Hazardous Chemical Register & Risk Assessment

AMP Capital

700 Bourke Street, Melbourne VIC

March 2021

RISKTECH Compliance

Hazardous Chemicals Register & Risk Assessment

Report For	AMP Capital
Address	700 Bourke Street, Melbourne VIC
Site Inspection By	David Bembrick, Senior Consultant
Date of Inspection	3 March 2021
Conferred With	Darren Hynes, Facility Manager, AMP Capital

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Document Revision Record

File Name	Prepared By	Reviewed By	Issue No.	Issue Date
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Contents

1. Executive Summary 4
2. Introduction 5
   2.1 Site Description 5
3. Scope/Methodology 6
   3.1 Scope 6
   3.2 Methodology 6
   3.3 Legislative Requirements 7
   3.4 Limitations/Areas Not Accessed 7
4. Findings 8
   4.1 Chemical Storage Areas 8
5. Risk Assessment/Action Plan 17
Appendix 1 Risk Assessment Criteria 19
Appendix 2 Hazardous Chemicals Register 20
Appendix 3 Information 27

1. Executive Summary

Scope

RiskTech Compliance was commissioned by AMP Capital to undertake a hazardous chemicals risk assessment and prepare a hazardous chemical register for 700 Bourke Street, Melbourne VIC. The assessment was carried out by David Bembrick of RiskTech Compliance on 3 March 2021.

Chemical Storage Areas

Hazardous chemicals stored on site are generally related to cooling tower water treatment, maintenance, cleaning chemicals and fuels for plant and equipment. These chemicals were stored in the following locations:

- Roof Level – Cooling Tower Area;
- Level 15 – Chiller Room;
- Level 15 – Co-Gen Room;
- Level P2 – Blackwater Treatment Plant;
- Level P2 – Fuel Room;
- Level P2 – Cleaner's Storage Cage;
- Level P2 – Main Cleaner's Store Room; &
- Level P1 – Fire Pump Room.

Key Findings & Recommendations

The table below details information pertaining to risk issues that were identified in the course of the site assessment. Recommendations made should be considered for rectification.

Observations/Findings	Risk Level	Recommendations
Level P2 – Cleaner's Storage Cage – Some cleaning chemicals were not afforded appropriate bunding (secondary containment)	**Moderate**	To eliminate or reduce the risk and to contain spills safely within the premises, ensure that provisions are made for the containment of Hazardous Chemicals spills/leaks (e.g. secondary containment) in accordance with the *Victorian Dangerous Goods (Storage & Handling) Regulations 2012*. Ensure bunding is adequate for the quantities of chemicals stored and to not be exposed to the elements.
Throughout site – Injury to personnel due to delayed response to chemical hazards due to absence of Safety Data Sheets (SDS).	**Moderate**	Provide current (i.e. less than 5 years old) SDS for all Hazardous Chemicals stored on site & store at point of use.
Various locations – No signage to indicate the storage of hazardous chemicals.	**Low**	Consider installing appropriate hazard warning signage at the entrances to all chemical storage locations on site.
Various locations - No eye wash station installed in the cleaner's store room to assist with emergency first aid.	**Low**	Consider installing emergency eye wash bottles and ensure the eye wash solutions are managed appropriately and are within the required expiry dates.

2. Introduction

RiskTech Compliance was commissioned by AMP Capital to undertake a hazardous chemicals risk assessment and prepare a hazardous chemical register for 700 Bourke Street, Melbourne VIC.

The assessment was carried out by David Bembrick of RiskTech Compliance on 3 March 2021. The aim of the assessment is to assess risks associated with the storage and handling of hazardous chemicals on the site managed by AMP Capital and to provide practical solutions to eliminate or minimise and control the identified risks.

2.1 Site Description

Site Address	700 Bourke Street, Melbourne VIC
Construction Date	2013
Site Type	Commercial
Number of Levels and Description	Level 15 – Plant Rooms; Levels 1-14 – Office Space; Ground Level – Cafés & Entry Lobby P1 & P2 – Car Parks and Plant Rooms

Site Location: 700 Bouke Street, Melbourne VIC

Image courtesy NearMap 2021

3. Scope/Methodology

3.1 Scope

The Hazardous Chemicals Register and Risk Assessment survey included the following:

- Inspection of representative areas of the site under the control of AMP Capital to identify Hazardous Chemicals;
- Review of the location and presence of bulk underground or above ground fuel tanks or bulk gas cylinders;
- Review relevant records of previous audits undertaken on site;
- Review Safety Data Sheets (SDS) and labels of stored Hazardous Chemicals;
- Review of hazardous chemical safe handling and storage procedures; &
- Preparation of a Hazardous Chemicals Register and Risk Assessment report.

The work was conducted during normal business hours and the areas assessed were occupied during the assessment.

3.2 Methodology

3.2.1 Risk Assessment/Action Plan – Refer Section 5

Hazards identified through the inspection process are assessed for the potential consequence(s) and in the likelihood that the hazard is realised. Existing controls in place and the current risk rating is included, as well as corresponding recommended control measures to be implemented and updated/residual risks are outlined in the table.

3.2.2 Hazardous Chemicals Register – Refer Appendix 1

Hazardous properties of each substance stored on site were collated from the chemical Safety Data Sheet (SDS) that were present/provided. Where the SDS was unavailable for a chemical, generic hazardous properties for the class of hazardous chemicals were used. For each hazardous property identified, an assessment was made to determine whether this hazardous property resulted in a hazard for the storage area.

3.2.3 Safety Data Sheets

Safety Data Sheet (SDS), previously called a Material Safety Data Sheet (MSDS) were reviewed during the assessment. These documents provide information on the properties of hazardous chemicals and how they affect health and safety in the workplace. For example, an SDS includes information on:

- The identity of the chemical,
- Health and physicochemical hazards,
- Safe handling and storage procedures,
- Emergency procedures, and
- Disposal considerations.

The SDS should always be referred to when assessing risks in the workplace.

An SDS must be reviewed periodically to keep it up to date, for example when any new or significant information becomes available on the hazards of the material. Otherwise, a SDS must be reviewed and re-issued every 5 years.

3.2.4 Globally Harmonised System (GHS) of classification and labelling of chemicals

The GHS is a system used to classify and communicate chemical hazards using internationally consistent terms and information on chemical labels and Safety Data Sheets. The GHS provides criteria for the classification of physical hazards (e.g. flammable liquids), health hazards (e.g. carcinogens) and environmental hazards (e.g. aquatic toxicity).

The GHS was created by the United Nations to create a single worldwide methodology for chemical classification, labelling and safety data sheets. The system ensures that users are provided with practical, reliable and easy to understand information on chemical hazards, and can take the appropriate preventive and protective measures for their health and safety. The GHS is expected to provide significant trade benefits to industry as well as improved health and safety outcomes by introducing internationally consistent assessment criteria, labels and Safety Data Sheets (SDS) for hazardous chemicals.

The GHS will update the way in which information about the hazards of chemicals and any precautions necessary to ensure safe storage, handling and disposal, is conveyed to users of chemicals. The GHS uses pictograms, signal words, and hazard and precautionary statements to communicate this information. Please note that the GHS does not change your general duties relating to the management of hazardous chemicals in the workplace.

3.3 Legislative Requirements

The findings of the site inspection were linked to the assessment of compliance with legislative requirements. Legislative & guidance documents used throughout the assessment included:

- *Victorian Occupational Health and Safety Act 2004;*
- *Victorian Occupational Health and Safety Regulations 2017;*
- *Victorian Dangerous Goods Act 1985;*
- *Victorian Dangerous Goods (Storage & Handling) Regulations 2012;*
- *Code of Practice for the Storage and Handling of Dangerous Goods (Worksafe Victoria 2013);*
- *Code of Practice for Hazardous Substances (Worksafe Victoria 2018);*
- *AS 1940:2017 – The storage and handling of flammable and combustible liquids;*
- *AS 3780:2008 – The storage and handling of corrosive substances; and*
- *AS/NZS 3833:2007 – The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers.*

3.4 Limitations/Areas Not Accessed

- The assessment is limited to those physical aspects that could be observed during the assessment of representative areas of the site.
- Access was not gained to all tenanted areas on site.
- No detailed testing or intrusive investigations were carried out.
- The assessment does not cover defects in inaccessible places or latent defects.

We have generally used and relied upon information supplied as being regarded as authoritative and reliable. Review of reports and certification documentation is limited to those that were present on site at the time of the assessment.

4. Findings

4.1 Chemical Storage Areas

Hazardous chemicals stored on site are generally related to cooling tower water treatment, maintenance, cleaning chemicals and fuels for plant and equipment. These chemicals were stored in the following locations:

- Roof Level – Cooling Tower Area;
- Level 15 – Chiller Room;
- Level 15 – Co-Gen Room;
- Level P2 – Blackwater Treatment Plant;
- Level P2 – Fuel Room;
- Level P2 – Cleaner's Storage Cage;
- Level P2 – Main Cleaner's Store Room; &
- Level P1 – Fire Pump Room.

Further information on the risks identified on site are outlined on the following pages:

4.1.1 Level 51 – Cooling Tower Area

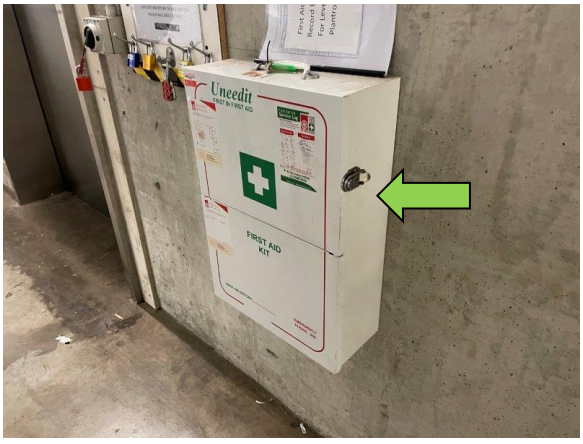
4.1.1.1 Findings

- The Cooling Tower Area was secured against unauthorised access at the time of inspection.
- The cooling tower chemicals were stored within appropriate secondary containment (bunding) at the time of inspection.
- Appropriate hazardous chemical warning signage was provided at the entrance to the Cooling Tower Area.
- Appropriate fire services were installed in the vicinity of stored hazardous chemicals in the Cooling Tower Area.
- A first aid kit was provided adjacent to the Cooling Tower Area.
- Spill kits were located adjacent to the Cooling Tower Area to assist with spills and/or leaks.

4.1.1.2 Adverse Findings

- The majority of Safety Data Sheets (SDS) were available and current for the stored chemicals, however SDS's were missing for some stored chemicals.
- No emergency eye wash station was observed in the vicinity of the Cooling Tower Area.

4.1.1.3 Photographs

<table>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Cooling Tower Area appropriately signposted</td><td>First aid kit installed adjacent to the Cooling Tower Area</td></tr>
<tr><td colspan="2"> 
 </td></tr>
<tr><td colspan="2">Appropriate secondary containment (bunding) for the cooling tower chemicals</td></tr>
</table>

4.1.1.4 Level 15 – Co-Gen Room

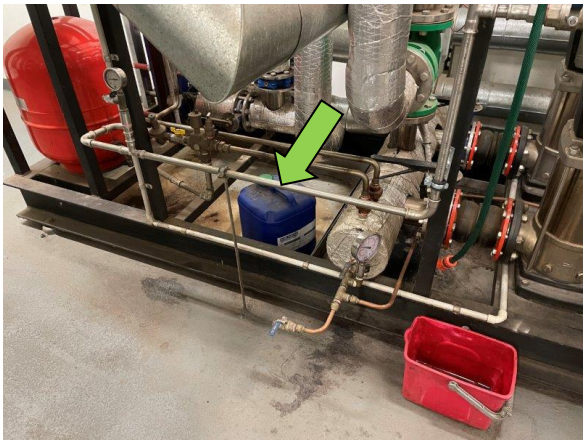
4.1.1.5 Findings

- The Co-Gen Room was secured against unauthorised access at the time of inspection.
- Chemicals were stored within appropriate secondary containment (bunding) at the time of inspection.
- Appropriate fire services were installed in the vicinity of stored hazardous chemicals in the Co-Gen Room.
- An emergency eye wash kit / solution is installed in the Co-Gen Room.
- Spill kit was located adjacent to the Co-Gen Room to assist with spills and/or leaks.

4.1.1.6 Adverse Findings

- Safety Data Sheet (SDS) were not available for some of the stored chemicals in the Co-Gen Room.
- No hazardous chemical warning signage was installed at the entrance to the Co-Gen Room.

4.1.1.7 Photographs

<table>
<tr><td>  </td><td> 
</td></tr>
<tr><td>Appropriate secondary containment (bunding) for the chemicals</td><td>Spill kit is installed adjacent to the Co-Gen Room</td></tr>
<tr><td>  </td><td> 
</td></tr>
<tr><td>Emergency eye wash kit / solution is installed adjacent to the Co-Gen Room</td><td>The Co-Gen Room was secured against unauthorised access; however, no hazardous chemical warning signage was installed at the entrance</td></tr>
</table>

4.1.1.8 Level 15 – Chiller Room

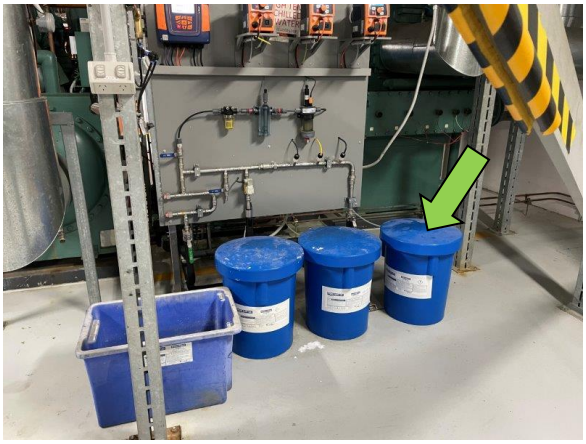
4.1.1.9 Findings

- The Chiller Room was secured against unauthorised access at the time of inspection.
- Chemicals were stored within appropriate secondary containment (bunding) at the time of inspection.
- Appropriate fire services were installed in the vicinity of stored hazardous chemicals in the Chiller Room.
- Spill kits were located adjacent to the Chiller Room to assist with spills and/or leaks.

4.1.1.10 Adverse Findings

- Safety Data Sheet (SDS) were not available for some of the stored chemicals in the Chiller Room.
- No hazardous chemical warning signage was installed at the entrance to the Chiller Room.
- No emergency eye wash station was observed in the vicinity of the Chiller Room.

4.1.1.11 Photographs

	
Appropriate secondary containment (bunding) for the chemicals	The Chiller Room was secured against unauthorised access; however, no hazardous chemical warning signage was installed at the entrance

4.1.1.12 Level P2 Mezzanine – Blackwater Treatment Plant

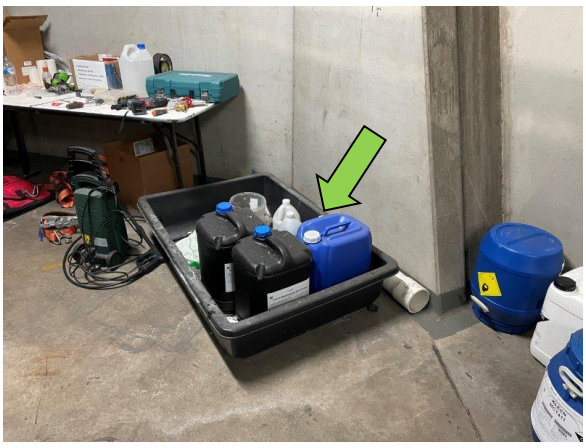
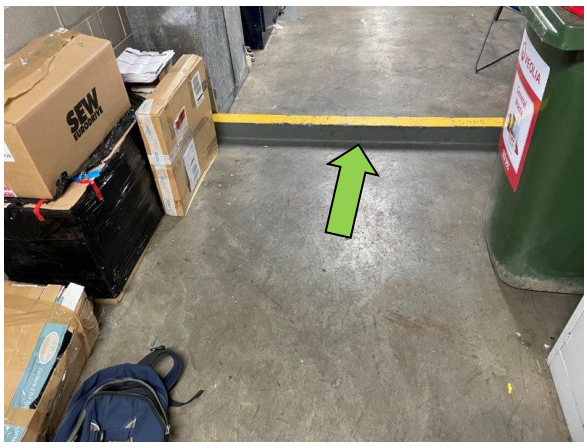
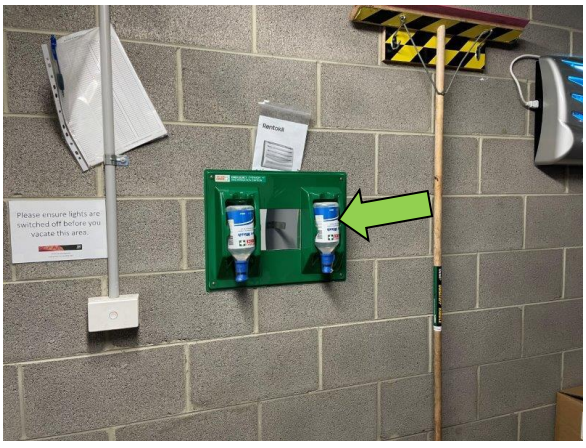
4.1.1.13 Findings

- The Blackwater Treatment Plant was secured against unauthorised access at the time of inspection.
- Chemicals were stored within appropriate secondary containment (bunding) at the time of inspection.
- Appropriate fire services were installed in the vicinity of stored hazardous chemicals in the Blackwater Treatment Plant.
- An emergency eye wash kit / solution is installed adjacent to the Blackwater Treatment Plant.
- Spill kit was located adjacent to the Blackwater Treatment Plant to assist with spills and/or leaks.

4.1.1.14 Adverse Findings

- Safety Data Sheet (SDS) were not available for the stored chemicals in the Blackwater Treatment Plant.
- No hazardous chemical warning signage was installed at the entrance to the Blackwater Treatment Plant.

4.1.1.15 Photographs

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">Appropriate secondary containment is provided for the chemicals and the Blackwater Treatment Plant is located in a bunded</td></tr>
<tr><td>  </td><td> 
</td></tr>
<tr><td>Emergency eye wash kit / solution is installed adjacent to the Blackwater Treatment Plant</td><td>The Blackwater Treatment Plant was secured against unauthorised access; however, no hazardous chemical warning signage was installed at the entrance</td></tr>
</table>

4.1.2 Level P2 - Fuel Room

4.1.2.1 Findings

- There are two 20,000L above ground diesel tanks installed in the Fuel Room on Level P2.
- The Fuel Room was secured against unauthorised access at the time of inspection.
- The diesel was provided with appropriate secondary containment (bunding) at the time of inspection.
- Appropriate hazardous chemical signage was provided at the entrance to Fuel Room.
- Fire services were installed in the vicinity of stored hazardous chemicals in the Fuel Room.
- A spill kit was located within the Fuel Room to assist with spills and/or leaks.

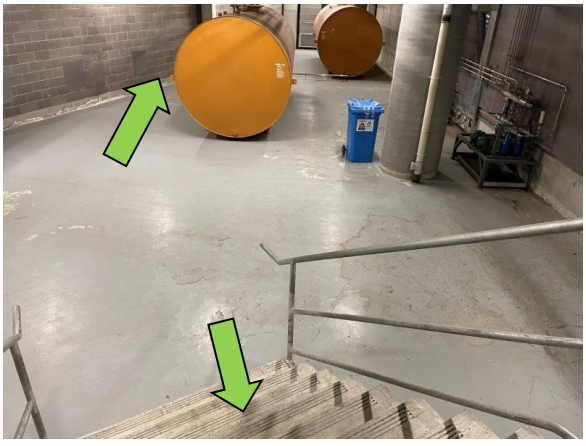
4.1.2.2 Adverse Findings

- No Safety Data Sheet (SDS) was available for the stored diesel.
- No emergency eye wash station was observed in the vicinity of the Chiller Room.

4.1.2.3 Photographs

The Fuel Room was appropriately signposted and secured against unauthorised access

Spill kits available in the Fuel Room



The diesel tanks in the Fuel Room are located within a bunded room

4.1.3 Level P2 – Cleaner's Storage Cage

4.1.3.1 Findings

- The Cleaner's Storage Cage was secured against unauthorised access at the time of inspection.
- The majority of cleaning chemicals were provided with appropriate secondary containment (bunding) at the time of inspection.
- Safety Data Sheets (SDS) were available for the majority of cleaning chemicals.
- Appropriate fire services were installed in the vicinity of stored hazardous chemicals in the Cleaner's Storage Cage.
- A spill kit was located within the Cleaner's Storage Cage to assist with spills and/or leaks.

4.1.3.2 Adverse Findings

- Some chemicals were observed to be not stored within appropriate secondary containment (bunding).
- Safety Data Sheet (SDS) were not available or out of date for some of the stored chemicals.
- No hazardous chemical warning signage was installed at the entrance to the Cleaner's Storage Cage.
- No emergency eye wash station was observed in the vicinity of the Cleaner's Storage Cage.

4.1.3.3 Photographs

	
Appropriate secondary containment (bunding) for the majority of chemicals; however, some chemicals were not stored within secondary containment	Cleaner's Storage Cage was secured against unauthorised access; however, no hazardous chemical warning signage was installed at the entrance

4.1.4 Level P2 – Main Cleaner's Store

4.1.4.1 Findings

- The Main Cleaner's Store Room was secured against unauthorised access at the time of inspection.
- The cleaning chemicals were provided with appropriate secondary containment (bunding) at the time of inspection.
- Class 3 Flammable Liquids were appropriately segregated and stored in a dedicated flammable liquids cabinet.
- Safety Data Sheets (SDS) were available for the majority of cleaning chemicals.
- Appropriate fire services were installed in the vicinity of stored hazardous chemicals in the Main Cleaner's Store Room.
- A spill kit was located within the Main Cleaner's Store Room to assist with spills and/or leaks.

4.1.4.2 Adverse Findings

- Safety Data Sheet (SDS) were not available or out of date for some of the stored chemicals.
- No hazardous chemical warning signage was installed at the entrance to the Main Cleaner's Store Room.
- No emergency eye wash station was observed in the vicinity of the Main Cleaner's Store Room.

4.1.4.3 Photographs

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>Appropriate secondary containment (bunding) for the cleaning chemicals</td><td>Class 3 Flammable liquids were appropriately segregated in a dedicated flammable liquids cabinet</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Safety Data Sheets (SDS) were available and current for the majority of chemicals; however, some SDS were missing or out of date</td><td>No hazardous chemical warning signage was installed at the entrance to the Main Cleaner's Store Room</td></tr>
</table>

4.1.5 Level P1 – Fire Pump Room

4.1.5.1 Findings

- The Fire Pump Room was secured against unauthorised access at the time of inspection.
- Appropriate fire services were installed in the vicinity of stored hazardous chemicals in the Fire Pump Room.
- The diesel was stored in an appropriately bunded room at the time of inspection.
- A spill kit was located within the Fuel Transfer Pump Room to assist with spills or leaks.

4.1.5.2 Adverse Findings

- No Safety Data Sheet (SDS) was available for the stored diesel.
- No hazardous chemical warning signage was installed at the entrance to the Main Fire Pump Room.
- No eye wash station/kit was present in the Fuel Transfer Pump Room to assist with emergency first aid.

4.1.5.3 Photographs

	
Appropriate secondary containment (bunding) for the diesel fuel	Spill kit available in the Fire Pump Room

5. Risk Assessment/Action Plan

2021 - 01	***Bunding Requirements***
Current Risk	**Moderate**
Location	Level P2 – Cleaner's Storage Cage
Hazard	Some cleaning chemicals were not afforded appropriate bunding (secondary containment)
Proposed Action	To eliminate or reduce the risk and to contain spills safely within the premises, ensure that provisions are made for the containment of Hazardous Chemicals spills/leaks (e.g. secondary containment) in accordance with the *Victorian Dangerous Goods (Storage & Handling) Regulations 2012*. Ensure bunding is adequate for the quantities of chemicals stored and to not be exposed to the elements.
Residual Risk	**Low**
Photos	
Completed?	

2021 – 02	***Safety Data Sheets (SDS) Requirements***
Current Risk	**Moderate**
Location	Roof Level – Cooling Tower Area Level 15 – Co-Gen Room Level 15 – Chiller Room Level P2 – Blackwater Treatment Plant Level P2 – Fuel Room Level P2 – Cleaner's Storage Cage Level P2 – Main Cleaner's Store Room Level P1 – Fire Pump Room
Hazard	Injury to personnel due to delayed response to chemical hazards due to absence to Safety Data Sheets (SDS) and not being stored at the point of use.
Proposed Action	For all Hazardous Chemicals stored on site, obtain current (i.e. less than 5 years old) SDS from suppliers or request these be obtained where chemicals are used by contractors in accordance with the VIC *OHS Regulations 2017, Clause 146*. Ensure that they are readily available adjacent to chemical storage areas.
Residual Risk	**Low**
Completed?	

2021 - 03	***Signage requirements***
Current Risk	**Low**
Location	Level 15 – Co-Gen Room Level 15 – Chiller Room Level P2 – Blackwater Treatment Plant Level P2 – Cleaner's Storage Cage Level P2 – Main Cleaner's Store Room Level P1 – Fire Pump Room
Hazard	No signage to indicate the storage of hazardous chemicals was identified in the above areas.
Proposed Action	Consider installing appropriate hazard warning signage at the entrances to the above areas.
Photos	 
Residual Risk	**Low**
Completed?	

2020 - 04	***Eye Wash Station***
Current Risk	**Low**
Location	Roof Level – Cooling Tower Area Level 15 – Chiller Room Level P2 – Cleaner's Storage Cage Level P2 – Main Cleaner's Store Room Level P2 – Fuel Room
Hazard	No eye wash station installed in the above locations to assist with emergency first aid.
Proposed Action	Consider installing emergency eye wash bottles and ensure the eye wash solutions are managed appropriately and are within the required expiry dates to assist in managing the risks associated with cleaning chemicals and first aid treatment.
Residual Risk	**Low**
Completed?	

Appendix 1 Risk Assessment Criteria

Risk Rating: The level of risk is determined using the matrix below.

Likelihood Table		
Likelihood	**Description**	**Frequency at Location**
Almost Certain	Expected to happen	Occurs once a week
Likely	May easily happen	Occurs once a month
Possible	May happen	Occurs once every year
Unlikely	May happen sometime	Occurs once every 10 years
Rare	May happen in extreme circumstances	Occurs once every 100 years

Consequence Table			
Consequence	**Health and Safety**	**Environment**	**Loss / Damage**
Low	First aid	Short term environmental impact managed on-site.	$0-$5K
Minor	Medical Treatment	Medium term on-site environmental impact managed on site.	$5K-$50K
Moderate	Classified Injury (LTI or restricted work case)	Medium term on-site environmental impact needing external assistance.	$50K-$500K
Major	Fatality or severe permanent disability	Very serious, long-term environment impairment of ecosystem functions.	$500K-$5M

	Consequence			
Likelihood	**Low**	**Minor**	**Moderate**	**Major**
Almost Certain	High	High	Extreme	Extreme
Likely	Moderate	High	High	Extreme
Possible	Low	Moderate	High	Extreme
Unlikely	Low	Low	Moderate	High
Rare	Low	Low	Moderate	High

Appendix 2 Hazardous Chemicals Register

The following table lists chemicals that were identified on site during the inspection and the corresponding Safety Data Sheets information.

Manufacturer/ Product name	Active Chemical Ingredient	Hazardous? (Yes/No)	DG Class/ Sub-risk	Haz Chem Code	Poison Schedule	UN Number	SDS Expiry Date	Max Quantity On Site	Approved Use	Safe Storage Requirements
Roof Level – Cooling Tower Area										
Hydro Flow 198	Bromine chloride, Sodium hydroxide	Yes	8 (Corrosive)	2X	S5	3266	July 2021	105L	Microbiocide	Store in a cool, dry place, away from incompatible materials including acids, reducing agents and other oxidizers
Hydro Flow 860	Sodium Hydroxide	Yes	8 (Corrosive)	2R	S6	1824	May 2021	80L	Boiler Water Treatment and pH Correction	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Store away from incompatible materials including acids, ammonium salts, foodstuffs and most metals
Hydro Flow 115B	None	No	-	-	-	-	April 2021	60L	Colling Water Dispersant	Store in a cool, dry place, away from incompatible materials including strong oxidizers, ammonia, magnesium, sodium and calcium
Hydro Flow 740	Hydrochloric Acid	Yes	8 (Corrosive)	2R	S6	1789	June 2021	40L	pH Correction	Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials such as strong alkalis, oxidizing agents and metals.
Hydro Flow 144	5-Chloro-2-methyl-2H-isothiazol-3-one	Yes	8 (Corrosive) & 6.1 (Toxic)	2XE	S6	2922	Jul 2021	30L	Cooling water Microbiocide & bio dispersant	Store in a cool, well-ventilated area. Keep container closed when not in use. Store away from oxidizers, strong acids, reducing agents and alkaline.
Hydro Flow 588	Sodium molybdate, Sodium tetraborate, Tricarboxylic acid, 1,2,3-Benzotriazole, Sodium triazole, Sodium hydroxide	Yes	-	-	S6	-	Aug 2021	20L	Water treatment chemical	Store in a cool, well-ventilated area. Keep container closed when not in use. Store away from oxidizers, strong acids, reducing agents and alkaline.
Hydro Flow 322	Zinc Chloride, Hydrochloric Acid, Phosphoric Acid, Sodium Tolytriazole	Yes	8 (Corrosive)	2X	S6	1760	Sep 2021	20L	Cooling water corrosion inhibitor	Keep container closed when not in use. Store away from alkaline materials. Ensure adequate ventilation.

Manufacturer/ Product name	Active Chemical Ingredient	Hazardous? (Yes/No)	DG Class/ Sub-risk	Haz Chem Code	Poison Schedule	UN Number	SDS Expiry Date	Max Quantity On Site	Approved Use	Safe Storage Requirements
Hydro Flow 320	Zinc Chloride, Hydrochloric Acid, Phosphoric Acid, Sodium Tolytriazole	Yes	8 (Corrosive)	2X	-	1760	Sep 2021	15L	Cooling water corrosion inhibitor	Keep container closed when not in use. Store away from alkaline materials. Ensure adequate ventilation.
Hydro Flow 245	Polydimethylsiloxane	No	-	-	-	-	**No SDS**	15L	Antifoam for Industrial Applications	Store in a cool place and out of direct sunlight. Keep containers closed when not in use and store in original container
Hydro Flow 195	Sodium hypochlorite	Yes	8 (Corrosive)	2X	S5	1791	**No SDS**	10L	Microbiocide	Store in a cool, dry place, away from incompatible materials including strong oxidizers, strong acids, metals, peroxides, reducing agents, metal salts and metals
Level 15 – Co-Gen Room										
Hydro Flow 860	Sodium Hydroxide	Yes	8 (Corrosive)	2R	S6	1824	May 2021	15L	Boiler Water Treatment and pH Correction	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Store away from incompatible materials including acids, ammonium salts, foodstuffs and most metals
Hydro Flow 840	None	Yes	-	-	-	-	**No SDS**	40L	Boiler water treatment	Keep container closed when not in use. Store away from oxidizers, strong acids, reducing agents alkaline and direct sunlight. Store in a dry, well-ventilated area.
Level 15 – Chiller Room										
Hydro Flow 588	Sodium molybdate, Sodium tetraborate, Tricarboxylic acid, 1,2,3-Benzotriazole, Sodium triazole, Sodium hydroxide	Yes	-	-	S6	-	Aug 2021	15L	Water treatment chemical	Store in a cool, well-ventilated area. Keep container closed when not in use. Store away from oxidizers, strong acids, reducing agents and alkaline.
Hydro Flow 830	Sodium hydroxide	Yes	8 (Corrosive)	2R	S6	1719	**No SDS**	15L	Boiler water treatment	Keep container closed when not in use. Store away from oxidizers, strong acids, reducing agents alkaline and direct sunlight. Store in a dry, well-ventilated area.
Hydro Flow 143	5-Chloro-2methyl-2H-isothiazol-3-one, 2-Methyl-2H-isothiazol-3-one	Yes	8 (Corrosive) & 6.1 (Toxic)	2XE	-	2922	**No SDS**	15L	Microbiocide	Keep container closed when not in use. Store away from oxidizers, strong acids, reducing agents alkaline and direct sunlight. Store in a dry, well-ventilated area.

Manufacturer/ Product name	Active Chemical Ingredient	Hazardous? (Yes/No)	DG Class/ Sub-risk	Haz Chem Code	Poison Schedule	UN Number	SDS Expiry Date	Max Quantity On Site	Approved Use	Safe Storage Requirements
Level P2 Mezzanine – Blackwater Treatment Plant										
Sodium Metabisulphite 40% Solution	Sodium metabisulphite	Yes	8 (Corrosive)	2X	S5	2693	**No SDS**	40L	Oxygen scavenger and dechlorinating agent	Store away from alcohol, acids, oxidising agents and alkalis.
Hydro Flow 630	None	No	-	-	-	-	**No SDS**	30L	Antifoam for Industrial Applications	Keep containers closed when not in use. Store away from oxidising agents.
Hydro Flow 388	Sodium tolytriazole, Sodium hydroxide	Yes	8 (Corrosive)	2X	S5	3267	**No SDS**	20L	Cooling water corrosion inhibitor	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Store away from incompatible materials including acids
12.5% Sodium Hypochlorite	Sodium Hypochlorite	Yes	8 (Corrosive)	2X	S5	1791	**No SDS**	20L	Water sanitiser	Store in cool, dry, well ventilated areas away from incompatible materials, oxidising agents and sources of ignition.
Aqueous Sol-Care	Phosphonates, chlorides	Yes	-	-	-	-	**No SDS**	20kg	Reverse Osmosis Antiscale	Keep containers tightly closed in a dry, cool and well-ventilated place.
Hach Buffer Solution ph4.01±0.02 (Red)	Formaldehyde, Methyl alcohol	No	-	-		-	**No SDS**	4L	Buffer Solution	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from strong oxidising agents, strong acids, and strong bases.
Hach Buffer Solution ph7.00±0.02 (Yellow)	Nitric acid magnesium salt hexahydrate, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, C.I. Acid Yellow 23, 3(2H)-Isothiazolone, 2-methyl-	No	-	-		-	**No SDS**	4L	Buffer Solution	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from strong oxidising agents, strong acids, and strong bases.
Hach Buffer Solution ph10.01±0.02 (Blue)	Formaldehyde, Methyl alcohol, Cuprate(2-), [29H,31H-phthalocyanine-C,C-disulfonato(4-)-N29,N30,N31,N32]-disodium	No	-	-		-	**No SDS**	4L	Buffer Solution	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from strong oxidising agents, strong acids, and strong bases.

Manufacturer/ Product name	Active Chemical Ingredient	Hazardous? (Yes/No)	DG Class/ Sub-risk	Haz Chem Code	Poison Schedule	UN Number	SDS Expiry Date	Max Quantity On Site	Approved Use	Safe Storage Requirements
Redox Soda Ash Dense	Sodium carbonate anhydrous	Yes	-	-	-	-	**No SDS**	25kg	Cleaning agent and additive	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed when not in use. Protect from moisture/humidity. Avoid extreme heat. Keep away from food stuffs, aluminium, fluorine, acids, sulfuric acid, magnesium, iron, zinc, phosphorus pentoxide
Level P2 – Fuel Room										
Diesel	Diesel	Yes	9 (Combustible C1)	3Z	S5	3082	**No SDS**	40,000L	Diesel engine fuel	Keep in a cool, well-ventilated area. Store and use only in equipment/ containers designed for use with this product
Level P2 – Cleaner's Storage Cage										
Diversey Go Getter	Phosphoric acid	No	-	-	-	-	Nov 2021	155L	Commercial grade disinfectant and deodoriser	Store in a cool, dry, well ventilated area, removed from oxidising agents, acids and foodstuffs.
Diversey Divercleanse	Sodium hypochlorite, 1-Dodecanamine, N,N-dimethyl-, N-oxide, Sodium hydroxide	No	8 (Corrosive)	2X	S5	1760	Feb 2023	140L	Disinfectant	Store in a closed container. Keep only in original packaging. Keep from freezing. Keep away from acids.
Diversey Suma Break Up D3.5	Tetrapotassium pyrophosphate, Potassium hydroxide, Disodium disilicate, Sulfonic acids petroleum sodium salts, EDTA tripotassium salt, Sodium xylene sulphonate	No	8 (Corrosive)	2R	S5	1814	Jul 2021	45L	Degreaser	Keep only in the original container. Keep container in a well-ventilated place. Store in a cool area. Keep out of direct sunlight. Store in a well-ventilated place.
Deb Azure Foam Wash	Sodium laureth sulfate	No	-	-	-	-	Nov 2021	72L	Hand cleaner	Store in closed original container at temperatures between 0°C and 40°C
Initial Gold	Unknown	No	-	-	-	-	**No SDS**	60L	Cleaning agent	Unknown

Manufacturer/ Product name	Active Chemical Ingredient	Hazardous? (Yes/No)	DG Class/ Sub-risk	Haz Chem Code	Poison Schedule	UN Number	SDS Expiry Date	Max Quantity On Site	Approved Use	Safe Storage Requirements
Agar Exit	Surfactants	No	-	-	-	-	Jul 2021	35L	Carpet Detergent	Store in a cool dry place
Diversey Clearclean Plus	2-Butoxyethanol, sodium alkylbenzenesulphonate Sodium hydroxide, Ethanol	Yes	-	-	-	-	**Sep 2020**	25L	Degreaser	Keep only in original packaging. Store in a closed container
Initial Hand Sanitiser	Ethanol	Yes	3 (Flammable)	2YE	-	1170	Jun 2023	25L	Hand Sanitiser	Store in a cool, dry, well ventilated place. Store away from sources of heat or ignition. Store away from oxidising agents, acids, acid chlorides, alkali metals, ammonia, potassium tert-butoxide and peroxides
Graffiti Remover	Benzyl alcohol	Yes	3 (Flammable)	3W	S6	2924	Nov 2021	15L	Graffiti Remover	Store in a cool, well-ventilated, low-fire risk area, away from sources of heat or ignition. Keep away from strong oxidising agents. Keep out of reach of children
Agar Bonnet Cleaner	Anionic detergent, Tetra-sodium EDTA	Yes	-	-	-	-	**No SDS**	10L	Liquid carpet detergent	Make sure that containers of this product are kept tightly closed. Make sure that the product does not come into contact with oxidisers
Netbiokem DSAM	N-(3-aminopropyl)-N-dodecyl-1,3-propanediamine	Yes	-	-	-	-	**No SDS**	8L	Disinfectant	Store in original container
Fresh Wave IAQ	None	No	-	-	-	-	**No SDS**	5L	Air & Surface Liquid	
Whiteley Fabripwr	Monoethanolamine citrate, Benzalkonium chloride	Yes	-	-	-	-	Sep 2021	5L	Carpet Detergent	Store in a cool, dry, well ventilated area. Keep container tightly sealed.
Agar Anitfoam	Silicone oil emulsion	No	-	-	-	-	Aug 2021	5L	Defoaming Additive	Avoid strong bases and oxidizing agents

Manufacturer/ Product name	Active Chemical Ingredient	Hazardous? (Yes/No)	DG Class/ Sub-risk	Haz Chem Code	Poison Schedule	UN Number	SDS Expiry Date	Max Quantity On Site	Approved Use	Safe Storage Requirements
Level P2 – Main Cleaner's Store Room										
Initial Gold	Unknown	No	-	-	-	-	**No SDS**	75L	Cleaning agent	Unknown
Initial Bio Sanitiser Concentrate	Unknown	No	-	-	-	-	**No SDS**	40L	Natural disinfectant	Unknown
Diversey Divercleanse	Sodium hypochlorite, 1-Dodecanamine, N,N-dimethyl-, N-oxide, Sodium hydroxide	No	8 (Corrosive)	2X	S5	1760	Feb 2023	20L	Disinfectant	Store in a closed container. Keep only in original packaging. Keep from freezing. Keep away from acids.
Diversey Suma Break Up D3.5	Tetrapotassium pyrophosphate, Potassium hydroxide, Disodium disilicate, Sulfonic acids petroleum sodium salts, EDTA tripotassium salt, Sodium xylene sulphonate	No	8 (Corrosive)	2R	S5	1814	Jul 2021	15L	Degreaser	Keep only in the original container. Keep container in a well-ventilated place. Store in a cool area. Keep out of direct sunlight. Store in a well-ventilated place.
Agar Anitfoam	Silicone oil emulsion	No	-	-	-	-	Aug 2021	10L	Defoaming Additive	Avoid strong bases and oxidizing agents
Diversey Clearclean Plus	2-Butoxyethanol, sodium alkylbenzenesulphonate Sodium hydroxide, Ethanol	Yes	-	-	-	-	**Sep 2020**	10L	Degreaser	Keep only in original packaging. Store in a closed container
Netbiokem DSAM	N-(3-aminopropyl)-N-dodecyl-1,3-propanediamine	Yes	-	-	-	-	**No SDS**	10L	Disinfectant	Store in original container
Diversey Go Getter	Phosphoric acid	No	-	-	-	-	Nov 2021	5L	Commercial grade disinfectant and deodoriser	Store in a cool, dry, well ventilated area, removed from oxidising agents, acids and foodstuffs.

Manufacturer/ Product name	Active Chemical Ingredient	Hazardous? (Yes/No)	DG Class/ Sub-risk	Haz Chem Code	Poison Schedule	UN Number	SDS Expiry Date	Max Quantity On Site	Approved Use	Safe Storage Requirements
Level P2 – Main Cleaner's Store Room – Flammable Liquid Cabinet										
Diversey Soft Care Hand Sanitiser	Ethanol	Yes	3 (Flammable)	2YE	-	1170	Feb 2025	5L	Hand Sanitiser	Store in a cool, dry, well ventilated place. Store away from sources of heat or ignition. Store away from oxidising agents, acids, acid chlorides, alkali metals, ammonia, potassium tert-butoxide and peroxides
Unleaded Petrol	Gasoline	Yes	3 (Flammable)	3YE	S5	1203	Sep 2021	5L	Engine fuel	Keep in a cool, well-ventilated area. Store and use only in equipment/ containers designed for use with this product
Central Methylated Spirits	Ethanol	Yes	3 (Flammable Liquid)	2YE	S5	1170	Feb 2023	4L	Solvent, Fuel, Cleaning	Store in a cool, dry, well ventilated area away from incompatible materials
Level P1 – Fire Pump Room										
Diesel	Diesel	Yes	9 (Combustible C1)	3Z	S5	3082	**No SDS**	200L	Diesel engine fuel (fuel supply for Sprinkler Pumps)	Keep in a cool, well-ventilated area. Store and use only in equipment/ containers designed for use with this product

* SDS Expiry Date: Shaded yellow & bolded **No SDS** – Indicates that the SDS was not available on site at the time of the inspection or that the SDS displayed no issue date.

Appendix 3 Information

Globally Harmonised System (GHS) of classification and labelling of chemicals

Changes to labels under the WHS Regulations

The new Occupational Health and Safety (OHS) Regulations introduced a new system of labelling for hazardous chemicals based on the United Nations' Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

Hazard communication under the GHS

The GHS sets out the way information about the hazards of chemicals and the precautions necessary to ensure safe storage, handling and disposal is explained to those using them.

The GHS uses pictograms, signal words and hazard and precautionary statements to communicate hazard information.

The GHS does not change the primary duties for businesses managing hazardous chemicals in the workplace.

What is a hazardous chemical label?

A label is a group of written, printed or graphical information elements about a hazardous chemical that is affixed to, printed on or attached to the container. Labels are also used on pipes and pipe-work used to transfer hazardous chemicals.

Labels contain information on the identity and proportions of the hazardous chemical and its constituents or ingredients. They also contain information on the hazards of the chemical, precautions to be followed during its use, handling and storage, and instructions for the safe disposal of the chemical.

You should always read and understand the information on a label before using a hazardous chemical.

Do I need to find further information?

Labels sometimes do not contain all of the information needed to safely use, handle, store or dispose of the chemical. For example, a container may be too small for all of the relevant information to fit on it. There are also other labelling systems used in Australia, for example on consumer chemicals, in which all hazard information is not included on the label.

Therefore, when using a hazardous chemical at work you should always refer to the chemical's Safety Data Sheet (SDS), as this contains more detailed information.

What information should I look for in a label?

Under the GHS, labels will contain the following elements.

Pictograms – these provide a graphical representation of the chemical's hazardous properties. These pictograms are designed to be easily recognised so you can instantly see the hazards associated with a chemical.

There are nine new pictograms, each with a specific meaning. The table on the following page shows these new pictograms and the types of hazards they represent.

GHS Hazard Pictograms

Pictogram	Hazard	Pictogram	Hazard
 **GHS01— Exploding bomb**	Explosion, blast or projection hazard	 **GHS02 – Flame**	Flammable liquids, solids and gases; including self-heating and self-igniting substances.
 **GHS03— Flame over circle**	Oxidising liquids, solids and gases, may cause or intensify fire	 **GHS04—Gas cylinder**	Gases under pressure
 **GHS05— Skull and crossbones**	Fatal or toxic if swallowed, inhaled or in contact with skin	 **GHS06— Exclamation mark**	Low level toxicity. This includes respiratory, skin, and eye irritation, skin sensitisers and chemicals harmful if swallowed, inhaled or in contact with skin
 **GHS07— Corrosion**	Corrosive chemicals, may cause severe skin and eye damage and may be corrosive to metals	 **GHS08— Health Hazard**	Chronic health hazards; this includes aspiratory and respiratory hazards, carcinogenicity, mutagenicity and reproductive toxicity
 **GHS09— Environment**	Hazardous to aquatic life and the environment		

Signal words – these provide an indication of the relative severity of the hazard. The signal words used are DANGER or WARNING. Danger indicates a higher severity of hazard.

Hazard statements – these describe the nature and severity of the chemical hazard. Examples of hazard statements are:

- Highly flammable liquid and vapour
- May cause respiratory irritation
- May cause cancer
- Contains gas under pressure
- Causes severe skin burns and eye damage

Precautionary statements – these describe some recommended measures that should be taken to minimise or eliminate risks during storage, handling, use or disposal of the hazardous chemical. The GHS uses four types of precautionary statement, covering:

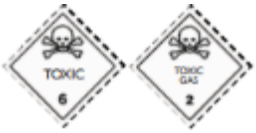
- *Prevention of an incident (for example how to prevent poisoning from a toxic chemical or igniting a flammable liquid)*
- *Response in the event of an incident (for example providing first aid information if a worker is exposed or instructions to extinguish a fire)*
- *Storage instructions (for example specific conditions under which the chemical should or should not be stored)*
- *Disposal (for example referring to any applicable local/state regulations*

Examples of precautionary statements are:

- Do not breath dust/fume/gas/mist/vapours/spray
- Keep away from heat/sparks/open flames/hot surfaces – No smoking.
- Get immediate medical advice/attention
- Dispose of contents in accordance with local Regulations

Note: the OHS Regulations allow manufacturers and importers to continue to use dangerous goods class labels on containers for workplace hazardous chemicals. Dangerous goods class labels are those pictograms that are used on dangerous goods containers to meet transport requirements under the Australian Code for the transport of dangerous goods by road or rail (ADG) Code.

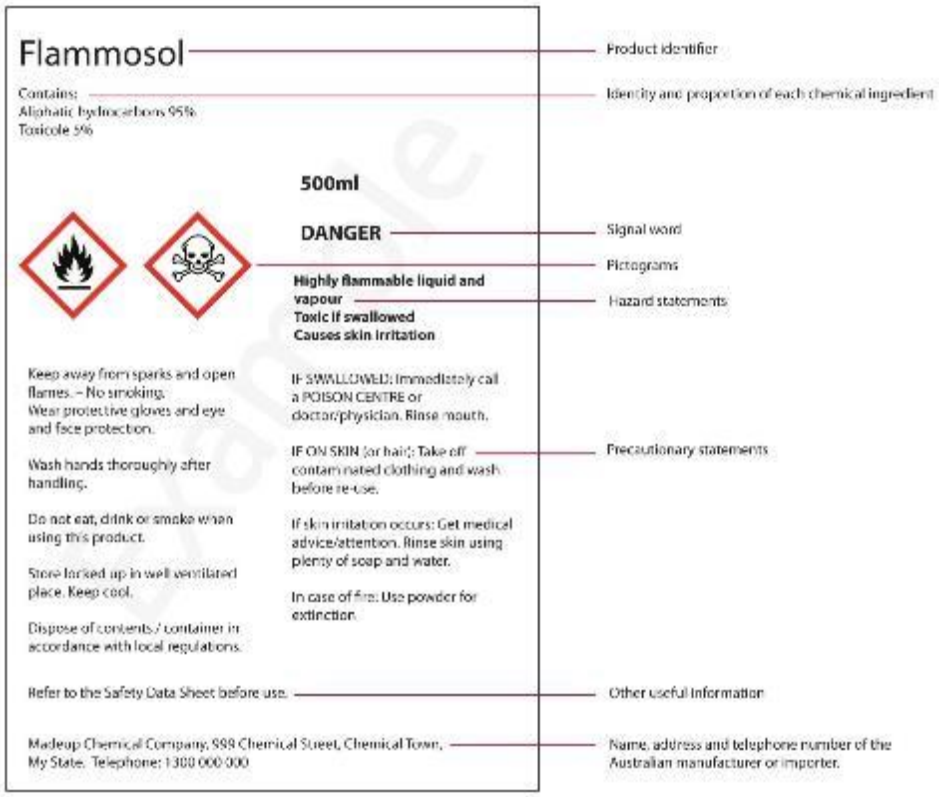
The following table compares hazard Pictograms from the GHS with the corresponding ADG Code Class Labels:

Pictogram	GHS Hazard	Dangerous Good Class Labels (Pictograms)	ADG Classes
	Explosives Self-reactive Organic peroxides		Explosive
	Flammables Self-reactive Pyrophoric Self-heating Emits flammable gas in contact with water Organic peroxides		Flammability (Liquid, Solid or Gas) Pyrophoric, Emits Flammable Gas Organic Peroxide
	Oxidisers		Oxidiser Oxidising gas
	Gases under Pressure		Non-toxic non-flammable gas, flammable gas, oxidising gas, toxic gas
	Acute toxicity		Acute toxicity Acute toxic gas
	Acute toxicity Skin irritants Eye irritants Skin sensitisers	No equivalent	
	Carcinogens Respiratory sensitisers Reproductive toxicants Target organ toxicants Germ cell mutagens	No equivalent	
	Eye corrosion Skin corrosion Corrosive to metal		Corrosive to metals

Pictogram	GHS Hazard	Dangerous Good Class Labels (Pictograms)	ADG Classes
	Aquatic toxicity. Not covered within the scope of workplace hazardous chemicals requirements		Environmental hazard
No equivalent hazard pictogram			Miscellaneous dangerous goods
Not covered within the scope of workplace hazardous chemicals requirements			Infectious
Not covered within the scope of workplace hazardous chemicals requirements			Radioactive

What does a hazardous chemical label look like?

The following is an example of a label you might see when a manufacturer moves to the new labelling system.



Identification of Hazards

Hazardous Substances

The identification of hazards associated with hazardous substances reviews how they are used as well as the health effects associated with the substances. Factors considered are the routes of exposure, work practices and the circumstances under which exposure to hazardous substances could occur.

Hazardous substances are defined in terms of their direct health effects on people whereas hazardous chemicals are defined by their physical and chemical properties. For example, a chemical that is only flammable and has no toxic, corrosive, sensitising or cancer causing properties would be a dangerous good but not necessarily a hazardous substance. There is a large overlap (about 95%) between the two groups.

Risk Evaluation

The purpose of risk evaluation is to determine those risks that need to be controlled, and assist with decisions about the order in which risks should be controlled. In evaluating the risks associated with hazardous chemicals and hazardous substances, a system can be used which considers the consequence and potential of an incident or exposure together with the likelihood that the hazard will result in an incident or adverse health effects. The system used is based on *ISO 31000 – Risk Management Principles and Guidelines*.

Risk Control

Control measures should be considered where identified hazards have a risk rating where it may be possible to further reduce risk. The following hierarchy of controls should be observed when determining control measures. The list below sets out the order of control measures to be taken if it is not reasonably practicable to eliminate a risk.

Elimination

The most effective method of risk reduction is the elimination of risk at the source. This includes eliminating either the hazardous chemical or the activity which gives rise to the risk.

Substitution

Substituting the hazardous chemical with another product, that has a lower risk associated with the storage and handling.

Reducing Quantities Stored and Handled

Where possible, the quantities of hazardous chemicals should be kept at a minimum. This includes the removal of chemicals that are no longer required on site.

Isolation

Isolation involves separating people from the substance by distance or barriers. Australian and New Zealand Standards provide guidance on appropriate separation distances for hazardous chemicals.

Engineering Controls

Engineering controls are controls which use engineering measures to reduce the risk associated with the storage and handling of hazardous chemicals (i.e. ventilation).

Administrative Controls

Administrative controls are systems of work or safe work practices that help to reduce risks associated with the storage and handling of hazardous chemicals.

Personal Protective Equipment (PPE)

The use of PPE in conjunction with other control measures may provide additional risk control. PPE should be the last resort for controlling risk and workers should be trained to fit and use any required PPE properly.