

## A mechanic is poisoned with sodium cyanide during a repair on a leaching reactor.

On June 3, 2015, at the ore processing plant, a mechanic is called on to temporarily repair a leak on a valve of an inline leach reactor. At this point of the process, the concentration of sodium cyanide is at its highest level of 10 000 ppm and an alarm sounds. The mechanic comes on the scene without additional protection and tries to plug the leak. The workplace has not been cleaned and the solution containing cyanide continues to spread. He works for an hour and a half at which point his knee and forearm are covered with the solution containing cyanide. He begins to suffer from discomfort and his colleagues suspect a heart problem. He was sent to the infirmary where he died of acute sodium cyanide poisoning.

### Serious Event

**Date:** June 3, 2015

**Category:** Concentrator

**Activity:** Repairing a leak

**Job title:** Mechanic

### Causes of the accident

- Workplace cleaning, lockout and powering down are not performed thereby exposing the mechanic to cyanide.
- The mechanic is not wearing any personal protective equipment related to the presence of sodium cyanide.
- The mechanic and his supervisors are not trained in the risks associated with cyanide and are unaware of the safe working methods, the personal protective equipment required and the measures to be taken in case of an emergency.
- The antidote is not accessible and the medical personnel and first responders have not received instructions on the identification and treatment of cyanide poisoning.



### Preventative Measures

- Write up a sodium cyanide working procedure based on risk analysis.
- Provide training on hazards and safe work practices for anyone who may be exposed to sodium cyanide. It includes the use, handling, stockpiling, storage and disposal of hazardous materials. It also includes precautions to be taken with respect to leaks, the procedure to follow in the event of an emergency, the location and manner of dispensing the antidote, the location of and access to the safety data sheets.
- Using a work permit completed by a qualified person, assess the hazards present prior to the start of work (gas, splash, flammability, etc.) and determine the means of control.

(see continuation on the back)

## Preventative Measures (continued)

- Porter Wear personal protective equipment (HCN and NH<sub>3</sub> gas detector, visors, safety glasses, gloves, boots, coat and neoprene pants) and have the collective protective equipment (ABC fire extinguisher, radio transmitters, milk of lime, large amount of water (rinsing), ventilation, perimeter red ribbons).
- Clean the work area, purge the product, lock and power-down the equipment.
- Provide the supervision of the worker during the work.
- Offer training specific for the first responders, provide for a quick onsite presence in case of emergency as well as access to emergency equipment such as oxygen and a smart bag and a specialized kit (Cyanokit, B12). Simulate intoxication annually.
- Provide nearby eyewash and emergency shower in case of exposure.

## Additional Information

### Regulation

- Loi sur la santé et la sécurité du travail (LSST), Art. 62.
- Règlement sur l'information concernant les produits dangereux - SECTION VI. *Programme de formation et d'information des travailleurs*

### Reference

- Répertoire toxicologique de la CNESST : Cyanure de sodium
- Secourisme en milieu de travail, 7e éd. (CNESST) P.95-96 : *Information sur les intoxications par le cyanure*

**Post ACCIDENT ALERTS on your bulletin board and distribute them to persons concerned**

To obtain our ACCIDENT ALERTS, visit [www.apsmines.qc.ca](http://www.apsmines.qc.ca)

To publish an ACCIDENT ALERT for other mines, contact:

Louis-Philippe Simard, Prevention Consultant, at: 418-653-1933, ext. 26

**All our "ACCIDENT ALERTS" are depersonalized**