

FATALGRAM 11-01

Alaska Department of Labor & Workforce Development
Division of Labor & Safety Standards
Occupational Safety & Health



Date of incident: July 22, 2010

Industry: Construction

Location: Point Mackenzie - Wasilla, Alaska

Summary: On July 22, 2010, an employee was fatally injured by asphyxiation when he was engulfed into a sinkhole while working in an excavation around an existing water well.

Description of incident: The victim was a pipe layer working in an excavation 11-feet deep around an existing 10-inch water well. The pipe layer was completing his third pass with a jumping jack compactor around the well casing when a void opened under him. He was buried under ten to twelve feet of sand and gravel and was subsequently asphyxiated.

The origin of the void was not positively identified. The well had been drilled in 1986 for irrigation of surrounding farm land. The original well log stated a capacity of 18,000+ gallons/hour. The well had been developed in 1999, and a well screen was installed. A capacity of 1,200 gallons/minute was noted on the well log of the well developer. The void may have originated when sand was removed from the water table while the well was being used for irrigation, or when the well was developed, or both. The void had apparently been bridged by the natural occurring formations and may have existed for years. Construction activities around the well apparently caused the void to move towards the surface.

Alaska Occupational Safety and Health investigated the accident. Based on the investigation it was determined that the events leading up to the accident were unforeseen and outside of the known hazards associated with excavation and compacting around an existing well. No subsidence of the ground around the well was noted prior to the construction activities.

Accident Prevention Recommendations:

- Ensure that workers are trained in the hazards associated with trenching and excavation.
- Ensure that the excavation or trench is inspected by a competent person to detect possible cave-in or engulfment hazards.
- Have an emergency plan and contact information for emergency services.
- In the future if the possibility of a sinkhole or void is suspected, use body harnesses attached to above ground structures.