

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

**REPORT OF INVESTIGATION**

**Surface  
Construction Sand and Gravel**

**Fatal Fall of Person Accident  
May 13, 2014**

**Desert Construction Inc.  
Hualapai Pit  
Kingman, Mohave County, Arizona  
Mine ID No. 02-01062**

**Investigators**

**Bart Wrobel  
Supervisory Mine Safety and Health Inspector**

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

Victim was standing on top of the drive belt guard signaling the excavator operator when he was hit with the excavator bucket.



The victim impacted the ground here.

## OVERVIEW

Michael Dennis Schmidt, mechanic, age 67, was seriously injured on May 13, 2014. Mr. Schmidt was performing maintenance on a cone crusher. At the time of the accident, Schmidt was standing on the crusher drive belt guard. An excavator had been used to lower components into the cone crusher. The operator of the excavator stopped the work and was getting out of the cab to speak to Schmidt when the excavator swung and the bucket knocked Schmidt off of the crusher. Schmidt fell approximately 11 feet to the ground, landing on his head and shoulder. Schmidt was transported to the local hospital where he underwent emergency surgery to stabilize his condition. He spent more than a week in the Intensive Care Unit on life support. Following his hospitalization, Schmidt was sent to various long term care facilities, but succumbed to his injuries on May 26, 2015.

Management failed to ensure that the hydraulic system on the excavator was deactivated. This allowed the boom to swing, knocking the victim off of the cone crusher. Management also failed to ensure that miners were wearing fall protection devices when exposed to the danger of falling.

On September 3, 2015, the Mine Safety and Health Administration (MSHA) referred the accident to the Chargeability Review Committee (CRC). On April 12, 2016, the CRC determined that this death should be charged to the mining industry.

## **GENERAL INFORMATION**

Hualapai Pit is a surface construction sand and gravel operation, owned and operated by Desert Construction Inc., located near Kingman, Mohave County, Arizona. The principal operating official is Thomas Short, President. The mine employs five miners, and operates one eight-hour shift per day, five days per week.

Rock, sand, and gravel is mined from an open pit and transported to the plant by loader for crushing, sizing, and stockpiling. The final product is loaded into customer trucks by loader. The finished product is sold for use in the construction trades.

Prior to the accident, MSHA completed the last regular inspection at this operation on March 11, 2014.

## **DESCRIPTION OF THE ACCIDENT**

Michael Schmidt, mechanic, arrived at the Hualapai Pit at 6:00 a.m. PST on Tuesday, May 13, 2014. Schmidt, Mark Shaffer, laborer, and Donnie Scroggins, lead operator, set out to replace the bowls in the mine's cone crusher. The team was using a John Deere 790 ELC excavator to lift and move the heavy parts. Scroggins was operating the excavator, and Shaffer was helping Schmidt to replace the worn out parts in the cone crusher. The job proceeded without any reported problems until the accident, which took place at approximately 11:30 a.m.

Immediately before the accident, Scroggins used the bucket of the excavator to lower the top bowl into the body of the crusher. Shaffer was below the crusher putting the oil plug into the bottom of the cone crusher and Schmidt was above making sure the bowl was placed properly. The bowl was in place and had been disconnected from the excavator bucket. Schmidt gave Scroggins directions, but he did not understand them. Scroggins said that he disengaged the hydraulics using the lock-out lever, got up, and began to exit the cab of the excavator. As he exited the cab, he inadvertently hit the swing arm lever, causing the hydraulics to reengage and the bucket to swing toward Schmidt.

Schmidt was standing with one foot on the crusher drive belt guard and the other on the cone. As the bucket swung, it struck Schmidt in the side, causing him to fall forward off of the crusher. He fell approximately 11 feet to the ground, landing on his head and shoulder. Shaffer and Scroggins saw Schmidt fall and immediately went to his aid. An ambulance was summoned and Schmidt was transported to the hospital.

Schmidt suffered severe injuries, including a broken collar bone, a broken neck, a broken back, two broken legs, and broken ribs. After spending several months

in the hospital, he was moved to a rehabilitation facility. He was released from the rehabilitation facility in mid-April 2015, but had to return, because a foot wound was not healing properly. Schmidt went into acute respiratory distress, and was transported to the hospital where he died on May 26, 2015.

## **INVESTIGATION OF THE ACCIDENT**

Mike Schmidt, the victim's son, called the Department of Labor's National Contact Center (DOLNCC) to notify MSHA of the accident at 1:42 p.m. PST on May 13, 2014. The DOLNCC notified Patricia Borer, Staff Assistant in MSHA's Western District, and an investigation started the same day. A non-contributory citation was issued to the mine operator for failure to contact MSHA within 15 minutes of the accident.

MSHA's accident investigator 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.

## **DISCUSSION**

### **Location of the Accident**

The accident occurred in the crusher plant on the TEL SMITH cone crusher trailer during the relining of the cone crusher.

### **Equipment involved in the accident**

The 790 ELC John Deere excavator involved in the accident uses a series of pedals and levers in the cab to control the machine's movement and the operation of the excavator arm and bucket. This unit is equipped with a hydraulic lock-out lever to the left of the operator's seat that disengages the hydraulics so that the unit and implements will not move. The lever has two positions. When the handle is in a 90 degree vertical position, the hydraulics are isolated and the machine controls are not operable. When the lever is pushed forward, from a vertical position down to approximately 45 degrees, the machine will move and the arm and bucket will operate. While in the 45 degree (operation) position, the lever partially blocks the exit from the excavator. The lock-out lever and hydraulic controls were tested and functioned properly.

### **Weather**

The weather on the day of the accident was mostly clear and sunny. The temperature ranged between 49 degrees in the morning and a high of approximately 79 degrees Fahrenheit in mid-afternoon. Weather was not considered to be a contributing factor in the accident.

### **Training and Experience**

Michael Schmidt had thirteen years and one week of experience as a Plant Maintenance Mechanic, all at this mine. An in-depth review of the mine operator's training records was conducted. The training records for Schmidt were reviewed and found to be in compliance with MSHA training requirements.

### **ROOT CAUSE ANALYSIS**

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

Root Cause: The excavator operator was unable to effectively maintain control of the excavator while exiting the cab of the unit, resulting in the excavator bucket striking the victim.

Corrective Action: The operator retrained miners to shut down the unit before exiting the cab.

Root Cause: The victim was not wearing any type of fall protection to prevent him from falling from the top of the cone crusher.

Corrective Action: Miners were retrained in the proper use of fall protection.

### **CONCLUSION**

Management failed to ensure that the hydraulic system, on the excavator being used to lift heavy components during repair tasks, was deactivated. This allowed the boom to swing, knocking another miner off of the crusher. Management also failed to ensure that miners were wearing fall protection devices when exposed to the danger of falling.

## ENFORCEMENT ACTIONS

### Issued to Desert Construction

Citation No. 8694550 – Issued under section 104(a) of the Mine Act for a violation of 30 CFR 56.15005:

*A maintenance employee who had been repairing a cone crusher and standing above the hand railing and was not wearing a safety belt with a lanyard or any type of restraining device to prevent or stop a fall of eleven feet to the uneven rocky ground below. Falls of this nature have proven fatal as noted in MSHA fatal reports. The lack of proper hand and foot holds, and/or proper use of fall protection make it reasonable likely a fatal injury would occur. Fall protection was available on site and a location to tie off at was near the mechanic work area.*

Citation No. 8694551 – Issued under section 104(a) of the Mine Act for a violation of 30 CFR 56.9101:

*Excavator operator did not maintain control of his unit while lifting cone crusher parts into place during repairs. During the excavator's operator exiting of unit the swing lever of the excavator was activated causing the bucket to impact a miner/mechanic. Miner was exposed to fatal blunt force trauma from the impact of the bucket and the eleven (11) foot fall to the rocky ground below. Excavator operator was in charge of the lift of the cone crusher parts at time of incident and was consider leadsperson also during that time.*

Approved: \_\_\_\_\_



Wyatt Andrews  
District Manager

Date: \_\_\_\_\_



**Appendix A**

**Desert Construction Inc.**

Tom Fuller.....Safety Manager  
Mark Shaffer.....Laborer  
Donnie Scroggins.....Lead Operator/Foreman

**Mine Safety and Health Administration**

Bart Wrobel.....Supervisory Mine Safety and Health Inspector

## Appendix B

Accident Investigation Data - Victim Information

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



Event Number:

<b>Victim Information:</b> <input type="text" value="1"/>																							
1. Name of Injured/Ill Employee: <i>Michael D. Schmidt</i>				2. Sex: <i>M</i>		3. Victim's Age: <i>69</i>			4. Degree of Injury: <i>01 Fatal</i>														
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 05/26/2015 b. Time: 8:06</i>								6. Date and Time Started: <i>a. Date: 05/13/2014 b. Time: 6:00</i>															
7. Regular Job Title: <i>104 Mechanic</i>						8. Work Activity when Injured: <i>039 Repairing Cone Crusher</i>						9. Was this work activity part of regular job? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
10. Experience																							
a. This				b. Regular				c. This				d. Total											
Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days									
Work Activity:	<i>13</i>	<i>1</i>	<i>4</i>	Job Title:	<i>13</i>	<i>1</i>	<i>4</i>	Mine:	<i>13</i>	<i>1</i>	<i>4</i>	Mining:	<i>13</i>	<i>1</i>	<i>4</i>								
11. What Directly Inflicted Injury or Illness?: <i>117 Fall to the ground</i>								12. Nature of Injury or Illness: <i>370 Acute Respiratory Distress Syndrome</i>															
13. Training Deficiencies:																							
Hazard:				New/Newly-Employed Experienced Miner:				Annual:				Task:											
14. Company of Employment: (If different from production operator) <i>Operator</i>																							
Independent Contractor ID: (if applicable)																							
15. On-site Emergency Medical Treatment:																							
Not Applicable: <input type="checkbox"/>				First-Aid: <input checked="" type="checkbox"/>				CPR: <input type="checkbox"/>				EMT: <input checked="" type="checkbox"/>				Medical Professional: <input checked="" type="checkbox"/>				None: <input type="checkbox"/>			
16. Part 50 Document Control Number: (form 7000-1)								17. Union Affiliation of Victim: <i>9999</i>								<i>None (No Union Affiliation)</i>							



## Appendix C



Photo shows lever in upright 90 degree position, deactivating the excavator's hydraulic system, making it easy to enter and exit the operator's seat.



Photo shows the lever in the forward 45 degree position, engaging the excavator's hydraulic system, and making it difficult to exit and enter the operator seat.