UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Crushed, Broken Limestone)

Fatal Slip or Fall of Person Accident
January 30, 2023

Randolph Deep Mine
Martin Marietta Kansas City, LLC
Randolph, Clay County, Kansas
ID No. 23-02308

Accident Investigators

Nicholas Dunne
Mine Safety and Health Inspector

Keith Markeson
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Madisonville District
100 YMCA Drive
Madisonville, KY 42431
Mary Jo Bishop, District Manager

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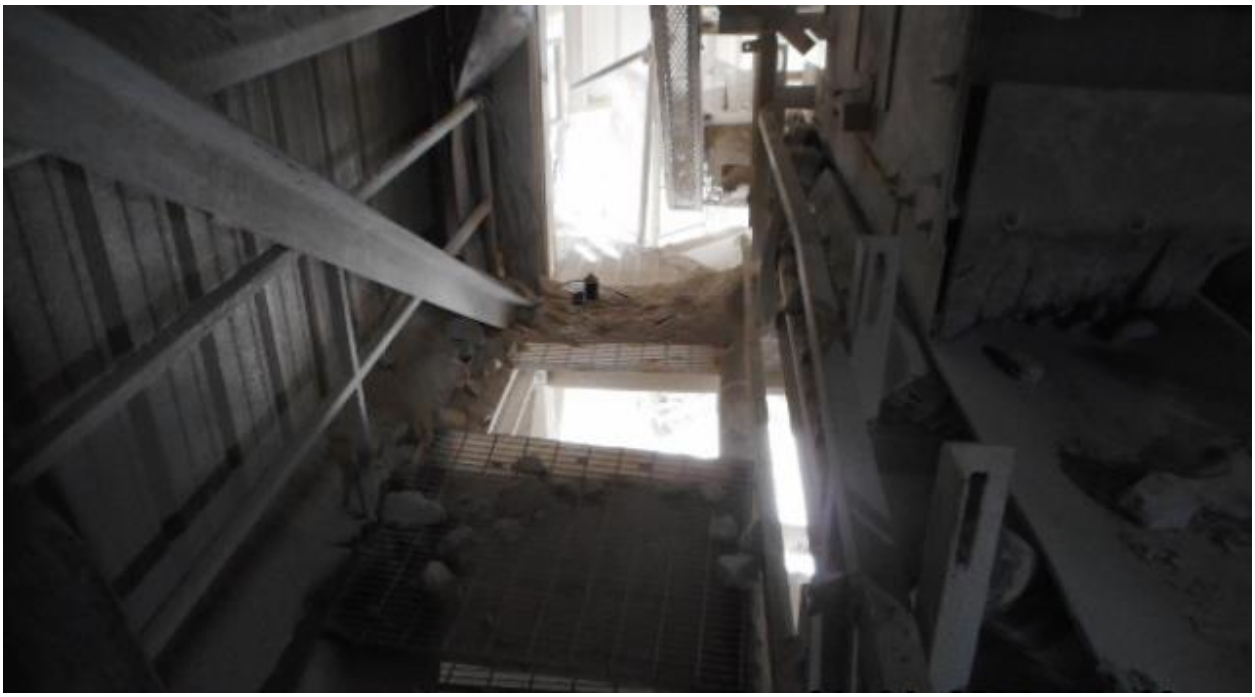


OVERVIEW

On January 30, 2023, at approximately 4:45 p.m., Bobby Allen, a 42 year-old maintenance mechanic with over ten years of mining experience, died when he fell through an opening in an elevated beltline catwalk. He fell approximately 35 feet to the ground below.

The accident occurred because the mine operator did not: 1) barricade or post warning signs to prevent miners from falling through the opening in the catwalk, and 2) ensure that miners wore fall protection where there was danger of falling.

GENERAL INFORMATION

Martin Marietta Kansas City, LLC owns and operates the Randolph Deep Mine. The mine is an underground crushed and broken limestone mine located in Randolph, Clay County, Kansas. Randolph Deep Mine employs 52 miners and operates one 12-hour shift per day, five days per week. A belt conveyor transports limestone from the underground portion of the mine to the plant on the surface for crushing and sizing. The final product is stockpiled on the surface and loaded into customer trucks.

The principal management official at the Randolph Deep Mine at the time of the accident was:

Dennis Heaton	Plant Manager

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection on November 17, 2022. The 2022 non-fatal days lost incident rate for the Randolph Deep Mine was 1.74, compared to the national average of 1.20 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On January 30, 2023, at 5:37 a.m., Allen arrived at the plant and began his normal duties, which included examining equipment and the plant prior to start up. Marcelino Salas, Plant Operator, started the plant operations at approximately 7:30 a.m. and Allen monitored plant operations. At approximately 4:20 p.m., the No. 12 belt conveyor, located in the East End Building stopped working. Salas called Allen on his hand-held radio and asked him to determine what was wrong with the belt. Allen walked to the belt and reported to Salas that the conveyor discharge chute was full of rock and needed to be cleaned out.

Based on interviews, at approximately 4:25 p.m., Salas radioed Jeremiah Shilley and Brian Woltz, Plant Utility Miners; and Mynor Gallegos and Derek Craig, Truck Drivers, to help clean the conveyor discharge chutes on the No. 12 belt conveyor in order to restart the No. 12 belt conveyor. According to interviews, Shilley arrived first and met Allen on the catwalk. Allen and Shilley removed a 35.5-inch by 41-inch section of bar grating located on the catwalk at the head roller end of the No. 12 belt conveyor. Allen and Shilley also opened the side door of the conveyor discharge chute on the No. 12 belt conveyor (see Appendix A). Allen walked upstairs to check the screens that feed the chutes. Craig arrived and helped Shilley at the head roller end of the No. 12 belt conveyor. Gallegos and Woltz arrived and lifted the hinged section of bar grating at the tail roller end of the No. 12 belt conveyor and opened the side door on the other conveyor discharge chute. After a few minutes, the miners completed shoveling rock from both conveyor discharge chutes on the No. 12 belt conveyor.

Craig, Gallegos, and Woltz closed the hinged bar grating at the tail roller end and left the East End Building. Allen came back down from the screens above the chutes and met Shilley at the head roller end. Allen instructed Shilley to go down to the Cone House and check for obstructions in the cone crushers while they waited for the belt to restart. Shilley crossed over the opening in the catwalk and exited the building. All of the miners' locks were removed from the No. 12 belt conveyor and Salas attempted to restart the plant.

According to interviews, Salas radioed Allen to inform him that the No. 12 belt conveyor would not restart. Allen crossed over the opening in the catwalk to examine the conveyor belt. Allen radioed Salas and informed him that the drive belt at the head roller end looked worn and he was going to apply belt dressing to help restart the belt. At approximately 4:45 p.m., Allen also informed Salas that he was going to check on one more issue before restarting the belt. That was the last radio communication with Allen. Salas waited a few minutes and did not hear anything from Allen. Salas attempted to call Allen three separate times on his hand-held radio, but there was no reply. Salas left the plant control room to see if Allen needed help at the No. 12 belt conveyor. Salas was unable to locate Allen in the area. He then looked through the opening in the catwalk and observed Allen on the ground below (see Appendices A and B). Salas immediately went to check on Allen but could not find a pulse, so he went to the plant control room to call for help. Salas met Shilley on the way and informed him that Allen was unresponsive and needed help. Shilley stayed with Allen until Dayton Shireman, Claycomo Emergency Medical Services Acting Captain, arrived and pronounced Allen dead at 5:06 p.m.

INVESTIGATION OF THE ACCIDENT

On January 30, 2023, at 5:24 p.m., Bradley Colter, Senior Safety Representative, called the Department of Labor National Contact Center (DOLNCC) to report the accident. The DOLNCC called Lawrence Sherrill, Supervisory Mine Safety and Health Inspector, who called Robert Simms, District Manager. Simms called David West, Assistant District Manager, and Curtis Hardison, Staff Assistant. Sherrill called Nicholas Dunne and Keith Markeson, Mine Safety and Health Inspectors, and sent them to the mine. Hardison assigned Dunne to be the lead accident investigator.

At 10:27 p.m., Dunne 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 preservation of evidence. On January 31, 2023, Markeson arrived at the mine to assist in the investigation. The accident investigation team, along with the Clay County Sheriff's Department, conducted an examination of the accident scene, interviewed miners and mine management, and reviewed conditions and work practices relevant to the accident. See Appendix C for a list of persons who participated in the investigation of the accident.

DISCUSSION

Location of the Accident

The accident occurred on the catwalk along the No. 12 belt conveyor in the East end building of the plant. The catwalk is approximately 40 feet long and is elevated 35 feet above the ground.

Weather

The weather on the day of the accident was dry and sunny with a high temperature of 18 degrees Fahrenheit. Investigators determined that weather did not contribute to the accident.

Work on the No. 12 Belt Conveyor

The No. 12 belt conveyor has two chutes that are fed from overhead sizing screens. One chute is located at the tail roller and one chute is located at the head roller. Miners removed a 35.5-inch by 41-inch section of bar grating, leaving a 34-inch by 37-inch opening in the catwalk at the head roller end. This bar grating used to be hinged on the side farthest from the belt, but the hinge broke at some point and the investigators were unable to determine when that happened. The bar grating at the tail roller end was permanently hinged to the catwalk and was propped open during the cleanup. After removing or opening these sections of bar grating, miners were able to shovel the rock from the conveyor discharge chute through the opening to the ground below. According to interviews, miners clean the chute once or twice per year as part of their regular duties to keep the plant running. The mine operator did not assign this task to the miners and was not aware of the procedure of lifting the floor grate as part of the procedure for cleaning out the chute. When the miners completed the cleanup, the hinged bar grating at the tail roller end was replaced, but the bar grating at the head roller end was not. Investigators observed Allen's boot print on the conveyor side support beam, indicating that at some point Allen had walked around the opening in the catwalk at the head roller end. Based on the examination of the accident scene, Allen apparently stepped through the opening while walking on the catwalk. The mine operator did

not barricade or post warning signs to prevent miners from falling through the opening in the catwalk, which contributed to the accident.

Fall Protection

The mine operator provided fall protection gear at the mine. According to interviews, none of the miners working around the No. 12 belt conveyor wore fall protection during the cleanup or while attempting to restart the belt. Investigators determined that the mine operator did not ensure that miners wore fall protection where there was danger of falling, which contributed to the accident.

Examinations

There were no workplace examination records available for the day of the accident for the East End Building of the plant. The record is not required to be made until the end of the shift. Therefore, investigators were unable to determine if the mine operator conducted a workplace examination on the day of the accident.

Training and Experience

Bobby Allen had over eight years of mining experience, which he worked as a plant operator. Allen had six months of experience at this mine as a mechanic and had not previously cleaned the chute at the accident location. Leon Mueller, Mine Safety and Health Training Specialist, reviewed the mine's Part 48 training plan and training documentation for Allen. Allen's training records indicated that he received training for pre-operational inspections, workplace examinations, and fall protection. Based on these records, Mueller determined that all training was conducted in accordance with MSHA Part 48 training regulations and 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 implemented the corresponding corrective actions to prevent a recurrence.

1. Root Cause: The mine operator did not barricade or post warning signs to prevent miners from falling through the opening in the catwalk.

   Corrective Action: The mine operator hired a contractor to conduct a training session on fall protection while working on elevated surfaces or near areas that create a fall hazard. The training included installation of protective devices or adequate warning signals in accordance with Title 30 Code of Federal Regulations (30 CFR) Part 57.11012.

2. Root Cause: The mine operator did not ensure that miners wore fall protection where there was danger of falling.

   Corrective Action: The mine operator hired a contractor to conduct a training session on fall protection while working on elevated surfaces or near areas that create a fall hazard. This training included the proper use, donning, and proper care of fall protection in accordance

with 30 CFR Part 57.15005. As an additional precaution, the mine operator ordered new fall protection for every miner who works in an area where fall protection is required.

CONCLUSION

On January 30, 2023, at approximately 4:45 p.m., Bobby Allen, a 42 year-old maintenance mechanic with over ten years of mining experience, died when he fell through an opening in an elevated beltline catwalk. He fell approximately 35 feet to the ground below.

The accident occurred because the mine operator did not: 1) barricade or post warning signs to prevent miners from falling through the opening in the catwalk, and 2) ensure that miners wore fall protection where there was danger of falling.

Approved By:

_____ _____

Mary Jo Bishop Date
District Manager

ENFORCEMENT ACTIONS

1. 103(k) order was issued to Martin Marietta Kansas City, LLC.

   A fatal accident occurred on January 30, 2023, at approximately 4:45 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.

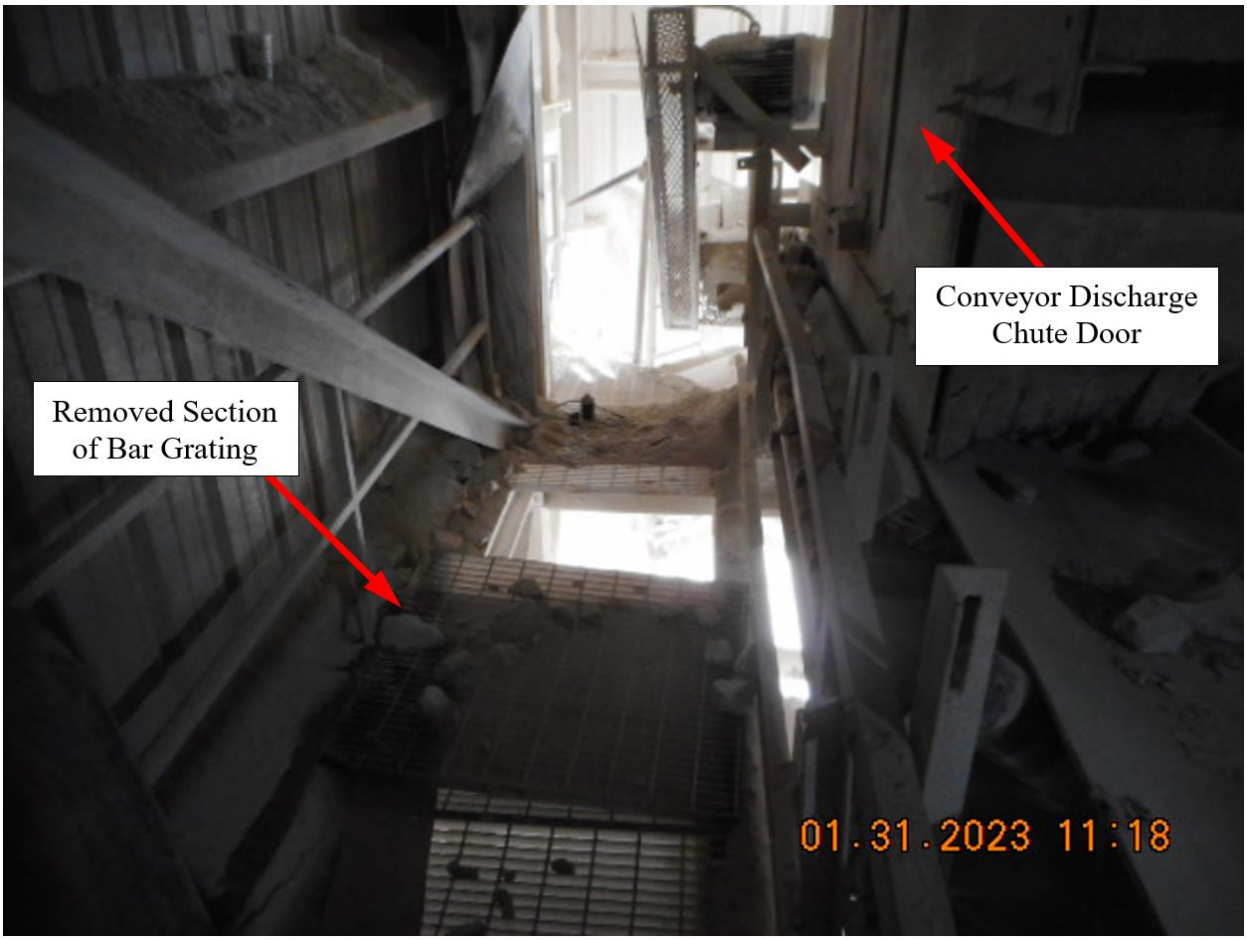
2. A 104(a) citation was issued to Martin Marietta Kansas City, LLC for a violation of 30 CFR 57.11012.

   On January 30, 2023, at approximately 4:45 p.m., a fatal accident occurred at this mine when a maintenance mechanic fell 35 feet from the elevated catwalk along the No. 12 Belt conveyor to the ground. Two miners removed a section of bar grating to clear rock out of a conveyor discharge chute, which created a 34-inch by 37-inch opening in the catwalk. The mine operator did not barricade or post warning signs to warn miners of the hazard before any work or access was allowed in the area and to prevent miners from falling through the opening in the catwalk.

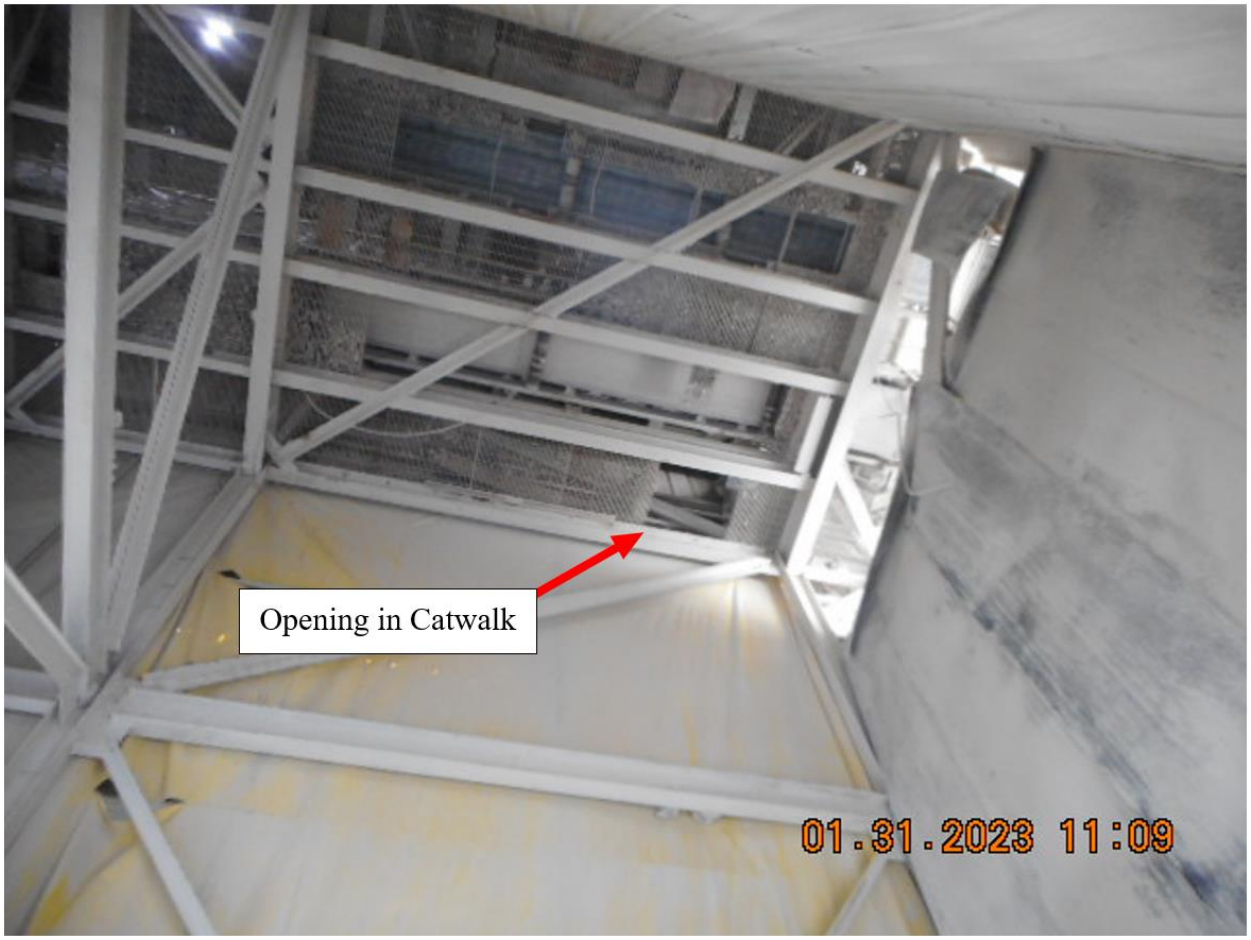
3. A 104(a) citation was issued to Martin Marietta Kansas City, LLC for a violation of 30 CFR 57.15005.

   On January 30, 2023, at approximately 4:45 p.m., a fatal accident occurred at this mine when a maintenance mechanic fell 35 feet from the elevated catwalk along the No. 12 Belt conveyor to the ground. The mine operator did not ensure that miners wore fall protection where there was danger of falling. Two miners removed a section of bar grating to clear rock out of a conveyor discharge chute, which created a 34-inch by 37-inch opening in the catwalk. The section of bar grating was not replaced when the cleanup was complete. The maintenance mechanic was not wearing fall protection while troubleshooting the No. 12 Belt conveyor around the opening in the catwalk.

APPENDIX A – Removed Section of Bar Grating on the Head Roller End of the Catwalk



APPENDIX B – View of the Catwalk Opening from the Ground



APPENDIX C – Persons Participating in the Investigation

Martin Marietta

Dennis Heaton	Plant Manager
Bradley Colter	Senior Safety Representative
Marcelino Salas	Plant Operator
Jeremiah Shilley	Plant Utility Miner
Brian Woltz	Plant Utility Miner
Derek Craig	Truck Driver
Mynor Gallegos	Truck Driver

Clay County Sheriff's Department

Kristen Rivera	Detective
Cody Minnis	Detective

Mine Safety and Health Administration

Nicholas Dunne	Mine Safety and Health Inspector
Keith Markeson	Mine Safety and Health Inspector
Leon Mueller	Mine Safety and Health Training Specialist