JER-8000-MGT-PRO-0039 Use of Hazardous Substances

(AS/NZS, ISO 45001:2018, Clause 8.1.2)

1. SCOPE

The procedure applies to all KGL Resources Workers whose work may involve the use, handling, generating, purchasing, storage or transport of hazardous substances.

This procedure covers management of workplace health and safety risks associated with hazardous substances that include:

- Chemicals, fuels and paints
- Bi-products, residuals and other associated substances generated during work processes, such as welding, removal of paints, blasting etc.

2. PURPOSE OF DOCUMENT

The purpose of this procedure is to provide a proactive and risk-based approach to manage risks arising from hazardous substances in the workplaces.

3. RELEVANT LEGAL & OTHER REQUIREMENTS

It is the responsibility of all personnel to comply with this procedure and seek guidance from the Project Director where clarification is required.

- Work Health and Safety Act 2011 (NT)
- Work Health and Safety Regulation 2011 (NT)'
- Code of Practice: Managing risks of hazardous chemicals in the workplace NT (2020)

4. DEFINITIONS

Hazard class	The nature of a physical, health or environmental hazard under the GHS. Note: *This includes dangerous goods.*
Hazard pictogram	A graphical composition, including a symbol plus other graphical elements, that is assigned in the GHS to a hazard class or hazard category.
Hazard statement	A statement assigned in the GHS to a hazard class or hazard category describing the nature of the hazards of a hazardous chemical including, if appropriate, the degree of hazard.
Hazardous chemical	A substance, mixture or article that satisfies the criteria for a hazard class in the GHS (including a classification referred to in Schedule 6 of the WHS Regulations), but does not include a substance, mixture or article that satisfies the criteria solely for one of the following hazard classes: a. acute toxicity – oral – category 5; b. acute toxicity – dermal – category 5; c. acute toxicity – inhalation – category 5; d. skin corrosion/irritation – category 3;

	e. serious eye damage/eye irritation – category 2B; f. aspiration hazard – category 2; g. flammable gas – category 2; h. acute hazard to the aquatic environment – category 1, 2 or 3; i. chronic hazard to the aquatic environment – category 1, 2, 3 or 4; j. hazardous to the ozone layer.
Hazard statement	A statement assigned in the GHS to a hazard class or hazard category describing the nature of the hazards of a hazardous chemical including, if appropriate, the degree of hazard.
Hazardous substance	Hazardous substance means any substance, chemical, mixture or article that satisfies the criteria for a hazard class in the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including a classification referred to in Schedule 6 of the WHS Regulations (2011).
Hazardous Substances Register	A Hazardous Substances Register is a register with a list of all the product names of hazardous chemicals used, handled or stored at the workplace and must be accompanied by the current SDS (one that is not more than 5 years old) for each hazardous chemical listed.
Hazchem code	*'Hazchem Code'* under the *ADG Code*. Also known as the *Emergency Action Code*
Label	Written, printed or graphical information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the container of a hazardous chemical.
Manufacture	The activities of packing, repacking, formulating, blending, mixing, making, remaking and synthesizing of the chemical.
Mixture	A combination of, or a solution composed of, two or more substances that do not react with each other. Placard means a sign or notice: a. displayed or intended for display in a prominent place, or next to a container or storage area for hazardous chemicals at a workplace b. that contains information about the hazardous chemical stored in the container or storage area.
Substance	A chemical element or compound in its natural state or obtained or generated by a process, including any additive necessary to preserve the stability of the element or compound and any impurities deriving from the process, but excluding any solvent that may be separated without affecting the stability of the element or compound or changing its composition.
Supply	Selling or transferring ownership or responsibility for a chemical.
SWMS	A SWMS is a pre-start risk assessment that is undertaken prior to commencing any high-risk construction work or as otherwise required by a supervisor or manager. A SWMS must be completed in accordance with the KGL Resources Risk Management Procedure.
Take 5	A Take 5 is a pre-start risk assessment that is undertaken by all workers prior to commencing work. A Take 5 must be completed in accordance with the KGL Resources Risk Management Procedure.

Workers	Workers include employees, contractors, sub-contractors, volunteers and consultants who conduct work for KGL Resources.

5. RESPONSIBILITIES

Senior Leadership Team	1. Provide adequate resources to managers, supervisors and workers to support safe management of hazardous substances. 2. Establishes safe systems of work that mitigate risks of hazardous substances. 3. Reviews and acts on reported organisational risk management performance.
Safety Manager	1. Ensure this procedure is fit for purpose and meets all applicable legislative requirements. 2. Establishes, maintains and monitors hazard identification, risk management, and training systems within the KGL Resources Safety Management System 3. Support managers, supervisors and workers in the implementation and operation of this procedure. 4. Provides advice on hazardous substances requirements. 5. Recommend change and improvement to this procedure as required.
Managers and Supervisors	1. Ensure all contractors under their management and control are made aware of this procedure and processes are established to ensure their contractors comply with this procedure. 2. Ensure that this procedure is implemented in their area by ensuring that all workers are aware of and understand this procedure. 3. Ensure that workers are provided with appropriate training in relation to the safe management of hazardous substances and the appropriate control measures; and 4. Ensure that workers implement risk control to eliminate or minimise risks arising from working with hazardous substances. 5. Consult with relevant workgroups to identify tasks and locations that are likely to require the management of hazardous substances.

Worker	1. All workers must ensure they are familiar with and understand this procedure. 2. Continually monitors/assesses hazards and report to manager or supervisor any change of conditions. 3. Comply with this procedure including: • participating in risk assessments for hazardous substances as required; • completed Hazardous Substances and Dangerous Goods awareness training if required; and 4. Implementing all identified control measures, including using all required PPE (for example, safety goggles and gloves).

6. HAZARDOUS SUBSTANCES RISK MANAGEMENT

Working with hazardous substances can expose workers to risks to their health and safety. When working with or near hazardous substances, all workers must:

a. only work with hazardous substances if they are competent and have the necessary tools and equipment to do so (for example, adequate training and available PPE); and

b. stop work where they have reasonable grounds to believe that a hazardous substance may cause a risk that does not have adequate controls in place.

KGL Resources manages risk associated with hazardous substances through a risk management approach. The key elements of KGL Resources' systematic approach to risk management include:

a. hazard identification;

b. risk assessment;

c. controlling risks; and

d. reviewing control measures to ensure they remain effective.

This is to be undertaken in line with the **KGL Resources Risk Management procedure.** Before undertaking any work involving hazardous substances, workers:

a. Must complete a **Take 5**; and

b. If applicable, complete a SWMS.

c. Any decisions and reasons for the decisions about hazardous substances risk management must be documented in accordance with this procedure.

6.1 Hazard Identification

The purpose of identifying hazards associated with hazardous substances is to eliminate or, if it is not reasonably practicable to eliminate the risk, to minimise so far as is reasonably practicable.

There are three main ways hazardous substances can enter the body, called routes of exposure. The potential of each route needs to be considered in the risk assessment, in particular the hazard identification of hazardous substances:

- **inhalation** (breathing in) – where there are airborne concentrations of a substance (e.g. in the form of an aerosol, vapour, mist or suspended dust);

- **skin contact** or **eye contact** – many chemical substances are readily absorbed through the skin or eyes. Formulations involving solvents or detergents may increase absorption. Accidental contact with contaminated surfaces is a common route of exposure; and
- **ingestion** (swallowing) – this can result from splashes. Dusts and aerosols can be breathed in, then swallowed. Smoking or eating while handling Chemicals or without hand washing can also cause ingestion.

In addition, KGL Resources will identify hazards through:

- routine workplace inspection of work areas (including KGL Resources work vehicles) to identify any substances stored or used in operations;
- review of current storage arrangements, Safety Data Sheets (**SDS**), hazardous substances container labelling, PPE used and available;
- consult workers on proposed work activities, conditions and hazards;
- review previous injury/incident records;
- review prior risk assessments conducted in that area or for that job or work task; and
- use of the Hazardous Substances Hazard Identification and Registration Form**,** JER-8000-MGT-FRM-0022.

All hazardous substances identified must be recorded and registered on the Hazardous Substances Register with the manager or supervisor of a site, using the Hazardous Substances Hazard Identification and Registration Form provided in JER-8000-MGT-FRM-0022. The register must be routinely reviewed and kept up to date and must be available to any workers who need to use, handle or store a hazardous substance.

See JER-8000-MGT-PRO-0038 Safe Management of Asbestos for further information in relation to asbestos.

6.2 Risk Assessment

When assessing the risks arising from Hazardous Substances, supervisors, managers and workers must consider the following:

a) correct labelling of containers and pipework, using warning placards and outer warning placards and displaying of safety signs;

b) maintaining a register and manifest (where relevant) of hazardous chemicals and providing notification to the regulator of manifest quantities if required;

c) identifying risk of physical or chemical reaction of hazardous chemicals and ensuring the stability of hazardous chemicals;

d) ensuring that exposure standards are not exceeded;

e) provision of health monitoring to workers;

f) provision of information, training, instruction and supervision to workers;

g) provision of spill containment system for hazardous chemicals if necessary;

h) obtaining the current SDS from the manufacturer, importer or supplier of the chemical;

i) controlling ignition sources and accumulation of flammable and combustible substances;

j) provision and availability of fire protection, firefighting equipment and emergency and safety equipment;

k) preparing an emergency plan if the quantity of a class of hazardous chemical at a workplace exceeds the manifest quantity for that hazardous chemical;

l) stability and support of containers for bulk hazardous chemicals including pipework and attachments;

m) decommissioning of underground storage and handling systems; and

n) notifying the regulator as soon as practicable of abandoned tanks in certain circumstances.

6.3 Route of Entry

The type of hazard (for example, hazard classifications of carcinogenicity, sensitisation, and acute toxicity) and relevant routes of exposure (for example, inhalation, ingestion, skin contact) should be known from the hazard identification step. These are needed in the risk assessment to understand the level of risk from likely or potential exposure scenarios in your workplace and should be considered when assessing the above-mentioned steps of the risk assessment process.

6.4 Record Keeping Requirements

All hazardous substance records and registers will be managed in accordance with the KGL Resources' records management procedures. Records to be maintained include (at a minimum):

- A Hazardous Substances using the Hazardous Substances Register and the Hazardous Substances Hazard Identification and Registration Form provided in JER-8000-MGT-FRM-0022for each KGL Resources site;
- SDS (current within last 5 years)
- Records of any workers exposed to hazardous substances
- Reports regarding detailed hazardous substances risk assessments.

All workplace substances used, handled or stored at any KGL Resources work site need to be managed and listed on the Hazardous Substances Register and accompanied by the current SDS (one that is not more than five years old) for each hazardous chemical listed. It must be updated as new hazardous chemicals are introduced to the workplace or when the use of a hazardous chemical is discontinued.

6.5 Risk Control Measures

As set out in KGL Resources' Risk Management Procedure, control measures should always be considered in the order of the hierarchy of controls starting with elimination. In some circumstances, two or more control measures will be required to minimise so far as is reasonably practicable the risk(s).

KGL Resources applies the Hierarchy of controls to eliminating, so far as is reasonably practicable, or minimising the risks arising from hazardous substances. Set out in **Table 1** below are some examples of risk control measures to eliminate or minimise these risks according to the hierarchy of control.

Table 1: Risk Control Measures

Risk control hierarchy		KGL Resources risk controls
Level 1	Eliminate the hazard	Eliminate the need to work with the hazardous substance.
Level 2	Substitute the hazard with something safer	Substitute the hazardous substance for a for non-hazardous substance (or a substance with a lower risk rating).

	Isolate the hazard from people	Store the hazardous substance in a suitable and secure locked container or bounded area.
	Reduce the risks through engineering controls	
Level 3	Reduce exposure to the hazard using administrative controls	Control over selection of procured Hazardous Substances at KGL Resources workplaces; • Labelling, SDS, and record keeping; • Specific prohibitions and restrictions; • First Aid & Emergency Response; and • Workforce competency training.
	Use PPE	Including correct selection of appropriate PPE, for example respirator, safety glasses, gloves etc.

7. GUIDELINES FOR WORKING WITH HAZARDOUS SUBSTANCES

7.1 Purchasing of hazardous substances

Hazardous substances shall not be procured without conducting a full hazard identification and risk assessment of the substance, which covers storage, transport, handling, generating, use, storage and disposal risks.

An SDS is required for all new substances prior to being brought onto an KGL Resources workplace, including “trial products”.

The manufacturer or importer of the hazardous chemical must provide the current SDS for the hazardous chemical to any worker, if the worker:

- is likely to be affected by the hazardous chemical, and
- asks for the safety data sheet.

The manager or supervisor responsible for purchasing hazardous substances must obtain from the supplier a current SDS for the hazardous chemical when the chemical is first supplied to an KGL Resources workplace.

KGL Resources must obtain the SDS (and any amended version) for a hazardous chemical from the manufacturer, importer or supplier no later than when the chemical is first supplied at the workplace or as soon as practicable after it is first supplied but before it is used at the workplace.

The Hazardous Substances Register must be updated as new chemicals are purchased.

If hazardous substances are classified as Dangerous Goods they may require additional storage and handling constraints to comply with the additional legal requirements for dangerous goods. Dangerous Goods are materials which are either specifically listed in the Australian Dangerous Goods (ADG) Code or meet the classification criteria of the ADG Code or are deemed to be dangerous goods by the Competent Authorities Panel.

7.2 Safety Data Sheets (SDS)

All hazardous chemicals stored in KGL Resources workplaces require an individual SDS. Chemicals which are generally for domestic use and considered safe in the home may present greater risks in the workplace depending on the manner and quantities in which they are used. This is particularly relevant, for example, where domestic cleaning chemicals are purchased from a supermarket and used in a workplace environment. KGL Resources workers should always follow label directions. However, if workers are using a domestic chemical in a manner different to normal household use, they should also obtain the SDS in order to determine the level of risks to workers and the appropriate controls. The SDS should contain more detailed information on hazards and risks, for example on incompatibilities with other chemicals and risks from use in enclosed areas.

SDSs are to be located in a suitable folder or other container in the vicinity of where the hazardous substances are used including KGL Resources work vehicles for off-site work in paper form readily available to staff that use them. They should also be stored electronically for easy retrieval.

All SDSs must be routinely reviewed and kept up to date (no longer than 5 years from the date of issue or when substance or information in the SDS has changed) and must be available to any workers who need to use, handle or store a hazardous substance. The SDS should provide, detailed information that allows the worker to identify the following important hazard information:

Table 2: SDS Information

Hazard Classification	This information will be present on the SDS in the form of hazard statements, for example “may cause cancer” or “flammable liquid”.
The route of entry	This information is important as it lets you assess the health risks to your workers. Routes of entry can include inhalation (breathing it in), skin contact, ingestion (swallowing it), eye contact and injection through high pressure equipment. Depending on the substance, the severity of the harm could range from minor to major, for example, from minor skin irritation to chronic respiratory disease. Some chemicals may not be hazardous by all routes of entry. For example, silica is hazardous only by inhalation so the risk assessment needs to consider how inhalation could occur in the workplace.
Advice or warnings for at-risk workers	The SDS may also include summaries of toxicological data, or advice or warnings for people that might be at risk, such as • people who are sensitised to particular chemicals • warnings for pregnant women • people with existing medical conditions such as asthma.
Instructions on storage	This may include advice on not to store with certain incompatible materials, or advice on potential hazardous degradation products. Examples include – storage of acids and bases, or storage instructions to avoid formation of explosive peroxides in ether during extended storage
Physicochemical Properties	Physicochemical properties can have a significant effect on the hazard. Some key properties to note include:

	• physical state: is it solid, liquid or gas?
	  - if solid – what is the potential for dust explosion?
	  - if liquid – is it mobile/viscous/volatile/miscible?
	  - if gas (and vapours) – is it lighter/heavier than air?
	• flashpoint, fire point and explosive limits
	• viscosity
	• density
	• particle size
	• vapour pressure
	• solubility and pH
	• reactivity
	• boiling and/or freezing point or range
	• electrical and/or heat conductivity
	• the nature and concentration of combustion products.

Situations that may generate hazardous chemicals	Examples may include: • use of welding rods which may liberate hazardous fumes and vapours • directions for use of chlorine bleach, warning that harmful levels of chlorine gas may be generated if the substance is mixed with incompatible chemicals. • warnings that some metals, including alkali metals, in contact with water or acids, liberate flammable gas • information on by-products or breakdown products like formation of explosive peroxides in ether
Environmental hazards	The SDS should contain information on environmental hazards and risks. An awareness of this information will assist you to meet any environmental laws in your state or territory.

Labelling must identify the product and provide safety information that includes:

- The dangerous goods ‘diamonds’ (or "class labels") and/or the poisons label, where appropriate;
- The substance’s trade name and chemical name(s), including constituent components in mixtures;
- Health hazard information (i.e. routes of exposure and health effects);
- Precautions for use and safe handling requirements; and

- First Aid/treatment information.

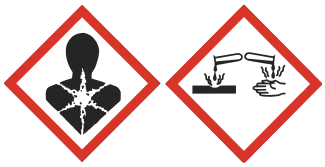
7.3 Hazardous Substances Labelling

Stored hazardous substances must be identified and labelled in accordance with the OHS/WHS Act and WHS Regulation.

The SDS should be referred to when reading a label to ensure all chemical hazards are identified.

Table 3 below shows examples of elements on a label that indicates the type of hazard and the severity of the hazard.

Table 3: Examples of hazard information on a label

Label Element	Examples
Signal words – these provide an immediate warning to the reader	Danger or Warning
Hazard statements – these describe the nature and severity of the chemical hazard based on a chemical's classification	May cause cancer Fatal if inhaled Flammable liquid and vapour Causes severe skin burns and eye damage May cause respiratory irritation
Pictograms – these provide a pictorial representation of the type of hazard that can be easily recognised at a glance	 Flammable Acute toxicity Warning  Human health Corrosive

If an KGL Resources worker finds a container that does not have a label or is incorrectly labelled, action must be taken to correctly label the container. Containers that have had chemicals transferred into them (decanted) in the workplace, and containers of chemical wastes need to be labelled correctly.

If the contents of the container are not known, this should be clearly marked on the container, for example, '**Caution - do not use unknown substance**'. Such a container should be stored in isolation until its contents can be identified and, if it is then found to be hazardous, the container is appropriately labelled. If the contents cannot be identified, they should be disposed of in accordance with relevant local waste management requirements. Workers should contact the Safety Manager for guidance.

7.4 Fire and Explosion

Fire and explosion can result in catastrophic consequences, causing serious injuries or death of workers, as well as significant damage to property. They occur when the following three primary elements come together (commonly referred to as the fire triangle – **see Figure 1):**

- a source of fuel (a flammable or combustible substance)
- a source of oxygen (usually in the air)
- an ignition source (a source of energy sufficient to cause ignition).

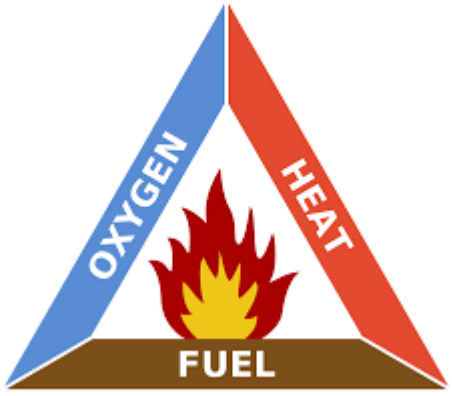


Figure 1: Fire Triangle

When identifying hazards KGL Resources workers should ensure they have identified all of the sources of fuel in the workplace that could contribute to fire and explosion risks.

Key control measures for managing these risks include:

- designing buildings and plant to relieve and redirect pressure and flame in the event that an explosion occurs;
- installing systems to detect leaks of flammable gases or vapours;
- using intrinsically safe equipment;
- ventilation to avoid creation of hazardous atmosphere;
- substituting flammable materials for ones that are less flammable or combustible;
- ensuring incompatible materials are separated or segregated;
- reducing quantities of flammable and combustible materials, including items that contribute to the fire load but that are not hazardous chemicals themselves (example: wooden pallets or large quantities of paper);
- eliminating ignition sources from hazardous areas. This may include establishing a hot work permit system if required;
- ensuring equipment used in handling hazardous chemicals is maintained in accordance with manufacturer's instructions; and
- good housekeeping to minimise accumulation of combustible dusts.

7.5 First Aid & Emergency Response

First aid kits, appropriate for dealing with substances on site, together with competent first aiders, must be available and easily accessible/contactable.

All KGL Resources sites are required to have emergency procedures. T hose sites that use, store or handle hazardous substances must consider in a risk assessment the possible emergencies that may involve chemical substances (for example fires, spills, poisoning, etc.), identify appropriate risk controls, and ensure that emergency response and evacuation plans reflect these requirements.

Appropriate spill containment (spill kits) should be available considering the amount of product stored and the hazard classification.

7.6 Containing Spills

When a spill, leak or accidental release of hazardous chemicals occurs, appropriate actions must be taken to contain the hazardous chemicals within the KGL Resources workplace.

The spill containment system must describe how to contain, clean-up and dispose of the spill or leak and any resulting effluent. The system must not create a hazard by bringing together different hazardous chemicals that are not compatible or that would react together to cause a fire, explosion, harmful reaction or evolution of flammable, toxic or corrosive vapour.

Any spill containment system should be large enough to ensure that all spills can be held safely until cleaned up.

Factors KGL Resources workers should consider when designing a spill containment system include:

- the nature of the hazardous chemicals (whether liquid or solid);
- the quantity of the hazardous chemicals;
- the size of the largest container or reasonably foreseeable largest spill;
- the potential impact if the hazardous chemicals escape to the environment;
- whether it is necessary to provide for the management of firewater at an incident;
- a separate spill containment is provided for incompatible goods;
- the materials used to construct the containment system, as well as any materials used for absorption, are compatible with the hazardous chemicals;
- other materials in the vicinity that will prevent contamination of groundwater or soil; and
- the system's integrity will be maintained in any reasonably foreseeable incident.

For large quantities of hazardous chemicals, bunding may be required. Bunding should be designed and constructed in accordance with the relevant Australian Standard specific to the type of hazardous chemical, for example AS 1940*: The storage and handling of flammable and combustible liquids*, and in consultation with the emergency services authority.

7.7 Emergency Planning

The purpose of the emergency plan is to plan for and minimise the effects of any dangerous occurrence or near miss at a workplace resulting from handling of hazardous chemicals.

When developing an emergency plan, KGL Resources takes consideration of the following factors:

- the nature of the work being carried out at the workplace;
- the nature of the hazards at the workplace;
- the size and location of the workplace; and
- the number of workers and other persons at the workplace.

For KGL Resources workplaces that use, store or handle large quantities of hazardous chemicals, providing a copy of emergency plans and details of actions to be taken in the event of an alarm or

emergency situation to neighbouring sites may assist coordinating responses in the event of an emergency.

Additional information regarding emergency management associated with the storage and handling of flammable hazardous chemicals is available in AS 1940: *The storage and handling of flammable and combustible liquids*.

Please refer to the **JER-8000-MGT-0018 KGL Resources Emergency Response Plan.**

8. REVIEW AND REVISION OF CONTROL MEASURES

Risk controls must be reviewed on a regular basis to ensure their effectiveness and to ensure that new risks have not been introduced. A review is required:

a) when the control measure is not effective in controlling the risk;

b) before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control;

c) if a new hazard or risk is identified;

d) if the results of consultation indicate that a review is necessary; and

e) if a health and safety representative requests a review.

9. HEALTH MONITORING

Health monitoring of a person means monitoring the person to identify changes in the person's health status because of exposure to certain substances. It involves the collection of data in order to evaluate the effects of exposure and to confirm that the absorbed dose is within safe levels.

This allows decisions to be made about implementing ways to eliminate or minimise the worker's risk of exposure, for example, reassigning to other duties that involve less exposure or improving control measures.

Appendix 1 of this procedure, includes the type of health monitoring that must be carried out for each hazardous chemical listed, unless:

- an equal or better type of health monitoring is available;
- the use of that other type of monitoring is recommended by a registered medical practitioner with experience in health monitoring.

If the results indicate that a worker is experiencing adverse health effects or signs of exposure to a hazardous chemical, the control measure must be reviewed and if necessary revised.

KGL Resources must;

- inform workers and prospective workers about health monitoring requirements;
- ensure health monitoring is carried out by or under the supervision of a registered medical practitioner with experience in health monitoring;
- consult workers in relation to the selection of the registered medical practitioner;
- pay all expenses relating to health monitoring;
- provide certain information about a worker to the registered medical practitioner;
- take all reasonable steps to obtain a report from the registered medical practitioner as soon as practicable after the monitoring has been carried out;

- provide a copy of the report to the worker and the regulator if the report contains adverse test result or recommendations that remedial measures should be taken. Also provide the report to all other persons conducting a business or undertaking who have a duty to provide health monitoring for the worker; and
- keep reports as confidential records for at least 30 years after the record is made (40 years for reports relating to asbestos exposure).

10. ESTIMATED EXPOSURE TO CHEMICALS

Once you have investigated the hazardous chemicals, the quantities used, the frequency and duration of exposure, the effectiveness of the controls already in place, and whether workers are working directly with the substance this information should then be used to estimate the level of exposure.

Inhalation exposure can be determined by personal sampling. Information on the level of airborne concentrations of chemicals can also be obtained from static area sampling; however this method is not acceptable for determining compliance with exposure standards.

Air monitoring should be carried out by a person such as an occupational hygienist with skills to carry out the monitoring according to the appropriate standard and to interpret the results. Results from air monitoring indicate how effective your workplace controls are, for example whether ventilation systems are operating as intended. Records of air monitoring for airborne contaminants with exposure standards must be kept for a minimum of 30 years and must be available to workers who are exposed.

KGL Resources must ensure that all workers at KGL Resources workplaces are not exposed to substances or mixtures in an airborne concentration that exceed the exposure standard for the substance or mixture. Air monitoring may be necessary to ensure that air quality is monitored, and workers are not exposed to airborne concentrations above the chemical's exposure standard.

11. INFORMATION, INSTRUCTION, TRAINING & SUPERVISION

Information, training and instruction should be provided to KGL Resources managers, supervisors, workers, who use, handle, generate, store, handling, purchase or transport hazardous substance on a SafeWork site, and should include the following:

- the nature of the hazardous chemicals involved and the risks to the worker;
- the control measures implemented, how to use and maintain them correctly;
- the arrangements in place to deal with emergencies, including evacuation procedures, containing and cleaning up spills and first aid instructions;
- the selection, use, maintenance and storage of any personal protective equipment (PPE) required to control risks and the limitations of the PPE;
- any health monitoring which may be required and the worker's rights and obligations;
- the labelling of containers of hazardous chemicals, the information that each part of the label provides and why the information is being provided;
- the availability of SDS for all hazardous chemicals, how to access the SDS, and the information that each part of the SDS provides; and
- the work practices and procedures to be followed in the use, handling, processing, storage, transportation, cleaning up and disposal of hazardous chemicals.

Managers, supervisors and workers involved in work activities that require the storage, handling, or use of a hazardous substance should complete Hazardous Substances and Dangerous Goods awareness training. Records of training provided to workers must be kept, documenting who was trained, when and on what.

12. INCIDENT REPORTING AND INVESTIGATION

Any incidents arising from fatigue must be reported in accordance with the **KGL Resource Incident Management Procedure**.

13. BREACH OF THIS PROCEDURE

Workers must comply with this procedure at all times. KGL Resources takes breaches of this procedure very seriously.

If an employee is found to have breached this procedure, they may be subjected to disciplinary action in accordance with KGL Resources' disciplinary processes. Contractors of KGL Resources who are found to have breached this procedure may be the subject of action under their contract with KGL Resources.

14. CONSULTATION

This procedure has been developed and implemented in consultation and co-operation with KGL Resources' workers.

15. RELATED DOCUMENTATION

JER-8000-MGT-PRO-0006	Risk Management
JER-8000-MGT-PRO-0023	Incident Management
JER-8000-MGT-FRM-0011	Incident Report Form
Safety Data Sheets	

16. MONITORING, EVALUATION AND REVIEW

VERIFICATION	
Monitoring	Compliance with this procedure will be monitored through training and regular audits.
Evaluation & Review	The risk rating is moderate, reviewed every 2-years. A review will be undertaken sooner if there are changes to legislation, standards and industry codes, or following an SMS review, changes as defined by WHS Regulators, or to ensure continual improvement.
Version Control	Version 1: May 2026

17. APPROVAL

Konrad Litfin

Project Director

APPENDIX 1 – REQUIREMENTS FOR HEALTH MONITORING

The table below shows the requirements for health monitoring, as specified in the WHS Regulations (Schedule 14).

Item	Hazardous Chemical	Type of health monitoring
1	Acrylonitrile	Demographic, medical and occupational history Records of personal exposure Physical examination
2	Arsenic (inorganic)	Demographic, medical and occupational history Records of personal exposure Physical examination with emphasis on the peripheral nervous system and skin Urinary inorganic arsenic
3	Benzene	Demographic, medical and occupational history Records of personal exposure Physical examination Baseline blood sample for haematological profile
4	Cadmium	Demographic, medical and occupational history Records of personal exposure Physical examination with emphasis on the respiratory system Standard respiratory questionnaire to be completed Standardised respiratory function tests including for example, FEV_1, FVC and FEV_1/FVC Urinary cadmium and β_2-microglobulin Health advice, including counselling on the effect of smoking on cadmium exposure
5	Chromium (inorganic)	Demographic, medical and occupational history Physical examination with emphasis on the respiratory system and skin Weekly skin inspection of hands and forearms by a competent person
6	Creosote	Demographic, medical and occupational history Health advice, including recognition of photosensitivity and skin changes Physical examination with emphasis on the neurological system and skin, noting any abnormal lesions and evidence of skin sensitisation Records of personal exposure, including photosensitivity
7	Crystalline silica	Demographic, medical and occupational history

		Records of personal exposure Standardised respiratory questionnaire to be completed Standardised respiratory function test, for example, FEV_1, FVC and FEV_1/FVC Chest X-ray full size PA view
8	Isocyanates	Demographic, medical and occupational history Completion of a standardised respiratory questionnaire Physical examination of the respiratory system and skin Standardised respiratory function tests, for example, FEV_1, FVC and FEV_1/FVC
9	Mercury (inorganic)	Demographic, medical and occupational history Physical examination with emphasis on dermatological, gastrointestinal, neurological and renal systems Urinary inorganic mercury
10	Methylene bis (2-chloroaniline) (MOCA)	Demographic, medical and occupational history Physical examination Urinary total MOCA Dipstick analysis of urine for haematuria Urine cytology
11	Organophosphate pesticides	Demographic, medical and occupational history including pattern of use Physical examination Baseline estimation of red cell and plasma cholinesterase activity levels by the Ellman or equivalent method Estimation of red cell and plasma cholinesterase activity towards the end of the working day on which organophosphate pesticides have been used
12	Pentachlorophenol (PCP)	Demographic, medical and occupational history Records of personal exposure Physical examination with emphasis on the skin, noting any abnormal lesions or effects of irritancy Urinary total pentachlorophenol Dipstick urinalysis for haematuria and proteinuria
13	Polycyclic aromatic hydrocarbons (PAH)	Demographic, medical and occupational history Physical examination Records of personal exposure, including photosensitivity Health advice, including recognition of photosensitivity and skin changes

14	Thallium	Demographic, medical and occupational history Physical examination Urinary thallium
15	Vinyl chloride	Demographic, medical and occupational history Physical examination Records of personal exposure