MAI-2016-14

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION
Metal and Nonmetal Mine Safety and Health

REPORT OF INVESTIGATION

Open Pit
Magnesite

Fatal Slip/Fall of Person Accident
9/15/2016

Premier Magnesia LLC
Premier Magnesia LLC
(Gabbs, Nye County, Nevada)
Mine ID No. 26-00002

Investigators

Ronald Jacobsen
Supervisory Mine Safety and Health Inspector

Terri S. Judkins
Mine Safety and Health Inspector

Ralph Chavez
Mine Safety and Health Training Specialist
Educational Field and Small Mine Services

Originating Office
Mine Safety and Health Administration
Western District
991 Nut Tree Road
Vacaville, CA 95687
Wyatt S Andrews, District Manager

OVERVIEW

On September 15, 2016, Gregory R. Duff, Mechanic (age 60), was injured while working on a front end loader. Duff had completed his assigned tasks and was dismounting the machine when he fell. He impacted the ground with his head, neck, and shoulders and was unconscious for several minutes. He was transported to Renown Hospital in Reno, Nevada and placed on life support. Duff died as a result of his injuries on September 26, 2016.

The accident occurred because management failed to ensure that policies and procedures on maintaining three points of contact while using ladders were followed.

GENERAL INFORMATION

Premier Magnesia LLC, a facility owned and operated by Premier Magnesia LLC, is located near Gabbs, Nye County, Nevada. The principal official is Brian Simpson, General Manager. The mine operates one, ten-hour shift four days a week. The mill operates two, twelve-hour shifts, seven days a week. The operation currently employs 110 miners.

The operator extracts magnesite from a multi-bench quarry. The magnesite is blasted, loaded into haul trucks by a front end loader, and stockpiled at a crusher plant. The plant crushes and sizes the material before it is hauled to a dryer/mill. The finished products are sold for animal feed, environmental cleanup, and water treatment.

The Mine Safety and Health Administration (MSHA) completed the last regular inspection on May 4, 2016.

DESCRIPTION OF THE ACCIDENT

On the day of the accident, Gregory R. Duff, (victim) arrived at the facility at 5:40 a.m. and met with Leland Ketten, Supervisor Mobile Maintenance Shop, and Cody Acquistapace, Leadman Mobile Maintenance, to get his work tasks for the day. Duff was to finish working on the Kawasaki 135ZV front end loader because the automatic bucket leveler was not operating. Duff was also told that Marc Dalton, a service representative from Shafer Equipment Company Inc., was going to be on-site at approximately 9:00 a.m. to test the oil pressure on the transmission in relation to earlier issues with the transmission on the front end loader.

At approximately 6:00 a.m., Duff started his day by assisting a mobile equipment operator on the ready line. He finished assisting the operator a short time later and began working on the front end loader. Throughout the morning, Duff was testing and troubleshooting the leveler of the front end loader from inside the cab. Acquistapace periodically assisted him with these tasks.

At approximately 8:45 a.m., Dalton arrived at the lower shop area where Duff was working on the loader. Acquistapace instructed Duff to put the console back together after the 9:00 a.m. break so Dalton could perform tests on the transmission. At approximately 9:15 a.m., Duff went into the cab of the loader to put the console back together. Dalton, Acquistapace, and Ketten were standing on the right side of the loader talking about the task at hand. They noticed Duff replacing screws in the console. Duff finished the job at about 9:35 a.m., gathered his tools and started down the left side of the loader. Dalton, Acquistapace and Ketten heard the sound of objects hitting the ground and then saw Duff hit the ground, landing on the back of his head and shoulders. All three men ran over to assist Duff who was unresponsive. Ketten placed a radio call to

911. Acquistapace left the area to ensure the call was made and that help was on the way. Ketten and Dalton assisted Duff by maintaining the airway, keeping him immobile and talking to him. Tulso Harrison, Maintenance Leadman, and Miguel Pagon, Maintenance Mechanic, arrived to assist after hearing the 911 radio call. The Gabbs Volunteer ambulance arrived and loaded Duff into the ambulance at 10:55 a.m. During transport to the hospital in Fallon, Nevada, Duff was transferred from the Gabbs Volunteer ambulance to a Banner Churchill Community Hospital ambulance due to the length of the trip. Due to his condition, Duff was transferred again to a Care Flight air ambulance and flown to Renown Health Hospital in Reno, Nevada where he remained in an induced coma until September 26, 2016, when he died as a result of his injuries.

INVESTIGATION OF THE ACCIDENT

Brian Simpson, General Manager, notified MSHA of the accident at 11:56 a.m. on September 15, 2016, by a phone call to the Department of Labor National Contact Center (DOLNCC). The DOLNCC notified James Fitch, Safety & Health Specialist, of the accident at 12:14 p.m., and he relayed the information to Bart Wrobel, Henderson, Nevada Field Office Supervisor. Wrobel contacted the mine after receiving the initial report. The company reported that an employee had fallen off a loader and was unconscious for less than a minute. They reported that he was taken to the hospital and the company was conducting an investigation. The initial MSHA investigation started on September 19, 2016, when Wrobel learned that the miner's injuries were worse than initially reported by the company and that Duff was still in the hospital. MSHA learned of Mr. Duff's death on September 26, 2015, at which time MSHA's accident investigation team traveled to the mine, made a physical inspection of the accident scene, interviewed employees, and reviewed documents and work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management and employees.

The mine failed to report the accident immediately and failed to secure the accident scene. MSHA issued two non-contributory citations for these violations.

DISCUSSION

Location of the Accident

The accident occurred outside of Premier Magnesia LLC's lower shop, steam cleaning pad. The work area was level.

Equipment involved in the accident

The equipment involved was a Kawasaki 135ZV front end loader. It was located outside of the lower shop for repairs.

The front end loader was equipped with a combination step and ladder assembly located on the left side of the loader, which was used for mounting and dismounting the loader. The step assembly had six steel steps including the top and the bottom of the platform. Each step measured 9” wide by 16.5” in length and had a cleated surface. The height of each riser measured 10” consistently, and the steps were set at about a 51-degree angle. The steps had a 42” high handrail on the left and right side. The steps were narrow and steep with a 23.5” opening to the ladder access on the bottom landing platform.

The bottom landing platform was about 19” wide by 48” long with ¼” round dimples as traction. The platform had a 35” high handrail to the back side of the opening with a chain rail that was about 28” high and hooked to the rear of the loader from the handrail. The platform was about 66” above the ground and had a ladder comprised of 4 rungs to reach the ground. The first ladder rung was about 24 inches off the ground and was about 14” to the top of the next rung. Each rung after that was about 10” apart and all had a cleated surface. According to interviews, the steps, platform, and ladder were clean and clear of obstacles and there were no deficiencies noted on them.

Accident Scene

The company created a reenactment of the scene using a Tyvek suit to represent the victim and the type of tools that were found on the ground at the original accident scene. (See Attachment 1). According to information provided by the witnesses, Duff fell freely to the ground landing on the back of his head and shoulders. Witnesses said that Duff landed perpendicular to the loader straight out and down from the ladder opening. His hardhat was about five feet beyond him above his head, his electrical tester was about two feet above his head to the right, his drill was on his right side at about arm’s length and just below the right arm, and his sockets were on his left side close to the left arm.

Attachment No.1
Recreation of Accident Scene

Weather

The weather was calm and sunny on the day of the accident. The weather was not considered to be a contributing factor in the accident.

Training and Experience

Gregory R. Duff had 20 years of experience as a maintenance mechanic, with a total of seven years and fourteen weeks working at this mine. A representative of MSHA's Educational Field and Small Mine Services staff conducted a review of the mine operator's training records and found that the records were not in compliance with MSHA Part 48. A citation was issued for a non-contributory recordkeeping violation.

ROOT CAUSE ANALYSIS

Investigators conducted a root cause analysis and identified the following root cause:

Root Cause: The victim traveled down the ladder from the rear left fender of the loader without having both hands free.

Corrective Action: All miners were retrained in accessing ladders and steps. The operator implemented a safe procedure to raise and lower tools.

CONCLUSION

The accident occurred because management failed to ensure that policies and procedures on maintaining three points of contact while using ladders were followed.

ENFORCEMENT ACTIONS

Issued to the company

Citation No. 8690464 was issued on 10/21/2016, under the provisions of Section 104(a) of the Mine Act for a violation of 56.11011.

A serious accident occurred on 9/15/2016 when a mechanic fell from a Kawasaki 135 ZV front end loader. The victim was descending the left side of the loader when he fell approximately six feet to the hard packed dirt surface. He had just finished a work task and was dismounting the loader with tools in his hands. The victim suffered severe trauma from the fall and succumbed to his injuries on 9/26/2016.

Approved: John Pereya for Wyatt Andrews
District Manager

Date: 1/4/2017

APPENDIX A

Persons Participating in the Investigation

Premier Magnesia

Jennifer Williamson	Safety/HR Manager
Cody Acquistapace	Leadman/Mobile Maintenance
Shane Rasmussen	Miners Representative
Leland Ketten	Supervisor Mobile Maintenance Shop

Mine Safety and Health Administration

Ronald Jacobsen	Supervisory Mine Inspector
Terri Judkins	Mine Inspector
Ralph Chavez	Training Specialist

APPENDIX B

Accident Investigation Data - Victim Information

Event Number: 6 7 2 6 0 3 3

U.S. Department of Labor
Mine Safety and Health Administration

Victim Information: 1

1. Name of Injured/Ill Employee:	2. Sex	3. Victim's Age	4. Degree of Injury:
Gregory R. Duff	M	60	01 Fatal

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 09/27/2016 b.Time: 3:45	a. Date: 09/15/2016 b.Time: 6:00

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
104 Mechanic	013 Dismounting front end loader	Yes X No

10. Experience	Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days
a. This Work Activity:	0	14	0	b. Regular Job Title:	20	0	0	c: This Mine:	7	14	0	d. Total Mining:	20	0	0

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
117 Ground	370 Multiple Blunt Force Injuries

13. Training Deficiencies:
Hazard: | New/Newly-Employed Experienced Miner: | Annual: | Task:

14. Company of Employment: (If different from production operator)
Operator
Independent Contractor ID: (if applicable)

15. On-site Emergency Medical Treatment:
Not Applicable: | First-Aid: X | CPR: | EMT: | Medical Professional: | None:

16. Part 50 Document Control Number: (form 7000-1)

17. Union Affiliation of Victim: 2647 AFL-CIO