

MNM Fatal 2015-10

- Other (Environmental Suffocation)
- Kaolin Plant
- Tank Car Wash Out
- 25 years old
- 24 weeks of experience

Overview

Travis A. Barnes, Railcar Washer, age 25, was fatally injured on July 15, 2015 after entering a railroad tank car to wash out the residual material left inside. Barnes was found inside the railcar by a co-worker, unresponsive.

The accident occurred due to management's failure to properly train railcar washers in the health and safety aspects of their job. Management failed to prevent a railcar washer from being exposed to an atmosphere that was below the minimal oxygen content of 18%. Management failed to conduct exposure monitoring to determine the adequacy of control measures. Management failed to have a second miner available with backup equipment and rescue capability in the event of failure of the respiratory equipment. Finally, management failed to have a second person tend a lifeline when a miner was entering a tank.



07/17/2015

Root Causes

A root cause analysis was conducted and the following causal factors were identified.

Root Cause: The mine operator failed to train miners and to enforce safe work practices while miners were working in the confined space of the rail car.

Corrective Action: Management established procedures and controls to assure safe rail car entry. A procedure was developed to include life line and attendants, rescue capability, ventilation, and atmospheric monitoring. All miners will be provided adequate task training in the health and safety aspects of this task before performing rail car entry.

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Best Practices

- ❑ Oxygen deficiency is the leading cause of confined space fatalities. Check the atmosphere inside the confined space for adequate oxygen, toxic contamination and accumulation of flammable gases with a suitable gas detector before entering the confined space. Wear supplied air respirators when making these examinations.
- ❑ Prior to use, gas detection equipment should be calibrated or bump tested per manufacturer recommendations and miners should be task trained in the use of such equipment.
- ❑ Miners working within confined spaces should never work alone. Ensure that a trained person is posted outside the confined space to monitor the miner working in the confined space. The miner working in the confined space should be attached to a lifeline.
- ❑ The person outside of the confined space should be ready to summon help if the miner inside the confined space requires assistance. The person monitoring should carry a portable radio to call for assistance in an emergency. No miner should ever enter a confined space to conduct a rescue without awareness of the hazard(s) present and appropriate personal protective equipment.
- ❑ Purging of the confined space to remove contaminants should be done before entry by means of a high volume of fresh air flow. Mechanical ventilation may be necessary to ensure an adequate supply of fresh air is provided for miners working in the confined space.
- ❑ Miners **MUST** be adequately informed and trained for the hazards they will encounter. The mine operator should have a plan that addresses confined space entry, monitoring, (attendance) and rescue specific to the types of confined spaces at the mine.