Significant Incident Report No. 263

Subject: Asbestos-containing material (ACM) disturbed in power transformer

Date: 08 June 2018

Summary of incident

In January 2018, following a winding failure, electrical workers were refurbishing a high voltage (HV) power transformer (manufactured in 1978).

To remove cables to disconnect the transformer, the workers unbolted and removed a gland plate located at the base of the transformer's junction box. During this process, the gland plate broke into several pieces.

On turning the gland plate over, the workers found the words "Ausbestos" (brand name for asbestos-containing products) stencilled on the underside. The electrical workers were not wearing respirators.

Note: Power transformers are long-life electrical installations and units manufactured prior to 2004 may contain asbestos.

Left: High-voltage transformer, indicating where the gland plate was located on the inside base of the transformer's junction box. Right: Damaged gland plate.

Direct causes

The asbestos-containing gland plate was broken while being removed.

Contributory causes

- Asbestos-containing material (ACM) in the transformer was not identified prior to the work task commencing and the transformer was not listed in the site's asbestos register.
- A safe work method to prevent damage to the gland plate was not used.

Note: When ACM is disturbed or broken, asbestos fibres can be released into the atmosphere. Inhalation of airborne respirable asbestos fibres can lead to asbestos-related diseases.

Actions required

When working on power transformers, the following actions are recommended:

- Competent person (e.g. occupational hygienist with asbestos experience, licensed asbestos assessor) to conduct a survey of power transformers to identify possible sources of ACM.

Note: HV transformers must be isolated and made safe by an appointed high voltage operator for access, maintenance or repairs under a permit system (r 5.18, Mines Safety and Inspection Regulations 1995) before inspection, sampling or removal of asbestos by a competent person.

- Record the results of the survey in the site's asbestos register.
- Provide appropriate signage and labelling to warn of the presence of asbestos.
- If ACM is to be removed, ensure competent persons (e.g. licensed asbestos removalists) conduct the removal work using appropriate safe work methods to comply with the *Code of practice for the safe removal of asbestos* (r. 9.32, Mines Safety and Inspection Regulations 1995).

Note: Power transformers manufactured prior to 2004 should be treated as suspected ACM, provided with appropriate signage and labelling and included in the asbestos register until inspection or sampling can be performed.

Further information

- Department of Mines, Industry Regulation and Safety

WorkSafe, www.commerce.wa.gov.au/publications

Asbestos licencing, assessors, licence holders and training providers (web pages)

Mining safety publications, www.dmp.wa.gov.au/Safety/Safety-335.aspx

Mines Safety Bulletin No. 129 *Management of asbestos-containing materials at mine sites and accommodation*

- Safe Work Australia, www.safeworkaustralia.gov.au

Code of practice for the management and control of asbestos in workplaces [NOHSC: 2018(2005)]

Code of practice for the safe removal of asbestos (2nd Edition) [NOHSC:2002 (2005)]

This Significant Incident Report was approved for release by the State Mining Engineer on 08 June 2018