PROCEDURE

Hazardous Chemicals Management

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Document Review Record				
Document No. and Name		WHS-PRO-010 Hazardous Chemicals Management Procedure		
Rev No	**Description**	**Prepared by**	**Checked by**	**Date**
0	New	Mackay Safety Consultants		22.04.2013
1	Update Number Structure	L.Strappazon	M.Delaney	08.06.2016
2	Review as per Internal Audit A016	A.Forrest	M.Delaney	06.07.2016
3	Remove and transfer responsibilities section to QMS-PRO-026 Authority and Responsibilities Procedure	M Richards	L Strappazon	03.11.2016
4	Review	M Vorpagel	D McNeil	26.09.2019
Electronic approval by: **Name:** David McNeil **Position:** Operations Manager **Date:** 26.09.2019				

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1 PURPOSE

The purpose of this procedure is to ensure that people and the environment are not exposed to hazardous chemicals or Dangerous Goods to such an extent that they pose an unacceptable risk.

2 SCOPE

This procedure applies to the use of hazardous chemicals and dangerous goods by all Company employees and contractors.

This procedure is not intended to apply to storage of explosives, bulk diesel and oil, or reagents.

3 DEFINITIONS

Company / the company - Refers to Reay Services Group.

SWP – Standard Work Procedure.

JSA – Job Safety Analysis

Hazardous Chemicals – Substance does not include a thing (other than a fluid or particle):

a) formed during production to a predetermined design or shape or to have a predetermined surface

b) used for a purpose depending completely or partly on its design, shape or surface, and

c) keeping its chemical composition and physical state during use.

ADG Code – the Australian Dangerous Goods Code for the Transport of Dangerous Goods.

Safety Data Sheet (SDS) – a document provided by the supplier or manufacturer of a chemical, and by specialist service providers, that specifies the particular hazardous chemical, how it shall be stored, handled, used and disposed of, particular precautions that should be taken, and the method of first aid treatment.

Dangerous Goods – Chemicals that present an immediate threat to safety (eg. through fire or explosion), health (eg. toxicity), or property if spilled or involved in some sort of accident or emergency situation.

Decanting – is the process of transferring a hazardous chemicals from one container to another - normally from a larger drum to a smaller container for use on the job.

Placard – a warning notice to alert persons to the location and nature of chemicals stored and is in accordance with the National Standard for the Placarding of Hazardous chemicals.

Hazardous Chemicals Register – an information source containing a list of all chemicals used in the relevant work area, quantity stored and the SDS for each one.

4 ROLES AND RESPONSIBILITIES

All company Employees and Contractors are responsible for complying with the requirements of this procedure.

Refer to QMS-PRO-026 – Authority and Responsibilities Procedure for further details.

5 ACTIONS

5.1 General Requirements for Hazardous Chemicals

Prior to the introduction (including a trial of a chemical) of any chemical substance to site, an assessment is required to determine:

- if it is a hazardous chemical or dangerous goods.
- if so, how it is used in the workplace, and
- the health / environmental risks involved.

The purpose of the assessment is to enable decisions to be made about appropriate control measures, training, and monitoring and health surveillance. These decisions will depend on the degree of risk (i.e. likelihood of harm to the person using or likely to be exposed) that arises from the use of hazardous chemical or dangerous goods under particular working conditions.

The role of the Administrator is to ensure that there is sufficient information on hazardous chemicals and dangerous goods in the register so that a reliable assessment can be made, and in general, support this procedure.

5.2 Register of Hazardous Chemicals

Each worker shall have access to the current Hazardous Chemicals Register which lists all chemicals used on site and to a copy of the SDS for any chemical in use or stored at the site. The Hazardous Chemicals Register contains a SDS and Hazardous Chemical Register that provides information including:

- Identity
- Health issues
- PPE requirements
- Emergency response requirements
- Handling requirements
- Risk assessment/ product assessment
- Labels (if required)
- Information

To assist in maintaining a current register, the employee shall check if a product is listed in the Hazardous Chemicals Register before placing a purchase requisition.

If a product is not listed in the Hazardous Chemicals Register, the Administrator shall be contacted. The product will then be treated as a new hazardous chemical as per Section 5.3.

5.3 Selection and Purchasing of New Hazardous Chemicals

Purchase of new Hazardous Chemicals shall use risk management principles when evaluating what product to use and shall:

- identify if there is an actual need for the product
- research and assess if change is required
- evaluate the risk via a risk assessment
- decide if current, alternative or new product is required
- decide if health surveillance and monitoring are required.

The Hazardous chemical request form is to be completed and approved prior to any chemical being purchased.

The Administrator or General Manager may wish to consult external sources or Specialist Providers such as manufacturer's product information lines for further information regarding the chemical.

The Administrator shall seek the General Manager approval prior to uploading of the chemical into the Hazardous Chemicals Register.

5.4 Risk Assessment

For all chemicals classified as hazardous or dangerous under the NOHSC criteria, an assessment of the risk of potential loss shall be performed. Risk assessments for hazardous chemicals and dangerous goods shall be reviewed at least every five (5) years, or when a work practice involving the chemical is significantly modified.

- Risk assessments shall be completed with involvement from the workforce.
- When work related ill health is reported.
- When accidents, near misses, monitoring or health surveillance indicate loss of control.
- When there is new evidence available regarding the associated hazards.
- When new or improved control technology becomes available.

5.5 Training

All persons who have designated responsibilities for the administration and utilisation of the control of hazardous chemicals procedures shall be adequately trained in the procedure.

Familiarisation with this procedure shall be included in the induction programs.

5.6 Auditing and Record Keeping

An audit of the Hazardous Chemicals Register shall be scheduled by the Administrator every twelve (12) months to ensure compliance with the system.

The Manager shall inspect and audit contractor hazardous chemical and dangerous goods use.

5.7 Storage and Transportation

Storage and transportation of hazardous chemicals and dangerous goods shall be in accordance with statutory requirements and SDS and the ADG Code.

5.7.1 Dangerous goods

The dangerous goods class labels are shown in the Australian Dangerous Goods Code. These chemicals represent an acute danger to those who come into contact with them or the facilities where they are stored because of their concentrations and natures. They are not merely hazardous to health, but incorrect storage or handling will, in all cases, create an unacceptable level of risk.

Dangerous goods are classified according to the predominant type of risk involved and such classifications are defined in the Australian Dangerous Goods Code.

Risk control measures required with these are provided in the manufacturers' SDS's and in the Australian Dangerous Goods Code.

All dangerous goods are allocated an internationally recognised UN Number for identification purposes.

5.7.2 Competence of persons to handle dangerous goods

The General Manager shall ensure an adequate number of persons are trained to handle Dangerous Goods. These persons shall be:

- instructed as to the hazards and the precautions to be observed, and
- competent to operate all safety equipment, including vehicles, pumps, fire protection equipment and breathing apparatus that is used in conjunction with the keeping or handling of the goods.

5.7.3 Stock control

5.7.3.1 Receipt of chemicals

All chemicals received on site shall be closely checked by the purchaser to ensure that a SDS is available on the Hazardous Chemical Register and that they are correctly packed, labelled and approved for use on site.

Where there is any discrepancy in any of the above, the chemical is to be either rejected or put aside in a safe place in the quarantine area and the General Manager notified.

5.7.3.2 Labelling

The label on hazardous chemicals or dangerous goods needs to draw the attention of the person handling or storing the chemical and any significant hazards involved. The style and type of label will vary with the specific risks involved, and this is a function of the amount or quantities in each package / container. Labelling requirements for dangerous goods are stipulated in the Australian Dangerous Goods Code.

5.7.4 Storage

Hazardous chemicals or Dangerous Goods shall not be stored in any container which:

- is not labelled correctly
- was previously used for the storage of another product
- is damaged in any way
- inappropriate for the storage of the particular chemical.

Storage requirements for specific chemicals are specified.

5.7.4.1 Minor storage in store and workshops

Appendix 9.6 (AS1940, Table 2.1) is a summary of what constitutes minor storage for Dangerous Goods allowed outside a properly constructed depot. The Manager and/or persons competent are required to monitor storage limits during hazard and housekeeping inspections.

5.7.4.2 Storage of flammable and combustible liquids

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

In particular:

- Minor storage quantities in the store and workshop areas (AS1940, Table 2.1) are not to exceed 250 litres for flammable liquids with a flash point below 23°C, 500 litres for flammable liquids with a flash point between 23-60.5°C or 2000 litres for any combustible liquids.
- Maximum container size for internal storage is to be 60 litres.
- External storage facilities are to be separated from other facilities by 3 metres for sealed packages or 10 metres for decanting purposes.
- Any storage in a tank or tanks shall be constructed in accordance with the appropriate parts of Section 4 of AS1940 and placarding showing class and content.
- Portable fire extinguishers of the dry powder type are to be provided, so as to be readily accessible, adjacent to all flammable liquid storage.

5.7.4.3 Storage of Gases

The storage of gases is to be in accordance with the provision of AS1596: LP Gas - Storage and Handling and AS2030: SAA Gas Cylinders Code.

In particular:

- Full cylinders are to be stored in a secure, upright manner, segregated by class, min 3mtr apart, free from contact with grease, oils or water, and separated from empty cylinders.
- Storage facilities are to be:
  - Constructed of fire rated material and have a firm, level, non combustible floor.
  - Away from occupied workplaces and thoroughfares.
  - Well ventilated and provided with basic weather protection.
  - Free from fire risk.
  - Designated as a NO SMOKING, NO NAKED FLAME, OPEN ELECTRICAL DEVICES, STATIC OMITTING DEVICES (Mobile Phones) area.
  - Clearly marked as a gas store with HAZCHEM labelling.
  - Provided with appropriate safety / emergency equipment (eg. fire extinguishers).

5.7.4.4 Placarding

Placarding for stores of Dangerous Goods is a requirement of the Dangerous Goods Safety Management Act and is intended to:

- Alert people to the presence of Dangerous Goods.
- Identify the categories of Dangerous Goods stored.
- Indicate required emergency actions and contacts.

5.7.5 Internal issue and decanting

Chemicals used are to remain in their own containers / packaging or be decanted / transferred into appropriate containers correctly labelled with the product name, the risk and safety phrases, and dangerous goods class label(if dangerous goods).

Unlabelled containers shall not be used.

If decanting within the store, or elsewhere, it shall be performed in accordance with any specific SDS instruction. Where specific personal protective equipment is called for, it shall be provided and worn.

Appropriate devices / structures shall be set up to minimise any possibility of accidental spillage.

5.8 Disposal of Hazardous Chemicals

The SDS / Chemical Reports for products shall be referred to for disposal information.

5.9 Hazardous Chemical Emergencies and Spills

In all emergency circumstances, local site Emergency Response Plan shall be followed.

5.9.1 First aid facilities

Provisions shall be made in the site first aid facilities for at least initial response first aid treatment for personal injuries considered possible with regard to the transport, storage, handling, use and disposal of hazardous chemicals on site - for example provision of eye wash stations.

5.9.2 Environmental controls

Some chemicals may have the potential to harm the environment. Where any doubt exists, the General Manager shall ensure that the disposal and/or control action is in accordance with relevant environmental protection laws, Council by Laws and the site conditions.

In case of an emergency / accidental spillage, the control actions as outlined in the SDS's shall be adhered to. Resources shall be made available for controlling spills (eg. spill kits).

5.10 Contractors

All contractors are to be notified before they commence work on site, that they are required to comply with this procedure for the control of hazardous chemicals and dangerous goods and remove all unused chemicals and containers from site on completion of the contract.

5.10.1 Hazardous Chemicals Registers

The sub-contractor shall create and maintain their own Hazardous Chemicals Register for all hazardous chemicals and dangerous goods intended for use for the duration of the contract. The register shall contain a listing of products names and a SDS for each hazardous chemical or dangerous good.

The Hazardous Chemicals Register shall be made available at all times for inspection the Manager.

The sub-contractor shall notify the company representative prior to chemicals being brought on site.

The General Manager may elect to have chemicals used by contractor loaded into the Company Hazardous Chemicals Register.

5.10.2 *Auditing*

The contractor may be audited by a representative from Company at random intervals for the duration of the contract.

6 RECORDS

Register of Hazardous Chemicals and dangerous goods.

7 ATTACHMENTS

Minor storage in store and workshops

- Table 2.1 of AS1940 - minor storage in store and workshops
- Hazard Grouping Based on Flammability

8 REFERENCES

Work Health and Safety Act & Regulation 2011
Australian Code for the Transport of Dangerous Goods by Road and Rail
AS1596: LP Gas - Storage and Handling
AS1940: The Storage and Handling of Flammable and Combustible Liquids
AS2030: Gas Cylinders Code
AS2714: The Storage and Handling of Hazardous Chemical Materials - Class 5.2 Substances - Organic Peroxides
AS3780.8: Storage and Handling of Hazardous Chemical Materials Class 8 Substances – Corrosives
WH&S QLD Hazardous Chemicals Code of Practice 2011
WHS-FRM-044 – Risk Assessment Template

9 ATTACHMENT 1 – Minor storage of dangerous goods in store & workshops

Table 2.1 –of AS1940 Minor Storage

Location	Class of liquid			Manufactured products
	Flammable		Combustible	
	PG I or PG II	PG III	C1, C2	
Residential buildings of any type Within a dwelling In a garage attached to a dwelling with a 60/60/60 FRL rating separation wall Outdoors, or in a shed or garage, separated from the dwelling or any other building by 1 m space Outdoors, uncovered, or in a shed or garage, separated from the dwelling or any structure or boundary by either 3 m of space or a wall having an FRL of 180/180/180 A supply tank for domestic oil-fired appliances installed in accordance with AS 1691 is excluded from any calculation of the quantity stored on the premises	5 L 25 L 100 L 250 L	25 L 50 L 250 L 250 L	50 L total C1 and C2 100 L total C1 and C2 500 L total C1 and C2 500 L total C1 and C2	50 L 250 L 250 L 250 L
Commercial building	10 L per 50 m^2 of floor space, but 5 L for any tenancy of less than 50 m^2 area	25 L per 50 m^2 of floor space, but 25 L for any tenancy less than 50 m^2 area	500 L total C1 and C2 per 50 m^2 of floor space but 500 L for any tenancy less than 50 m^2 area	The limit for any manufactured product is the same as for a liquid of the same class
Hospitals	10 L per 50 m^2 of floor space	25 L per 50 m^2 of floor space	500 L total C1 and C2 per 50 m^2 of floor space	
Educational establishments (excluding laboratories) For storage outdoors, or in sheds or attachments, the limits for the corresponding entry in residential buildings shall apply	5 L per 50 m^2 of floor space	10 L per 50 m^2 of floor space	500 L total C1 and C2 per 50 m^2 of floor space	
Laboratories (see Notes 1, 2 and 5)	50 L per 50 m^2 of floor space	100 L per 50 m^2 of floor space	200 L total C1 and C2	
Factories, workshops Inside	250 L; or 1 L per 2 m^2 space with no more than 250 L in any 500 m^2 area	500 L; or 1 L per 1 m^2 with no more than 500 L in any 500 m^2 area	2 000 L; or 4 L per 1 m^2 space with no more than 2 000 L in any 500 m^2	In packages only—2 000 L
And either— (a) in attached outhouses or sheds if separated by a partition having an FRL of 60/60/60; or	250 L	As immediately above	2 500 L	
(b) outside, or in a detached shed or outhouse separated from the factory or workshop by at least 1 m.	As immediately above	1 400 L in tanks not over 700 L each, or in packages	5 000 L	

Table 2.1 (*continued*)

Location	Class of liquid			Manufactured products
	Flammable		Combustible	
	PG I or PG II	PG III	C1, C2	
Shops	As for factories and workshops (above) but no container for PG I or PG II liquid may exceed 20 L capacity			Flammable products: 10 000 L, of which no more than 2 000 L are PG , provided that storage is in closed packages, not to be opened except for tinting paint for immediate sale
Warehouses	As for factories and workshops (above) but no container for PG I or PG II liquid may exceed 60 L capacity			
Service stations *Outdoors*	500 L total in packages 1 Any packages kept in a sales area shall be unopened packages not over 20 L capacity	250 L total in tanks or packages An additional 1 000 L in packages can be kept outdoors	3 000 L total C1 and C2	As for factories, workshops
Open land Outdoors above ground Underground tank(s)	 5 000 L 5 000 L	 5 000 L 5 000 L	 10 000 L 10 000 L	 As for shops
Construction sites	2 500 L	5 000 L	10 000 L	As for shops

1. In the case of laboratories, commercial buildings and the like, this Table is intended to cater for the day-to-day working stock in the laboratory or workroom. If these quantities are to be exceeded, it will be necessary to install a cabinet or major store facility according to the scale needed.
2. Laboratories which are constructed, operated and equipped in the form of a flammable liquid storage room and are used for the analysis of flammable liquids being processed are exempt from this Table.
3. It is permissible to store at the same time on the same area, the maximum permissible allowance for each or all of the other classes of liquids.
4. Where the maximum allowance is specified in terms of quantity per unit area, any arrangement which results in concentration at one point should be avoided. Such aggregation contravenes the intent of minor storage, which is dispersal, and proper storage provisions as in Section 4 could be necessary.
5. Materials being analyzed, used, mixed, blended or reacted upon on laboratory benches or in fume cupboards are exempt from the limitations of Table 2.1.

PG I, II and III are Packing groups as designated by the ADG Code (Australian Dangerous Goods Code) appendix 2. Dangerous goods are assigned to different categories for a number of reasons, but specifically for flammable liquids, section 3.2.6 of the ADG appendix 2 defines hazard group based on flammability in table 2 in that section.

Hazard Grouping Based on Flammability

Packing Group	Flash point (closed cup)	Initial Boiling Point
I	-	≤ 35°C
II	< 23°C	> 35°C
III	≥ 23°C - ≤ 60.5°C	> 35°C