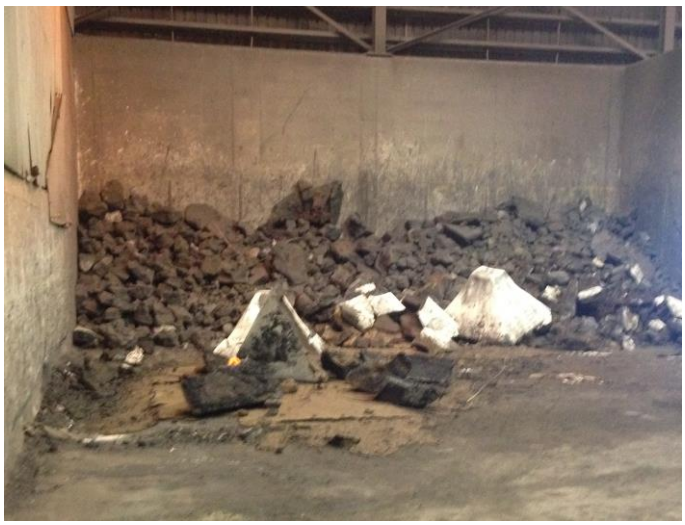
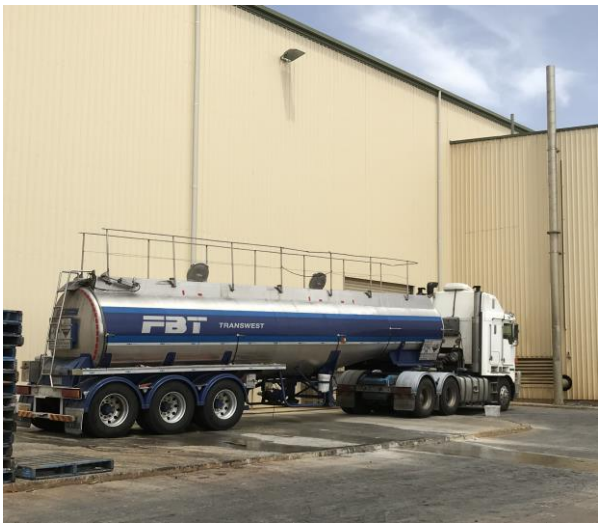
BSSP003.006

Pollution Incident Response Management Plan





EPSR-IN-CONFIDENCE	
Issued: 1 February 2012	Updated: 01 April 2023
Authorised by: General Manager	Approved by:
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1.0 Amendments/Stakeholders/Distribution/Review

Amendment Record			
Alteration:	**Amended Details**	**Amended By**	**Issue Date**
25	Updated Dangerous Goods storage map p25	H&S Manager	14/07/2021
26	Updated Dangerous Goods storage map p25	H&S Manager	18/06/2022
27	Updated Emergency Evac Plan map p26	H&S Manager	26/09/2022
28	Updated contact details information p13	H&S Manager	01/04/2023
29	Updated Dangerous Goods storage map p25	H&S Manager	01/04/2023
30	Updated Emergency Evac Plan map p26	H&S Manager	01/04/2023
31	Updated PIRMP testing passage p17	H&S Manager	28/04/2023
32	Inserted risk matrix p21	H&S Manager	20/06/2023
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Stakeholders - Any changes to this document must be advised to the following personnel	
1	General Manager
2	Health and Safety Manager
3	Process Engineer
4	Area Managers

	Position	Updated
Document Owner:	Health and Safety Manager	20 June 2023
Authorised:	General Manager	Version: 010
Approved:		
Review Date:	1 April 2024	
File Location:	Share Drive > BOM > Risk and Sustainability> Environment>Management Systems > Pollution Incident Response Management Plan	

Review Schedule
March 2024 – and or when using the management of change process when changes occur on or off-site to ensure that it remains current and effective.

1.1 Glossary and Abbreviations

Air pollution	the emission into the air of any air impurity
Air impurity	includes smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances
Land pollution	placing in or on, or otherwise introducing into or onto, the land (whether through an act or omission) any matter, whether solid, liquid or gaseous: (a) that causes or is likely to cause degradation of the land, resulting in actual or potential harm to the health or safety of human beings, animals or other terrestrial life or ecosystems, or actual or potential loss or property damage, that is not trivial, or (b) that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter, but does not include placing in or on, or otherwise introducing into or onto, land any substance excluded from this definition by the regulations.
Material harm	(a) harm to the environment is material if: (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and (b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.
Noise	includes sound and vibration
Noise pollution	the emission of offensive noise
Pollution	water pollution, or air pollution, or noise pollution, or land pollution
Pollution incident	an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise
Water pollution	(a) placing in or on, or otherwise introducing into or onto, waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, so that the physical, chemical or biological condition of the waters is changed, or

	(b) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any refuse, litter, debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters or the refuse, litter, debris or other matter, either alone or together with any other refuse, litter, debris or matter present in the waters makes, or is likely to make, the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters, or (c) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter, and, without affecting the generality of the foregoing, includes: (d) placing any matter (whether solid, liquid or gaseous) in a position where: a. it falls, descends, is washed, is blown or percolates, or b. it is likely to fall, descend, be washed, be blown or percolate, into any waters, onto the dry bed of any waters, or into any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, or (e) placing any such matter on the dry bed of any waters, or in any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, if the matter would, had it been placed in any waters, have polluted or have been likely to pollute those waters.
Waters	the whole or any part of: (a) any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or (b) any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.

2.0 Introduction

It is a requirement for holders of an environment protection license (EPL), to prepare and implement a Pollution Incident Response Management Plan (PIRMP). This PIRMP has been developed to satisfy compliance requirements and sets out the specific requirements regarding the preparing, keeping, testing and implementation of this plan.

2.1 Purpose

This Pollution Incident Response Management Plan (PIRMP) focuses on the management of pollution incidents at Enirgi Power Storage Recycling Pty Ltd. The purpose of the PIRMP is to ensure site readiness in the event of a pollution incident. The PIRMP applies to all pollution incidents that occur at the site as a result of activities carried out by EPSR.

2.2 EHS system context

A critical component of the EPSR environment, health and safety system is the management of safety and environmental incidents. Existing policies, procedures and plans provide guidance on incident response. The PIRMP shall be implemented in addition to the other existing policies, procedures and plans, as they relate to pollution incident response. Where an inconsistency exists, the PIRMP shall take precedence to the extent of the inconsistency.

2.3 Legislative Requirement

All licensees except for waste transporters are required to include certain information as outlined under Section 153C of the POEO Act and clause 98C of the POEO (G), regulation details where this information is located and referred to in this plan is listed in Table 2.4 document directory.

2.4 Document Directory

Section 153C	Detail required	Location in document
(a)	The procedures to be followed by the holder of the relevant EPL in notifying a pollution incident to: (i) The owners or occupiers of premises in the vicinity of the premises to which the EPL relates, and (ii) The local authority for the area in which the premises to which the EPL relates are located and any area affected, or potentially affected, by the pollution, and (iii) Any persons or authorities required to be notified by Part 5.7 (of the POEO Act)	**Section 8.0** **Section 7.2** **Section 7.2**
(b)	A detailed description of the action to be taken, immediately after a pollution incident, by the holder of the relevant EPL to reduce or control any pollution,	**Section 9.0**
(c)	The procedures to be followed for co-ordinating, with the authorities or persons that have been notified, any action taken in combating the pollution caused by the incident and, in particular, the persons through whom all communications are to be made,	**Section 7.2**
(d)	Any other matter required by the Protection of the Environment Operations (General) Regulation 2009 (as set out below): 98C (1)(a) A description of the hazards to human health or the environment associated with the activity to which the licence relates (the **"relevant activity"**).	**Section 4.0** **Appendix A**
	98C (1)(b) The likelihood of any such hazards occurring, including details of any conditions or events that could, or would, increase that likelihood.	**Appendix A**
	98C (1)(c) Details of the pre-emptive action to be taken to minimise or prevent any risk of harm to human health or the environment arising out of the relevant activity.	**Appendix A**
	98C (1)(d) An inventory of potential pollutants on the premises or used in carrying out the relevant activity.	**Section 5.0** **Appendix B**
	98C (1)(e) The maximum quantity of any pollutant that is likely to be stored or held at particular locations (including underground tanks) at or on the premises to which the licence relates.	**Appendix B**
	98C (1)(f) A description of the safety equipment or other devices that are used to minimise the risks to human health or the environment and to contain or control a pollution incident.	**Section 6.0**

2.4 Continued

Section 153C	Detail required	Location in document
	98C (1)(g) The names, positions and 24-hour contact details of those key individuals who: (i) are responsible for activating the plan, and (ii) are authorised to notify relevant authorities under section 148 of the POEO Act, and (iii) are responsible for managing the response to a pollution incident.	**Section 7.2** **Section 7.2.1**
	98C (1)(h) The contact details of each relevant authority referred to in section 148 of the POEO Act.	**Section 7.2.2**
	98C (1)(i) Details of the mechanisms for providing early warnings and regular updates to the owners and occupiers of premises in the vicinity of the premises to which the licence relates or where the scheduled activity is carried on.	**Section 8.0**
	98C (1)(j) The arrangements for minimising the risk of harm to any persons who are on the premises or who are present where the scheduled activity is being carried on.	**Section 6.0**
	98C (1)(k) A detailed map (or set of maps) showing the location of the premises to which the licence relates, the surrounding area that is likely to be affected by a pollution incident, the location of potential pollutants on the premises and the location of any stormwater drains on the premises.	**Appendix C**
	98C (1)(l) A detailed description of how any identified risk of harm to human health will be reduced, including (as a minimum) by means of early warnings, updates and the action to be taken during or immediately after a pollution incident to reduce that risk.	**Section 9.0**
	98C (1)(m) The nature and objectives of any staff training program in relation to the plan.	**Section 11.0**
	98C (1)(n) The dates on which the plan has been tested and the name of the person who carried out the test.	**Section 11.0**
	98C (1)(o) The dates on which the plan is updated.	**Section 11.0**
	98C (1)(p) The manner in which the plan is to be tested and maintained.	**Section 11.0**

3.0 Site Details

Enirgi Power Storage Recycling Pty Ltd operates a used lead acid battery recycling plant in Bomen NSW. The premise is located in the Bomen Business Park approximately 12 Kilometres from the city of Wagga Wagga and has been in operation since September 2010. The nearest water way is an ephemeral creek which runs from the premises and flows towards the Murrumbidgee River which is approximately 4 kilometres away.

The facility converts used lead acid batteries into reusable lead, polypropylene and sodium sulphate. The majority of the lead is reused in the production of new lead acid batteries. The sodium sulphate is supplied to manufacturers of detergents and the polypropylene (and other plastics) is recycled domestically.

Lead	Battery plates, connectors and posts are sent through to the smelter furnace to be formed into lead ingots.
Sulphuric acid	Converted to sodium sulphate
Polypropylene	Battery containers and lids are crushed and broken down into plastic fragments

The Facility is licensed to process up to 70 000 tonnes of used lead acid batteries per year.

4.0 Hazard Identification

The following section describes the main hazards to human health or the environment, associated with the operations at Enirgi Power Storage Recycling, along with the risk management for each hazard. Management of impacts is prioritised according to the level of risk each aspect is assigned.

4.1 Description and likelihood

The hazards to human health or the environment are described in the site risk register (refer to Appendix A). The risk register also includes details of the following:

- the receiving environment that could be harmed by the hazard;
- the risk event that could occur as a result of the hazard harming the receiving environment (including neighbouring premises);
- likelihood of the risk event occurring;
- rating of the consequence of the risk event occurring; and
- details of the pre-emptive action to be taken to mitigate the risk of harm to human health or the environment.

5.0 Chemicals and Potential Pollutants

The potential pollutants that have been identified and or are used on site operations refer to *Annexure B*. All chemicals are accompanied by the relevant Safety Data Sheets as required by work health and safety regulations.

The facility which stores chemicals has been designed in accordance with Australian Standard 1940 – 2017. The system has been designed to incorporate:

- impervious walls and floors;
- enough capacity to maintain 110% of the volume of the tank (or 110% volume of the largest tank where more than one tank is stored in the bund);
- floors are graded to a collection sump.

EPSR holds a Dangerous Goods Notification that is updated as per regulatory requirements. The storage and location map for chemicals are in the Dangerous Goods Manifest.

5.1 Site plan

The site plan illustrates the location of Enirgi Power Storage Recycling, the surrounding area that is likely to be affected by a pollution incident, the location of stormwater drains on the premises refer to Annexure C.

6.0 Safety Equipment

Equipment that will be used to minimise harm to human health is described in the following table.

List of Emergency Resources	Type	Location
Fire Fighting Equipment	Fire hydrants and booster connections; Fire extinguishers (various types); Fire Hose reels; Spill Kits	Site Wide
First Aid Equipment	First Aid Kits; Emergency Showers and eye wash	Site Wide
Fire suppressions mediums	Water mist system; Neutralising agents	Prep Charge Site Wide

List of Emergency Resources *Continued*	Type	Location
Specialised Equipment (e.g. front-end loader, Forklift)	Forklifts various; Front end loader; bobcat, mini excavator	CX and Foundry
Breathing Apparatus	self contained breathing apparatus	Administrative Building
Gas detection monitor	Handheld gas monitor Fixed sensors	Washroom Basement
Respirators	P2 / P3 respirators	Storage – Washroom

7.0 Management Responsibilities

7.1 Legal Duty to Notify

All EPSR employees and contractors are responsible for alerting management personnel to all environmental incidents or hazards which may result in an environmental incident, regardless of the nature or scale.

Notification responsibilities are detailed in the POEO Act (Section 148), which encompasses all site personnel, including contractors and sub-contractors. These can be categorised broadly as:

- the duty of an employee or any person undertaking an activity:
- Any person engaged as an employee or undertaking an activity at EPSR must, immediately after becoming aware of any potential incident, notify their relevant manager of the incident and all relevant information about it.
  This is to be undertaken as per **Section 7.2**; and
- the duty of the employer or occupier of a premises to notify:
- An employer or occupier of the premises on which the incident occurs, who is notified (or otherwise becomes aware of) a potential pollution incident, must undertake notification to the appropriate regulatory authority of any **"material harm incidents"**, including relevant information. Notification shall be undertaken by the General Manager as per outlined in **Section 7.2**.

7.2 Contact Details

7.2.1 Internal Contact Details and Responsibility

Name	Contact details	Position	Responsibility
[redacted]	[redacted]	General Manager	Responsible for authorising the PIRMP and all subsequent updates Responsible for ensuring adequate resourcing for implementation of the PIRMP Responsible for undertaking notification as defined in this PIRMP Authorised to liaise with the relevant authority Responsible for coordinating communications with affected community members
[redacted]	[redacted]	Health and Safety Manager	Responsible for undertaking notification as defined in this PIRMP Responsible for coordinating the response to a pollution incident Responsible for arranging testing and updating of the PIRMP Responsible for ensuring notification and training of PIRMP Facilitate site personnel in implementation of the PIRMP Communication of the PIRMP to site personnel
[redacted]	[redacted]	Process Engineer	Responsible for uploading current PIRMP to website. Responsible for arranging testing of affected areas as required in event of serious incident. Responsible for remediation of serious incident in conjunction with Health and Safety Manager and General Manager Responsible for auditing of PIRMP
[redacted]	[redacted]	Plant Manager	Responsible for authorising the PIRMP and all subsequent updates Responsible for ensuring adequate resourcing for implementation of the PIRMP Communication of the PIRMP to site personnel
[redacted]	[redacted]	Day Supervisor on duty	Responsible for assisting with the response to a pollution incident. Responsible to notify their relevant manager of the incident and all relevant information about it
[redacted]	[redacted]	Team Leaders on duty	Responsible for assisting with the response to a pollution incident under the guidance of the supervisor. Responsible to notify their relevant supervisor / manager of the incident and all relevant information related to it.
		Employees /Contractors and Subcontractors	Responsible for reporting immediately after becoming aware of any potential incident, notify their relevant team leader / supervisor or manager of the incident and all relevant information related to it. Render assistance with implementing this plan under the guidance of their relevant departmental head.

7.2.2 External Notification and reporting

As outlined in Section 7.0, internal reporting of environmental incidents is the responsibility of all employees and contractors. In the event of a material harm incident, response and notification must be undertaken as per **Table 7.2.3** which contains the following important information:

- the local government authority for the area in which the EPL is issued;
- the persons and authorities to be notified by Part 5.7 of the POEO Act; and
- the contact details of each relevant authority referred to in section 148 of the POEO Act.

The agencies listed in Table 7.2.3 must be contacted in the order outlined below:

Table 7.2.3 PIRMP Notification Requirements

Agency	Contact details
Fire and Rescue	000 (only to be contacted first if fire or rescue services are required)
EPA	13 15 55
WWCC	1300 292 442
Ministry of Health	13 77 88 (ask for Public Health Officer on call)
Safe Work	13 10 50

In the instance of identification of an environmental incident or hazard, the personnel will report the issue immediately to their supervisor, who in turn shall report it to the General Manager. Immediately is taken to mean 'promptly and without delay'. As per guidance provided by the EPA, the decision on whether to notify the incident in accordance with Part 5.7 of the POEO Act should not delay immediate actions to provide for the safety of people or contain a pollution incident. However, incident notification will be made as soon as it is safe to do so.

8.0 Notification to Local Landholders and Community

Community notification shall be undertaken at the determination of the General Manager. Names and contact details of stakeholders, including local and downstream residents are included in the Social Involvement Plan.

The following notification methodology is proposed to be utilised as required:

- early warnings: same day telephone notification to landholders who may be affected by the incident over the subsequent 24-hour period; and
- updates: follow up phone calls to all landholders who may have been notified by the initial early warning. Updates are to be provided to the broader local community in affected areas via information sheets or newsletters, Community Consultative Committee meetings, media statements or any other strategy as defined in the Social Involvement Plan.

Priority will be granted to notification of neighbouring premises in close proximity. Information provided to the community will be relevant to the incident and may include the following details:

- type of incident that has occurred.
- potential impacts local landholders and the community.
- site contact details; and
- advice or recommendations based on the incident type and scale.

Table 8.1 Landholder and Community Contact details

Neighbours	Contact details
Warehousing North of premise (formerly Wool Combing)	[redacted]
RTS (Logistics)	[redacted]
Enirgi Administration Offices (located 212 East Bomen Road, adjoining boundaries)	[redacted]

9.0 Incident Management

A pollution incident is defined in the POEO Act as an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

In the case of a material harm incident (refer to Section 10.0), prior to any other action, the site must contact 000 if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

If the material harm incident does not pose any threat to human health or property, concurrently with contacting emergency services (000), all possible actions should be taken to control the pollution incident and minimise health, safety, and environmental consequences. These actions must be employed to the maximum extent possible to:

- provide for the safety of people at and within the vicinity of the site; and
- contain the pollution incident.

In compliance with Emergency Management Plan, the actions to be implemented at EPSR in the event of an incident include the following:

1. Secure the scene and contain the incident.
2. Gather information (i.e. environmental monitoring)
3. Determine the investigation level.
4. Commence RIMS reporting.
5. Review and classify information and determine actions.
6. Complete actions

Incident management at EPSR focuses on actions to:

- secure and assign necessary response resources, including equipment and/or personnel, to minimise the environmental impacts associated with an incident.
- provide effective response operations which are carried out in a safe, well-organised, legal, and effective fashion.
- provide for the safety and welfare of all responders, employees, contractors, and visitors.
- continuously assess the incident to determine the adequacy of response operations and the need for further assistance.
- manage stakeholders arriving at site.
- minimise effects on people, the environment, property, production, and company reputation.
- implement an environmental monitoring program to quantify impacts as a result of an incident as well as to be used as the basis to notify adjacent landholders and downstream water users as to whether avoidance or remediation measures are required.

EPSR has limited authority to undertake pollution management activities on private property, or outside the site boundary and in such cases will liaise directly and provide appropriate assistance to the relevant authority, landowner, and emergency services.

10.0 Determination of Material Harm

Following containment of the incident, immediate action must be taken to determine if the incident can be classified as a 'material harm incident', i.e., considered to be causing or threatening material harm. As defined by Section 147 of the POEO Act, a material harm incident has occurred if the incident:

- involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or

- results in actual or potential loss (including all reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or

remediate harm to the environment) or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations).

The determination of a material harm incident and if notification required will be made by the General Manager. If the General Manager is not available immediately, the determination and if notification will be made by the Divisional Managing Director.

11.0 Training and Testing

11.1 Pollution incident training response

Training of personnel in incident response will occur at least annually, in the form of toolbox talks or simulated incident exercises. The frequency of training will be commensurate with the risk of pollution incidents at the site. All training records, including the name of the person undertaking training and date of training, shall be maintained in employee files located on the Share Drive under BOM > Human Capital.

11.2 PIRMP testing

The PIRMP will be tested routinely to ensure that the information included in the plan is accurate and up to date and the plan is capable of being implemented in an effective and efficient manner.

The PIRMP will be tested on an annual basis.

PIRMP will be tested within one month of any pollution incident occurring – an action for the test to be conducted will be added in the incident report investigation of the pollution incident.

Routine testing will be undertaken in the form of either desktop simulations or practical exercises / drills.

APPENDIX A

Risk Register

Risk Consequence Type	Risk Subcategory	Likelihood	RA Consequence	Control – Pre-emptive action
Off Site Contamination from emissions during bag house/bag failures	Off Site Impact	Almost Certain	Moderate	On-line stack emission monitoring Reporting of issues with Baghouse Operation Emission monitoring instrument calibration Baghouse preventative maintenance program Opacity reading and Alarm Over Temperature protection
Airborne Contaminates	Onsite and Off-Site Impact	Possible	Moderate	Internal extraction system Wet Scrubber Baghouse Preventative operational maintenance Closed facility House Keeping
Off Site Flow of Contamination stormwater	Off Site Impact	Almost Certain	Minor	Daily Checks Housekeeping WTP Operation Preventative Maintenance Sump pumps Storage and handling of Chemicals Stormwater collection and retention
Air borne dust from plant movement	On and Off-Site Impact	Possible	Minor	Sealed ground and building floors Hardstand services daily wash down Wheel Wash for plant movement Wastewater directed to sediment pond basin
Groundwater contamination on site from operational activities	On Site Impact	Possible	Moderate	Maintenance of internal drains and pits and sediment ponds Groundwater monitoring Sealed ground and building floors with leak detection devices where required

Risk Consequence Type	Risk Subcategory	Likelihood	RA Consequence	Control – Pre-emptive action
Spills during unloading of Chemicals	On Site Impact	Possible	Moderate	Deliver only in Bunding areas Storage and Handling Chemicals procedure Spill kits located in risk areas Site Training
Incorrect waste disposal	Off site impact	Possible	High	Correct disposal of waste as per guidelines On site training Incorporate re-use and recycle where possible
Natural Gas igniting	On site and off site	Possible	High	Regular monitoring and checks Fitted as per AS standards Certified operators to provide service only
Oil in Oxygen	On Site and Off Site	Possible	High	Regular monitoring and checks Certified operators to provide service only Fitted as per AS standards
Transformers igniting	On Site and Off Site	Possible	High	Regular monitoring and HV maintenance Certified operators to provide service only
Steam Explosion	On Site	Possible	High	Regular servicing and monitoring water quality Pressure release valves and disks
Flammable Goods and Storage of Chemicals	On site and Off site	Possible	High	Regular servicing and monitoring keeping levels at minimal Housekeeping
Oxygen Tanks	On Site and Off Site	Possible	High	Regular monitoring and checks Certified operators to provide service only Fitted as per AS standards Restricted Area
VPSA Plant – Oxygen leak	On Site	Possible	Minor	Low pressure, low level of contained storage Installed to AS standards, Pressure vessel inspections by authorised inspector

Risk Matrix

LIKELIHOOD	CONSEQUENCE				
	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	High 9	High 16	Extreme 20	Extreme 23	Extreme 25
Likely	Moderate 6	High 13	High 18	Extreme 22	Extreme 24
Possible	Low 4	Moderate 11	High 15	Extreme 19	Extreme 21
Unlikely	Low 2	Low 7	Moderate 12	High 14	Extreme 17
Rare	Low 1	Low 3	Moderate 5	High 8	High 10

Likelihood

Almost Certain	Likely	Possible	Unlikely	Rare
The risk is expected to occur in most circumstances, say daily or may already be happening.	The risk will probably occur in most circumstances say monthly.	The risk might occur at some time, for example once per year or have a 1 in 20 chance of occurring.	The risk could occur at some time, for example once in a 10 year period or have a 1 in 100 chance of occurring.	May occur only in exceptional circumstances, that is a less than 1% chance of occurring.

Consequence

Insignificant	Minor	Moderate	Major	Catastrophic
Safety & Health				
Report Only. No treatment required.	First Aid Injury/Treatment.	Medical Treatment Injury or Lost Time Injury. Short term/non-enduring measurable health effects.	Extensive injuries, permanent part disability. Leads to illness that compromises quality of life without having an effect on life expectancy.	Fatality(s) or permanent serious disability(s). Leads to illness that significantly reduces life span or causes death.
Environment				
No discernable impact or measurable impairment – for example, not exceeding published guideline values for "normal" or "background" levels. Internally reported.	Minor effects on biological or physical environment. Minor short-medium term damage to a localised area or that ceases once the event is over.	Measurable impairment on biological or physical environment but not affecting ecosystem function. Short-medium term impacts, where the ecosystem will recover quickly and without intervention.	Serious environmental effects with some impairment of ecosystem function. Relatively widespread medium-long term impacts, requiring remediation, where ecosystem will recover over time once clean-up has been completed.	Very serious environmental effects with significant impairment of ecosystem function. Long term, widespread effects. Remediation required.
Quality/Supply				
Can easily be absorbed through normal activity.	Consequences can be absorbed, but management effort is required to minimise impact. Minor delivery delays.	Significant event, which can be managed under special circumstances. Some customers seek alternative supply for short term.	Major event, with prioritised and focused management will be endured. Some customers lost to alternative supplier.	Extreme event with potential to lead to failure of most objectives or collapse of part of the business. Key customers lost to alternative supplier.
Operations				
Loss of production time of < 9 hours	Loss of production time of between 9 hours or 3.5 days	Loss of production time between 3.5 days and 5 weeks.	Loss of production time between 5 weeks and 3 months.	Loss production time of > 3 months.
Legal/Compliance				
Unlikely to result in adverse regulatory response or action.	Minor non-compliances and breaches of regulation or consent conditions. Not likely to result in regulatory action, may result in Infringement Notice. Incident reportable to regulatory authorities	Serious breach of regulation or consent conditions with potential for regulatory action such as issuance of a formal notice, a fine or prosecution.	Major breach of regulation or consent condition that is expected to attract regulatory attention. Investigation, prosecution and/or major fine possible.	May be considered 'wilful' or 'negligent' by regulator. Significant prosecution and fines likely. May result in significant litigation, including class actions. May jeopardise future approvals.
Stakeholder				
Little or no stakeholder interest.	Minor, adverse local public or media attention and complaints. Reputation is adversely affected with a small number affected people.	Attention from local media and/or heightened concern by local community. Criticism by NGO's. Reputation impacted with some stakeholders.	Significant adverse national media/public. Reputation impacted with significant number of stakeholders. Share price may be affected.	Serious public or media outcry (international coverage). Reputation impacted with majority of key stakeholders. Share price seriously affected.
Organisational Structure				
Change to non-core business units within the organisational structure.	Minor change to organisational structure.	Significant change to the core organisational structure or significant change to non-core business entities.	Major change to the core organisational structure.	Extreme changes to the core organisational structure.
Financial Impact				
Impact less than: 0.5M$ at a Group level; 0.1M$ at an operational level; 0.02M$ for other activities	Impact between: 0.5M$ and 1M$ at a Group level; 0.1M$ and 0.2M$ at an operational; 0.02M$ and 0.1M$ for other activities	Impact between: 1M$ and 10M$ at a Group level; 0.2M$ and 2.5M$ at operational level; 0.1M$ and 1M$ for other activities	Impact between: 10M$ and 50M$ at a Group level; 2.5M$ and 10M$ at operational level; 1M$ and 2M$ for other activities	Impact greater than: 50M$ at a Group level; 10M$ at a mine/smelter level operational level; 2M$ for other activities

APPENDIX B

Potential Pollutants

Pollutant Name	Maximum Quantity	Storage Area
Liquid (Refrigerated) Oxygen	66,000L Tank Storage	Bag House Area
Onsite generation of Oxygen – low pressure	6000L X 3 Tanks + Pipeline	South of Warehouse (External)
Sodium Hydroxide Flake - Caustic	8,000kg Roof stored	Casting Storage Racks
Sodium Hydroxide Solution (<50%) Caustic	24,000L Tank - Roof Stored	CX Area - Vessel
Sodium Sulphide	2,000L Roof Stored	Warehouse
Sulphuric Acid (<50%)	18,000L Roof Stored	CX Area
Antimony	2,000L Roof Stored	Locked Container (east side of building)
Arsenic	1,000Kg Roof Stored	Locked Container (east side of building)
Diesel fuel	3,000L Tank	Refinery (east side road external)
Hydrogen peroxide	2,000L Roof Stored	Open sided Container (between admin and maintenance buildings)
Liquid Petroleum Gas	180L x 3 Cylinders	PK500 (west side road external)
Sodium carbonate – Soda Ash - Bulk	55,000kg Silo	CX Area
Sodium carbonate – Soda Ash - Bag	100,000kg Roof Stored	Warehouse
Sodium Nitrate	8,000kg Roof Stored	Casting Storage Racks
Sulphur	2,000kg Roof Stored	Refinery (internal)
Coke	90,000kg Roof Stored	Prep/Charge Area
De-foamer (Antifoamer)	500kg Roof Stored	CX Area
Diatomaceous Earth – Filter Acid	2,000kg Roof Stored	CX Area
Flocculent	1,000kg Roof Stored	CX Area
Iron sulphide – Iron pyrites	10,000kg Roof Stored	Casting Storage Racks
Sodium Sulphate	50,000kg Silo	CX Crystalliser
Red Phosphorus	3,000kg Roof Stored	Locked Container (east side of building)

APPENDIX C

Site Maps

Legend:

Landholder/s; STP; Sediment pond/s; WTP; Storm water drainage; Fire Hydrant Booster