

# PROCEDURE

Title: **Management of Chemicals**

Procedure No: <b>P314.103</b>	Issue: <b>4</b>	Revision: <b>0</b>	Operative Date: <b>14/08/2013</b>	Author: <b>H Warren</b>
Department: <b>HSEC</b>	Sect./Classification: <b>Health</b>	Category: <b>Hazardous substances</b>	Owner Role: <b>Laboratory Superintendent</b>	Approver Role: <b>H&amp;S Manager</b>
				Appr. Signature:

## CONTENTS

1.0	PURPOSE .....	1
2.0	SCOPE .....	1
3.0	RESPONSIBILITIES .....	2
4.0	REFERENCES .....	2
5.0	DEFINITIONS .....	3
5.1	Hazardous Chemical .....	3
5.2	SDS (formerly MSDS).....	3
5.3	ChemAlert.....	3
5.4	Risk Assessment .....	3
5.5	Register.....	3
5.6	Manifest .....	3
5.7	Placard.....	3
6.0	ACTIONS .....	4
6.1	Approval for new chemical.....	4
6.2	Purchasing a chemical.....	4
6.3	Receipt of chemicals.....	4
6.4	Labelling.....	4
6.5	Storage / Signage .....	4
6.6	Preventing, Containing and Managing Spills .....	5
6.7	Fire protection .....	5
6.8	Risk Assessment & Controlling Exposure .....	5
6.9	Health Monitoring.....	6
6.10	Induction and Training .....	6
6.11	Disposal .....	6
6.12	Records.....	6
7.0	ATTACHMENTS .....	6

### 1.0 PURPOSE

To provide for the safe management and control of hazardous chemicals, including their purchase, delivery, use, storage and disposal

### 2.0 SCOPE

All chemicals brought onto or prepared on QAL property by QAL employees, contractors or their employees or visitors

FORM NO: ADM-023-0305	IF THE LOGO ON PAGE NO. 1 OF THIS DOCUMENT DOES NOT APPEAR IN FOILED METAL FINISH THIS IS <b><u>NOT</u></b> A CONTROLLED QUALITY SYSTEM DOCUMENT	PAGE 1 of 6
--------------------------	--	-------------

Last amendments to this Document are Highlighted in ***Bold Italic*** Print

**3.0 RESPONSIBILITIES****3.1 Section Superintendent or Contractor Principal**

Each Superintendent is responsible for the safe handling of chemicals in their area as defined within this procedure. Some responsibilities may be delegated to Section Chemical Safety Coordinator as listed below or to supervisors.

**3.2 Superintendent - Laboratory**

- Administer requirements of this procedure and specific requirements as documented in P784.002
- Provide advice on management of chemicals to plant sections.
- Complete calculations to determine whether or not QAL is classified as a Major Hazard Facility, as defined within Chapter 9 and Schedule 15 of the WH&S regulations.
- Generate Manifest as detailed in Schedules 11 and 12 of WH&S regulations.
- Other requirements as document in this procedure

**3.3 Senior Specialist – Occupational Health and Systems (SS – OH&S)**

- Liaise with RMT on the provision of ChemAlert services
- Identify and develop a register of all employees who are required to undergo Health Surveillance.
- Other requirements as documented in this procedure.

**3.4 All Employees**

All employees are to contribute to the identification of risks associated with handling and storage of chemicals and use control measures as documented in risk assessments or as required by good occupational hygiene practices.

**3.5 Chemical Safety Coordinator (CSC)**

All sections handling placard quantities of hazardous chemicals, as defined in Schedule 11 of the regulations, shall appoint a Section Chemical Safety Coordinator and ensure they are trained. Training is to include at least the following –

- SM 25 – Introduction to Hazardous Chemicals
- SM67 – Introduction to ChemAlert
- Mentoring from either Laboratory Superintendent, Senior Specialist Occupational Health & Systems or experienced section Chemical Safety Coordinators.

The role is to assist the Superintendent in management of Hazardous Chemicals in the area and as assigned by section superintendent.

**4.0 REFERENCES**

Work Health and Safety Act 2011  
 Work Health and Safety Regulation 2011 - Chapter 7 – Hazardous Chemicals  
 Queensland Code of Practice 2003 – Hazardous Chemicals (Preserved)  
 Queensland Code of Practice 2011 - Preparation of Safety Data Sheets for Hazardous Chemicals  
 Queensland Code of Practice 2011 – Labelling of Workplace Hazardous Chemicals  
 P712.763 – General Receiving  
 P314.106 - Asbestos Management and Control  
 P003.008 - Incident Management & Investigation  
 P314.305 – Warning of Intent to Fire Explosive Charges  
 P314.101 – Management of Ionising Radiation Sources  
 P784.002 – Management Systems for Substances  
 P703.044 – Minimum Compliance Training  
 P315.205 – Health Monitoring  
 P745.202 – Occupational Health & Hygiene Exposure Monitoring  
 P783.114 – Abrasive Blasting Environmental Management

Title: <b>Management of Chemicals</b>	No: <b>P314.103</b> Issue: <b>4</b> Rev: <b>0</b>	Approval: (Inits)
---------------------------------------	--	----------------------

Training Module SM25 – Introduction to Hazardous Chemicals  
 Training Module SM67 – Introduction to ChemAlert  
 Training Module SM80 – Hazardous Chemicals

## 5.0 DEFINITIONS

### 5.1 Hazardous Chemical

A hazardous chemical is a substance, mixture or article that satisfies the criteria for a hazard class in the legislation. Chemicals which are hazardous are identified as such within the SDS.

This procedure includes mixtures and dilutions which are made on site (eg: diluted flocculant / laboratory reagents), but does NOT include:

- Items which do not change form during their lifetime (eg: pens, toner cartridges)
- Materials brought onto site by an individual for personal or sanitary uses not related to work activities (eg. Pharmaceutical items).

Some chemicals are also covered by other QAL procedures. These include:

- Radioactive chemicals – P314.101 – Management of Ionising Radiation Sources
- Explosives – P314.305 – Warning of Intent to Fire Explosive Charge
- Asbestos – P314.106 – Asbestos Management and Control
- Blasting Media – P783.114 – Abrasive Blasting Environmental Management

### 5.2 SDS (formerly MSDS)

Safety data sheet – means a document (either electronic or hard copy) which contains information on the properties of a chemical and the resulting hazards. Specifically the SDS must satisfy at least the requirements of Queensland Code of Practice 2011 - Preparation of Safety Data Sheets for Hazardous Chemicals

ChemAlert “Full Reports” may be used as an SDS. ChemAlert “Extended Summary Reports” may be used to assist in communication of information regarding chemical hazards, but do not contain sufficient information to be regarded as a SDS.

### 5.3 ChemAlert

Means a computer based program, available through portal, which provides access to SDS, register and stock holdings and forms the basis for management of hazardous chemicals at QAL.

### 5.4 Risk Assessment

Means an assessment of the risk to the health and safety of an employee and of damage to the environment from a hazardous chemical used at the workplace, and the controls which are in place to minimise this risk. Refer to form S-091-mmy for more details.

### 5.5 Register

Means a list of chemicals on site, their quantity and SDS. This is maintained within ChemAlert.

### 5.6 Manifest

Means a list of hazardous chemicals, which are stored on the premises in quantities above the amount prescribed in Schedule 11, and the location and quantity of those materials

### 5.7 Placard

Means a sign on display at the site of chemical storage, when the quantity of material is above that prescribed in Schedule 11, which contains information about the chemical stored

FORM NO: ADM-023-0305	IF THE LOGO ON PAGE NO. 1 OF THIS DOCUMENT DOES NOT APPEAR IN FOILED METAL FINISH THIS IS <u>NOT</u> A CONTROLLED QUALITY SYSTEM DOCUMENT	PAGE 3 of 6
--------------------------	---	-------------

**6.0 ACTIONS****6.1 Approval for new chemical**

- 6.1.1** Any person may identify a new chemical for use to cover a new task or to better perform a current task,
- 6.1.2** The person identifying the need for a new chemical is to consult with their section Chemical Safety Coordinator, obtain the SDS from the supplier and complete Part 1 of the Chemical Procurement Approval Form (S-090-mmyy). If the chemical is hazardous a Chemical Risk Assessment Form (S-091-mmyy) is also completed.
- 6.1.3** Approval is also required for chemicals identified through Engineering Specifications (Standards), through changes in formulations of existing chemicals, and for mixtures or dilutions of chemicals prepared on site.
- 6.1.4** Materials which can be used for abrasive blasting or spray painting are restricted under legislation. Materials will not be approved for these purposes unless SDS clearly provides information showing that material meets the requirements listed in Attachment 7.4
- 6.1.5** Forms are processed as detailed in Attachment 7.1.

**6.2 Purchasing a chemical**

- 6.2.1** Once approval for chemical is processed, as in Attachment 7.1, material may be brought on site. If purchase is required through QAL Procurement Section, a MJR form (SAP-013) must be completed as shown in Attachment 7.1.

**6.3 Receipt of chemicals**

- 6.3.1** Chemicals received through distribution centre are checked according to P712.763 – General Receiving.
- 6.3.2** Chemicals brought onto QAL property by means other than through the Distribution Centre (e.g. Via contractors or purchased on Petty Cash) shall satisfy all the requirements of this procedure.

**6.4 Labelling**

- 6.4.1** Chemical containers used shall be labelled to clearly identify contents in accordance with Queensland Code of Practice 2011 – Labeling of Workplace Hazardous Chemicals. This includes all containers into which chemicals are decanted including spray bottles, sample bottles and oil cans. Where it is not practicable to label a container, the rack or box surrounding the container may be labeled. The label must remain on the container until it is empty and clean of the contents.

Labels which satisfy requirement are available from ChemAlert.

- 6.4.2** All process tankage and pipework is considered to contain caustic soda unless otherwise labeled.
- 6.4.3** All pipework which does not contain caustic soda shall be labelled to identify the contents, where reasonably practicable.

**6.5 Storage / Signage**

Hazardous chemicals must be stored in identified storage areas, which meet the requirements of Australian Standards appropriate for the type and quantity of chemical stored. (See Attachment 7.3)

Title: <b>Management of Chemicals</b>	No: <b>P314.103</b> Issue: <b>4</b> Rev: <b>0</b>	Approval: (Inits)
---------------------------------------	--	----------------------

Placarding requirements are identified through Stock Management module of ChemAlert and with reference to placard quantities listed in Schedule 11 of the regulations.

Placards must meet requirements of Schedule 13 of the regulations. Placards on individual storage areas are installed and maintained by CSC

Outer warning placards are installed on all major entry gates and are maintained by Laboratory Superintendent.

**6.6 Preventing, Containing and Managing Spills**

Containers of hazardous chemicals, including tanks, pipework and attachments, must be protected against damage caused by an impact or excessive loads.

If there is a risk of spillage of a hazardous chemical, a secondary containment system must be established that is sufficient to contain the spill and any resulting effluent. This spill containment system must ensure the continued separation of chemicals that are incompatible, and allow for the clean-up and disposal of the spill and effluent.

**6.7 Fire protection**

Where flammable or combustible chemicals are used or stored, there must be sufficient fire protection and fire fighting equipment available to address reasonably expected fire risks taking into consideration quantity of chemicals stored and their use. AS 1940 provides guidance on requirements.

If fire fighting equipment becomes unserviceable, alternative fire prevention and control measures must be put in place.

**6.8 Risk Assessment & Controlling Exposure**

All chemicals which are hazardous shall be subject to risk assessment according to form S-091-mmy, using the QAL risk score calculator (P003.008) and as documented in SAP transaction CBIH12. The risk assessment process must include representatives of those people who use the chemical.

Controls shall be put in place to ensure that exposure is less than half the national exposure standard as detailed in SDS or in NOHSC documentation.

Where risk cannot be controlled by means other than PPE, the person at risk of exposure must be given appropriate PPE and instructed on the use of that PPE. Checks must be made to ensure that the PPE is used appropriately and effectively maintained.

If the risk assessment indicates that there is high risk, then action must be taken to identify less toxic alternatives and those actions recorded in risk assessment.

If the SDS identifies the chemical as a carcinogen or a reproductive toxicant exposures must be as low as reasonably practicable and there must be documented annual review of exposures and impacts and controls for these substances. This may be done by rating the risk as high which results in the need for annual review, and by recording details within the Risk Assessment.

If the risk assessment shows a hazardous chemical used at the workplace causes a significant degree of risk to health, then QAL must keep the following documents for thirty (30) years from date that the particular document was made.

- The risk assessment record
- A monitoring result
- A health surveillance report

If the risk assessment shows that the substance does not cause a significant degree of risk to health, then QAL must keep the record of the assessment for five (5) years from the date it was made.

FORM NO: ADM-023-0305	IF THE LOGO ON PAGE NO. 1 OF THIS DOCUMENT DOES NOT APPEAR IN FOILED METAL FINISH THIS IS <u>NOT</u> A CONTROLLED QUALITY SYSTEM DOCUMENT	PAGE 5 of 6
--------------------------	---	-------------

Risk controls must be reviewed and if necessary revised whenever:

- The SDS is updated
- Health monitoring shows a worker has been exposed to hazardous chemical
- Monitoring shows that airborne concentration of the hazardous chemical exceeds the relevant exposure standard.
- Five (5) years have passed since last review

Review process is recorded on the Risk Assessment.

### 6.9 Health Monitoring

If the substance risk assessment shows that the level of exposure cannot be limited to below one half the national exposure limit, or if a worker is exposed to a chemical listed in Schedule 14 (see Attachment 7.2), health monitoring must be in place.

This monitoring is covered under P315.205 – Health Monitoring and P745.202 – Occupational Health & Hygiene Exposure Monitoring.

### 6.10 Induction and Training

All people (employees and contractor supervisors) who commence at QAL shall be given training in this procedure and requirements of legislation via SM25 during plant induction.

All employees and contractors are required to undergo update training as part of minimum compliance training (see P703.044). This usually takes the form of SM80, and must include a review of the processes for safe handling of caustic soda or Bayer liquor.

All people who may be exposed to hazardous chemicals shall be given training on the handling of the chemicals to which they may be exposed. This is the responsibility of the section superintendent.

All training records are recorded within SAP.

### 6.11 Disposal

Chemicals no longer required on site can be disposed of in consultation with either Laboratory Superintendent or Environmental Superintendent.

### 6.12 Records

Records are kept for at least five (5) years except as specified in 6.8

## 7.0 ATTACHMENTS

- 7.1 Substance Purchase Flow Chart
- 7.2 List of Schedule 14 Substances which require health monitoring
- 7.3 QAL Australian Standards relating to storage of DG of relevance to QAL
- 7.4 Materials not to be used for Abrasive Blasting, Wet Blasting or Spray Painting