



IGO GROUP OCCUPATIONAL HEALTH STANDARD 5 – Hazardous Chemicals, Dusts and Fibres

INDEPENDENCE GROUP NL





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1. INTENT

The aim of this IGO Group Occupational Health Standard is to eliminate or minimise adverse risks arising from the purchase, selection, transportation, delivery, distribution, storage, use, disposal of and exposure to: hazardous chemicals and hazardous emissions.

2. APPLICATION

This standard shall apply to all IGO sites and projects (exploration, construction and development) and to all IGO employees, contractors (including sub-contractors) and visitors to IGO sites and projects. All IGO sites and projects shall comply with the provisions of this standard.

Where this standard identifies Australian and New Zealand Standards, IGO's international sites and projects shall ensure any other standards relevant to the location meet the minimum requirements established through this standard.

This standard applies to all hazardous chemicals and hazardous emissions (including Dangerous Goods and Poisons) that have the potential to harm people, the environment, or community. It does not cover the handling of explosives, radioactive substances or contaminated soil.

3. REQUIREMENTS

3.1 General Requirements

Sites shall manage hazardous chemicals (including Dangerous Goods and Poisons) and products that can generate hazardous emissions (gases, vapours, mists, dusts and fibres) in compliance with all relevant statutory obligations, licences and other requirements, including Codes of Practice.

3.2 Risk Assessment and Control

The risks associated with the purchase, selection, transportation, delivery, distribution, storage, use, exposure to, and disposal of, hazardous chemicals and products that can generate hazardous emissions shall be assessed and evaluated.

There are three basic types of risk assessment that may be undertaken for hazardous chemicals, dusts and fibres to determine whether risk levels are acceptable with current controls or additional controls are required.

These are:

- Hazardous chemical (and dangerous goods) risk assessments required by law to be developed in consultation with personnel for each chemical and to be readily available to affected workers
- Health and hygiene risk assessments conducted in accordance with IGO accepted hygiene risk assessment processes described in Guideline HE GL-01 Occupational Health and Hygiene to identify, assess, control and record risks that are specific to health and hygiene. Outcomes of these risk assessments shall be entered into the site's health risk register.
- SQRATM and standard risk assessments conducted in accordance with CMS ST-03 Risk Management to identify, assess, control and record 'generic' risks.

The outcomes of risk assessments shall be entered into the appropriate risk register for the site.

Where risk levels are not acceptable, or could be practicably reduced, additional controls shall be identified in accordance with the hierarchy of preferred control measures: elimination or substitution; engineered controls; procedural controls and finally, personal protective equipment.

Group-wide health guidelines shall be prepared to specify the key controls required for the following health and hygiene risks at a minimum:

- Hazardous chemical management
- Dangerous goods management
- Schedule 7 drugs, poisons and controlled substance management
- Hazardous emissions (including dusts and fibres)
- Carcinogens.

These guidelines shall specifically name:

- Any hazardous chemicals that are prohibited at IGO sites
- Any products or activities that may generate emissions (including dusts and fibres) that are prohibited at IGO sites.

Group-wide environmental guidelines shall be prepared to specify the key controls required for the following environmental risks at a minimum:

- Hazardous chemical storage requirements
- Transportation of hazardous chemicals
- Hazardous chemical spill response and clean up.

3.3 Emissions Control

Exposure to emissions (including gases, vapours, mists, dusts and fibres) shall be identified as required by **HE ST-01 Occupational Health And Hygiene**, monitored as per the requirements of **HE ST-02 Occupational Health Surveillance** and controlled through the application of strict exposure standards, control measures and standard operating procedures which limit and minimise worker exposures as described in **HE GL-09 Emissions** and **HE GL-09 Carcinogens**.

These guidelines shall specify the conditions and measures under which:

- Dust source mapping is required
- Control measures and standard operating procedures to minimise generation and exposure are required
- Special respiratory protection programs shall be implemented requiring clearly designated zones requiring the use of respiratory protection devices to be established, communicated and monitored

- Personal hygiene programs are required to reduce exposures, e.g. the washing of hands and face prior to drinking, eating or smoking, showering, laundering of clothing
- Cleaning programs are required to ensure that surfaces are adequately cleaned to avoid emissions, dust and fume generation
- Activities such as abrasive blast cleaning are permitted
- Training in the use of respiratory devices and the recognition of signs and symptoms of hazardous emission exposure is required.

3.4 Hazardous Chemicals Register

Each site shall maintain a Hazardous Chemicals Register that shall include the following information:

- Chemical name
- HAZCHEM / United Nations code
- Safety Data Sheets (SDS)
- Summary of maximum inventory
- Storage requirements and precautions
- Location, physical properties of the chemicals where they are used
- Approved disposal methods
- Hazardous chemicals risk level.

3.5 Specific Dangerous Goods Requirements

In addition to the requirements for hazardous chemicals each site shall maintain:

- A register that meets legal requirements of all dangerous goods that are stored or handled at the site and make it accessible
- A manifest (record) of dangerous goods where they exceed prescribed quantities and make this available at the main entrance to the site and to those managing an emergency.

3.6 Specific Schedule 7 Drugs, Poisons and Controlled Substance Requirements

Sites shall identify and implement any requirements for the management of Schedule 7 drugs, poisons and controlled substances. Where Schedule 7 substances are to be brought to site they shall require approval as a hazardous chemical and additional approval by the Site Manager.

3.7 Hazardous Chemicals Coordinators and Dangerous Goods Coordinators

All sites processing, storing or handling hazardous chemicals shall appoint a site Hazardous Chemicals Coordinator.

This person shall be responsible for:

- Approving the use of hazardous chemicals on site
- Ensuring that hazardous chemical risk assessments are undertaken and documented for all hazardous chemicals
- Maintaining the hazardous chemicals register for the site.
- Ensuring that licences for the storage, transport, etc of hazardous chemicals are obtained where required
- Ensuring that the required signage / dangerous goods placarding is displayed
- Ensuring that hazardous chemicals are properly packaged and labelled
- Assessing, and where appropriate approving, management of change requests relating to the transportation, storage handling, use and disposal associated with hazardous chemicals.

Sites shall also appoint a Dangerous Goods Coordinator who may be the same person as the Hazardous Chemicals Coordinator. The Dangerous Goods Coordinator shall be responsible for maintaining the Dangerous Goods Register and manifest and implementing the requirements of **HE GL-09 Dangerous Goods Management**.

3.8 Design of Hazardous Chemical / Dangerous Goods Storage Areas

Hazardous chemicals / dangerous goods storage areas shall be designed to meet statutory requirements and:

- To ensure that separate containment areas are provided for incompatible bulk hazardous chemicals
- To eliminate ignition sources
- To stop the spread of incidents, e.g. fires
- Have appropriate fire detection and protection systems and other emergency provisions in place
- To be protected from impact by vehicles or other mobile equipment
- To allow safe delivery and movement of hazardous materials by mobile plant
- With required signage and placarding
- With containment and collection systems to protect delivery areas and refuelling areas from spills and releases to the environment
- With appropriate buffer distances from site boundaries.

Storage tanks and pipework containing hazardous chemicals shall be located above ground (not buried) where practicable and shall have impermeable secondary containment to prevent spills from reaching the environment. Secondary containment shall contain a minimum of 110% of the volume of the largest tank in the containment area.

4. OPERATIONS

4.1 Procedures

Standard work procedures to control the transportation, unloading, transfer, storage, handling, use, disposal of and exposure to hazardous chemicals, dusts and fibres shall be developed, implemented and maintained. These procedures shall ensure that:

- Only approved hazardous chemicals / dangerous goods and products that can generate hazardous emissions are permitted to be brought on to the site
- All hazardous chemicals / dangerous goods) and products that can generate hazardous emissions are transported, received, unloaded, transferred, stored, handled used and disposed of in the required manner
- New hazardous chemicals / dangerous goods and products that can generate hazardous emissions shall only be introduced to the site following approval by the site Hazardous Chemicals and / or Dangerous Goods Co-Ordinator
- Safety Data Sheets for all chemicals on the site hazardous chemicals register are available to personnel in the language of the host country, and English, at the point of transport, storage, handling, use and disposal. SDSs are kept up to date (a maximum of 5 years old).
- Labels clearly identify the contents of all storage vessels, containers and tanks, as per appropriate standards
- Appropriate security is provided to areas where hazardous chemicals / dangerous goods are stored and used
- Control measures to minimise generation and exposure to hazardous emissions are used
- Fugitive emissions from the bulk transfer and storage of dry chemicals is controlled at all times
- Spills of hazardous chemicals or products that can generate hazardous emissions are reported as required to authorities and in the required timeframes
- Maintenance, inspection, testing schedules and procedures are developed for critical equipment associated with hazardous chemicals.

4.2 Contractors Transporting Hazardous Chemicals and Dangerous Goods

Where a contractor may be required to transport hazardous chemicals / dangerous goods their contract shall contain specific conditions including that they shall:

- Identify and comply with statutory requirements including licencing, placarding, etc
- Meet IGO requirements
- Use transportation vehicles and tanks in suitable condition and design for the chemicals / dangerous goods
- Identify and provide appropriate competency training to their personnel

- Implement a maintenance and inspection program for their transport equipment
- Seek prior approval of transportation routes.

4.3 Emergency Response

Information relating to the hazardous chemicals / dangerous goods on site shall be readily available to local emergency services including the manifest of dangerous goods as required by *Clause 3.5 Specific Dangerous Goods Requirements*.

Site *Emergency Management Plans* (EMPs) shall specifically address hazardous chemicals / dangerous goods incident scenarios which shall be tested as part of the ongoing exercise program.

Spill containment, clean up equipment and PPE shall be provided appropriate to the nature and volume of hazardous chemicals on site.

Any actual or suspected releases of a hazardous material must be reported within the IGO incident CHES reporting system and responded to as rapidly as possible.

4.4 Training

Sites shall develop a competency based training system to authorise and control the training of appropriate personnel in normal transportation, storage handling, use and disposal of, and emergency response procedures involving hazardous chemicals / dangerous goods and products that can generate hazardous emissions.

Sites shall provide employees and others with the appropriate training to manage exposure to workplace hazardous chemicals, meet compliance with regulatory requirements and apply proper use and maintenance of PPE.

This shall include awareness as necessary of:

- The site hazardous chemicals register and risk assessments
- SDS documentation, handling PPE and first aid
- Requirements for product and container labelling and labels for storage / handling
- The system for introducing new hazardous chemicals and products that can generate hazardous emissions to site
- Transportation and storage practices
- Spill and emergency response procedures.

4.5 Closure

Sites shall plan for inventory reduction as part of mine closure to minimise quantities of hazardous chemicals / dangerous goods and products that can generate hazardous emissions that will require any post-closure disposal or remediation.

4.6 Inspections and Monitoring

Areas of bulk hazardous chemicals / dangerous goods storage, distribution, transfer and use, including on site contractor facilities, shall be routinely inspected to verify that storage, use, management and disposal conforms to this standard. Records of these inspections shall be retained.

Significant non-conformities shall be recorded in the IGO incident CHESS reporting system. Corrective actions shall be managed in the IGO action tracking system.

5. PERFORMANCE MEASURES

Conformance with this standard will be assessed through regular audits and assessments.

6. OTHER INFORMATION

6.1 Related Documents

Common Management System Standards

- CMS ST-03 Risk Management
- CMS ST-12 Management of Change

HSES Standards

- EN ST-08 Hydrocarbons and Chemicals Management

Document Control

No amendments to this document may be made without the approval of the document owner.

Document Approval