FAI-6898696-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Cement)

Fatal Slip or Fall of Person Accident
July 26, 2021

G & R Mineral Services Inc.
Contractor ID No. (ACR)

at

Hercules Cement LP
Stockertown, Northampton County, Pennsylvania
ID No. 36-00006

Accident Investigators

Arthur D. Wall
Mine Safety and Health Inspector

Leslie R. Tharp
Mine Safety and Health Inspector

Gary C. Merwine
Mine Safety and Health Inspector

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

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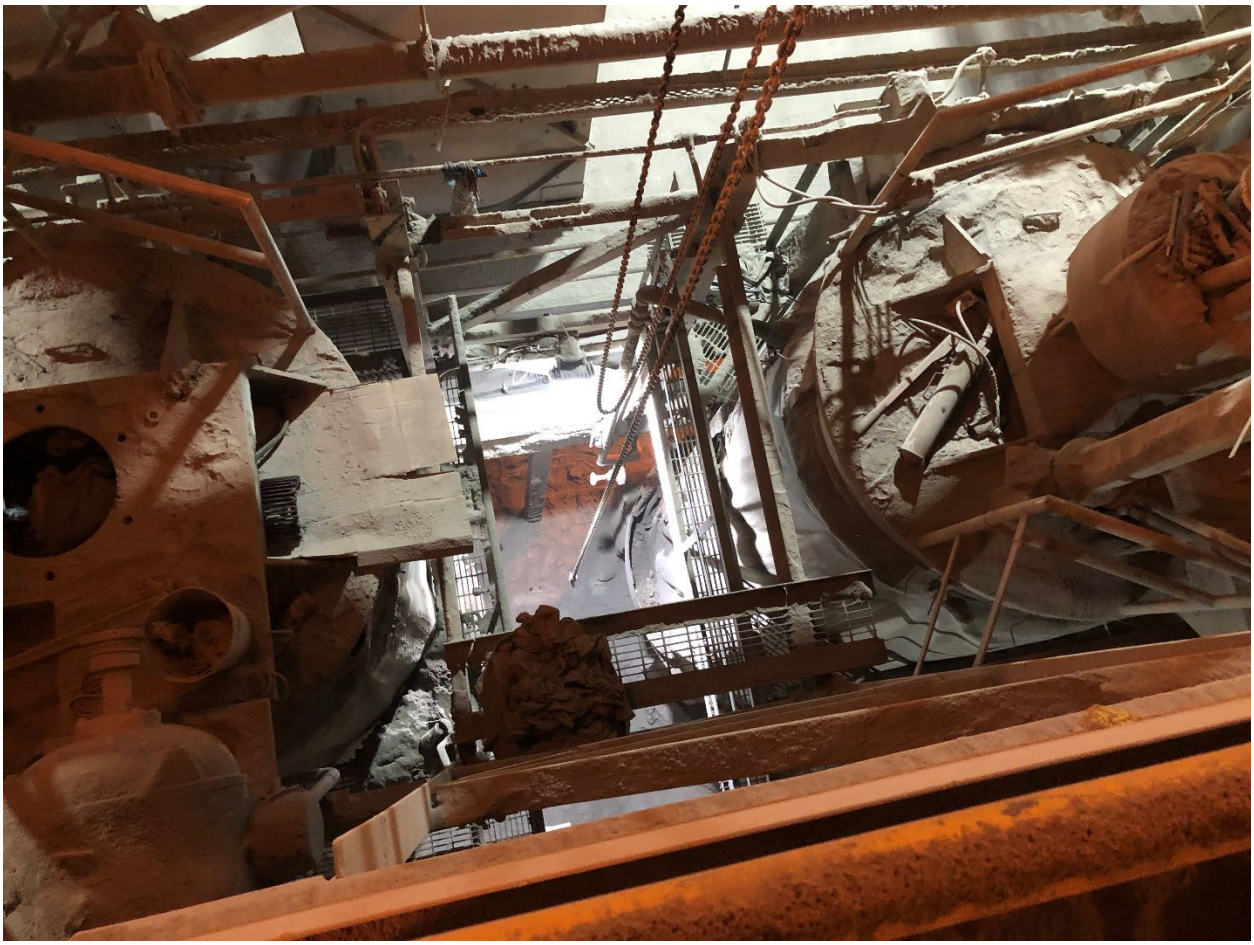

OVERVIEW

On July 26, 2021, at approximately 3:30 p.m., Michael R. Pittman, a 33 year-old ironworker with approximately eight years of experience, died when he fell 23 feet from the top of the #6 Cement Cooler to the concrete floor below.

The accident occurred because: (1 the mine operator's work practices did not provide and maintain safe access to the work area, and (2 the contractor did not confirm that employees were properly using fall protection equipment.

GENERAL INFORMATION

Buzzi Unicem USA (Buzzi) owns and operates the Hercules Cement LP mine, a surface limestone mine and cement processing facility located in Stockertown, Northampton County, Pennsylvania. Hercules Cement LP employs 128 miners and operates three eight-hour shifts, seven days per week. The mine drills and blasts limestone in an open pit quarry, transports the material by haul truck to an onsite processing facility, where the material is crushed and sized, stockpiled, and sent to the cement facility for final processing. G & R Mineral Services Inc. has a contract with Buzzi to perform maintenance work on the #6 Cement cooler.

The principal officers for Buzzi Unicem USA at the time of the accident were:

Massimo Toso	President and Chief Operating Officer
Fabio Rizzi	Vice President Operations
Patrick Lydon	Vice President and General Counsel
Nancy Krial	Chief Financial Officer

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on March 2, 2021. The 2020 non-fatal days lost (NFDL) incident rate for Hercules Cement LP mine was 6.61, compared to the national average of 1.61 for mines of this type.

DESCRIPTION OF THE ACCIDENT

Buzzi contracted G & R Mineral Services, Inc. (contractor) to remove and replace the gearbox on the #6 Cement Cooler (Cooler). R. Casey Reiger, Maintenance Supervisor, provided instructions to G & R explaining the scope of the project and instructions on how to complete the gearbox removal and replacement. On July 26, 2021, Pittman started his shift at 7:00 a.m. Harry Carnell, Field Superintendent, began the shift by conducting the required workplace examination of the cement cooler area. After completing the workplace examination, Carnell and his crew of three ironworkers: Brian Byrd, Kevin Phylups and Pittman, locked out the Cooler's electrical circuit and proceeded to remove the Cooler's gearbox.

Carnell uncoupled the Cooler's drive unit and removed the mounting bolts. In order to lower the defective gearbox from the top of the #6 Cement Cooler to the floor level, Carnell, Pittman, Byrd and Phylups unbolted the catwalk between the #5 and #6 Cement Coolers and lifted it out of the way using an overhead electric-powered hoist mounted on a monorail. Removing the catwalk created an opening, which measured 74 inches wide by 90 inches long and a distance of approximately 23 feet to the floor below. Carnell and the three ironworkers used the same overhead hoist to move the approximately 2,500-pound gearbox to the floor below.

In preparation for installation of the replacement gearbox, Carnell asked Reiger to clean the top of the #6 Cement Cooler before the next day's scheduled work activities. Reiger contacted Timothy Budwash, Service Department Supervisor, and requested Buzzi's Summer Temporary Service Crew (Service Crew) clean the top of the #6 Cement Cooler. Budwash traveled to the top of the #5 Cement Cooler with Michael Leach and Joshua Nemeth, Service Crew Laborers. Budwash observed the large hole where the G & R crew removed the catwalk. Budwash determined that it was not safe for the Service Crew to access the #6 Cement Cooler without fall protection and returned to the control room along with Leach and Nemeth.

Budwash asked Reiger to instruct G & R to place planking to provide a walkway for the Service Crew. Reiger instructed Carnell to place wood planking between the #5 and #6 coolers for the Service Crew to access and clean the top of the #6 Cement Cooler. Reiger informed Carnell that the wood planking was located near the top of the #5 Cement Cooler. Carnell instructed Pittman to place the wood planks and cover the open shaft of the unit to protect it from dust. At approximately 3:00 p.m., Pittman traveled to the top of the #5 Cement Cooler, placed one

wooden plank over the opening between the #5 and #6 Cement Coolers, and placed a rag over the open shaft on the #6 Cement Cooler.

After finishing their break, Leach and Nemeth walked from the break area towards the ground floor stairs, which provide access to the top of the #5 and #6 Cement Coolers. At approximately 3:45 p.m., Leach and Nemeth discovered Pittman lying face down and unresponsive on the cement floor. Nemeth evaluated Pittman's condition while Leach proceeded to the control room to get help. Leach contacted Antonio Rios Jr., Production Supervisor, of the accident and Peter Arcuri, Control Room Operator, called 911. Nicholas R. Ross, Police Officer from the Stockertown Borough Police Department, arrived at 3:56 p.m., conducted a patient assessment, and began performing cardiopulmonary resuscitation. Emergency medical services (EMS) from Nazareth Ambulance Corp. and Suburban EMS arrived at approximately 4:00 p.m. Nazareth Ambulance Corp. transported Pittman to St. Luke's Anderson Campus Hospital where Dr. Jennifer To, M.D., General Surgeon, pronounced him dead at 4:36 p.m.

INVESTIGATION OF THE ACCIDENT

On July 26, 2021, at 4:16 p.m., Dale Womer, Safety and Health Supervisor, called the Department of Labor National Contact Center (DOLNCC) to report the accident. At 4:30 p.m., the DOLNCC contacted Thomas E. Rasmussen, Staff Assistant, and informed him of the accident. At 4:35 p.m., Rasmussen issued an order to Womer under the provisions of Section 103(j) of the Mine Act to maintain the safety of miners and preserve all evidence. Rasmussen contacted Gary C. Merwine, Mine Safety and Health Inspector, who immediately traveled to the mine site, secured the accident scene, and modified the 103(j) order to a 103(k) order at 6:25 p.m. Rasmussen sent Arthur D. Wall, Mine Safety and Health Inspector, and Leslie R. Tharp, Mine Safety and Health Inspector, to conduct the accident investigation.

Wall and Tharp arrived at the mine on July 27, 2021, to begin the investigation. MSHA's accident investigation team conducted an examination of the accident scene, interviewed miners, mine management, the miners' representative, contractor employees, contractor 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 and Description of the Accident

The accident occurred between the top of #5 and #6 Cement Coolers, which are located inside the Mill Building, east of the Mills and west of the Storage Hall (see Appendix B). The G & R crew had removed the section of catwalk between the #5 and #6 Cement Coolers and placed it to the side, on top of the handrails to the south of the #6 Cement Cooler. G & R did not place barricades around the 74 inch wide by 90 inch long opening, or provide any sort of warnings of the dangerous opening.

Investigators found two pieces of a wooden plank, measuring nine inches wide, 80 inches long and one and a half inches thick when re-assembled, on the floor near Pittman. An additional unbroken wooden plank was located on the catwalk along the east side of the #5 Cement Cooler.

Neither of the wooden planks was adequate for use as a scaffold platform. A narrow section of catwalk, measuring 15 inches wide by 72 inches long, was in place between the #5 and #6 Cement Coolers to the east of the opening and adjacent to where the removable section of catwalk was previously located. This narrow section of catwalk had no handrails along the west side where the 74 inches wide by 90 inches long opening existed.

Equipment Involved

F.L. Smidth manufactured the #6 Cement Cooler (Cooler). The Cooler is a six foot six-inch diameter cylindrical cooler (see Appendix C). Investigators determined that the top of the Cooler had grease, dust, and structural obstacles, which contributed to hazardous conditions, including the potential for slipping and tripping.

Work Practices

Based on interviews, Buzzi miners who previously conducted the gearbox replacement task used wooden planks, similar to those found at the accident scene, to provide access across the opening between the cement coolers and had informed management that, in their opinion, the task and method of completing the task were unsafe. Based on interviews, Carnell had been working in the area earlier in the shift when the opening existed while G & R employees were not wearing fall protection. Investigators did not locate any adequate wooden planking or decking at the plant.

Investigators found no suitable tie-off points in the work area to safely and effectively attach the lanyards used with G & R's fall protection. During interviews, Buzzi maintenance employees stated that they had historically completed the gearbox change and there was no suitable anchorage point for personal fall arrest systems in the area.

Weather

The weather at the time of the accident was 89 degrees Fahrenheit with mostly sunny skies and a north breeze of eight miles per hour. Investigators determined that weather was not a contributing factor for the accident.

Training and Experience

Pittman had approximately eight years of experience as an ironworker with G & R at various mining operations. Scott Chiccarello, Mine Safety and Health Training Specialist, examined both Hercules Cement LP's training plan, and G &R's training plan. Pittman received eight hours of annual refresher training on September 21, 2020, fall protection task training on September 23, 2020, and, site specific training for this mine site on May 11, 2021. Chiccarello determined that Pittman received all training in accordance with MSHA Part 46 training regulations.

Workplace Examinations

Carnell conducted a workplace examination of the #5 and #6 Cement Cooler area at the start of the shift before the accident occurred. Carnell, Byrd, Phylups and Pittman reviewed the workplace examination record then added their names at the bottom of the form. The mine operator did not have workplace examination records for the previous shift for this area because G & R was not there for the previous shift. Carnell stated that the removable catwalk was in

place when he conducted his examination before work began on the day of the accident. The mine operator allows the contractor to perform workplace examinations and requires the contractor to fill out a Job Safety Analysis form. Fall protection was provided by G & R, but there were no anchor points to tie off the lanyards. Carnell did not note on the form that this task required fall protection or that there were no anchor points to tie off the lanyards. Investigators determined that workplace examinations were not a contributing factor in 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's work practices did not provide and maintain safe access to the work area.

   Corrective Action: The mine operator developed and implemented a written plan to assure safe access for personnel working at the top of the coolers during gearbox changes. The plan includes extending the overhead monorail across the top of all the coolers and past the end of the catwalk. This monorail extension will allow the overhead electric-powered hoist to raise the components up, trolley across, and lower them to the floor. The mine operator trained all miners on the use of the monorail extension.

2. Root Cause: The contractor did not confirm that employees were properly using fall protection equipment.

   Corrective Action: The contractor developed and implemented a written fall protection plan, which includes a progressive discipline policy to enforce proper use of personal fall arrest equipment, and including establishing that each potentially hazardous area has suitable anchorage points for the miners' fall protection lines. The contractor trained the contract miners on this new plan.

CONCLUSION

On July 26, 2021, at approximately 3:30 p.m., Michael R. Pittman, a 33 year-old ironworker with approximately eight years of experience, died when he fell 23 feet from the top of the #6 Cement Cooler to the concrete floor below.

The accident occurred because: (1 the mine operator's work practices did not provide and maintain safe access to the work area, and (2 the contractor did not confirm that employees were properly using fall protection equipment.

Approved By:

_____ _____

Peter J. Montali Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) Order was issued to Buzzi Unicem USA on July 26, 2021.

   A fatal accident occurred on July 26, 2021 at approximately 3:30 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 insure 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 Buzzi Unicem USA for a violation 56.11001.

   On July 26, 2021, a fatal accident occurred at this mine when a contractor employee fell 23 feet where safe access was not provided and maintained at the top of the #5 and #6 Cement Coolers. In order to allow for removal and replacement of the #6 Cement Cooler gearbox, G & R Mineral Services, Inc. removed a section of catwalk between the #5 and # 6 Cement Coolers. A 15-inch wide section of catwalk was still in place along one side but the remainder of the 74 inch by 90 inch opening where the catwalk had been removed was not equipped with handrails, barricades, or other warning signs of a dangerous work area. The contractor employee was directed to install two wooden planks, which measured approximately 1 ½ inches thick by 9 inches wide, across the opening and cover the exposed end of the drive shaft on the #6 Cement Cooler with a cloth in preparation for Buzzi Unicem USA laborers to clean the area prior to contractors installing the new gearbox. Management engaged in aggravated conduct constituting more than ordinary negligence in that the Operator was aware there was a large, unprotected opening between #5 and #6 Cement Coolers, provided the Contractor with the task outline as performed by their own employees and had requested the Contractor place the wooden planks across the opening. This violation is an unwarrantable failure to comply with a mandatory standard.

3. A 104(d)(1) citation was issued to G & R Mineral Services, Inc. for a violation of 56.15005.

   On July 26, 2021, a fatal accident occurred at this mine when a contractor employee fell approximately 23 feet from near the top of the #5 and #6 Cement Coolers. G & R Mineral Services, Inc. removed a section of catwalk between Cement Cooler #5 and Cement Cooler #6 to allow for removal and replacement of the #6 Cement Cooler gearbox. A 15-inch wide section of catwalk was in place along one side but the remainder of the 74 inch by 90 inch opening was not equipped with handrails or barricades. The miner was not wearing a safety belt and line while working to place wooden planks across the opening and fell to the concrete floor below. Management engaged in aggravated conduct constituting more than ordinary negligence in that the Contractor had previously been cited at this mine for employees not wearing safety belts and lines while working from elevated wooden planking and the Supervisor had been working in the area while employees were not wearing suitable fall protection. This violation is an unwarrantable failure to comply with a mandatory standard.

APPENDIX A – Persons Participating in the Investigation

Buzzi Unicem, USA

Patrick Lydon	Vice President and General Counsel
Gregg Knecht	Safety and Health Director
Dale Womer	Safety and Health Supervisor
Jeffrey Raub	Miner's Representative
Timothy Budwash	Service Department Supervisor
Richard Casey Reiger	Maintenance Supervisor
Antonio Rios Jr.	Production Supervisor
Robert Jones	Maintenance Manager
Chad Miller	Mill Foreman
Trever Stone	Production Superintendent
Michael Leach	Laborer
Joshua Nemeth	Laborer

G & R Mineral Services, Inc.

Harry Carnell	Field Superintendent

Northampton County Coroner's Office

Zachary R. Lysek	Coroner
Coy K. Smith	Chief Deputy Coroner

Mine Safety and Health Administration

Arthur D. Wall	Mine Safety and Health Inspector
Leslie R. Tharp	Mine Safety and Health Inspector
Gary C. Merwine	Mine Safety and Health Inspector
Scott Chiccarello	Educational Field and Small Mine Services

APPENDIX B – Photograph of the Accident Scene

APPENDIX C – Photograph of the Equipment Involved