coal near the 6 Right longwall conveyor belt drive when Mr. Damewood and Mr. Molino arrived at his location. He stated that Mr. Damewood used the mine telephone to report the accident and to call for help and then informed him that Mr. Payne was entrapped in the 3 East Mains No. 1 belt conveyor tailpiece.

- 25. Mr. Wright stated that prior to the accident, the belts had stopped operating once or twice, and that each time the belts stopped operating only for a short period of time before restarting again. He stated that he did not receive any telephone calls explaining why the belts had stopped operating, and that he did not know why the belts had stopped.
- 26. Mr. Hager, fill-in belt mine foreman, stated that he explained the belt work assignments to Mr. Payne on the surface before entering the mine on September 26, 2004. He stated that this was the last time that he saw or talked to Mr. Payne during the shift.
- 27. Mr. Hager stated that when the accident occurred, he was located at the 4 North Mains area, within five crosscuts of the 4 North No. 3 belt conveyor drive, on the outby side, toward the bunker. He stated that he was supervising a crew of men that was distributing belt structure along the belt line at this location.
- 28. Mr. Hager stated that he had not supervised any belt work for a number of days prior to September 26, 2004. He stated that when he received the mine examiner's report for the belt conveyors on September 26, 2004, he did not recall any reported needs concerning the belt conveyors.
- 29. Mr. Hager stated that at the beginning of the shift, he transported several beltmen to various locations in the mine to perform belt clean up work. He stated that he transported Mr. Byrd to the Sizer to perform belt clean up work, located one crosscut inby the 3 East Mains No. 2 conveyor belt drive. He stated that at approximately 6:00 p.m., he was supervising a belt crew and a motor crew while distributing belt structure along the 4 North Mains No. 3 belt conveyor. He stated that Mr. Curry, maintenance foreman, arrived and they were required to back up and switch out at the 5 Left track switch on 4 North Mains. He stated that as they were clearing up traffic on the track, the belts stopped. He stated that as Mr. Curry went by, he stopped and asked him if he knew why the belts had stopped operating, and he informed Mr. Curry that a mine telephone was near his location, if he wanted to call and check on why the belts had stopped operating. He stated that Mr. Curry traveled to the mine telephone and came back a short time later, flagging him with his caplight as he approached. He stated that Mr. Curry informed him that a person was entrapped in the 3 East Mains No. 1 belt conveyor tailpiece. Mr. Hager stated that he got in the mantrip with Mr. Curry and they traveled toward the 3 East Mains No. 1 belt tailpiece.
- 30. Mr. Hager stated that while traveling toward the 3 East Mains No. 1 belt tailpiece, they met Mr. Horne near the shaft bottom. He stated that Mr. Horne informed him that Mr. Payne was the person entrapped in the tailpiece. Mr. Hager stated that Mr. Horne informed him that he was enroute to lock-out the 3 East Mains No. 1 belt conveyor electrical disconnecting device. Mr. Hager stated that Mr. Curry said that he would lock-out the belt electrical disconnecting device. Mr. Hager stated that he got in the mantrip with Mr. Horne and they proceeded to the accident scene.
- 31. Mr. Hager stated that as he and Mr. Horne traveled by the 2 Right track switch, he observed several mine personnel congregated there and that no mine personnel were located at the 3 East Mains No. 1 belt conveyor tailpiece when they arrived. He stated that when they arrived, he looked inside the tailpiece and saw Mr. Payne. He stated that after looking inside the tailpiece, he walked around to the back of the tailpiece and then came back around to the track side of the tailpiece. He stated that he looked at Mr. Horne and said "we have to get him out of here" and then instructed Mr. Horne to cut the belt conveyor into. He stated that Mr. Horne cut the belt into and when the belt was cut, it came out of the tail roller. He stated that cutting the belt into and it coming

out of the tail roller provided ample space to gain access to Mr. Payne. He stated that they removed the side guard located on the trackside of the tailpiece and that he actually broke the guard mounting bolts to remove the guard. He stated that he stepped inside the tailpiece structure and realized that first aid equipment would be needed and then instructed Mr. Horne to travel to the shaft bottom to get a stretcher.

- 32. Mr. Hager stated that shortly after Mr. Horne departed, Mr. Dickerson, Mr. Ganesh and Mr. Ward arrived with first aid supplies. He stated that Mr. Curry arrived shortly thereafter and assisted with the extrication of Mr. Payne. Mr. Hager stated that Mr. Hylton, second shift mine foreman, also arrived and Mr. Payne was transported to the surface. Mr. Hager stated that he and Mr. Hylton remained at the accident location to secure the scene.
- 33. Mr. Cole and Mr. Graham stated that they had never attempted to install a bottom belt scraper before with the belt operating and had no knowledge of other mine personnel attempting to perform such work with the belt operating. They stated that they usually deenergized the belts using the remote belt control on/off switch before attempting to replace bottom belt scrapers. Mr. Cole and Mr. Graham stated that the belt electrical power disconnecting device was always locked-out and tagged prior to splicing belts or installing top belt structure.
- 34. Mr. Graham and Mr. Cole stated that they did not possess devices that could be used to lock-out and tag electrical power disconnecting devices provided for belt conveyor systems. They stated that the foreman usually locked-out and tagged the electrical power disconnecting devices when they performed belt maintenance work, such as making belt splices or replacing top belt structure.
- 35. Mr. Curry stated that when he installed the lock-out device at the 3 East Mains No. 1 belt electrical power control transformer, he did not have a tag to tag out the belt and that he called Mr. Charles Ritchie, second shift maintenance repairman, and instructed him to travel to the 3 East Mains No. 1 belt transformer and to place a tag on his locking device. He stated that he also instructed Mr. Ritchie to lock-out and tag the 3 East Mains No. 1 belt conveyor take-up unit.
- 36. Mr. Cole and Mr. Graham stated that prior to the shift of the accident, they had never attempted to replace a bottom belt scraper with the belt operating.
- 37. Mr. Cole and Mr. Graham stated that they had knowledge of the company policy regarding locking-out and tagging energized belt equipment prior to performing work on such equipment.
- 38. Mine personnel stated that the company locking-out and tagging policy, with respect to conducting belt maintenance work, requires that the belt electrical power disconnecting device be locked-out and tagged when such work involves working on top of the belts or between the belts, making belt splices, and changing out top or bottom belt structure, with the exception of installing one bottom belt roller.
- 39. Mine personnel stated that the mine produces coal three shifts per day, seven days per week. Mine personnel also stated that routine belt maintenance work is often dependent upon interruptions in production activities when the belts have stopped operating.

### **PHYSICAL FACTORS**

The physical factors at the scene of the accident revealed the following:

- 1. The accident occurred at approximately 7:00 p.m., on September 26, 2004, at the 3 East Mains No. 1 belt conveyor tailpiece. The tailpiece is located in the 3 East Mains, No. 5 belt and track entry, approximately 46 feet inby survey station No. 19923.
- 2. Physical evidence at the accident scene revealed that the victim and the belt scraper apparently traveled through the 3 East Mains No. 1 belt conveyor tailpiece tail roller, traveling around the tail roller between the belt and tail roller. The victim and the scraper were lodged between the first and second metal pipe support structures located inside the tailpiece frame.
- 3. The 3 East Mains No. 5 belt and track entry height at the 3 East Mains No. 1 belt conveyor tailpiece measured approximately nine feet and six inches.
- 4. The 3 East Mains No. 1 belt conveyor tailpiece was a Snub Nose Tail Section, Model ST-54-12-40, fabricated by S and T Welding Company, Inc., located in Pineville, West Virginia. The 3 East Mains No. 1 belt conveyor tail roller measured 26 inches in diameter and 66 inches in length. The width of the tailpiece measured approximately eight feet and five inches and the length of the tailpiece frame measured approximately six feet and six inches. The three metal pipe support structures located inside of the tailpiece structure were approximately eight feet in length and were installed approximately 36 inches apart. The metal pipe support structures were four and one-half inches in diameter.
- 5. The 3 East Mains No. 1 belt conveyor was cut into to provide access and extrication of the victim. The cut end of the top belt was located approximately 20 feet outby the front of the 3 East Mines No. 1 belt conveyor tailpiece frame, and the cut end of the bottom belt was located approximately 38 feet outby the front of the tailpiece frame.
- 6. The 3 East Mains belt conveyors No.'s 1, 2 and 3 are equipped with in-line conveyor belt drives. The belt drives are installed approximately 100 feet inby each of the coal transfer points. The 3 East Mains No. 2 belt conveyor discharges coal onto the 3 East Mains No. 1 belt using a head drive roller assembly that is suspended from the mine roof. The head drive is located above the 3 East Mains No. 1 belt conveyor, approximately forty-two feet and six inches outby the 3 East Mains No. 1 belt conveyor tailpiece. Coal is discharged from the 3 East Mains No. 1 belt conveyor tailpiece. Coal is discharged from the 3 East Mains No. 1 belt conveyor using a coal chute assembly.
- 7. The 3 East Mains No. 2 belt conveyor is suspended from the mine roof above the 3 East Mains No. 1 belt conveyor for a distance of 50 feet. The 3 East Mains No. 2 conveyor belt drive assembly is located approximately 100 feet inby the 3 East Mains No. 1 belt conveyor tailpiece. The vertical distance between the 3 East Mains No. 2 belt conveyor and the 3 East Mains No. 1 belt conveyor measured approximately 34.6 inches.
- 8. The 3 East Mains No. 1 belt conveyor system consists of a Goodyear 800 PIW belt, 54inches in width, powered by a Continental Conveyor belt drive assembly equipped with two-300 horsepower motors, 600 volts alternating current. The belt drive pulls a total of 7,872 feet of belt at a speed of 700 feet per minute. The 3 East Mains No. 1 belt conveyor system is equipped with 60 inch Continental Conveyor rigid belt structure suspended from the mine roof, using anchor roof supports with 5/16 inch x 72 inch belt support chains.
- 9. The electrical power supply-disconnecting device provided for the 3 East Mains No. 1 belt control transformer was locked-out and tagged. The lock-out tag inscription was dated

September 26, 2004, and had the initials "CER" on it. These initials were identified as Mr. Charles E. Ritchie, repairman.

- 10. On the trackside, the position of the suspended belt structure frame rails measured approximately 29 inches from the 3 East Mains No. 1 belt conveyor tailpiece frame. This is where Mr. Payne was located when the accident occurred.
- 11. The 3 East Mains No. 1 belt conveyor was spliced using vulcanized splices and no mechanical splices were present in the belt conveyor.
- 12. Measurements were taken to verify the distance between the top and bottom belts at the location of the bottom belt scraper following reinstallation of the 3 East Mains No. 1 belt conveyor. On the trackside, the vertical distance between the edges of the top and bottom belts measured approximately 23 inches, and the vertical distance between the center of the top belt and the center of the bottom belt measured approximately 21 inches.
- 13. The replacement bottom belt scraper involved in the accident was manufactured by S and T Welding Company, Inc. The scraper, identified by the manufacturer as an "angled belt wiper", was constructed specifically to accommodate a belt conveyor 54 inches in width. The scraper / wiper measured 66 inches in length and was attached to metal brackets mounted on the 3 East Mains No. 1 belt conveyor tailpiece, using a one inch by sixty-six inch steel attachment rod. The attachment rod secured the angled scraper / wiper to the tailpiece mounting brackets by using a flat washer and a cottered key fastening system provided on each end of the attachment rod.
- 14. The replacement bottom belt scraper involved in the accident was extremely deformed and conformed to the shape of the 3 East Mains No. 1 belt conveyor tail roller. There was no belt chain attached to the scraper. The scraper support bracket located on the trackside of the tailpiece was bent inward toward the belt. The scraper mounting brackets were located approximately 78 inches from the 3 East Mains No. 1 belt conveyor tail roller. The tailpiece structure, tail roller guard measured approximately 96 inches from the scraper mounting bracket on the trackside of the tailpiece.
- 15. A section of circular cloth fabric with a sleeve snap, identified as a section of shirtsleeve, was found on the on the mine floor underneath the belt structure support rail on the trackside of the 3 East Mains No. 1 belt conveyor, approximately forty-two feet and six inches outby the front of the 3 East Mains No. 1 belt conveyor tailpiece frame, at the 3 East Mains No. 2 belt conveyor coal discharge chute. This section of shirtsleeve was attached to a chain hook of a section of 5/16-inch belt chain that measured approximately 60 inches in length.
- 16. Another section of 5/16-inch belt chain was found on top of the bottom belt on the mine floor, underneath the belt structure of the 3 East mains No. 1 belt conveyor, approximately 30 inches outby the chain attached to the section of shirtsleeve. This chain consisted of two sections of belt chain attached together with a chain hook and secured with tape. One section of chain, approximately 57 inches in length, was equipped with a hook on each end and was attached to the other section of chain, approximately 46 inches in length, using one of the end hooks of the 57-inch section of chain. Approximately three inches of the two chains overlapped at the connection point. The two sections of chain, equipped with a hook on one end, measured approximately eight feet and four inches in length.
- 17. A Mine Safety Appliance (MSA) W-65 self-rescue device was located on the mine floor on the off trackside of the tailpiece inby the 3 East Mains No. 1 belt conveyor tail roller guard.
- 18. A pair of Channel-Loc pliers was located on top of the 3 East Mains No. 1 belt conveyor tailpiece frame, on the trackside.
- 19. A Koehler Wheat electric cap lamp battery cell was located on the trackside of the 3 East Mains No. 1 belt conveyor outby the 3 East Mains No. 2 discharge roller. The lamp cord and headpiece assembly had been detached from the battery cell. The lamp cord attachment

headpiece assembly and a section of the lamp cord were observed on top of the side frame on the trackside of the tailpiece near the open end of the 3 East Mains No. 1 belt conveyor tail roller guard assembly.

- 20. The 3 East Mains No. 1 belt conveyor tailpiece side guard provided on the trackside of the tailpiece was mounted to the belt structure rail of the 3 East Mains No. 2 belt conveyor with two attachment wing bolts. The attachment wing bolts had been broken off. The tailpiece side guard, located on the off trackside of the tailpiece, was suspended from the belt structure rail of the 3 East Mains No. 2 belt conveyor using two 5/16-inch belt chains. The 3 East Mains No. 1 belt conveyor tail roller guard was displaced from it's original location and was bent in the center revealing structural damage.
- 21. A glove was observed on the mine floor underneath the 3 East Mains No. 1 belt conveyor, approximately 48 feet outby the front of the 3 East Mains No. 1 belt conveyor tailpiece frame.
- 22. The old, bottom belt scraper, that had been removed, was located on the trackside of the belt, approximately 22 feet outby the front of the 3 East Mains No. 1 belt conveyor tailpiece frame.
- 23. The remote belt control on/off switches, being used for the 3 East Mains No.'s 1 and 2 belts, were identified as Moeller Rotary Selector Switches, Item No. MM22-WK. The remote belt control on/off switch, provided for the 3 East Mains No. 2 belt conveyor, was found in the "off" position, and this switch was located on the trackside, approximately 20 feet outby the 3 East Mains No. 1 belt conveyor tailpiece. This switch was identified as the remote belt control switch that Mr. Cole turned off after the accident. The remote belt control switch, provided for the 3 East Mains No. 1 belt conveyor, was found in the "on" position, and this switch was located outby the 3 East Mains No. 1 belt conveyor, was found in the "on" position, and this switch was located outby the 3 East Mains No. 2 belt discharge roller, approximately 72 feet outby the 3 East Mains No. 1 belt conveyor tailpiece.
- 24. Two bottom belt scrapers were observed on the trackside of the 4 North Mains No. 4 belt conveyor tailpiece. A bottom belt scraper had not been installed at the 4 North Mains No. 4 belt conveyor tailpiece. A scraper attachment rod was located on the off trackside of the 4 North Mains No. 4 belt conveyor, outby the tailpiece. A flat washer and a cottered key were located on the top frame of the tailpiece, on the off trackside of the tailpiece.
- 25. The belt examination date board, installed on the trackside of the 3 East Mains No. 1 belt conveyor, outby the 3 East Mains No. 2 belt discharge roller, indicated that the 3 East Mains No. 1 belt conveyor was examined at 2:45 p.m., on September 26, 2004, by Mr. Arber Click, day shift belt examiner. The belt conveyor Pre-shift / On-shift examination record books and weekly belt conveyor, electrical equipment examination record books did not reveal any hazardous conditions observed at the 3 East Mains No. 1 belt conveyor.
- 26. The 3 East Mains belt conveyor system was used to transport coal from the 6 Right longwall section, 7 Right longwall development section and the 3 East Mains development section to the New Bunker coal storage facility, located on the Grassy Creek Mains. The 3 East Mains belt conveyor system consisted of the 3 East Mains No. 1, No. 2 and No. 3 belt conveyors. Coal is transferred from the 3 East Mains belt conveyor system to the four belt conveyors of the 4 North Mains belt conveyor system. The coal is stored temporarily in the New Bunker facility, then reclaimed and transported by a six-part conveyor haulage system to the production skip shaft.

# BELT CONVEYOR ELECTRICAL EQUIPMENT EXAMINATIONS AND OPERATIONAL TESTS CONDUCTED DURING THE INVESTIGATION

Examinations and tests of the 3 East Mains No. 1 belt conveyor and 3 East Mains No. 2 belt conveyor systems conducted on September 28, 2004, revealed the following:

- 1. The 3 East Mains No. 1 conveyor belt drive control starter was a Pemco Corporation Silpak, 600 volts alternating current, three-phase, belt control starter, Model No. Dual MS 300, serial number 6335-201. The power cable supplying voltage input to the belt starter was a 350 Million Circular Mils (MCM) cable, and the 600 volt power circuit output was provided by a 4/0 American Wire Gauge (AWG) power supply cable.
- 2. The 3 East Mains No. 2 conveyor belt drive control starter was a Line Power Manufacturing Company, Inc., 600 volts alternating current, three-phase, belt control starter, Type 500 VFD, serial number U2287. The power cable supplying voltage input to the belt starter was a 350 MCM cable, and the 600 volt power circuit output was provided by a 4/0 AWG power supply cable.
- 3. The belt control starters, provided for the 3 East Mains No. 1 and 3 East Mains No. 2 conveyor belt drive systems, are equipped with an Allen Bradley 550 Programable Logic Controller (PLC) panel, located at the belt control operator station, to monitor the control circuitry. The PLC is designed to coordinate and sequence all functions of the control and monitoring circuits associated with operator of the belt systems. The belt control selector switch, located at the belt control operator station, was set on automatic at each belt control starter transformer.
- 4. The 3 East Mains No 1 conveyor belt drive assembly was equipped with belt slip and sequence controls. The belt slip control monitored the belts for belt slippage or accidental breakage of the belt. The belt slip control system consisted of a Butler Wiring Incorporated (BWI) Hawkeye proximity sensor unit controlled by a BWI Eagle Model 2 electrical control unit. The slip sensor unit was mounted on a top belt structure roller, located on the trackside of the 3 East Mains No. 1 belt conveyor, approximately 15 feet inby the 3 East Mains No. 1 conveyor belt drive friction rollers. The BWI Eagle Model 2 electrical control unit was installed in the 3 East Mains No. 1 belt control starter panel. The 3 East Mains No. 1 belt conveyor sequence control circuit is connected to the outby 4 North Mains No. 4 belt control starter. The sequence control monitored operation of the 4 North Mains No. 4 belt conveyor to synchronize operation of the 3 East Mains No. 1 belt conveyor.
- 5. The 3 East Mains No. 2 conveyor belt drive assembly was also equipped with the BWI Hawkeye proximity sensor unit and BWI Eagle Model 2 electrical control unit. The slip control sensor unit was mounted approximately 29 feet inby the 3 East Mains No. 2 conveyor belt drive friction rollers. The BWI Eagle Model 2 electrical control unit was installed in the 3 East Mains No. 2 belt control starter panel. The 3 East Mains No. 2 belt conveyor sequence control circuit is connected to the outby 3 East Mains No. 1 belt control starter. The sequence control monitored operation of the 3 East Mains No. 1 belt conveyor to synchronize operation of the 3 East Mains No. 1 belt conveyor with operation of the 3 East Mains No. 2 belt conveyor.
- 6. On September 28, 2004, examinations of the 3 East Mains No. 1 and No. 2 belt control starters were conducted to determine why and when the respective belt conveyor systems stopped operating on September 26, 2004. This was determined by examining the

present conditions as well as the history stored in the PLC panel unit located at each belt conveyor starter.

- 7. The electrical power was deenergized on the 3 East Mains No. 1 and 3 East Mains No. 2 belt conveyor systems, at their respective belt control starters, on September 26, 2004. When the electrical power was restored to the belt starters on September 28, 2004, the control starter PLC units displayed the status of various circuitry controls and the circuitry activated to stop operation of the belts when the accident occurred, including activation time of the circuitry. The 3 East Mains No. 1 belt conveyor control starter PLC panel displayed the following fault history:
  - Outby belt stopped (4 North Mains No. 4 belt conveyor)
  - Remote head control switch closed (switch in "on" position)
  - Remote tail control switch closed (switch in "on" position)
  - Belt sequence switch closed
  - Belt slip closed
- 8. The fault history provided by the PLC panel, located at the 3 East Mains No. 1 belt control starter, was set one calendar day in advance of the actual display date. Although the PLC panel displayed the date as September 27, 2004, the events displayed actually occurred on September 26, 2004. The PLC panel displayed the following fault history:
  - September 26, 2004: 5:08.04 p.m.- remote head control switch open (switch in "off" position)
  - September 26, 2004: 5:08.15 p.m.- outby belt stopped (4 North Mains No. 4 belt conveyor)
  - September 26, 2004: 7:09.29 p.m.- external fault (most likely an activated slip control)
  - September 26, 2004: 7:19.59 p.m.- outby belt stopped (4 North Mains No. 4 belt conveyor)
- 9. The external fault, that occurred on September 26, 2004, at 7:09.29 p.m. as indicated by the 3 East Mains No. 1 belt control starter PLC, was determined to be an activation of the belt fault electrical circuit that controls the belt slippage or sequence switch functions. Although the PLC external fault condition did not differentiate between activation of the slip and sequence control functions, it was determined that the obstruction that occurred within the 3 East Mains No. 1 belt conveyor tailpiece at the time of accident, most likely would cause a substantial interruption in the belt operation, resulting in the activation of the slip control circuit. Also, Mr. Damewood stated that upon notification of the accident, he immediately traveled to the 6 Right longwall conveyor belt drive where he initially notified mine personnel to deenergize the underground belt conveyor systems, before calling for assistance. This indicated that the 4 North Mains No. 4 belt conveyor was operating when the 3 East Mains belt conveyor stopped.
- 10. When the power supply was restored at the 3 East Mains No. 2 conveyor belt control starter on September 28, 2004, the PLC panel displayed the following fault history:
  - Outby belt stopped (3 East Mains No. 1 belt conveyor)
  - Remote head control switch open (switch in "off" position)
  - Remote tail control switch closed (switch in "on" position)
  - Belt sequence switch closed
  - Belt slip switch closed
- 11. The fault history provided by the PLC panel at the 3 East Mains No. 2 belt control starter on September 28, 2004, was set for Daylight Savings Time. The time indicated in the

PLC fault history was one hour earlier than the actual time of the events stored in the PLC on September 26, 2004. The PLC unit displayed the following fault history:

- September 26, 2004: 7:08.53 p.m. remote head control switch open (3 East Mains No. 2 remote belt control switch in "off" position)
- September 26, 2004: 7:08.53 p.m. outby belt stopped (3 East Mains No. 1 belt conveyor)
- 12. The fault history that occurred on September 26, 2004, at 7:08.53 p.m., as indicated by the 3 East Mains No. 2 belt control starter PLC, verified that Mr. Cole turned the 3 East Mains No. 2 belt conveyor head remote belt control switch to the "off" position when the accident occurred.
- 13. The remote belt control switches provided for the 3 East Mains No's. 1 and 2 belt conveyor systems, located at the accident scene, were tested and both belt control switches operated properly. The tests of the belt control switches were also used to verify the accuracy of the information stored in the PLC units.

#### CONCLUSION

On September 26, 2004, at approximately 7:00 p.m., an underground powered haulage accident occurred at Consolidation Coal Company, Buchanan Mine No. 1. Mr. Hassel Gene Payne, utilityman, received fatal injuries when he became entangled between the top and bottom belts inside the 3 East Mains No. 1 belt conveyor tailpiece. The victim and two coworkers were attempting to install a replacement bottom belt scraper at the 3 East Mains No. 1 belt conveyor tailpiece while the belt conveyor was operating. The victim was attempting to throw a section of chain, that was attached to the belt scraper, between the top and bottom belts to a coworker located on the off trackside of the belt. Apparently, the chain became entangled in the tail roller or the belt pulling the belt scraper and the victim in between the moving belts and through the tail roller, between the belt and the tail roller.

#### **ENFORCEMENT ACTION**

The following enforcement action was taken as a result of the investigation:

- An order of closure, No. DWA0005007, was issued under Section 45.1-161.91.A. (ii) of the <u>Coal Mine Safety Laws of Virginia</u> to control and preserve the scene of the accident pending an investigation. The order of closure was modified to allow mine examinations; travel on the 3 East Mains trackway in the accident area and; for the accident area to be cleaned and sanitized. The order of closure was also modified to allow the 3 East Mains No. 1 belt conveyor to be repaired and energized for conducting investigation examinations and testing. The order of closure was also modified to allow implementation of an action plan developed in response to the fatal accident and for the mine to resume full production.
- 2. An order of closure, No. DWA0005034, was issued under Section 45.1-161.91.A. (i), referencing 45.1-161.196 of the Coal Mine Safety Laws of Virginia. On September 26, 2004, at approximately 7:00 p.m., a fatal powered haulage accident occurred at Consolidation Coal Company, Buchanan Mine No. 1. Mr. Hassel Gene Payne, utilityman, received fatal injuries when he became entangled between the top and bottom belts inside the 3 East Mains No. 1 belt conveyor tailpiece. The accident victim and two coworkers were attempting to install a replacement bottom belt scraper at the 3 East Mains No. 1 belt conveyor tailpiece while the belt conveyor was operating. An imminent danger was created when the 3 East Mains No. 1 belt conveyor electrical power supply disconnecting device had not been locked out and suitably tagged prior to performing this work.
- 3. A notice of violation, No. DWA0005034, was issued under Section 45.1-161.196 of the <u>Coal Mine Safety Laws of Virginia</u>. Statements provided during mine personnel interviews, revealed that on September 26, 2004, second shift mine personnel performed mechanical work at the 4 North Mains No. 4 belt conveyor tailpiece and the 3 East Mains No. 2 belt conveyor tailpiece without having the applicable belt electrical power supply disconnecting devices locked out and suitably tagged prior to performing this work. Mine personnel performed mechanical work at the 4 North Mains No. 4 belt conveyor tailpiece by attempting to install a bottom belt scraper but were unsuccessful because the scraper attachment rod was too short. Mine personnel also performed mechanical work at the 3 East Mains No. 2 belt conveyor tailpiece when they removed and reinstalled the scraper to provide a new scraping surface. The belt conveyor remote control switches were used to stop operation of the belts while the mechanical work was being performed.

#### RECOMMENDATIONS

- 1. Disconnecting devices shall be locked out and suitably tagged by the persons who perform electrical or mechanical work on such circuits or equipment connected to the circuits.
- 2. Never attempt to change out belt scrapers, belt structure, or perform similar mechanical work while the conveyor is in motion.
- 3. Adequate training shall be provided to all mine personnel concerning the hazards, safety precautions and safe work procedures when performing work on or near haulage conveyor systems. Follow-up job safety observations should be conducted to ensure belt conveyor maintenance work is performed in a safe manner.
- 4. Stay out of areas along a moving conveyor belt where clearance is restricted.
- 5. Ensure all guards are adequate and securely in place.
- 6. Belt maintenance personnel shall have in their possession devices to lock-out and suitably tag electrical circuits or associated equipment.
- 7. The remote belt control switch provided for the 3 East Mains No. 1 belt conveyor should be installed in close proximity to the 3 East Mains No. 1 belt conveyor tailpiece and the remote belt control switch provided for the 3 East Mains No. 2 belt conveyor should be installed in close proximity to the 3 East Mains No. 2 belt conveyor coal transfer point.

## SIGNATURE SHEET

This report is hereby submitted by Terry Ratliff and approved by Frank A. Linkous.

TERRY A. RATLIFF, COAL MINE INSPECTOR

DATE

FRANK A. LINKOUS, CHIEF

DATE

## APPENDIX

VICTIM DATA SHEET

PERSONS PRESENT DURING THE INVESTIGATION

MINE LICENSE INFORMATION

## VICTIM DATA SHEET

Name:	Hassel
Occupation:	Utilityı
Mailing Address:	981 W
Date of Birth:	Novem
Total Mining Experience:	Twelve
Experience with Present Company:	Five m
Experience in Present Occupation:	Five m

Hassel Gene Payne Utilityman 981 Willow Springs, Cedar Bluff, Virginia 24609 November 3, 1957 Twelve years Five months Five months

#### PERSONNEL

The following personnel provided information and/or were present during the investigation and those personnel interviewed are identified with an asterisk (\*):

## **CONSOLIDATION COAL COMPANY**

John Zachwieja	Vice President, Southern Appalachian Operations			
Terry Suder	General Manager, Virginia Operations			
Terry Mason	Human Resources Supervisor			
Kenneth Harvey	Mine Superintendent	Day Shift		
Craig Chadwell	Assistant Mine Superintendent	Day Shift		
Spike Bane	Corporate Safety Inspector	Day Shift		
Michael Canada	Chief Inspector	Day Shift		
Archie Ruble	Supervisor of Safety	Day Shift		
Leonard Clarkson	General Mine Foreman	Day Shift		
Michael Dillow*	Longwall Utilityman	Day Shift		
Arber Click	Belt Examiner	Day Shift		
Donald Hylton*	Shift Mine Foreman	Second Shift		
Russell Short*	Construction Foreman	Second Shift		
Donald Hager*	Section Mine Foreman			
	/Fill-in Belt Foreman	Second Shift		
Craig Dickerson*	Longwall Section Mine Foreman	Second Shift		
Dennis Ward	Longwall Systems Operator	Second Shift		
Sakshi Ganesh*	Longwall Maintenance Foreman	Second Shift		
Cleve Curry*	Maintenance Foreman	Second Shift		
Daniel Damewood*	Mine Examiner	Second Shift		
Jerry Molino	Mine Examiner	Second Shift		
Everett Cole*	Utilityman	Second Shift		
Donald Graham*	Utilityman	Second Shift		
McConley Byrd*	Utilityman	Second Shift		
Glen Wright*	Longwall Utilityman	Second Shift		
Nelson Horne	Belt Man	Second Shift		
Charles Ritchie	Repairman	Second Shift		
Leroy Stiltner*	Utilityman / New Bunker Operator	Second Shift		
Benny Patterson*	Utilityman / Old Bunker Operator	Second Shift		
Douglas Roop*	Utilityman	Third Shift		

#### MINE SAFETY AND HEALTH ADMINISTRATION

Edward Morgan Norman Page Chris Weaver James W. Poynter Larry Worrell James R. Baker Terry Sheffield Arnold Douglas Carico Russell Dresch Dennis Belcher David Fowler Carl Duty District Manager, District 5 Assistant District Manager Acting Director, Tri-State Initiative Supervisory Mine Safety and Health Inspector Supervisory Mine Safety and Health Inspector Educational Field Services Specialist Mining Engineer Mining Engineer Electrical Engineer Coal Mine Safety and Health Inspector, Electrical Coal Mine Safety and Health Inspector Coal Mine Safety and Health Inspector

#### VIRGINIA DIVISION OF MINES

Frank Linkous Opie McKinney Carroll Green Don Keen Joseph Altizer Danny Altizer J. E. Brown Terry Ratliff Bill Messick Dwight Miller Chief, Division of Mines Mine Inspector Supervisor Mine Inspector Supervisor Coal Mine Inspector Coal Mine Inspector

## MINE LICENSE INFORMATION

Official Corporation: Official Business Name of Operator: Person with Overall Responsibility: Person in Charge of Health and Safety: Consolidation Coal Company Consolidation Coal Company Kenneth Harvey Kenneth Harvey