

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface Coal Mine

Fatal Fall of Highwall Accident
December 7, 2011

Fairbanks No. 4
Fairbanks Coal Company, Inc.
Appalachia, Wise County, Virginia
I.D. No. 44-07256

Accident Investigators

Wade T. Gardner
Mine Safety and Health Specialist - Surface

Steven J. Vamosy
Civil Engineer, P.E. Technical Support

Anthony J. Argirakis
Civil Engineer Technical Support

Originating Office
Mine Safety and Health Administration
District 5
Wise County Plaza
Norton, Virginia 24273

Greg Meikle, District Manager

TABLE OF CONTENTS

OVERVIEW	1
GENERAL INFORMATION.....	1
DESCRIPTION OF THE ACCIDENT.....	3
INVESTIGATION OF THE ACCIDENT.....	4
DISCUSSION.....	5
ROOT CAUSE ANALYSIS.....	10
CONCLUSION.....	12
ENFORCEMENT ACTIONS	13
APPENDIX A - Persons/Participants in this Accident Investigation.....	19
APPENDIX B - List of Persons Interviewed.....	20
APPENDIX C - Accident Scene Sketch.....	21
APPENDIX D - Victim Information.....	22

OVERVIEW

On Wednesday, December 7, 2011, at 7:33 a.m., Richard N. Yonts, a 49-year-old excavator operator with 20 years of mining experience, was fatally injured while loading haul trucks in a strip pit. The victim was operating a Komatsu PC 400 excavator, loading shot material from the active pit into a Komatsu 785 haul truck. A portion of the highwall collapsed onto the operator's compartment of the excavator, resulting in fatal injuries.

The day before the accident, hazards were observed in the highwall by mine management, and afterward, mine management constructed an inadequate barricade to prevent access to the hazardous pit area. The hazards observed in the highwall and documented by mine management the day before the accident, were not reviewed by mine management the day of the accident. The hazards observed by mine management in the highwall during the pre-shift examination performed on the day of the accident, were not eliminated or mitigated by mine management.

GENERAL INFORMATION

Fairbanks No. 4 is a surface mine located in Wise County, Virginia, off State Route 78 North West approximately 4 miles from Appalachia. The mine is operated by Fairbanks Coal Company, Inc. Coal is mined from the Redwine, Kelly and Imboden seams. This mine operates two 9-hour production shifts five to six days per week. The Fairbanks No. 4 mine employs 29 miners in one active pit.

The mine produces approximately 4,500 tons of raw coal per week. Coal is transported by truck to the Pigeon Creek Processing Corporation, Plant No.1, which is owned and operated by Alpha Natural Resources. The coal is then processed and loaded in rail cars.

The principal Officers for Fairbanks Coal Company, Inc. are:

Wesley D. Burke.....President/Director/Owner
Robert W. Kyle.....Secretary/Treasurer
Donnie E. Maine.....Vice President/Director/Owner

This mine became active on March 15, 2010. The last regular MSHA inspection of the Fairbanks No. 4 mine was completed on May 5, 2011.

The last Non-Fatal Days Lost (NFDL) incidence rate for this surface mine in 2011 was 0, compared to the national average of 1.30 for mines of the same type.

DESCRIPTION OF THE ACCIDENT

On Wednesday, December 7, 2011, Yonts began his shift at approximately 6:00 a.m. He was assigned to operate the PC 400 Komatsu excavator that was parked in the Redwine pit a short distance from the accident scene.

The Redwine pit had been mined around a point to a position that placed the active pit under overhead high voltage power lines. Due to the power lines being in close proximity to the active working pit, blasting practices were modified to prevent fly rock from damaging the power lines. Witness statements indicated that thirty (30) foot vertical holes were drilled, but only approximately half of the drill hole was loaded with explosives. This modified blasting practice resulted in the lower 15 feet of the highwall being fractured while the top 15 feet was left almost intact. The fractured lower portion of the highwall was exposed as the shot material was removed on the second shift of December 6, 2011. An unstable highwall condition was created through this process and the weak fractures in the lower 15 feet of the highwall caused a toppling effect on the upper 15 feet of solid rock in the highwall.

John Pennington, a second shift bulldozer operator working in the Redwine pit, had observed a large vertical crack in the east-facing highwall. He indicated that upon further observation, there appeared to be a large "chimney" or column of rock containing vertical cracks on each side, possibly extending behind the column, and the rock at the toe of the column appeared fractured and weak. Pennington contacted Timothy Wright, Second Shift Foreman, who examined the highwall and determined it to be unstable. Wright removed all miners from the area and had the area partially bermed with earthen material to prevent entry. The berm was reported to be 15 feet high by 40 feet in length, and was constructed of shot material pushed up by a bulldozer around the unstable highwall area. According to interview statements, the earthen material berm ramped down on one end and created an access area to the highwall. Wright made an entry in his on-shift record book stating, "a bad place came in wall bermed off." Wright did not post warning signs around the area that had been inadequately barricaded by the berm.

The second shift normally ended at 2:00 a.m., and the day shift began at 6:00 a.m. The normal procedure used to communicate between shifts was a cell phone voice mail message left for the day shift superintendent by the second shift foreman. According to Wright, the voice mail message left after the December 6, 2011, second shift did not include any warning of the unsafe highwall or of an area "bermed off." The message detailed production and equipment breakdowns.

On December 7, 2011, at approximately 6:00 a.m., the day shift crew began work in the Redwine pit. Witness statements from George Steele, Day Shift Foreman, and Daniel Short, Day Shift Superintendent, indicated that they conducted a pre-shift examination of the Redwine pit area before the day shift began, due to heavy rain the night before. The examination was conducted before daylight and handheld lights and equipment lights were used to illuminate the highwall. No hazardous conditions were detected during the examination. Steele stated that Short assigned him work in other areas of the mine, and Steele did not return to the Redwine pit before the accident. Steele stated he overheard Short make the excavator operator aware of a crack in the highwall, and told him he would examine the area once it was daylight. Short did not return to the pit area until after the accident occurred.

Witness statements indicated Yonts was instructed by Short to start loading shot material into the haul trucks from the Redwine pit using the PC 400 Komatsu excavator. A Komatsu WA 900 front-end wheel loader and a Caterpillar 992-G front-end wheel loader were normally used to load shot material into haul trucks. Both of these loaders had been out of service for several shifts because they needed mechanical repairs. Due to both rock loaders out of service, a Komatsu WA 600 coal loader was used to load haul trucks on the second shift on December 6, 2011. The Komatsu WA 600 coal loader also incurred a mechanical breakdown and was taken out of service on the second shift. Wright instructed John Davis, Loader Operator, to operate the Komatsu PC 400 excavator for the remainder of the second shift to load the haul trucks from the Redwine pit. All the loaders were still unavailable when the day shift began working in the Redwine pit on December 7, 2011, and Yonts was assigned to load rock with the excavator on the day shift.

According to witness statements, Short give directions to Yonts regarding how the excavator needed to be oriented to load the shot material, where to start loading and how to position the haulers to be loaded. Yonts maneuvered the excavator up a ramp onto the shot material and started loading haul trucks shortly after 6:00 a.m. Yonts positioned the excavator with the cab adjacent to the highwall face at the far end of the Redwine pit, backing toward the partially bermed section of highwall as he loaded trucks.

The attempt to isolate and danger off the hazardous highwall on the previous shift consisted solely of pushing an earthen berm around the bad section of highwall. No other barricades or warning signs were used. The berm was not recognized by the oncoming shift as a barrier to prevent entry into an area with a hazardous condition. Witness statements revealed the day shift crew began work before Steele or Short reviewed the on-shift book completed by Wright.

Delbert Porter, bulldozer operator, was also working in the Redwine pit pushing shot material in front of the excavator. At 7:33 a.m., while backing up the bulldozer, Porter observed the highwall raveling and attempted to contact Yonts by CB radio. Before contact could be made, the highwall fell on the excavator, resulting in fatal injuries to Yonts. Porter called Short and Steele by CB radio, notifying them of the accident, and requesting that they come to the pit.

Upon arriving in the pit, Short contacted Larry Gannaway, an office employee, instructing him to call 911. Steele examined Yonts and did not detect any vital signs. An inspector and acting supervisor with the Mine Safety and Health Administration (MSHA) were traveling to a nearby mine when they saw an ambulance entering mine property. They called the MSHA District 5 office, were briefed on the accident, and dispatched to the mine to secure the site. Due to the instability of the highwall in the area of the excavator, an action plan was developed for safe recovery of the victim.

The Appalachia Rescue Squad ambulance arrived at the accident scene at 8:16 a.m. to assist in the recovery. Due to the measures taken to remove the victim in a safe manner, Yonts was removed from the excavator at 11:30 a.m. and transported by the rescue squad to Wellmont Lonesome Pine Hospital in Big Stone Gap, Virginia. The Medical Examiner's report states that Yonts was pronounced dead at 12:28 pm.

INVESTIGATION OF THE ACCIDENT

MSHA personnel were notified of the accident at 7:45 a.m. on December 7, 2011. A verbal 103(j) Order was issued to ensure the safety of all persons during the recovery operations. An investigation team was dispatched to the mine. The order was modified to a 103(k) Order by the accident investigator upon arrival at the scene.

The investigation was conducted jointly by MSHA, the Virginia Department of Mines Minerals and Energy (VDMME), and the mine operator. A list of persons who participated in the investigation is provided in Appendix A.

Preliminary information relevant to the accident was collected. The accident scene was observed, photographed, and preliminary measurements for a sketch were taken by the investigators. The MSHA Technical Support Branch was notified and Steven J. Vamossy and Anthony J. Argirakis, Civil Engineers, were assigned to assist in the investigation.

Interviews were conducted with employees and management personnel of Fairbanks Coal Company, Inc., deemed to have knowledge of the facts regarding the accident. The interviews were conducted at the VDMME office in Big Stone Gap, Virginia, on December 8 and 9, 2011. Interviews were also conducted at the accident site on December 14, 2011. A list of persons interviewed is provided in Appendix B.

DISCUSSION

Accident Scene

The Redwine pit had been developed around a “point” or “knob” area with a south-facing highwall and an east-facing highwall. The accident occurred along the east-facing highwall. The east-facing highwall had a bearing of approximately North 10 degrees East, and was approximately 160 feet long. The highwall terminated in the north end of the pit. The last reported blast was conducted on December 6, 2011.

At the time of the accident, the excavator was located approximately 110 feet from the north end of the pit. The excavator was positioned on top of the shot material pile, which was approximately 10 to 15 feet above the pit floor. At the time of the accident, the excavator was oriented generally parallel to the highwall and facing north, which placed the operator’s cab directly adjacent to the highwall. Since the excavator was moved during the recovery of the victim, the exact distance between the excavator and the highwall at the time of the accident could not be determined, but was estimated to be 15 to 20 feet. The positioning of the excavator with the cab adjacent to the highwall was a contributing factor that led to the accident.

The east-facing highwall was mainly comprised of sandstone. The highwall height varied from approximately 80 feet near the south end, and decreased to approximately 60 feet at the north end. The highwall slope angle varied between 70 and 80 degrees. Small ledges/benches existed along the upper portions of the north end of the wall. The most significant ledge was approximately 15 feet wide and was located approximately 40 feet above the pit floor. Prior to the highwall failure, this ledge was approximately 120 feet long and extended from where the excavator had been positioned to the north end of the pit. The highwall slope below this ledge was slightly steeper at approximately 85 degrees. The highwall failure involved a section of rock that had been part of this ledge. An overview of the accident scene is shown in Appendix C.

Ground Control Plan

The company’s ground control plan, dated February 10, 2010, provides information pertaining to the mining method, highwall geometries, and local

geology. Rock overburden removal is carried out by blasting and open pit mining methods. The shot material is typically removed by a combination of loaders, bulldozers, and trucks, and is then deposited in spoil piles. The plan specifies a minimum pit width of 60 feet, a normal highwall slope of 76 degrees, and a maximum highwall height of 193 feet. However, the plan includes provisions for benches, specifying that they be 30 feet wide and spaced vertically 80 feet apart.

Management did not ensure that the acknowledged ground control plan was being followed. The operator's ground control plan states, "hazardous conditions will be corrected before the mining operation is allowed to proceed. If a hazardous highwall condition exists, the area will be posted to prevent personnel from entering the hazardous area."

Proper measures were not taken by mine management to adequately post warning signs in the area for the purpose of alerting persons of the dangerous condition and restricting entry. The berm that was constructed was reported to be 15 feet high by 40 feet in length constructed of shot rock material pushed up by a dozer; a ramp was left in the berm. This did not provide any warning to the victim or management on the day shift. No other method of warning was provided to alert the miners of the hazardous condition.

Geology

According to the ground control plan, the rock strata within the permit area is part of the Wise Formation. The Wise Formation consists of alternating layers of siltstone, shale, and sandstone, with a number of coal beds mixed throughout. The rock bedding planes have a northwest dip direction and a dip angle of approximately 1.5 degrees. The three main coal seams mined within the permit area include the Redwine, Kelly, and Imboden. Mining in the Redwine pit consists of overburden removal in order to expose the Redwine coal seam, which averages 24 to 30 inches in thickness. The Kelly coal seam lies approximately 130 to 155 feet below the Redwine coal seam, followed by the Imboden coal seam which lies approximately 70 to 100 feet below the Kelly coal seam. The Kelly and Imboden coal seams had been previously mined in underground mines; however, only the Imboden coal seam underground mine workings extend into the permit area. There did not appear to be signs of mine subsidence within the Redwine pit which could have contributed to the highwall failure.

Equipment

The victim was operating a Komatsu PC 400 excavator at the time of the accident. The excavator was a crawler unit equipped with a backhoe boom and bucket. The operator's cab was located on the left side of the boom and was not equipped with a falling object protection structure (FOPS) or a roll over

protection structure (ROPS). According to the manufacturer's specifications, the tracks are 11 feet wide and 14 feet long. The maximum digging depth is approximately 22 feet, the maximum digging height is approximately 34 feet, and the maximum digging reach is approximately 35 feet. The height to the top of the cab is approximately 11 feet.

The victim was directed by mine management to operate the excavator in a manner that placed the excavator cab adjacent to the unstable highwall.

The Komatsu PC 400 excavator was less efficient in terms of loading shot material into haul trucks than the Komatsu WA 900 front-end wheel loader and Caterpillar 992-G front-end wheel loader which were normally used. The bucket capacity of the Komatsu PC400 excavator bucket is 2.9 cubic yards. This is over five times smaller than the bucket capacities of the Komatsu WA 900 front-end wheel loader and Caterpillar 992-G front-end wheel loader which are 17 cubic yards and 16 cubic yards, respectively.

Weather

It was raining and foggy at the time of the accident. There had also been rainfall in the days prior to the failure. According to weather records from Appalachia, Virginia (about 5 miles south of the mine), there was 0.13 inches of precipitation on December 5, 2011, 0.63 inches of precipitation on December 6, 2011, and 0.94 inches of precipitation on December 7, 2011 (daily total includes rainfall after the accident). During the week prior to the accident, the temperature indicated average highs in the mid 50's and average lows in upper 30's. Therefore, temperature-related effects were ruled out as a factor, but it is possible that the rainfall did contribute to the highwall failure.

Highwall Failure

The highwall failure involved the hazardous area identified by the second shift employees on the previous shift. The failed area was approximately 30 feet high, 25 feet wide, and 15 feet thick (based on comparing the thickness of the remaining ledge portion of the highwall). The corresponding volume of failed material was approximately 417 cubic yards. The failed material included several large rock slabs and boulders, with the largest estimated to be 20 feet high, 20 feet wide, and 15 feet thick. This largest rock boulder weighed approximately 450 tons. This large slab appeared to have directly struck the excavator's cab and boom.

The highwall failure appeared to be a toppling-type failure. Given the witness statements, the vertical fracture or joint likely ran parallel and behind the face and intersected with another vertical fracture or joint, thereby forming a partially detached column or slab of rock that had the potential to fall with very little

warning. It is also likely that the column was more steeply inclined (approximately 85 degrees) compared to the rest of the highwall slope (approximately 70 to 80 degrees), which would have increased the potential for toppling to occur. There was no evidence of large amounts of water seeping from the failed area. However, the rainfall possibly contributed to the highwall failure by building small hydrostatic pressures behind the column of rock.

Examinations

Management failed to provide additional illumination for safe working conditions and to facilitate adequate examinations of work areas when operating in darkness. No light plant was used to illuminate the highwall and the work area in the pit. The superintendent performed an inspection of this pit prior to the start of day shift. The highwall inspection was performed in darkness without sufficient illumination. A mobile light plant was being stored at the mine. Miners stated that it had been weeks since a light plant had been used in the pit area.

The day and second shift supervisors utilized cell phone messages to communicate due to a four hour lapse between the end of the second shift and beginning of the day shift. The messages were primarily used to communicate information related to production activities and equipment breakdowns. According to Wright, he did not include any information concerning the condition of the highwall in the message left on December 7, 2011, at approximately 2:00 a.m.

The day shift and second shift had separate on-shift examination record books. Both books remained on mine property, and were available for review by any member of mine management. On the day of the accident, Short completed the on-shift record book after the accident occurred, but Short and Steele refused to sign the examination record.

Training and Mining Experience

Yonts was a seasoned miner with 20 years of mining experience. He was an experienced excavator operator but had not been trained to load haul trucks with an excavator. While this deficiency did not contribute to the accident, a non-contributory 104(d)(2) violation was issued to the mine operator on a separate inspection event for the Task Training violation.

The last Annual Refresher training for the employees of Fairbanks Coal Company, Inc. was conducted June 18, 2011. Yonts missed this training, but received training on July 8, 2011, from a contract trainer in Kentucky, who was not listed in the approved training plan as a certified instructor. The training received was not mine specific and did not include any training on the ground

control plan for the Fairbanks No. 4 Mine. The instructor who conducted Yonts' training stated he did not know Yonts was working at a mine in Virginia. The instructor also stated that he used a generic training plan to conduct the training. Yonts paid the instructor \$50.00 for the eight-hour training session, and payroll records revealed that Fairbanks Coal Company, Inc. compensated Yonts for the hours he attended the training. A second non-contributory 104(d)(2) violation was issued to the mine operator on the separate inspection event for the insufficient training violation.

ROOT CAUSE ANALYSIS

A root cause analysis was conducted. Root causes were identified that could have mitigated the severity of the accident or prevented loss of life. Listed below are root causes identified during the analysis and their corresponding corrective actions to prevent a recurrence of the accident.

Root Cause: Management did not ensure that proper blasting procedures were followed when blasting under high voltage power lines. Thirty-foot vertical holes were drilled and loaded heavily from 15 feet down to the bottom of the blast hole. This practice resulted in the bottom portion of the highwall being fractured while leaving the upper portion intact. As the shot materials were removed, the bottom portion of the highwall could not support the overlying rock structure, resulting in a toppling failure.

Corrective Action: Proper blasting procedures when blasting under or near high voltage power lines or towers were made part of the ground control plan.

Root Cause: Management did not ensure that the acknowledged ground control plan was being followed. Hazardous conditions were observed at the Redwine strip pit during the second shift by the bulldozer operator who reported the conditions to the foreman. The mine operator's ground control plan states: hazardous conditions will be corrected before the mining operation is allowed to proceed. If a hazardous highwall condition exists, the area will be posted to prevent personnel from entering the hazardous area."

Corrective Action: Proper posting procedures for hazardous conditions not corrected promptly were made part of the ground control plan.

Root Cause: The second shift foreman did not properly report an imminent danger condition, to the mine operator, when he identified the condition on the highwall in the Redwine pit, during an on-shift examination. The foreman recorded the information in the on-shift book, but did not verbally make the on-coming shift foreman or superintendent aware of the condition.

Corrective Action: The ground control plan has been amended to include the method of communication between shifts and to require the foreman of an on-coming shift to review the previous shift's on-shift record book prior to allowing work to commence in surface work areas.

Root Cause: Management failed to conduct an adequate examination of the highwall in the Redwine pit on the day of the accident, especially after heavy

rains occurred in the area. The examination did not detect cracks and loose rocks that were obviously present in the highwall and miners were allowed to work in an unsafe area.

Corrective Action: The ground control plan has been amended to require additional examinations after every rain, freeze, or thaw prior to miners entering the pit area, and examinations shall be recorded in the daily record book.

Root Cause: Management assigned the excavator operator to work in close proximity to a hazardous highwall with the operator's compartment of the Komatsu PC 400 adjacent to the highwall. This placed the excavator operator in a dangerous location and prevented him from having any escape route when a portion of the highwall collapsed, crushing the operator's compartment.

Corrective Action: The ground control plan has been amended to prohibit excavators from working within fifty feet of a highwall.

Root Cause: Management failed to provide additional illumination for safe working conditions and to facilitate adequate examinations of work areas when operating in darkness. No light plant was used to illuminate the highwall and the work area in the pit. The superintendent performed an inspection of this pit prior to the start of day shift. The highwall inspection was performed in darkness without sufficient illumination. A mobile light plant was being stored at the mine.

Corrective Action: The ground control plan has been amended to require that portable light plants be used during hours worked in darkness.

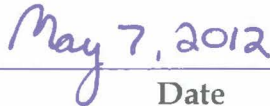
CONCLUSION

The accident occurred because of management's failure to provide adequate oversight of the mining process, to conduct proper examinations, and to comply with the mine's Ground Control Plan. Management chose to use a modified blasting procedure, due to the presence of overland high voltage lines, and this procedure created instability in the Redwine pit highwall. A hazardous highwall condition developed as the Redwine pit was mined and the condition was not posted conspicuously to warn miners of the danger. As mining continued on a subsequent shift, the hazardous condition along the Redwine pit highwall continued to exist due to lack of communication between shift managers, and an inadequate examination of the highwall by day shift foremen. The victim was directed by mine management to operate an excavator in a manner that placed the excavator cab adjacent to the unstable highwall. As he was loading previously blasted shot material into haul trucks, a portion of the highwall collapsed, entrapping and fatally injuring the victim in the cab of the excavator.

Approved By:



Gregory B. Meikle
District Manager



Date

ENFORCEMENT ACTIONS

1. An accident occurred at this operation on 12-07-2011 at approximately 07:31a.m. As rescue and recovery work is necessary, this order is being issued, under Section 103(j) of the Federal Mine Safety and Health Act of 1977, to assure the safety of all persons at this operation. This order is also being issued to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity at Fairbanks Coal Company Inc. No. 4 surface operation until MSHA has determined that it is safe to resume normal mining operations in this area. This order applies to all persons engaged in the rescue and recovery operation and any other persons on-site. This order was initially issued orally to the mine operator at 8 a.m. and has now been reduced to writing.

2. 104(d)(2) Order 8187875, CFR 30 § 77.1005(a)

A miner was performing work in the Redwine pit and hazardous material in the form of large rocks and visibly cracked, unstable highwall were present in his work area exposing him to a dangerous condition. The foreman did not have the hazardous materials scaled on the highwall, nor had any action been taken by management to correct the condition before any one worked in this area.

On December 6, 2011, the second shift production foreman determined that the highwall was unstable, removed all miners from the affected area, and left an earthen berm to prevent entry to the area. The earthen berm was reported to be 15 feet high by 40 feet in length, constructed of shot rock material pushed up by a bulldozer around unstable material. Based on a statement provided by a witness, a ramp was left in place leading onto the shot material.

On December 7, 2011 at approximately 0600, the dayshift production crew began work in the Redwine pit. At 0733 rocks fell from the highwall location where the crack had been observed by the second shift crew. The rocks struck the excavator, fatally injuring the excavator operator. Based on the statement provided by the day shift foreman during the investigation, he heard the superintendent tell the excavator operator to be aware of a crack in the highwall, and he also told him he would return and examine the area once it was daylight.

The mine superintendent and the day shift production foreman engaged in aggravated conduct which exhibits the absence of the slightest degree of care in that they were aware of the adverse condition of the highwall and gave specific instructions to the excavator operator on how to load the rock trucks and how to position the excavator. This violation is an unwarrantable failure to comply with a mandatory standard.

3. 104(d)(2) Order: 8187876, CFR 30 § 77.1006(a)

The mine superintendent directed the Komatsu operator to perform work under an unsafe highwall before the condition was corrected. The operator of a Komatsu excavator sustained fatal injuries in the Redwine pit area due to his placement and proximity to a hazardous highwall. Loose rock and a cracked, unstable highwall were present in the immediate area where the excavator operator was working. A portion of the highwall collapsed trapping the miner in the operator's compartment, between the falling material and the excavator. Due to the miner's location inside an unprotected cab, he had no means of a safe escape from the falling material.

On December 6, 2011, the second shift production Foreman determined that the highwall was unstable, removed all miners from the affected area, and partially bermed the area to prevent entry. The berm was reported to be 15 feet high by 40 feet in length constructed of shot rock material pushed up by a dozer around unstable material; a ramp was reportedly left in the berm. These conditions were recorded in the daily on shift record book.

On December 7, 2011, at approximately 0600, the day shift production crew began work in the Redwine pit. At 0733 rocks fell from the highwall location where the crack had been observed by the second shift crew. The rocks struck the excavator, fatally injuring the excavator operator.

Based on the statement provided by the day shift foreman during the investigation, he heard the superintendent tell the excavator operator to be aware of a crack in the highwall, and he also told him he would return and examine the area once it was daylight.

The mine superintendent and the day shift production foreman engaged in aggravated conduct which exhibits the absence of the slightest degree of care in that they were aware of the adverse condition of the highwall and gave specific instructions to the excavator operator on how to load the rock trucks and how to position the excavator. This violation is an unwarrantable failure to comply with a mandatory standard.

4. 104(d)(2) Order: 8187877, CFR 30 § 77.1004(b)

A hazardous condition existed in the Redwine pit area in the form of a cracked unstable highwall that contained loose rocks and material. Proper measures were not taken by mine management to adequately post warning signs in the area for the purpose of alerting persons of the dangerous condition and restricting entry. A determination had been made by mine management that this area could not be mined safely and posed a serious threat to miners.

On December 6, 2011, the second shift production Foreman determined that the highwall was unstable, removed all miners and partially bermed the affected area for his shift. Based on statements provided during the investigation the berm was reported to be 15 feet high by 40 feet in length constructed of shot rock material pushed up by a dozer; a ramp was left in the berm. No other method of warning was provided to alert the miners of the hazardous condition.

On December 7, 2011 at approximately 0600 the dayshift production crew began work in the Redwine pit. At 0733 rocks fell from the highwall location where the crack had been observed by the second shift crew. The rocks struck the excavator, fatally injuring the excavator operator.

The second shift production foreman engaged in aggravated conduct which exhibits the absence of the slightest degree of care in that he was aware of the adverse condition of the highwall and did not post the area off to alert miners on the following shift of the hazard. This violation is an unwarrantable failure to comply with a mandatory standard.

5. 104(d)(2) Order: 8187878, CFR 30 § 77.1713(b)

The second shift production foreman identified an imminent danger situation on the highwall after a dozer operator reported the condition in the Redwine pit area. The foreman partially bermed the area and miners working on the second shift were withdrawn from the area. The foreman entered the hazardous condition in his on-shift book, but did not also follow the operator's established practice by notifying the mine superintendent of the dangerous condition to alert the on-coming shift of the imminent danger. The mine has no reliable system to exchange information between the shift foreman and/or the mine superintendent to ensure all miners are aware of dangerous conditions on mine property. Statements provided by the mine superintendent revealed he did not routinely examine the on-shift books when he reported to work and many times cell phone messages were the base form of communication. The gravity of the situation was elevated by the fact that the 2 sets of on-shift books were being kept on mine property. Statement from the second shift foreman indicated that the cell phone message left on December 6, 2011 did not contain any information about the imminent danger condition only a report of production and breakdowns.

On December 6, 2011 the second shift production Foreman determined that the highwall was unstable, removed all miners from the affected area, and partially bermed the area to prevent entry. The berm was reported to be 15 feet high by 40 feet in length constructed of shot rock material pushed up by a dozer around unstable material; a ramp was reportedly left in the berm. These conditions were

recorded in the daily on-shift record book. The superintendent stated that he did not remember reviewing the record book and the day shift Foreman stated that he did not review the on-shift record book. The failure of the superintendent and production foreman to review the second shift record book demonstrates that they made no effort to make themselves aware of hazardous conditions.

On December 7, 2011, at approximately 0600, the day shift production crew began work in the Redwine pit. At 0733 rocks fell from the highwall location where the crack had been observed by the second shift crew. The rocks struck the excavator, fatally injuring the excavator operator.

The second shift foreman engaged in aggravated conduct which exhibits the absence of the slightest degree of care in that he was aware of the adverse condition of the highwall and did not notify the operator of the adverse highwall conditions in the Redwine pit. This violation is an unwarrantable failure to comply with a mandatory standard.

6. 104(d)(2) Order: 8187879, CFR 30 § 77.1004(a)

Neither the mine superintendent nor the day shift production foreman conducted an adequate examination of the highwall in the Redwine pit on December 7, 2011 after a heavy rain which occurred during the evening hours of December 6, 2011. Such examination shall be made and recorded in accordance with 77.1713. The examination by the mine superintendent and the day shift production foreman was conducted before day light, during foggy and rainy weather. The highwall was approximately 70 feet high. The lack of concern for an adequate examination was elevated when the superintendent reportedly stated he saw a crack and would be back when daylight came and look at it again. He proceeded to assign a miner to work in close proximity to the unstable highwall which resulted in fatal injuries to the excavator operator.

At approximately 0600, the dayshift production crew began work in the Redwine pit. At 0733 rocks fell from the highwall location where a crack had been observed by the second shift crew. The rocks struck the excavator, fatally injuring the excavator operator.

Hazardous material, in the form of large rocks, had not been stripped from the highwall in the Redwine strip pit before any work was performed. This condition was obvious, and had been recorded as a hazardous condition by the second shift production foreman on December 6, 2011.

Also, the mine superintendent and the day shift production foreman declined to sign the on-shift record book for December 7, 2011, as required by 77.1713. This

was an examination that both management persons admitted they conducted prior to the accident.

Based on a statement provided by the day shift foreman during the investigation, he heard the superintendent tell the excavator operator to be aware of a crack in the highwall, and he also told him he would return and examine the area once it was daylight. This information does not preclude the responsibility of the day shift foreman.

The Mine Superintendent and the day shift production Foreman engaged in aggravated conduct which exhibits the absence of the slightest degree of care in that they were aware of the adverse condition of the highwall and gave specific instructions to the excavator operator on how to load the rock trucks and how to position the excavator. This violation is an unwarrantable failure to comply with a mandatory standard.

7. 104(d)(2) Order: 8187880, CFR 30 § 77.207

Illumination sufficient to provide safe working conditions in the Redwine Pit was not being provided on the morning of December 7, 2011. Surface mining activities started at 0600 during darkness and the weather was still rainy and foggy. The superintendent and the day shift production foreman did not use adequate illumination to perform a highwall examination, nor was sufficient lighting provided to allow the excavator operator to safely perform his job. The only means of illuminating the highwall was equipment light and handheld lights. Statements from the miners revealed that it was weeks since a light plant was used. At 0733 rocks fell from the highwall location where a crack had been observed by the second shift crew. The rocks struck the excavator, fatally injuring the excavator operator.

Hazardous material, in the form of large rocks, had not been stripped from the highwall in the Redwine strip pit before any work was performed. This condition was obvious, and had been recorded as a hazardous condition by the second shift production foreman on December 6, 2011.

Based on the statement provided by the day shift foreman during the investigation, he heard the superintendent tell the excavator operator to be aware of a crack in the highwall, and he also told him he would return and examine the area once it was daylight.

The mine superintendent and the day shift production foreman engaged in aggravated conduct which exhibits the absence of the slightest degree of care in that they were aware of the adverse condition of the highwall and gave specific instructions to the excavator operator on how to load the rock trucks and how to

position the excavator. This violation is an unwarrantable failure to comply with a mandatory standard

APPENDIX A

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

Fairbanks coal Company Inc., Officials and Employees

Wesley D. Burke.....President/Director/Owner
Robert W. Kyle.....Secretary/Treasurer
Donnie E. Maine.....Vice Pres/Director/Owner
Daniel C. Short.....Superintendent
George K. Steele.....Foreman
Timothy R. Wright.....Foreman

Virginia Department of Mines Minerals and Energy

Marshall R. Moore..... Chief, DMME Division of Mines
Mike Willis..... Mine Safety Engineer
Sammy Fleming..... Inspector Supervisor
Carroll Greene.....Inspector Supervisor
Christopher Whitt..... Emergency Manager
Anthony Sturgill..... Technical Engineer
Gary Cutting..... Technical Specialist
Danny Mann..... Mine Inspector/Emergency Response Team
Hersh Hayden..... Mine Inspector/Emergency Response Team
Glendon Sturgill.....Mine Inspector/Emergency Response Team
Ken Johnson..... Mine Inspector/Emergency Response Team

Mine Safety and Health Administration

Ray McKinney.....District Manager
Wade Gardner.....CMS&H Surface Inspector
Benjamin Harding.....Assistant District Manager, Technical Division
Daniel Johnson.....Staff Assistant
Dennis Carter..... CMS&H Inspector
Garnie Deel.....Acting Supervisor, CMS&H Inspector
Scott Beverly.....Supervisory CMS&H Inspector
Carlton D. Beggs.....Civil Engineer
Gary Hall.....Supervisory CMS&H Inspector
Mike Colley.....Supervisory CMS&H Inspector
Lloyd Robinette Jr.....Family Liaison
Steve J. Vamossy..... P.E., Civil Engineer, Technical Support
Toney Argirakis.....Civil Engineer, Technical Support

APPENDIX B

List of persons Interviewed

Mark Boggs.....	Hauler Driver
Richard K. Steele.....	Hauler Driver
Delbert Porter.....	Bulldozer Operator
Brian Pennington.....	Hauler driver
Hank Ketron.....	Bulldozer Operator
John Davis.....	Loader Operator
John Pennington.....	Bulldozer Operator
Nathaniel Vanover.....	Hauler Driver
Daniel C. Short.....	Superintendent
George K. Steele.....	Foreman
Timothy R. Wright.....	Foreman
Dale E. Caudill.....	Mechanic

APPENDIX C

Sketch of the Accident



APPENDIX D

Victim Information

Accident Investigation Data - Victim Information

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



Event Number: **4 1 2 9 8 1 2**

Victim Information: 1

1. Name of Injured/III Employee: <i>Richard N. Yonts</i>		2. Sex <i>M</i>	3. Victim's Age <i>49</i>	4. Degree of Injury: <i>01 Fatal</i>											
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 12/07/2011 b. Time: 7:33</i>				6. Date and Time Started: <i>a. Date: 12/07/2011 b. Time: 6:00</i>											
7. Regular Job Title: <i>186 Excavator</i>			8. Work Activity when Injured: <i>072 Excavator</i>			9. Was this work activity part of regular job? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
10. Experience a. This Work Activity:	Years <i>2</i>	Weeks <i>5</i>	Days <i>3</i>	b. Regular Job Title:	Years <i>2</i>	Weeks <i>5</i>	Days <i>3</i>	c. This Mine:	Years <i>2</i>	Weeks <i>5</i>	Days <i>3</i>	d. Total Mining:	Years <i>20</i>	Weeks <i>0</i>	Days <i>0</i>
11. What Directly Inflicted Injury or Illness? <i>089 Falling rocks from a highwall</i>				12. Nature of Injury or Illness: <i>170 Rocks crushing victim</i>											
13. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input checked="" type="checkbox"/> Task: <input checked="" type="checkbox"/>															
14. Company of Employment: (If different from production operator) <i>Operator</i>				Independent Contractor ID: (if applicable)											
15. On-site Emergency Medical Treatment: Not Applicable: <input type="checkbox"/> First-Aid: <input type="checkbox"/> CPR: <input type="checkbox"/> EMT: <input type="checkbox"/> Medical Professional: <input type="checkbox"/> None: <input checked="" type="checkbox"/>															
16. Part 50 Document Control Number: (form 7000-1)				17. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>											

Victim Information:

1. Name of Injured/III Employee:		2. Sex	3. Victim's Age	4. Degree of Injury:											
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:				6. Date and Time Started:											
7. Regular Job Title:			8. Work Activity when Injured:			9. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>									
10. Experience a. This Work Activity:	Years	Weeks	Days	b. Regular Job Title:	Years	Weeks	Days	c. This Mine:	Years	Week	Days	d. Total Mining:	Years	Weeks	Days
11. What Directly Inflicted Injury or Illness?				12. Nature of Injury or Illness:											
13. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>															
14. Company of Employment: (If different from production operator)				Independent Contractor ID: (if applicable)											
15. On-site Emergency Medical Treatment: Not Applicable: <input type="checkbox"/> First-Aid: <input type="checkbox"/> CPR: <input type="checkbox"/> EMT: <input type="checkbox"/> Medical Professional: <input type="checkbox"/> None: <input type="checkbox"/>															
16. Part 50 Document Control Number: (form 7000-1)				17. Union Affiliation of Victim:											

Victim Information:

1. Name of Injured/III Employee:		2. Sex	3. Victim's Age	4. Degree of Injury:											
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:				6. Date and Time Started:											
7. Regular Job Title:			8. Work Activity when Injured:			9. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>									
10. Experience a. This Work Activity:	Years	Weeks	Days	b. Regular Job Title:	Years	Week	Days	c. This Mine:	Years	Week	Days	d. Total Mining:	Years	Weeks	Days
11. What Directly Inflicted Injury or Illness?				12. Nature of Injury or Illness:											
13. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>															
14. Company of Employment: (If different from production operator)				Independent Contractor ID: (if applicable)											
15. On-site Emergency Medical Treatment: Not Applicable: <input type="checkbox"/> First-Aid: <input type="checkbox"/> CPR: <input type="checkbox"/> EMT: <input type="checkbox"/> Medical Professional: <input type="checkbox"/> None: <input type="checkbox"/>															
16. Part 50 Document Control Number: (form 7000-1)				17. Union Affiliation of Victim:											