

Aurizon Port Services NSW - Pollution Incident Response Management Plan


6 November 2023



**NOTIFICATION REQUIREMENTS
AND PROCESSES ARE DETAILED
ON PAGE 6 – 8.**

**IF NOTIFYING, HAVE PEN AND
PAPER AVAILABLE TO TAKE
NOTES AND RECORD
NOTIFICATION REFERENCE
NUMBERS.**

Plan Approval Table

Position	Name	Signature	Date
Principal Adviser Environment NSW	Harry Egan		06/11/2023

Revision History

Rev	Date	Author	Comments
1	24/02/2021	Romana Thefs	
2	30/05/2022	Harry Egan	Annual update
3	06/11/2023	Harry Egan	Annual update

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Glossary

Term	Definitions
Aurizon Ports	Aurizon Port Services NSW Pty Ltd
EPA	NSW Environment Protection Authority
EPL	Environmental Protection Licence
ERA	Environment Risk Register
PIRMP	Pollution Incident Response Management Plan
PON	Port of Newcastle

1.0 Introduction

Aurizon Port Services NSW Pty Ltd (Aurizon) holds Environment Protection Licence (EPL) 1431 with the NSW Environment Protection Authority (EPA) for 'Shipping in Bulk'. As per the *Protection of the Environment Operations Act 1997* (the POEO Act), the holder of an EPL must prepare, keep, test and implement a Pollution Incident Response Management Plan (PIRMP) that complies with Part 5.7A of the POEO Act in relation to the activity to which the licence relates.

1.1 Objectives

The objectives of the PIRMP are to:

- Minimise and control the risk of a pollution incident at the shipping terminal by identifying risks and implementing planned actions to minimise/manage those risks;
- Ensure comprehensive and timely communication of a pollution incident to relevant authorities, network operators, community and customers; and
- Ensure that the PIRMP is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the PIRMP is regularly tested for accuracy, currency and suitability.

1.2 Scope

The PIRMP covers all 'Shipping in Bulk' for Aurizon Port Services, including the loading and unloading of mineral concentrates.

The PIRMP applies to any person working at the ship loading facility.

1.3 EPL Details

Aurizon's EPL details are included in Table 1 below.

Table 1 - EPL Details

Criteria	Detail
Licensee:	Aurizon Port Services NSW Pty Ltd
EPL Number:	1431
Premises:	Carrington Shiploader Dyke No. 2 Berth Carrington NSW 2294
Contact Details:	Name: Harry Egan Position: Principal Adviser Environment (NSW)

Criteria	Detail
	Contact (BH and AFH): 0438 13 66 97
	Email: Harry.Egan@aurizon.com.au
Website Address:	https://www.aurizon.com.au/
Scheduled Activity:	Shipping in bulk
Fee Based Activity:	Shipping in bulk: >500000 T of annual capacity to load and unload

1.4 Supporting Documentation

The PIRMP has been developed with consultation to the EPA's *Guidelines: Pollution Incident Response Management Plans (2020)*.

The PIRMP also supports and meets the requirement of the following Aurizon procedures and principles:

- 16-PRI-035 – Enterprise-Wide Principle: Enterprise Incident Management
- RD-SAF-0012-COM-Guide001 Incident Management Framework Version 1.3
- 16-PLA-001-COM - Enterprise-Wide Plan: Rail Emergency Management Plan
- 16-PRI-021 - Enterprise-Wide Principle: Management of Notifiable Incidents

2.0 Notification Requirements, Contacts and Responsibilities

2.1 PIRMP Process

The PIRMP notification process is outlined below in Figure 1.



Figure 1 - PIRMP Notification Process

2.2 PIRMP Activation Trigger

If a 'Pollution Incident' occurs in the course of an activity so that 'Material Harm' to the environment is caused or threatened, Aurizon must **IMMEDIATELY** implement this plan.

This plan will generally be activated by SAE, Operations Manager or Site Supervisor. The GM or delegate will inform relevant responsible persons as listed in Section 2.4 either verbally or correspondence of a suspected incident.

A *Pollution Incident* is defined 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 does not include an incident or set of circumstances involving only the emission of any noise.

Material Harm is defined as:

- 1) *It involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*
- 2) *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)” (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.)*

2.3 Key Notification Information

Where known, the following information is required to be recorded by the Operations Manager or Site Supervisor and communicated to the person responsible for undertaking the notification to the relevant authorities:

- Time/date of Incident;
- nature of incident;
- duration of incident;
- location of incident (nearest town/chainage);
- nearby sensitive receivers (creeks/streams, public/private property, stormwater inlets);
- volume of pollutants lost; and
- Actions completed to date to control the incident.

All information must be factual and not speculation. If something is unknown, state that it is currently unknown. An incident details form template is included in Appendix A if required.

2.4 PIRMP Activation Responsible Persons

Activation of the PIRMP and notification of relevant regulatory authorities is the responsibility of the personnel detailed in Table 2 in order of delegation. It is the responsibility of the business unit General Manager to confirm the notification delegate. If a delegate is unavailable responsibility shifts to the next listed delegate.

Table 2 - PIRMP Activation and Responsible Person

Delegation	Position	Name	Contact	Email
1	Principal Adviser Environment	Harry Egan	0439 805 317	Harry.Egan@aurizon.com.au
2	Manager Environment	Mark Harris	0419 365 993	Mark.Harris@aurizon.com.au
3	Operations Manager	Matthew Gilbert	0407 467 328	Matthew.Gilbert@aurizon.com.au
4	Site Supervisor	Ron Burgoyne	0402 428 716	Ron.Burgoyne@aurizon.com.au
5	GM Operations - Bulk	Tamara Wood	0409 468 872	Tamara.Wood@aurizon.com.au

2.5 Regulatory Contacts

Authorities required to be notified in the case of a pollution incident that causes or threatens to cause material harm to the environment are listed in Table 3. It is the responsibility of the delegate identified in Section 2.4 to notify all regulatory contacts of the information detailed in Section 2.3.

Table 3 - Regulatory Contacts

Priority	Relevant Authority	Contact details	Further Information
1	Fire and Rescue NSW	000	Use 000 in case of an emergency
2	Port of Newcastle Emergency Incident Report Line	4929 3890	
3	Port of Newcastle Dyke Point Security	4985 8222	
4	NSW EPA	131 555	Environment Line (24/7 hotline)
5	Environmental Health Officer	Ph: 02 4924 6477	(diverts to John Hunter Hospital) - ask for Environmental Health Officer on call
6	WorkCover	13 10 50	Select incident notification (24/7 hotline)
7	Newcastle City Council	02 4974 2000	

2.6 Community Notification

Table 4 lists the relevant contacts for adjoining landowner/occupiers to be used in the case of a pollution incident where there is the potential to impact these neighbours.

Table 4 - Adjoining Landowners/Occupiers Contacts

Landowners/Occupiers	Contact Details
Port of Newcastle	02 4985 8222
Australian Rail and Track Corporation – Neighbour	0408 616 692
BP Australia – Neighbour	0407 603 836
Minion Enterprises- Neighbour	0439 800 120
Toll Resources – Neighbour	0417 256 473
NAT Grain Terminal – Neighbour	02 4940 8339
Patricks – Neighbour	0407 452 076

All community notification will be undertaken in consultation with, and possibly with the support of, emergency services.

Communication is to be fit-for-purpose and tailored to the:

- Nature of the incident;
- Phase of response (e.g. initial community notifications, update communications, clean-up/recovery); and
- Types of neighbours who need to receive information.

Aurizon communications may consist of:

- Social media;
- Telephone calls, SMS or other messaging systems;
- Emails to community representatives (as agreed through a community consultation process);
- Letterbox drops; and
- Doorknocking of potentially affected community members.

3.0 Action During and Post Incident

Management of pollution incidents are undertaken in compliance with the 16-PLA-001-COM - Enterprise-Wide Plan: Rail Emergency Management Plan and Site Emergency Response Plan as generally summarised in Table 5.

Dependent on the nature of the incident, management of the pollution response may be managed by the Operations Coordinator or by an Incident Manager as appointed by the business unit General Manager.

All incident responses are undertaken in consultation with internal subject matters experts, Port of Newcastle and emergency services/regulators as required.

Table 5 - Incident Response

Stage	Description
Incident Notification	Operational incidents will first be known through identification or notification to the Operations Manager or Site Supervisor.
	Operations Manager or Site Supervisor are responsible for notification to internal stakeholders and emergency services as required. The PIRMP will be triggered at this stage as required.
Immediate (On-site)	Site personnel attempt to control incident with available supplies where safe and available to do so as per LMS Spill Control Training.
Evacuation	Aurizon Port Services uses radio/verbal communication to evacuate the facility where an incident occurs which threatens human safety and is beyond the capability of site personnel to manage. There are two separate muster areas depending if separated by a train on the siding. Manager/Supervisor are responsible for activating any evacuation.
Activation	Timely escalation of an incident, or activation of a more senior team within the structure, is imperative should an incident become too large to manage with the current resources. Upon notification, it is the responsibility of the Business Unit GM/Director to request the activation of an Incident Management Team (IMT).
Response and Recovery	The offsite management of incidents is coordinated by Aurizon through an IMT. The purpose of the IMT is to bring together a cross-functional team to assess the impact of the incident and determine required management measures.
	The IMT is Aurizon's offsite coordination point for interaction with the RIO nominated point of contact. Upon activation of the IMT, an Aurizon Incident Commander will be nominated by the Business Unit GM/Director if required.
Watching Brief	As the response to the incident gets closer to completion, a smaller group of key stakeholders from the IMT will continue to meet on a regular basis to ensure the key recovery milestones are achieved as per initial plans developed by the Aurizon IMT. This team shall identify the criteria which would require re-activation of the IMT
Debrief	<p>It is the responsibility of the GM to schedule and facilitate a debrief meeting with onsite and offsite stakeholders. The debrief shall be conducted no greater than two weeks after the last IMT meeting for the incident. The purpose of the debrief is to identify and confirm:</p> <ul style="list-style-type: none"> Processes which worked well. Elements of the process which did not work well and opportunities for improvement. Any changes to relevant emergency plans and/or associated tools and resources.

4.0 Environmental Management

4.1 Environmental Risk Assessment

To identify hazards to human health and the environment associated with the activity an Environmental Risk Assessment (ERA) has been developed. The ERA considers the likelihood and consequence of a hazard occurring and the controls required to mitigate that risk.

The ERA has been developed with reference to the enterprise Safety Risk Management Principle (PRI/0014/COR), Aurizon corporate environmental policies and standards and the Aurizon Enterprise Risk Management Framework (RMT/DIR/0001).

In line with the Aurizon Change Management Standard (05-STD-001-COM), the ERA will be reviewed in the following circumstances:

- Upgrade, replacement or decommissioning of old plant or equipment;
- change to business as usual activities; and
- following major environmental incidents.

The ERA is included as Appendix F.

4.2 Inventory of Pollutants

A general inventory of pollutants has been included in Table 7 below. The inventory has been developed from contaminates expected to be stored and dispatched onsite.

Table 6 - Inventory of Pollutants

Pollutant	Uses	Maximum Total Stored	Storage Location
Zinc Concentrate	Product for storage and dispatch	30kwmt	Concentrate Shed
Copper Concentrate	Product for storage and dispatch	30kwmt	Concentrate Shed
Lead Concentrate	Product for storage and dispatch	15kwmt	Concentrate Shed
Diesel	Forklift, loaders, vehicles, pumps.	5000L	Bunded diesel tank
Lubricants	Moving mechanical parts	250L	Store container
Waste Oil	Recycled	100L	Store container
Acetylene	Maintenance	4 standard size bottles	Locked cage
Weed Poison	Weed killer	5lts	Store container
Collected rainwater runoff on site	Potential for sediment (copper, lead, zinc) contamination	7500L	HumeCeptors
Cement	Product for storage and dispatch	40kt	Yard

4.3 Safety Equipment

All PPE is to comply with the relevant Australian Standard. The standard PPE required at Aurizon Port Services is listed below with risk specific safety equipment and controls included in the ERA:

- Steel capped safety boots,
- safety glasses (for designated activities);
- hard hat;
- high-visibility clothes (visitors vest);
- long pants; and
- Long sleeved shirt.

In addition to the standard PPE required to be worn at the facility Table 7 details the location of Site specific safety equipment. A guide to the minimum PPE when handling mineral concentrates it is detailed in Table 8.

It is the responsibility of Aurizon Port Services to provide the required additional PPE. The Operations Manager or delegate and contractor / stevedoring company as well as the individual are responsible for ensuring correct PPE is worn.

Table 7 - Safety Equipment

PPE/Control	Location
Spill Kits	Fuel station, Shiploader
Pressure Gauges	Throughout the plant
Firefighting Equipment	Throughout the plant
SDS	Front desk
Radios	On Person
Height/Water Safety Equipment	Lockers
E-stops/trip lanyards	Conveyors

Table 8 - Minimum PPE

Work Group / Task	Minimum Additional PPE
Any person entering or working in the Tippler Building during train unloading.	All concentrates: P2 respirator, impervious gloves, and in addition for Lead concentrate: overalls or dust coat as authorised.
Any person required to enter the gantry from the Tippler Building to the Concentrate Storage Shed during train unloading.	All concentrates: P2 respirator, impervious gloves, and in addition for Lead concentrate: overalls or dust coat as authorised.

Work Group / Task	Minimum Additional PPE
Any person entering or working in the Concentrate Storage Shed (in or immediately under conveyor systems and transfer towers) during ship loading.	All concentrates: P2 respirator, impervious gloves, and in addition for Lead concentrate: overalls or dust coat as authorised.
Any person required to enter any gantry and / or transfer tower from the Concentrate Storage Shed to the Shiploader during ship loading.	All concentrates: P2 respirator, impervious gloves, and in addition for Lead concentrate: overalls or dust coat as authorised.
Any person required to enter the Shiploader during loading.	All concentrates: P2 respirator, impervious gloves, and in addition for Lead concentrate: overalls or dust coat as authorised.

5.0 Compliance

5.1 Training

The contents and requirements of this PIRMP and findings of any reviews will be communicated to Aurizon personnel identified in Section 2 via the following methods:

- Desktop and field incident scenario exercises
- Toolbox talks; and
- Senior Leadership Meetings.

All Aurizon operational personnel will complete compulsory Spill Management Training as included in the Aurizon Learning Management System.

5.2 Testing

The PIRMP will be tested and reviewed annually and within one month of any incident or near miss which caused or had the potential to cause Material Harm.

Testing methods will either be desktop or practical exercises/drills and will reflect the:

- Nature of activities undertaken at the premises or by the mobile plant;
- Risk level determined for the licence under the EPA's risk-based licensing system; and
- Environmental context – location, sensitive/protected waterways (water catchment), air quality, land habitat, sensitive receivers who are close by.

Testing may take the form of a post-incident debrief to assess whether:

- The PIRMP was implemented efficiently during the activation;
- there were areas of the PIRMP that did not work or could be improved;
- all contact details were correct and up-to-date; and
- Maps were accurate and sufficiently detailed.

Testing must cover all components of the PIRMP and include a debrief with personnel who participated in the test. A debrief involves asking the following questions:

- What worked?
- What would we do the same next time?
- What would we do differently next time?
- What needs did we identify? (e.g. staff training, safety procedures, additional equipment)

The results of all testing of the PIRMP will be recorded in the testing register included in Appendix F. The PIRMP will be updated with the findings of all tests as required.

5.3 Reporting

Holders of premises-based and mobile plant licences are required to report on their compliance with PIRMP obligations in their Annual Return. The Annual Return asks licensees to confirm if their PIRMP:

- Has been prepared as required under the legislation;
- Is available at the premises;
- Is available on a publicly accessible website, and if so, the details of the website;
- Has been tested in the last 12 months, and if so, the date it was last tested; and
- Has been updated, and if so, the date it was last updated.

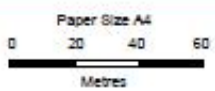
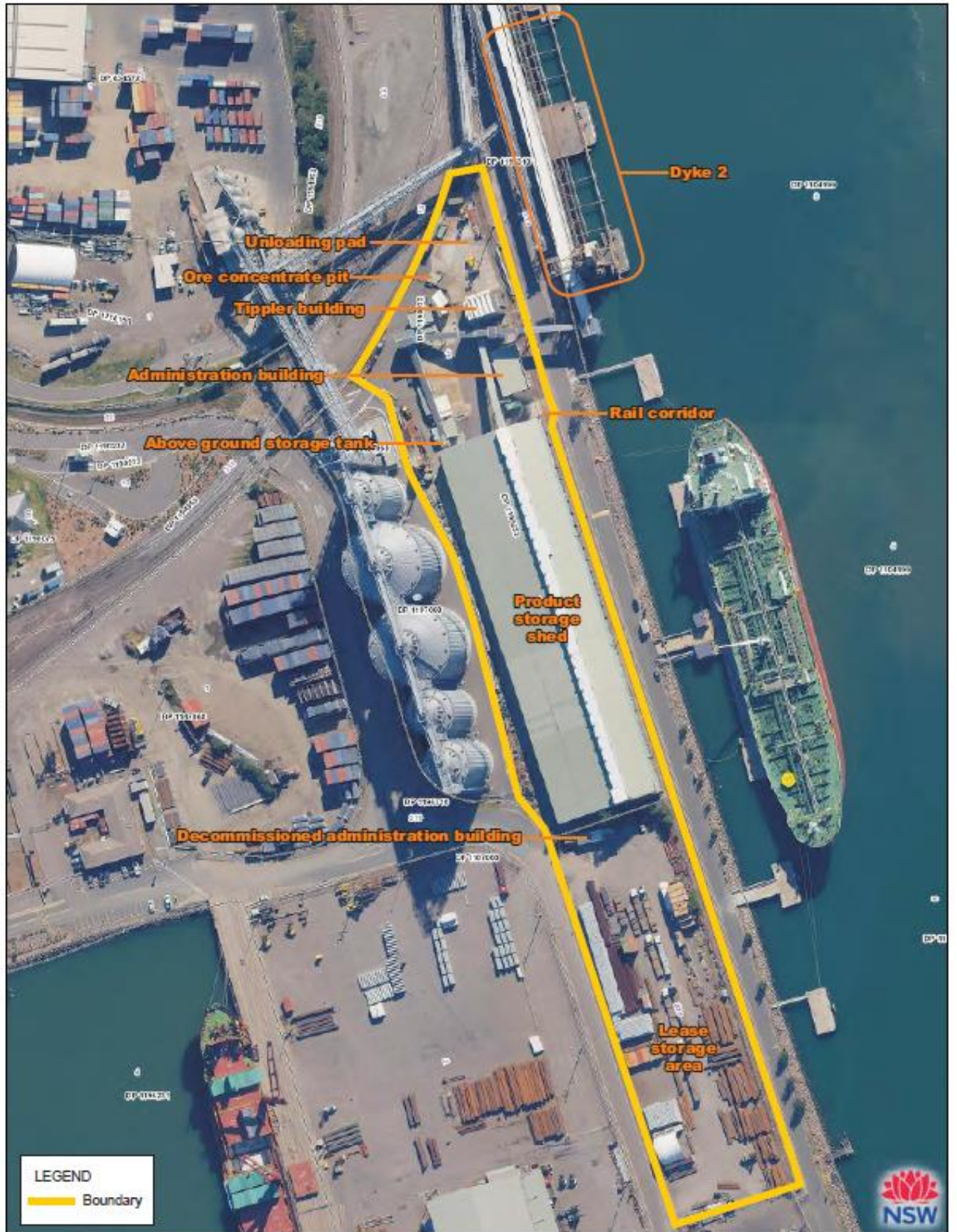
APPENDICIES

APPENDIX A – Incident Details Form

Date	
Name/Position	
Site Name	
Site Type	
Scenario	
Name of Reporter	
Position	

Criteria	Information
Time of incident (24 hour time)	
Date of incident	
Nature of incident	
Duration of incident	
Location	
Location of impact	
Estimate quantity of pollutants (IF KNOWN. DON'T SPECULATE)	
Actions implemented to control incident	
Equipment ID	

APPENDIX B – Site Locality Map



Aurizon
 Project Charlotte Supplementary Assessment
 Site location and layout

Job Number 12-528726
 Revision A
 Date 15 Dec 2020

Figure 1

APPENDIX C – Authority Notification Form

Details	Have Incident Details Been Communicated (FORM 1)	Time of Notification	Reference Number (Supplied by Regulator)	Notes
NSW EPA	Yes/No			
NSW Minister for Health (Public Health Unit)	Yes/No			
NSW Fire and Rescue	Yes/No			
NSW WorkCover	Yes/No			
Council	Yes/No			

APPENDIX D – PIRMP Test Template

Criteria

Information

Comment

Date Tested:

Test by:

Details of Test:

**(nature of the test, involvement of
other agencies)**

**Note: Testing must cover all
components of the plan.**

Findings:

Next Scheduled Test:

APPENDIX E – PIRMP Update Register

Rev #	Date Updated	Update Justification	Detail of Update	Date Uploaded to Website	Comment
2	30/5/22	Annual Update	Site, neighbour and regulatory contact details Pollutants table	30/05/2022	
3	06/11/23	Annual update/post incident update	Contacts update	06/11/2023	

APPENDIX F – Environmental Risk Assessment

1	Traffic and Access	<p>A) Noise and vibration emissions from light and heavy vehicle access impacting sensitive receivers.</p> <p>B) Improper use of access by 3rd parties and or impacts to private landholders.</p>	<p>Elimination</p> <p>A/B) Site access will be limited to designated access roads managed by PoN security and password protected APSN access gate.</p> <p>A) No adjacent sensitive receivers with no BAU concentrate received via road.</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>A) Access roads will be maintained as required.</p> <p>B) All deliveries (oil, fuel etc.) are to access the site using designated access and be unloaded in designated areas.</p> <p>Administration</p> <p>A) Operational staff on-site at any one time is approximately 6-12 during normal operating conditions.</p> <p>A) Traffic is to be managed in a manner that meets the noise and vibration management performance criteria as detailed in the EMP.</p> <p>A) All deliveries and heavy vehicles will access the Site during daytime hours (0730 to 1830) where practical.</p> <p>A) Vehicle movements restricted to 10 km/h.</p> <p>A) All operational staff and contractors will complete an induction communicating key elements prior to accessing the site as required.</p> <p>B) Changes to traffic management regimes and potential hazards shall be communicated to all relevant third parties as soon as practicable after they have been identified.</p> <p>A/B) Operational Environmental Management Plan</p> <p>PPE</p> <p>Not applied.</p>	<p>Guidance: The selected HOC is justified on the basis that the controls form part of the accepted safe system of work for the known operating environment and have valid potential to minimise the identified risk.</p> <p>All credible control options were considered within the hierarchy of control (HOC) as applicable to the accountable sphere of control.</p> <p>Controls considered but rejected:</p> <p>NIL</p>	2	2	L	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p> <p>Not applied</p> <p>PPE</p> <p>Not applied</p> <p>Control Effectiveness:</p> <p>SE</p>	<p>Guidance: Risk Controls are subject to ongoing due diligence in accordance with the authorised implementation and review timeframes.</p>	Operations Manager		26/04/22
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			<p>Control Effectiveness:</p> <p>SE</p>								
2	Provisioning and management of site storages	<p>A) Spill of hazardous materials to the environment during provisioning of site storages causing environmental harm.</p> <p>B) Failure of bulk storage due to collision of heavy vehicle resulting in impact to the environment.</p>	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>A) All fuel supply contractor vehicles and equipment are to be compliant with relevant AS/NZS standards including AS1940.</p> <p>A) Designated provisioning areas are bunded to capture potential spills and maintain separation of potential spills from the stormwater system.</p> <p>B) Bulk fuel area is separated from roadway.</p> <p>Administration</p> <p>A) All fuel supply contractors are to provide Aurizon with a fuelling risk assessment for approval prior to operating on-site.</p> <p>A) Fuel supply contractors maintain compliance with (ADGC).</p> <p>A) All contractors undertaking works on-site or delivering materials will be required to undertake Aurizon's site specific induction; provide evidence of relevant licences / permits and provide a SWMS to Aurizon for review prior to entry.</p>	<p>Guidance: The selected HOC is justified on the basis that the controls form part of the accepted safe system of work for the known operating environment and have valid potential to minimise the identified risk.</p> <p>All credible control options were considered within the hierarchy of control (HOC) as applicable to the accountable sphere of control.</p> <p>Controls considered but rejected:</p> <p>NIL</p>	3	2	M	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p> <p>Not applied</p> <p>PPE</p> <p>Not applied</p> <p>Control Effectiveness:</p> <p>SE</p>	<p>Guidance: Risk Controls are subject to ongoing due diligence in accordance with the authorised implementation and review timeframes.</p>	Operations Manager	26/04/22

			<p>A) Provisioning to be completed in accordance with ADGC and AS1940.</p> <p>A) Aurizon Incident Management Framework RD SAF 0012 Guide 001.</p> <p>A) Site EMP.</p> <p>PPE</p> <p>A) Hydrocarbon Spill Kits will be available and ready for mobilisation at key locations across the site including the bulk fuel unloading area.</p> <p>A) All site personnel are to be trained in spill response procedures prior to operating on-site.</p> <p>Control Effectiveness:</p> <p>SE</p>								
3	Storage of spare and damaged parts	<p>A) Inappropriate storage of spare and damaged parts resulting in impact to the environment.</p> <p>B) Failure of parts resulting in environmental impacts.</p>	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>A) Mechanical parts in contact with any automotive fluid shall be stored in designated areas.</p> <p>Engineering</p> <p>A) All work areas are graded into collection sumps.</p> <p>Administration</p> <p>A & B) All hazardous materials used on-site are logged in Aurizon's ChemAlert register system and individually risk assessed.</p> <p>A & B) MSDSs for all chemicals in-use are to be on-display and reviewed regularly.</p> <p>A & B) Environmental Management Plan.</p> <p>PPE</p>	<p>Guidance: The selected HOC is justified on the basis that the controls form part of the accepted safe system of work for the known operating environment and have valid potential to minimise the identified risk.</p> <p>All credible control options were considered within the hierarchy of control (HOC) as applicable to the accountable sphere of control.</p> <p>Controls considered but rejected:</p> <p>NIL</p>	3	2	M	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p> <p>Not applied</p> <p>PPE</p> <p>Not applied</p> <p>Control Effectiveness:</p> <p>SE</p>	<p>Guidance: Risk Controls are subject to ongoing due diligence in accordance with the authorised implementation and review timeframes.</p>	Operations Manager	26/04/22

			<p>A & B) Hydrocarbon spill kits are to be maintained on-site, fully stocked, in readily accessible locations.</p> <p>A & B) Liquid spills are to be cleaned using dry methods.</p> <p>Control Effectiveness:</p> <p>SE</p>								
4	Management of surface and groundwater quality	A) Spills from provisioning activities and loss of product during operations and maintenance activities reporting to soil, surface and or groundwater resulting in environmental impact.	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Engineering</p> <p>A) Maintenance and operation of plant as per manufacturer's requirements and recommendations.</p> <p>A) Installation of collection mat at rail siding unloading area.</p> <p>A) Routine vacuum of required operational areas to mitigate concentrate deposits available for mobilisation.</p> <p>A) Tippler building and Concentrate Shed dust collection and fume management system.</p> <p>A) Sealing of all available areas to prevent stormwater ingress into soils.</p> <p>A) Concentrate boot wash system.</p> <p>A) All concentrate handling systems and storage areas fully enclosed.</p> <p>A) Fogging system within concentrate shed maintains moisture content of concentrate.</p> <p>A) HumeCeptors collect all runoff.</p> <p>A) Site sumps maintain at designated volume via automatic float switch.</p>	<p>Guidance: The selected HOC is justified on the basis that the controls form part of the accepted safe system of work for the known operating environment and have valid potential to minimise the identified risk.</p> <p>All credible control options were considered within the hierarchy of control (HOC) as applicable to the accountable sphere of control.</p> <p>Controls considered but rejected:</p> <p>NIL</p>	3	2	M	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p> <p>Not applied</p> <p>PPE</p> <p>Not applied</p> <p>Control Effectiveness:</p> <p>SE</p>	<p>Guidance: Risk Controls are subject to ongoing due diligence in accordance with the authorised implementation and review timeframes.</p>	Operations Manager	26/04/22

			<p>A) Site water removed from site or pumped utilised in foggers.</p> <p>A) Refuelling of FEL undertaken via steel pipeline within CCS.</p> <p>A) Telechute fogging system.</p> <p>Administration</p> <p>A) Indicative surface quality performance criteria included in the EMP.</p> <p>A) Routine inspections and maintenance of site and surface water infrastructure undertaken as per EMP requirements.</p> <p>A) Surface monitoring program and reporting requirements as per EMP.</p> <p>A) All cleaning of infrastructure is undertaken with vacuum. No washdown is permitted.</p> <p>A) All maintenance of vehicles undertaken in bunded areas.</p> <p>A) Spill kits well stocked and available.</p> <p>A) Loading are operations restricted to occurring when >35 knots to prevent concentrate from becoming windblown.</p> <p>PPE</p> <p>Not applied.</p> <p>Control Effectiveness:</p> <p>SE</p>								
5	Waste management	A) Improper waste management and disposal resulting in regulatory non-compliances or harm to the environment.	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p>	<p>Guidance: The selected HOC is justified on the basis that the controls form part of the accepted safe system of work for the known operating environment and have valid potential to minimise the identified risk.</p>	3	2	M	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p>	<p>Guidance: Risk Controls are subject to ongoing due diligence in accordance with the authorised implementation and review timeframes.</p>	Operations Manager	26/04/22

			<p>A) All waste water, sludge and hazardous material tanks are to be routinely inspected and serviced as per manufacturer's requirements.</p> <p>A) All tanks are to be pumped out in identified bunded areas.</p> <p>Administration</p> <p>A) All waste is to be removed by a licenced waste contractor and disposed of at a licenced facility.</p> <p>A) Cardboard, paper and commingled waste recycling receptacles available in key work areas.</p> <p>A) Hydrocarbon receptacles (for oily rags and oil filters) available if required.</p> <p>A) Secure HAZMAT receptacles available on-site if required.</p> <p>A) Metals / steel / aluminium components recycled where feasible.</p> <p>A) No waste will be received at the facility.</p> <p>PPE</p> <p>Not applied.</p> <p>Control Effectiveness:</p> <p>SE</p>	All credible control options were considered within the hierarchy of control (HOC) as applicable to the accountable sphere of control.				<p>Not applied</p> <p>PPE</p> <p>Not applied</p> <p>Control Effectiveness:</p> <p>SE</p>			
6	Community	A) Onsite operational activities resulting in impacts to community members.	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>A) Operational areas are fully enclosed where possible mitigating noise and dust emissions.</p> <p>Administration</p>	<p>Guidance: The selected HOC is justified on the basis that the controls form part of the accepted safe system of work for the known operating environment and have valid potential to minimise the identified risk.</p> <p>All credible control options were considered within the hierarchy of control (HOC) as</p>	2	2		<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p> <p>Not applied</p> <p>PPE</p> <p>Not applied</p> <p>Control Effectiveness:</p>	<p>Guidance: Risk Controls are subject to ongoing due diligence in accordance with the authorised implementation and review timeframes.</p>	Operations Manager	26/04/22

			<p>A) Community complaints management system in place.</p> <p>A) Machinery turned off when not in use.</p> <p>A) Trucks entering the facilities with dust generating loads are covered at all times except when loading and unloading.</p> <p>PPE</p> <p>Not applied.</p> <p>Control Effectiveness:</p> <p>SE</p>	<p>applicable to the accountable sphere of control.</p> <p>Controls considered but rejected:</p> <p>NIL</p>				SE				
7	Historical site contamination	A) Disturbance of historical site contamination from ground disturbance works resulting in impacts to the environment.	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p> <p>A) Baseline surveys have been undertaken and retained site contamination identified. No disturbance of retained contamination is proposed to occur.</p> <p>PPE</p> <p>Not applied.</p> <p>Control Effectiveness:</p> <p>SE</p>	<p>Guidance: The selected HOC is justified on the basis that the controls form part of the accepted safe system of work for the known operating environment and have valid potential to minimise the identified risk.</p> <p>All credible control options were considered within the hierarchy of control (HOC) as applicable to the accountable sphere of control.</p> <p>Controls considered but rejected:</p> <p>NIL</p>	3	3	M	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p> <p>Not applied</p> <p>PPE</p> <p>Not applied</p> <p>Control Effectiveness:</p> <p>SE</p>	<p>Guidance: Risk Controls are subject to ongoing due diligence in accordance with the authorised implementation and review timeframes.</p>	Operations Manager		26/04/22
8	Air Quality	A) Operational activities resulting in the emissions of dust which impact sensitive receivers.	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p>	<p>Guidance: The selected HOC is justified on the basis that the controls form part of the</p>	2	2	L	<p>Elimination</p> <p>Not applied</p> <p>Substitution</p> <p>Not applied</p>	<p>Guidance: Risk Controls are subject to ongoing due diligence in</p>	Operations Manager		26/04/22

		<p>B) Operational activities resulting in diesel emissions impacting sensitive receivers and the environment.</p> <p>C) Fire within operational areas.</p>	<p>Not applied</p> <p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>B) Equipment is well maintained and operated as per manufactures requirements.</p> <p>B) Machinery is turned off when not in use.</p> <p>A) Maintenance and operation of plant as per manufacturer's requirements and recommendations.</p> <p>A) Routine vacuum of required operational areas to mitigate concentrate deposits available for mobilisation.</p> <p>A) Tippler building and Concentrate Shed dust collection and fume management system.</p> <p>A) All concentrate handling systems and storage areas fully enclosed.</p> <p>A) Fogging system within concentrate shed maintains moisture content of concentrate.</p> <p>B) Refuelling of FEL undertaken via steel pipeline within CCS.</p> <p>A) Telechute fogging system.</p> <p>Administration</p> <p>B) NPI and GHG reporting is undertaken as required.</p> <p>A) Vehicle movements are restricted to 10 km/h onsite.</p> <p>A) Loading are operations restricted to occurring when >35 knots to prevent concentrate from becoming windblown.</p> <p>A/B) Aurizon CMS is in place to record and respond to complaints. Incidents will be managed through SHEM.</p>	<p>accepted safe system of work for the known operating environment and have valid potential to minimise the identified risk.</p> <p>All credible control options were considered within the hierarchy of control (HOC) as applicable to the accountable sphere of control.</p> <p>Controls considered but rejected:</p> <p>NIL</p>			<p>Isolation</p> <p>Not applied</p> <p>Engineering</p> <p>Not applied</p> <p>Administration</p> <p>Not applied</p> <p>PPE</p> <p>Not applied</p> <p><u>Control Effectiveness:</u></p> <p>SE</p>	<p>accordance with the authorised implementation and review timeframes.</p>			
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			<p>A/B) APSN is a member of the Newcastle Air Quality Monitoring Network.</p> <p>A) Trucks entering the facilities with dust generating loads are covered at all times except when loading and unloading.</p> <p>C) Majority of operational areas are fully enclosed and managed by fume and dust extraction systems. Product moisture content actively managed with fogging system available to increase moisture levels as required.</p> <p>PPE</p> <p>Not applied.</p> <p><u>Control Effectiveness:</u></p> <p>SE</p>								
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