



# **Environmental Management Strategy**

**Myuna Colliery** 

**June 2017** 

## **Table of Contents**

1	IN	TRODUCTION	4
	1.1	Scope	
	1.2	Purpose	
		LATIVE REQUIREMENTS	
CC	NSEN	ITS, LEASES AND LICENCES	4
	1.3	PROJECT APPROVAL 10_0080 MOD 1	5
2	cc		
_			
	2.1	EMPLOYEESREGULATORY AUTHORITIES	
	2.2	DEPARTMENT OF PLANNING	
3	EN	NVIRONMENTAL MANAGEMENT SYSTEM FRAMEWORK	
	3.1	REGULATORY AUTHORITIES	9
4	IN	FORMATION AND COMMUNICATION	10
	4.1	COMMUNITY	10
	4.1.1	CENTENNIAL WEBSITE	-
	4.1.2	COMMUNITY CONSULTATIVE COMMITTEE	10
	4.1.3	COMMUNITY COMPLAINTS AND ENQUIRIES	10
	4.2	DISPUTE RESOLUTION	11
	4.3	GOVERNMENT DEPARTMENTS	11
	4.3.1	Annual Review	12
		Annual Return	
	4.3.3	MONTHLY WEBSITE ENVIRONMENTAL MONITORING REPORT	12
	4.3.4	INCIDENT / NON-COMPLIANCE REPORTING	12
5	RE	ESPONSIBILITIES	14
	5.1	MINE MANAGER	14
	5.2	ENVIRONMENT AND COMMUNITY COORDINATOR	
	5.3	MYUNA EMPLOYEES AND CONTRACTORS	14
6	М	ONITORING	15
	6.1	Environmental Monitoring	15
	6.2	COMMUNITY/SOCIAL MONITORING	
7	EN.	VVIRONMENTAL EMERGENCIES	
		JDIT	
8	AU		_
	8.1	External Audits	16
9	RE	EVIEW	17
	9.1	REVIEW FOLLOWING AN ENVIRONMENTAL AUDIT	17
	9.2	REVIEW FOLLOWING NON COMPLIANCE	17
	9.3	REVIEW FOLLOWING SUBMISSION OF ANNUAL REVIEW	17
	9.4	EVENT BASED REVIEW	17
ΑF	PEND	DIX 1: PROTOCOL 2	18
AP	PEND	DIX 2: PROTOCOL3	19
AF	PEND	DIX 3: ENVIRONMENTAL MONITORING PLAN – MY11158	20

## **DOCUMENT CONTROL**

DOCUMENT DETAILS

Name: Pollution Incident Response Plan

Author: Environment and Community Coordinator

Revision No.: 3
Document Status Final

APPROVAL	Revision No.	Date Sent	Details of Approval	Revised By	Approved By
DETAILS	0	17/08/12	Development of EMS in accordance with Development Consent 10_0080	V. Warren	R. Davis
	1	29/04/15	Requirement of PA10_0080 to review following Modification	M. Gleeson	M. Yule
	2	17/05/16	Annual review	M. Gleeson	M. Yule
	3	28/06/17	Annual review	A. van der Kroft	M. Yule

# CIRCULATION DETAILS

Revision No.	Issue Date	Name	Department	Title
0	17/08/12	Colin Phillips	DP&I	Senior Planner
2	22/06/16	Colin Phillips	DP&E	Team Leader - Resource Assessment
3	26/07/17	Colin Phillips	DP&E	Team Leader - Resource Assessment

## **Abbreviations**

**CCC** Community Consultative Committee

**DPE** NSW Department of Planning and Environment

**DPIW** Environment and Community Database

**ECD** Decibel

**EL** Exploration Licence

**EPA** Environment Protection Authority

**EPL** Environment Protection Licence

**EMS** Environmental Management Strategy

**EWP** Environmental Work Procedure

**GHG** Greenhouse Gas

ML Mining Lease

MPL Mining Purposes Lease

Mtpa Million Tonnes per Annum

**POELA Act** Protection of the Environment Legislation Amendment Act 2011

**POEO Act** Protection of the Environment Operations Act 1997

#### 1 Introduction

This Environmental Management Strategy has been created to assist in compliance with the Protection of Environmental Operations (POEO) Act, Project Approval (10\_0080), Environmental Protection Licence (EPL) 366 and other licences, approvals and legislation.

Myuna Colliery (Myuna) is an underground coal mine owned and operated by Centennial Myuna Pty Ltd. Myuna is located 25 km south west of Newcastle NSW in the Lake Macquarie and Wyong Local Government Areas.

Myuna began mining in three coal seams (Wallarah, Great Northern and Fassifern) using bord and pillar mining methods in 1982. Centennial Coal acquired Myuna in 2002, and has operated the mine since this time.

Myuna received approval for the 'extension of mining'. This approval extends mining and coal handling at Myuna within the Colliery lease Area and proposes to:

- Mine using bord and pillar mining methods in the Wallarah, Great Northern, and Fassifern seams in ML1632 and ML1370, to 2032;
- Produce, handle and distribute to Eraring Power Station, up to 3 million tonnes of coal per annum (Mtpa) using existing infrastructure;
- Continue the use of ancillary infrastructure and services to 2032;
- Upgrade the water management system; and
- Rehabilitate the surface facilities within 5 years of completion of mining.

#### 1.1 Scope

This Environmental Management Strategy applies to the Myuna premises and lease boundary and all work sites associated with Myuna, including all employees and contractors.

#### 1.2 Purpose

The purpose of the Environmental Management Strategy is to provide an effective management system to identify and control potential environmental impacts to achieve compliance with environmental legislation and regulatory requirements applicable to Myuna and to reduce the impacts from the Colliery on external stakeholders.

#### **Legislative Requirements**

The activities at Myuna are conducted in accordance with relevant legislation and requirements of statutory authorities.

Legislative and regulatory requirements are generally recognised through the imposition of conditions on development consents, licences or mining approvals.

## **Consents, Leases and Licences**

The Myuna Colliery Holding is covered by Mining Lease No 1632. The Mining Lease No 1632 includes a surface land area of 33 hectares for mine infrastructure (Mining Purposes Lease No. 334). The

total lease area is 7426.5 hectares. A summary of Myuna's Approvals, Authorities and licences is presented in Table 1 below.

Table 1: Summary of Myuna Colliery Approvals, Licences and Authorities

Name	Approval Number	Date Granted	Expiry Date
Development Consent	Development Consent SH.110/148	21/12/1977	No expiration date specified in the consent. Subject to renewal of mining leases
Project Approval	10_0080 MOD1	18/01/2012	31/12/2032
Mining Lease	ML 1632	13/04/2013	13/10/2022
Mining Purposes Lease	MPL 334	20/10/1994	20/10/2036
Mining Lease	ML 1370	26/09/1995	07/03/2033
Exploration Licence	EL 4444	23/10/1992	23/10/2017
Exploration Licence	EL 6640	23/10/1992	23/10/2017
Mining Operations – Various Licence, Point Wolstoncroft	Section 151 Licence	10/09/2009	10/09/2020
Mining Operations – Various Licence, Pulbah Island	Section 151 Licence	1/11/2011	21/10/2021
Mining Operations – Various Licence, Wangi Wangi Point	Section 151 Licence	16/02/2011	15/02/2021
Bore Licence	20BL172565	13/12/2010	12/12/2015*
Bore Licence	20BL173259	7/08/2012	Perpetuity
Environmental Protection Licence	EPL 366	01/01/2000	N/A
Trade Waste Permit	D 171027	23/10/1995	N/A

<sup>\*</sup> DPIW renewed Bore Licence 20BL172565 on 12/12/2015, awaiting copy of licence and expiry date.

## 1.3 Project Approval 10\_0080 Mod 1

Myuna Colliery received Project Approval (10\_0080) on 18th January 2012. A modification of PA 10\_0080 was approved 1st February 2015. As a requirement of this approval Myuna is to develop an Environmental Management Strategy. The requirements for this Strategy are presented in Table 2 below along with where they are addressed in this document.

**Table 2: Project Approval Requirements** 

	PA 10_0080 Condition	Section of this Management Plan
Sche		
Env	ironmental Management Strategy	
1.	The proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:	This Strategy
a)	Be submitted for approval to the Secretary within 7 months of the date of this approval;	Section 2.3
b)	Provide the strategic framework for the environmental management of the project;	Section 3
c)	Identify the statutory approvals that apply to the project;	Section 1.3
d)	Describe the role, responsibility, authority and accountability of all key personnel involved in environmental management of the project;	Section 5
e)	Describe the procedures that would be implemented to:	
•	Keep the local community and relevant agencies informed about the operation and environmental performance of the project	Section 4.1
•	Receive, handle, respond to, and record complaints;	Section 4.1.3
•	Resolve any disputes that may arise during the course of the project;	Section 4.1.4
•	Respond to any non-compliances;	Section 4.3.3
•	Respond to emergencies; and	Section 7
f)	Include:	
•	Copies of any strategies, plans and programs approved under the conditions of this approval; and	Section 3
•	A clear plan depicting all the monitoring required to be carried out under the conditions of this approval.	This Strategy

#### 2 Consultation

Myuna will consult with employees, contractors, and regulatory authorities when the manner of operations has been altered that may affect this environmental management strategy. Examples of situations requiring consultation include, but are not limited to:

- Changes to surface work environments, environmental work methods & systems;
- Undertaking, or reviewing risk assessments and implementing controls; and
- Investigating incidents and complaints.

## 2.1 Employees

Consultation with employees under the Environmental Management Strategy may be through the following methods:

- Reviews of this document.
- Risk Assessments.
- Incident / Accident Investigations.
- Meetings.

## 2.2 Regulatory Authorities

Myuna will communicate on relevant aspects of the Mine's operation in accordance with the "Myuna Colliery Stakeholder Engagement Plan", Project Approval conditions and any other Regulatory requirements.

## 2.3 Department of Planning

The Environmental Management Strategy was approved by the then Director-General of the Department of Planning on 4<sup>th</sup> September 2012.

## 3 Environmental Management System Framework

The strategic framework for Environmental Management at the Colliery is depicted in Figure 1 below.

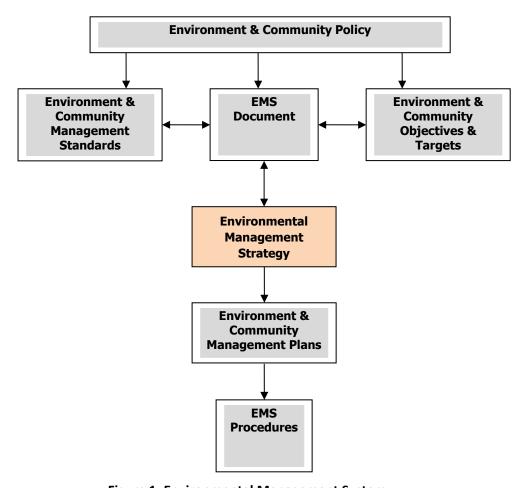


Figure 1: Environmental Management System

## 3.1 Regulatory Authorities

The following management plans were developed as per the requirements of PA10\_0080:

- Noise Management Plan.
- Air Quality & Greenhouse Gas Management Plan.
- Water Management Plan which includes:
  - A site water balance.
  - o Erosion & Sediment Control Plan.
  - Surface Water Management Plan.
  - Groundwater Monitoring Program.
  - Surface & Groundwater Response Plan.
- Biodiversity Management Plan.
- Heritage Management Plan, which has been split into two management plans, including:
  - o Aboriginal Cultural Heritage Management Plan.
  - o Non-indigenous Cultural Heritage Management Plan.
- Rehabilitation Management Plan (Mining Operations Plan).

#### 4 Information and Communication

## 4.1 Community

The community will be kept informed about Myuna Colliery and the environmental performance by the following methods.

#### 4.1.1 Centennial Website

The following information will be made publicly available on the Centennial Myuna website as per Schedule 5 Condition 11 of PA 10\_0080:

- All approved strategies, plans and programs required under the conditions of PA 10\_0080;
- A summary of the monitoring results which will be reported in accordance with the approved plans or programs;
- A complaints register, which is to be updated on a monthly basis;
- Minutes of CCC meetings;
- Annual Reviews as per Schedule 5 Condition 4 of PA 10\_0080; and
- Any independent audits conducted under Schedule 5 Condition 9 of PA 10 0080.

In accordance with Schedule 5 Condition 8, Myuna shall provide regular reporting on the environmental performance of the project on the website, in accordance with the reporting arrangements.

#### 4.1.2 Community Consultative Committee

The Myuna Community Consultative Committee (CCC) commenced in August 2012 as per *Schedule 5 Condition 6* of PA 10\_0080. This committee operates in general accordance with the *Community Consultative Committee Guidelines for State Significant Projects, November 2016*.

## 4.1.3 Community Complaints and Enquiries

Myuna will publicise the community inquiries/complaints hotline (02 4970 0270) on the Centennial Coal website, as well as in the local phone directory.

For the regional community and stakeholders an e-mail feedback link (myunacolliery@centennialcoal.com) is available on Centennial's web page for the community or stakeholders to register concerns or comments.

The Mine will respond to any community inquiries or complaints received by this number as described in the Myuna Mine's Incident Report and Detail Form and the Environment & Community Database (ECD) forms.

It is the responsibility of the Environment & Community Coordinator to record any community complaints/inquiries received via this number and for the supervisor to investigate the nature of the complaint/inquiry. Complaints will be followed up by the supervisor or Environment & Community Coordinator as soon as the outcomes of the investigation have been completed and no more than 24 hours after the complaint was received if contact details have been provided.

A community complaints register will be put onto the Centennial Coal website, and updated monthly in accordance with PA 10 0080 Schedule 5 Condition 11.

Protocol 2 (Appendix 1) shows the process that will be followed in the event of a complaint.

Personal information of the complainant will not be released.

## 4.2 Dispute Resolution

If a community member is not satisfied with the actions undertaken as a result of a complaint as described above, then disputes will be resolved in accordance with the Project Approval requirements *Schedule 4 Conditions 2 & 3* as described below and in Protocol 3 (**Appendix 2**).

2) If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Proponent shall:

- a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
- consult with the landowner to determine his/her concerns;
- conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and
- if the project is not complying with these criteria, then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- b) give the Secretary and landowner a copy of the independent review.
- 3) If the independent review determines that the project is complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary.

If the independent review determines that the project is not complying with the relevant impact assessment criteria in Schedule 3, and that the project is primarily responsible for this non-compliance, then the Proponent shall:

- a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until the project complies with the relevant criteria; or
- b) secure a written agreement with the landowner to allow exceedances of the relevant criteria,

to the satisfaction of the Secretary.

#### 4.3 Government Departments

Government Departments will be kept informed about Myuna Colliery and the environmental performance by the following methods.

#### 4.3.1 Annual Review

An Annual Review (formerly known as the Annual Environmental Management Report) will be developed in accordance with Project Approval *Schedule 5 Condition 4*.. The Annual Review includes:

- information on the development and activities carried out in the past calendar year;
- information on the activities proposed to be carried out over the current calendar year;
- a comprehensive review of the monitoring results and complaint records of the development over the past calendar year;
- a comparison of monitoring results against:
  - o the relevant statutory requirements, limits or performance measures/criteria;
  - the monitoring results of previous years; and
  - o the relevant predictions in the EIS.
- information on any non-compliances over the past year, and what actions were (or are being) taken to ensure compliance;
- an identification of any trends in the monitoring data;
- identification of any discrepancies between the predicted and actual impacts of the development, and an analysis of the potential cause of any significant discrepancies; and
- a description of what measures will be implemented over the next calendar year to improve the environmental performance of the development.

This report will also be made available on the Centennial Myuna website.

#### 4.3.2 Annual Return

An Annual Return stating the sites compliance with the conditions of EPL 366 is completed and submitted to the EPA on an annual basis. This is done in accordance with the EPL conditions and by the due date as stated in the EPL.

#### 4.3.3 Monthly website environmental monitoring report

A monitoring report is published on the website to satisfy the requirements under the Protection of the Environment Legislation Amendment Act 2011 (POELA Act) to publish or make pollution monitoring data available to members of the public.

## 4.3.4 Incident / Non-Compliance Reporting

Reporting of an environmental incident that has caused, or threatens to cause material harm to the environment will be conducted as per the Pollution Incident Response Plan.

The Pollution Incident Response Plan is prepared in accordance with section 153 of the POEO Act.

Incident reporting is in accordance with Schedule 5 Condition 7 of PA 10 0080.

For any other incident associated with Myuna, the Proponent shall notify the Secretary and any other relevant agencies as soon as practicable after Myuna becomes aware of the incident. Within 7

days of the date of the incident, Myuna shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Any incidents, complaints and non-conformances that occur need to be reported in accordance with the Centennial Incident Reporting Standard (CIMOS-006), logged and corrective and preventative actions identified. This includes:

- minor incidents resulting in no off-site impact but requiring immediate mitigation and instigation of any mitigation action(s); and
- off-site impacts, such those which prompt complaints, requiring notification to the Site Manager or Environment & Community Coordinator.

In the event of an incident or complaint, the following procedure will be followed:

- investigate the likely source of noise emission, based on current equipment or activities operating within nearby mining operations;
- mitigate the source immediately through application of mitigation measures where
  possible, such as relocation of noise generating activities or ceasing the operation if
  mitigation is not feasible;
- log the complaint/incident; and
- create an incident report, including the corrective actions that were taken and who was
  involved, that documents preventative actions required to prevent a recurrence of the
  event and includes a sign-off by an authorised person at the site.

## 5 Responsibilities

Each employee and contractor has a responsibility for protecting the environment & adhering to the Environmental Policy. The following key staff are responsible for environmental management at Myuna Colliery and undertake the following roles:

## **5.1** Mine Manager

The Mine Manager is responsible for:

- Authorisation of this strategy;
- Compliance with the Myuna Colliery Environment & Community Policy;
- Providing resources to allow the identified environmental risk and community objectives be implemented;
- Reporting of environmental incidents which may cause environmental harm to the Group Environmental Manager.
- Delegation of duties during the absence of the Environment and Community Coordinator.

## 5.2 Environment and Community Coordinator

The Environment & Community Coordinator is responsible for:

- Development and implementation of Environmental Management System including strategies, plans and procedures.
- Regulatory and community liaison concerning environmental matters
- Registration of Community complaints and regulatory liaison on ECD
- Monitoring and auditing in accordance with approvals and management plans
- Compliance management of licences, approvals for environmental management of the site
- Establishment of CCC and report issues or matters to mine manager.

#### 5.3 Myuna Employees and Contractors

All employees and contractors have a responsibility to manage operations in an environmentally responsible manner and report any incidents or take action to minimise the impacts from site operations. All environmental incidents and complaints will be reported to the Environment & Community Coordinator.

## 6 Monitoring

#### 6.1 Environmental Monitoring

Environmental Monitoring at Myuna Colliery will be conducted in accordance with the EPA Environmental Protection Licence (EPL 366), Project Approval, Development Consent requirements and Environmental Management Plans (EMPs).

Records of all environmental monitoring and results which are undertaken in accordance with EPL's, Project Approval, Development Consent and management plans are to be kept onsite for a minimum of 4 years.

## 6.2 Community/Social Monitoring

Myuna Colliery will monitor social impacts of its operations by recording and trending complaints over time by entering these in ECD and reviewing the nature of complaints on a monthly basis. This will assist in determining the environmental aspects of the complaint and requirement for additional controls or management strategies to limit the impacts.

## 7 Environmental Emergencies

Myuna Colliery Pollution Incident Response Plan is prepared in accordance with the *Protection of the Environment Legislation Amendment Act 2011* (POELA Act).

This plan is available on the Centennial Myuna website in accordance with the requirements of the POELA Act.

### 8 Audit

The objectives of an audit are to maintain compliance with the Environmental Management Strategy.

#### 8.1 External Audits

Independent audits of the Management Plan shall be conducted in accordance with Project Approval 10\_0080 Schedule 5 Condition 9 detailed below.

By the end of June 2013, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:

- a. be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
- b. include consultation with the relevant agencies;
- c. assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);
- d. review the adequacy of strategies, plans or programs required under the abovementioned approvals; and
- e. recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

Within 6 weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

#### 9 Review

Revisions of this EMS are to be instigated by the site Environment & Community Coordinator or delegate. The outcomes of a review will be documented by updating sections of these documents where required. Revised documents will be approved by the Group Manager Environment and Mine Manager and submitted to DPE for approval. Once approved, the revised Management Plan will be placed on the Centennial Coal Website.

## 9.1 Review following an environmental audit

Audits can provide an assessment of compliance with the Project Approval, EMS and management plans. They also allow for continual improvement and resource allocation.

The objectives of an audit are to:

- identify compliance with the statutory requirements, and
- to identify opportunities for improvement.

If required, this Management Plan will be reviewed following the completion of an environment audit.

## 9.2 Review following non compliance

Non-compliances may be identified during site inspections, through audit findings, environmental monitoring and as a result of either an exceedance, incident or community compliant. Non-compliances identified shall be investigated and consider:

- the cause of the non-conformance,
- a review of existing controls to identify modifications required to avoid repetition of the non-conformance; and
- identification of the appropriate corrective or preventative action.

This Strategy will be reviewed following any non-compliance investigation.

#### 9.3 Review following submission of Annual Review

This Strategy will be reviewed, and if necessary revised following the submission of the Annual Review.

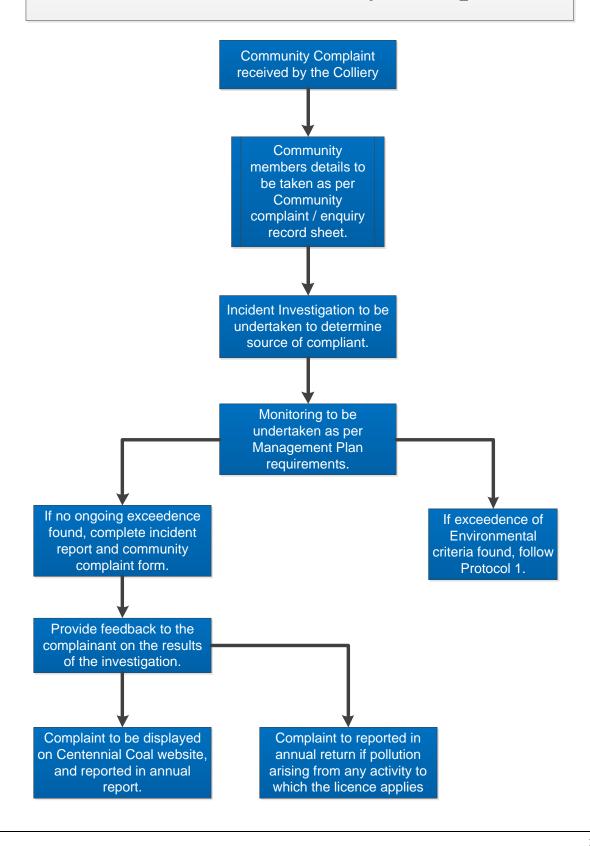
#### 9.4 Event based review

Other events which may trigger a review of this Management Plan include:

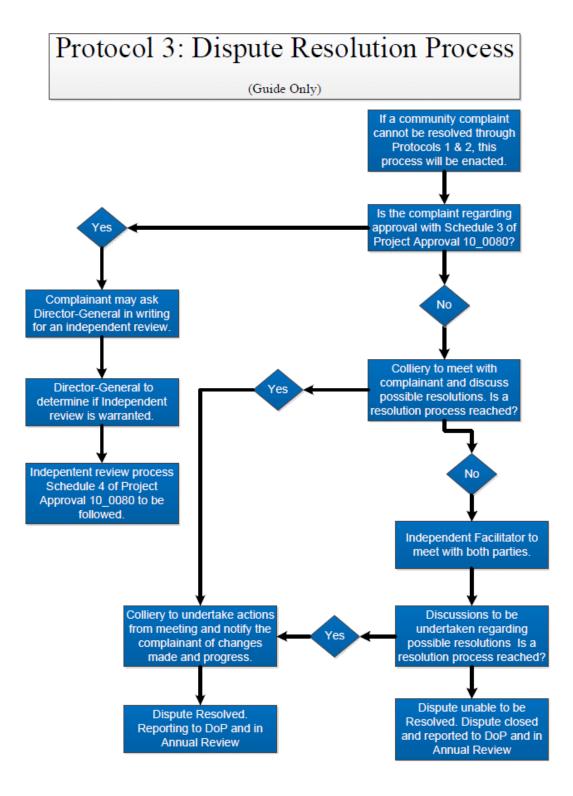
- modifications / improvements to the system;
- changes in the operation;
- modifications to or new approvals, guidelines or codes of practice that require a review of the strategy; or
- as otherwise directed by the Secretary.

#### **APPENDIX 1: Protocol 2**

# **Protocol 2: Community Complaint**



#### **APPENDIX 2: Protocol 3**



## **APPENDIX 3: Environmental Monitoring Plan – MY11158**

Table 3: Summary of summary of all monitoring required under PA 10\_0080

PA 10_0080 Condition	Area	Monitoring Type	Frequency	Number of Locations
Schedule 3,	Noise Monitoring	Attended	Quarterly	8
Condition 11	Noise Monitoring	Real Time	Continuous	1
		Dust Deposition	Monthly	4
Schedule 3, Condition 19	Air Quality	High Volume Air Sampling	Every 6 <sup>th</sup> Day	1 PM <sub>10</sub> 1 TSP
	Greenhouse Gas	Gas Bag Samples	Monthly	1
Schedule 3, Condition 20	Weather	Meteorological	Continuous	1
Schedule 3,	Surface Weter	Grab Samples	Daily during discharge Monthly	2 3
Condition 20	Surface Water	Flow monitoring	Continuous	1
Schedule 3,	Groundwater	Storage Volume	Quarterly (when accessible)	3
Condition 20		Grab Samples	Quarterly (when accessible/discharging)	7

Further details of monitoring conducted are contained in relevant Management Plans.

