

Great Greta

Plan for

Former Great Greta Colliery Pollution Incident Response Management Plan

Document Number: WWCX-1443240966-16207

Status: Approved

Version: 1.0

Effective: 7/11/2018

Review: 7/11/2021

Owner: Manager - Environment & Community

For Notification Procedure, please turn to Section 5

Table of Contents

1	Introduction.....	3
1.1	Background and Scope.....	3
1.2	Regulatory Requirements	4
2	Premises Details.....	6
2.1	Site Details	6
2.2	Major Hazards.....	6
2.3	Chemical and Potential Pollutants	7
3	Management and Responsibilities	7
3.1	Legal Duty to Notify	7
3.2	PIRMP Responsibilities.....	8
4	Incident Management.....	8
4.1	Incident Response Process	8
4.2	Incident Response Infrastructure and Equipment.....	9
4.3	Specific Hazard Response Procedures	10
4.3.1	Acid Water Discharge off Site	10
4.3.2	Minor Hazardous and Non-Hazardous Spills (i.e. minor hydrocarbon spills, hydrated lime spills etc.)	10
4.3.3	Emergency Response Team.....	10
5	Notification Procedures	11
5.1	Determination of Material Harm	11
5.2	Internal and External Notification	11
5.3	Notification to Local Landholders and Community.....	12
6	Training, Testing and Communication	12
6.1	Training	12
6.2	Testing, Review and Maintenance.....	13
6.3	Availability of the PIRMP.....	13
7	Document Information	14
7.1	Related Documents.....	14
7.2	Reference Information.....	14
7.3	Change Information.....	14

1 Introduction

1.1 Background and Scope

The Protection of the Environment Legislation Amendment Act 2011 (PELA) received assent on 16 November 2011 resulting in changes to the Protection of the Environment Operations Act 1997 (POEO Act). The intent of the PELA is to improve the way pollution incidents are reported and managed. Provisions include a requirement for holders of Environmental Protection Licenses (EPLs) to prepare, keep, test and implement a Pollution Incident Response Management Plan (PIRMP). The specific requirements for PIRMPs are set out in Part 5. 7A of the POEO Act and the Protection of the Environment Operations (General) Regulation 2009 (POEO (G) Regulation). In summary, this legislation requires the following:

holders of EPLs must prepare a pollution incident response management plan (section 153A, POEO Act);

the plan must include the information detailed in the POEO Act (section 153C) and the POEO(G) Regulation (clause 98C) and be in the form required by the POEO(G) Regulation (clause 98B);

licensees must keep the plan at the premises to which the EPL relates (section 153D, POEO Act);

licensees must test the plan at least every 12 months and after a pollution incident in accordance with the POEO(G) Regulation (clause 98E); and

if a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened within the meaning of Part 5. 7 of the POEO Act, licensees must immediately implement the plan (section 153F, POEO Act).

As the holder of EPL 20055, Oceanic Coal Australia Pty Limited (OCAL) is required to comply with the POEO Act for its premises at Cranky Corner Road, Glendon Brook NSW (former Great Greta Colliery). Scheduled activities that are being undertaken at the site are related to contaminated groundwater treatment. As such, this document has been developed to satisfy the PIRMP requirements documented above.

This document also details the procedures for notification of pollution incidents resulting in or having the potential to cause material harm to the environment. The notification of environmental incidents under this PIRMP is only required for those incidents causing or threatening to result in material environmental harm (a material harm incident) as defined in the POEO Act (see Section 5.1).

1.2 Regulatory Requirements

Specific detail is required for inclusion in the PIRMP. Table 1.1 lists information mandated under Section 153C of the POEO Act and clause 98C of the POEO (G) Regulation and details where this information is located in this document.

Section 153C	Detail required	Location in
(a)	The procedures to be followed by the holder of the relevant EPL in notifying a pollution incident to: (i) The owners or occupiers of premises in the vicinity of the premises to which the EPL relates, and (ii) The local authority for the area in which the premises to which the EPL relates are located and any area affected, or potentially affected, by the pollution, and (iii) Any persons or authorities required to be notified by Part 5.7 (of the POEO Act)	Section 5.3 Section 5.2 Section 5.2
(b)	A detailed description of the action to be taken, immediately after a pollution incident, by the holder of the relevant EPL to reduce or control any pollution,	Section 4.0
(c)	The procedures to be followed for coordinating, with the authorities or persons that have been notified, any action taken in combating the pollution caused by the incident and, in particular, the persons through whom all communications are to be made,	Section 5.2
(d)	Any other matter required by the Protection of the Environment Operations (General) Regulation 2009 (as set out below): 98C(1)(a) A description of the hazards to human health or the environment associated with the activity to which the license relates (the "relevant activity").	Section 2.2
	98C(1)(b) The likelihood of any such hazards occurring, including details of any conditions or events that could, or would, increase that likelihood.	Section 2.2
	98C(1)(c) Details of the pre-emptive action to be taken to minimize or prevent any risk of harm to human health or the environment arising out of the relevant activity.	Sections 2.1 and 2.2
	98C(1)(d) An inventory of potential pollutants on the premises or used in carrying out the relevant activity.	Section 2.3
	98C(1)(e) The maximum quantity of any pollutant that is likely to be stored or held at particular locations (including underground tanks) at or on the premises to which the license relates.	Section 2.3
	98C(1)(f) A description of the safety equipment or other devices that are used to minimise the risks to human health or the environment and to contain or control a pollution incident.	Section 4.0

Section 153C	Detail required	Location in
	<p>98C(1)(g)</p> <p>The names, positions and 24-hour contact details of those key individuals who: (i) are responsible for activating the plan, and</p> <p>(i) are authorized to notify relevant authorities under section 148 of the POEO Act, and</p> <p>(ii) are responsible for managing the response to a pollution incident.</p>	Section 3.2
	<p>98C(1)(h)</p> <p>The contact details of each relevant authority referred to in section 148 of the POEO Act.</p>	Section 5.2
	<p>98C(1)(i)</p> <p>Details of the mechanisms for providing early warnings and regular updates to the owners and occupiers of premises in the vicinity of the premises to which the licence relates or where the scheduled activity is carried on.</p>	Section 5.3
	<p>98C(1)(j)</p> <p>The arrangements for minimizing the risk of harm to any persons who are on the premises or who are present where the scheduled activity is being carried on.</p>	Section 4.0
	<p>98C(1)(k)</p> <p>A detailed map (or set of maps) showing the location of the premises to which the licence relates, the surrounding area that is likely to be affected by a pollution incident, the location of potential pollutants on the premises and the location of any storm water drains on the premises.</p>	Figures 2.1 to 2.3
	<p>98C(1)(l)</p> <p>A detailed description of how any identified risk of harm to human health will be reduced, including (as a minimum) by means of early warnings, updates and the action to be taken during or immediately after a pollution incident to reduce that risk.</p>	Section 4.0 and Section 5.3
	<p>98C(1)(m)</p> <p>The nature and objectives of any staff training program in relation to the plan.</p>	Section 6.1
	<p>98C(1)(n)</p> <p>The dates on which the plan has been tested and the name of the person who carried out the test.</p>	Section 6.2
	<p>98C(1)(o)</p> <p>The dates on which the plan is updated.</p>	Section 7.0
	<p>98C(1)(p)</p> <p>The manner in which the plan is to be tested and maintained.</p>	Section 6.2

Table 1 - Document Directory

2 Premises Details

2.1 Site Details

The former Great Greta Colliery site is located approximately 16 kilometres north of Branxton and approximately 23 kilometres east of Singleton in the Hunter Valley of New South Wales (NSW) (refer to Figure 2.1). The mine including the land occupied by the former surface infrastructure is owned by OCAL, which is wholly owned by Glencore Coal Assets Australia.

Mining operations ceased on 5 February 1999. The mine was purchased by Xstrata post closure, as part of the OCAL group of coal mines. Since this time, the mine has been decommissioned and rehabilitated and is now undergoing an active care and maintenance program in regards to the management of groundwater within the former underground workings. The primary source of the groundwater is the infiltration of surface water flow via subsidence induced cracking in Eui Creek as a result of mining in the 1980s. This water infiltrates the underground mine via acid bearing strata, resulting in acidic qualities in the mine seepage via the area of the adit seal in the former open cut.

OCAL's primary aim at the former Great Greta Colliery site is to develop and implement a long term passive and feasible groundwater management strategy that leads to a sustainable environmental outcome and enables full relinquishment of the mining lease held for the site. As such, the main focus of the future groundwater management strategy will be to prevent any uncontrolled acid seepage generated from the adit seal and open cut area.

In recognition that development of a passive strategy will require further detailed site investigations, OCAL will be adopting the following phased approach:

- Interim Strategy — maintain short-term measures to minimise the potential for seepage off site whilst medium to long term strategies are developed and implemented; and
- Long Term Strategy — implement a long term passive management strategy that prevents seepage where practical.

The surrounding area which may potentially be impacted by a pollution incident occurring at the former Great Greta Colliery (Great Greta) in addition to the premises itself may include the following:

- landholders adjacent to the former mine; and
- Downstream water courses (including adjacent landholders) of Eui Creek and Webbers Creek (refer to Figure 1), which subsequently flow into the Hunter River.

2.2 Major Hazards

The potential major hazards which have been identified for the premises relates to the following:

- uncontrolled acid groundwater discharge
- spills (e.g. hydrocarbon, hazardous chemicals, etc.) resulting in land contamination;
- spills (e.g. hydrocarbon, hazardous chemicals, saline or sediment laden water, etc.) resulting in water contamination; and
- Major water discharge (for example dam failure).

The likelihood of environmental hazards occurring at the Great Greta site has been captured through the Great Greta Broad Brush Risk Assessment (BBRA). The purpose of the BBRA is to identify significant environment and community aspects and impacts at the site, the risk they pose and the controls necessary to effectively manage them. Management of impacts is prioritised according to the level of risk each aspect is assigned. OCAL implements site specific risk management plans that have been developed to comply with Glencore's Risk and Change Management standard.

The likelihood of future uncontrolled acid water discharges from the site is considered to be low provided that the groundwater levels in the former underground workings continue to be managed at low levels (i.e. via release and treatment in accordance with EPL) in order to reduce hydrostatic pressure on the high wall.

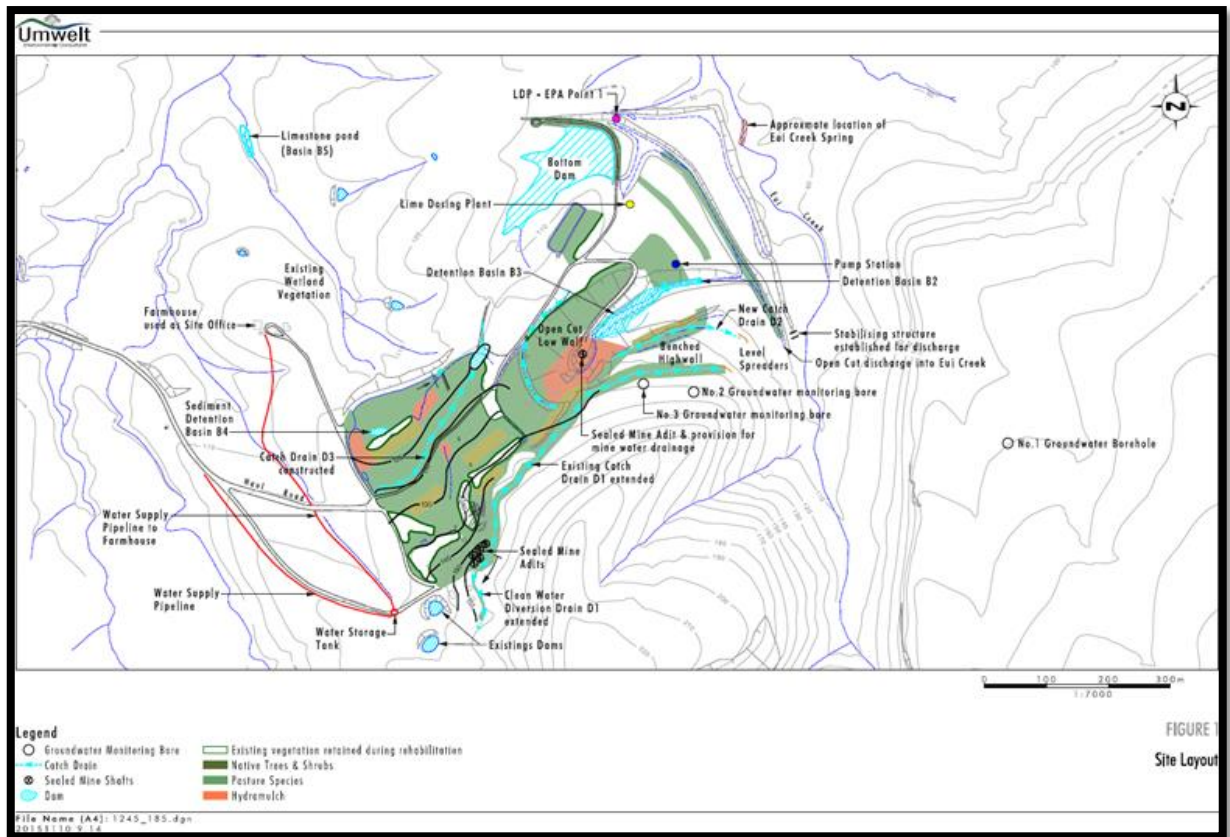


Figure 1 - Site Layout

The systematic identification, assessment and management of foreseeable hazards at the Great Greta site are undertaken through the following:

- identifying foreseeable hazards associated with the management of groundwater at the premises;
- assessing Sustainable Development risks using recognised analysis and evaluation methodologies; and
- implementing controls necessary to eliminate or reduce identified risks in accordance with the established hierarchy of controls for environmental management

2.3 Chemical and Potential Pollutants

Only minor quantities of chemicals are kept on site. Hydrated lime used for water treatment is stored at the site office while minor quantities of fuel required for diesel generators for pumping are stored at non-permanent locations on site.

Figure 1 displays the location of potential pollutant sources including dams, lime and fuel storage locations

3 Management and Responsibilities

3.1 Legal Duty to Notify

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

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

- the duty of an employee or any person undertaking an activity:
Any person engaged as an employee or undertaking an activity (at the premises) must, immediately after becoming aware of any potential incident, notify their relevant supervisor/manager of the incident and all relevant information about it. This is to be undertaken as per Section 5.2; and
- the duty of the employer or occupier of a premises to notify:
An employer or occupier of the premises on which the incident occurs, who is notified (or otherwise becomes aware of) a potential pollution incident, must undertake notification to the appropriate regulatory authority of any "material harm incidents", including relevant information. Notification shall be undertaken by the Environment and Community Manager or Operations Manager as per Section 5.2.

3.2 PIRMP Responsibilities

The specific responsibilities associated with the management and implementation of the PIRMP is outlined in Table 3.1 below.

Name	Contact Details	Position	Responsibility
Ben Clibborn	Office 49412 163 Mobile 0422 930 418	OCAL E&C Manager	Responsible for undertaking notification as defined in this PIRMP Responsible for managing the response to a pollution incident Responsible for arranging testing and updating of the PIRMP Responsible for ensuring notification and training of PIRMP Responsible for coordinating communications with affected community members

Table 3.1: PIRMP Management Responsibilities

4 Incident Management

4.1 Incident Response Process

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

In the case of a material harm environmental incident (refer to Section 5.1), prior to any other action, the site must contact 000 if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

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

- provide for the safety of people at and within the vicinity of the site, and
- Contain the pollution incident.

In accordance with the Glencore Incident Management Standard, the actions to be implemented at the premises on the occasion of a material harm incident include the following:

1. Secure the scene and contain the incident
2. Gather information (i.e. environmental monitoring)
3. Determine the investigation level
4. Commence an ICAM (if required)
5. Review and classify information and determine actions
6. Complete actions
7. Trend analysis reports

Specifically in relation to steps 1 and 2, incident management at the premises focuses on actions to:

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

4.2 Incident Response Infrastructure and Equipment

Arrangements, including description and location of safety equipment, for minimising risk of harm to people and the environment as result of a pollution incident, and for containing or controlling a pollution incident, are outlined below.

- Suitable earthmoving equipment including backhoes, excavators etc. that can be utilised to construct embankments and dams to contain spills are available at Les Russell's & Sons Pty Ltd, which is situated at 75 Fleet Street Branxton and can be contacted on 4938 1340.
- Glencore has installed a more reliable pumping capacity to maintain groundwater levels in the former underground workings at low levels so as to minimise the risk of uncontrolled seepage from the site. However, additional diesel pumps may be used on site to provide back-up in the event of an emergency.
- Hydrated lime is stored under cover at the site office and suitable PPE equipment is available for employees handling the material.
- Glencore has installed a lime dosing facility to effectively dose and treat groundwater prior to discharge off site in accordance with the Environment Protection Licence.
- Emergency hydrocarbon spill kits are stored at the site office in the event of a diesel spill from pumps, generators or machinery.

4.3 Specific Hazard Response Procedures

4.3.1 Acid Water Discharge off Site

Until implementation of the long term groundwater management strategies is complete, the interim strategy will primarily involve the ongoing management of any continued seepage. The key objective of this strategy involves the implementation of a treatment and release strategy of groundwater from the underground workings in order to reduce the hydrostatic pressure on the former open cut high wall in the area of the adit seal. The intended outcome of reducing hydrostatic pressure is to minimise the risk of uncontrolled acidic seepage from this area.

Groundwater seepage and actively discharged groundwater from the adit seal valve drains into Detention Basin D2 from the high wall area before being pumped into the Bottom Dam, which has approximately 60 ML capacity. A lime dosing facility for the Bottom Dam is used to treat acidic water (as required) from Detention Basin B2 so that the water quality is within EPL criteria for discharge off site. The water level in the dams on site are maintained as low as reasonably practical in order to maintain capacity to adequately store and treat acidic groundwater from the former underground workings.

4.3.2 Minor Hazardous and Non-Hazardous Spills (i.e. minor hydrocarbon spills, hydrated lime spills etc.)

The process to be followed for a minor hazardous or non-hazardous spills associated with chemicals listed in Section 2.3 is detailed below:

1. Control — where safe to do so, to prevent further release of the substance.
2. Contain — contain the spill utilising spill response equipment, focusing on minimising contamination to drains, dams or sensitive environments.
3. Clean up — consult the SDS prior to cleaning up to ensure correct clean-up equipment is utilised.
4. Dispose - treat waste as you would the spilt substance and refer to the SDS or contact the OCAL E & C Manager for advice.

4.3.3 Emergency Response Team

All Great Greta Colliery employees and contractors receive emergency preparedness and response training during their site familiarisation induction. PPE and incident containment and control equipment are detailed in the risk assessment documents listed in Section 2.2, this includes but is not necessarily limited to:

- emergency spill kits;
- firefighting equipment;
- portable pumping infrastructure;
- earth moving equipment;
- floating booms; and
- Erosion and sediment control materials.

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

5 Notification Procedures

5.1 Determination of Material Harm

Following containment of the incident, immediate action must be taken to determine if the incident can be classified as a 'material harm incident', i.e. considered to be causing or threatening material harm. As defined by Section 14 7 of the POEO Act, a material harm incident has occurred if the incident:

- involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or
- results in actual or potential loss (including all reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment) or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations).

The determination of a material harm incident will be made by the OCAL E&C Manager in consultation with the OCAL Operations Manager. If the E&C Manager is not available immediately, the determination will be made by the GCAA Environment and Community Manager.

5.2 Internal and External Notification

As discussed in Section 3.1, internal notification of an environmental incident is the responsibility of all site and contractor personnel. In the instance of identification of an environmental incident or hazard, the personnel will report the issue immediately to their supervisor/manager, who in turn shall report it to the OCAL E&C Manager. Immediately is taken to mean 'promptly and without delay'. As per guidance provided by the EPA, the decision on whether to notify the incident in accordance with Part 5. 7 of the POEO Act should not delay immediate actions to provide the safety of people or contain a pollution incident. However, incident notification will be made as soon as it is safe to do so¹.

The agencies listed in Table 5.1 must be notified by the appropriate personnel (detailed in Table 3.1) of the occurrence and details of a material harm incident immediately, in the order presented below:

Agency	Contact details
Fire and Rescue	000 (To be contacted first in this order if the incident presents an immediate threat to human health or property and emergency services are required, or last in this order if emergency response is not required.)
EPA	131 555
Ministry of Health	(02) 4924 64 77 (ask for Public Health Officer on call)
Work Cover	131 050
Singleton Council	(02) 65 78 7290 (office hours) or (02) 65 72 1400 (after hours)

Table 5.1: PIRMP Notification Requirements

Record keeping of incident details, including investigations and outcomes, will be undertaken in accordance with the site document control procedures.

EPA, Frequently Asked Questions Regarding the Duty to Notify of a Pollution Incident (March 2012) <
<http://www.environment.nsw.gov.au/legislation/poefagsnotify.htm>>

After initial notification of any material harm incident, it will be the responsibility of the OCAL E&C Manager to liaise with any authority listed in Table 5.1 that requests additional information, or is providing directions for management of the material harm incident. This may include incident investigation reports and ongoing environmental monitoring results.

5.3 Notification to Local Landholders and Community

Community notification shall be undertaken at the determination of the OCAL E&C Manager. Names and contact details of stakeholders, including local and downstream residents are included in Table 5.1. The following notification methodology is proposed to be utilised as required:

- early warnings: same day telephone notification to landholders whom may be affected by the incident over the subsequent 24 hour period; and
- updates: follow up phone calls to all landholders whom may have been notified by the initial early warning.
- Updates are to be provided to the broader local community in affected areas via information sheets or newsletters, media statements or any other strategy as defined in the Great Greta Colliery Site Groundwater Management Strategy (2012).

Information provided to the community will be relevant to the incident and may include the following details:

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

The response to water quality results that are found to be outside of EPL limits as a result of the discharge includes the following steps:

- affected landholders are to be notified by phone as early as possible so as to allow them to cease pumping water to their property; and
- the affected landholders are to be consulted daily until such time that monitoring demonstrates that water quality has returned to within EPL limits.

Dependent upon the scale of the discharge, monitoring may be extended further downstream as a means to define the area of affectation.

6 Training, Testing and Communication

6.1 Training

Incident management and emergency response is included in the Great Greta site induction.

All training records, including the name of the person undertaking training and date of training, shall be maintained in accordance with the WWC & MCPP Training and Competency Management Plan.

6.2 Testing, Review and Maintenance

The testing of the PIRMP will be undertaken to check that the information is accurate and current and that the plan is capable of being implemented in a workable and effective manner. Testing shall be undertaken in the following ways:

1. the PIRMP will be tested by assessing and reviewing it and making any necessary changes as identified. Testing is taken to be either a desktop review or an environmental emergency drill procedure. Testing will include all components of the plan, including training requirements;
2. a review of the PIRMP will occur every 12 months commencing from the date of authorisation by the OCAL E&C Manager. Contact details in this document must be kept current at all times; and
3. the PIRMP will be reviewed within one month from the date of any pollution incident that occurs in the course of an activity to which the EPL relates. This review will be undertaken in light of the incident, to provide the information included in the plan is accurate and up to date and the plan is still capable of being implemented in a workable and effective manner.

Records will be kept in accordance with legal requirements and will be included in Section 7.0 of this plan. Information to be retained regarding PIRMP testing includes:

- the manner in which the test was undertaken;
- dates when the plan has been tested;
- the person who carried out the testing; and
- the date and description of any update of or amendment to the plan.

6.3 Availability of the PIRMP

The PIRMP shall be kept in written form at the EPL premises and shall be made available to all personnel responsible for implementing the plan, and to an authorised officer (as defined in the POEO Act) on request.

The PIRMP will be made publicly available within 14 days of finalisation (taken to be authorisation of the PIRMP by the Operations Manager) via the Great Greta Colliery website, in a prominent position and on a publicly available page.

No personal information (within the meaning of the Privacy and Personal Information Protection Act 1998) will be made publicly available as part of the PIRMP.

7 Document Information

Relevant legislation, standards and other reference information must be regularly reviewed and monitored for updates and should be included in the site management system. Related documents and reference information in this section provides the linkage and source to develop and maintain site compliance information.

7.1 Related Documents

Related documents, listed in **Table 7-1** below, are internal documents directly related to or referenced from this document.

Number	Title

Table 7-1 – Related documents

7.2 Reference Information

Reference information, listed in **Table 7-2** below, is information that is directly related to the development of this document or referenced from within this document.

Reference	Title

Table 7-2 – Reference information

7.3 Change Information

Full details of the document history are recorded in the document control register, by version. A summary of the current change is provided in **Table 7-3** below. Example detail shown below.

Version	Date	Review team (consultation)	Change Summary
	17 October 2014	Allison Gray Mark Robinson	Updated contact details and merged into Glencore template.
	26 October 2015	Paul Amidy	Updated contact details and minor administrative changes
	31 October 2016	Paul Amidy	Minor administrative changes
	30 October 2017	Paul Amidy	Minor administrative changes
1.0	18 October 2018	Allison Gray	Updated Section 4, changed from Xstrata Guideline to Glencore Incident Management Standard. Included firefighting equipment in section 4.3.3 and changed from Project Manager to OCAL E&C Manager throughout the document (changed site contact from Paul Amidy to Ben Clibborn).

Table 7-3 – Change information