

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Coal Facility

Slip or Fall of Person Accident
August 20, 2019

Scrubgrass Fuel Handling Facility
Scrubgrass Generating Company LP
Kennerdell, Venango County, Pennsylvania
ID No. 36-08567

Accident Investigator

Steven Pentz
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
District 2
Paladin Professional Center
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Mount Pleasant, Pennsylvania 15666
Russell J. Riley, District Manager

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OVERVIEW

On Tuesday, August 20, 2019, at approximately 8:00 a.m., Thomas Flinspach, a 20-year-old Yardman/Laborer with less than 6 months of mining experience died when he fell 37 feet from an elevated work position. The victim was attempting to empty a waste bin at the top of the shaft in the grinder building when the accident occurred.

The accident occurred because the waste bin dump safety procedures were not followed.

GENERAL INFORMATION

Scrubgrass Generating Company LP is a coal-fired power plant located in Venango County, Pennsylvania. The mine employs 50 miners working two production shifts per day, seven days a week. The facility processes waste coal for power generation. The waste coal is transported in from reclamation sites and other outside sources using over the road haul trucks.

The principal officers for the facility at the time of the accident were:

William SpencePresident
Richard ShafferGeneral Manager
Jeff Melat..... Safety Director

The previous regular (E01) safety and health inspection was completed on March 27, 2019. The non-fatal days lost (NFDL) incidence rate for this facility was zero compared to the national average of 1.38 for facilities of this type.

DESCRIPTION OF ACCIDENT

On Tuesday, August 20, 2019, at 6:00 a.m., Flinspach (victim), Yardman/Laborer, began his shift. At 7:00 a.m., Richard Shaffer, General Manager, assigned tasks to Flinspach and Kevin Swartz, Laborer/Trainee. Swartz was directed to accompany Flinspach as part of his onsite training. The two miners were instructed to wash and clean a portion of the grinder building and then finish cleaning spillage from a conveyor belt near the magnet collector on the bottom floor of the facility.

Flinspach and Swartz cleaned the grinder building and went to the bottom floor of the facility and began cleaning the conveyor belt spillage. Flinspach and Swartz uncovered a waste bin that was partially buried in the conveyor belt spillage. Flinspach and Swartz used an overhead trolley to move the waste bin, loaded with spilled material, to the bottom of the shaft. The miners then connected the waste bin to a trolley hoist and traveled up the stairs to the top of the shaft. The trolley hoist is an overhead winch that moves loads vertically, and a tram system to move horizontally along the monorail. Flinspach reached out over the safety gate and pulled the 40-foot remote control cable and remote control module to the top of the shaft (see Appendix A). Flinspach then pulled open the safety gate. Flinspach drove a front-end loader so the bucket of the loader was near the shaft to allow the material from the waste bin to be dumped into the front-end loader.

Flinspach exited the front-end loader and instructed Swartz on the operation of the remote control module. The waste bin was hoisted to the top of the shaft using the trolley hoist. Swartz then moved the waste bin and trolley hoist along the monorail, away from the shaft doorway while Flinspach monitored him. The waste bin was moved to the front-end loader bucket which was not at the end of the monorail (see Appendix A). The position of the waste bin prevented the safety gate from being closed. Flinspach and Swartz attempted to dump the waste bin into the bucket of the front-end loader, but the bin would not rotate forward as designed. The victim told Swartz that the waste bin may be too heavy and that they should remove some of the material to lighten the load. The victim used a masonry hoe and Swartz dug by hand to move material from the waste bin to the bucket of the front-end loader. The safety gate

remained open while this work was performed. Neither Flinspach nor Swartz donned any type of fall protection while working near the unguarded shaft opening.

At approximately 8:00 a.m., Swartz briefly turned away to move the remote control cable. When Swartz realized the victim was no longer removing material from the waste bin, he told investigators that he assumed Flinspach needed to use the restroom or was retrieving drinking water. Several minutes later, Swartz walked down the stairs of the facility to retrieve a shovel and discovered the victim laying on the concrete floor.

Swartz searched unsuccessfully for the victim's radio so that he could call for help. He then travelled up the stairs and found Andrew Burgdorfer, Laborer/Yardman. Burgdorfer contacted Andrew Barton, Materials Analyst Supervisor, by radio and instructed him to call for an ambulance. Barton contacted 911 at 8:15 a.m.

Swartz returned to the accident scene, located the victim's radio, and notified Jeff Melat, Safety Director; Kent Campbell, Shift Manager; Jimmy Smith, Equipment Operator/Yardman; and Shaffer. Melat, Campbell, Smith, and Shaffer travelled to the accident scene and performed cardiopulmonary resuscitation (CPR) until the Emlenton and Clintonville ambulance services arrived at approximately 8:30 a.m. The victim did not respond to CPR, and was pronounced dead at 8:57 a.m. by the Medical Command of University of Pittsburgh Medical Center Northwest Hospital.

INVESTIGATION OF THE ACCIDENT

On August 20, 2019, at 8:32 a.m., Melat notified the Department of Labor National Contact Center (DOLNCC). The DOLNCC notified Kevin Abel, Assistant District Manager, in the MSHA Northeast District. Abel contacted the Warrendale Field Office and the information was forwarded to the Mount Pleasant Office in District 2. Russell Riley, District 2 Manager, contacted Robert Roland, Clearfield Field Office Supervisor. Mark Boguslawski, Mine Safety and Health Inspector and David McDonald, Mine Safety and Health Inspector, were dispatched to the scene, arriving at 10:37 a.m. McDonald issued a 103(k) order to ensure the safety of all persons at the mine. McDonald and Boguslawski gathered information, photographed the scene, and conducted preliminary interviews.

On August 21, 2019, Steven Pentz, Mine Safety and Health Inspector, was assigned to lead the investigation. Thomas McAfoose, Educational Field and Small Mine Services (EFSMS) Specialist, checked training records. In addition to the MSHA investigation, Andrew Hagan, Criminal Investigator, Pennsylvania State Police, also investigated this accident. See Appendix B for a list of persons interviewed and those who participated in the accident investigation.

DISCUSSION

Machinery Information

The waste bin used at the time of the accident was an Apex Bulk Handler. The I-Beam mounted electric trolley hoist system has a capacity of two tons. The task of emptying the bin is normally performed when the waste bin is filled with metal collected from the conveyor belt magnet on the bottom floor of the facility. When the loaded bin is in the proper location for dumping, a latch is disengaged on one side of the bin, allowing the weight of the material to slowly tip the bin.

The electric trolley hoist manufactured by ShawBox, is a Lift-Tech model trolley hoist. The front-end loader is a Volvo L90h model front-end loader.

Examinations of waste bin and work area

The mine operator performed daily examinations of the facility. No safety hazards were documented in the examination records.

Additional Information

The victim positioned the front-end loader near the opening at the top of the shaft prior to Swartz moving the bin out from the shaft opening. Due to the location of the parked front-end loader, the victim was unable to close the safety gate at the shaft opening. Swartz stated that when he moved the bin against the front-end loader bucket, the victim decided not to drive the loader backward and commented that he was dumping the waste bin from this position because he was concerned about the structural integrity of the monorail if the waste bin was moved to the very end of the monorail. Flinspach told Swartz the waste bin rattled excessively as it was being hoisted up the shaft, likely due to the excessive weight of the waste bin. At the time of the accident, the distance from the back of the bin to the shaft edge was approximately 58 inches.

Pictures taken show a left boot heel print, made by the victim, on the inside edge of the concrete shaft, along with a scrape mark matching the front of his boot tread (see Appendix C). Swartz stated that he never heard any noise from the victim. A raised concrete "lip," approximately 3 inches in height is present on the outside edge of the concrete shaft lining, 28 inches from the edge of the void. The purpose of the concrete lip is to act as a bumper to alert mobile equipment operators of the shaft opening and also to aid in keeping ground water from entering the shaft. Due to the close proximity of the waste bin to the shaft opening, and the safety gate not being closed, the lip created a safety hazard that may have contributed to the victim falling into the shaft.

Training and Experience

Flinspach had almost 6 months of surface mining experience. He received hazard training on February 28, 2019, when he was hired as a temporary employee. He

received hazard training again when he was hired on August 19, 2019 as a full time employee. The victim was not provided with the required new miner training. Smith trained the victim to use the trolley hoist, stressing the importance of closing the safety gate to avoid falling into the shaft. There is no record of any task training provided to the victim for operation of the trolley hoist or the front-end loader.

ROOT CAUSE ANALYSIS

MSHA conducted an analysis to identify the most basic causes of the accident that were correctable through reasonable management controls. Root causes were identified that, if eliminated, would have either prevented the accident or mitigated the consequences.

Listed below is the root cause identified during the analysis and the corresponding corrective actions implemented to prevent a recurrence.

1. Root Cause: The waste bin dump safety procedures were not followed causing the safety gate, located at the top of the shaft, to be open when the accident occurred. Also, the miner did not use fall protection while working from an elevated position.

Corrective Action: The mine operator redesigned the equipment and process to eliminate exposure to the hoist shaft while this work is performed. The safety gate was replaced with a fixed handrail that doesn't open. Also, the waste bin was replaced with a smaller waste bin. The trolley hoist now moves the smaller waste bin over the fixed handrail. Additionally, a switch at the top of the hoist shaft now controls the trolley hoist so miners will not be below a load while they operate the trolley hoist. This creates an engineered, fail-safe, control which prevents the need for the previous safety procedures while miners are performing this task.

CONCLUSION

On Tuesday, August 20, 2019, at approximately 8:00 a.m., Thomas Flinspach, a 20-year-old Yardman/Laborer with less than 6 months of mining experience died when he fell 37 feet from an elevated work position. The victim was attempting to empty a waste bin at the top of the shaft in the grinder building when the accident occurred.

The accident occurred because the waste bin dump safety procedures were not followed.

Approved By:

Russell J. Riley
District Manager

Date

ENFORCEMENT ACTIONS

1. A Section 103(k) Order No. 9072241 was issued to Scrubgrass Generating Company LP, ID No. 36-08567.

A Fatal accident occurred at this operation on August 20th, 2019 at approximately 08:00 when a miner fell from an elevated work position. This order is intended to protect all persons, on site, including those involved in rescue and recovery operations or investigation of the accident. The mine operator shall obtain prior approval from an Authorized Representative of the Secretary for all actions to recover and/or restore operations in the affected area. Also, it prohibits all activity at the grizzly crusher building as well as the surrounding area to include the high lift (Volvo L90 H S/N 623175) that was involved, until MSHA has determined it is safe to resume normal mining operations in the area. This order was initially issued orally to the mine operator at 10:47 a.m. and now has been reduced to writing.

2. 104(a) Citation No. 8013391 was issued to Scrubgrass Generating Company LP, for a violation of 30 CFR § 77.205(a).

A safe means of access was not provided to all working places where miners were working. On August 20, 2019, a miner died when he fell to the bottom of a hoist shaft. The work area at the top of the hoist shaft opening was not provided with handrails or guarding. Footprints are visible from multiple miners around the 3 accessible edges of the hoist shaft opening. A three (3) inch raised concrete bumper is present at the doorway of the shaft which presents a tripping hazard near the work area. A steel gate is present at the front of the hoist shaft opening, but was not closed while miners were working. Also, this gate is not being maintained in good condition and has several bent/loose parts.

3. 104(a) Citation No. 8013392 was issued to Scrubgrass Generating Company LP, for a violation of 30 CFR § 77.1710(g).

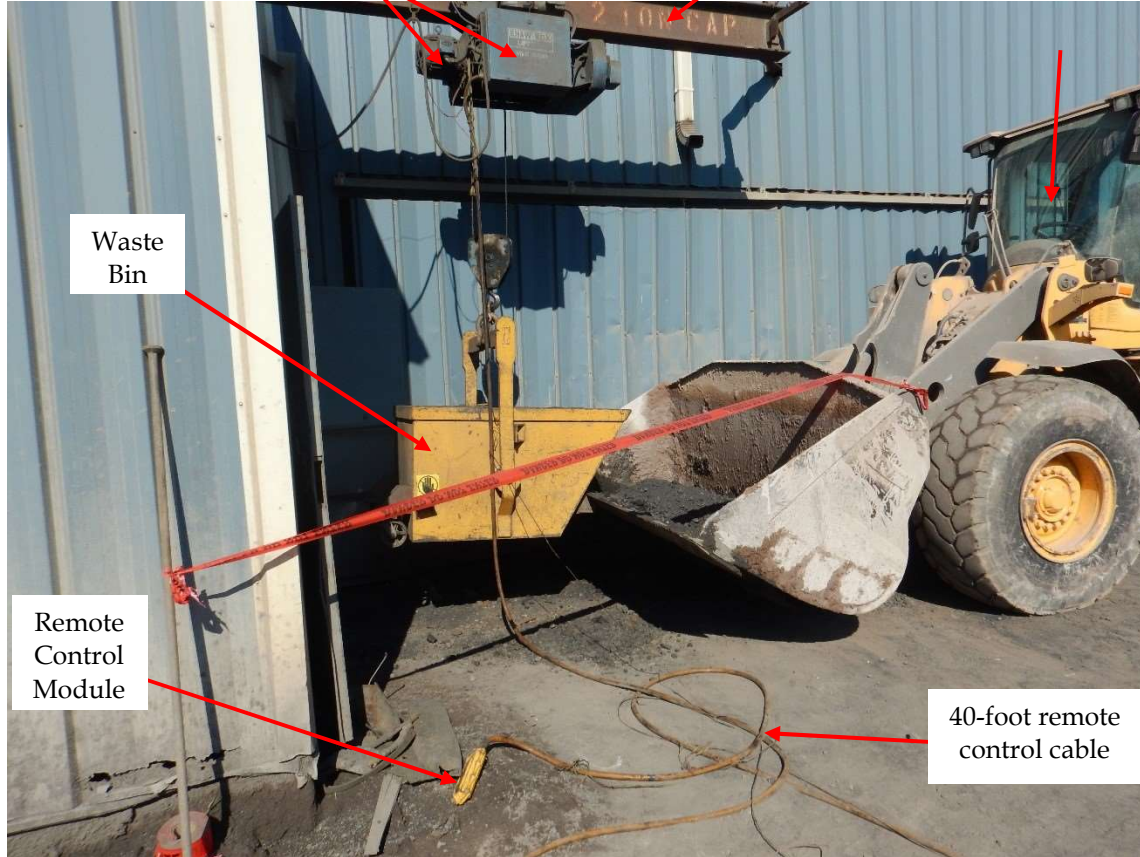
A miner did not wear proper fall protection in an area where it was required. On August 20, 2019, a miner died when he fell 37 feet to the bottom of a hoist shaft. The miner was not tied off, nor did he employ the use of any fall related personal protective equipment.

Appendix A
Equipment used to Perform Task

Trolley Hoist

Monorail

Front-End Loader



Waste
Bin

Remote
Control
Module

40-foot remote
control cable

Appendix A Cont'd.



Appendix B
Persons Participating in the Investigation
(Persons interviewed are indicated by a * next to their name)

Scrubgrass Generating Company LP

*Andrew Barton Materials Analyst Supervisor
*Andrew Burgdorfer..... Laborer/Yardman
Kent Campbell..... Shift Manager
*Jeff Melat..... Safety Director
*Richard Shaffer General Manager
*Jimmy Smith..... Equipment Operator/Yardman
*Kevin Swartz Laborer/Trainee

Pennsylvania State Police

*Andrew Hagan Criminal Investigator, Pennsylvania State Police

Mine Safety and Health Administration

Mark Boguslawski Mine Safety and Health Inspector
Thomas McAfoose Educational Field and Small Mine Services Specialist
David McDonald..... Mine Safety and Health Inspector
Steven Pentz..... Mine Safety and Health Inspector

Appendix C
Accident Scene Photograph

Victim's left heel print on shaft edge, foot center over edge.

