

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION
Surface Nonmetal Mine
(Crushed Limestone)

Fatal Powered Haulage Accident
June 10, 2019

Premier Power Professionals Inc. (L058)
Racine, Racine County, WI

at

River Road Quarry
Vulcan Construction Materials, LLC
Nashville, Davidson County, TN
ID No. 40-00104

Accident Investigators

Rory M. Smith
Supervisory Mine Safety and Health Inspector

Kevin Hardester
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Southeastern District
1030 London Drive, Suite 400
Birmingham, Alabama 35211
Samuel K. Pierce, District Manager

Table of Contents

| | |
|--|----|
| OVERVIEW | 1 |
| GENERAL INFORMATION | 2 |
| DESCRIPTION OF ACCIDENT..... | 2 |
| INVESTIGATION OF ACCIDENT..... | 3 |
| DISCUSSION | 4 |
| Location of Accident | 4 |
| Equipment | 4 |
| Weather Conditions..... | 4 |
| Training and Experience..... | 4 |
| ROOT CAUSE ANALYSIS | 5 |
| CONCLUSION..... | 5 |
| ENFORCEMENT ACTIONS | 6 |
| Appendix A – Overhead Photo..... | 7 |
| Appendix B – Persons participating in the investigation..... | 8 |
| Appendix C – Wall detail..... | 9 |
| Appendix D – Wacker Neuson WL36 FEL | 10 |



OVERVIEW

Collin Sawasky, a 22-year old apprentice electrician with Premier Power Professionals (Premier) with three years of experience died on June 10, 2019, when a front-loader toppled into the trench where he and a coworker were installing electrical conduit.

The accident occurred because the equipment operator did not maintain control of the front-end loader to prevent overtravel into the trench and the mine operator did not provide berms or other devices to prevent overtravel.

GENERAL INFORMATION

Vulcan Construction Materials, LLC (Vulcan) owns and operates River Road Quarry, a surface limestone mining operation located in Nashville, Davidson County, Tennessee. The mine operates two, ten-hour shifts, five days per week and employs 14 miners.

River Road Quarry drills and blasts limestone. Excavators and front-end loaders load the limestone into haul trucks for delivery to on-site processing facilities. The mine produces aggregates primarily for road construction.

Premier Power Professionals, Inc. (Premier) provides electrical contracting services to River Road Quarry.

TPS Construction Services provides general contracting services to River Road Quarry.

The principal officers at this mine at the time of the accident were:

Joseph "Nate" Peters.....Plant Manager
Derrick Gill.....Leadman

The Mine Safety and Health Administration (MSHA) completed the last regular inspection at this operation on May 29, 2019. The non-fatal days lost (NFDL) incident rate for the River Road Quarry for 2018 was zero (0), compared to the national average of 1.35.

DESCRIPTION OF ACCIDENT

On June 10, 2019, Sawasky arrived at the mine site at 6:00 a.m., to continue installing electrical lines for a new plant. Premier's Foreman, Greg Turcotte, met with Sawasky and Travis Hegemann, Journeyman Electrician, to conduct the morning safety briefing and discuss the day's tasks. The three men walked over to a trench for electrical lines, to see the impact of a recent rain event.

Turcotte determined the trench was too muddy to work safely, so he coordinated with Joseph Peters, Plant Manager, to remove the mud. Peters used an excavator to clear the mud from the trench. He also placed a six-by-two-foot concrete block at the head of the trench to serve as a mounting structure for an electrical junction box. Before leaving the area, Turcotte coordinated with Peters to replace the mud with crushed rock. Turcotte then left the mine site to obtain additional construction material. Bruce Batson, Maintenance/Equipment Operator, delivered approximately half a bucket of crushed stone using a Caterpillar 980H front-end loader. He put some stone into the trench and dumped the remainder along the trench for later placement.

Hegemann coordinated with Peters to bring an additional four loads of crusher fines to the trench to use as bedding for the conduit. Peters operated a Wacker Neuson WL36 front-end loader to deliver the crusher fines from a nearby stockpile. A pile of crushed rock, other materials, and equipment in front of and adjacent to the trench impeded Peters' approach to the trench. Peters

had to approach the trench at about a 30-degree angle and then turn to the right, which placed the bucket of the front-end loader parallel to the trench (see Appendix A).

Hegemann acted as a spotter for Peters when he dumped the first three buckets of crusher fines into the trench. After Peters dumped the third bucket of crusher fines, Hegemann got in the trench to mount steel struts to the concrete block for the junction box. Sawasky stood next to him, assisting. Hegemann was not spotting when Peters delivered the fourth load.

At approximately 11:10 a.m., as Peters was preparing to dump the fourth load, the right-front wheel of the front-end loader went over the edge and into the trench. Peters yelled out a warning and Hegemann jumped back out of the way. The front-end loader rolled and slid down into the trench, with its bumper coming to rest on the concrete block.

Hegemann watched Peters climb out of the front-end loader cab and then turned to see that Sawasky was pinned between the front-end loader and the concrete block. Hegemann called to Turcotte, who had returned to the site, to call 911. He then climbed to the top of the block and tried to speak to Sawasky, who was not responsive.

Peters assisted emergency medical services by using a large excavator to lift the fallen front-end loader to free Sawasky at 11:25 a.m. Kelli Derleth, Medicolegal Death Investigator, examined Sawasky and pronounced him dead at 12:06 p.m.

INVESTIGATION OF ACCIDENT

At 11:31 a.m., Brandon Clemons, Vulcan's Safety Representative, called the Department of Labor's National Contact Center (DOLNCC). At 11:43 a.m., the DOLNCC contacted David Allen, MSHA Southeastern District Safety Specialist, who dispatched Scottie Sizemore, Mine Safety and Health Inspector, and Darren Conn, Supervisory Mine Safety and Health Inspector, in MSHA's Franklin, Tennessee field office, to the mine site. Sizemore and Conn arrived at 1:24 p.m., and issued an order under Section 103(k) of the Mine Act to secure the scene and ensure the safety of miners.

Rory Smith, Supervisory Mine Safety and Health Inspector, in MSHA's Birmingham, Alabama field office and Kevin Hardester, Mine Safety and Health Inspector, arrived on the scene at 4:30 p.m., to conduct a fatal injury accident investigation. MSHA's accident investigation team conducted a physical examination of the accident scene, interviewed five mine employees and seven contractor employees, reviewed training documentation, and examined work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management, miners, and contractors. See Appendix B for a list of persons participating in the investigation.

DISCUSSION

Location of Accident

The accident occurred in an area where the operator was building a secondary processing plant. The electrical contractors were preparing to place electrical conduit and a junction box in a trench at the perimeter of the new plant site. The trench was approximately seven-feet wide and ranged from four to six feet deep. The walls were slightly sloped (see Appendix C), and there was a shallow ramp at the head of the trench for access.

Equipment

A Wacker Neuson WL36, front-end loader, Serial #3025335, with a bucket capacity of .8 cubic yards was involved in the accident (see Appendix D). River Road Quarry has only one front-end loader of this model and they have trained multiple miners to operate it. There were no documented mechanical issues with the front-end loader. Maintenance records did not indicate any current or recurring issues. After inspecting pre-operational examination records and conducting interviews, the accident investigators concluded that the mine operator was performing required examinations and there were no reported safety defects or concerns prior to the accident.

Weather Conditions

The weather at the time of the accident was mostly cloudy, no precipitation, and a temperature of 77° F. Rainfall over the previous weekend made further excavation of the trench necessary to correct the muddy conditions. Investigators did not consider the weather to be a factor in the accident.

Training and Experience

Peters received training in operating the front-end loader. He had approximately six months of experience at this site and approximately three years of total mining experience. Collin Sawasky's training records indicated he had received new miner training; site-specific training; annual refresher training; and task training on various pieces of equipment.

ROOT CAUSE ANALYSIS

The accident investigation team conducted a root cause analysis to identify the underlying cause 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 maintain control of the front-end loader to prevent overtravel into the trench.

Corrective Action: The mine operator provided additional training to all equipment operators on how to operate equipment in a safe and controlled manner.

2. Root Cause: The mine operator did not use berms or other limiting devices to prevent overtravel of equipment when approaching a drop-off to dump material.

Corrective Action: The mine operator developed and implemented new policies and procedures to ensure miners' safety when dumping material near an edge of a drop-off, and provided training to miners in the new policies and procedures.

CONCLUSION

Collin Sawasky died when a front-end loader toppled into the trench where he and a coworker were installing electrical conduit. The accident occurred because the equipment operator did not maintain control of the front-end loader to prevent overtravel into the trench and the mine operator did not provide berms or other devices to prevent overtravel.

Approved: _____ Date: _____
Samuel K. Pierce
Southeastern District Manager

ENFORCEMENT ACTIONS

A 103(k) Order No. 9455074 was issued to River Road Quarry on June 10, 2019.

A fatal accident occurred at this operation on June 10, 2019 when a front-end loader turned over in a trench and pinned a contractor between the front-end loader and a concrete block. This order is issued to assure the safety of all persons at this operation. It prohibits all activity where the operator is building the new secondary plant until MSHA has determined it is safe to resume normal mining operations in the area. The mine operator shall obtain prior approval from an authorized representative for all actions to recover and/or restore operations to the affected area.

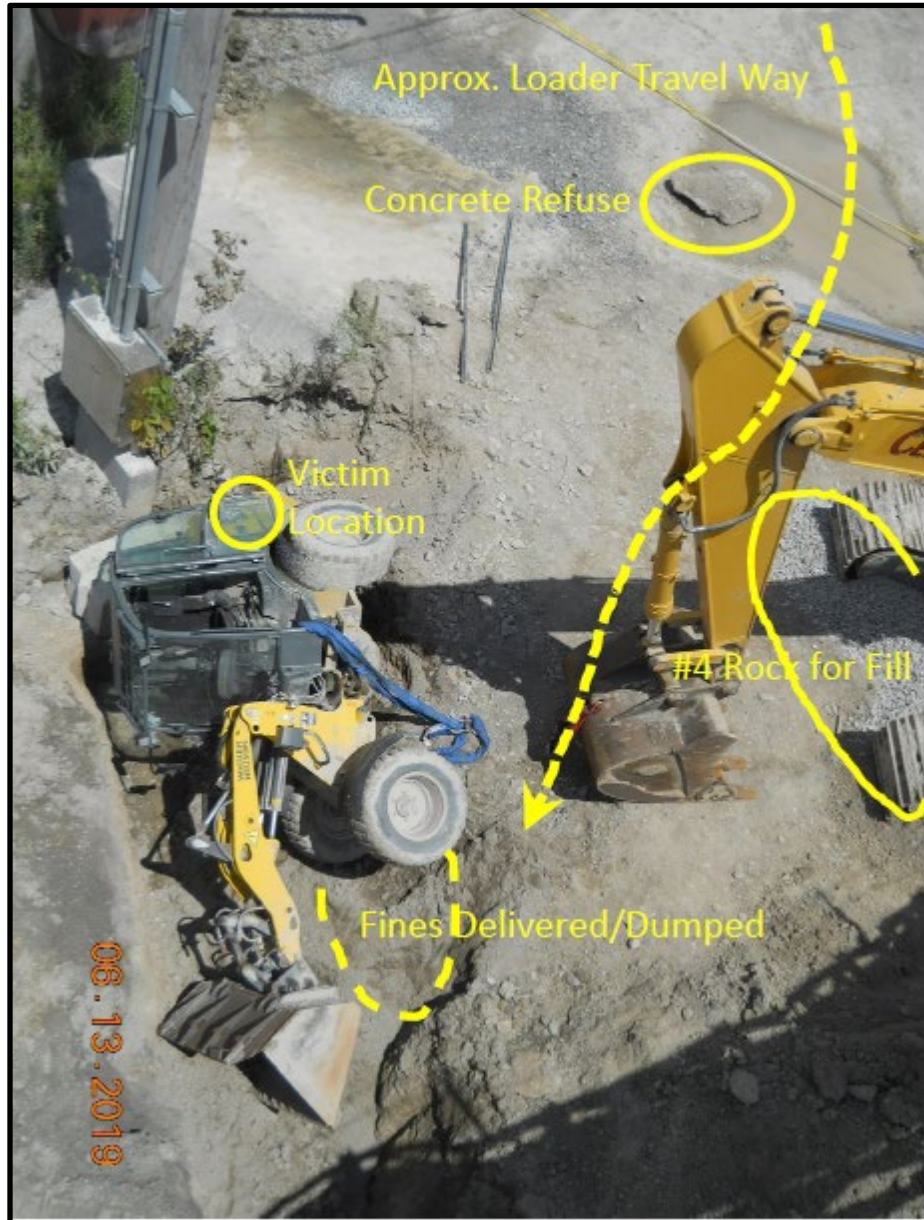
A 104(d) (1) Citation No. 9490607 was issued to River Road Quarry for violation of 30 CFR § 56.9301 on August 20, 2019.

On June 10, 2019, a contractor received fatal injuries when the front-end loader operated by the plant manager toppled into the trench where he was working, pinning him between the Wacker Neuson WL36 FEL and a large concrete block. The plant manager was using the Wacker Neuson WL36 FEL to dump crusher fines into the trench for conduit bedding. The mine operator did not provide or use berms or other limiting devices at the edge of the trench to prevent overtravel of the Wacker Neuson WL36 FEL while dumping material into the trench.

A 104 (a) Citation No. 9490608 was issued to River Road Quarry for violation of 30 CFR § 56.9101 on August 20, 2019.

On June 10, 2019, a contractor received fatal injuries when the front-end loader operated by the plant manager toppled into the trench where the victim was working, pinning him between the Wacker Neuson WL36 FEL and a large concrete block. The plant manager was using the Wacker Neuson WL36 FEL to dump crusher fines into the trench for conduit bedding. The mine operator did not maintain control of his equipment, which overtravelled into the trench.

Appendix A – Overhead Photo



Appendix B – Persons participating in the investigation
(Persons interviewed are indicated by a * next to their name)

River Road Quarry

Joseph Peters* Plant Manager
Derrick Gill*Leadman
John “JT” Slayton* Area Manager
Bruce Batson* Maintenance/Equipment Operator
Brian Bunn* Plant Operator
Bill Huffman Safety and Health Manager
Brandon Clemons Safety Representative

Premier Power Professionals, Inc.

Greg Turcotte* Foreman
Travis Hegemann*Journeyman Electrician

TPS Construction Services

David Gardner*Construction Manager
Patrick Evans*Laborer
Bobby “BJ” Boulton*General Foreman
Bradley Freeman* Lay Down Supervisor

Mine Safety and Health Administration

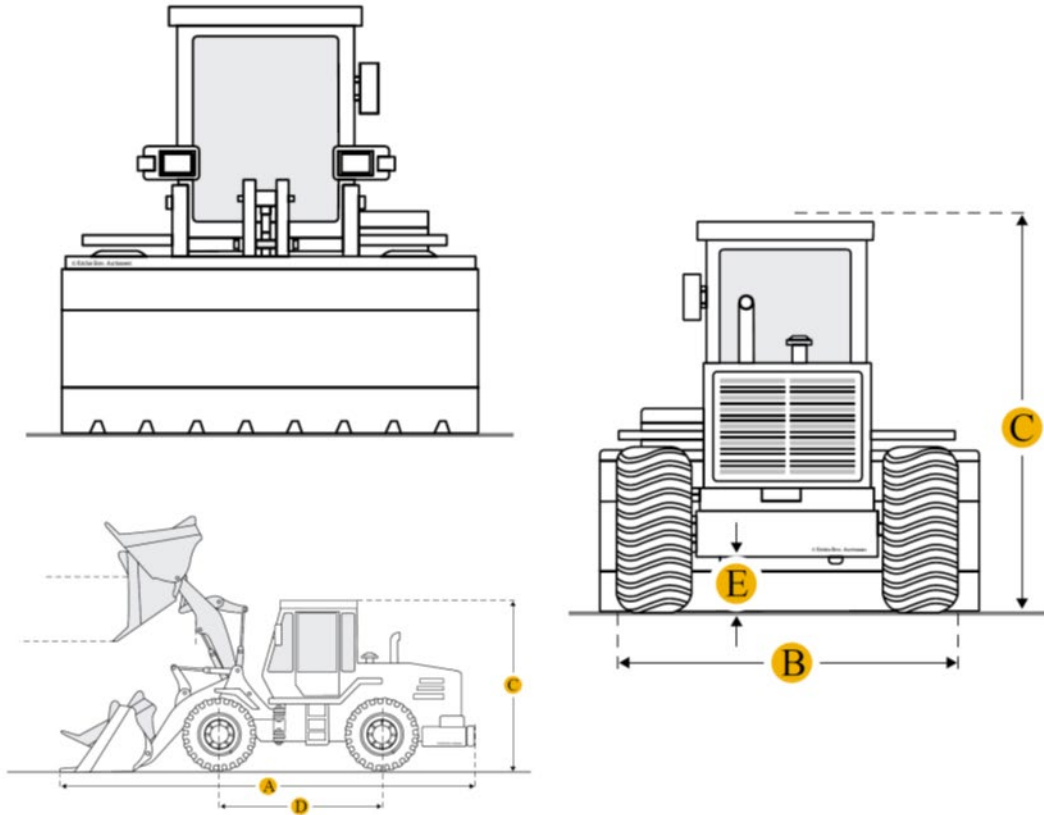
Rory M. Smith..... Supervisory Mine Safety and Health Inspector
Kevin Hardester Mine Safety and Health Inspector
Darren Conn..... Supervisory Mine Safety and Health Inspector
Scottie Sizemore..... Mine Safety and Health Inspector
Randall Dye Educational Field and Small Mine Services

Appendix C – Wall detail



Fines removed from wall after front-end loader extracted. No indication the trench wall collapsed. Note: front-end loader tracks indicate wheel was rolling into trench.

Appendix D – Wacker Neuson WL36 FEL



Dimensions

| | | |
|---------------------------------|-------------------------------------|---------------------|
| A | Length with Bucket on Ground | 13.54 ft in |
| B | Width Over Tires | 5.16 ft in |
| C | Height to Top of Cab | 7.58 ft in |
| D | Wheelbase | 6.63 ft in |
| E | Ground Clearance | 0.98 ft in |
| Bucket Capacity - heaped | | 0.8 yd ³ |
| Track Width | | 47.3 in |
| Weight | | 8002.8 lb |