FAI-7018573-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Coal)

Fatal Machinery Accident
April 20, 2023

Tri State Maintenance Solutions LLC (C3953)
Washington, Daviess County, Indiana

at

Bear Run Mine
Peabody Bear Run Mining LLC
Carlisle, Sullivan County, Indiana
ID No. 12-02422

Accident Investigators

Todd Seilhymer
Mine Safety and Health Inspector

Anthony DiLorenzo
Supervisory Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Vincennes District
2300 Willow Street
Vincennes, Indiana 47591
Ronald Burns, District Manager

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OVERVIEW

On April 20, 2023, at 12:58 p.m., Philip Heymann, a 59 year-old contract laborer with over 32 years of mining experience, died when a side plate being removed from a shaker screen fell on him.

The accident occurred because the mine operator and the contractor did not: 1) ensure the side plate being removed was blocked against motion, 2) provide task training for the disassembly of the shaker screen, and 3) ensure the contractor crew followed the Surface Safety Handbook.

GENERAL INFORMATION

Peabody Bear Run Mining LLC owns and operates the Bear Run Mine. Bear Run Mine is a surface coal mine located near Carlisle, Sullivan County, Indiana. The mine operates two ten-hour production shifts, seven days per week. Bear Run Mine uses draglines, shovels, and haul trucks to mine and transport coal. The mine operator contracted Tri State Maintenance Solutions LLC (Tri State) for maintenance repairs and disassembling various types of screen decks.

The principal management officials at the Bear Run Mine at the time of the accident were:

Caleb Grounds	General Manager
Brock Rider	Safety Manager

The principal management official for Tri State at the time of the accident was:

Shannon Wininger	Owner/Operator

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on March 28, 2023. A regular safety and health inspection was

ongoing at the time of the accident. The 2022 nonfatal days lost incident rate for the Bear Run Mine was 0.34, compared to the national average of 0.67 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On Thursday, April 20, 2023, at 6:30 a.m., the Tri State crew consisting of Heymann, Shannon Wininger, Owner/Operator, Joshua Bedwell, Laborer, and Kenneth Zimmerman, Laborer, arrived at Bear Run Mine for their scheduled dayshift. Wininger met with Kane Rippy, Preparation Plant Maintenance Planner, to get the day's work order. Rippy told Wininger the shaker and dewatering screens needed to be disassembled, but no work order was given.

At 7:00 a.m., Heymann used a telehandler to retrieve two portable torch carts containing oxygen and acetylene tanks with torch assemblies from the preparation plant and delivered them to the worksite. Using the torches, the Tri State crew began disassembling the dewatering and shaker screens until their lunch break at noon.

At 12:35 p.m., according to video footage, the Tri State crew returned to the worksite, and Wininger instructed Bedwell and Zimmerman to remove the bolts holding the shaker screen side plate assemblies to the beams. Bedwell began cutting the south side plate bolts with assistance from Wininger, and Zimmerman began cutting the north side plate bolts with assistance from Heymann. Wininger and Heymann picked up pieces of the screen that had been cut off. At 12:44 p.m., Rippy and Jason Langford, Preparation Plant Operator, arrived at the worksite in a company truck. Langford exited the truck and asked Heymann if he and Rippy could use the telehandler. According to video footage, Langford took the telehandler at 12:47 p.m.

According to interviews, during this time, Zimmerman continued to cut bolts off the north side plate, leaving three bolts in the middle beam. During interviews, Zimmerman stated he planned to leave bolts in the east double beam because he did not want to be in the middle cutting out the last bolts keeping the side plate in place. Zimmerman moved back to the middle and removed the three bolts. Zimmerman then moved back to the second beam from the east end and began cutting the bolts behind the spring mount bracket. Heymann was still on the north side of the shaker screen, between the shaker screen side plate and the dewatering screen, picking up pieces of the screen and putting them in the dumpster. Wininger passed by Heymann and stopped to ask him how many bolts were left to cut. Wininger told investigators that when he stopped to talk to Heymann, he noticed the bolts in the middle of the north side plate were gone. At this time, Zimmerman cut through the last bolt holding the side plate to the beam, allowing the side plate to fall over toward all three contractors on the north side of the shaker screen.

As the side plate began to fall, Wininger put his hand on the side plate trying to hold it up. The side plate began pushing Wininger back, striking him in the lower back and pushing him into the dewatering screen. The side plate also struck Zimmerman, knocking him out of the way. When Wininger turned to see if everyone was okay, he saw Heymann pinned between the side plate and the dewatering screen south side plate. Wininger started yelling to get him out. Zimmerman and Wininger tried to raise the side plate off Heymann. Bedwell heard a loud noise and came around to the north side of the shaker screen and joined them in trying to lift the side plate. Wininger began to yell and motion to Langford who was operating the telehandler 50 feet away.

Langford positioned the forks under the side plate and lifted it away from the dewatering screen, which released Heymann from the pinch point.

Wininger, Zimmerman, and Bedwell pulled Heymann out from under the side plate and began to assess Heymann's condition. Wininger told Langford to call a "Code Red." A Code Red is used at the mine to alert miners of an emergency and activate the surface mine emergency team (SMET). Langford ran to the preparation plant control room and told Garrett Cornelius, Preparation Plant Operator, to call a Code Red and contact emergency services. Cornelius called Kendra Stevenson, Maintenance Technician, who issued a Code Red over the mine radio. SMET members arrived on the scene and began treating Heymann. SMET members began cardiopulmonary resuscitation (CPR) and attached an automated external defibrillator (AED). CPR continued through the arrival of Sullivan County EMS.

Sullivan County EMS arrived, checked Heymann's vitals, and contacted Sullivan County Community Hospital. Katie Morgan, Paramedic, pronounced Heymann dead at 1:33 p.m.

INVESTIGATION OF THE ACCIDENT

On April 20, 2023, at 1:09 p.m., Brock Rider, Safety Manager, called the Department of Labor National Contact Center (DOLNCC). At 1:22 p.m., the DOLNCC notified David Stepp, Assistant District Manager. Stepp notified Anthony DiLorenzo, Supervisory Mine Safety and Health Inspector, who assigned Todd Seilhymer, Mine Safety and Health Inspector, to investigate the accident.

At 2:15 p.m., Seilhymer arrived at the mine and met with Rider. Seilhymer issued an order under the provisions of Section 103(k) of the Mine Act to ensure the safety of miners and preservation of evidence.

At 2:45 p.m. DiLorenzo; Dustin Galloway, Staff Assistant; Ronald Burns, District Manager; and Kevin Hirsch, Assistant District Manager, arrived at the mine. MSHA's accident investigation team conducted an examination of the accident scene, interviewed miners, contractors, and management, and reviewed conditions and work procedures relevant to the accident. See Appendix A for a list of persons who participated in the investigation.

DISCUSSION

Location of the Accident

The accident occurred 100 yards southeast of the preparation plant. The shaker screen and dewatering screen were next to each other in the preparation plant yard. The shaker screen was located on the south side of the dewatering screen. The distance between the shaker screen's north side plate and the dewatering screen's south side plate measured five feet on the west end and seven feet and eight inches on the east end. The ground was dry and mostly level in this area.

Weather

Weather conditions at the time of the accident were sunny with a temperature of 80 degrees. The wind was from the south, sustained at 21 miles per hour (mph) with gusts reaching 29 mph. The shaker screen's north side plate fell over with the orientation of the wind. Investigators could not determine if the wind contributed to the accident.

Equipment Involved

The shaker screen involved in the accident was a Conn-Weld Industries, Inc., ten-foot by 20-foot five-angle vibrating screen. The mine operator uses the shaker screen in the preparation plant to separate the fine material from the coarse material. This shaker screen was taken out of service on March 15, 2023, to be discarded. The total weight of the shaker screen was approximately 39,000 lbs. The north side plate weighed approximately 4,600 lbs. Both ends of the shaker screen's north side plate measured three feet, two and one-half inches in height, and increased to eight feet, four and one-half inches at its highest point.

Interviews with the Tri State crew revealed that they did not block any part of the shaker screen against motion while disassembling it throughout the day. The contractor did not block against motion the shaker screen side plates before the crew cut out the inside support pipes. These support pipes were welded to the inside of the shaker screen side plates to give them stability. The contractor cut loose at least one of these inside support pipes and allowed it to fall to the screen deck below before the crew began removing the bolts. In addition, the contractor did not block against motion either shaker screen side plate before the crew removed the bolts. All bolts holding the east end double beam to the shaker screen were cut by Bedwell earlier in the shift. The sideboards held this beam in place until the north side plate fell. When the north side plate fell, however, the north end of the double beam dropped, becoming suspended off the ground.

According to interviews, Tri State planned to use the telehandler forks and slings to secure the side plate before the they removed the final bolts. Wininger instructed Bedwell and Zimmerman to leave enough bolts in place to hold the side plate in place until the side plate could be rigged to the telehandler. Once secured, the remaining bolts would be removed, and the telehandler would be used to lay the side plate down. Wininger told investigators he was not aware that Zimmerman had removed the three bolts from the middle beam until he walked around to where Zimmerman was cutting. Investigators found no materials appropriate for blocking the shaker screen against motion at or near the disassembly work area. Investigators determined that the mine operator and the contractor did not ensure the side plate being removed was blocked against motion, which contributed to the accident.

The dewatering screen involved in the accident was a Conn-Weld Industries, Inc. six-foot by 12-foot screen. It was used in the preparation plant to separate water from fine material. This dewatering screen was taken out of service on March 13, 2023, to be discarded. When the shaker screen's north side plate fell, it came to rest on the dewatering screen's south side plate, which was still secured to the dewatering screen.

Training and Experience

Heymann had over 32 years of mining experience, with approximately 14 weeks of experience with Tri State. Investigators determined Heymann did not receive Experienced Miner Training

in accordance with MSHA Part 48 training regulations. However, this lack of training did not contribute to the accident because it would not have covered the specific task of disassembling a shaker screen.

Zimmerman had over 11 years of mining experience, with approximately three days of experience with Tri State. Zimmerman received two years of welding training and most of his mining experience has been cutting and welding. Investigators determined Zimmerman did not receive Experienced Miner Training in accordance with MSHA Part 48 training regulations. However, this lack of training did not contribute to the accident because it would not have covered the specific task of disassembling a shaker screen.

According to interviews with the Tri State crew, Wininger, Bedwell, Heymann, and Zimmerman had never disassembled a shaker screen. Neither the mine operator nor the contractor could produce any type of task training form indicating Wininger, Bedwell, Heymann, or Zimmerman received task training on the disassembly of the shaker screen or dewatering screen. Investigators determined that this lack of training contributed to the accident.

Wininger and Heymann were previously employed by the mine operator, as mine employees, at the Bear Run Mine. Wininger departed from Peabody in 2019 and Heymann in 2022.

Safety Program

Bear Run Mine has a Surface Safety Handbook which gives instructions to miners about safety regulations and procedures to be followed at the mine. The mine operator published the handbook and distributed it to miners and contractors, but did not provide it to the Tri State crew. The handbook provides guidance as to what types of work require isolation of stored energy, including gravitational energy. It also requires miners to perform a risk analysis before beginning a task to determine the proper equipment, tools, materials, or personnel to do the job normally. Peabody provided a copy of the handbook to Wininger and Heymann while they were mine employees at the Bear Run Mine.

Bear Run Mine has in place a Stop, Look, Analyze, and Manage (SLAM) program. SLAM cards are made available to miners and contractors to guide them through a risk assessment before performing any task. Tri State did not use a SLAM card on the day of the accident. The investigators determined that the mine operator and contractor did not ensure the contractor crew followed the Surface Safety Handbook, which contributed to the accident.

Examinations

Roy Stormes, Preparation Plant Operator, performed a work area examination on April 20, 2023, in the area where the screens were disassembled. Records indicate that Stormes did the work area examination after the accident occurred. Investigators determined that work area examination did not contribute to the accident.

ROOT CAUSE ANALYSIS

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

1. Root Cause: The mine operator and the contractor did not ensure the side plate being removed was blocked against motion.

   Corrective Action: The mine operator revised their safety procedure to include a checklist of energies to look for and additional hazard checklist questions focusing on stored energy and blocking against motion. The mine operator retrained miners and contractors on isolation and blocking against motion.

   The contractor does not intend to return to the mine. If they do, the contractor will conduct a proper risk assessment prior to conducting similar tasks.

2. Root Cause: The mine operator and the contractor did not provide task training for the disassembly of the shaker screen.

   Corrective Action: The mine operator developed and implemented a written Contractor Safety and Health Management Contract Owner Checklist. This checklist assists the miners responsible for bringing contractors to Bear Run Mine in determining whether the contractor has the appropriate training. The mine operator trained those miners responsible for bringing contractors to Bear Run Mine on the Contractor Safety and Health Management Contract Owner Checklist.

   The contractor does not intend to return to the mine. If they do, the contractor will conduct proper training prior to conducting similar tasks.

3. Root Cause: The mine operator and the contractor did not ensure the contractor crew followed the Surface Safety Handbook.

   Corrective Action: The mine operator revised their safety procedure to include a checklist of energies to look for and additional hazard checklist questions to assist miners and contractors in performing a proper risk analysis. The mine operator trained miners responsible for bringing contractors to Bear Run Mine on the Contractor Safety and Health Management Contract Owner Checklist.

   The contractor does not intend to return to the mine. If they do, the contractor will conduct a proper risk assessment prior to conducting similar tasks.

CONCLUSION

On April 20, 2023, at 12:58 p.m., Philip Heymann, a 59 year-old contract laborer with over 32 years of mining experience, died when a side plate being removed from a shaker screen fell on him.

The accident occurred because the mine operator and the contractor did not: 1) ensure the side plate being removed was blocked against motion, 2) provide task training for the disassembly of the shaker screen, and 3) ensure the contractor crew followed the Surface Safety Handbook.

Approved by:

_____ _____

Ronald Burns Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Peabody Bear Run Mining LLC.

   A fatal accident occurred on April 20, 2023, at 12:58 p.m. This order is being issued under the authority of the Federal Mine Safety and Health Act of 1977, under Section 103(k) to ensure the safety of all persons at the mine, and requires the operator to obtain the approval of an authorized representative of MSHA of any plan to recover any person in the mine or to recover the mine 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(a) citation was issued to Peabody Bear Run Mining LLC for a violation of 30 CFR 77.404(c).

   On April 20, 2023, at 12:58 p.m., a fatal accident occurred in the preparation plant yard of this mine when a crew of contract laborers was disassembling a shaker screen. The side plate of the shaker screen fell, pinning a contract laborer between the side plate and a nearby dewatering screen. The mine operator did not ensure the side plate being removed was blocked against motion before the bolts holding it in place were removed.

3. A 104(a) citation was issued to Tri State Maintenance Solutions LLC for a violation of 30 CFR 77.404(c).

   On April 20, 2023, at 12:58 p.m., a fatal accident occurred in the preparation plant yard of this mine when a crew of contract laborers was disassembling a shaker screen. The side plate of the shaker screen fell, pinning a contract laborer between the side plate and a nearby dewatering screen. The contractor did not ensure the side plate was blocked against motion before the bolts holding it in place were removed.

4. A 104(a) citation was issued to Peabody Bear Run Mining LLC for a violation of 30 CFR 48.27(c).

   On April 20, 2023, at 12:58 p.m., a fatal accident occurred in the preparation plant yard of this mine when a crew of contract laborers was disassembling a shaker screen. The side plate of the shaker screen fell, pinning a contract laborer between the side plate and a nearby dewatering screen. The mine operator did not provide task training to the contractors before the disassembly of the shaker screen began.

5. A 104(a) citation was issued to Tri State Maintenance Solutions LLC for a violation of 30 CFR 48.27(c).

   On April 20, 2023, at 12:58 p.m., a fatal accident occurred in the preparation plant yard of this mine when a crew of contract laborers was disassembling a shaker screen. The side plate

of the shaker screen fell, pinning a contract laborer between the side plate and a nearby dewatering screen. The contractor did not provide task training and did not seek out task training from the mine operator before the disassembly of the shaker screen began.

APPENDIX A – Persons Participating in the Investigation

Peabody Bear Run Mining LLC

Glenn Reynolds	Preparation Plant Manager
Kevin Bland	Safety Manager
Brock Rider	Safety Manager
Kane Rippy	Preparation Plant Maintenance Planner
Garrett Cornelius	Preparation Plant Operator
Jason Langford	Preparation Plant Operator
Roy Stormes	Preparation Plant Operator
Gregory Cunningham	Bulldozer/Mobile Equipment Operator
Austin Pitts	Mechanic I
Kendra Stevenson	Maintenance Technician

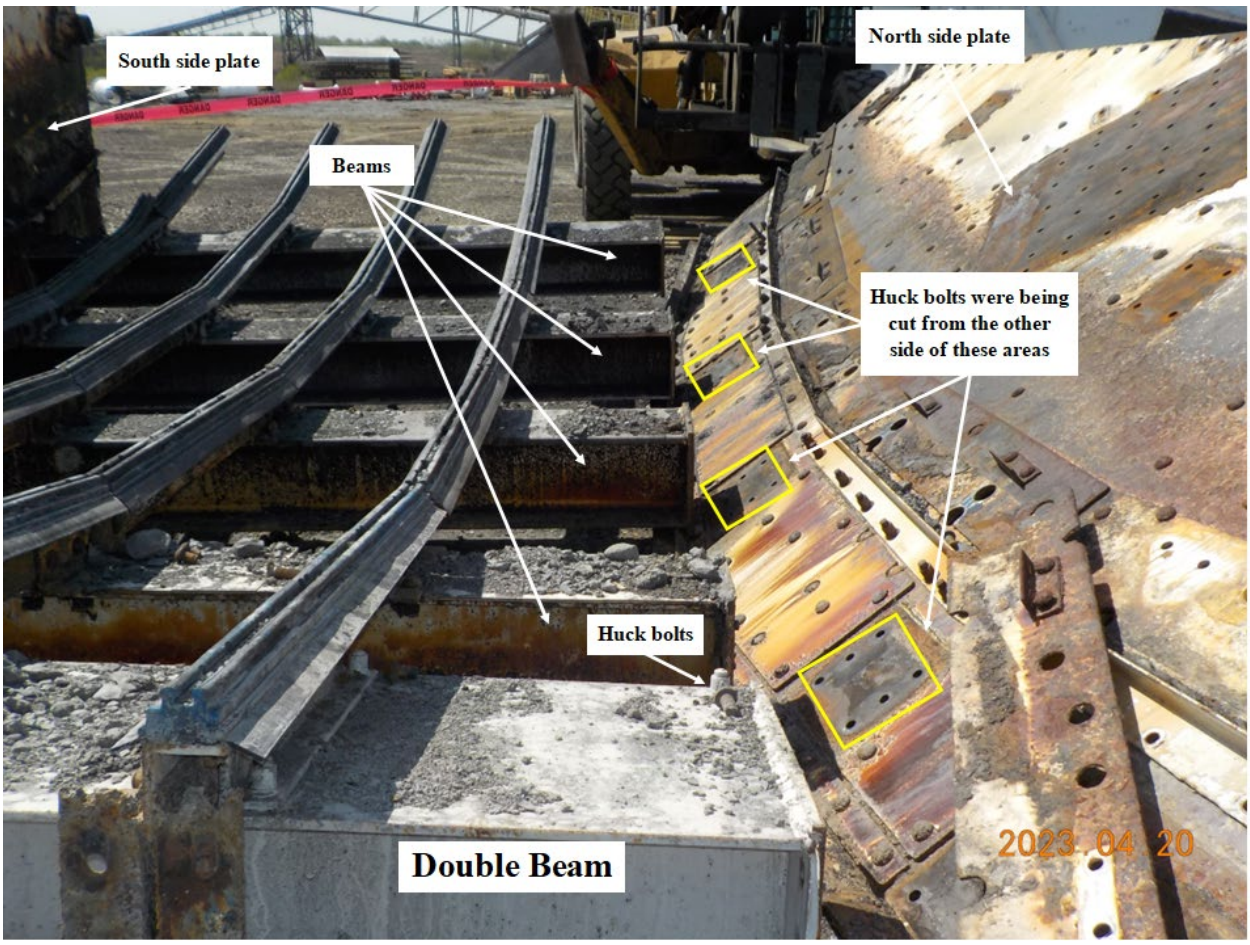
Tri State Maintenance Solutions LLC

Shannon Wininger	Owner/Operator
Joshua Bedwell	Laborer
Kenneth Zimmerman	Laborer

Mine Safety and Health Administration

Ronald Burns	District Manager
Kevin Hirsch	Assistant District Manager
Dustin Galloway	Staff Assistant
Anthony DiLorenzo	Supervisory Mine Safety and Health Inspector
Todd Seilhymer	Mine Safety and Health Inspector

APPENDIX B – Photo of Shaker Screen



APPENDIX C – Aerial Sketch of Accident Scene