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UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Sand and Gravel)

Fatal Machinery Accident
November 16, 2024

at

Ervin Hill Enterprises Inc
Ervin Hill Enterprises Inc
Hillsboro, Highland County, Ohio
ID No. 33-04527

Accident Investigators

David Stimmel
Mine Safety and Health Inspector

Justin Griffith
Mine Safety and Health Specialist

Originating Office
Mine Safety and Health Administration
Warrendale District
178 Thorn Hill Road Suite 100
Warrendale, PA 15086
Peter Montali, District Manager

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OVERVIEW

On November 16, 2024, at approximately 8:30 a.m., Scott Rhodes, a 50-year-old excavator operator with over seven years of mining experience, died when he became entangled in a log washer.

The accident occurred because the mine operator did not: 1) de-energize and block the log washer against motion while performing maintenance, and 2) provide task training on log washer maintenance procedures.

GENERAL INFORMATION

Ervin Hill Enterprises Inc owns and operates the Ervin Hill Enterprises Inc mine (Ervin Hill), a surface sand and gravel mine in Hillsboro, Highland County, Ohio. The mine employs seven miners and operates one 11-hour shift, five days per week, and one six-hour shift on Saturdays. Ervin Hill Enterprises Inc extracts sand and gravel from the pit, and haul trucks transport the material to the wash plant. A front-end loader loads material into the feeder box at the wash plant. Belt conveyors transport the material through screens, a log washer, sand screws, and then into stockpiles for sale to various customers.

The principal management official at Ervin Hill at the time of the accident was:

Mark Edenfield	Owner/President

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on September 11, 2024. The 2023 non-fatal days lost injury rate for Ervin Hill was zero, compared to the national average of 1.06 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On November 16, 2024, at approximately 6:00 a.m., Rhodes arrived at the mine office and met with Jason Campbell, Foreman; Mark Edenfield, Owner/President; Carl Spriggs, Haul Truck Driver; and Wanda Countryman, Weighmaster, for the morning meeting at the mine office. According to interviews, Edenfield went to the pit to operate an excavator, and Campbell assigned Rhodes and Spriggs to start the wash plant. Once the wash plant was started, Campbell used the front-end loader to feed the wash plant from the sand and gravel stockpile and load customer trucks.

At approximately 7:40 a.m., Campbell noticed a reduced flow of material on the #4 belt. Campbell proceeded to the switch house, noticed smoke coming from the log washer's drive belt, and de-energized the log washer. Campbell went to the second-level of the wash plant and observed the #4 size gravel overflowing into the log washer. Campbell called Rhodes by cell phone and asked Rhodes and Spriggs to come to the plant to help clear the #4 size gravel from the log washer. Campbell, Rhodes, and Spriggs worked on clearing the log washer using metal rods and a water hose. At approximately 8:15 a.m., a customer truck arrived, and Campbell left the wash plant to load the customer truck. Rhodes and Spriggs were on the first level of the wash plant at the cleanout ports. Rhodes went to the second-level catwalk to use the water hose to continue the cleaning process. Spriggs remained on the first level and continued using the metal rods to remove the gravel from the cleanout ports (see Appendix A).

At approximately 8:25 a.m., Campbell returned to the wash plant. Campbell thought that since most of the gravel was removed from the log washer, he would see if the log washer would run by "bumping" (starting and stopping) the log washer. Campbell went into the switch house and started up the manual alarm bell. Campbell walked east of the switch house with the alarm still activated until he was 63 feet away from the second-level catwalk and looked toward the log washer and the second-level catwalk. Campbell did not see anyone in that area and went back into the switch house, turned off the alarm, and bumped the log washer. Spriggs, who was still on the first level and without a line of sight to the second-level catwalk, noticed the log washer turn on and jumped back. Campbell stated that he could tell by the sound of the generator that the log washer was not clear enough to run. Campbell left the switch house and went back to the area where he could see the log washer and second-level catwalk. He saw a stream of water shooting from a water hose. Campbell went to the second-level catwalk to remove the hose and saw Rhodes entangled in the log washer.

At 8:31 a.m., Campbell called Edenfield, still operating an excavator in the pit, and told him that Rhodes was deceased in the log washer. Campbell called 911 at 8:55 a.m. David Bushelman,

Director of the Emergency Management Agency of Highland County, Ohio; and David Manning II, Fire Chief of Paint Creek Joint Emergency Medical Services/Fire District, arrived on site at 9:10 a.m. Manning pronounced Rhodes dead at 9:13 a.m.

INVESTIGATION OF THE ACCIDENT

On November 16, 2024, at 8:36 a.m., Campbell called the Department of Labor National Contact Center (DOLNCC) to report a fatality. The DOLNCC contacted Thomas Rasmussen, Assistant District Manager, who contacted Carl Graham, Supervisory Mine Safety and Health Inspector. Graham sent Herbert Bilbrey, Mine Safety and Health Inspector, to the mine. Rasmussen and Michael Wynkoop, Supervisory Mine Safety and Health Inspector, assigned David Stimmel, Mine Safety and Health Inspector, as the lead investigator. Kevin Abel, Assistant District Manager, assigned Justin Griffith, Mine Safety and Health Specialist, to assist Stimmel in the investigation.

At 12:50 p.m., Bilbrey arrived at the mine and issued an order under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and the preservation of evidence. The MSHA accident investigation team conducted an examination of the accident scene, interviewed miners, and mine management, and reviewed conditions and work procedures relevant to the accident. See Appendix B for a list of persons who participated in the investigation.

DISCUSSION

Location of the Accident

The accident occurred at the log washer located at the wash plant (see Appendices C and D). The lower and upper ends of the log washer were 11 feet and 19 feet above the ground, respectively. The second-level catwalk was approximately 20 feet above the ground.

Weather

The weather at the time of the accident was in the mid-40 degrees Fahrenheit and overcast. There was no precipitation with winds at zero to seven miles per hour. Investigators determined that the weather did not contribute to the accident.

Equipment Involved

The log washer involved in the accident was an Eagle Sol-Clay Log Washer. The manufacturer's manual, which the mine operator provided to MSHA, had a warning statement on page seven which read, "WARNING TO PREVENT INJURY: TURN OFF AND LOCK THE POWER TO THIS MACHINE BEFORE DOING ANY SERVICE WORK. EACH MAN WORKING ON ANY MACHINE SHOULD PLACE HIS OWN PADLOCK ON THE DISCONNECT SWITCH AND REMOVE ONLY WHEN HE IS DONE WITH HIS SERVICE OPERATION." Investigators tested the controls on the log washer and found no defects that contributed to the accident.

Investigators determined Rhodes became entangled in the log washer while it was energized and not blocked against motion. The mine operator did not de-energize and block the log washer against motion while performing maintenance.

The wash plant had a manual alarm bell that Campbell turned on before bumping the log washer. Spriggs stated that he did not hear the alarm. Using a sound level meter, investigators measured the alarm to be 85 decibels, and the noise of the wash plant running to be 82 decibels. Although investigators determined that this did not contribute to the accident, the mine operator installed a new alarm that is 135 decibels.

Examinations

Beginning at approximately 6:15 a.m., Rhodes and Spriggs conducted a workplace examination of the wash plant, including the log washer, before operation and reported no hazards. Campbell recorded and signed the workplace examination record. Investigators determined all examinations were adequate and did not contribute to the accident.

Training and Experience

Rhodes had over seven years of mining experience, all at Ervin Hill. Rhodes completed new miner training on April 21, 2017, and received annual refresher training on January 18, 2024. Rhodes, Campbell, and Spriggs had cleared the log washer a few times before the day of the accident. Investigators determined that Rhodes, Campbell, and Spriggs did not receive task training for plant maintenance, which was a task listed in the mine operator's Part 46 Training Plan. The training plan did not include procedures for clearing the log washer. Investigators determined that the mine operator did not provide task training on log washer maintenance procedures, which contributed 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 implemented the corresponding corrective actions to prevent a recurrence.

1. Root Cause: The mine operator did not de-energize and block the log washer against motion while performing maintenance.

   Corrective Action: The mine operator developed and implemented new written procedures for plant maintenance procedures. The mine operator trained all miners on these procedures.

2. Root Cause: The mine operator did not provide task training on log washer maintenance procedures.

   Corrective Action: The mine operator updated their Part 46 Training Plan to include procedures for clearing the log washer. The mine operator trained all miners who will be performing plant maintenance according to their Part 46 Training Plan.

CONCLUSION

On November 16, 2024, at approximately 8:30 a.m., Scott Rhodes, a 50-year-old excavator operator with over seven years of mining experience, died when he became entangled in a log washer.

The accident occurred because the mine operator did not: 1) de-energize and block the log washer against motion while performing maintenance, and 2) provide task training on log washer maintenance procedures.

Approved By:

_____ _____

Peter Montali — Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Ervin Hill Enterprises Inc.

   A fatal accident occurred on November 16, 2024, at approximately 8:30 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 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 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.

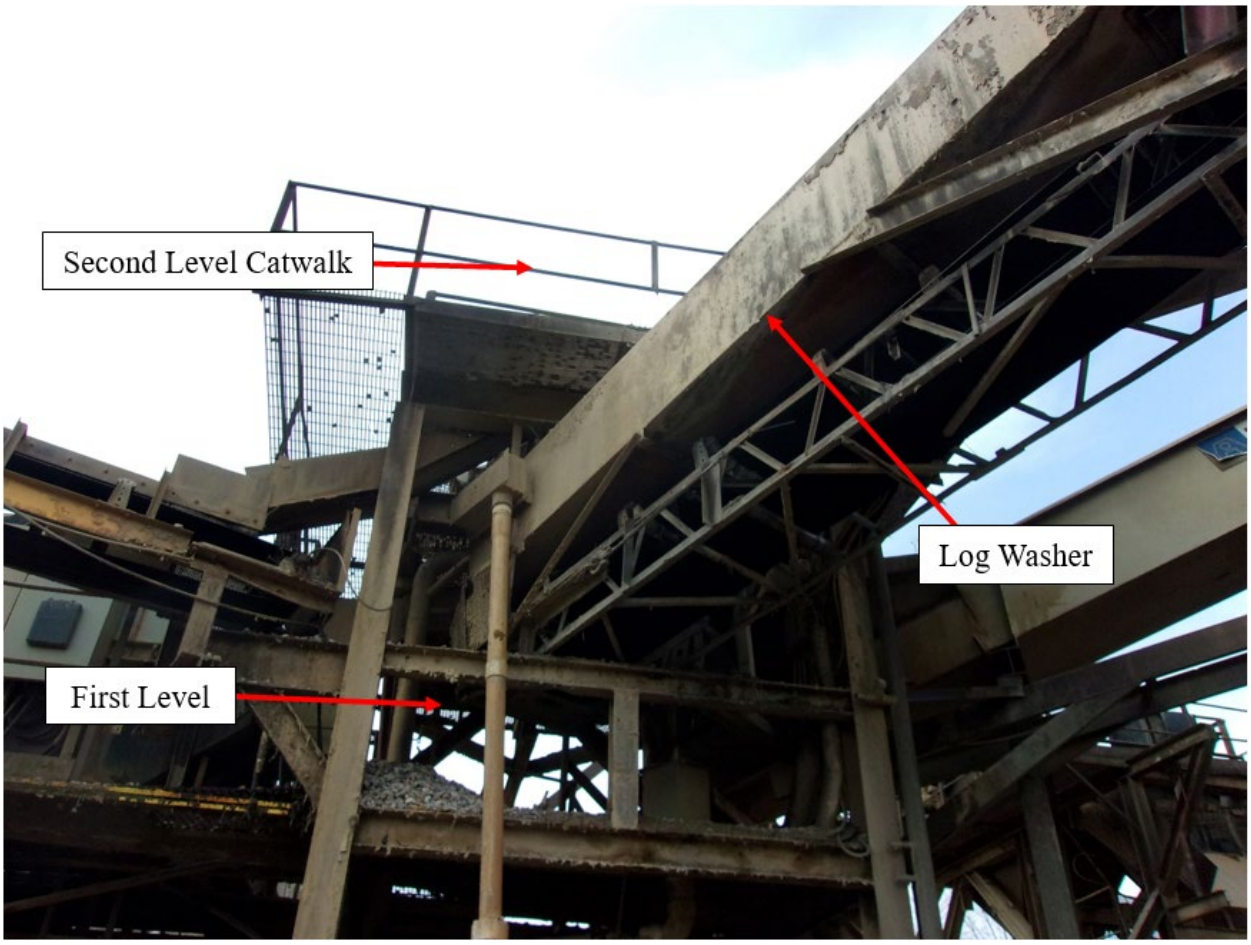
2. A 104(d)(1) citation was issued to Ervin Hill Enterprises Inc for a violation of 30 CFR 56.14105.

   A fatal accident occurred at this operation on November 16, 2024, when a miner (victim) was attempting to manually clean the Eagle Sol-Clay Log Washer at the Wash Plant. Before the victim's attempt to manually clean the Eagle Sol-Clay Log Washer, the log washer was not de-energized and blocked against hazardous motion. The victim was using a one- and one-half inch water hose to clean an accumulation of oversize material from the log washer. During the activity, the log washer was started and the victim became entangled between the rotating shafts and paddles and died because of his injuries. Management engaged in aggravated conduct constituting more than ordinary negligence. This violation is an unwarrantable failure to comply with a mandatory standard.

3. A 104(d)(1) order was issued to Ervin Hill Enterprises Inc for a violation of 30 CFR 46.7(a).

   A fatal accident occurred on November 16, 2024, when an excavator operator became entangled in the Eagle Sol-Clay Log Washer at the wash plant. The mine operator did not provide task training on the log washer maintenance procedures. The mine operator engaged in aggravated conduct constituting more than ordinary negligence by being aware that miners cleared the log washer without being task trained. This violation is an unwarrantable failure to comply with a mandatory standard.

APPENDIX A – Wash Plant Levels



APPENDIX B – Persons Participating in the Investigation

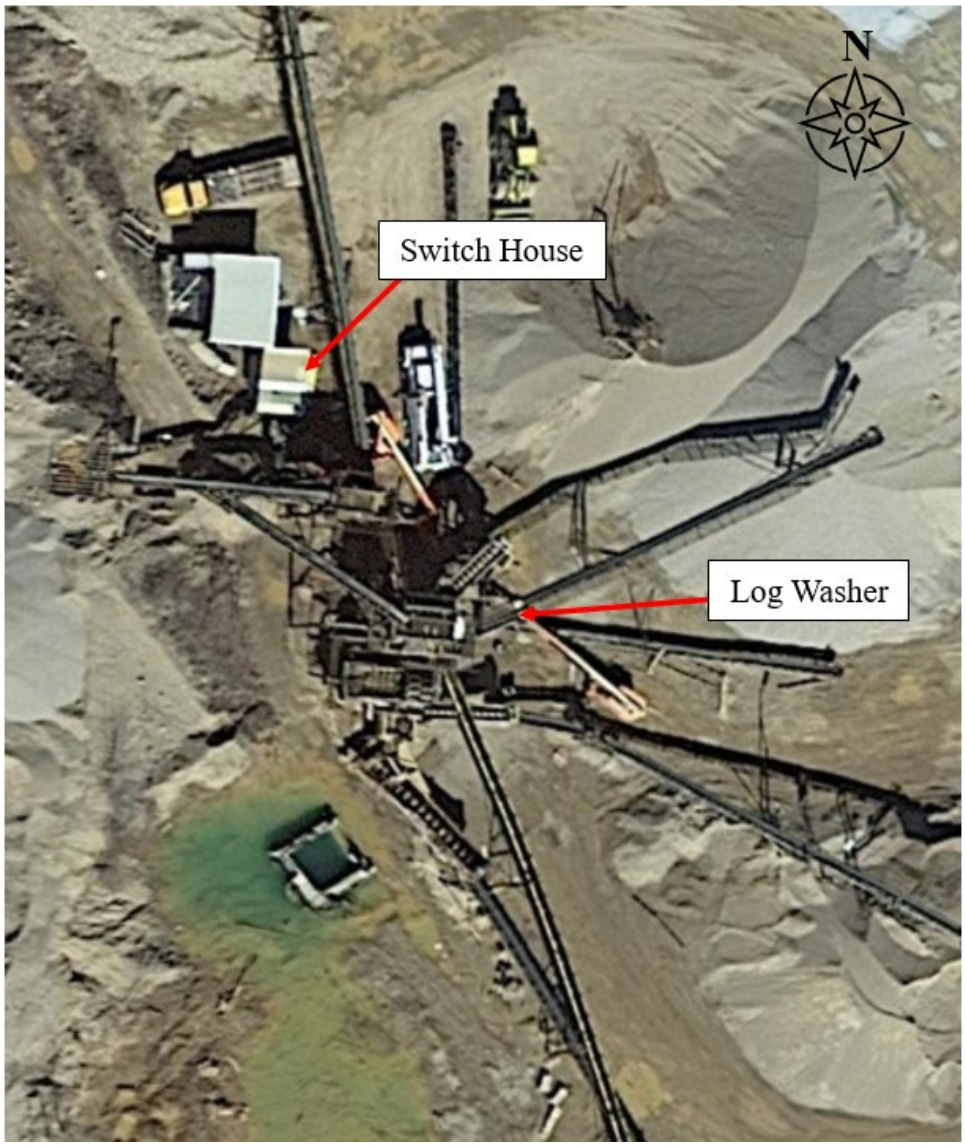
Ervin Hill Enterprises Inc

Mark Edenfield	Owner/President
Jason Campbell	Foreman
Carl Spriggs	Haul Truck Driver
Wanda Countryman	Weighmaster

Mine Safety and Health Administration

Justin Griffith	Mine Safety and Health Specialist
Herbert Bilbrey	Mine Safety and Health Inspector
David Stimmel	Mine Safety and Health Inspector

APPENDIX C – Aerial View of Wash Plant



APPENDIX D – Eagle Sol-Clay Log Washer at Wash Plant