

# Hanson Aggregates Midwest, LLC Dry Fork Sand & Gravel

Fatal Accident: July 10, 2015

# Overview

- July 10, 2015 William J. Roell, Superintendent, age 50 was killed while operating a dredge
- Roell and another miner were attempting to dislodge the clamshell bucket from the bottom of the lake bottom
- The dredge capsized

# Overview

- The miner was injured when he was thrown from the dredge as it capsized, was able to swim ashore
- Divers recovered Roell from the motor control center room in the submerged dredge eight days later



# Information

Read the sections entitled “Significant Events Prior to the Accident” and “Description of Accident” on pages 2-4 of the Accident Investigation report.

# Information

- What type of task training was originally provided?
- Who received the task training?
- What were the job responsibilities of the trainees that received the initial task training?
- Had the employees ever experienced an event where the clamshell bucket became stuck?
- If so, how was the event mitigated?

# Information

- How did the victim (Roell) come to be operating the dredge?
- What was Roell's plan for dislodging the clamshell bucket from the lake bottom?
- Did Roell receive approval to execute his plan?
- What was the status of the employees Roell assigned to assist with his plan?

# Information

- In your opinion, what actions did the helpers take that might have contributed to the accident?
- On the day of the accident what probably saved Cooley's life?
- What was determined as the cause of death in this accident?





**Dredge prior to the accident in Spring 2015**

# Accident Cause

What was the cause  
of the accident?

# Basic Causes

- The overload switches that prevent excessive submersion or tipping had been disabled
- The access covers into the pontoons did not have watertight gaskets and were not fastened down as required
- The dredge crew was not following the manufacturer's procedure for retrieving a stuck bucket
- Not all crew members had training on the dredge operations



## **Overload sensors and mounting pipes**

Note the missing rod on one sensor and the electrical tape on the other sensor. The fastening bolt is visible at the base of the left hand mounting pipe section.



## **Dredge in water**

Note missing hatch cover and hanging overload sensor.

# MSHA Root Cause

Management policies and controls were inadequate. Mine management participated in the removal of the dredge's pontoon overload sensors and knew about its unfastened hatches and did not correct these conditions before continuing to operate the dredge.



# MSHA Root Cause

Management policies and controls were inadequate. The dredge had been modified and used beyond the design capacity intended by the manufacturer. Mine management failed to consult with the manufacturer or follow its recommended safe procedures when attempting to dislodge the dredge bucket from the lake bottom.

# MSHA Root Cause

Mine management failed to provide task training to miners in accordance with the manufacturer's recommended safe procedures for dislodging or recovering a dredge bucket.



# Accident Prevention

What could have prevented this accident?

# Accident Prevention

Outline proper  
procedure for  
performing this task

# MSHA Best Practices

- Always wear a life jacket where there is a danger of falling into water.
- Ensure that machinery components are blocked against hazardous stored energy prior to performing maintenance or repairs.
- Task train all persons to recognize all potential hazardous conditions and ensure they understand safe job procedures for elimination of hazards before beginning work.

# MSHA Best Practices

- Examine and test all safety devices on a regular basis and ensure that they are operating properly.
- When non-routine tasks or problems occur, conduct a risk analysis before starting the task to ensure that all hazards are evaluated and eliminated.