

# HAZARD ALERT

Industry: Pulp mill

Age: 50 years  
46 years

Experience: 7 years  
15 years

Area: Vancouver Island

## Two workers die from lack of oxygen in confined space

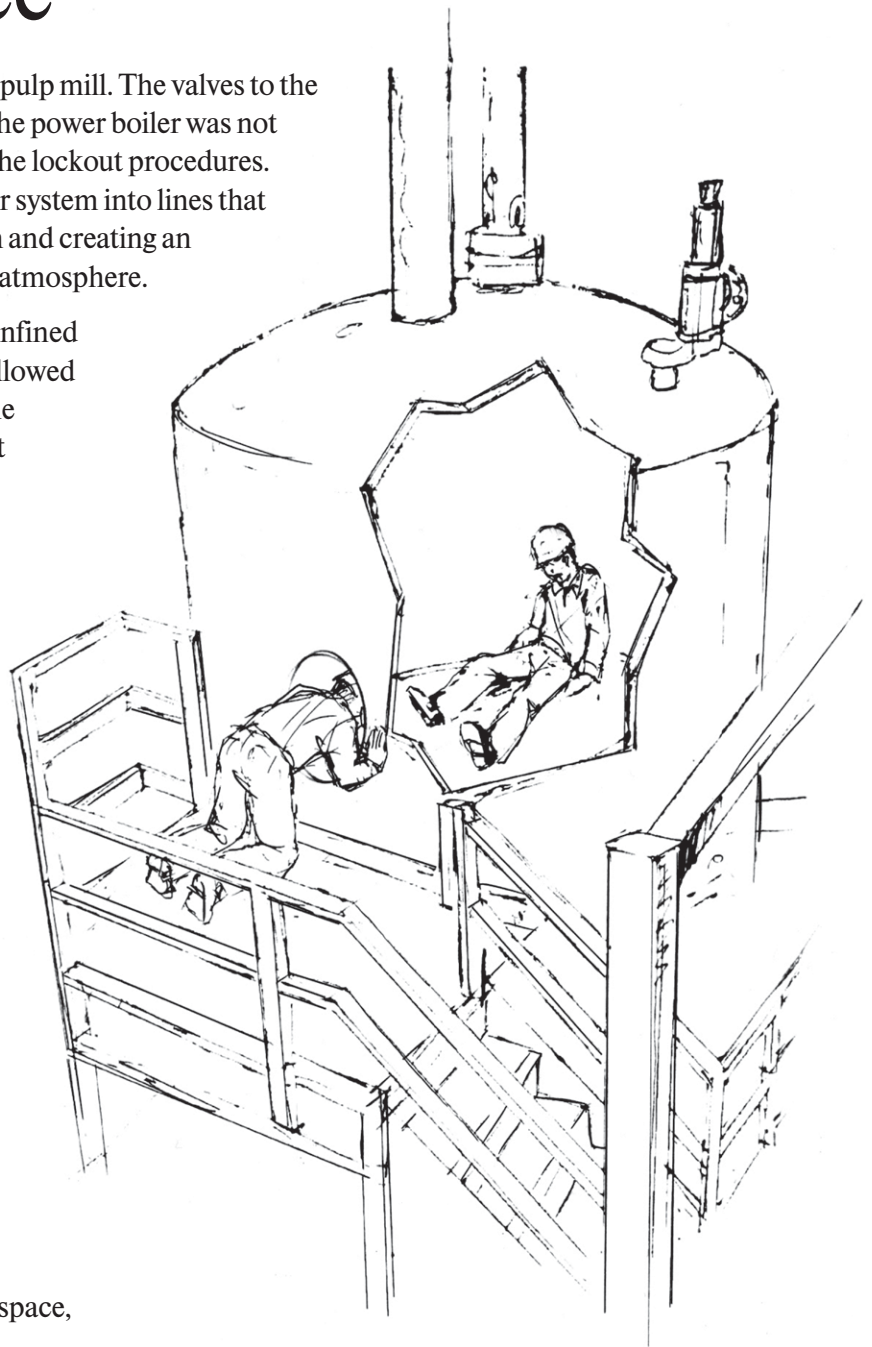
Two workers were repairing a process vessel at a pulp mill. The valves to the vessel were locked out, but a nitrogen supply to the power boiler was not locked out because it had not been identified in the lockout procedures. Nitrogen gas inadvertently leaked from the boiler system into lines that fed into the process vessel, displacing the oxygen and creating an IDLH (immediately dangerous to life or health) atmosphere.

The vessel was a confined space. Appropriate confined space entry procedures to the vessel had been followed on previous entries. However, on this re-entry, the atmosphere was not tested and the space was not ventilated. One worker entered the vessel and collapsed from oxygen deficiency. The second worker, who had been watching outside the entrance hole, was found collapsed with his head inside the vessel.

### Safe work practices:

- Consider each entry to a confined space to be potentially deadly. Proper testing and safe entry procedures must be followed for *each* entry.
- Identify and label confined spaces in the workplace.
- Provide written safe work procedures for entering a confined space and ensure that workers are trained in these procedures.
- Isolate the confined space from adjacent piping by blanking, blinding, or disconnecting the piping.
- Assess the hazards before entering a confined space, including testing for oxygen levels if necessary.

**Note:** This hazard alert is based on an accident that occurred in 1997.



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