FAI-4315107-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Coal)

Fatal Powered Haulage Accident
January 29, 2024

Ellangowan Bank #45
Reading Anthracite Company
Mahanoy City, Schuylkill County, Pennsylvania
ID No. 36-02234

Accident Investigators

Edward Knoll
Mine Safety and Health Inspector

Stephen Kowalick
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Mt. Pleasant District
Paladin Professional Center
631 Excel Dr. Suite 100
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Michael Kelley, District Manager

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OVERVIEW

On January 29, 2024, at 4:17 a.m., David Moyer, a 63 year-old haul truck driver with over 13 years of mining experience, died when the haul truck he was operating backed over the end of the feed bank and overturned.

The accident occurred because the mine operator did not: 1) examine the feed bank before miners began working, 2) provide illumination at the feed bank, 3) provide a means to prevent overtravel and overturning at the dumping location, 4) follow their Ground Control Plan, and 5) ensure the haul truck driver was wearing the seat belt.

GENERAL INFORMATION

Reading Anthracite Company owns and operates the Ellangowan Bank #45 mine. The mine is a surface culm bank mine in Mahanoy City, Schuylkill County, Pennsylvania. A culm bank is an anthracite coal "waste" or refuse material site. The mine operator reclaims the culm bank material by using an excavator to load haul trucks. The haul trucks transport the culm bank material to the feed bank.

Schuylkill Energy Resources, Inc. removes the culm bank material from the feed bank using front-end loaders to feed the material onto a belt conveyor that goes to the St. Nicholas Cogeneration Plant for processing for use in electrical generation. Reading Anthracite Company and Schuylkill Energy Resources, Inc. have a corporate structure with many of the same officers and directors.

Ellangowan Bank #45 mine employs 11 miners and operates one, ten-hour shift, six days a week. The United Mine Workers of America represent Ellangowan Bank #45 hourly employees. Schuylkill Energy Resources, Inc's. hourly employees are not represented by a union.

The principal management officials at Ellangowan Bank #45 mine at the time of the accident were:

Vincent Devine	Material Handling Supervisor, Schuylkill Energy Resources, Inc.
Andrew Devine	Foreman, Reading Anthracite Company

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on August 18, 2023. The 2023 non-fatal days lost incident rate for Ellangowan Bank #45 mine was zero, compared to the national average of 2.20 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On January 29, 2024, at 2:55 a.m., Moyer began his shift by conducting a pre-operational inspection of his haul truck. According to interviews, at approximately 4:00 a.m., Moyer drove to the excavator, operated by Scott Bowers, Excavator Operator, to get a load of culm bank material. At approximately 4:10 a.m., Moyer left the excavator loaded with material and traveled to the feed bank. The investigation team verified from the fault code data downloaded from the haul truck's onboard computer that, at 4:17 a.m., while traveling in reverse, Moyer backed over the end of the feed bank and overturned. The downloaded data showed that Moyer applied the foot brake as the haul truck overturned.

According to interviews, between 4:17 a.m. and 7:39 a.m., three other haul trucks continued to haul material and dump it on the feed bank. At approximately 6:20 a.m., Joseph Nadja, Bulldozer Operator, began pushing the piles the haul trucks had dumped on top of the feed bank over the end of the feed bank (see Appendix A). At 6:26 a.m., Bowers sent a text to Moyer's cell phone to see where he was and received no response. At 7:07 a.m., Bowers called Moyer's cell phone and received no answer.

According to interviews, at 7:38 a.m., Steven Forgotch, Equipment Operator / Supervisor for Schuylkill Energy Resources, Inc., accompanied by Elijah Brzostowski, Plant Maintenance for Schuylkill Energy Resources, Inc., drove a pickup truck to check the loadout area. Forgotch observed the overturned haul truck at the bottom of the feed bank loadout area. Forgotch instructed Brzostowski to inform V. Devine. Forgotch observed Moyer in the cab of the haul truck, without a seat belt on, and began trying to get into the cab. At 7:45 a.m., Brzostowski drove to the office and informed V. Devine of the accident. V. Devine got the automated external defibrillator, called A. Devine on his cellphone, and told him to call 911. At 7:48 a.m., A. Devine called 911. V. Devine and Brzostowski then went back to the accident scene. V. Devine and Brzostowski arrived back at the overturned haul truck at approximately 7:50 a.m. and assisted Forgotch with removing the windshield to gain access to Moyer. V. Devine found Moyer unresponsive with no pulse and began cardiopulmonary resuscitation.

At 7:55 a.m., the Mahanoy Township Police Department arrived on-site. At 8:00 a.m., Shenandoah Ambulance arrived on-site and removed Moyer from the haul truck. At 9:08

a.m., Louis David Truskowsky, Schuylkill County Deputy Coroner, pronounced Moyer dead.

INVESTIGATION OF THE ACCIDENT

At 7:47 a.m., Riccardo Muntone, Safety Director, called the Department of Labor National Contact Center (DOLNCC) to report the accident. The DOLNCC contacted William Kearns, Office Assistant, who notified Michael Kelley, District Manager. Kelley notified Todd Anderson and Jeremy Williams, Assistant District Managers, and Thomas Yencho and Patrick Boylan, Supervisory Mine Safety and Health Inspectors.

Yencho sent Edward Knoll and Steven Kowalick, Mine Safety and Health Inspectors, and Boylan sent Christian Epting, Mine Safety and Health Inspector, to the mine. Yencho and Boylan arrived at the mine at 8:40 a.m. Epting and Kowalick arrived at the mine at 8:45 a.m. Knoll arrived at 9:00 a.m. At 9:20 a.m., Knoll issued an order under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and preservation of evidence.

In conjunction with the Pennsylvania Bureau of Mine Safety and United Mine Workers of America, MSHA's accident investigation team conducted an examination of the accident scene, interviewed miners, mine management, and other relevant personnel from Reading Anthracite Company and Schuylkill Energy Resources, Inc., and reviewed conditions and work practices relevant to the accident. MSHA Technical Support assisted with the investigation of the haul truck's onboard computer data and drone mapping of the feed bank and accident scene. See Appendix B for a list of persons who participated in the investigation.

DISCUSSION

Location of the Accident

The accident occurred at the end of the feed bank. The feed bank was 500 feet long, 24 feet in height, and with a nine percent grade elevating/rising towards the end of the bank at the time of the accident (see Appendix C).

A front-end loader, over the course of two shifts on January 27 and 28, 2024, had removed material from the toe of the feed bank leaving a 24-foot drop-off. Investigators determined that no berms were present at the end of the ramp of the feed bank at the time of the accident. The investigation team determined the mine operator not maintaining a berm or similar means to prevent overtravel or overturning at the dumping location contributed to the accident.

Weather

The weather was 34 degrees Fahrenheit with variable winds at six to 12 miles per hour and mostly cloudy skies at the time of the accident. The previous day, Sunday, January 28, 2024, the area received 0.441 inches of rain, with temperatures around freezing. The investigation team determined that the weather did not contribute to the accident.

Ground Control Plan (GCP)

The mine operator's revised GCP dated June 19, 2015 (acknowledged by MSHA on July 13, 2015), details the plan to be used and the provisions to be followed when hazardous conditions were found on the feed bank. The mine operator submitted these provisions because of an accident where a haul truck over traveled the end of the feed bank and overturned resulting in lost time injuries to a miner on February 17, 2015. The following provisions are specifically stated in the mine operator's GCP but were not being followed:

1. "Loaders shall not remove material from the toe of a pile greater and [sic] 1 and ½ times the reach of the loader or a maximum of 20 feet." (Page 3, Item 2 of GCP)

2. "Haul trucks shall dump at least 75 feet back from the leading edge of the load-out area ramp and material shall be pushed to the load-out point by track mounted dozers." (Page 3, Item 4 of GCP)

3. "Before dumping begins, and throughout the shift, equipment operators and their supervisors will routinely check the dump area for unsafe conditions, such as cracks, inadequate berms, unstable material on the slope below the dump point, or a loaded outslope below the dump point. Such conditions will be promptly reported and corrected. Berms need to be at least mid-axle height of the largest piece of equipment that will use the dump area. While the adequacy of a berm is normally judged based on the mid-axle height criterion, it will be recognized that it only sets a minimum value for berm height. It is good practice to provide as large a berm as practical, and operators will realize that the effectiveness of a berm depends not just on its height but also on its thickness and firmness." (Page 4, Item 4 of GCP)

4. "Adequate illumination will be provided for nighttime operations." (Page 4, Item 11 of GCP)

The investigation team determined that not following the Ground Control Plan contributed to the accident.

Illumination

No illumination, other than the reverse lights from the haul truck, was provided at the feed bank as required by the GCP. Haul truck operators were backing up to the dumping location on the feed bank, but the area was not illuminated to safely dump. The investigation team determined that the mine operator not providing illumination at the dumping location contributed to the accident.

Equipment Involved

The equipment involved was a Komatsu HD785-8 haul truck. The haul truck had operated 62.5 hours at the time of the accident. The truck weighs 162,701 lbs. empty and has a load capacity of 101.6 tons. The manufacturer equipped Moyer's haul truck with a rollover protective structure.

MSHA Technical Support downloaded and reviewed the data files from the haul truck's onboard computer. Leading up to the accident, the data shows the haul truck backed up the feed bank in reverse and at 4:17 a.m., the haul truck overturned. According to interviews, Moyer was not wearing a seat belt when he was found in his overturned haul truck. The investigation team determined that not wearing a seat belt contributed to the severity of the accident. Data related to seat belt usage was not saved on the haul truck's onboard computer.

According to interviews and records, Moyer conducted a pre-operational inspection of the haul truck. Moyer did not report or record any safety hazards with the haul truck. Investigators did not observe any deficiencies of the haul truck that would have contributed to the accident.

Examinations

A. Devine did not examine the feed bank area prior to the accident even though they experienced significant rainfall the previous day. Investigators determined inadequate examinations contributed to the accident.

The last record of an on-shift examination conducted at the feed bank was on January 27, 2024, by A. Devine. If the mine operator had adequately checked the feed bank for unsafe conditions before dumping began, unsafe conditions would have been identified. An adequate examination would have determined that there was no berm or any means of preventing overtravel or overturning the end of the feed bank and that the feed bank was shorter by several feet than it was at the end of the shift on January 27, 2024.

Training and Experience

Moyer had over 13 years of mining experience and worked for Reading Anthracite Company for 11 years as a haul truck driver. During the investigation, the investigation team reviewed the training records and found that Moyer received all training in accordance with MSHA Part 48 training regulations.

ROOT CAUSE ANALYSIS

The accident investigators conducted an analysis to identify the underlying causes of the accident. The investigators identified the following root causes, and the mine operator implemented the corresponding corrective actions to prevent a recurrence.

1. Root Cause: The mine operator did not examine the feed bank before miners began working.

   Corrective Action: The mine operator developed and implemented a new ground control plan with a procedure requiring examinations prior to and throughout the shift. The mine operator retrained the miners on their new ground control plan.

2. Root Cause: The mine operator did not provide illumination at the feed bank.

   Corrective Action: The mine operator placed portable light plants at the feed bank to provide illumination.

3. Root Cause: The mine operator did not provide a means to prevent overtravel and overturning at the dumping location.

   Corrective Action: The mine operator developed and implemented through their new ground control plan the requirement to maintain a berm on the feed bank to prevent over travel and overturning. The mine operator retrained the miners on their new ground control plan.

4. Root Cause: The mine operator did not follow their Ground Control Plan.

   Corrective Action: The mine operator developed and implemented a new ground control plan with additional safety precautions for the feed bank. The mine operator trained the miners on their new ground control plan.

5. Root Cause: The mine operator did not ensure the haul truck driver was wearing the seat belt.

   Corrective Action: The mine operator has retrained all miners on the use of seat belts.

CONCLUSION

On January 29, 2024, at 4:17 a.m., David Moyer, a 63 year-old haul truck driver with over 13 years of mining experience, died when the haul truck he was operating backed over the end of the feed bank and overturned.

The accident occurred because the mine operator did not: 1) examine the feed bank before miners began working, 2) provide illumination at the feed bank, 3) provide a means to prevent overtravel and overturning at the dumping location, 4) follow their Ground Control Plan, and 5) ensure the haul truck driver was wearing the seat belt.

Approved By:

_____ _____

Michael Kelley Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Reading Anthracite Company.

   A fatal accident occurred on January 29, 2024, at 4:17 a.m. This order is being issued under the authority of the Federal Mine Safety and Health Act of 1977, under Section 103(k) to insure the safety of all persons at the mine and requires the operator to obtain the approval of an authorized representative of MSHA for any plan to recover any person in the mine or to recover the mine or affected area. This order prohibits any activity in the affected area. The operator is reminded of the obligation to preserve all evidence that would aid in investigating the cause or causes of the accident in accordance with 30 CFR 50.12.

2. A 104(d)(1) citation was issued to Reading Anthracite Company for a violation of 30 CFR 77.1605(l).

   On January 29, 2024, a fatal accident occurred when a haul truck driver backed over the end of the feed bank and overturned. Berms, bumper blocks, safety hooks, or similar means were not provided to prevent overtravel and overturning at dumping locations. The mine operator engaged in aggravated conduct constituting more than ordinary negligence in that four haul trucks were hauling and dumping material on the feed bank, before the area was checked for unsafe conditions as required by the operator's Ground Control Plan dated June 19, 2015, and with no berm or other means to prevent overtravel or overturning at the end of the feed bank. This is an unwarrantable failure to comply with a mandatory standard.

3. A 104(d)(1) order was issued to Reading Anthracite Company for a violation of 30 CFR 77.1004(a).

   On January 29, 2024, a fatal accident occurred when a haul truck driver backed over the end of the feed bank and overturned. Highwalls, banks, and benches shall be examined after every rain, freeze, or thaw before men work in such areas, and shall be recorded. The mine operator did not conduct this examination on January 29, 2024, at the feed bank area. Failure to conduct an examination of this area, prior to work commencing, exposed the miners to fatal hazards. Miners began dumping at this location at 4:00 a.m. and the mine operator did not conduct or record an examination. It had rained steadily the previous day, Sunday, January 28, 2024, (0.441 inches). Front-end loader operators had loaded out material from the toe of the feed bank for two previous shifts since the ramp was last used and examined. The Ground Control Plan requires before dumping begins, and throughout the shift, equipment operators and their supervisors will routinely check the dump area for unsafe conditions. The mine operator engaged in aggravated conduct constituting more than ordinary negligence by not examining the feed bank prior to miners dumping on the ramp. This is an unwarrantable failure to comply with a mandatory standard.

4. A 104(d)(1) order was issued to Reading Anthracite Company for a violation of 30 CFR 77.207.

   On January 29, 2024, a fatal accident occurred when a haul truck driver over traveled the end of the feed bank and overturned. The mine operator did not provide illumination, other than the reverse lights from the haul truck, at the feed bank. Haul truck operators were backing up to the dumping location on the feed bank, but the area was not illuminated to safely dump. The mine operator engaged in aggravated conduct constituting more than ordinary negligence by not providing sufficient illumination at the feed bank. This condition has existed for several months. This is an unwarrantable failure to comply with a mandatory standard.

5. A 104(d)(1) order was issued to Reading Anthracite Company for a violation of 30 CFR 77.1000.

   On January 29, 2024, a fatal accident occurred when a haul truck driver backed over the end of the feed bank and overturned. Each operator shall establish and follow a ground control plan for the safe control of all highwalls, pits, and spoil banks, which shall be consistent with prudent engineering design and will ensure safe working conditions. The operator was not following their Ground Control Plan dated June 19, 2015:

   1. "Loaders shall not remove material from the toe of a pile greater and [sic] 1 and ½ times the reach of the loader or a maximum of 20 feet." (Page 3, Item 2 of GCP)

   2. "Haul trucks shall dump at least 75 feet back from the leading edge of the load-out area ramp and material shall be pushed to the load-out point by track mounted dozers." (Page 3, Item 4 of GCP)

   3. "Before dumping begins, and throughout the shift, equipment operators and their supervisors will routinely check the dump area for unsafe conditions, such as cracks, inadequate berms, unstable material on the slope below the dump point, or a loaded outslope below the dump point. Such conditions will be promptly reported and corrected. Berms need to be at least mid-axle height of the largest piece of equipment that will use the dump area. While the adequacy of a berm is normally judged based on the mid-axle height criterion, it will be recognized that it only sets a minimum value for berm height. It is good practice to provide as large a berm as practical, and operators will realize that the effectiveness of a berm depends not just on its height but also on its thickness and firmness." (Page 4, Item 4 of GCP)

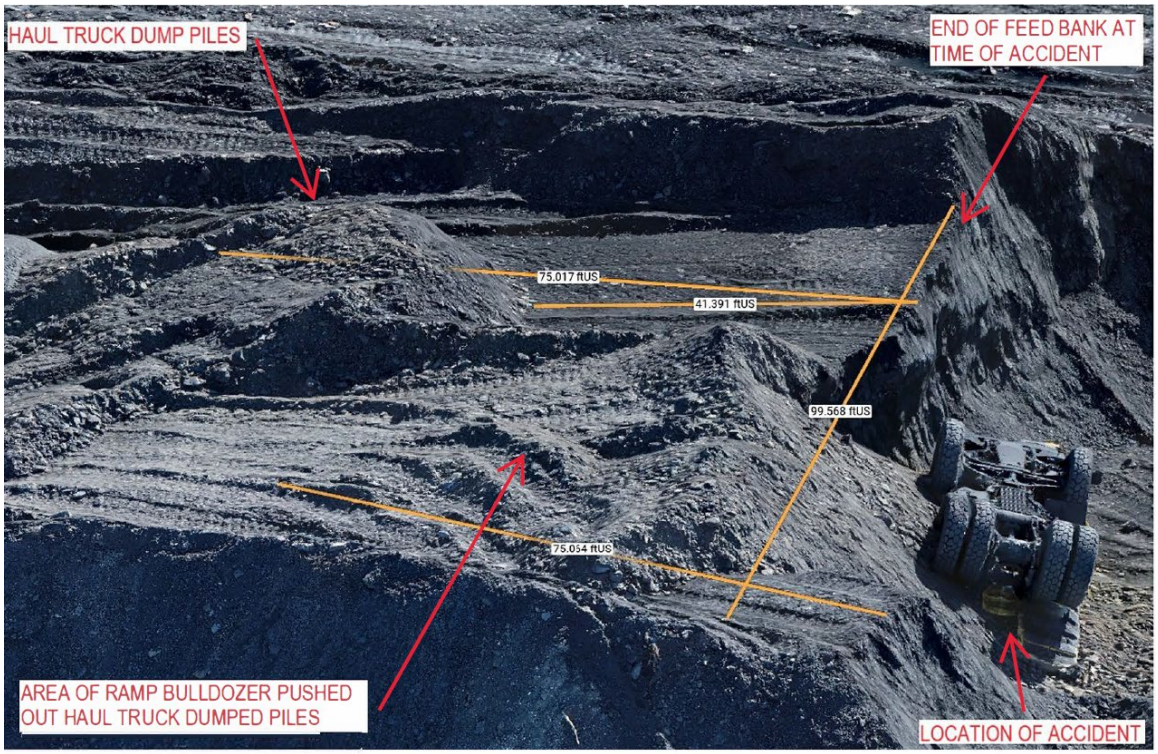
4. “Adequate illumination will be provided for nighttime operations.” (Page 4, Item 11 of GCP)

The mine operator engaged in aggravated conduct constituting more than ordinary negligence by not following their ground control plan. This is an unwarrantable failure to comply with a mandatory standard.

6. A 104(a) citation was issued to Reading Anthracite Company for a violation of 30 CFR 77.403-1(g).

On January 29, 2024, a fatal accident occurred when a haul truck driver backed over the end of the feed bank and overturned. Seat belts shall be worn by the operator of equipment that is equipped with ROPS. The haul truck operator of the Komatsu HD785-8 Haul Truck, which is equipped with ROPS, was not wearing a seat belt. This condition exposed the haul truck operator to fatal injuries.

APPENDIX A – Drone Photo of the End of the Feed Bank



APPENDIX B – Persons Participating in the Investigation

Reading Anthracite Company

Andrew Devine	Foreman
Riccardo Muntone	Safety Director
Anthony Pritiskutch	Haul Truck Driver
Bryan Shappell	Haul Truck Driver
Elvin Brennan	Haul Truck Driver
Joseph Nadja	Bulldozer Operator
Scott Bowers	Excavator Operator
Thomas Hartz	Haul Truck Driver

Schuylkill Energy Resources, Inc.

Vincent Devine	Material Handling Supervisor
Steven Litchko	Assistant Superintendent
Steven Forgotch	Equipment Operator / Supervisor
Elijah Brzostowski	Plant Maintenance
Edward Haag	Plant Maintenance/Front-End Loader Operator
Bradley Kellman	Plant Maintenance/Front-End Loader Operator

Lehigh Engineering

Ryan Higgins	Surveyor

United Mine Workers of America

Joshua Roberts	Director of Occupational Health and Safety
Gary Socko	Chairman, Grievance Committee/ Miner's Representative Local 1686
Martin Wolfe	Safety Committee Chairman Local 1686
Michael Honicker	Mine Committee
Charles Knisell	Vice President, District 2
William Lurwick	President Local 1686
Thomas McGary	United Mine Workers of America District 2 Safety Committee

Pennsylvania Department of Environmental Protection

Troy Wolfgang	Chief, Anthracite Division
Terry Wolfgang	Anthracite U/G Mine Inspector
Kenneth Dengler	Anthracite U/G Mine Electrical Inspector

Mine Safety and Health Administration

Michael Kelley	District Manager
Patrick Boylan	Supervisory Mine Safety and Health Inspector
Thomas Yencho	Supervisory Mine Safety and Health Inspector
Christian Epting	Mine Safety and Health Inspector
Edward Knoll	Mine Safety and Health Inspector
Stephen Kowalick	Mine Safety and Health Inspector
Seth Huey	Mine Safety and Health Inspector Trainee
Thomas Weiser	Mine Safety and Health Inspector Trainee
Brett Chiccarello	Mine Safety and Health Training Specialist
Brandon Boring	General Engineer, Technical Support
Nicholas Fallova	General Engineer, Technical Support

APPENDIX C – Aerial View of Feed Bank