



# MINE SAFETY INVESTIGATION UNIT

INFORMATION RELEASE

## Serious illness

**Incident date** November 2015  
**Event** Exposure to hazardous chemicals  
**Location** Manuka Silver Mine, Cobar NSW

### Overview

Workers may have been exposed to hazardous chemicals such as lead and mercury during improvised attempts to extract gold using a manual acid-leaching process.



Photograph of silver pouring at the Manuka Silver Mine. Source: Black Oak Minerals Limited, (June 2016)  
[www.blackoakminerals.com.au](http://www.blackoakminerals.com.au)

## **The mine**

The Manuka Silver Mine is 80 km south of Cobar in central NSW. Black Oak Minerals Limited acquired the mine in September 2014 and recommenced silver production in March 2015.

The mine is a large open cut with a nearby processing plant. The processing plant's production capacity is estimated to be in excess of 2 million ounces of silver a year.

Black Oak Minerals also owns the Mount Boppy Gold Mine, an open cut mine, near Canbelego, located 48 km east of Cobar. Mining at Mount Boppy began in March 2015 and gold ore was trucked to the Manuka mine for processing.

In March 2016, Black Oak Minerals Limited was placed into external administration.

## **The incident**

Between October and November 2015, workers at the mine carried out a manual acid-leaching process to extract gold from ore.

During this process, workers may have absorbed mercury and lead into their blood via their skin and through the inhalation of vapours. Several workers also reported skin and eye irritation conditions.

The process involved manually mixing nitric acid with gold ore slurry in stainless steel buckets. Several workers were involved in the process.

This process was initially conducted inside the gold room but was moved outside when excessive nitric acid fumes were given off.

Workers involved in the acid-leaching process may have suffered from elevated lead and mercury levels in their blood.

## **The investigation**

The Mine Safety Investigation Unit has begun an investigation into the circumstances surrounding the acid-leaching process.

An investigation report will be prepared for the Secretary of the NSW Department of Industry.

All operations at the mine have ceased as a result of the mining company being placed in external administration.

Anyone with information that may assist the investigation can contact the Mine Safety Investigation Unit on 02 4931 6569.

## **Safety observations**

The provision of safe systems of work for the use, handling and storage of hazardous chemicals and mixtures is a critical control measure to reduce the risk of acute (short term) or chronic (long term) adverse health effects.

Mercury exposure, even in small amounts, may cause serious health problems. Mercury may have toxic effects on the nervous, digestive and immune systems, and on lungs, kidneys, skin and eyes.

Lead is a highly toxic metal and a very strong poison. Lead poisoning usually occurs over a period of months or years. The poisoning can cause severe mental and physical impairment.

Mine operators must manage the risk of exposure of workers to hazardous chemicals.

## **Managing risks of hazardous chemicals in the workplace**

The Work Health and Safety Regulations include specific duties for a person conducting a business or undertaking to manage the risks to health and safety associated with using, handling, generating and storing hazardous chemicals at a workplace.

The duties include:

- correct labelling of containers and pipework, using warning placards and outer warning placards and displaying of safety signs
- maintaining a register and manifest (where relevant) of hazardous chemicals and providing notification to the regulator of manifest quantities if required
- identifying risk of physical or chemical reaction of hazardous chemicals and ensuring the stability of hazardous chemicals
- ensuring that exposure standards are not exceeded
- provision of health monitoring to workers
- provision of information, training, instruction and supervision to workers
- provision of spill containment system for hazardous chemicals if necessary
- obtaining the current Safety Data Sheet (SDS) from the manufacturer, importer or supplier of the chemical
- controlling ignition sources and accumulation of flammable and combustible substances
- provision and availability of fire protection, firefighting equipment and emergency and safety equipment
- preparing an emergency plan if the quantity of a class of hazardous chemical at a workplace exceeds the manifest quantity for that hazardous chemical
- stability and support of containers for bulk hazardous chemicals including pipework and attachments
- decommissioning of underground storage and handling systems
- notifying the regulator as soon as practicable of abandoned tanks in certain circumstances.

The WHS Regulations contain prohibitions or restrictions on certain hazardous chemicals (e.g. certain carcinogens) except in specified circumstances and a restriction on the age of a person who can supply hazardous chemicals.

Officers, such as company directors and secretaries, have a duty to exercise due diligence to ensure that the business or undertaking complies with the WHS Act and Regulations. This includes taking reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks that arise from hazardous chemicals at the workplace.<sup>1</sup>

### **About this information release**

The Mine Safety Investigation Unit has issued this information to draw attention to the occurrence of a serious incident in the mining industry. The investigation is ongoing. Further information may be published as it becomes available.

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Industry, Skills and Regional Development or the user's independent adviser.

Information about the Investigation Unit and its publications can be found at: [www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/major-investigations](http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/major-investigations)

For information about health and safety regulation on mine sites contact a mines inspector at one of our local offices [www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/mine-safety-offices](http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/mine-safety-offices)

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<sup>1</sup> SafeWork NSW, *Managing risks of hazardous chemicals in the workplace - code of practice*, (July 2014), s 1.2, pp 5-6.