



Hazardous Chemicals Management Procedure

Brief description

The Hazardous Chemical Management Procedure defines the processes to meet compliance obligations and to effectively manage risk exposures from the use, storage and handling of Hazardous Chemicals at GPC owned and operated sites.

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The current version of this Procedure is available on GPC's Intranet.

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1 Terms and definitions

“ADG Code” means the Australian Code for the Transport of Dangerous Goods by Road and Rail.

“ChemAlert” means a comprehensive electronic chemical information database utilised by GPC to support achievement of our compliance obligations in relation to chemical management.

“Chemical Requestor” means any person who is looking to procure / bring a new chemical to site.

“Hazardous Chemical” means any substance, mixture or article that satisfies the criteria of one or more hazard classes in the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (including a classification referred to in Schedule 6 of the WHS Regulation), unless the only hazard class or classes for which the substance, mixture or article satisfies the criteria are any one or more of the following:

- Acute toxicity – oral – category 5
- Acute toxicity – dermal – category 5
- Acute toxicity – inhalation – category 5
- Skin corrosion / irritation – category 3
- Aspiration hazard – category 2
- Flammable gas – category 2
- Acute hazard to the aquatic environment – category 1, 2 or 3
- Chronic hazard to the aquatic environment – category 1, 2, 3 or 4
- Hazardous to the ozone layer.

Most substances, mixtures and articles that are dangerous goods under the ADG Code are Hazardous Chemicals.

“Health Monitoring” means monitoring a person to identify changes in their health status due to exposure to certain substances or hazards. Health monitoring is not an alternative to implementing control measures.

“Placard” means a sign or notice displayed or intended for display in a prominent place, or next to a container or storage area for hazardous chemicals at a workplace, that contains information about the hazardous chemical stored in the container or storage area.

“Prohibited Hazardous Chemical” means a hazardous chemical that is prohibited for use, storage and handling in certain situations as listed in Schedule 10 of the WHS Regulation.

“Restricted Hazardous Chemical” means a hazardous chemical that is restricted for use, storage and handling in certain situations as listed in Schedule 10 of the WHS Regulation.

“SDS” means a safety data sheet. It provides critical information about hazardous chemicals including chemical properties, hazards (health, physical, environmental), safe handling and storage, emergency procedures and disposal considerations.

Terms that are capitalised and not otherwise defined in this Procedure are defined in the GPC Corporate Glossary Instruction (as listed in Appendix 1 – Related documents).

2 Introduction

2.1 Purpose

The purpose of this Procedure is to define processes to effectively manage health, safety and environmental risk exposures from the use, storage and handling of Hazardous Chemicals at GPC owned and operated sites. The Procedure also provides the process and responsibilities to ensure GPC meets its compliance obligations both from legislation and internal requirements.

2.2 Scope

This Procedure applies to all workers undertaking activities on GPC operated sites. Contractors may apply their own systems of work to meet legislative requirements, including maintaining chemical registers, unless otherwise specified in the Procedure.

This Procedure does not apply to cargo classified as hazardous or dangerous that is transiting for loading / unloading.

2.3 Objectives

The objectives of this Procedure are to:

- Ensure effective risk management through the identification of hazards and reduction of risks associated with the use, handling, generating and storage of chemicals as far as is reasonably practicable;
- Ensure workers have access to necessary chemical information;
- Provide the framework for appropriate and compliant chemical use and storage; and
- Ensure compliance to relevant legislation.

3 Roles and responsibilities

To assist GPC Representatives to better understand their responsibilities, key responsibilities and accountabilities are summarised below:

Role	Responsibilities
GPC Executive Leadership Team	To ensure that GPC complies with its obligations by: <ul style="list-style-type: none">• Providing appropriate resources to manage Hazardous Chemicals in accordance with this Procedure.
GPC Leaders	To ensure that GPC complies with its obligations by: <ul style="list-style-type: none">• Providing appropriate resources to manage Hazardous Chemicals in accordance with this Procedure.• Ensuring hazards associated with chemical use and storage are managed.• Ensuring all Workers comply with requirements of this Procedure.

Role	Responsibilities
Safety and Environment Team	<ul style="list-style-type: none"> • Addressing non-conformances with this Procedure. <p>To ensure that GPC complies with its obligations by:</p> <ul style="list-style-type: none"> • Administering all user functions and maintaining ChemAlert to ensure it is up to date and meets GPC requirements. • Ensuring this Procedure remains current and in line with legislation and ChemAlert updates. • Providing training and coaching in ChemAlert and ensuring ChemAlert training is in line with the current version. • Assisting with risk assessments for requested chemicals. • Ensuring compliance is met by auditing and reviewing chemical storage locations, SDS currency and chemical risk assessments periodically.
Safety Specialists	<p>To ensure that GPC complies with its obligations by:</p> <ul style="list-style-type: none"> • Completing health/hygiene and safety review of any new chemical requests for site in ChemAlert to approve or reject chemicals. • Correlating environment and safety reviews and performing final sign offs on any new or existing products in ChemAlert to approve or reject chemicals. • Providing support with the procurement of any additional personal protective equipment requirements in accordance with applicable SDS recommendations. • Providing specialist advice in relation to compatibilities for storage facilities and placarding. • Ensuring manifests are kept and maintained. • Preparing submissions and notifications to Regulator as required by legislation.
Environment Specialists	<p>To ensure that GPC complies with its obligations by:</p> <ul style="list-style-type: none"> • Providing specialist advice in relation to environmental impacts and disposal management for Hazardous Chemicals. • Completing environment review of any new chemical requests for site in ChemAlert to approve or reject chemicals.

Role	Responsibilities
Chemical Requestor	<p>To ensure that GPC complies with its obligations by:</p> <ul style="list-style-type: none"> • Reviewing ChemAlert to ensure chemical to be procured / brought to site is not already approved. • Seeking permission from Supervisors (as required) and submitting chemical requests using ChemAlert. • Performing a risk assessment in line with this Procedure and chemical request process via ChemAlert prior to bringing any new chemical to site.
Supervisor	<p>To ensure that GPC complies with its obligations by:</p> <ul style="list-style-type: none"> • Ensuring no new chemicals are purchased and used onsite prior to approval in ChemAlert. • Ensuring all relevant personal protective equipment requirements are met in accordance with SDS and seek approval for any additional non-approved personal protective equipment. • Ensuring chemical storage locations are audited periodically with results updated in ChemAlert stock inventory to maintain accurate records. • Reviewing chemical risk assessments periodically in accordance with this Procedure. • Ensuring approved controls and risk assessment within ChemAlert are considered and included in task JSA / SWI. • Notifying Safety Team of any obsolete products to allow ChemAlert stock inventory registers to be maintained.
GPC Contractor Supervisor	<p>To ensure that GPC complies with its obligations by:</p> <ul style="list-style-type: none"> • Ensuring all contractors manage Hazardous Chemicals in accordance with this Procedure. • Ensuring hazards associated with contractor's chemical use or storage are managed.
Workers (including employees, contractors)	<p>To ensure that GPC complies with its obligations by:</p> <ul style="list-style-type: none"> • Performing a risk assessment in accordance with the Safety Risk Management Procedure for the task specific use of a Hazardous Chemical with consideration to SDS requirements. • Following SDS and manufacturer instructions and using associated equipment and plant in a safe manner.

Role	Responsibilities
	<ul style="list-style-type: none"> Assisting in maintaining accuracy and compliance of chemical storage areas. Using and maintaining personal protective equipment provided.

4 Hazardous Chemicals Management

4.1 Identification

(a) Hazardous Chemical Register

A register of Hazardous Chemicals used, handled or stored at all GPC operating sites must be kept. The register must include the following details:

- Hazardous Chemical product name;
- Manufacturer name;
- Current SDS; and
- Maximum quantity held on site.

GPC utilise ChemAlert as an electronic Hazardous Chemical register to gather and maintain required information related to all chemicals approved for use, handling and storage. The register must be updated as new Hazardous Chemicals are introduced to a work area, significant changes in quantities occur and when Hazardous Chemicals are no longer used or stored at particular locations. ChemAlert automatically creates/updates the register following approval process when a product is added to a stockholding or when information changes in ChemAlert.

The register must be readily accessible to all workers involved in the use, storage and handling of the Hazardous Chemicals or anyone else who is likely to be affected by the chemical at the workplace. All employees have access to ChemAlert and GPC Contractor Supervisors can contact the Safety and Environment Team to arrange access for any contractors as required. Hard copies of the ChemAlert register can be printed and located at each storage location however must be updated on a regular basis as this would be an uncontrolled copy.

Contractors / Port Users must maintain their own Hazardous Chemical Register and provide upon request to GPC (including prior to mobilising to site and upon updates). A GPC Contractor Supervisor may request in a scope of work for a contractor to maintain their register within GPC's ChemAlert database.

(b) Safety Data Sheet (SDS)

A SDS contains information on the chemical identity and ingredients, potential health effects, toxicological properties, physical hazards, safe handling and storage procedures, emergency procedures and disposal considerations specific to the chemical. All controls detailed in a SDS must be implemented.

The WHS Regulation prescribes that SDSs must be reviewed by the manufacturer of the chemical every 5 years as a minimum. Where the manufacturer supplies these to ChemAlert, these will be automatically updated into GPC's electronic register.

A current SDS (within 5 year validity period) must be readily accessible to workers involved in using, handling, generating or storing the Hazardous Chemical, emergency services as well as anyone else who is likely to be exposed to the Hazardous Chemical.

All SDS can be accessed electronically by all employees via ChemAlert. Hard copies can also be printed to ensure accessibility and act as a back-up means. Printed hard copies must be periodically checked by the relevant work group within ChemAlert to ensure the most current version is in use.

Contractors / Port Users must make available the SDS for the Hazardous Chemicals they will bring to GPC sites.

To assist in maintaining SDS currency and reviewing any changes, Supervisors (or any other ChemAlert users) can nominate 'Interest Profiles' within ChemAlert to allow them to be notified of changes within the system. For example, a Supervisor can nominate a Stock Location/s (chemical cabinet) to receive email notifications for when any SDS are updated in their area to ensure the most current version is always used.

From the Stock Register within ChemAlert, a search can also be performed to identify all current out of date SDS in the system for chemicals approved for site. The Safety and Environment Team will perform periodic audits on the ChemAlert out of date SDSs.

(c) Labelling

All Hazardous Chemicals and their containers or related pipework must be clearly and correctly labelled. The minimum information required on labels is set out in Part 3 of Schedule 9 of the WHS Regulation.

Where a Hazardous Chemical is decanted or transferred to a smaller container, the new container must be labelled and contain the following information at a minimum:

- Product identifier; and
- A hazard pictogram or hazard statement consistent with the correct classification of the chemical.

An exception to the above is if the Hazardous Chemical in the container is used immediately and the container is thoroughly cleaned immediately after.

Labels can be generated and printed from ChemAlert when decanting/transferring. Varying size labels are available that meet WHS Regulation requirements.

If a container that does not have a label or is incorrectly labelled is identified, it should be reported as a hazard in SAI360 and action must be taken to correctly label the container. If the contents are not known, this should be marked clearly on the container (e.g. "Caution – do not use: unknown substance" and the container should either be stored in isolation until contents are identified or disposed of in accordance with section 4.7 of this Procedure.

For pipe work, pipe markers should comprise of either a printed label affixed to the pipe or equivalent colours and information sign written directly onto the pipe or incorporated into the pipe on manufacturing.

(d) Prohibited and Restricted Hazardous Chemicals

The use, storage and handling of certain Hazardous Chemicals are prohibited and restricted as per WHS Regulation. Refer to Appendix 4 for Prohibited and Restricted Hazardous Chemicals as listed in Schedule 10 of the WHS Regulation. Approval

from the Regulator must be received before Restricted Hazardous Chemicals may be used.

The WHS Regulation also prohibits and restricts the use of some Hazardous Chemicals with crystalline silica content. No workers are permitted to use any material with greater than 1 per cent crystalline silica for abrasive blasting. No workers are permitted to undertake uncontrolled dry cutting or processing of materials that contain 1 per cent or greater of crystalline silica.

The National Pollutant Inventory contains data on substances that are emitted to the environment and have potential impacts on health and the environment. The substance list shows all the substances required to be reported (if GPC exceed reporting thresholds) and the relevant threshold category. Hazardous Chemicals on this list are identified chemicals of concern and will require additional measures to control and monitor as agreed to with the Safety and Environment Team.

4.2 Approval process for new chemicals

(a) Process Overview

All chemicals approved for use on GPC operated sites are maintained within ChemAlert.

All new chemicals required to be purchased and used on a GPC operated site (including for trial purposes) must be requested through ChemAlert and follow the approval workflow provided in Appendix 2. Where the chemical is identified in ChemAlert as 'Hazardous' or a 'Dangerous Good', it will automatically trigger the requirement to complete a risk assessment within ChemAlert (separate to the Chemical Request). When identifying new chemicals, consideration should first be had to the ability to eliminate the need for the Hazardous Chemical or substitute the Hazardous Chemical for a less hazardous alternative.

Three specialist assessments may be conducted to approve the chemical request (noting that if the product is 'green' rated in ChemAlert, the assessments are not required and will only require an authorisation):

- Health/Hygiene Assessment to consider health hazards – immediate or long term risks to human health through toxicological properties
- Safety Assessment to consider physical safety hazards – risks to safety of persons and property mainly from chemicals interaction with other things e.g. ignition sources
- Environment Assessment to consider environmental hazards – risks to the environment from the ecological and toxicological properties

An exception to this approval process is when a Sales Representative attends sites with new products to discuss. In these instances, the relevant Supervisor must ensure SDS is available and all controls are implemented prior to any demonstration.

Where a chemical cannot be found to commence a request process within ChemAlert, provide a copy of the SDS and notify the Safety Team who will liaise with ChemAlert to have the chemical added.

A quarantine process will be enforced for any Hazardous Chemicals that have not been approved for site. The Hazardous Chemical must be tagged not for use and stored in isolation (still in accordance with any SDS requirements) away from Hazardous Chemicals regularly used. The chemical will be released from quarantine after all relevant approval processes are completed.

Where a GPC Contractor Supervisor requests in a contractor's scope of work that GPC's ChemAlert database must be utilised, nominated delegates from the contractor company will be provided relevant access to ChemAlert. These delegates must review if Hazardous Chemicals they will bring to GPC sites are approved in GPC's ChemAlert stock register. If they are not, the delegate from the contractor company must lodge the Chemical Request/s via GPC's ChemAlert database. Safety and Environment Specialists will review their conditions of use in consultation with the GPC Contractor Supervisor to determine approval and stock status through GPC's ChemAlert system as well as any other future control measures required. Where approval is only for the contractor, a status of 'Restricted' may be applied. Refer to Appendix 2 for workflow.

(b) Risk Assessment

Risk assessments must be completed for all Hazardous Chemicals prior to being brought onto GPC operated sites and must have regard to:

- The hazardous properties of the Hazardous Chemical;
- Any potential hazardous reaction (chemical or physical) between the Hazardous Chemical and any other substance or mixture, including a substance that may be generated from a reaction;
- The nature of the work to be carried out with the Hazardous Chemical;
- Any structure, plant or system of work that:
 - Is used in the use, handling, generation or storage of the Hazardous Chemical;
 - Could interact with the Hazardous Chemical at the workplace.
- Determining and implementing appropriate control measures; and
- Reviewing and monitoring the effectiveness of the control measures used.

Risk should be reduced as far as is reasonably practicable by applying the Hierarchy of Controls.

Hierarchy of Control	Example
Elimination	Remove the need to use the Hazardous Chemical (e.g. pressure cleaning as alternative)
Substitution	Swapping chemical for less Hazardous alternative
Engineering Controls	Segregation of Hazardous Chemicals, ventilation
Administrative Controls	Signage, training
PPE	Gloves, respirators

The chemical request process in ChemAlert supports the development of a risk assessment for new chemicals. If the risk assessment identifies any additional control measures (e.g. specific storage, first aid, firefighting equipment or personal protective equipment), the relevant Supervisor must arrange for the additional requirements to be purchased, installed and/or tested prior to the chemicals being purchased or used on site.

Risk assessments are available to all Workers via ChemAlert and remain valid for a period of 5 years after the last assessment, or until there is a change to the risk or controls. At a minimum of a 5 yearly period, the Safety and Environment Team will coordinate with Supervisors and work groups a review of controls implemented to manage risks in relation to Hazardous Chemicals.

Contactors/port users must ensure they complete risk assessments for the Hazardous Chemicals they intend to use on GPC sites.

4.3 Storage and Segregation

(a) Stock Inventory

Chemical storage owner supervisors must coordinate a stock inventory inspection annually at a minimum, on mobilisation to site and/or whenever there are significant changes in Hazardous Chemicals. This ensures each Hazardous Chemical and listed quantities for each designated storage location are kept up to date. The 'Stock Inventory Inspection' report from ChemAlert can be used to facilitate this process. The Safety and Environment Team can provide support and will assist with the update of ChemAlert electronic inventory. Records of inspection are to be entered in SAI360.

Where a Hazardous Chemical is no longer used/stored at a location, the relevant Supervisor must contact the Safety Team to remove the chemical from the particular location in the ChemAlert stock inventory.

Contractor companies are to maintain records of inspections they conduct and provide upon request to GPC.

(b) Storage

Hazardous Chemicals must be stored in accordance with the requirements in the SDS and the Australian Dangerous Goods (ADG) Code. Chemicals of different hazard classes should not be stored together unless authorised by the Safety Team.

Consideration must also be given to storage requirements prior to ordering in chemicals in bulk for projects etc. There must be sufficient storage capacity in accordance with SDS and/or ADG Code.

Chemical cabinets must only be used for chemicals and must not have other combustible materials inside (e.g. cardboard boxes, rags). They must be maintained, including ensuring they self-close. Chemical cabinets must not be placed within 5 metres of hot work areas.

Highly flammable liquids should be stored outside buildings or in approved chemical cabinets. Where practical, flammable gas cylinders should be stored outside and restrained.

Minor quantities of flammable liquids must not be kept in minor storage (outside of a bunded or approved cabinet) unless they are essential for daily activities. Minor quantities is defined as the following in accordance with AS1940:

- 5 litres in open containers for occasional use; or

- 1 litre in open containers for continuous use.

Containers in which a Hazardous Chemical is stored in bulk and any associated pipe work or attachments must:

- Have stable foundations and supports; and
- Be secured to the foundations and supports to prevent any movement.

(c) Compatibility

Hazardous Chemicals that are incompatible must be segregated. This can be achieved by the use of an impervious barrier or by a separation distance sufficient to prevent contamination. Storage, segregation and compatibility information can be found on the SDS, through the 'Storage Incompatibilities' report from ChemAlert and Appendix 3 of this Procedure.

When a chemical request is entered into ChemAlert, the Chemical Requestor must nominate the quantity and location of storage. Any incompatibilities will be advised automatically by ChemAlert. If notified of an incompatibility, the storage location must be reviewed and modified as appropriate.

4.4 Safe Use

(a) SDS and Risk Assessment Review

Prior to any use of a Hazardous Chemical, workers must review the SDS to identify potential health, safety and environment risks associated with the use in relation to the task being performed.

The GPC Safety Risk Management Procedure still must be complied with in terms of managing the activity/task risks. The risk assessment in ChemAlert should be cross-referenced to verify controls are included in the JSA/SWI.

When a new SDS is issued or there is a change in the manner in which the Hazardous Chemicals are used, handled or stored, it is the responsibility of the relevant Supervisor to review, and as necessary, revise the risk assessment and control measures associated with the chemical. Consideration should be made to whether or not any changes warrant review and approval through the GPC Management of Change Standard/Procedure.

(b) Plant and Equipment for use or handling of Hazardous Chemicals

Plant and equipment for the use or handling Hazardous Chemicals must be suitable for the type, concentration and application. Original equipment manufacturer guidelines and SDS requirements should be consulted with as necessary.

Maintenance of the plant and equipment must be in accordance with original equipment manufacturer guidelines.

(c) Transportation

Hazardous Chemicals must be transported in accordance with the Australian Dangerous Goods Code and relevant SDS requirements. This includes:

- Never transporting Hazardous Chemicals in the cab of a vehicle (utilise cargo area)
- Segregating incompatible materials

- Securing containers to prevent movement, breakage or spillage
- Only transporting flammable or toxic gases outside a vehicle or in an externally ventilated compartment.

(d) Personal protective equipment

Personal protective equipment must be used in accordance with the relevant SDS and task specific risk assessment.

(e) Spill response

When using, handling or storing Hazardous Chemicals, equipment must be readily accessible to contain and clean up any spillage. Equipment type and quantities will vary based on nature of the chemical. Contractors must provide spill response resources when conducting activities on GPC operated sites where the potential to spill contaminates to land or water has been identified.

Any uncontrolled or unplanned release of a chemical must be managed in accordance with the GPC Spill Response Instruction.

Additional requirements apply for significant land based spills that constitute an emergency and first strike marine oil pollution response. In the event of these, refer to GPC Spill Prevention, Preparedness, Response and Recovery Plan.

4.5 Manifests and Placards

(a) Manifest

A manifest that complies with the requirements of Schedule 12 of the WHS Regulation shall be kept where the quantities of specific Hazardous Chemicals, as outlined in Schedule 11 of the WHS Regulation, exceed prescribed threshold amounts. Refer to Appendix 5 for Schedule 11 Hazardous Chemicals and quantities requiring inclusion in the manifest.

The Safety Team must update the manifest and notification must be given to the Regulator by the Safety Manager when:

- A quantity of a Schedule 11 Hazardous Chemical or group of Schedule 11 Hazardous Chemicals that exceeds the manifest quantity is used, handled or stored, or is to be used, handled or stored at a GPC workplace;
- There will be a significant change in the risk of using, handling or storing of Schedule 11 Hazardous Chemicals;
- A Schedule 11 Hazardous Chemical or group of Schedule 11 Hazardous Chemicals cease to be used, stored or handled and not likely to be used, stored or handled in the future; or
- A request is received from the Regulator.

A physical copy of the manifest shall also be maintained and located in a manifest box at all relevant GPC site entry points that would be used by emergency services.

(b) Placards

Where Hazardous Chemicals that exceed the manifest quantities allowed under Schedule 11 of the WHS Regulation are used or stored, the site and chemical storage area must have correct placards that comply with Schedule 13 of the WHS Regulation.

Placards will be displayed in these situations unless in a bulk container intended for transport and a placard is displayed on the container in accordance with the ADG Code.

4.6 Health Monitoring

Health exposure to Hazardous Chemicals shall be assessed and controlled in accordance with GPC Hygiene Exposure Risk Management Specification. This includes when a worker is carrying out ongoing work at a workplace using, handling, generating or storing Hazardous Chemicals and there is a significant risk to the worker's health because of exposure to a Hazardous Chemical in Schedule 14 of the WHS Regulation (see Appendix 6).

Any Health Monitoring requirements will be coordinated between the Safety and Health and Wellbeing Teams. All Hazardous Chemical exposure results will be maintained in the eDRMS within the appropriate occupational hygiene register (e.g. #1063099 Occupational Hygiene Database or #1705459 Non-Standard Hygiene Monitoring- VOC, Isocyanates, Carcinogenic Register).

4.7 Disposal of Products

All surplus / used Hazardous Chemicals and containers must be disposed of in accordance with SDS instructions or as required by local or State regulations, including any regulated waste provisions. The Environment Team can provide assistance in understanding the regulated waste provisions.

Unused Hazardous Chemicals that are no longer required should be appropriately disposed of in a timely manner.

Contractors and Port Users are responsible for the appropriate disposal of all products / associated waste generated by their activities.

4.8 Major Hazard Facilities

Although GPC does not currently qualify as a major hazard facility, consideration should be made if threshold limits change under the requirements of Chapter 9 of the WHS Regulation. This includes when considering any potential business development or new trade opportunities.

If the threshold limits exceed 10% of the listed Hazardous Chemicals in Schedule 15 of the WHS Regulation, the regulator must be notified as soon as reasonably practicable, but no more than 3 months after GPC becomes aware. Changes to the threshold limits will be notified by the Safety Manager.

4.9 Incident Management

If a worker believes they have been affected by a Hazardous Chemical by means of ingestion, inhalation, injection or absorption, they are to notify their Supervisor, seek medical treatment and follow the Incident Management and Investigation Procedure.

In the event of an environmental spill relating to Hazardous Chemicals, the Spill Report Checklist must be completed (RGT only) and the Incident Management and Investigation Procedure must be followed.

4.10 Emergency Preparedness

Potential Hazardous Chemical emergencies must be identified and assessed to determine if the events require consideration and management as emergencies in accordance with GPC's Emergency Management Plan. GPC's Emergency Management Plan outlines the all hazards approach to response and management of emergencies and also provides specific response instructions for identified potential scenarios.

Where exceedances exist for Schedule 11 Hazardous Chemicals within the WHS Regulation, the emergency plan must be provided to emergency services.

Emergency plans must be easily located by all workers. The GPC Emergency Management Plan is accessible electronically via the Emergency Response page on Neptune and in hard copy at various nominated GPC facility locations.

Contractors/port users must ensure emergency plans for credible Hazardous Chemical emergency scenarios are supplied to GPC prior to mobilising to site.

4.11 Training

All workers (including contractors) receive general awareness of this Procedure (including safe and correct use of Hazardous Chemicals) via the general site induction. All employees are required to complete a Hazardous Chemical Management corporate mandatory training module. Specific employee role types are also required to complete Spill Response training and Agricultural Chemicals Distribution Control Course training as identified through job specific mandatory training.

Contractors are to be trained in the use of any spill response equipment they may have.

eLearning module training and 'How to Guides' are available for ChemAlert to assist end user navigation of the system and completion of chemical requests. The Safety and Environment Team also provide ChemAlert user training and coaching.

5 Appendices

5.1 Appendix 1 – Related documents

(a) Legislation and regulation

Key relevant legislation and regulation, as amended from time to time, includes but is not limited to:

Type	Legislation/regulation/guidelines
Federal Acts	N/A
State Acts	Work Health and Safety Act 2011 (QLD) Work Health and Safety Regulation 2011 (QLD)
Other	Managing Risk of Hazardous Chemicals Code of Practice (QLD) Labelling of Workplace Hazardous Chemicals Code of Practice (QLD) Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Australian Dangerous Goods Code International Maritime Dangerous Goods Code AS/NZS 1345:1995 Identification of the contents of pipes, conduits and ducts

Type	Legislation/regulation/guidelines
	AS/NZS 1940:2017 Storage and handling of flammable and combustible liquids
	AS/NZS 1894:1997 Storage and handling of non-flammable cryogenic and refrigerated liquids
	AS/NZS 3833:2007 Storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers
	AS/NZS 3846:2005 Handling and transport of dangerous cargoes in port area

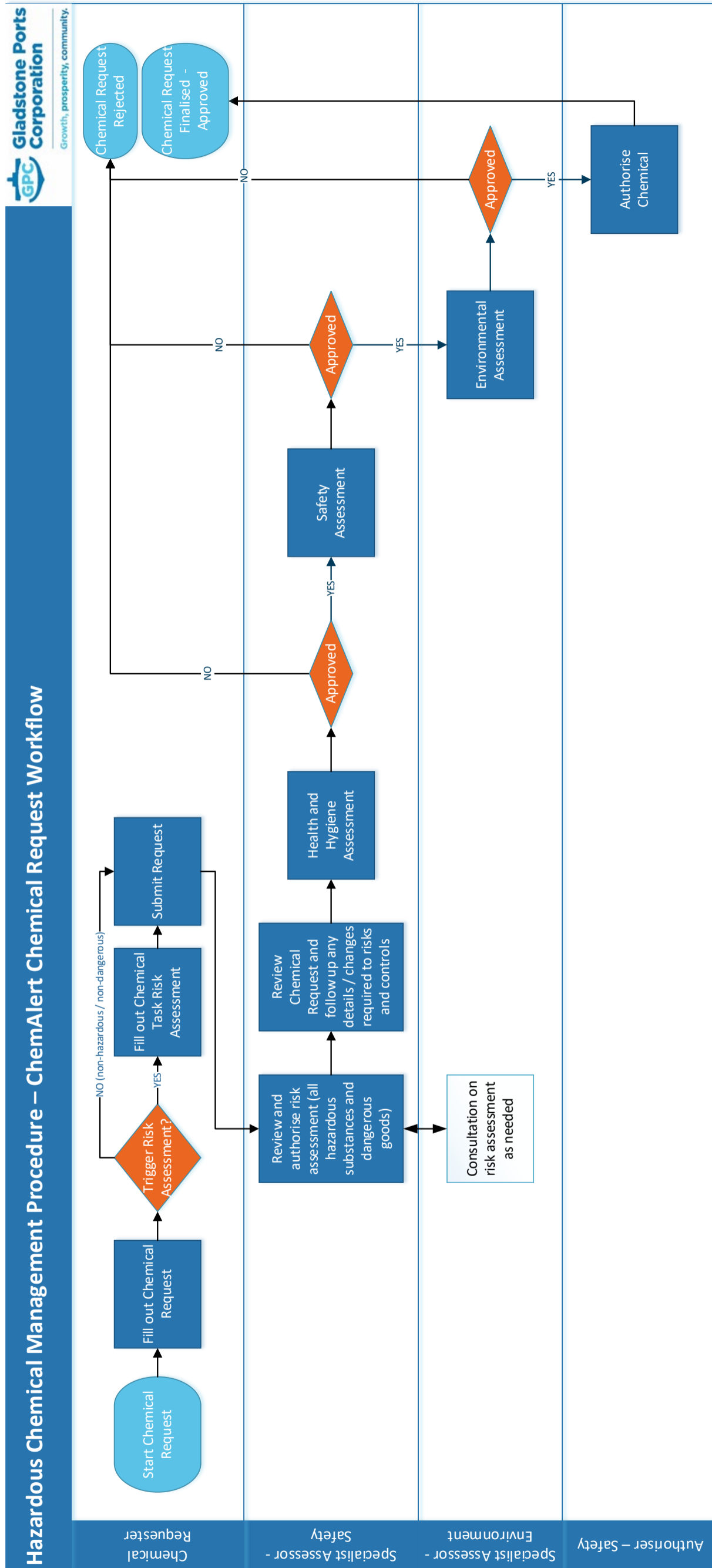
(b) Gladstone Ports Corporation documents

The following documents relate to this Procedure:

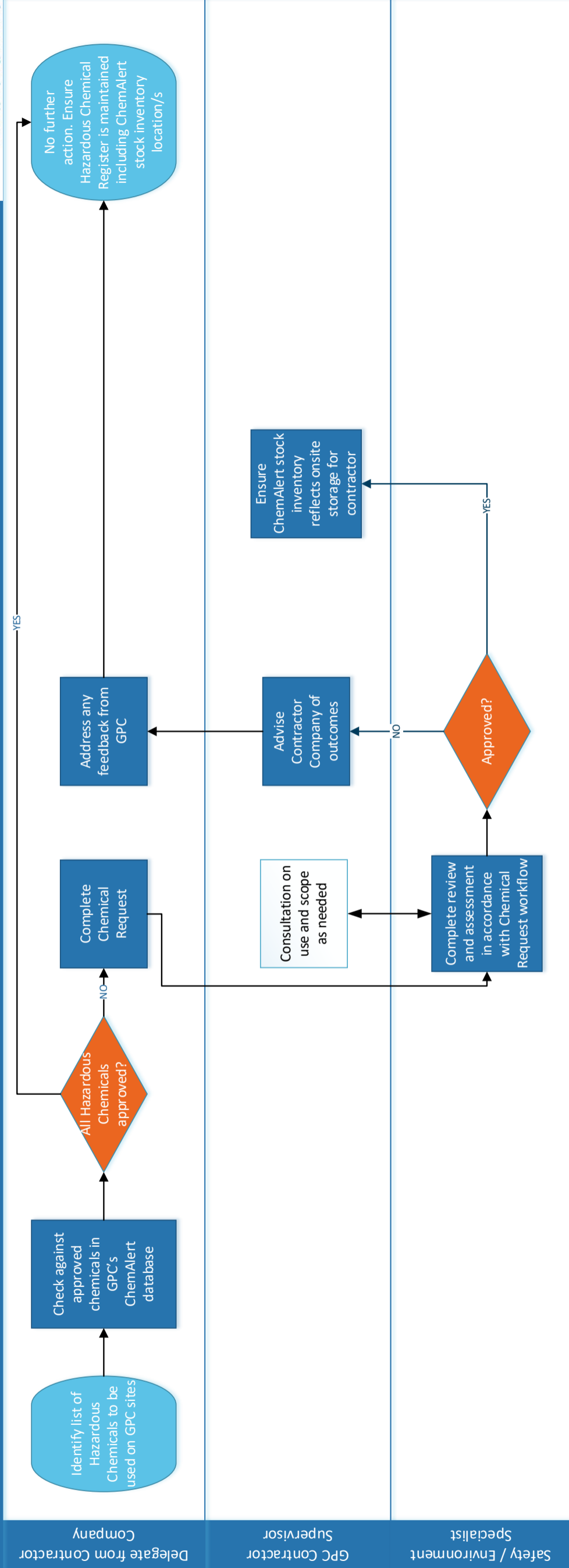
Type	Document number and title
Tier 1: Policy	#365624 Safety Policy
	#366016 Environment Policy
Tier 2: Standard/Strategy	#854303 Safety Management Framework Standard
	#995910 Contractors and Port Users Safety, Environment and Security Standard
	#1209557 Management of Change Standard
Tier 3: Specification/Procedure/Plan	#1357835 Hygiene Exposure Risk Management Specification
	#1075526 Incident Management and Investigation Procedure
	#1169443 Personal Protective Equipment (PPE) Procedure
	#1344636 Management of Change Procedure
	#1568522 Spill Prevention, Preparedness, Response and Recovery Plan
	#1494019 Emergency Management Plan
Tier 4: Instruction/Form/Template/Checklist	#1121965 Spill Response Instruction
	#1656062 Spill Report Checklist
	#1621179 GPC Corporate Glossary Instruction
Other	eLearning – Hazardous Chemical Management

Type	Document number and title
	#1063099 Occupational Hygiene Database
	#1705459 Non-Standard Hygiene Monitoring – VOC, Isocyanates, Carcinogenic Register
	#1533172 ChemAlert Guide – How to Navigate the Home Screen
	#1533174 ChemAlert Guide – How to Search
	#1533175 ChemAlert Guide – How to Create a Request
	#1533176 ChemAlert Guide – How to Create a Risk Assessment
	#1533177 ChemAlert Guide – Generate Labels
	#1533179 ChemAlert Guide – Generate ChemAlert Reports
	#1917913 ChemAlert Dangerous Goods Storage Incompatibility Poster

5.2 Appendix 2 – ChemAlert – Chemical request workflow



Contractor Chemical Approval Workflow (where requested to comply in Scope of Work)



5.3 Appendix 3 – Storage Incompatibility and Segregation Guide



Dangerous Goods Storage Incompatibility Guide

The following tables list the requirements (under AS/NZS 3833:2007) for the separation of, and segregation within, stores containing more than one class of dangerous goods, in quantities exceeding those given for minor storage. These requirements do not apply to minor storage or retail storage.

Dangerous Goods classes not covered in this guide are subject to different standards.

Note: Generally, Explosives and Radioactive Substances are incompatible with everything.

		Class	2	3	4	5	6	8				
COMPRESSED GASES	2.1 Flammable		C	KA	S	S	S	S	S	I	KA	KA
	2.2 Non-flammable /Non-toxic		KA	C	KA	SM	S	SM	SM	S	SM	KA
FLAMMABLE LIQUIDS	and Combustible Liquids		S	KA	C	KA	S	S	S	I	KA	KA
FLAMMABLE SOLIDS	4.1 Flammable Solids		S	SM	KA	C	KA	S	S	S	KA	SM
	4.2 Spontaneously Combustible		S	S	S	KA	C	KA	S	I	KA	KA
	4.3 Dangerous When Wet		S	SM	S	S	KA	C	KA	S	SM	SM
OXIDISING SUBSTANCES	5.1 Oxidising Agents		S	SM	S	S	S	KA	!	S	KA	KA
	5.2 Organic Peroxides		I	S	I	S	I	S	S	C	KA	KA
TOXIC SUBSTANCES			KA	SM	KA	KA	KA	SM	KA	KA	C	SM
CORROSIVE SUBSTANCES			KA	KA	KA	SM	KA	SM	KA	KA	SM	!

DEDICATED COMPRESSED GAS STORE UNDER AS 4332:2004				
Class / Sub-risk	2.1	2.2	2.2 / 5.1	2.3 or 2.3/8
2.1	C	C	KA	KA
2.2	C	C	C	C
2.2 / 5.1	KA	C	C	KA
2.3 or 2.3/8	KA	C	KA	C

MAXIMUM MINOR STORAGE QUANTITIES				
Description	Quantity (kg or L)			
	PG I	PG II	PG III	Combustible Liquids
Total quantity of all dangerous goods	25	250	1000	1500

LEGEND			
C	SHOULD BE COMPATIBLE. Consult the SDS or supplier about requirements for individual substances.	S	SHOULD BE SEGREGATED by at least 5m and kept in separate compounds or building compartments.
!	COULD BE INCOMPATIBLE or react dangerously. Consult the SDS or supplier about requirements for individual substances.	I	ISOLATION REQUIRED. Dedicated stores or storage cabinets are recommended. Adequate separation from other buildings and boundaries is required.
		SM	SEGREGATION MAY BE NECESSARY. Consult the SDS or supplier.
		KA	SHOULD BE KEPT APART by at least 3m. Consult the SDS or supplier.

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5.4 Appendix 4 – Schedule 10 (WHS Regulation) – Prohibited carcinogens, restricted carcinogens and restricted Hazardous Chemicals

Refer to WHS Regulation for current listings.

Table 1 Prohibited carcinogens

Item	Prohibited carcinogen ['CAS' number]
1	2-Acetylaminofluorene [53-96-3]
2	Aflatoxins
3	4-Aminodiphenyl [92-67-1]
4	Benzidine [92-87-5] and its salts (including benzidine dihydrochloride [531-85-1])
5	bis(Chloromethyl) ether [542-88-1]
6	Chloromethyl methyl ether [107-30-2] (technical grade which contains bis(chloromethyl) ether)
7	4-Dimethylaminoazobenzene [60-11-7] (Dimethyl Yellow)
8	2-Naphthylamine [91-59-8] and its salts
9	4-Nitrodiphenyl [92-93-3]

Table 2 Restricted carcinogens

Item	Restricted carcinogen ['CAS' number]	Restricted use
1	Acrylonitrile [107-13-1]	All
2	Benzene [71-43-2]	All uses involving benzene as a feedstock containing more than 50% of benzene by volume Genuine research or analysis
3	Cyclophosphamide [50-18-0]	When used in preparation for therapeutic use in hospitals and oncological treatment facilities, and in manufacturing operations Genuine research or analysis
4	3,3'-Dichlorobenzidine [91-94-1] and its salts (including 3,3'-Dichlorobenzidine dihydrochloride [612-83-9])	All

Item	Restricted carcinogen ['CAS' number]	Restricted use
5	Diethyl sulfate [64-67-5]	All
6	Dimethyl sulfate [77-78-1]	All
7	Ethylene dibromide [106-93-4]	When used as a fumigant Genuine research or analysis
8	4,4'-Methylene bis(2-chloroaniline) [101-14-4] MOCA	All
9	3-Propiolactone [57-57-8] (Beta-propiolactone)	All
10	o-Toluidine [95-53-4] and o-Toluidine hydrochloride [636-21-5]	All
11	Vinyl chloride monomer [75-01-4]	All

Table 3 Restricted Hazardous Chemicals

Item	Restricted Hazardous Chemical	Restricted use
1	Antimony and its compounds	For abrasive blasting at a concentration of greater than 0.1% as antimony
2	Arsenic and its compounds	For abrasive blasting at a concentration of greater than 0.1% as arsenic For spray painting
3	Benzene (benzol), if the substance contains more than 1% by volume	For spray painting
4	Beryllium and its compounds	For abrasive blasting at a concentration of greater than 0.1% as beryllium
5	Cadmium and its compounds	For abrasive blasting at a concentration of greater than 0.1% as cadmium
6	Carbon disulphide (carbon bisulphide)	For spray painting
7	Chromate	For wet abrasive blasting
8	Chromium and its compounds	For abrasive blasting at a concentration of greater than 0.5% (except as stated for wet blasting) as chromium

Item	Restricted Hazardous Chemical	Restricted use
9	Cobalt and its compounds	For abrasive blasting at a concentration of greater than 0.1% as cobalt
10	Free silica (crystalline silicon dioxide)	For abrasive blasting at a concentration of greater than 1%
11	Lead and compounds	For abrasive blasting at a concentration of greater than 0.1% as lead or which would expose the operator to levels in excess of those set in the sections covering lead
12	Lead carbonate	For spray painting
13	Methanol (methyl alcohol), if the substance contains more than 1% by volume	For spray painting
14	Nickel and its compounds	For abrasive blasting at a concentration of greater than 0.1% as nickel
15	Nitrates	For wet abrasive blasting
16	Nitrites	For wet abrasive blasting
17	Radioactive substance of any kind where the level of radiation exceeds 1 Bq/g	For abrasive blasting, so far as is reasonably practicable
18	Tetrachloroethane	For spray painting
19	Tetrachloromethane (carbon tetrachloride)	For spray painting
20	Tin and its compounds	For abrasive blasting at a concentration of greater than 0.1% as tin
21	Tributyl tin	For spray painting

5.5 Appendix 5 – Schedule 11 (WHS Regulation) – Placard and manifest quantities

Refer to WHS Regulation for current listings.

Item	Description of Hazardous Chemicals	Placard quantity	Manifest quantity	
1	Flammable gases	Category 1	200L	5,000L
2	Gases under pressure	With acute toxicity, categories 1, 2, 3 or 4	50L	500L
3		With skin corrosion categories 1A, 1B or 1C	50L	500L
4		Aerosols	5,000L	10,000L
5		Not stated elsewhere in this table	1,000L	10,000L
6		Flammable liquids	Category 1	50L
7		Category 2	250L	2,500L
8		Category 3	1,000L	10,000L
9		Any combination of chemicals from items 6 to 8 where none of the items exceeds the quantities in columns 4 or 5 on their own	1,000L	10,000L
10		Category 4	10,000L	100,000L
11	Self-reactive substances	Type A	5kg or 5L	50kg or 50L
12		Type B	50kg or 50L	500kg or 500L
13		Type C to F	250kg or 250L	2,500kg or 2,500L
14	Flammable solids	Category 1	250kg	2,500kg
15		Category 2	1,000kg	10,000kg
16		Any combination of chemicals from items 12 to 15 where none of the items exceeds the quantities in columns 4 or 5 on their own	1,000kg or 1,000L	10,000kg or 10,000L

Item	Description of Hazardous Chemicals		Placard quantity	Manifest quantity
17	Pyrophoric liquids and pyrophoric solids	Category 1	50kg or 50L	500kg or 500L
18	Self-heating substances and mixtures	Category 1	250kg or 250L	2,500kg or 2,500L
19		Category 2	1,000kg or 1,000L	10,000kg or 10,000L
20		Any combination of chemicals from items 17 to 19 where none of the items exceeds the quantities in columns 4 or 5 on their own	1,000kg or 1,000L	10,000kg or 10,000L
21	Substances which in contact with water emit flammable gas	Category 1	50kg or 50L	500kg or 500L
22		Category 2	250kg or 250L	2,500kg or 2,500L
23		Category 3	1,000kg or 1,000L	10,000kg or 10,000L
24		Any combination of chemicals from items 21 to 23 where none of the items exceeds the quantities in columns 4 or 5 on their own	1,000kg or 1,000L	10,000kg or 10,000L
25	Oxidising liquids and oxidising solids	Category 1	50kg or 50L	500kg or 500L
26		Category 2	250kg or 250L	2,500kg or 2,500L
27		Category 3	1,000kg or 1,000L	10,000kg or 10,000L
28		Any combination of chemicals from items 25 to 27 where none of the items exceeds the quantities in columns 4 or 5 on their own	1,000kg or 1,000L	10,000kg or 10,000L
29	Organic peroxides	Type A	5kg or 5L	50kg or 50L
30		Type B	50kg or 50L	500kg or 500L

Item	Description of Hazardous Chemicals	Placard quantity	Manifest quantity	
31		Type C to F	250kg or 250L	2,500kg or 2,500L
32		Any combination of chemicals from items 30 and 31 where none of the items exceeds the quantities in columns 4 or 5 on their own	250kg or 250L	2,500kg or 2,500L
33	Acute toxicity	Category 1	50kg or 50L	500kg or 500L
34		Category 2	250kg or 250L	2,500kg or 2,500L
35		Category 3	1,000kg or 1,000L	10,000kg or 10,000L
36		Any combination of chemicals from items 33 to 35 where none of the items exceeds the quantities in columns 4 or 5 on their own	1,000kg or 1,000L	10,000kg or 10,000L
37	Skin corrosion	Category 1A	50kg or 50L	500kg or 500L
38		Category 1B	250kg or 250L	2,500kg or 2,500L
39		Category 1C	1,000kg or 1,000L	10,000kg or 10,000L
40	Corrosive to metals	Category 1	1,000kg or 1,000L	10,000kg or 10,000L
41		Any combination of chemicals from items 37 to 40 where none of the items exceeds the quantities in columns 4 or 5 on their own	1,000kg or 1,000L	10,000kg or 10,000L
42	Unstable explosives		5kg or 5L	50kg or 50L
43	Unstable chemicals	Any combination of chemicals from items 11, 29 and 42 where none of the items exceeds the quantities in columns 4 or 5 on their own	5kg or 5L	50kg or 50L

5.6 Appendix 6 – Schedule 14 (WHS Regulation) – Requirements for Health Monitoring

Refer to WHS Regulation for current listings.

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, FEV1, FVC and FEV1/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

Item	Hazardous chemical	Type of Health Monitoring
		<p>Health advice, including recognition of photosensitivity and skin changes</p> <p>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</p>
7	Crystalline silica	<p>Demographic, medical and occupational history</p> <p>Records of personal exposure</p> <p>Standardised respiratory questionnaire to be completed</p> <p>Standardised respiratory function test, for example, FEV1, FVC and FEV1/FVC Chest X-ray full size PA view</p>
8	Isocyanates	<p>Demographic, medical and occupational history</p> <p>Completion of a standardised respiratory questionnaire</p> <p>Physical examination of the respiratory system and skin</p> <p>Standardised respiratory function tests, for example, FEV1, FVC and FEV1/FVC</p>
9	Mercury (inorganic)	<p>Demographic, medical and occupational history</p> <p>Managing risks of Hazardous Chemicals in the workplace Code of Practice 2013 (PN11578) Page 58 of 82</p> <p>Physical examination with emphasis on dermatological, gastrointestinal, neurological and renal systems Urinary inorganic mercury</p>
10	4,4'-Methylene bis (2-chloroaniline) (MOCA)	<p>Demographic, medical and occupational history</p> <p>Physical examination</p> <p>Urinary total MOCA Dipstick analysis of urine for haematuria</p> <p>Urine cytology</p>
11	Organophosphate pesticides	<p>Demographic, medical and occupational history including pattern of use Physical examination</p> <p>Baseline estimation of red cell and plasma cholinesterase activity levels by the Ellman or equivalent method</p>

Item	Hazardous chemical	Type of Health Monitoring
		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

Item	Hazardous chemical	Type of Health Monitoring
1	Lead (inorganic)	Demographic, medical and occupational history Physical examination Biological monitoring

5.7 Appendix 7 – Revision history

Revision date	Revision description	Author	Endorsed by	Approved by
13/04/2015	New Procedure – Chemical Management	Kevin Grieve, Safety Specialist	Tony Young, Safety Manager	John Sherriff, SER GM
27/08/2019	Formatted into new document template	Rebecca Devine, Safety Specialist – Systems & Projects	Tony Young, Safety Manager	Rowen Winsor, PCS GM
20/11/2019	Scheduled procedure update. Rename to 'Hazardous Chemical Management'.	Rebecca Devine, Safety Specialist – Systems & Projects	Tony Young, Safety Manager	Rowen Winsor, PCS GM
03/01/2024	v3 Full re-write of Procedure to reflect current processes, ChemAlert configuration and legislation requirements.	Kirsty Iszlaub, Safety & Environment Systems Lead	Tony Young, Safety Manager	Richard Haward, EGM Safety & ESG