



GM³

a mining and metals company

Pollution Incident Response Management Plan – EPL 611 (CDX)

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Name	Position	Company/Site	Exp (yrs)	Revision
Chris Schultz	Superintendent Environment	ICHPL	28	Dec 2024
Josh Carlon	Coordinator Environment	ICHPL	15	Dec 2024
Antony Leone	Manager Corporate Affairs	ICHPL	10	Nov 2024

Version History

Version	Description of Changes	Date
IMC Document - IMCMP0231		
1.0	Original Document	August 2012
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3.0	Change to South32 and Review of Inventory Tables Changes following audit recommendations	September 2017
4.0	Changes in personnel and Review of Inventory Tables	July 2019
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5.1	Update of contact numbers and PIRMP test	December 2020
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1 Introduction

1.1 Facility Details

The facility details, as defined in Environment Protection Licence (EPL) 611, are summarised in Table 1.

Table 1: Facility Details

Company:	Endeavour Coal Pty Ltd
EPL Number:	611
Postal Address:	PO Box 514, Unanderra, NSW 2526
Scheduled Activities:	Coal Works Mining for Coal
Facility Name and Address:	Cordeaux Colliery Mt Keira Road (site is accessed from Picton Road) Wollongong NSW 2500

1.2 Overview of Operations

Cordeaux Colliery is wholly owned and operated by Endeavour Coal Pty Ltd, a subsidiary company of Illawarra Coal Holdings Pty Ltd (ICHPL), which is a wholly owned subsidiary of Gear M Illawarra Met Coal Pty Ltd.

Cordeaux Colliery is located adjacent to Picton Road, approximately 20 km north west of Wollongong. The site is on land owned by WaterNSW. The site is covered by Development Consent D74/134 (issued by Wollongong City Council) and Consolidated Coal Lease (CCL) 768.

Construction of the mine commenced in 1976 with the first coal being produced from the underground workings in 1980. In 1985, Cordeaux holed into Corrimal Colliery workings to officially merge the two collieries in January 1986. ICHPL is responsible for the ‘care and maintenance’ of the Cordeaux Colliery Pit Top site and other relevant sites.

The economically recoverable Bulli Seam coal reserves in the Cordeaux Colliery holding were extracted by the year 2001. The colliery ceased coal production on 23 March 2001 and has been on care and maintenance since 14 April 2001 to date.

The pit top covers approximately 10.7 ha of land on the Picton Road site and includes the infrastructure which was required to support the mining operations.

ICHPL’s exploration, survey and environmental field crew personnel still utilise the Cordeaux Colliery Pit Top site as the base for their operations.

1.3 Plan Objectives

This Pollution Incident Response Management Plan (PIRMP) has been prepared in accordance with Part 5.7A Section 153A and 153C of the *Protection of the Environment Operations Act 1999 (POEO Act)* and Sections 71, 72 and 73 of the *Protection of the Environment Operations (General) Regulation 2022 (POEO Regulation)*.

The objectives of the PIRMP (as per the EPA’s Guideline: Pollution Incident Response Management Plans dated September 2022) are to:

- minimise the risk of a pollution incident occurring as a result of licensed activities, by identifying risks and the actions proposed to minimise and manage those risks;
- have established clear and effective notification, action and communication procedures to ensure the right people are notified, warned and quickly provided with updates and information they may need to act appropriately, including people who may need to be involved in incident responses – including staff at the premises; the Environment Protection Authority (EPA); and other relevant authorities (such as Fire and Rescue NSW, NSW Health and local councils) and industrial, commercial and residential neighbours and other members of the community; and
- have properly trained staff and up-to-date incident management information available to ensure the potential impact of a pollution incident is minimised.

2 Definitions

Term	Definition
CCL	Consolidated Coal Lease
CEMP	Crisis and Emergency Management Plan
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ICHPL	Illawarra Coal Holdings Pty Ltd
PIRMP	Pollution Incident Response Management Plan
<i>POEO Act/Regulation</i>	<i>Pollution of the Environment Operations Act/Regulation</i>
PPE	Personal Protective Equipment
SDS	Safety Data Sheet

3 Statutory Requirements

Table 2 identifies the relevant statutory requirements as detailed in the *POEO Act* and *POEO Regulation* for inclusion in the PIRMP and where each requirement is described in the plan.

Table 2: Statutory Requirements

Requirements	PIRMP Section
Notification Procedures – <i>POEO Act</i> Section 148 and 149	Section 4
Action to be taken following a pollution incident - <i>POEO Act</i> Section 153C(b) and 153F	Section 4 and Section 7
Procedures for coordinating with the EPA, Local Council, Ministry of Health, SafeWork NSW and Fire and Rescue NSW – <i>POEO Act</i> 153C(c)	Section 4 and Section 7
Description of hazards to human health or environment associated with the relevant activity – <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(a)	Appendix 2
Likelihood of hazards occurring – <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(b)	Appendix 2
Pre-emptive actions to minimise or prevent risk of harm to human health or environment – <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(c)	Section 8
Inventory of potential pollutants – <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(d)	Section 5, Appendix 1
Maximum quantity of pollutant to which the licence relates – <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(e)	Appendix 1
Safety equipment to minimise the risks to human health or environment – <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(f)	Section 10
Names, positions and contact details – <i>POEO Act</i> Section 153C (d) and <i>POEO Regulation</i> 72(g)	Section 4.5.2 – Table 4
Contact details of each relevant authority- <i>POEO Act</i> Section 148 and <i>POEO Regulation</i> 72(h)	Section 4.5.2 – Table 5
Early warning mechanism for people off site – <i>POEO Act</i> Section 153C(a), (d) and <i>POEO Regulation</i> 72(i)	Section 4.5.3
Arrangements for minimising risk of harm to persons on the premises – <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(j)	Section 9
Detailed maps – <i>POEO Regulation</i> 72(k)	Appendix 3
Description of how any identified risk of harm to human health will be reduced, including early warnings, updates and action to be taken - <i>POEO Regulation</i> 72(l)	Section 7, Section 8, Section 9
Training - <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(m)	Section 11
Testing of plan – <i>POEO Act</i> Section 153(d) and Section 153E and <i>POEO Regulation</i> 72(n) and 75	Section 12.2
Updating of plan - <i>POEO Regulation</i> 72(o)	Section 12.2
Manner in which plan is tested and maintained – <i>POEO Act</i> Section 153C(d) and <i>POEO Regulation</i> 72(p)	Section 12.2
Availability of plan – <i>POEO Act</i> Section 153D and <i>POEO Regulation</i> 74	Section 12.1

4 Notification of a Pollution Incident

4.1 Roles and Responsibilities – Incident Response Process

As a minimum, all employees are required to report all hazards, accidents and incidents which occur in the workplace that either have the potential to or caused harm to personnel, property or the environment.

Key responsibilities associated with the incident response process flow chart are summarised in Table 3.

Table 3: Roles and Responsibilities – Incident Response Process

Role	Responsibility
General Manager Sustainability and Approvals Site General Manager	<ul style="list-style-type: none"> Undertake or delegate Superintendent Environment responsibilities in their absence.
Superintendent Environment	<ul style="list-style-type: none"> Assess materiality of incident and activate relevant response system. Assess potential for off-site impacts and notify Corporate Affairs team if required. Notify internal stakeholders as appropriate. Notify relevant agencies (written and verbal notifications as required).
Site Personnel (including Specialist Environment)	<ul style="list-style-type: none"> Report actual or potential incidents immediately. Assist in site response and clean-up activities.
ICHPL Incident Controller	<ul style="list-style-type: none"> Coordinate incident response activities. Communicate with emergency services personnel to identify actions to be taken as appropriate.
Site based Incident Management Teams	<ul style="list-style-type: none"> Coordinate incident response activities (as appropriate).
Manager Corporate Affairs (or representatives)	<ul style="list-style-type: none"> Coordinate media response/s and community notifications (Note: Only the Chief Executive Officer or nominated delegate is authorised to speak to the media).
Specialist Communities	<ul style="list-style-type: none"> Coordinate communication with impacted community members.
Control Room Officer	<ul style="list-style-type: none"> Coordination of initial emergency response and internal notifications.

4.2 Timeframes for reporting

If a pollution incident occurs in the course of an activity at the premises that causes, or threatens to cause, material harm to the environment, this PIRMP must immediately be implemented. All pollution incidents causing or threatening material harm to the environment are to be immediately notified in accordance with Section 4.5.

4.3 Definition of a Pollution Incident and Material Harm

The POEO Act definition of a ‘**pollution incident**’ is:

*‘**Pollution incident** means 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’.*

Notifications of a pollution incident are required if there is a risk of ‘**material harm to the environment**’, which is defined in Section 147 of the POEO Act as:

- (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.*

The POEO Act defines ‘**pollution**’ in the following terms:

‘pollution’ means

- (a) *water pollution; or*
- (b) *air pollution, or*
- (c) *noise pollution; or*
- (d) *land pollution.*

Material harm can occur both on land located within the EPL boundary, along with land located outside the EPL boundary. A determination of a material harm incident will be made by the Superintendent Environment. If the Superintendent Environment is not available immediately, then determination can be made by the General Manager Sustainability and Approvals or site General Manager in consultation with the site Coordinator/Specialist Environment.

If the Superintendent Environment, General Manager Sustainability and Approvals, site General Manager or Coordinator/Specialist Environment cannot be contacted, then the Control Room Officer at Dendrobium Mine must be contacted, who must treat the incident as a material harm incident and initiate reporting to relevant agencies as listed in Section 4.5.2.

4.4 Incident Response Process

The incident response protocols, including the communication protocol and on-site emergency response actions, for responding to an incident that has resulted in a material impact to human health or the environment (as per the definition provided in Section 4.3 of this plan), are shown in Figure 1.

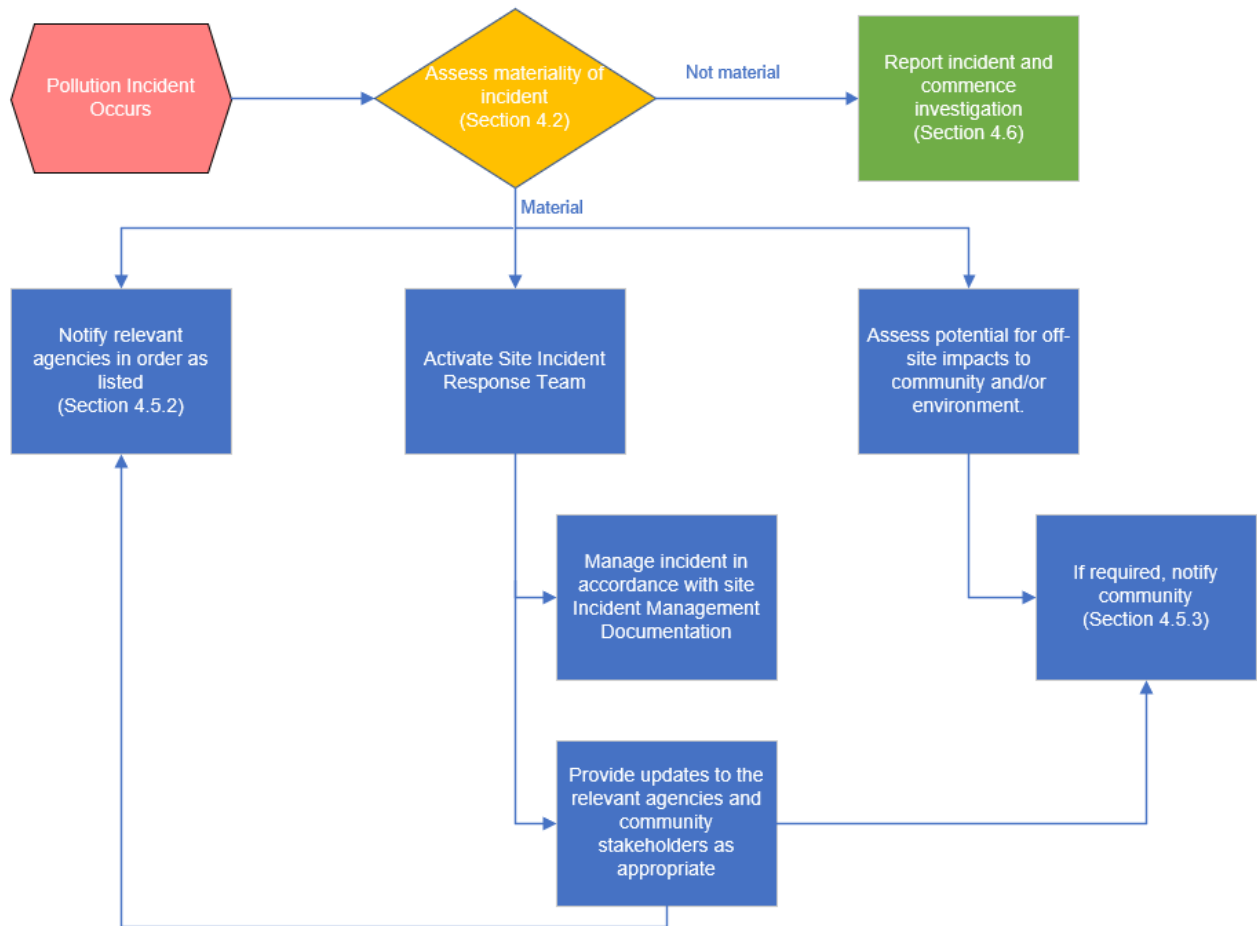


Figure 1: Incident Response Process Flow

4.5 Communication Protocol

4.5.1 Internal Stakeholders (i.e. employees/contractors)

Internal communications will be undertaken as per Section 3.3 of the site Crisis and Emergency Management Plan (ICAMP0149) (refer to reference list in Section 14).

4.5.2 Government Agencies

The key contacts associated with the implementation/activation of this plan are provided in Table 4.

Table 4: Key Contacts Table

ICHPL	
Superintendent Environment – Chris Schultz	1800 102 210 (via GM ³ Community Call Line)
Coordinator Environment – Josh Carlon	
Manager Corporate Affairs – Antony Leone	
Specialist Communities – Sandra Moreno	
Site General Manager – Sean Wood	

The relevant government agencies (Table 5) will be notified of a pollution incident that has caused or has the potential to cause material harm immediately (i.e. promptly and without delay). The agencies are to be notified as listed (i.e. starting from the top).

Table 5: External Agencies to be Notified

External Agencies	
Environment Protection Authority	131 555 ¹
NSW Department of Planning, Housing and Infrastructure - Compliance Wollongong Office: (Email: compliance@planning.nsw.gov.au). Log on Major Projects Portal (https://www.planningportal.nsw.gov.au/major-projects).	(02) 4247 1852 ²
NSW Resources Regulator (Email: nswresourcesregulator@service-now.com)	1300 814 609 ³
Public Health (Local Health District - Illawarra and Shoalhaven (Email: ISLHD-PHU@health.nsw.gov.au)	02 4221 6700 ⁴
SafeWork NSW ⁵	13 10 50 ⁶
Wollongong City Council (for Pit Top incidents)	(02) 4227 7111 ⁷
Wollondilly Shire Council (for Catchment incidents)	(02) 4677 1100 ⁸
Fire and Rescue NSW	000 (if emergency) 1300 729 579 (pollution notification)
NSW State Emergency Service	132 500
WaterNSW (Email: customer.helpdesk@waternsw.com.au)	1300 662 077 ⁹

The information that is required to be reported is:

- time, date, nature, duration and location of the incident;
- location of the place where pollution is occurring or is likely to occur;
- nature, estimated quantity or volume and concentration of any pollutants involved (if known);

¹ Select Option 1.

² Note that there is no approval/consent granted by the Department for the Cordeaux Colliery site. Notify as a courtesy.

³ Office open between 8.30 am and 4.30 pm. Will be directed to on call person after hours. Select Option 1.

⁴ After hours 02 4222 5000. Select Option 3. Ask for Public Health Officer.

⁵ SafeWork NSW do not regulate mines and therefore they should only be contacted where the incident has not occurred on the mine site.

⁶ Select 1 and then Select 2.

⁷ Ask for Environmental Planning Manager.

⁸ Ask for Environmental Health Officer on call.

⁹ Select 6 then select 2

- circumstances in which the incident occurred (including the cause of the incident, if known); and
- action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

ICHPL will, through the ICHPL Incident Controller, coordinate response activities with the relevant agencies as required.

4.5.3 Local Community

Community stakeholders that are potentially affected by a pollution incident causing or having the potential to cause material harm will be notified immediately (i.e. without delay) by one (or more) of the following methods:

- door knocking by company representatives or emergency services personnel (dependent on nature of event);
- phone call/SMS by company representative;
- email from a company representative;
- letterbox drops; or
- other method as determined by the Manager Corporate Affairs.

The appropriate method for communication will be determined by the Manager Corporate Affairs or as directed by the relevant agency and will be tailored to the nature of the incident, phase of response, and types of neighbours who are required to receive information.

If required (dependent on the nature of the incident) the communication should outline practical steps that community members can take to reduce the risk of harm to their health or property, both during and after the incident. This may include instructions to close windows and doors and remain inside, avoiding accessing water in creeks and rivers, or avoiding use of groundwater.

Regular updates will be provided to the affected community stakeholders throughout the course of the event.

Signage will be employed, as appropriate and necessary, to inform the community in cases of incidents occurring on a property outside the premises where community members might be at risk of injury or illness.

4.6 Event Reporting and Investigation

Environmental events are to be reported in G360. Reporting is to be undertaken in accordance with the Reporting and Investigation Standard (IMCSTD0069), Event Report and Basic Investigation Procedure (IMCP0098) and Environmental Compliance/Conformance Assessment and Reporting Procedure (IMCP0186).

5 Inventory of Pollutants

Site inspections are periodically conducted to review the inventory of storage facilities at Cordeaux Colliery. The inventories include details of potential pollutants at the storages, the maximum quantity that is likely to be stored or held at the facilities, and whether the storages have the potential to be associated with a material pollution incident.

The pollutant inventories for the facilities are provided as Appendix 1.

The storage facilities are assigned a specific identification number with the location of the storage facility reflected in the site maps (refer to Appendix 3).

A register of hazardous substances and dangerous goods is maintained. The information requirements for the hazardous materials register are detailed in the Substance Management Procedure (IMCP0054). A copy of the National Code of Practice Compliant Safety Data Sheets (SDS) for each hazardous material is maintained within the register.

6 Description and Likelihood of Hazards

An Aspects and Impacts Register has been developed and is maintained to identify the main hazards to human health or the environment associated with a pollution or other incident at the site.

The listing and assessment of pollution and other incidents with potentially material consequences are provided in the ‘Hazard Assessment Summary Tables’ in Appendix 2. The hazard assessments provide a description of the event, likely causes, consequences, responses and controls and ranking for materiality of the consequences.

Note: Regardless of whether a particular incident is captured within the hazard assessment tables, any pollution incident with the potential for material consequences will be addressed as per the ‘incident response protocols’ of this plan.

7 Emergency Response

A Crisis and Emergency Management Plan (CEMP) (ICAMP0149) is in place which describes the on-site actions to be taken in response to an incident that has resulted (or has the potential to result) in a material impact to human health and/or the environment. This plan will be activated in parallel with the PIRMP as required to minimise the impacts of the pollution incident as much as practically possible through early response/management. The CEMP defines the roles and responsibilities of key site personnel and provides information on evacuation protocols and muster points.

If there is an emergency on site, the person who received the initial notification must initiate the emergency response by notifying the site General Manager, either by telephone, radio or other means.

Surface personnel will assemble at the appropriate muster point and will await instructions from the person assuming the Incident Controller responsibilities. If evacuation is not required personnel will remain on site and await instructions from the person assuming the Incident Controller responsibilities and assist in the management and containment of the emergency.

The ICHPL Incident Controller will communicate with emergency services personnel to identify actions to be taken as appropriate.

8 Pre-emptive action to reduce the risk of Harm to Human Health or the Environment

Appendix 2 describes specific pre-emptive actions that are in place to reduce the risk of harm to human health or the environment where a specific incident may occur. In addition, the following proactive actions are implemented (as relevant) to reduce the risk of harm occurring as a result of a pollution incident:

- a) an ISO 14001 certified Environmental Management System is in place;
- b) site personnel receive regular training as outlined in Section 11;

- c) relevant personnel are trained in the appropriate use of safety equipment and general use of pollution control equipment;
- d) risk assessments are undertaken for tasks and activities to identify health, safety and environmental risks (including Take 2s, Task Analyses, Qualitative Risk Assessments);
- e) regular site inspections are undertaken by the Coordinator Environment and other site personnel;
- f) maintenance regimes and checks are in place for site equipment and storage facilities;
- g) site equipment is checked prior to its use on site to verify it meets safety and environmental standards;
- h) pre-shift communications and toolbox talks are provided to site personnel at start of shift to communicate incidents, hazards and corrective actions;
- i) incidents are investigated, and corrective actions are developed and implemented to prevent a reoccurrence;
- j) governance reviews are undertaken internally to verify compliance with site management plans;
- k) bunds are in place for the storage of hazardous materials; and
- l) substance approval processes are in place for the introduction of new chemicals to site.

9 Minimisation of Harm to Persons on the Premises

Actions and arrangements are in place to minimise the risk of harm to any persons who will be on the premises, or who are likely to be on the premises, should an incident occur. These actions and arrangements include:

- a) site personnel are informed, trained, and competent, relating to their responsibility and required actions during an emergency;
- b) training in emergency response for site personnel includes evacuation points and procedures;
- c) evacuation points are clearly recognised on site by appropriate signage;
- d) all visitors are familiarised with the site and made aware of the evacuation procedure;
- e) fire alarms are in place;
- f) access to site is restricted to inducted (or otherwise approved) personnel;
- g) access to high-risk areas is restricted to appropriately qualified personnel;
- h) minimum personal protective equipment (PPE) requirements are in place; and
- i) signage is in place where hazardous materials are stored.

10 Equipment Available to Control or Contain a Pollution Incident

The Spill Management Procedure (IMCP0183) outlines the process to be followed in the event of a spill. Spill kit type and locations are identified in the procedure.

In addition, the Spill Trigger Action Response Plan (TARP) (IMCTARP0006) is available for use in the event of a spill to determine the action that needs to be taken.

Other safety equipment and information available includes:

- a) a selection of PPE (hard hats, gloves, glasses, masks, goggles) (available from spill kits and PPE store);
- b) fire extinguishers and hydrants;
- c) gas monitors (available from the gas laboratory);
- d) SDS (available electronically through Chemalert); and
- e) eye wash stations.

11 Staff Training

Environmental personnel responsible for the initiation of the PIRMP are familiarised with the PIRMP on commencement in the role and are involved in the regular review and testing of the PIRMP.

Site personnel are made aware of the PIRMP during the ICHPL site induction process. Completion of this induction package is a pre-requisite for working on any ICHPL controlled operation. Personnel are required to complete refresher training on a two-yearly basis for surface personnel.

In addition to the above induction, spill response and chemical handling aspects will also be provided to key personnel on site (i.e. personnel that can influence the environmental performance of the operation) as part of an Environmental eLearning Training Package. This training package was developed with input from the Environment Team and is administered by the Training Team.

Training records are managed through the Learning Management System.

Additional information will be provided to site personnel through pre-shift communications, toolbox talks and environmental awareness sessions as required.

12 Plan Administration

12.1 Availability of Plans

In accordance with Section 153D of the *POEO Act* and Section 74 of the *POEO Regulation*, the plan will be made available to all site personnel via the site document control system.

In addition, the plan framework, protocols and processes (public version) will be made available to the public via the following methods:

- uploading a public version of the plan to the GM³ website ([link](#)); and
- providing copies of the public version of the plan, without charge, to any person who requests a copy.

12.2 PIRMP Testing

This plan will be tested at least once every 12 months in accordance with Part 5.7A Section 153E of the *POEO Act* and Section 75 of the *POEO Regulation* to check that the information contained within the plan is accurate and up to date, and that the plan is capable of being implemented in a workable and effective manner.

A record of tests is provided in Table 6.

The primary method for testing the plan will be via desktop simulations which will be supplemented by periodic practical exercises or drills, however, should an event occur, this may also be considered as a test.

The PIRMP will also be tested within one (1) month of any pollution incident occurring that caused or threatened material harm to the environment.

Table 6: Record of PIRMP tests

Date of testing of plan	Person testing plan	Persons involved in the testing of the plan
15/07/2016	Dave Thomas	Various personnel involved
7/4/2017	Corrimal 3 Transformer Incident	Various personnel involved
13/08/2018	Michelle Grierson	Various personnel involved
11/04/2019	Josh Carlon	Craig Taylor, Steve Tyas and Kenny Forrest
2/06/2020	Josh Carlon	Dan Chittick, Allan Watts, Antony Leone (Exploration Team), Chris Schultz
1/09/2021	Amy Bradbury	Mike Wang (Geologist), Amy Bradbury (Specialist Environment), Billy Agland (Specialist Environment), Josh Carlon (Coordinator Environment), Chris Schultz (Superintendent Environment)
25/10/2022	Josh Carlon, James Page, Luca Franceschini	Adam Swan and Andrew Wright (Luca Drilling), Henry Mukuka (Supervisor Exploration)
23/10/2023	Billy Agland	Amanda Crehan (Manager Exploration and Technical Support), Chris Weir (Supervisor Exploration), Andrew Gurba (Agurba), Chris Schultz (Superintendent Environment)
27/09/2024	Josh Carlon	Heath Ogilvie (Survey Team), Andrew Gurba (Environment Team), James Page (Environment Team), Chris Schultz (Superintendent Environment), Ben Fitzsimmons (Manager Exploration and Technical Support)

12.3 PIRMP Review

The PIRMP will be nominally reviewed on a three-yearly basis. Updates may occur following PIRMP tests where any improvements are identified, where personnel or contact details for regulatory agencies have changed or there is an update to site procedures.

The PIRMP is a controlled document in the document management system. The document control process will be followed for updating the PIRMP.

13 Penalties for Non-compliance

There are offences set out in the *POEO Act* in relation to PIRMP requirements. These relate to the failure to:

- prepare a PIRMP that complies with Part 5.7A of the *POEO Act*;
- ensure the PIRMP is kept at the premises the EPL relates to, and make parts of it available to the public; and

- test the PIRMP in accordance with the *POEO Regulations*.

The maximum penalties for the above offences are:

- for corporations - \$2,000,000, and for continuing offences, a further penalty of \$240,000 per day the offence continues; and
- for individuals - \$500,000, and for continuing offences, a further penalty of \$120,000 per day the offence continues.

It is also an offence if a person carrying on an activity does not implement the relevant PIRMP if a pollution incident occurs in the course of an activity, so material harm to the environment is caused or threatened.

The maximum penalties for this offence are:

- for corporations - \$4,000,000, and for continuing offences, a further penalty of \$480,000 per day the offence continues; and
- for individuals - \$1,000,000, and for continuing offences, a further penalty of \$240,000 per day the offence continues.

14 References and Associated Documents

Cordeaux Colliery Crisis and Emergency Management Plan (ICAMP0149)

Spill Management Procedure – IMCP0183

Spill TARP – IMCTARP0006

Environmental Compliance/Conformance Assessment and Reporting Procedure – IMCP0186

Reporting and Investigation Standard - IMCSTD0069

Event Reporting and Basic Investigation Procedure - IMCP0098

Protection of the Environment Operations (POEO) Act 1997

Protection of the Environment Operations (General) Regulation 2022

Cordeaux Colliery Bushfire Management Plan (ICAMP0102)

Substance Management Procedure (IMCP0054)

15 Appendices

Appendix 1 : Pollutant Inventory

Storage ID	Storage Description	Pollutant	Maximum Quantity	Potential for association with a Material Harm Event (Yes = see hazard assessment Appendix 2)
CDX.01	Underground Bulk Diesel Storage Tank	Diesel	42 KL	No
CDX.01	Small Container Petrol Storage Area	Petrol, 2 Stroke	<1000 litres	No
CDX.02	Transient Oil Storage (Workshop)	Engine Oil, transmission oil, gear oil, Lubricants, paints, other chemicals	<1000 litres	No
CDX.03	Mine Water Holding Lagoons	Stormwater generated on site	5 ML	No
CDX.04	Site Catchment Sedimentation Pond	Runoff generated from potentially dirty areas	1 ML	Yes
CDX.05	Gas Cylinder Storage Compound	Nitrogen gas bottles	2 x E size.	No
CDX.06	Gas Cylinder Storage Compound	Various gas bottles (Oxygen, Acetylene, Nitrogen)	20–50 x G, D or E size.	No
CDX.07	Raw Effluent Tank	Sewage effluent (transient)	50 KL	No
CDX.08	Gas Cylinder Storage	Various gas bottles (Methane, Argon, Helium)	12 x G size.	No
CDX.09	33KV Switchyard Transformers	Transformer oil	One 6235 litre transformer)	No
CDX.10	BCW Transformer	Transformer oil	1174 litres	No
CDX.11	Workshop Transformer	Transformer oil	1010 litres	No
CDX.12	Bathhouse Transformer	Transformer oil	1580 litres	No
CDX.13	Waste Oil Container	Waste oil (various)	2000 litres	No

Storage ID	Storage Description	Pollutant	Maximum Quantity	Potential for association with a Material Harm Event (Yes = see hazard assessment Appendix 2)
CDX.14	Oily Water Sump (from vehicle washdown)	Water containing any oils or greases washed off vehicles, equipment, and machinery	27900 litres	No
CDX.15	Drillers Storage Shed	Dry form and liquid chemicals used for drilling activities including drilling muds, stabilising fluids, lubricants and cleaners	Dry: 17000 kg Liquid: 1300 litres	No
CDX.16	Used vehicle Battery Storage	Covered pallet bund containing used vehicle batteries	Up to 20 batteries	No
Note: Drilling fluids are stored on-site in powder/pellet form and mixed in the field				

Appendix 2: Hazard Assessment Summary Tables

Facility	Cordeaux Colliery		
Storage ID	N/A		
Hazard	Bushfire		
Cause	<ul style="list-style-type: none"> • Drought conditions • High fuel load in surrounding bushland • Arson • Lightning strike 		
Impact	<ul style="list-style-type: none"> • Damage to site storages and potential release of contents causing land and/or water pollution • Potential for explosion (dependent on storages impacted) 		
Likelihood	Low	Materiality	High
Controls (includes pre-emptive actions and safety devices)	<ul style="list-style-type: none"> • Maintenance of asset protection zones as required • Hazard reduction activities are undertaken as required • Involvement with Bushfire Management Committees (Wollongong and Wollondilly) • Maintain relationship with Rural Fire Service • ICHPL Emergency Response Team in place • Bushfire Management Plan (ICAMP0102) in place • Water sources available for fire fighting 		
Actions to be taken (if incident were to occur)	<ul style="list-style-type: none"> • Instigate Incident Management Team • Actions to be taken will be dependent on the impact of bushfire on site infrastructure. 		

Facility	Cordeaux Colliery		
Storage ID	N/A		
Hazard	Flooding		
Cause	Intense rainfall events		
Impact	<ul style="list-style-type: none"> • Overflow of site storages and potential release of contents causing land and/or water pollution • Inability to safely access site • Scour erosion and sediment movement • Damage to site infrastructure 		
Likelihood	Low	Materiality	High
Controls (includes pre-emptive actions and safety devices)	<ul style="list-style-type: none"> • Periodic checks to identify any sediment build up • Maintenance of bunds • Emergency Response Team in place • Weather forecasts • Underground water storages • Water level loggers with associated alarms 		
Actions to be taken (if incident were to occur)	<ul style="list-style-type: none"> • Instigate Incident Management Team • Actions to be taken will be dependent on the impact of flooding on site infrastructure. 		

Facility	Cordeaux Colliery		
Storage ID	N/A		
Hazard	Epidemic/Pandemic		
Cause	Spread of virus through contact or exposure to infected persons		
Impact	<ul style="list-style-type: none"> • Reduced access to site for maintenance and compliance activities • Usual personnel may not be able to conduct compliance activities • Business as usual activities may not be able to be undertaken 		
Likelihood	Rare	Materiality	High
Controls (includes pre-emptive actions and safety devices)	<ul style="list-style-type: none"> • Emergency Response Team in place • Split rosters • Identification of back up personnel • Improvements in personal hygiene practices enforced • Restrictions on access to site (and between sites) by personnel (to prevent spread) • Prioritisation of activities to maintain compliance • Procedures in place for compliance activities • Planned shutdown of site if required (safe, stable and non-polluting) <p><i>Note: These controls are only implemented when required/if an event occurs. During normal operations these controls are not implemented.</i></p>		
Actions to be taken (if incident were to occur)	<ul style="list-style-type: none"> • Instigate Incident Management Team • Actions to be taken will be dependent on the limitations for site access to maintain equipment and conduct inspections and monitoring. 		

Facility	Cordeaux Colliery		
Storage ID	N/A		
Hazard	Climate Change		
Cause	<ul style="list-style-type: none"> • Generation of greenhouse gases from burning fossil fuels • Deforestation • Changes in the earth’s reflectivity/absorption 		
Impact	<ul style="list-style-type: none"> • Increased risk of pollution incidents • Changes to vegetation communities • Changes in weather patterns (more frequent and intense drought and storms) • Increased risk of bushfire and flooding • Increased temperatures requiring increased cooling • Lack of water security • Overflow/flooding/damage to bunds/tanks/containers and spillage of contaminants • Reduced flow in watercourses 		
Likelihood	Possible	Materiality	High
Controls (includes pre-emptive actions and safety devices)	<ul style="list-style-type: none"> • Preventative maintenance of bunds and other control equipment • Emergency Response Team in place • Prioritisation of activities to maintain compliance • Maintenance of asset protection zones as required • Hazard reduction activities are undertaken as required • Water sources available for fire fighting • Secure water supplies for ongoing operations • Implementation of reasonable and feasible water efficiency measures 		
Actions to be taken (if incident were to occur)	<ul style="list-style-type: none"> • Instigate Incident Management Team • Actions to be taken will be dependent on the impact of climate change on site operations and infrastructure 		

Facility	Cordeaux Colliery		
Storage ID	CDX.04 (Site Catchment Sediment Pond)		
Hazard	Loss of containment of contaminated water to the local environment		
Cause	<ul style="list-style-type: none"> • Pond overflows when full of contaminated water • Contamination of Sediment Pond caused by upstream hazardous substance spill • Excessive rainfall event • Buffer not maintained in pond to accommodate heavy rainfall events • Large scale hazardous substance spill on site at time sediment pond is overflowing 		
Impact	Pollution of external environment		
Likelihood	Very Low	Materiality	Medium
Controls (includes pre-emptive actions and safety devices)	<ul style="list-style-type: none"> • Routine inspection of storages • Routine water sampling of mine water holdings and sand filter lagoon underflow • Sedimentation Pond transfer pump in place (automated) • Transfer of Sediment Pond water to the upper-level mine water storages • Limited industrial activities on site (mine in care and maintenance) • Spill response equipment readily available • Alarm when water reaches the level at which it is pumped to Primary Stabilisation Lagoon. High level alarm also installed on Mine Water Holding Lagoon. • Path to leave site is only via the sand filter lagoon underflow discharge point • 40% of the Cordeaux pit top site is dedicated to site water management 		
Actions to be taken (if incident were to occur)	<ul style="list-style-type: none"> • Transfer contaminated water from the Sediment Pond to the mine water holding lagoons • Arrange for tanker to recover contaminated water and dispose of to a licenced waste facility (if needed). • Activate internal communication protocols • If there is actual or potential for material environmental harm, activate the PIRMP 		

Appendix 3: Storage Locality Plan

