

## 1. PURPOSE

The purpose of this Pollution Incident Response Management (PIRMP) is to describe Ingal Civil's response to a potential pollution incident and to meet requirements of the Protection of Environment Operations Act 1997.

This plan covers description of potential hazards, actions to be taken to prevent environmental harm and details of communication required in the event of pollution incident.

## 2. SCOPE

The plan covers Minto NSW site operated by Ingal Civil Products Pty Ltd located at 57 - 65, Alrds Rd, Minto NSW 2566.

The PIRMP shall include:

- Location and neighboring land uses
- Environmental hazards and risk assessments
- Pre-emptive actions to minimize risks of pollution incident
- Inventory of potential pollutants
- Inventory of safety equipment for incident response
- Pollution incident response procedure including method of notifying occupiers of affected premises
- Details of staff training in relation to PIRMP
- Method of testing, reviewing and maintaining the PIRMP

## 3. INTRODUCTION

### 3.1 Site Description

Table 3-1 describes the subject site. The site is located in an established industrial area of Girraween, located approximately 25km west-northwest of Sydney CBD. Seven buildings are present on the site including workshop, two storage buildings, amenities building, structural and spinning galvanizing plant and office building.

Pedestrian and vehicular access to the site is via Mandoon Road which abuts the northern site boundary, and Amax Avenue, which abuts the southern boundary.

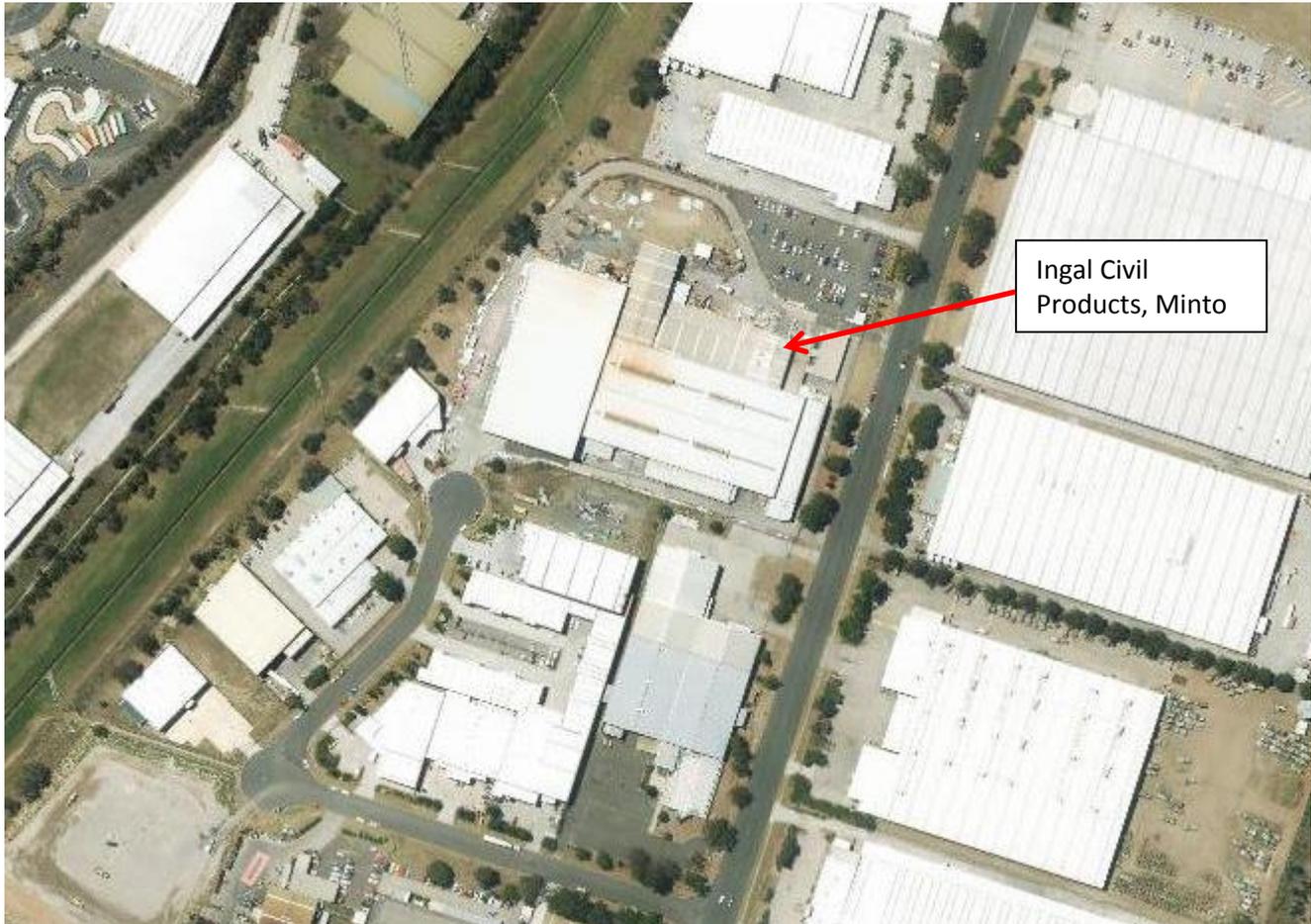
**Table 3-1 Site Details**

Item	Details
Site Name	Ingal Civil Products
Organisation Name	Industrial Galvanizers Corporation Pty Ltd
Site Address	57 – 65 Airds Rd, Minto.
Local Government Authority	Campbelltown Council
Current Zoning	Industrial Use
Site Area	Approximately 11,700m <sup>2</sup>

The location of the site is shown in Figure 3-1.

### **3.2 *Neighboring Land Uses***

The site is established in an established commercial / industrial area of Minto, with a range of light industry present in the proximity of the site. This plan covers the Ingal Civil Products factory and administration site at Minto, a south west suburb in Sydney. The site is bounded by Airds Road, two factories on either side and a creek to the rear.



**Figure 3-1: Ingal Civil Products, Minto Site**

**Table 3-2 Details of Neighboring Properties**

<b>No</b>	<b>Name</b>	<b>Address</b>	<b>Phone</b>
1	Impreglon	43-55 Airds Road, Minto	02 96029833
2	VIP Packaging	42 Airds Road, Minto	02 87963111
3	Plaspak Minto	67-77 Airds Road, Minto	02 87961100
4	Kay's Custom Sportswear	10-12 Montore Road, Minto	02 96031775
5	Redox Pty Ltd	2 Swettenham Road, Minto	02 97333000
6	Fastlane Karting	20 Swettenham Road, Minto	02 80041919
7	Bow Bowing Canal	NA	NA

### **3.3 Proximity to Local Sensitive Receptors**

Potentially sensitive ecological and human receptors for the Ingal Civil (Minto) site have been identified as follows:

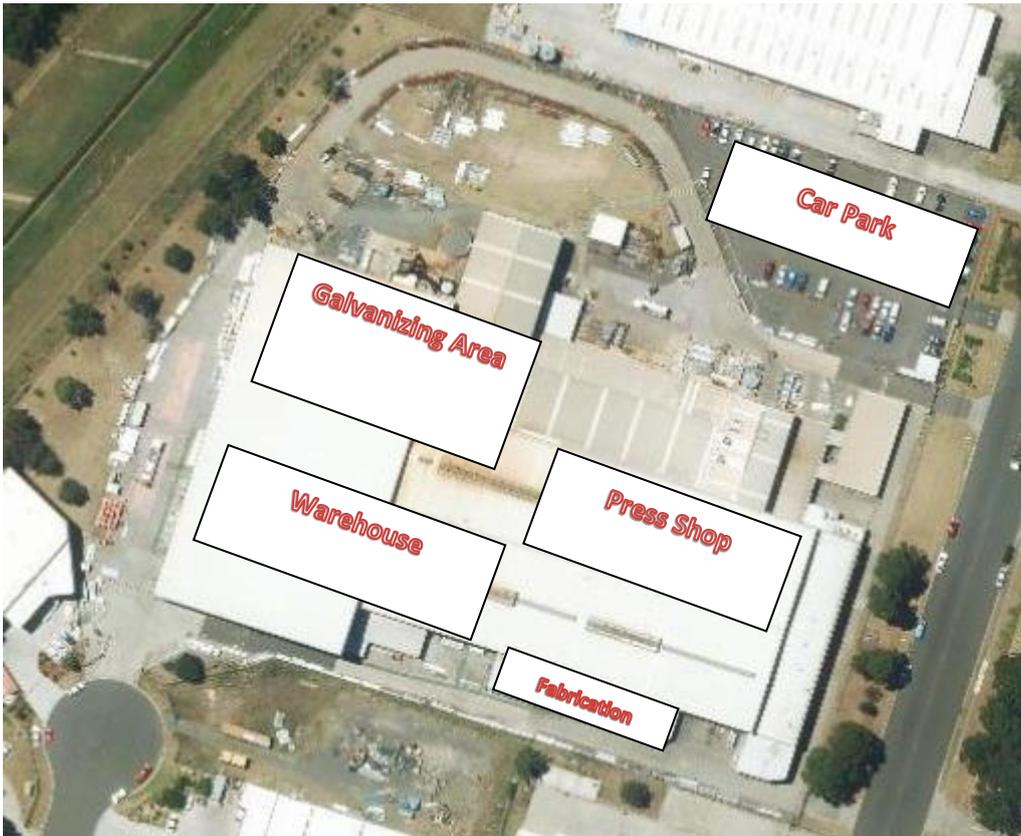
A. Ecological receptors:

- The underlying groundwater;
- Bow Bowing Canal, located 20M W to the site.

B. Human Receptors:

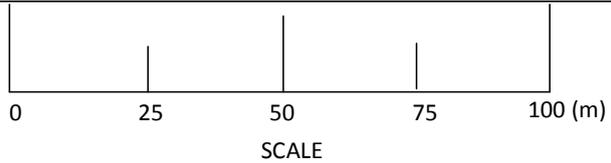
- Neighboring properties.

3.4 Site Layout

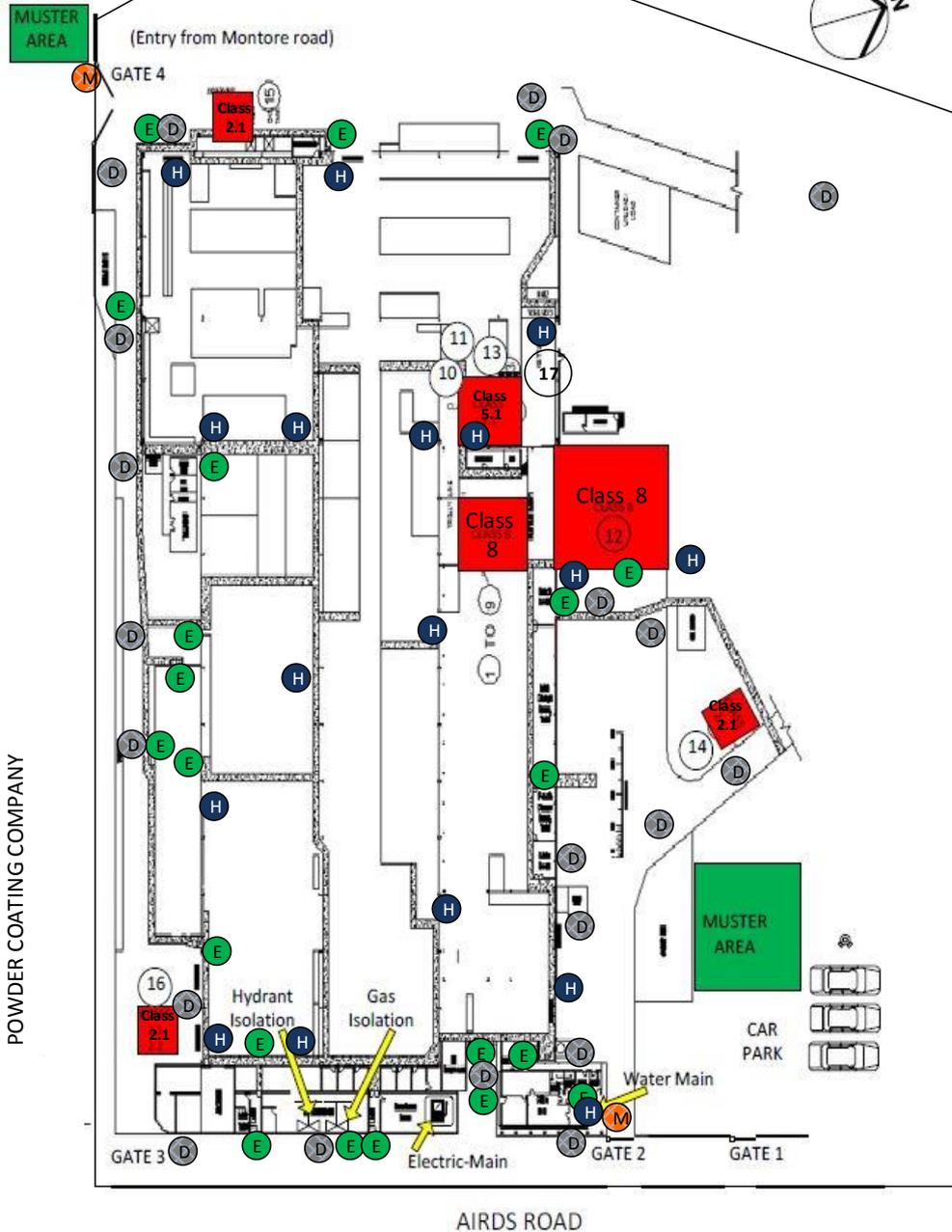


**POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN  
INGAL CIVIL PRODUCTS, MINTO**

CHIEF MEDIA PTY LTD



BOW BOWING CANAL



- |              |         |                                    |
|--------------|---------|------------------------------------|
| EXIT         | 1 - 9   | PRE-TREATMENT TANKS                |
| MANIFEST BOX | 10 - 11 | SODIUM BICHROMATE TANKS            |
| DRAINS       | 12      | CHEMICAL STORAGE AREA              |
| HYDRANTS     | 13      | TOXICS CABINET – SODIUM BICHROMATE |
| 17           | 14, 16  | GAS BOTTLE STORAGE                 |
|              | 15      | CNG RE-FILLING STATION             |

### **3.5 Key Activities & Processes**

#### **3.5.1 Hot Dip Galvanizing**

Galvanizing is a process undertaken to coat ferrous metals and metal products in a layer of zinc to prolong their life. The metal to be coated requires pre-treatment prior to being immersed into the zinc bath in order to remove rust, grease and other materials, and therefore to promote the galvanizing process.

Pre-treatment can include treatment of the metal with an alkaline degreasing solution, an acid pickling solution, water rinse, and a pre-flux solution. The pre-flux solution is usually comprised of zinc ammonium chloride ( $ZnCl_2 \cdot 3NH_4Cl$ ), and is used to promote the zinc-metal bond.

After pre-treatment, the metal is immersed in molten zinc followed by a quench bath.

Figure 3-3 shows a basic galvanizing flow diagram and expected emission points.

#### **3.5.2 Chemical Storage and Handling**

A number of chemicals are required for the galvanizing process and these are stored and handled on site. Some of the chemicals required for the process do not require storage at the site and these chemicals are delivered, as required, to site by bulk tanker and transferred directly to the appropriate process chemical tank.

#### **3.5.3 Typical Emissions**

Galvanizing generally produces emissions to air as well as waste. Hydrochloric acid fumes may be emitted from process tanks, while ammonia and ammonium chloride emissions to air can occur from the pre-flux solution and during the immersion of steel into the galvanizing bath.

Waste liquids may be generated from spent pre-treatment solutions and from quenching activities after galvanizing. Waste liquids are controlled on site and transferred off-site under a trade waste agreement or via approved waste disposal contractors (i.e. no emissions are expected).

The galvanizing process also generates solid wastes. Solid wastes include a zinc oxide ash that is periodically removed from the surface of the galvanizing bath and zinc iron alloy dross removed from the bottom of the galvanizing bath, as well as solids in spent solutions and wastewater treatment sludge.

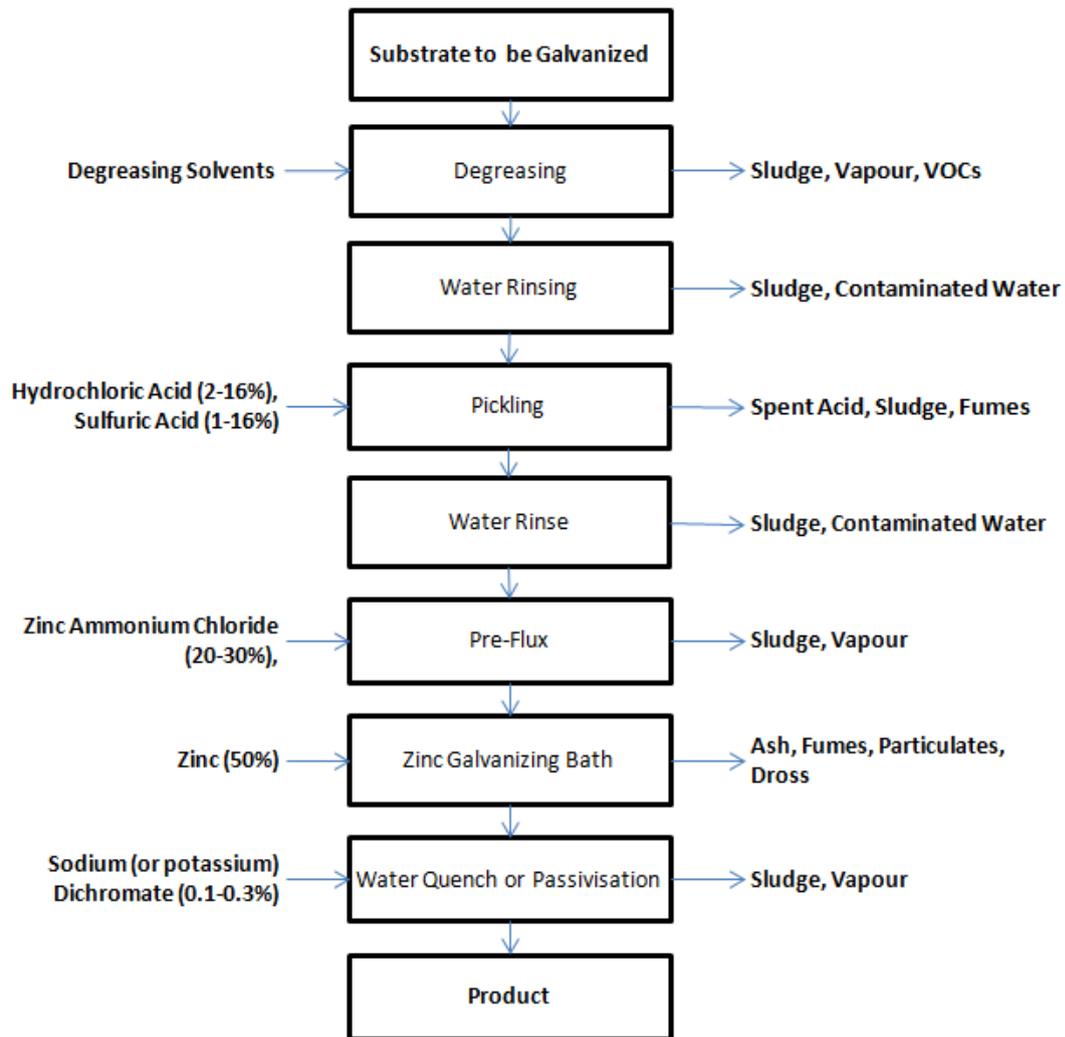


Figure 3-3: The basic galvanizing process steps and likely emission points

## 4 RISK IDENTIFICATION

The following documentation has been used to assist in the preparation of this PIRMP.

- Emergency & Pollution Incident response plan
- Dangerous Goods Manifest

### 4.1 Risk Assessment Process

The environmental risk assessment shall identify aspects that may cause a risk of harm to the environment and shall assess their impact. Environmental risk assessments are used for determining the significance of impacts on the environment. The process of risk assessment is explained below.

#### 1. How likely is an event to occur?

Consider the number of exposures, and the cumulative failures required to let the event occur.

Level	Descriptor	Description
A	Almost certain	The event is expected to occur in most circumstances
B	Likely	The event will probably occur in most circumstances
C	Moderate	The event should occur at some time
D	Unlikely	The event could occur at some time
E	Rare	The event may occur only in exceptional circumstances

#### 2. If it does, what are the worst-case scenario consequences?

Perhaps better to work back from 5 to 1. If in doubt, select the higher option.

Level	Descriptor	Example detail description
1	Insignificant	Low financial loss, negligible environmental impact
2	Minor	On site release immediately contained, minor and reversible impact. Generation of waste. Normal resource consumption. Medium financial loss.
3	Moderate	On site release contained with outside assistance. Potential release to stormwater. Incident reported to authorities. Minor but reversible. Generation of waste requiring disposal as controlled wastes. Significant consumption of resources e.g. gas, water, electricity, chemicals, zinc etc. High financial loss.
4	Major	Loss of production capability. Offsite release contained with outside assistance. Incident reported to authorities, major but reversible impact. Major financial loss.
5	Catastrophic	Toxic release off site with detrimental effect. Immediate involvement of authorities, major and irreversible impact, huge financial loss.

**3. Add the levels above to find risk level**

(I.e. Likelihood “3”, Consequence “3”, would equal “6” or High Risk)

LEVEL OF RISK	Consequences				
	Insignificant	Minor	Moderate	Major	Catastrophic
Likelihood	1	2	3	4	5
A (almost certain)	S	S	H	H	H
B (likely)	M	S	S	H	H
C (moderate)	L	M	S	H	H
D (unlikely)	L	L	M	S	H
E (rare)	L	L	M	S	S

Risk Prioritisation		
	<b>RISK LEVEL</b>	<b>SUGGESTED ACTIONS</b>
	Low Risk	Manage by routine procedures
	Moderate Risk	Responsibility and action dates must be specified
	Significant Risk	Reduce as soon as possible
	High Risk	Immediate action to reduce Risk

**4.2 Hazard Identification and Control**

The major activities and/or hazards that could cause potential significant pollution type incidents will include:

**Gas Storage and Handling**

Natural gas is used on site for the galvanizing process and for the operation of site forklifts. There are also minor storages of other gases associated with maintenance type activities. The risk of gas leaks or explosions have been assessed as low to moderate.

**Chemical Storage and Handling**

For those chemicals that require storage on site, the chemical storage and processing areas comply with the relevant legal requirements and are maintained with the minimum storage quantities required to maintain operations.

Where bulk liquid chemicals are stored in the process tanks within the galvanizing buildings, the tanks are located within bunded areas so that any spills or drips from the tanks can be contained. Where drums and other packaged chemicals are stored, all liquid chemicals in drums are stored on spill control pallets.

Other measures implemented where chemicals are stored and handled include:

- Equipment for the cleanup of reasonably foreseeable spills or leaks of chemicals are kept on site and readily accessible;
- Placarding and signage for the site includes “HAZCHEM” outer warning placards and placards

for all of the bulk processing tanks and packaged chemical storage areas.

- Material Safety Data Sheets (MSDS) for all substances stored and handled on the site are obtained and maintained up to date.
- All personnel responsible for chemical storage and handling activities are trained in the safe storage and handling of chemicals.

### **Chemical Deliveries and Disposals**

Chemical deliveries to the site take place in a couple of different ways. Some chemicals may be delivered to site in packages, i.e. drums, intermediate bulk containers (IBC's) or in solid form in the form of 25kg bags.

There are also specific bulk deliveries of process chemicals that are carried out in a designated chemical transfer area where there is a provision for emergency spill containment.

The areas used for bulk chemical solution deliveries and disposals are a dedicated transfer area.

The site also maintains the storm water isolation valve that is used to isolate the site's storm water system.

### **Waste Storage**

The site generates solid process waste that may require interim storage on site. The solid waste in this instance is stored in suitable containers that are kept sealed to prevent loss of the contents to the environment.

### **Baghouse Failure**

The site operates the baghouse for the collection and treatment of air emissions generated during the galvanizing process. Failure of the baghouse could lead to higher levels of fume emissions above normal fume emission levels. The site maintains an inspection and maintenance system to ensure the baghouse is kept in good working order. Annual stack emission testing is also completed to ensure emissions meet regulatory criteria.

## **4.3 *Emergency Response Equipment***

The site maintains the following emergency response equipment and has the ability to engage external spill control assistance:

- Storm water isolation valves
- Spill kits
- Fire extinguishers
- Fire hose reels
- Water pumps

**4.4 Inventory of Potential Pollutants – including maximum storage volume**

<b>Substance</b>	<b>Class</b>	<b>Sub Risk</b>	<b>UN No.</b>	<b>Pack Group</b>	<b>Maximum Storage Volume (kL)</b>
Sodium Hydroxide Solution (approx. 12%)	8	N/A	1824	II	36kL
Hydrochloric Acid Solution	8	N/A	1789	II	108kL
Ammonia Solution (10-35%)	8	N/A	2672	III	18kL
Oxidising Liquid, Toxic, n.o.s	5.1	6.1	3099	II	36KL
Sodium Hydroxide Solution (50%)	8	N/A	1824	II	2kL
Ammonia Solution	8	NA	2672	III	1kL
Oxidising Liquid, Toxic, n.o.s (50% solution)	5.1	6.1	3099	II	0.4kL
Liquefied Petroleum Gas	2.1	NA`	1075	NA	1kL
Compressed Natural Gas	2.1	N/A	1971	N/A	0.5kL
Compressed Oxygen	2.2	5.1	1072	NA	0.5kL
Dissolved Acetylene	2.1	NA	1001	NA	0.5kL
Compressed Argon	2.2	NA	1006	NA	0.75kL

## **5 INCIDENT RESPONSE PROCEDURE**

### **5.1 Notification Procedure – Neighbors**

The nature and direction of potential impact of the incident will determine the most appropriate neighbors to be notified.

Operations Manager or nominee present on-site at the time of incident will notify affected neighbors.

Notification of neighbors will be conducted via telephone or knocking on door if contact cannot be made via telephone.

### **5.2 Immediate Incident Response Procedure**

#### Site Management Team

- a. Managing Director
- b. Operations Manager
- c. Process Improvement Manager
- d. QEST Manager
- e. Operations Supervisor (Chief Fire Warden)

Chief Fire Warden or nominee present on site at the time of incident will ensure the following, after a pollution incident occurs;

1. Ensures all personnel are safe;
2. Ensures First Aid rendered as required;
3. Supervises containment of incident by on-site personnel;
4. Contacts Emergency Services (000) as required;
5. Site Management notified, called in following order until phone is answered;
  - a. Managing Director
  - b. Operations Manager
  - c. Operations Supervisor
  - d. QEST Manager
  - e. Process Improvement Manager

The second most senior position holder (as per site management team) present on site at the time of incident will notify authorities as per list.

If evacuation warrants following a pollution incident, site emergency control organization will assume the responsibility for site evacuation.

**POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN  
INGAL CIVIL PRODUCTS, MINTO**

5.2.1 Employee Procedure

<b>Safety First</b>	<ul style="list-style-type: none"> <li>Care for workers - Evacuate Area,</li> <li>Care for the Environment – e.g. Contain spills, put out fires; ONLY if safe to do so</li> </ul>		
<b>Treatment</b>	<b>Provide First Aid or Medical Treatment, if required</b>		
	Dr Tran / Dr. Houston	Phone: <b>98292900</b>	<b>Ingleburn Medical Centre</b> 2 Nardoo St, Ingleburn
	Ambulance:	<b>000 (triple zero)</b>	
	Hospital: <b>CAMPBELLTOWN</b>	Phone: <b>4634 3000</b>	Hospital Address: <b>THERRY ROAD, CAMPBELLTOWN</b>
<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>Stop the source of the spill immediately if it is safe to do so</li> <li>Contain the spill (Spill Kits) and control its flow from the site</li> <li>Report the spill to the Operations Manager if pollution has escaped the site or if the spill has potential to harm the environment</li> <li>Be safe rather than sorry; Report any pollution incident no matter how small, to the Manager</li> </ul>		
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>For large-scale hazardous spills call NSW Fire and Rescue immediately on 000 zero.</li> <li>Control pollution flow from the site where possible</li> <li>Report the spill to the Operations Manager or Managing Director if pollution has escaped the site or if the spill has potential to harm the environment</li> <li>Call Transpacific Industries (TPI) with details of spill so their emergency response crews can assist. <b>1800 774 557 (24hr Emergency Response Hotline)</b></li> <li>Call Key People listed below in order</li> </ul>		
<b>Notify Key People</b>	<b>Key people to be notified – work down the list until contact is made verbally</b>		
	Managing Director	John Dignam	Phone: 0459259111
	Operations Manager	Tad Jarominek	Phone: 0439564771
	Operations Supervisor	Murray Newell	Phone: 0417230481
	QEST Manager	Amit Gupta	Phone: 0437315547
	Maintenance Manager	Ganeshan Natarajan	Phone: 0437303776
<b>Media Relations</b>	<p>In the event of any pollution related incident, <b>ONLY</b> the Managing Director or his delegate are authorised to make any statements to the media or public.</p>		

5.2.2 Management Procedure

- The **Managing Director** is responsible for notifying the authorities in order as listed below.
- If the Managing Director is not available or immediately contactable, the **OPERATIONS MANAGER** shall be the person to take the responsibility for notifying the authorities immediately.
- Upon receipt of information regarding any pollution related incident on site, the Operations Manager must notify the **MANAGING DIRECTOR IMMEDIATELY**.
- **Last resort**, the responsibility to call the relevant authorities will reside with the QEST Manager or the Operations Supervisor or the Maintenance Manager in the event the MD and the Operations Manager have not been contactable.
- In the event of a major incident on site, **ONLY** the Managing Director or his delegate, shall be authorised to make any statements to the media or public.

SITE MANAGEMENT TEAM	AUTHORITIES TO NOTIFY OF POLLUTION INCIDENTS
<b>Managing Director</b>	<b>Environment Protection Authority (EPA)</b>  <b>Phone:</b>  <b>Tel: 131 555</b>
<b>Operations Manager</b>	<b>Ministry of Health</b>  <b>Phone:</b>  <b>Tel: (02) 9391 9000</b>
<b>Operations Manager</b>	<b>WorkCover NSW</b>  <b>Phone:</b>  <b>Tel: 131 050</b>
<b>Maintenance Manager</b>	<b>Holroyd Council</b>  <b>Phone:</b>  <b>Tel: (02) 9840 9840</b>
<b>QEST Manager</b>	<b>Fire and Rescue NSW</b>  <b>Phone:</b>  <b>Tel: 000</b>

**6 TRAINING AND TESTING**

**6.1 Training Requirements**

- All new employees are to receive a site induction that introduces the Environmental Policy, objectives and targets, environmental responsibilities and key environmental management rules and policies.
- All personnel are to be re-inducted at regular intervals, including team leaders and supervisors.
- Key emergency response personnel are to be provided with spill control training at least once every two years, or more frequently if emergency team members change.
- Toolbox sessions shall cover Environmental matters covering a variety of relevant topics at regular intervals. Toolbox sessions should also cover any environmental incidents recorded and reported.
- Environmental work instructions must be communicated to all employees so that employees have an understanding of relevant environmental management procedures relevant to their work areas.

**6.2 Plan testing, review and maintenance**

- An exercise drill will be completed randomly at least on an annual interval.
- This PIRMP will be reviewed on an annual basis or following a significant pollution incident covering deficiencies identified in drills.
- A level of supervision to ensure ongoing compliance will be provided (audits, monthly inspections, hazard reporting etc.)

**7. APPROVAL & HISTORY**

Issue	Amended paragraphs/pages	Amendment Details	Date Issued
1	New WI Issue	New WI Issue	Feb 2015
2	3.4 Site layout	Site map added	June 2016

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