#### CAI-2014-06

## UNITED STATES DEPARTMENT OF LABOR MINE SAFETY AND HEALTH ADMINISTRATION

## COAL MINE SAFETY AND HEALTH

#### REPORT OF INVESTIGATION

Underground Coal Mine

Machinery May 14, 2014

MC #1 Mine M-Class Mining, LLC Macedonia, Franklin County, Illinois I.D. No. 11-03189

## Accident Investigators

Harry Wilcox Coal Mine Safety and Health Inspector

Michael Tite Coal Mine Safety and Health Inspector

David Minor Coal Mine Safety and Health Inspector

Originating Office Mine Safety and Health Administration District 8 2300 Willow Street Vincennes, Indiana Robert A. Simms, District Manager

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#### **OVERVIEW**

On Wednesday, May 14, 2014, at approximately 2:15 p.m., William-Daniel Hans Payne (victim), a roof bolting machine operator, was killed when he was caught between a roof bolting machine and the coal rib. Payne and another roof bolting machine operator were tramming the roof bolting machine in the outby direction. The pair had trammed the roof bolting machine approximately 60 crosscuts when the accident occurred. Payne was found lying on the side of the entry between the roof bolting machine and the coal rib.

The accident occurred because the mine operator did not have effective policies, programs, procedures, or controls in place to protect miners from the hazards related to moving roof bolting machines in outby areas and the mine operator failed to provide a remedy for the limited visibility of the machine operator. In addition, the mine operator failed to maintain the roof bolting machine in safe operating condition.

## **GENERAL INFORMATION**

The MC#1 Mine is located near Macedonia, Franklin County, Illinois, and is operated by M-Class Mining, LLC. Coal is mined from the Herrin No. 6 coal seam, which averages 6 feet in height and has a depth-of-cover of approximately 900 feet. At the time of the accident, the mine employed 218 personnel. The mine works five days per week, operates two production shifts each day, and produces an average of 33,000 tons of raw material per day.

The mine has a dual-purpose slope at the South portal and a shaft at the Viking portal. One side of the slope is used as a roadway to transport miners and materials in and out of the mine. Coal is transported to the surface via a belt conveyor system. When looking inby, a belt conveyor is installed on the right side of the slope for transporting coal out of the mine. The shaft at the Viking portal is used to transport men and material in and out of the mine. At the time of the accident, the mine was ventilated with two blowing main mine fans and two exhausting main fans, which are connected to the mine via vertical shaft openings from the coal seam to the surface. One blowing main mine fan provides intake air for the South portal area and a second blowing fan provides intake air for the Viking portal area. The mine operates four mining sections. Three mining sections utilize continuous mining machines and shuttle cars for the development of longwall gate entries, and one mining section utilizes a longwall system consisting of a shearer, armored face conveyor (pan line), stage loader, and 1200-ton capacity portable roof supports (shields). Equipment for a second longwall section was being set up for operation.

The mine liberates 3,470,161 cubic feet of methane in a 24-hour period and is on a 5-day spot inspection schedule for excessive methane in accordance with Section 103(i) of the Mine Act.

The principal officers at this mine at the time of the accident were:

Anthony Webb	President/General Manager
Travis Brown	Viking Portal General Mine Manager
Joshua Huth	Viking Portal Longwall Coordinator
Girolamo Antravaia	Safety Director

At the time of the accident, a regular (E01) safety and health inspection was in progress by the Mine Safety and Health Administration (MSHA). The previous regular safety and health inspection of the mine was completed on March 27, 2014. The Non-Fatal Days Lost (NFDL) injury incidence rate for the MC#1 Mine in 2013 was 4.77, compared to the National NFDL rate of 3.28 for mines of this type.

## DESCRIPTION OF THE ACCIDENT

The mine tracking system records and accident investigation interview statements indicate that Shawn Stacy, Section Supervisor, Payne, and Kevin Fuller, Roof Bolting Machine Operators, and a crew of miners entered the mine via the Viking Portal on the dayshift of May 14, 2014, at 7:13 a.m. Stacy drove the man trip from the Viking Portal shaft bottom along the Main North travelway and the Viking Tailgate 1 (TG) travelway into the mining section, which was near No. 156 crosscut. Stacy made two trips in and out of the section to complete the transport of all of the miners from the shaft bottom to the section. Fuller and Payne arrived at the Viking TG 1 equipment recovery area, which was near the 151 crosscut, at 8:25 a.m. and 9:59 a.m., respectively. Stacy assigned Payne and Fuller to tram the roof bolting machine from the Viking TG 1 equipment recovery area to the mouth of the section. The back bumper of the roof bolting machine was coupled to a 995-volt ac (alternating current), 3-phase, rubber-tire mounted, diesel-powered generator, which was used to supply power to operate the roof bolting machine.

After connecting the generator to the roof bolting machine, Payne and Fuller trammed from the No. 1 entry to the No. 3 entry (travelway) at the No. 151 crosscut. At approximately 11:31 a.m., they started tramming the roof bolting machine outby, toward the mouth of the section. At approximately 1:38 p.m., Stacy observed Payne operating the roof bolting machine near the No. 116 crosscut with Fuller following behind the generator. At approximately 2:00 p.m., Stacy observed Fuller operating the roof bolting machine near the No. 98 crosscut with Payne following behind the generator.

Sometime after 2:00 p.m., Payne positioned himself in front (outby) of the roof bolting machine. At 2:15 p.m. near No. 89 crosscut, Fuller saw Payne walking in front of the roof bolting machine and then lost sight of him. Fuller immediately stopped the roof bolting machine and backed up. After backing up the roof bolting machine a short distance, Fuller again saw a light in front of the roof bolting machine. He immediately dismounted off the rear of the machine. Fuller walked around the right side and front of the roof bolting machine, then to the left side, where he found Payne lying on the mine floor between the rib and the automated temporary roof support (ATRS) structure. Payne was found with his head pointing inby and his legs pointing outby. See Appendix A for a drawing of the accident scene. Fuller found Payne to be unresponsive with no detectable pulse or respiration and immediately started CPR. Fuller continued CPR until he was exhausted. At 2:50 p.m., he stopped CPR to look for help or a mine telephone to call for help. Between approximately 2:50 p.m. and 3:20 p.m., Fuller left the victim twice to look for help or an operable telephone. Each time Fuller left the victim he returned and resumed CPR, but Fuller did not locate any other personnel or find an operational mine telephone.

After 3:20 p.m., Fuller finally encountered another miner in the No. 3 entry inby the accident scene. Michael Pribble, Roof Bolting Machine Operator, was stopped on a tractor at No. 101 crosscut when he saw Fuller's cap light flashing outby his location. Fuller ran to Pribble's location and informed him of the accident. Fuller returned to the victim. Pribble called to report the accident and Mike Lilly, Mine Manager, responded. Lilly was near the Viking Longwall District 1 Headgate #1. Pribble reported that Payne had been injured by a roof bolting machine, was unresponsive, and was located at the No. 87 crosscut on the Viking TG 1 in the No. 3 entry. It was learned during the accident investigation that the No. 87 crosscut, which had been reported as the accident location, was inaccurate. Lilly called Shawn Stacy, who was inby the accident scene on the Viking TG 1, and directed him to go to the accident scene. Lilly called Safety Director, Girolamo Antravaia, who was on the surface of the mine, and informed him of the accident and that the victim was unresponsive.

After talking with Pribble, Fuller returned to the accident scene and restarted CPR on Payne again. Stacy arrived at the accident scene a short time after Pribble had reported the accident and took over CPR. Stacy checked vital signs and found Payne unresponsive with no detectable pulse or respiration.

At approximately 3:20 p.m., Antravaia and Joshua Huth, Viking Portal Longwall Coordinator, entered the mine at the Viking Portal and traveled by truck to the accident scene, arriving at approximately 3:45 p.m. Stacy was performing CPR on Payne. Antravaia assessed Payne's vital signs. Payne was still unresponsive with no detectable pulse or respiration. Antravaia took over the CPR activities from Stacy. Payne was transported from the accident scene to the Viking Portal shaft bottom by truck.

Payne was brought to the surface at approximately 3:50 p.m. Abbott Emergency Services (EMS) transported the victim to the Franklin County Hospital in Benton, Illinois. At 4:12 p.m., Payne was pronounced dead by Dr. Charles Buckley at the Franklin County Hospital emergency room.

## INVESTIGATION OF THE ACCIDENT

Anthony Webb, President of Underground Operations for Coal Field Transport, notified MSHA by calling the MSHA Call Center at 4:01 p.m. on May 14, 2014, to report the accident. At 4:15 p.m., the MSHA Call Center contacted Anthony DiLorenzo, Supervisory Coal Mine Safety and Health Inspector, to convey that an accident had occurred. DiLorenzo contacted Michael Rennie, Supervisory Coal Mine Safety and Health Inspector, at the Marion, Illinois Field Office to notify him of the accident.

Rennie had been notified at 3:30 p.m., by Travis Brown, General Manager of the Viking Portal, informing Rennie of a serious accident at the Viking Portal, but at that time, Brown did not know the seriousness of the injury. Brown said the rescuers were on their way out of the mine with the victim. Rennie verbally issued a 103(j) order at 3:30 p.m., to ensure the safety of the miners. Rennie notified MSHA management personnel at the MSHA Vincennes District Office of the accident. After repeatedly trying to contact personnel at the mine, Rennie called Webb's cell phone at 3:57 p.m., and was told by Webb that the victim's injuries were fatal. At 4:04 p.m., Rennie notified Steve Miller, Supervisory Coal Mine Safety and Health Inspector. Miller directed Coal Mine Safety and Health Inspectors Harry Wilcox and David Minor to investigate the accident. Miller traveled to the mine ahead of the investigators and started the initial preparation for the investigation of the accident.

The accident investigation was conducted in cooperation with the Illinois Department of Natural Resources, Office of Mines and Minerals (IDNR), and M-Class Mining, LLC personnel. Appendix B lists the persons participating in the accident investigation.

The accident investigation team traveled underground for the initial on-scene investigation and arrived at the accident scene at 7:30 p.m. on May 14, 2014. Preliminary interview statements were obtained from persons having knowledge of the facts and circumstances concerning the accident.

On May 15, 2014, David Brown, MSHA Training Specialist, reviewed training records for this investigation.

Formal interviews were conducted on May 16, 2014, at the MSHA Marion Field Office. The employees interviewed are listed in Appendix C.

On May 21, 2014, Gary Clark, Mining Engineer, and Phillip McCabe, Mechanical Engineer from MSHA Technical Support's Approval and Certification Center, collaborated with other investigators to evaluate the roof bolting machine involved in the accident.

## DISCUSSION

#### Accident Notification

During interviews, it was determined that the time of the accident initially reported was incorrect. Antravaia reported the accident time as 3:20 p.m., which was when he first heard of the accident on the mine radio. Payne's tracking/communication unit, which was found on the roof bolting machine, did not communicate any movement of the roof bolting machine after 2:15 p.m. The MSHA Call Center was called at 4:01 p.m., 41 minutes after the mine operator knew of the accident. The nature of the injuries should have caused the mine management to know that the accident was required to be immediately reported to MSHA in accordance with 30 CFR § 50.10. A non-contributory citation was issued for this violation.

## Accident Scene

Initially, the No. 87 crosscut was reported as the accident location, which was determined to be inaccurate. The accident occurred in the No. 3 entry of the Viking TG 1 air courses between No. 89 and No. 90 crosscuts. When investigators arrived at the accident scene, Payne had been removed from the mine and transported to the Franklin County Hospital. The roof bolting machine and the "white" diesel generator involved in the accident were positioned on the south side of the entry. The front end of the roof bolting machine was pointing outby with the generator hooked to the rear bumper of the roof bolting machine, utilizing a tow bar and chain arrangement. The trailing cable for the roof bolting machine was plugged into the generator. The excess trailing cable, which could not be stored on the cable reel, was coiled in the center walkway of the roof bolting machine.

Area and directional lights were operational on the roof bolting machine with the exception of the directional lights on the outby or cable reel end of the machine not operational. Although the inoperative rear lights did not contribute to the accident, a citation for this violation of 30 CFR § 75.512 was issued on a separate inspection event.

The tram deck on the roof bolting machine is located on the left side near the machine's center. The visibility from the tram deck is limited for the roof bolting machine operator. The machine canopy height is adjustable by hydraulic cylinder and can be set as low as 11 inches above the operator's compartment wall and as high as 29 inches about the compartment wall. The canopy height is normally set at 18 inches above the compartment wall. The coal seam height is approximately 78 inches. The main-motor compartment covers, drill booms, and the ATRS structure limit the machine operator's view in the front of and on both sides of the roof bolting machine. A Notice to Provide Safeguard(s) was issued to address the hazards associated with limited visibility.

Fuller stated that while they were tramming the roof bolting machine out of the Viking TG 1, he and Payne normally either walked behind the generator or rode in the center walkway on the roof bolting machine. Fuller stated that the roof bolting machine was pulling to the right as they were tramming it out of the section. He stated that he had to move the tram controls to keep the roof bolting machine tramming in a straight line.

Payne's tracker/communicator was found in the operator's compartment of the roof bolting machine. Fuller did not try using his tracker/communication unit at the time of the accident. Fuller stated that he forgot that he could call for help with the unit. Fuller's tracker/communication unit was tested at the accident scene on May 15, 2014. The unit functioned properly on both tracking and communication.

The floor of the travelway was dry, flat, and smooth in both directions leading from the accident scene. Crawler track impressions from the roof bolting machine were observed on the travelway floor. The impressions left in the travelway floor were generally in a straight line with evidence of slight directional changes at intermittent distances. Marks from the roof bolting machine were observed on the south rib of the No. 3 entry adjacent to the ATRS structure on the roof bolting machine. The roof bolting machine in optimal condition is capable of a tram speed of up to 90 feet per minute. Typically, the machine is trammed at 65 to 70 feet per minute.

On May 15, 2014, the roof bolting machine was moved to reposition it to the original cat track impression at the accident location. This was done to check for alignment between the marks on the south rib and the structure of the roof bolting machine. The ATRS structure on the roof bolting machine aligned with the marks on the rib.

## Equipment

The self -propelled equipment involved in the fatal accident was a 995-volt ac, 3phase, J.H. Fletcher & Co. Model DDR-17-A, serial number 2008014, doubleboom roof bolting machine. MSHA approval number for the roof bolting machine is 2G-2956A-5, and the company identification number is DBRB3. In addition, a 995-volt ac, 3-phase, diesel-powered generator with the company designation of "white," manufactured by Flanders Electric, Model Number 680MSL1465, provided power to operate the roof bolting machine. The generator was being pulled by the roof bolting machine.

#### Examination of the Roof Bolting Machine

Investigators conducted tests and examinations on the roof bolting machine on May 14, 2014, with subsequent testing on May 15, 2014, May 29, 2014, and June 2,

2014. Violations for the roof bolting machine that were not related to the cause of the accident were issued under a separate inspection event than the accident investigation. Those violations of 30 CFR included: § 75.503, § 75.1725(a), § 75.1107, § 75.400, and § 75.512.

## Evaluation of the Roof Bolting Machine's Operation

Investigators conducted an evaluation of the roof bolting machine's tram and crawler functions on May 21, 2014. A field representative from J. H. Fletcher & Co. was present during the evaluation. The evaluation results are listed below:

- 1) After measuring the hydraulic fluid flow output from the tram pumps and control valves, it was determined that the split/combine valve (center section) functions to split or separate the flows of the pumps or combines the flows from one (if one pump malfunctions or stops) or both pumps. The valve functioned as designed.
- 2) When the split/combine lever is in the combined position (the valve was reportedly tied in the combined position), the pump flows are combined. A theoretical example with these pumps would be that each pump supplies 31 gallons-per-minute (gpm). In the combined position, 62 gpm would be available to either tram motor, but not both. The combined valve position makes the turning twice as fast in the right and left directions. It does not increase the forward or reverse speed of the machine.
- 3) The combined position of the split/combine lever was intended to be used if one tram pump or pump motor failed or malfunctioned so the machine could still move.
- 4) As the temperature of the hydraulic fluid increased, the fluid flow decreased.
- 5) The manufacturer recommends replacing the tram pumps when the discharge capacity drops below 75 per cent of nominal pump output. The right tram pump is marginal in performance.
- 6) The right crawler track needed maintenance or adjustment. Examination indicated the track climbed up on the sprocket during forward tramming.
- 7) Mine personnel reported that the roof bolting machine had a tendency to drift to the right going in the forward direction while tramming. The roof

bolting machine was observed drifting to the right while moving in the forward direction.

8) The labels associated with the control levers at each drill station were missing.

## Previous Accidents

A review of the reported accidents for the MC #1 Mine found two previous injuries that were caused by crushing from machinery or equipment. On January 29, 2010, a miner received non-fatal crushing injuries from a mantrip or personnel carrier. On January 17, 2014, a miner received non-fatal crushing injuries from an underground mining machine.

## Training and Experience

Payne had two years and fifteen weeks of total underground mining experience with the entirety of the experience at the MC#1 Mine. He was hired on January 30, 2012, and completed the initial part of a 40-hour new miner training course on January 14, 2012 at Rend Lake College. Payne completed the final part of the new miner training on January 30, 2012 at the mine. Payne received annual refresher training on July 21, 2012 and July 27, 2013 at Rend Lake College. Payne received task training on the Fletcher double-boom roof bolting machine, Bucyrus scoop, shuttle car, single-boom roof bolting machine, Joy continuous mining machine, Dodge truck, bobcat, and belt conveyors.

Fuller had approximately four years of underground mining experience. He worked two separate one and one-half year periods at the Willow Lake Mine, where he worked mainly as a roof bolting machine operator. Fuller was hired by the MC#1 Mine on May 28, 2013. His fourth year of experience was worked at the MC#1 Mine. Fuller received State of Illinois First Class Papers on March 25, 2008; experienced miner training, introduction to work environment on May 28, 2013; and annual refresher training on July 27, 2013, at Rend Lake College. Fuller received task training on the Fletcher double-boom roof bolting machine, DBT scoop, shuttle car, single-boom roof bolting machine, Joy continuous mining machine, Dodge truck, mantrip, Bobcat, utility, and belt conveyors.

## **ROOT CAUSE ANALYSIS**

An analysis was conducted to identify the underlying cause of the accident that was correctable through reasonable management controls. Listed below are the root causes identified during the analysis and the corresponding corrective action implemented to prevent a recurrence of the accident:

**<u>Root Cause:</u>** The mine operator did not have effective policies, programs, procedures, or controls in place to protect miners from the hazards related to moving roof bolting machines in outby areas of the mine, and therefore, miners were not trained properly on this task.

## **Corrective Action:**

The mine operator submitted a roof control plan revision that details the required equipment, procedures, and precautions in order to move roof bolting machines in outby areas. The roof bolting machine operators were trained in the precautions necessary when moving the roof bolting machines in the outby areas of the mine.

**Root Cause:** The mine operator failed to maintain the roof bolting machine in safe operating condition. A hydraulic control valve in the tramming circuit had been tied in place, which made tramming difficult to control when both electric motors for the hydraulic system are operating simultaneously.

## Corrective Action:

The mine operator removed the nylon rope that was holding the "split/combine" valve in the "combine" position. The roof bolting machine operators were trained in safe operating procedures for the roof bolting machines, including the hazards associated with tying a tram control valve circuit.

## Root Cause:

The mine operator failed to provide administrative or engineering controls or train the miners properly to prevent miners from entering areas of limited visibility around machinery when the machinery is being moved along haulage roads and other areas.

## **Corrective Action:**

The mine operator provided additional communication, lighting, and established a protocol for moving machinery on haulage roads. The roof bolting machine operators were task trained in the protocol for moving machinery on haul roads.

#### CONCLUSION

The victim was caught by a moving roof bolting machine and the coal rib while walking in front of the machine as the machine was being trammed in the outby areas of the mine. The mine operator did not have effective policies, programs, procedures, or controls in place to protect miners from the hazards related to moving roof bolting machines in outby areas. The mine operator also did not provide engineering or administrative controls for the hazards associated with limited visibility around the machinery when it was moving. In addition, the mine operator failed to maintain the roof bolting machine in safe operating condition. A hydraulic control valve in the tramming circuit had been tied in place, which made tramming difficult to control when both electric motors for the hydraulic system were operating simultaneously.

Approved By:

Labert A. G.

Robert A. Simms District Manager

10/29/2014

Date

#### **ENFORCEMENT ACTIONS**

- Section 103(j) Order No. 8438970, an accident occurred at this operation on 5/14/2014 at approximately 2:15 P.M. 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 being issued to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activities at the Viking Portal, No.1 Tailgate in the No. 3 entry between No. 89 and No. 90 crosscut 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 scene. This order was initially issued orally to the mine operator at 3:30 P.M. and has now been reduced to writing.
- 2. A 104(a) citation was issued for a violation of 30 CFR § 75.1725(a): On May 14, 2014, at approximately 2:15 p.m., a miner was fatally injured while assisting the move of the company No. DBRB3 Fletcher roof bolting machine from the completed Viking Longwall District 1 Tailgate #1 Section. The victim received crushing injuries when he was caught between the roof bolting machine ATRS and the south coal rib in the No. 3 entry between No. 89 and No. 90 crosscuts. The tram control "Split/Combine" valve in the operator's compartment was held in the "combine" position by a nylon rope. The roof bolting machine was being operated with both electric motors operating simultaneously for the hydraulic pumps. The Fletcher maintenance manual clearly states the "Split/Combine" valve is to be used in the "combine" position for use with only one electric motor on the roof bolting machine operating. The Fletcher maintenance manual clearly warns that operation in the "Combine" position will make tramming difficult to control when both electric motors are in operation.
- 3. A Notice to Provide Safeguard(s) was issued pursuant to section 314(b) of the Act for a violation of 30 CFR § 75.1403: A fatal accident occurred on May 14, 2014, at this mine during the removal of equipment from the North Tailgate 1 and North Headgate 1 sections. A miner was caught between the ATRS of the company No. DBRB3 Fletcher roof bolting machine and the coal rib in the No. 3 entry of the Viking Portal, North Tailgate 1, No. 3 entry between No. 89 and No. 90 crosscuts. The machine was being transported off the section using a diesel generator to provide power to the machine's tram and operating systems. The miner was

walking beside the machine when he was caught between the machine and the coal rib. Visibility was limited from the machine operator's compartment, located on the middle left side of the machine. This is a notice to provide safeguards. To assure that miners on foot do not go undetected by equipment or machine operators, whenever roof bolting machines or other large machinery are being trammed outby the section loading point or transported along haulage roads at this mine, the mine operator must have engineering controls and / or administrative controls in place to prevent miners working in the area of moving machinery from entering the limited visibility / No-Go zones on this machinery while the machinery is moving. Additional radio communications will be provided for the miners involved in the equipment move so that equipment operators and miners on foot can communicate with each other. Additional lighting, such as an operating strobe will be worn by all miners assisting in the equipment move. The mine operator shall establish a safe work protocol for the transport of machinery in the haulage roads. The protocol shall identify and address the safe work locations, NO-GO zones, and safe work procedures for machinery being moved. The protocol shall be incorporated in the mine's training plan for task training.

4. A 104(a) citation was issued for a violation of 30 CFR § 48.7(a): The mine operator failed to provide adequate task training for two roof bolters who were moving a roof bolting machine in an area outby of a working section. A fatal accident occurred on May 14, 2014, at this mine during the removal of equipment from the North Tailgate 1 area. A miner was caught between the automated temporary roof support of the company No. DBRB3 Fletcher roof bolting machine and the coal rib. The accident occurred in the No. 3 entry of the Viking Portal, Tailgate 1, between No. 89 and No. 90 crosscuts. The machine was being transported off the working section using a diesel generator to provide ac power to the machine when he was caught by the machine and the south side coal rib. The task training provided by the mine operator was not adequate to address hazards associated with mining equipment being moved in areas outby the working sections.

## Appendix A

## Drawing of Accident Scene



Not to Scale

# Appendix B

Persons Participating in the Investigation

# Mine Safety and Health Administration

Steve Miller	Supervisory Mine Safety and Health Inspector
Harry Wilcox	CMS&H Inspector, Accident Investigator
David Minor	CMS&H Inspector
Michael Tite	CMS&H Inspector
Phillip Stanley	CMS&H Inspector
Phillip McCabe	MSHA Technical Support
Gary Clark	MSHA Technical Support
Dean Cripps	Supervisory Mine Safety and Health Electrical
David Brown	MSHA Education and Field Services
State of Illinois Department of N	atural Resources, Office of Mines and Minerals
Jim Hafliger	Director Office of Mines and Minerals
William Patterson	Inspector
Larry Jenkel	Inspector
Man	agement Personnel
Anthony Webb	President of Underground Operations
	for Coal Field Transport
Girolamo Antravaia	MC#1 Mine Viking Portal Safety Director
Travis Brown	MC#1 Mine Viking Portal General Manager
Jimmy Gass	MC#1 Mine Viking Portal Safety
Wes Dunn	MC#1 Mine Viking Portal Maintenance
	Supervisor
	Attorneys
Charles Little	Bailey and Glasser
Christopher Pence	Hardy and Pence
Indu	stry Representative
Ryne Hunt	J. H. Fletcher & Co. Field Representative

# Appendix C

## Interview List

Shawn Stacy Kevin Fuller Girolamo Antravaia Michael Pribble

Section Foreman Roof Bolting Machine Operator Safety Director Roof Bolting Machine Operator

# Appendix D

## Victim Information

## Accident Investigation Data - Victim Information Event Number: 4 2 5 4 4 3 6

U.S. Department of Labor

Mine Safety and Health Administration

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Victim Information: 1													
1. Name of Injured/III Employee:	2. Sex	κ 3. Victim's Age		4. Degree of Injury:									
William-Daniel H. Payne	М	25	5	01 Fata	a/								
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:				6. Dat	6. Date and Time Started:								
a. Date: 05/14/2014 b.Time: 16:12				a. Date: 04/14/2014 b.Time: 7:00									
7. Regular Job Title:			8. Work Ad	ctivity when I	njured:				9. Was th	nis work ac	tivity part o	of regular job	?
012 Roof Bolter Operator			079 Roo	f Bolter Tran	nming					Yes	XNo		
10. Experience Years Weeks a. This	Days	b. Regular	Years	Weeks	Days	c: This	Years	Weeks	Days	d. Total	Years	Weeks	Days
Work Activity: 2 15	0	Job Title:	2	15	0	Mine:	2	15	0	Mining:	2	15	0
11. What Directly Inflicted Injury or Illness	?					12. Natur	e of Injury	or Illness:					
077 Underground Mining Machi	ines					170	Crushing						
13. Training Deficiencies:													
Hazard: New/New	ly-Employe	d Experien	ced Miner:				Annual:		Task:				
14. Company of Employment: (If different	from produ	iction opera	ator)										
Operator							Ir	ndependent C	Contractor ID	: (if applica	able)		
15. On-site Emergency Medical Treatmer	nt:												
Not Applicable: First-Aid	d:	С	PR: X	EMT:	X	Med	ical Profes	sional:	None:				
16. Part 50 Document Control Number: (f	orm 7000-	) 22014	1400013	1	17. Unic	on Affiliatio	on of Victim	n: 9999	None (	No Union	Affiliation)		