

AUSMITE

Bulkan North Mine Site

Standard Operating Procedure SOP-250.01 Hazardous Materials

(Training Document)

Contents

1.	Introduction	2
2.	Definitions	2
3.	Competencies / Authorisation.....	2
4.	Legal Obligations.....	2
5.	Responsibilities	3
6.	Selection, Purchasing and Approval	3
7.	Hazardous Materials Register	4
8.	Labelling and Decanting	5
9.	Equipment Labelling	5
10.	Transport and Storage	5
	Flammable and Combustible Liquids	6
	Gas Cylinders	6
11.	Disposal of Hazardous Materials	7
12.	Dangerous Goods.....	7
13.	Emergencies and Spills	7
	Appendix 1: Dangerous Goods Classes and HAZCHEM Code	8
	Appendix 2: Summary of Key Points	9

1. Introduction

This Standard Operating Procedure (SOP) specifies the minimum requirements to utilise hazardous substances at an Ausmite Bulkan North site in accordance with section 55, 56 and 100 (a) of the *Queensland Coal Mining Safety and Health Regulation 2017*.

The procedure provides for the control of hazardous materials (includes hazardous substances and dangerous goods) in order to minimise any health effects, risk to personnel and risk of environmental harm.

This procedure provides minimum practices required with regard to the purchase, selection, storage, use, decanting and disposing of hazardous substances.

This procedure does not apply to the following:

- the transportation of dangerous goods off site
- asbestos or asbestos containing materials

This procedure does not provide for the risks associated with hazardous substances outside the boundaries of the Bulkan North site OR for tasks undertaken such as hot work that are covered by other SOP's.

This SOP applies to all Coal Mine Workers and visitors at the Bulkan North mine site.

2. Definitions

Term	Definition
SDS	<i>Safety Data Sheet</i>
HMC	<i>Hazardous Materials Coordinator</i>
Ausmite-ChemReg	<i>Site Register for hazardous materials</i>

3. Competencies / Authorisation

Only persons deemed as competent and holding the appropriate prescribed competency shall undertake the management and containment of Hazardous Substances on this Site.

All employees shall be trained in the correct procedures for the safe transport, storage, use and disposal of hazardous substances in accordance with **the Ausmite Bulkan North Training Plan**.

Emergency Response personnel shall be trained to respond to hazardous substance emergencies.

A Hazardous Materials Coordinator (HMC) must be appointed to manage hazardous substances effectively.

4. Legal Obligations

The *Coal Mining Safety and Health Regulation 2017* prescribes the following relevant obligations:

- **s55** The mine must have an easily accessible register of hazardous substances that contains all relevant SDSs.
- **s56** A coal mine must have an SOP for using hazardous substances that provides for:
 - (a) purchasing, selecting, storing, using, moving, decanting and disposing of hazardous substances; and
 - (b) appropriate first aid for a person affected by a hazardous substance.
- **s100A** The site senior executive for a coal mine must ensure a prohibited substance mentioned in schedule 2A, column 1, is not used at the mine for a prohibited purpose mentioned in schedule 2A, column 2, opposite the name of the substance.

(Sections 55 and 56 above are paraphrased)

5. Responsibilities

The Site Senior Executive (SSE) must:

- Appoint a Hazardous Materials Coordinator (HMC) to manage hazardous substances effectively
- Arrange for Health surveillance to be undertaken where required, as per the GLD 11 Health Requirements.

Superintendent and Supervisors are responsible for:

- Conducting periodic audits of Hazardous Materials within their area of accountability

The Hazardous Materials Coordinator (HMC) is responsible for:

- Maintaining records of all materials requested and subsequently approved for introduction to the Bulkan North site as **SOP-251.01 New Hazardous Substance Approval** including the product risk assessment.

Workers are responsible for:

- Prior to using a substance, checking its properties, required personal protective equipment and first aid provisions with Safety Data Sheet (SDS)

Contractors are responsible for:

- Providing a full list of their proposed chemicals as per the Contractor Management System process.

6. Selection, Purchasing and Approval

All persons intending to bring chemical products onto site shall follow the process illustrated by Fig. 1 – New Hazardous Substance Management Flowchart, prior to bringing them onto site.

All persons who require purchase and use of a new potentially hazardous material on site shall follow the process illustrated by Fig. 1 – New Hazardous Substance Management Flowchart below, prior to making the purchase.

The **SOP-251.01 New Hazardous Substance Approval** includes a risk assessment appropriate for the introduction of new chemical products to site. All further hazardous material management on site must be conducted in accordance with the Bulkan North site Risk Management Procedure.

An Environmental Advisor must be involved in the review and authorisation of new substances, which present a high environmental risk.

All persons must procure and use hazardous materials which have the lowest Ausmite-ChemReg ranking as reasonably achievable. (i.e. Green in preference to Amber or Red) and in conformance with:

- Substances classified as Red in Ausmite-ChemReg should only be introduced if all other options have been considered
 - Substances currently in use which are Red should have alternatives considered whenever possible
 - Substances on the Bulkan North site **Prohibited Items Register** shall not be introduced to site

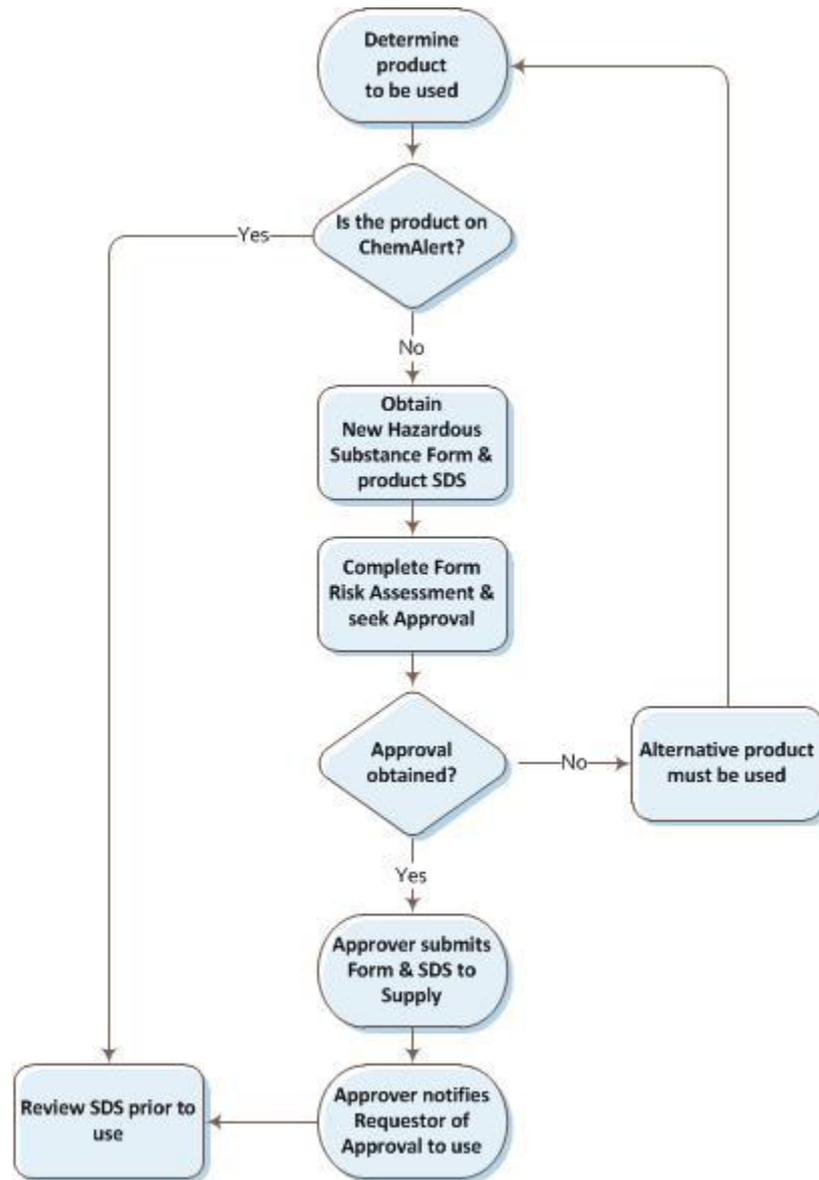


Figure 1 - New Hazardous Substance Management Flowchart

On receipt of a delivery, the cargo must be checked against the manifest list/consignment note. If any discrepancies are found, the cargo must be quarantined, and the Supervisor must be notified to determine the course of action.

7. Hazardous Materials Register - Ausmite-ChemReg

All hazardous materials on site must be recorded in the site register (Ausmite-ChemReg). Ausmite-ChemReg provides Safety Data Sheet (SDS) information and is available on **Ausmite Intranet**.

The register must include the storage location and maximum quantity of each material.

Chemicals are ranked as:

- **Green** – handle with care, no significant risk
- **Amber** – Specific precautions are required
- **Red** – Highly toxic, follow manufacturer’s instruction

When a new substance has been approved Ausmite-ChemReg **MUST** reflect the change

8. Labelling and Decanting

All containers shall be labelled as per the **Labelling of workplace hazardous chemicals Code of Practice**.

The following containers shall not be used:

- Unlabelled containers
- Containers that have been previously used for the storage of another product
- Damaged containers
- Recognised food/drink containers

If a container is unlabelled and the contents are not known it shall be marked “**CAUTION, DO NOT USE - Unknown Material**”.

Pipes shall be labelled or colour coded to indicate the contents and direction of flow.

The need to decant hazardous substances should be avoided by purchasing in suitable size containers for the task. Decanting requirements:

- When decanting into a smaller container, the container does not require a label if it is to be fully used during a single use and all residue is removed from container
- If the material is not all used at one time, the container shall be labelled with the name of the product and any safety or danger phrases that apply. Correct labels should be printed from Ausmite-ChemReg
- The container in which the product is decanted should not be utilised as permanent storage

Flammable substances require a minimum of ten (10) metres separation from potential ignition sources whilst decanting

9. Equipment Labelling

Safe operating limits for plant and equipment handling hazardous materials shall be clearly defined, documented and the limits marked on the equipment.

10. Transport and Storage

Transport and storage requirements for hazardous substances must be completed in accordance with the relevant SDS and all applicable Standards and Legislation.

When storing a hazardous substance, the following risks must be assessed and adequately controlled:

- spillage
- vapour emissions
- substance interaction
- fire or explosion

Hazardous materials shall be segregated from incompatible materials in accordance with the SDS.

Hazardous substance containers, tanks, entrances to facilities and storage areas must:

- Be adequately designed to safely contain, and allow for effective response to spills
- Be demarcated by signage compliant to **AS1319 Safety signs for the occupational environment**
- Have identification and emergency information placards in accordance with the SDS and the Placard and manifest requirements.

Flammable and Combustible Liquids

The storage of all flammable and combustible liquids is to be in accordance with **AS1940: The Storage and Handling of Flammable and Combustible Liquids**. The following key items to be observed:

- Minor storage quantities in the store and workshops is not to exceed:
 - 250 litres for flammable liquids with a flash point below 23°C
 - 500 litres for flammable liquids with a flash point between 23-60.5°C or
 - 2000 litres for any combustible liquids
- Maximum container size for internal storage is to be 60 litres
- External storage facilities are to be separated from other facilities by:
 - 3 metres for sealed packages, or
 - 10 metres for decanting purposes
- Any storage in a tank or tanks shall be constructed in accordance with the appropriate parts of **AS1940, s4** of placarding showing class and content
- Portable fire extinguishers of the dry powder type are to be provided adjacent to all flammable liquid storage so as to be readily accessible

Gas Cylinders

The storage of gases is to be in accordance with:

- **AS1596: LP Gas - Storage and Handling**
- **AS2030: SAA Gas Cylinders Code**
- **AS4326: Storage and Handling of Oxidising Agents.**
- **AS4332: Storage and Handling of Gases in Cylinders**

The following key items to be observed:

- Full cylinders are to be:
 - stored secured in an upright manner
 - segregated by class
 - free from contact with grease, oils or water, and
 - separated from empty cylinders
- Storage facilities are to be:
 - constructed of fire rated material and have a firm, level floor
 - away from occupied workplaces and thoroughfares
 - well ventilated and provided with basic weather protection
 - provided with fire suppression equipment
 - designated as a NO SMOKING, NO NAKED FLAME area
 - clearly marked as a gas store with HAZCHEM labelling

11. Disposal of Hazardous Materials

All hazardous substances must be disposed of in accordance with the applicable SDS and site waste disposal requirements.

12. Dangerous Goods

Persons required to use, handle, store or dispose of dangerous goods must be trained in the hazards associated with the dangerous good and must comply with the control measures required within the SDS and the **Storage and Handling of Workplace Dangerous Goods National Code Of Practice [NOHSC:2017(2001)]**

All dangerous goods are allocated an internationally recognised UN Number for identification purposes. In addition, all have been allocated a Packaging Group and a HAZCHEM Code. See **Appendix 1: Dangerous Goods Classes and HAZCHEM Code**.

13. Emergencies and Spills

In the event of an emergency or environmental spill involving hazardous substances, including Dangerous Goods, the requirements of PLN-003 Emergency Response Preparation Plan (ERP) will apply.

Where first aid is required, follow the hazardous substances SDS and report to site paramedics.

Hazmat boxes with hazardous materials listings and locations shall be located at site entrances and shall be accessible to emergency services

Appendix 1: Dangerous Goods Classes and HAZCHEM Code

Dangerous goods are grouped into different classes according to the most significant risk presented by the goods. There are nine classes (numbered 1 - 9), some having sub-classes. Each class or sub-class has a unique identifying label (commonly known as a 'diamond'), as shown below.

1 EXPLOSIVES		5.2 ORGANIC PEROXIDES	
2.1 FLAMMABLE GASES		6.1 TOXIC SUBSTANCES	
2.2 NON-FLAMMABLE NON-TOXIC GASES		6.2 INFECTIOUS SUBSTANCES	
2.2 OXIDIZING GAS SUB RISK		7 RADIOACTIVE MATERIAL (CATEGORY I)	
5.1 (NITROUS OXIDE & OXYGEN ONLY)		7 RADIOACTIVE MATERIAL (CATEGORY II or III)	
2.3 TOXIC GASES		8 CORROSIVE SUBSTANCES	
3 FLAMMABLE LIQUIDS		9 MISCELLANEOUS DANGEROUS GOODS AND ARTICLES	
4.1 FLAMMABLE SOLIDS (and other reactive substances)		MIXED CLASS LABEL FOR ROAD AND RAIL TRANSPORT	
4.2 SUBSTANCES LIABLE TO SPONTANEOUS COMBUSTION		SUBSIDIARY RISK LABEL TO BE USED WITH ELEVATED TEMPERATURE SUBSTANCES	
4.3 SUBSTANCES THAT IN CONTACT WITH WATER EMIT FLAMMABLE GASES			
5.1 OXIDIZING SUBSTANCES			

Figure 2 - A Typical Emergency Information Panel

ANHYDROUS AMMONIA		
UN No.	1005	
HAZCHEM	2RE	
IN EMERGENCY DIAL 000 POLICE or FIRE BRIGADE		SPECIALIST ADVICE ORGANISATION NAME AND PHONE NUMBER

Appendix 2: Summary of Key Points

-  No hazardous material shall be introduced onto a IOAM site without being recorded in **Ausmite-ChemReg**
-  Site approval of any hazardous substance requires a risk assessment that includes environmental exposure
-  Selection, purchase and supply of hazardous material shall preference products with the lowest possible Ausmite-ChemReg ranking
-  ALL containers shall be labelled in accordance with the *Labelling of workplace hazardous chemicals Code of Practice*
-  Hazardous substances must be transported and stored in accordance with the relevant SDS, signage compliant to AS1319 Safety signs for the occupational environment
-  The storage of all flammable and combustible liquids shall comply with AS1940: The Storage and Handling of Flammable and Combustible Liquids
-  The storage of gases is to be in accordance with relevant Australian Standards. Primarily:
 -  **AS1596: LP Gas - Storage and Handling**, and
 -  **AS4332: Storage and Handling of Gases in Cylinders**
-  All hazardous substances must be disposed of in accordance with the applicable SDS and Bulkan North site waste disposal arrangements
-  Persons required to use, handle, store or dispose of hazardous substances must receive instruction regarding the associated hazards and must be trained in the selection, care, use and disposal of the required PPE
-  All spills and loss of containment shall be immediately reported and action taken to recover or contain the materials. Contaminated soil shall be removed and either stored for remediation or disposed of as contaminated waste

Ausmite Worker / Contractor Declaration of Compliance

I (Print Name) _____ declare that I have read and understood the requirements and procedures of this Ausmite Bulkan North Mine Site SOP being document number and title: **SOP-250.01 Hazardous Materials.**

I acknowledge that while performing any work on the Ausmite Bulkan North mine site, I must comply with all aspects of this SOP. I understand that failure to comply with this SOP may result in me being escorted from the work site with re-admission and/or approval to continue work duties being at the sole discretion of Ausmite management.

Signature: _____

Date: _____

Please send a scanned copy of this page to: ausmite@astragroup.com.au