

MA1-2010-15

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

REPORT OF INVESTIGATION

**Surface Nonmetal Mine
(Construction Sand)**

**Fatal Other (Drowning) Accident
August 14, 2010**

**Southwestern State Sand Corporation
Southwestern State Sand
Snyder, Tillman County, Oklahoma
Mine ID No. 34-00615**

**Investigator
Laurence M. Dunlap
Supervisory Mine Safety and Health Inspector**

**Originating Office
Mine Safety and Health Administration
South Central District
1100 Commerce Street, Room 462
Dallas, TX 75242-0499
Edward E. Lopez, District Manager**



OVERVIEW

On August 14, 2010, Michael A. Diehl, dredge operator, age 23, drowned while attempting to retrieve a small boat from a dredge pond. The boat was on a trailer, which was being pulled up a ramp from the dredge pond, when the boat dislodged and drifted back into the dredge pond.

The accident occurred because management failed to ensure that persons wore life jackets while working around water. Diehl was not wearing a life jacket when he swam into the dredge pond. Investigators concluded that Diehl hit his head while attempting to climb into the boat.

GENERAL INFORMATION

Southwestern State Sand, a construction sand dredge operation, owned and operated by Southwestern State Sand Corporation, is located near Snyder, Tillman County, Oklahoma. The principal operating official is Jody Vance, manager. The mine operates one 10-hour shift per day, five days per week. Total employment is 5 persons.

Sand is removed by a dredge. The material is screened and dewatered at an on-site plant. Finished materials are loaded into trucks by front-end loaders for delivery to local construction projects.

The last regular inspection at this operation was completed on July 7, 2010.

DESCRIPTION OF THE ACCIDENT

On the day of the accident, Michael A. Diehl (victim) reported for work at the mine office at 4:58 a.m. Diehl and Timmie Greathouse, supervisor, intended to work a short shift since it was Saturday. Diehl operated the dredge and Greathouse operated a front-end loader.

Diehl used a pickup truck to back a small boat and trailer down a ramp into the dredge pond. The boat was launched and Diehl, wearing a life jacket, motored out to the dredge. Diehl worked on the dredge producing sand until about 9:00 a.m., when his wife brought him breakfast. Diehl went to shore in the small boat, spent about five minutes with his wife, and returned to the dredge.

About 11:35 a.m., Diehl flushed the dredge system to end the shift. About 11:50 a.m., he brought the small boat to shore and Greathouse used a pickup truck to back the boat trailer down the ramp into the water. Diehl powered the boat onto the trailer while Greathouse attempted to latch it to the trailer. Diehl then shut off the motor, raised it out of the water, and exited the boat.

Diehl then removed his life jacket and placed it in the boat. He got into the pickup truck and attempted to pull the boat and trailer up the ramp. The truck tires were spinning and the trailer wasn't moving. Greathouse walked up the ramp to retrieve his front-end loader to pull the pickup truck up the ramp.

While walking up the ramp, Greathouse looked back toward the trailer and saw that it was now coming out of the water but the boat had floated off the trailer into the dredge pond. He yelled to Diehl, who stopped the truck and exited it. Greathouse told Diehl that he would get a grappling hook to retrieve the boat then drove his loader to the shop.

When Greathouse returned with a grappling hook, he saw Diehl's boots on the bank of the dredge pond. He could see the boat in the water about 25 feet straight out from the

ramp but he did not see Diehl. Greathouse spent several minutes calling for Diehl but did not get a response.

About 12:00 p.m., Greathouse's wife called his cell phone so he asked her to call for emergency medical services. He then called Vance to report that Diehl was missing. Greathouse's wife had difficulty reaching the correct county 911 system so she drove to the mine and activated the OnStar emergency system in her vehicle. Vance tried reaching Diehl on his cell phone but did not receive a response.

Hobart Fire Rescue arrived at the mine at 1:16 p.m. Their dive team located Diehl's body in the dredge pond at 2:09 p.m. Diehl was pronounced dead by the Tillman County Corner. The cause of death was listed as drowning.

INVESTIGATION OF THE ACCIDENT

On the day of the accident, the Mine Safety and Health Administration (MSHA) was notified at 1:37 p.m. by a telephone call from Jody Vance, manager, to MSHA's emergency hotline. Laurence Dunlap, supervisory mine safety and health inspector, was notified and an investigation was started on August 16, 2010. An order was issued pursuant to section 103(j) of the Mine Act to ensure the safety of miners. This order was later modified to section 103(k) of the Mine Act.

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 and the Oklahoma Department of Mines. A citation was issued to Southwestern State Sand for altering the scene of the accident prior to the arrival of the MSHA investigator.

DISCUSSION

Location of the Accident

The accident occurred about 25 feet from the boat ramp in about 15 feet of water. Weather conditions at the time were clear skies with an air temperature of 98 degrees Fahrenheit and a water temperature of 90 degrees Fahrenheit. The weather conditions were not considered to be a factor in the accident.

Pickup Truck

The truck involved in the accident was a 1995 ¾-ton pickup. It was equipped with a 5.9 liter gasoline engine, an automatic transmission, and a two-wheel drive power train. The pickup truck was inspected and no defects were found.

Boat and Trailer

The small boat involved in the accident was a 1978 16-foot Viking Tri-Hull V1600B model with a 2005 40-Hp outboard motor that was found in the upright position. The tie down ring on the hull was inspected and found to be in good condition. The boat was inspected and a citation was issued for two defects on the boat but they were not considered contributory to the accident.

The trailer involved in the accident had no identifying information but it had a strap hand winch for securing the boat. Both the trailer and winch were inspected and no defects were found.

Training and Experience

Michael A. Diehl had four years and three days of mining experience, all at this operation. He had received all training required by 30 CFR Part 46.

Timmy Greathouse had 11 years of mining experience, all at this operation. He had received all training required by 30 CFR Part 46.

ROOT CAUSE ANALYSIS

A root cause analysis was conducted and the following root cause was identified:

Root Cause: Management failed to ensure that persons wore life jackets while working around water.

Corrective Action: Procedures were established to ensure that persons wear life jackets at all times while working around water.

CONCLUSION

The accident occurred because management failed to ensure that persons wore life jackets while working around water. Diehl was not wearing a life jacket when he swam into the dredge pond. Investigators concluded that Diehl hit his head while attempting to climb into the boat.

ENFORCEMENT ACTIONS

ORDER No. 6315001 was issued on August 14, 2010, under the provisions of Section 103 (j) of the Mine Act:

A fatal accident occurred at this operation on August 14, 2010, about 12:01 p.m. As rescue and recovery work is necessary, this order is being issued to assure the safety of

all persons at this operation and to prevent destruction of any evidence which would assist in investigating the cause or causes of the accident.

This order was terminated on August 17, 2010, after conditions that contributed to the accident no longer existed.

CITATION No. 6315004 was issued on September 1, 2010, under the provisions of Section 104(a) of the Mine Act for a violation of 30 CFR Part 56.15020:

A fatal accident occurred at this operation on August 14, 2010, when the dredge operator drowned. The dredge operator was not wearing a life jacket where there was a danger of falling into water.

This citation was terminated on September 1, 2010, after all persons were instructed in the proper use of life jackets while working around water.

Approved:_____

Edward E. Lopez
District Manager

Date:_____

APPENDIX A

PERSONS PARTICIPATING IN THE INVESTIGATION

Southwestern State Sand

Jody P. Vance.....Manager
Jimmie E. BentleySafety Director

Evans and Associates

Steven D. RohdeVice- President

Mine Safety and Health Administration

Laurence M. Dunlap.....Supervisory Mine Safety and Health Inspector

Oklahoma Department of Mines

Coy W. Rogers.....Mine Inspector
Richard Shore.....Mine Inspector

APPENDIX B

Accident Investigation Data - Victim Information															U.S. Department of Labor				
Event Number: 1 0 9 4 4 5 4															Mine Safety and Health Administration				
Victim Information: 1																			
1. Name of Injured/Ill Employee: <i>Michael A. Diehl</i>					2. Sex: <i>M</i>		3. Victim's Age: <i>23</i>		4. Degree of Injury: <i>01 Fatal</i>										
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 08/14/2010 b. Time: 11:50</i>										6. Date and Time Started: <i>a. Date: 08/14/2010 b. Time: 5:00</i>									
7. Regular Job Title: <i>172 Dredge Operator</i>							8. Work Activity when Injured: <i>041 Pulling boat from dredge pond</i>							9. Was this work activity part of regular job? Yes <input type="checkbox"/> X <input checked="" type="checkbox"/> No <input type="checkbox"/>					
10. Experience		Years	Weeks	Days	b. Regular		Years	Weeks	Days	c. This		Years	Weeks	Days	d. Total		Years	Weeks	Days
a. This					Job Title:					Mine:					Mining:				
11. What Directly Inflicted Injury or Illness? <i>014 Dredge pond</i>										12. Nature of Injury or Illness: <i>390 Drowning</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:		First-Aid:		CPR:		EMT:		Medical Professional:				None:		X <input checked="" type="checkbox"/>					
16. Part 50 Document Control Number: (form 7000-1)										17. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>									