

MAI-2008-04

UNITED STATES  
DEPARTMENT OF LABOR  
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface Nonmetal Mine  
(Sand and Gravel)

Fatal Other (Drowning) Accident  
January 23, 2008

Dartmouth Sand and Gravel  
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Hoisington, Barton County, Kansas  
Mine ID No. 14-01501

Investigators

Daniel C. Stevenson  
Mine Safety & Health Inspector

Kenneth Valentine  
Mine Safety & Health Inspector

Dale Ingold, P.E.  
General Engineer

Originating Office  
Mine Safety and Health Administration  
Rocky Mountain District  
P.O. Box 25367, DFC  
Denver, CO 80225-0367  
Richard Laufenberg, District Manager

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## **OVERVIEW**

On January 23, 2008, Robert L. Deines, owner, age 64, was fatally injured while adjusting a pump on a dredge. There was no conclusive evidence to determine the cause of the accident. Although there were no witnesses, apparently the victim fell into the water and drowned. He was not wearing a life jacket where there was a danger from falling into the water.

## **GENERAL INFORMATION**

Dartmouth Sand and Gravel, a surface sand and gravel dredge operation, owned and operated by Dartmouth Sand and Gravel, was located in Hoisington, Barton County, Kansas. The principal operating officer was Robert Deines (victim). The mine was idle and had not produced material since October 2007. Total employment was two persons.

Sand and gravel was mined with a water-jet suction dredge. The material was pumped to a screen plant on shore where it was sized and separated. The finished product was stockpiled and the reject material was returned to the dredge pond. The finished product was sold for use as construction aggregate.

The last regular inspection of this operation was completed on September 11, 2007.

## **DESCRIPTION OF ACCIDENT**

On January 23, 2008, Robert L. Deines (victim) and Kirk Deines, truck driver (victim's son), arrived at the mine site at 10:30 a.m. R. Deines began repairing a pump on the dredge. The pump on the dredge had been replaced and additional work was necessary to start and test the dredge for future production.

K. Deines left the mine to deliver a truck load of sand locally. He returned about 11:45 a.m. and saw R. Deines still working on the dredge. About 12:00 p.m., K. Deines left the mine to deliver another truck load of sand. Shortly after R. Deines contacted him by cell phone to report that the pump was operating and producing sand.

At 2:00 p.m., K. Deines returned to the mine but could not locate his father. He looked around the entire area and called the victim's cell phone several times. K. Deines then called his mother. Mrs. Deines had not spoken to her husband. K. Deines then called for emergency rescue personnel.

At 2:52 p.m., a local dive team arrived and searched for the victim. K. Deines explained that they were having problems with the suction head on the dredge and his father may have fallen into the water. The divers then searched that area and located the victim in 15 feet of water. He was transported to a local hospital and was pronounced dead at 4:42 p.m. by the attending physician. The cause of death was drowning.

## **INVESTIGATION OF ACCIDENT**

The Mine Safety and Health Administration (MSHA) was notified of the accident at 5:26 p.m. on January 23, 2008, by a telephone call from Kirk Deines, truck driver, to the National Call Center. Michael Dennehy, assistant district manager, was contacted and an investigation was started the same day. An order was issued under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners.

MSHA's accident investigation team traveled to the mine, made a physical inspection of the accident scene, interviewed an employee, and reviewed conditions and work procedures relevant to the accident.

## **DISCUSSION**

### **Location of the Accident**

The accident occurred on the dredge which was located near the northwest shore of the dredge pond.

### **Dredge**

The investigators were unable to safely access the dredge so the investigation was conducted from the shore. The boat used to access the dredge was not at the mine site. Apparently the victim accessed the dredge by stepping from the shore onto the discharge pipe float.

The dredge was fabricated locally. The dredge deck was approximately 30 feet long and 25 feet wide. It was powered by a mounted diesel engine and generator located in the middle of the dredge deck. Sand and gravel was dislodged from the underwater bank by a water jet suction head powered by a water pump mounted on the dredge deck. The 9-inch suction pipe extended approximately 15 feet from the edge of the dredge deck.

The dredge discharge pipe was mounted on two floats constructed of pieces of wood nailed together and plastic barrels. The float nearest the dredge was approximately 11.3 feet by 11.6 feet with a plywood deck under a 9-inch discharge pipe. The float nearest the shore was approximately 7.3 feet long and 5.3 feet wide and was not covered.

The dredge was facing towards the south. A 9-inch discharge pipe carried the materials from the dredge to the screen plant where the processed sand fell below the screening plant. The reject fines were returned to the pond.

### **Weather**

The weather on the day of the accident was 19 degrees Fahrenheit with calm winds. The pond was iced over except immediately around the dredge. The water temperature at the time of the investigation was 43 degrees Fahrenheit.

## **Training and Experience**

Robert L. Deines had 24 years of mining experience and had received training in accordance with 30 CFR, Part 46.

## **ROOT CAUSE ANALYSIS**

A root cause analysis was conducted. There was no conclusive evidence to determine the cause of the accident.

## **CONCLUSION**

There was no conclusive evidence to determine the cause of the accident. Although there were no witnesses apparently the victim fell into the water and drowned. He was not wearing a life jacket where there was a danger from falling into the water.

## **ENFORCEMENT ACTIONS**

**Order No. 6422266** was issued on January 23, 2008, under the provisions of Section 103(k) of the Mine Act:

A fatal accident occurred at this operation on January 23, 2008. This order is issued to ensure the safety of all persons at this operation. It prohibits all activity at this mining location until MSHA has determined that it is safe to resume normal operations. The mine operator shall obtain prior approval from an Authorized Representative for all actions to recover and/or restore operations to the affected area.

This order was terminated on February 19, 2008.

Robert L. Deines was a sole proprietor. Upon R. Deines' death the sole proprietorship ceased to exist and there was no entity to cite for any violation of mandatory safety standards attributable to R. Deines.

Approved by:

Date:

Richard R. Laufenberg  
District Manager

## **APPENDICES**

- A. Persons Participating in the Investigation
- B. Victim Data Sheet



## Appendix B Victim Data Sheet

### Accident Investigation Data - Victim Information

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



Event Number: 1 1 0 3 1 8 4

**Victim Information:** 1

1. Name of Injured/Ill Employee: <i>Robert L. Deines</i>		2. Sex <i>M</i>	3. Victim's Age <i>64</i>	4. Degree of Injury: <i>01 Fatal</i>											
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 01/23/2008 b. Time: 14:00</i>				6. Date and Time Started: <i>a. Date: 01/23/2008 b. Time: 10:30</i>											
7. Regular Job Title: <i>149 Management</i>			8. Work Activity when Injured: <i>098 Dredge Operator</i>			9. Was this work activity part of regular job? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
10. Experience a. This	Years	Weeks	Days	b. Regular Job Title:	Years	Weeks	Days	c. This Mine:	Years	Week	Days	d. Total Mining:	Years	Weeks	Days
Work Activity:	<i>24</i>	<i>0</i>	<i>0</i>	<i>098 Dredge Operator</i>	<i>24</i>	<i>0</i>	<i>0</i>	<i>098 Dredge Operator</i>	<i>24</i>	<i>0</i>	<i>0</i>	<i>24</i>	<i>0</i>	<i>0</i>	<i>0</i>
11. What Directly Inflicted Injury or Illness? <i>126 Water</i>				12. Nature of Injury or Illness: <i>390 Drowning</i>											
13. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>															
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:											

**Victim Information:**

1. Name of Injured/Ill Employee:		2. Sex	3. Victim's Age	4. Degree of Injury:											
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:				6. Date and Time Started:											
7. Regular Job Title:			8. Work Activity when Injured:			9. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>									
10. Experience a. This	Years	Weeks	Days	b. Regular Job Title:	Years	Week	Days	c. This Mine:	Years	Week	Days	d. Total Mining:	Years	Weeks	Days
Work Activity:															
11. What Directly Inflicted Injury or Illness?				12. Nature of Injury or Illness:											
13. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>															
14. Company of Employment: (If different from production operator)				Independent Contractor ID: (if applicable)											
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1. Name of Injured/Ill Employee:		2. Sex	3. Victim's Age	4. Degree of Injury:											
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10. Experience a. This	Years	Weeks	Days	b. Regular Job Title:	Years	Week	Days	c. This Mine:	Years	Week	Days	d. Total Mining:	Years	Weeks	Days
Work Activity:															
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16. Part 50 Document Control Number: (form 7000-1)				17. Union Affiliation of Victim:											