

Major Projects Safety Incident Alert

Incident Type	Medical Aid	Incident Date	March 8, 2011
Project	Line 6B Replacement	Location	Michigan, USA
Distribution	Internal (US / CAN)	Safety Alert Number	MPSIA 00030-2011

Incident Description

A Line 6B Replacement Project crew arrived at Segment 15B to install a mud-plug. The crew consisted of a Foreman, a Straw Boss, an Inspector and a Laborer. Crew members were advised that they would be working in a confined space. One crew member, the Straw Boss, was assigned to enter the pipe to install the mud-plug. Previously, the pipe was purged using nitrogen. The crew began ventilating the pipe. The Foreman tested the atmosphere in the pipe two times to determine if it was safe to enter. Both atmospheric tests of the pipe lasted for five minutes. Both atmospheric tests indicated that there were low oxygen levels in the pipe. Another crew 1.5 km away was ventilating a portion of Line 6B. The Foreman decided to check with that crew. Before leaving the Foreman told the crew not to enter the pipe.

The Straw Boss, Inspector, and Laborer remaining at the excavation site re-tested the atmosphere in the pipe twice. Both atmospheric tests resulted in low oxygen readings. The Inspector left to find the Foreman. Before leaving the Inspector told the Straw Boss and Laborer not to enter the pipe.

The Straw Boss continued monitoring air quality in the pipe. Low-oxygen readings persisted. However, the Straw Boss proceeded to enter the pipe to prepare to install the mud-plug. A short time later the Laborer saw the Straw Boss become limp and unresponsive and attempted to remove him from the pipe. The Laborer also became dizzy. A nearby Welder and a Pipe Services Representative saw what was happening and entered the site to assist. The Foreman and Inspector had now returned to the site. The Inspector called 911 while the Foreman and Laborer administered CPR. The Straw Boss and Laborer were transported to a medical facility for observation. Both were later released from the medical facility and returned to work with no restriction.



Incident Causes

- Worker did not understand the risk associated with low oxygen atmospheres.
- In an attempt to save time, the Straw Boss disregarded confined space entry procedures and verbal instructions given by the Foreman and entered the pipe.

Corrective Actions

- Review Work Practice associated with installation of mud-plugs in oxygen-deficient atmospheres.
- Ensure Confined Space Entry ("CSE") training and gas detection equipment is provided for inspection staff issuing permits for CSE work.
- Install a physical barrier to prevent access to confined spaces until the atmosphere is proven tenable by entry supervisor. The physical barrier should not be removed until a Permit is issued.

For more information, please contact
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