Awaba Colliery
Environmental Management Strategy

November 2011

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1   INTRODUCTION

This Environmental Management Strategy (EMS) has been developed to compliment Centennial Coal's Environmental Management Framework document.

1.1 Background

Awaba Colliery is a small underground coal mine operated by Centennial Newstan Pty Ltd (Newstan), a wholly owned subsidiary of Centennial Coal Company Ltd (Centennial). The mine is located within the Newcastle coalfield, south of the Awaba village on the western side of Lake Macquarie, near Newcastle NSW. Mining operations commenced at the Awaba Colliery in 1947, prior to the commencement of any planning controls, and have continued without abandonment since that time. Consequently, the Awaba Colliery previously operated pursuant to section 109(1) of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) and clause 6B(1) of the State Environmental Planning Policy (Major Development) 2005.

An application for a Part 3A Project Approval was lodged in March 2010 by Centennial for the Awaba Colliery Mining Project (the "Project"), which sought approval from the Minister for Planning to allow ongoing and extended underground mining and associated surface operations. The project was declared by NSW Department of Planning as a Major Project under Part 3A of the EP&A Act, with Director General's Requirements (DGRs) issued on 22nd April 2010 (DA10_0038) for assessment under Section 75F of the Environmental Planning and Assessment Act (1979). The Environmental Assessment was submitted to the Department in September 2010. The Planning and Assessment Commission of New South Wales granted conditional approval to Centennial Newstan Pty Ltd (Centennial Newstan) for their Part 3A Application on the 13th of May 2011.

1.2 Scope

Awaba Colliery promotes environmental awareness and commits to the strategy in the Environmental policy designed to minimise the impacts of the operation. Awaba Colliery accepts and has adopted the Centennial Coal Environmental Policy endorsed by the company's executives.

This EMS applies to the Awaba Colliery premises and all work sites associated with Awaba, including all employees and contractors. Suppliers and services providers may operate under their own EMS.

1.3 Purpose

The purpose of the Awaba Colliery Environmental Management Strategy (EMS) is to provide an effective management strategy to identify and control potential environmental impacts to achieve compliance with environmental legislation and regulatory requirements applicable to Awaba Colliery.

The purpose of the EMS is to fulfil the requirements of Condition 1 of Schedule 5 of the Project Approval (10_0038).

The objectives of the EMS are as follows:

- Provide the strategic framework for the environmental management of the Project; (Section 1.4)
- Identify the statutory approvals that apply to the project; (Section 1.7)
- Describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; (Section 8.2)
- 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 6.2.2)
    - Receive, handle, respond to and record complaints; (Section 6.2.2.2)
    - Respond to any non-compliance; (Section 6.2.2.4)
    - Respond to emergencies; and (Section 9.5)
- Include copies of any strategies, plans and programs approved under the conditions of this approval; and (Section 13)
- Include a clear plan depicting all the monitoring required to be carried out under the conditions of this approval. (Section 13.6)

1.4 Environmental Management Strategy Framework

The Awaba Colliery EMS outlines all components of the Centennial EMS Framework Document and is consistent with the elements of ISO 14001, as briefed below:
- Environmental Policy (Section 1.5)
- Hazard Identification - Aspects and Impacts (Section 3);
- Legal and Other Requirements (Section 1.7);
- Objectives and Targets (Section 1.6);
- Management Plans (Section 5.1);
- Responsibility for Implementing the EMS (Section 8.2);
- Training, Awareness and Competence (Section 7);
- Communication (Section 6.2);
- Documentation and Document Control (Section 9.10);
- Risk Management and Operational Control (Section 5)
- Emergency Preparedness and Response (Section 9.5)
- Measurement and Evaluation (Section 9)
- Management Review (Section 11)
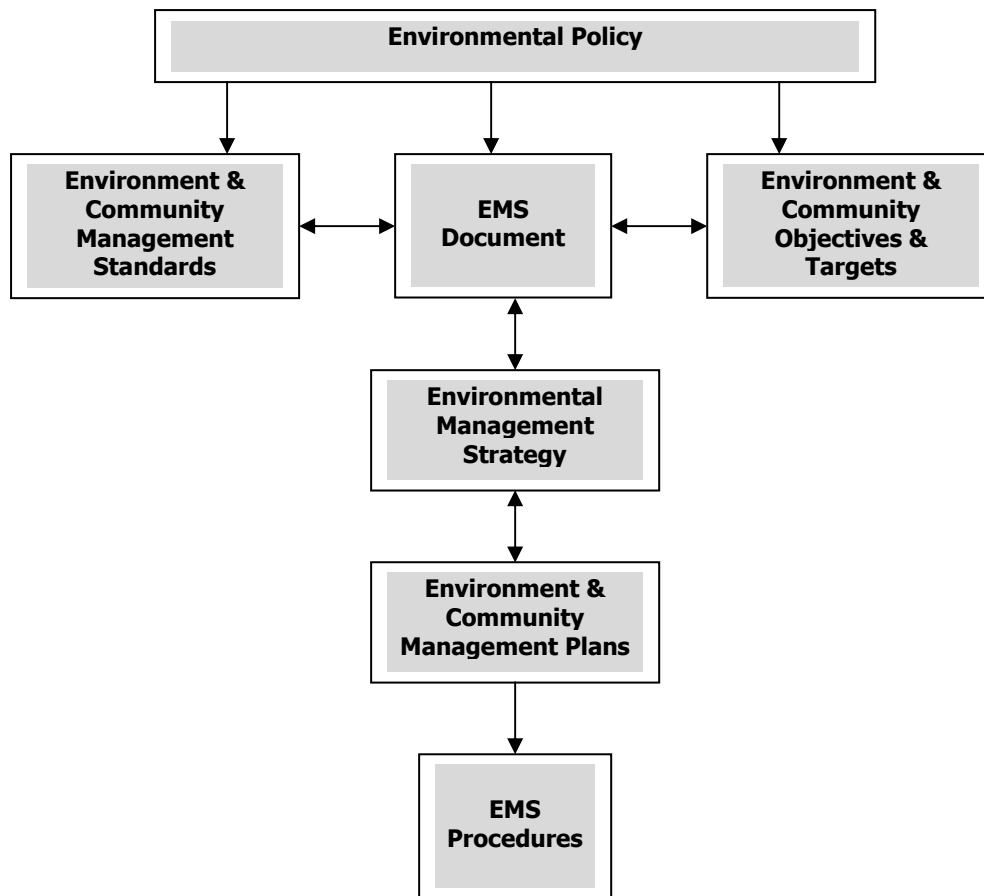
Figure 1.1 EMS Framework

The Awaba Colliery EMS incorporates four components

- Environmental Management Strategy Document (Volume 1)
- Environmental Management Strategy Procedures (Volume 2)
- Environment and Community Management Standards (Volume 3)
- Environment and Community Management Plans (Volume 4)

1.5 Environmental Policy

The Centennial Coal Environmental Policy sets out the Company aims and values applicable to all employees and contractors. The Policy underpins the Awaba Colliery Environment and Community Management Standards.

The Environmental Policy has been endorsed by the Board of Directors and Mine Manager and is a commitment from management to all of the Mine's employees. The Policy is included in Appendix 2.

The Environmental Policy is displayed at the Awaba site in the Managers conference room, training room, and the walkway to the bathhouse. The Policy is also available to all Centennial employees through the intranet and available to the public via the Centennial internet site.

The Awaba Mine Manager, staff and personnel accept and are committed to fulfilling the EMS to assist in meeting the Policy objectives.

1.6 Objectives and Targets

Objectives represent overall goals for environment and community performance and are created to meet components of the Environment Policy. Specific objectives for each Policy commitment will be reviewed annually as part of Centennial's business plan. The Centennial corporate objectives can be found in Appendix 3.

The following are the Objectives for environmental management at Awaba for the 2011 period. These have been derived by considering the Corporate Environmental Principles and Objectives, by assessing the past performance of the Colliery and by assessing the current external environment. The Awaba Colliery objectives to minimise the environmental impacts from operations are to:

1. Comply with the requirements of the Environmental Protection Licence and Project Approval;
2. Comply with other regulatory requirements;
3. Develop positive relationships with stakeholders including community and explore sponsorship opportunities;
4. Receive nil community complaints about environmental issues under site controls.

Targets will be clearly defined and measurable where practical. Progress against the relevant objectives and targets will be reviewed through the internal performance reporting strategy and staff performance reviews. These targets are referred to in the site environmental business plan.

1.7 Legal & Other Requirements

The activities of Awaba Colliery 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 the Project Approval, licences or mining approvals.

1.7.1 Identifying Legislative and Regulatory Requirements

The Mine's operations will be conducted in accordance with applicable State and Commonwealth environmental, planning, and natural resource legislation. Awaba Colliery will maintain a register of relevant environmental legislative and regulatory requirements as part of the EMS which will be reviewed and maintained.

The Centennial intranet system contains links to relevant legislative web sites and a selection of relevant guidelines and policy documents which is available in reviewing key environmental legislation.

1.7.2 Managing Legislative Requirements

Awaba Colliery will be made aware of significant changes to environmental legislation through participating in Centennial group environment meetings with representations from legal counsel, and by regulatory authorities and industry associations. The environmental legislative register will be reviewed on an as needs basis following a significant change to the environmental legislation or government regulatory policy which, has the potential to effect operations at Awaba.

2 CONSULTATION

Awaba Colliery will consult with employees, contractors, the community consultative committee (CCC), and regulatory authorities when a decision is to be made that may affect a person's health, safety or welfare and the environment. Examples of situations requiring consultation include, but are not limited to:

- Changes to work environments, work methods, work systems, equipment or substances;
- Undertaking, or reviewing risk assessments and implementing controls;
- Investigating incidents;
- Determining environmental training needs;
- Scope of work; and
- Undertaking projects that require a designated project manager.

2.1 HSEC Committee

A Health and Safety, Environment and Community Committee meet on a monthly basis to oversee the safety and environmental performance of the mine. HSEC committee members are encouraged to communicate environmental messages, issues, concerns and performance to the employees at the mine.

2.2 Employees and Contractors

Shift and team briefings provide the opportunity for discussion with individuals on matters that may be of concern to them. They will be able to voice concerns regarding environmental matters during these briefings.

2.3 Community Consultative Committee (CCC)

The Awaba Colliery Community Consultative Committee (CCC) has been established in accordance with Condition 5 of Schedule 5 of Project Approval 10_0038. Awaba Colliery will undertake consultation with the community and build an effective relationship with nominated committee and community members. The CCC provides a forum for community members to discuss environmental and community aspects of the operations. The Awaba Colliery CCC operates in conjunction with the Newstan Colliery CCC on a quarterly basis.

2.4 Regulatory Authorities

Awaba Colliery will communicate on relevant environmental and community aspects of the Mine's operation in accordance with the "Awaba Colliery Stakeholder Engagement Plan", development consent conditions any other regulatory requirements. These regulatory authorities include:

- Office of Environment & Heritage
- Division of Resources & Energy
- Department of Planning & Infrastructure
- NSW Office of Water
- Lake Macquarie City Council

2.5 External Providers

External providers will receive relevant information which will have an influence on their organisation / personnel through their contact or supervisor at Awaba Colliery. If further

information is required to perform a task it can be attained on request. All relevant information regarding health, safety and environment should be provided prior to work commencement.

3 HAZARD IDENTIFICATION – ASPECTS AND IMPACTS

To ensure that environmental hazards are identified, evaluated and eliminated or controlled to an acceptable level, an aspects and impacts register was constructed and forms the basis of the Annual Environmental Risk assessment discussed in Section 4.

The environmental aspects associated with operations were identified as part of the risk assessment at Awaba Colliery and are summarised in Appendix 5 - **Aspects and Impacts Register**. This register contains a matrix of the environment aspects listed below, pertinent to each of the Colliery Activities.

- Land and landform
- Water quality/quantity
- Air quality
- Waste minimisation
- Sustainability
- Visual Amenity
- Culture and heritage
- Noise
- Pollution Control
- Community
- Flora, fauna and biodiversity
- Energy and greenhouse gas
- Traffic.

The significant environmental elements of Awaba, with the activities and a summary of environmental aspects associated with the Mine's operation is contained in the table in Appendix 5. The Annual Environmental Risk Assessment listed in associated documents should be referred to for the environmental aspects contained in the formal risk assessment.

To assist in managing the environment aspects and impacts of the Mine's activities a number of Centennial Standards (refer to EMS **Volume three**) have been adopted.

Mine personnel will also consider the environmental aspects of the operation and evaluate these whilst undertaking risk assessments as required by the following:
- all job tasks performed by contractors by using the Awaba Colliery Mine "Permit/Authority to Commence Work"; and
- all new projects or changes to operations with environmental impacts as per the Awaba Colliery "Change Management System".

4 RISK ASSESSMENT

Awaba Colliery has adopted the Centennial guideline (*ECMG 02 Environmental Risk Assessment and Stature)* developed to ensure consistency in environmental risk assessment across the sites and is to be followed by each site. This Standard sets out an environmental consequences table and risk ranking matrix for managing identified risks.

Awaba Colliery will conduct an annual operational risk assessment to assess the environmental aspects and impacts of the Mine and to meet requirements of the Environmental Policy.

This assessment considers the operational activities of the Mine, identifies the potential environmental hazards associated with the activity and assesses the potential risk posed by that hazard. As part of Department of Industry & Investment requirements and the Mine's due diligence, commitments are made for reducing unacceptable risks. The reporting process then allows for these commitments to be reviewed for action at the next reporting period.

Some of the higher environmental risks recognised by the risk assessment at Awaba Colliery include:
- Surface water management – including discharged of dirty water and unlicensed discharges;
- Underground water management; and
- Subsidence impacts.

5   RISK MANAGEMENT / OPERATIONAL CONTROL

The identified environmental impacts of Awaba's operations and activities identified in the risk assessment will be managed through the development and implementation of management plans, procedures and/or standards.

5.1 Environment and Community Management Plans

Centennial has Environment and Community Management Plans to facilitate meeting the objectives and targets set in the Awaba Colliery Environmental Business Plan, development consent conditions, obligations to regulators, risk mitigation actions, continual improvement aims and corrective actions. These plans are detailed in the Associated Documents section and contained in **Volume 4** of the EMS.

These plans are in accordance with the development consent conditions which address as a minimum:
- process for identifying and managing major environmental aspects/impacts/risks;
- process for monitoring and managing compliance with regulatory requirements;
- measurement and monitoring of environmental performance and corrective actions;
- pollution prevention and emergency preparedness strategies;
- roles and responsibilities;
- specific management plans for significant risk areas; and
- audit and review.

5.2 Environmental Work Procedures (EWP's)

A register of Awaba EMS Procedures appears in **Volume 2**, and a list of the procedures can be found in the Associated Documents section. These have been developed to ensure that effective environmental and community procedures are implemented and adhered to by personnel conducting activities at Awaba Colliery and for the purpose of maintaining the EMS. These include but are not limited to:
- EWP001 Spill Response – Oil/Coal Fine Spills
- EWP003 – Environmental Incident Reporting
- EWP004 Community Enquiry/Complaint

- EWP006 Onsite Disposal of Hydrocarbons
- EWP008 Environmental Weekly Inspection
- EWP009 Re-fueling of Service Pods
- EWP012 Duplicate Water Sampling
- EWP013 Newstan & Awaba Quarterly Subsidence Inspection
- EWP014 Areas of Environmental Responsibility
- EWP015 Permit to Clear or Disturb Land
- EWP016 Monitoring During PCD Discharge Event
- EWP017 Public Safety Inspection
- EWP018 Watercourse Inspections
- EWP019 Surface Cleaning and Waste Management Procedure
- EWP020 – Monitoring During PCD Discharge Event
- EWP021 – EPA – OEH Notification

5.3 Standards

Awaba Colliery has adopted the Centennial Environmental and Community Management Standards (ECMS) and Guidelines (ECMG) to cover the operational aspects of the Mine and will develop and implement any additional Standards and Guidelines as deemed necessary (**Volume 3**).

The scope of these Standards covers all operational aspects and activities that have the potential to affect either the environment or the community. A list of these Standards and guidelines can be found in the Associated Documents section.

5.4 Permit to Work

A permit to work is to be completed where specialised tasks need to be undertaken by contractors for the Colliery. These tasks may include:
- Clearing vegetation
- Confined space
- Excavation
- Hot work
- Scaffolding – Elevated work platform
- Portable electrical and nominated apparatus

Other permits required will be prescribed by the project coordinator.

5.5 Authority to Commence Work

Prior to commencing work, contractors are to have the following requirements approved and signed by the project coordinator
- Mine Site Induction,
- Workers Compensation and/or Public Liability Insurance,
- Safe Work Method Statements,
- Purchase Order,
- Medical Certificate,
- Trade Certificate or letter of Competency, and
- Work history for the previous 12 months relevant to the task that personnel will be performing

5.6 Emergency Preparedness and Response

These are detailed in section 9.5

5.7 Contractor Management Plan

The Awaba Colliery Contractor Management Plan (MP 06) serves to provide the framework to ensure the safe and effective management of contractors on the Awaba Colliery Holding. When a contractor is brought to site all components of the Awaba Colliery Contractor Management Plan, Environmental Management Strategy and the Health and Safety Management System must be complied with.

6 INFORMATION

Knowledge required to perform work in a safe manner is provided by means of
- documentation of how to perform the work safely and associated documents that supplement specific work procedures to control the hazards of particular tasks and
- communication for the day to day status of information

6.1 Documentation

6.1.1 Equipment and Consumables

All equipment manufacturers are required to submit specifications, manuals, procedures and risk assessments on equipment and consumables to the site contact or coordinator to ensure it's safe to use. A Materials Safety Data Sheets (MSDS) must be provided for all Hazardous materials which are used or brought onsite. If a material or consumable has specific disposal requirements, these are to be brought to the attention of the mine site personnel.

6.1.2 Mine Site Documentation

Where there is a risk to health and safety and/or the environment when undertaking a task, safe work procedures, Job Safety Maps, Job Safety Analysis, Standards, inspections and reports have been developed to identify hazards and the steps to control those hazards. Controlled copies of the procedures are maintained on Lotus Notes.

6.2 Communication

6.2.1 Internal Communication

Key avenues for internal communication on environment and community aspects/concerns of operations are maintained mainly through meetings. Additionally, Awaba has the following methods of communication with the workforce and employees.

6.2.1.1 Display

Displays at Awaba Colliery include noticeboards, work orders, electronic communication, report books and daily diaries.

6.2.1.2 Tool Box Talks

Any major environmental incidents and information can be communicated to the whole workforce via toolbox talks.

6.2.1.3 Intranet

Environmental incidents can be communicated via the intranet in the form of a HSEC alert. Other information which can be communicated on Lotus Notes includes good news stories, newsletters and articles in newspapers.

6.2.1.4 Briefings

Contractors are given information on health, safety and environmental issues in the induction prior to work commencing onsite. All contractors are managed in accordance with the Awaba Contractor Management Plan. Further information can be given to the contractor prior to work commencement to ensure that they are properly informed of the issues regarding the task they are to perform. If a contractor is bringing a chemical to site, they must supply an MSDS.

6.2.1.5 Signage

Where it is deemed necessary, relevant signage may be used as a form of communication to the workforce and community. This may be used in instances such as environment and safety notices and for location of equipment and for providing directions in the event of an environmental emergency.

6.2.1.6 Accident/Incident Report

In the event of an environmental incident at the Awaba Colliery the workforce will immediately report these to the supervisor and the senior mine official will record these as per the Awaba Mine Accident/Incident Report. The Environmental Coordinator is to be notified of the incident as soon as possible to assist in determining actions and to inform the Mine Manager of the environmental incident as per Centennial ECMG *Environmental Incident Reporting (ECMG 03)*.

6.2.2 External Communication

External communication with the media will be conducted in accordance with the Centennial Coal "Media Standard" (refer to **volume three**). In the event of a media enquiry all contact should be considered as on the record and personnel are to immediately refer the enquiry to the Group Manager – External Affairs, the only person authorised to speak on behalf of the company to the Media.

6.2.2.1 Stakeholder Engagement Plan

Awaba Colliery will communicate to relevant stakeholders on the relevant environmental and community aspects of the Mine's operation in accordance with the "Awaba Colliery Stakeholder Engagement Plan". This plan is designed to maintain communication with external stakeholders on the Mine's operations and progress with environmental and community programs through identified forums and via nominated communication mechanisms. Details of any engagement with external stakeholders will be recorded in ECD forming part of the Stakeholder Register.

The Mine will also consult with the community as required in the Stakeholder Engagement Plan by providing information to community members through various communication mechanisms described below.

6.2.2.2 Community Consultative Committee (CCC)

The Awaba Colliery Community Consultative Committee (CCC) has been established in accordance with Condition 5 of Schedule 5 of Project Approval 10_0038. Awaba Colliery will undertake consultation with the community and build an effective relationship with nominated

committee and community members. The CCC provides a forum for community members to discuss environmental and community aspects of the operations. The Awaba Colliery CCC operates in conjunction with the Newstan Colliery CCC on a quarterly basis.

6.2.2.3 Community Complaints and Enquiries

Awaba Colliery will advertise the community enquiries/complaints hotline (02 4950 3435) as a minimum in the local phone directory and may also consider advertising the number through local media or on newsletters.

For the regional community and stakeholders an e-mail feedback link (cey1@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 registered community enquiries or complaints received by this number as described in the Mine's work procedure *Community Complaints and Enquiries Procedure (EWP-004)*. It is the responsibility of the Environmental Coordinator to record any community complaints/enquiries received via this number and for the supervisor to investigate the nature of the complaint/enquiry. Complaints will be followed up by the supervisor or Environmental Coordinator as soon as the outcomes of the investigation have been completed and no more than 24 hours after the complaint was received.

6.2.2.4 Media Releases

Environmental matters that are of significance are published monthly in the local newspaper – The Lakes Mail.

6.2.2.5 External Incident Reporting

The Group Environment Manager, in consultation with the relevant General Manager, will report significant environmental incidents to external stakeholders as appropriate. Such incidents will be communicated according to the Centennial Coal *ECMG 03 Environmental Incident Reporting*.

6.2.2.6 Regulatory Notification

In compliance with Condition 6 of Schedule 5 of Project Approval 10_0038 the Director General and any other relevant agencies shall be notified of any incident associated with the project as soon as practicable after Awaba Colliery becomes aware of an incident. Within 7 days of the date of the incident, the Director General and any other relevant agencies shall be provided with a detailed report on the incident.

The Colliery must notify the Director General and any other relevant regulatory authorities of any reportable incident. This includes but is not limited to:
- Dirty water discharge
- Large sink holes
- Impacts on water course / groundwater
- Other forms of environmental harm

A reportable incident is per the definition contained in the Centennial Standard *ECMG 03 Environmental Incident Reporting*. If an incident occurs this Standard as well as EWP016 and EWP021 must be considered and followed for reporting of incidents internally and externally to the OEH or other departments as required.

6.2.2.7 Regulatory Applications

- The Colliery must ensure all relevant licences or approvals are obtained to ensure compliance with legislative requirements. If licences and approvals already exist, any new works must ensure that they are either covered by these, or obtain approval by the relevant authorities.

7 TRAINING AWARENESS AND COMPETENCE

Employees/contractors are provided with instruction and training to
- Understand the work processes,
- Gain the necessary skills and knowledge to competently perform their tasks safely,
- Work to a standard (EWP),
- Identify associated hazards – hazard awareness (JSM, JSA),
- Assess and control the hazards.

7.1 Competency and Assessment

The Mine's induction and environmental awareness training incorporates a section to assess the competency of employees and contractor against environmental requirements.

Assessments of training may be written, practical and/or oral. The results of the training assessments are kept on a computer database. Training records are also maintained in individual employee files and are updated when required. An example of an assessment is *ECMG08 – Environmental inductions employees and contractors assessment*

7.2 Induction

All Awaba Colliery employees and contractors will be inducted prior to commencing work on site. The Environmental component of the new employees induction shall include:

- The importance of Centennial's Environmental Policy;
- Regulatory requirements;
- Overview of role and framework of Centennial's EMS;
- Roles and Responsibilities;
    - The proper storage of oil drums.
    - The clean up of all oils spills,
    - Appropriate storage of leaking equipment in designated / bunded areas,
    - Maintenance and general housekeeping,
    - The clean up of all coal or stone dust spills,
    - Proper disposal of waste,
    - Ensuring vehicles are parked in appropriate areas,
    - Appropriate storage of oil pods stored in bunded areas,
    - Reporting sumps/ pods/ oil cubicles which require cleaning out/oil removed to the ECC,
    - Reporting environmental incidents.
- Significant environmental aspects, impacts and consequences; and
- Environmental procedures.

7.2.1 Visitor

Visitors to Awaba will undertake a brief visitors induction, with an awareness section on key environment components as per *ECMG 10 Site Environmental Induction Visitors.*

7.2.2 New starter

Additional to [section 7.2](#), site specific issues are incorporated into the new employee and contractor site inductions and the competency of inducted personnel assessed as per *ECMG 11 Site Environmental Induction New Staff* and *ECMG 12 Site Environmental Induction Mine Worker*.

7.2.3 Contractor

Additional to [section 7.2](#), site specific issues are incorporated into the new employee and contractor site inductions and the competency of inducted personnel assessed as per *ECMG 09 Site Environmental Induction Employees and Contractors*

7.3 Environmental Awareness Training

Awaba Colliery will progress implementation of the EMS and the Environmental Policy by training employees and contractors in relevant areas on the EMS. Environmental and Community training may be but need not be limited to:

- Spill Response Procedure,
- Environmental awareness (e.g. Water Management Plan)
- Community awareness (Stakeholder Engagement Plan),
- Accredited training programs (as required).

Environmental awareness training will provide relevant knowledge and skills to manage environmental issues to:

- Gain commitment and alignment to the Mine's Policy and environmental expectations of Centennial Coal;
- Eliminate practices that may result in poor environmental performance by building the environmental capacity of employees;
- Improve application of existing procedures to improve environmental performance;
- Highlight individual/job role responsibility;
- Improve environmental decision making and problem solving skills; and
- Reduce environmental risk.

7.4 Refresher Training

Site activities and performance will influence the frequency of environmental awareness training, but as a minimum, refresher training for key personnel, including management, will be undertaken every two years.

8 SUPERVISION

Supervisors with the appropriate skills, experience and competence will have clear responsibilities allocated to them. They will:

- provide guidance and direction to personnel regarding their allocated work and
- effectively enforce the safety and environmental systems of work that have been developed to address the risks/hazards that have been identified through inspections direction or risk assessment

8.1 Instruction

Instruction by the supervisors provides the opportunity for effective communication to encourage both an understanding and acceptance of their requirement of the Environmental Management Strategy and OH&S responsibilities.

8.1.1 Written Instruction

Specific directions / instructions, that must be adhered to before work commences are included in the relevant Surface or Underground Job Safety Maps. Additional instructions can be provided via the Pulse Work Order strategy, where applicable. The relevant Environmental Work Procedure (EWP), Safe Work Procedure (SWP) or Safe Work Method Statement (SWMS) details the steps, hazards and controls for work to be conducted safely and in an environmentally responsible manner.

8.1.2 Verbal Instructions

Personnel can receive verbal instruction via the project co-ordinator, relevant engineer or mining supervisor.

8.2 Responsibilities

8.2.1 Mine Manager

The Mine Manager is responsible for:
- Authorisation of the EMS;
- Compliance with the Centennial Environmental Policy;
- Compliance with the condition of EPL 443 and Project Approval 10_0038.
- Providing resources to ensure identified environmental risk and community objectives are implemented;
- Reporting of significant environmental incidents as required to the Group Environmental Manager / General Manager of Environment and Sustainability;
- Delegation of resources to ensure environmental risk mitigation strategies are implemented; and
- Delegation of duties during the absence of the Environment and Community Coordinator.

8.2.2 Environmental and Community Coordinator

The Environment and Community Coordinator is responsible for:
- Compliance with the Centennial Environmental Policy;
- Maintenance and implementation of environmental systems, and plans;
- Regulatory and community liaison;
- Registration of community complaints and regulatory liaison on ECD;
- Development and implementation of environmental work procedures;
- Development and implementation of environmental training and inductions;
- Auditing the effectiveness of the EMS;
- Ensuring inspections are conducted,
- Reporting non-conformances in daily meetings and/or the monthly report,
- Tracking the progress of environment and community objectives in the monthly report
- Reviewing managements strategies and plans
- Coordinating maintenance on environmental equipment and systems; and
- Ensuring that the responsibilities highlighted in section 7.2 is complied with.

8.2.3 Manager of Mechanical/Electrical Engineer, Senior Projects Engineer, Washery Manager, Northern Coal Logistics Manager, and Purchasing Officer

It is the head of the Department, or their delegates' responsibility to

- Maintain the highest possible environmental Standards within their designated areas as outlined in section 7.2 and to
- Make use of all resources available to prevent or reduce environmental risks
- Reporting environmental incidents and non-compliance to the Environmental Coordinator
- Ensuring that section 7.2 is complied with.

8.2.4 Employees and Contractors

It is the responsibility of all employees and contractors to

- Comply with the Centennial Environmental Policy, Standards and procedures;
- Conduct operations in compliance with the Mine's environmental Standards and procedures; and
- Identify and implement appropriate controls for environmental risks from any risk assessments and job safety analysis and communicate these with responsible staff.

8.2.5 Health, Safety, Environment and Community (HSEC) Committee

It is the responsibility of the HSEC Committee to:

- Review compliance with the Mine's Environmental Policy, Standards and procedures;
- Promote environmental awareness within the workforce and contractors; and
- Raise environmental issues and programs that will improve compliance with the Mine's Environmental Policy, Standards and procedures at committee meetings for appropriate staff to consider.

The mine manager may delegate roles of responsibilities in the long term absence of the above.

8.3 Environmental Responsibilities Plan

An Environmental Responsibilities Plan has been developed to create ownership and awareness of environmental issues within each department at Awaba Colliery. This plan is located in Appendix 4. It is the Manager of each department or their delegates' responsibility to reduce harmful environmental effects from their delegated areas and to be aware of their environmental responsibilities.

9 MEASUREMENT AND EVALUATION

EMS monitoring shall include:

- Tracking progress towards achieving objectives and targets;
- Monitoring progress of environment and community plans;
- Tracking the completion of inspections; and
- Tracking completion of non-conformance and corrective actions and of community complaints.

Monitoring of the above EMS requirements will be undertaken by entering in ECD the progress of implementation on a monthly basis. ECD allows for these requirements to be recorded, tracked (i.e. targets achieved, inspections completed, non conformance or corrective actions completed) and to be report to the Group Environment Manager and Mine Manager in monthly environmental and operations reports.

9.1 Environmental Monitoring (Noise, Water, Dust, Waste)

Environmental Monitoring at Awaba Colliery will be conducted in accordance with the OEH Environmental Protection Licence (EPL 443) and Environmental Management Plans (EMP's) required by the Mine's Project Approval.

Compliance against the Mine's OEH limits in the Environmental Protection License and Project Approval conditions will be checked monthly and non compliances entered into ECD to document these in the monthly environmental and operations reports. Reporting of non compliances with EPL license limits will occur as described in the Centennial Standard *ECMG 03 Environmental Incident Reporting*.

Monitoring of waste should be in accordance with *ECMG 07 – Waste Management*.

9.2 Community / Social Monitoring

Awaba 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.

9.3 Environmental Performance Indicators

A set of environmental performance indicators has been developed and are regularly reviewed and updated as a part of the Mine's business plan. These indicators comprise both lead indicators and lag indicators. Where as the specific indicators and performance targets will be determined on an annual basis the typical indicators are listed below.

Awaba Colliery will assess performance against the environmental performance indicators by recording these in ECD and evaluating them in the monthly environmental report.

9.3.1 Lead Indicators

The lead indicators include:
- Corporate requirements action plan implementation
- EMS development and implementation
- Stakeholder Engagement Plan implementation
- Risk mitigation/site improvement action implementation
- Audits

9.3.2 Lag Indicators

The lag indicators for the site include:
- Water Non Conformance Frequency Rate (NCFR)
- Complaint Frequency Rate (FR)
- Level 2 Incidents (Significant)
- Level 3 Incidents (Reportable)

9.4 Inspections

Awaba Colliery will implement and maintain a plan identifying areas of environmental responsibility for surface operations. Environmental inspections will be undertaken consistent with the Centennial *ECMG 06 Audit and Inspection* (EWP008 – Environmental Weekly Inspection) and will include inspections of the surface areas with the responsible persons nominated under the

Mine's Area of Environmental Responsibilities Plan (appendix 4). This person will be responsible for meeting the environmental standards for their nominated areas and the Environmental Coordinator will audit in conjunction with the nominated personnel environmental standards on a regular basis. Any non-conformances shall be investigated and reported in ECD.

9.5 Emergency Preparedness and Response

Potential environmental emergencies will have specific procedures and/or targeted action response for the following:

- Spill Response – Oil/Coal Fine Spills (EWP001)
- Environmental Incident Reporting (EWP003)
- Fires or bush fires (Bushfire Management Plan)

These emergencies have been identified through group discussion, historical experience and risk assessments. As required by the Centennial EMS responding to major environmental incidents and emergency preparedness will be addressed in accordance with the relevant Awaba Colliery Emergency Procedures which addresses responsibilities and personnel requirements, chain of command and notification lists, duty card procedures, emergency equipment and material disposal procedures.

9.6 Management Meetings

Daily, weekly and monthly management meetings provide an effective discussion forum to review and monitor the mine's environmental performance, and to plan further environmental improvements.

9.7 Reporting

9.7.1 Annual Environmental Management Report (AEMR)

The Annual Environmental Management Report (AEMR) is completed and distributed to the Standards of '*Guidelines to the Mining, Rehabilitation and Environmental Management Process*' as required by the DRE and Project Approval conditions.

9.7.2 The OEH Annual Return

An annual return stating the sites compliance with the EPL is completed and submitted to the OEH on an annual basis. This is done in compliance with the EPL conditions and by the due date as stated in the EPL.

9.7.3 Mine Site Monthly Report

A monthly environment report which is prepared to communicate internally with Centennial senior management regarding details on:

- Compliance with licence requirements;
- Incidents and actions undertaken;
- Positive environmental performance indicators;
- Update on environmental and community issues and programs;
- Corrective action required and taken;
- Medium term and long term objectives and targets; and
- Community liaison.

External communication with regulatory authorities and community enquiries/complaints and all environmental incidents in or above Category 4 are to be reported in the monthly report to the

Group Environment Manager, Mine Manager and to the Chief Operating Officer as outlined in *ECMG 03 Environmental Incident Reporting.*

9.7.4 Environmental Incident Report

The Environmental Coordinator is responsible for reviewing the outcomes of the environmental incident investigation process, closing out the incident once the investigation has been completed, reporting the incident to appropriate regulatory authorities as per the Centennial Standard *ECMG 03 Environmental Incident Reporting* and coordinating any corrective or preventative actions to be instigated. The outcomes of the incident investigation and any corrective or preventative actions will be discussed with staff at the daily management meeting and be made available to the workforce if approved by the Mine Manager as a "HSEC alert" to the Mine site via email.

Awaba Colliery will maintain electronically a record of environmental incidents in "ECD" and a hardcopy of the Awaba Colliery "Incident/Accident Form" retaining the details of environmental incidents, investigations and any corrective or preventative actions. Environmental incidents are an internal method of reporting environmental performance and may not always be required to be reported externally.

9.8 Corrective and Preventative Action

Documented procedures for any corrective or preventative action taken are required to eliminate the causes of actual or potential non-conformities.

Non-conformances can be divided into two categories;
- **Major** – a systemic failure of the strategy or an activity which is in direct contravention of the strategy / procedure that could result in a level 1 to 3 incident (refer to Appendix 1 – Definition). That is it has moderate to major actual or potential environmental harm where remediation will be required.
- **Minor** – a procedural requirement or a non-conformance with the strategy which has no direct consequential effect or evidential environmental damage. This is can result in a level 3 to 4 incident.

Major non-conformances identified shall be investigated and the following considered:
- The cause of the non-conformance;
- Review of existing controls to identify modifications required to avoid repetition of the non-conformance
- Identification of the appropriate corrective or preventative action;

The implementation of corrective actions shall be monitored and documented using ECD and reported in the monthly environmental performance report.

9.8.1 Community Complaints and Enquiries

The Corrective and Preventive Actions are detailed in Section 6.2.2.2

9.8.2 Accident/Incident Investigation

A formalised process to capture the circumstances relating to accidents, incidents and non compliance to stated objectives of the Environmental Management Strategy is via the Accident/Incident (A/I) Investigation Report.

These reports detail the immediate or recommended action to be taken to prevent a re-occurrence of the incident/accident.

9.8.3 Audits

Any non-conformance to Management Strategies/Plans generated from an audit shall be recorded and reported to the Administrator. This is detailed in Section 10.3

9.8.4 Inspection

Under this strategy personnel are to report any conditions or actions required to be taken for events found during their inspections. They are required to take whatever reasonable practicable steps to rectify the conditions or notify the relevant supervisor of any actions required that are beyond their control. If the issue cannot be rectified immediately a work order is to be generated to correct the situation.

9.8.5 Planned Task Observations

Any unsafe behaviours, conditions or hazards identified by the observer of a Planned Task Observations (PTO) are to be corrected to prevent an incident occurring. Any issues identified and the preventive actions arising are to be recorded on the PTO.

9.8.6 Non Compliance

Any person who wilfully disregards the procedures, standards and policies detailed in this Management Strategy or Regulations shall be recorded and reported to the Mine Manager and/or Administrator. They shall be subject to the Disciplinary Procedure of the mine. This is to be a record of interview and this is to be placed on their personal file.

Where there is no Disciplinary Procedures in the case of contractors or contracting companies, non-conformances are to be recorded on a Non-Conformance Notice (Associated Documents), and issued to the respective parties that requires them to comply with the requirements of the Awaba Environmental Management Strategy.

9.9 Record Keeping

9.9.1 Mine Site Documents

A hardcopy of the EMS documents, Standards, programs, procedures and records will be retained by the Environmental Coordinator. A digital copy of these documents will be maintained on the Intranet under the Awaba Colliery document section (on lotus notes) so the most up to date copy is available to personnel onsite.

Awaba Colliery will retain as required by the EMS environmental management records for the statutory time frame identified in regulatory instruments. As a minimum this will include environmental licence monitoring data and community complaints information for a period of 4 years.

In addition to the statutory requirements, other records will be maintained for a minimum of 4 years including:
- Inspections
- Environmental incidents
- Audit reports
- Compliance reviews

- Monthly reports

9.9.2 Register of External Communication

A register of all external stakeholders relevant to Mine's operations will be maintained in Centennial's Environment and Community Database (ECD) on the intranet, including community members, regulatory and government authorities, indigenous groups and interest groups.

Community complaints and inquiries will be registered in ECD recording details such as the complainant/inquirer name and address, information about the complaint/inquiry, response and corrective actions.

The details required to be entered into ECD will retain information on contact(s) made with external stakeholders. This information will be entered by staff at Awaba Colliery who directly liaise with external stakeholders and may include personnel such as the Mine Manager, surveyors, and environmental coordinators.

9.10 Documentation and Document Control

The Environmental Management Strategy is comprised of four volumes as shown in Section 1.4. This document, *Volume One – Environmental Management Strategy*, describes the purpose and intent of the complete Strategy and forms the core of the Awaba Colliery EMS. The other Volumes of the EMS provide the documented Standards, EMS procedures and Environmental Management Plans.

An electronic copy of the approved volumes of the EMS will be available on the Mine's Intranet for onsite personnel to ensure availability and the most current version of these documents.

9.10.1 Controlled Document

One (1) controlled copy of this Management Strategy is to be maintained and located in the Mine Library (Mine Manager's Office). An electronic copy of the Environmental Management Strategy will be located on Lotus Notes under the "Environmental" folder.

9.10.2 Administrator of the Environmental Management Strategy

The Administrator of this Management Strategy is the Environment and Community Coordinator (ECC). The ECC will be responsible for administration of this Environmental Management Strategy to monitor the overall strategy, inclusive of ensuring training is carried out, non-conformances investigated, audits undertaken etc.

9.10.3 Changes to the Environmental Management Strategy

Changes or revisions to the Management Strategy are to be considered by the Mine Management team consisting of appropriate personnel. The Mine Manager will authorise the change.

Once changes have been made, checked and verified, the company intranet (Lotus Notes) contains an approval process to be followed before placing the documents on the intranet. A history of the revisions of this document is detailed in Appendix 6.

9.10.4 Changes to Associated Documents

Changes or revisions to the associated documents or procedures are to be considered by the Environment and Community Coordinator who will authorise the change.

Once changes have been made, checked and verified, the company intranet (Lotus Notes) contains an approval process to be followed before placing the documents on the intranet.

10 AUDIT

The objectives of an audit are:
- To maintain compliance with the statutory requirements periodically,
- To comply with the Standard that this strategy was developed under,
- To identify opportunities for improvement in the strategy.

10.1 Management Strategy

10.1.1 Internal Audits

Internal audits of the Awaba Colliery EMS will be conducted as specified in *ECMG 06 Audit and Inspection.* The EMS audits will investigate compliance with the EMS, Standards and Procedures.

10.1.2 External Audits

10.1.2.1 Compliance

Independent audits of the implementation of, and compliance with, the EMS shall be periodically undertaken as specified *ECMG 06 Audit and Inspection,* and as per development consent approval conditions.

10.1.2.2 Environmental Performance

To gain an independent view on environmental performance an external statutory audit will occur as per the Centennial audit schedule in *ECMG 06 Audit and Inspection*. This will be initiated by Centennial unless otherwise directed by development consent conditions or similar. The scope of external audits is detailed in *ECMG 06 Audit and Inspection.*

10.2 Tasks

To ensure the integrity and effectiveness of the controls in place to ensure a risk free environment, the project coordinator is to arrange Planned Task Observations to be conducted:
- During any task of high environmental risks (clearing of land, subsidence repairs, exploration activities, earth works).

10.3 Non-Conformance of Audits

Audit non-conformances are divided into two category's as described in Section 9.8 – Corrective and Preventive Action.

11 MANAGEMENT REVIEW

Revisions are to be coordinated by the site Environmental Coordinator or as directed by the Mine Manager and approved by the Mine Manager. The revision status is contained in the controlled document within lotus notes and updated as per the Awaba Colliery Change Management System.

The outcomes of a review will be documented by updating sections of these documents where required and revisions incorporated into the EMS for approval by the Mine Manager. Revised

documents will be approved by the Mine Manager before placing on the intranet as required by the Awaba Colliery Change Management.

11.1 Event Based

Events which will trigger a review of the EMS or its associated documents include:
- Reportable occurrences, that were a result of a non conformance of the Management Strategy
- Changes to Management Structure
- Modification/Improvement to the strategy
- Guidelines or codes of practice applied to the mine.

The environmental legislative register will be reviewed on an as needs basis following a significant change to the environmental legislation or government regulatory policy which, has the potential to effect operations at Awaba.

11.2 Time Based

Relevant sections of the Awaba Colliery EMS requiring revision will be reviewed annually by the Environmental Coordinator or as directed by the Mine Manager to ensure its continued effectiveness.

The EMS documents shall be reviewed annually and updated as required. The purpose of the review will be to:
- Review legislative changes;
- Consider community and employee feedback on the EMS;
- Consider results of audits; and
- Review changes to significant environmental aspects or business aspects.

The EMS review will include the:
- Environment Policy,
- EMS Document,
- Objectives and targets,
- Environment and Community Standards,
- Environment and Community procedures
- Environmental Management Plans.

Changes to risks from individual aspects of the Mine's operation are reviewed and assessed against the formalised risk assessment Standard (*ECMG 02 Environmental Risk Assessment*). These changes to risk will be considered when conducting the annual environmental risk assessment required by the I&I as a part of the AEMR.

11.3 Continuous Improvement

Any changes to the strategy will be recorded as per the Change Management System. This forms part of the continuous improvement process. This information is used to produce a work order (required modification management system) in the Pulse system.

12 APPENDICES

12.1 Appendix 1 – Definitions & Abbreviations

audit	A systematic examination against defined criteria to determine whether activities and related results conform to planned arrangements and commitments. In addition, whether these arrangements and commitments are implemented effectively and are suitably achieved in accordance with the organisation's policy
community complaint	A complaint is an act of expressing resentment, displeasure or grievance. A "complaint" is recorded if: the originator considers that the issue is not resolved as an "enquiry"; or the issue is specifically referred as a complaint from the OEH, Council, DRE or DoPI..
community enquiry	An "enquiry" is where a question is asked regarding an environmental issue - air, noise, vibration, water, waste, odour, land or subsidence. This enquiry can come from the community or a regulatory authority. Information is provided in response to this enquiry and this satisfies the issue.
continual improvement	process of enhancing the environmental management strategy to achieve improvements in overall environmental performance that are consistent with the Environmental Policy
controlled document	A document for which only the latest revision is in use. Its existence, movement, availability and eventual withdrawal is monitored, controlled and documented in a standardised manner
environment	surroundings in which Centennial operates, including air, water, noise, land, flora, fauna, natural resources, humans and their interaction
environmental aspect	element of Centennial's activities, products or services that can interact with the environment or community and are the cause of impacts Note: A significant environmental aspect has or can have a significant environmental impact. (The aspect is a hazard – it is the thing that causes the harm)
environmental impact	any change to the environment or community, whether adverse or beneficial, resulting from Centennial's activities, products or services (The impact is the Risk – It is what can happen to the environment)

environmental incident	1	Prosecution (Major)	major actual or potential material harm to the environment major remediation required
	2	Offence (Significant)	significant potential or actual material harm

	3	Reportable (Moderate)	significant remediation required
			reportable incident of actual or potential material harm to environment
			recurrent licence/approval exceedance or non-compliance
			multiple/ recurrent complaint
	4	Technical (Minor)	licence/approval/standard exceedance or non-compliance
			minor matter with no ecological damage evident
			one-off complaint
			spill/emission incident exceeding control strategy limits

Term	Definition
environmental/community management plan	documentation of controls developed in order to minimise environmental pollution or community impacts
environmental management strategy audit	systematic and documented verification process of obtaining and evaluating evidence to determine objectively whether Centennial Coal's environmental management strategy conforms to the requirements of ISO 14001, and communication of the audit findings to senior management
environmental objective	overall environmental (including community) goal, arising from the Environmental Policy, that Centennial aims to achieve, and which is quantified where practicable
environmental performance	measurable results of the environmental management strategy, related to Centennial's control of its environmental aspects, based on environmental policy, objectives and targets
environmental policy	statement of Centennial Coal's intentions and principles in relation to overall environment performance, which provides a framework for action and for setting of its objectives and targets
environmental target	performance requirement, quantified where practicable, applicable to Centennial, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives
external stakeholder	individual or group concerned with or affected by the environmental performance of Centennial Coal
non-conformance	a deficiency in characteristic, documentation or process implementation which renders the product of the activity unacceptable e.g. the breach of a licence or condition
personnel	all staff and contractors that perform work for Centennial Coal
prevention of pollution	use of process, practices, materials or products that avoid, reduce or control pollution, which may include recycling, treatment, process changes, control mechanisms, efficient use of resources and materials substitution
significant environmental aspect	Any environmental aspect for which the risk of environmental impact, as assessed in accordance with ECMS-003 Environmental Risk Assessment is determined to be "high" or "extreme"

NB: definitions sourced from ISO14000 series, where available or from Centennial's EMS supporting documentation

AEMR	Annual Environment Management Report
CCC	Community Consultative Committee
DRE	Division of Resources & Energy
ECMG	Environment and Community Management Guideline
ECMS	Environment and Community Management Standard
EMP	Environment Management Plan
EMS	Environment Management Strategy
EPL	Environment Protection Licence
ISO 14001	International Standard specifying the requirements of an Environmental Management Strategy
ECD	Environment and Community Database
DoPI	Department of Planning & Infrastructure
FR	Frequency Rate
NCFR	Non Conformance Frequency Rate
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
TARPs	Trigger Action Response Plans

12.2 Appendix 2 – Awaba Colliery Environmental Policy

![Centennial Coal logo] **Centennial Coal**

Environment and Community Policy

Our Vision

To conduct our business in an efficient and environmentally responsible manner, that is compatible with the expectations of our shareholders, government, employees and the community.

Beliefs

Everyone has a responsibility for minimising impact to the environment

Environmental performance can always be improved

Respecting our stakeholders is essential to business success

Guiding Principles

P1   Appropriate decisions are made

P2   Risk management strategies are implemented based on clear science and valid data

P3   Stakeholders are identified and respected

P4   Environmental impacts are recognised and minimised

P5   Legal obligations are known and respected

P6   Environmental management is integrated into our business

P7   Environmental performance is continually improved

P8   Natural resources are used efficiently

P9   Performance is assessed and reported

Catherine Brenner
Director

Bob Cameron
Managing Director

Ken Moss
Chairman

Paul Moy
Director

Richard Grellman
Director

Bruce Allen
Director

General Manager

Mine Manager

18 August 2009

12.3 Appendix 3 – Corporate Objectives and Targets

Principles	Objectives	Goals / Targets
P1 Appropriate decisions are made	P1.2 Decisions are made on scientifically sound, inclusive and transparent information, data analysis and procedures	1. Coordinate decommissioning and rehabilitation plan updates
	P1.3 Plan, design, operate and close our operations to minimise adverse environmental impact	2. R and D opportunities identified, costed and implemented
P2. Risk management strategies are implemented based on clear science and valid data	P2.1 Develop, maintain and test effective emergency response procedures	1. Review Environmental component of Corporate Emergency Manual
	P2.2 Undertake task specific risk assessment and regularly review and update risk management responses	2. Review Environmental incident Response Manual
P3 Stakeholders are identified and respected	P3.1 Consult with interested and affected parties in the identification, assessment and management of significant environmental impacts or our operations	1. Review Stakeholder Engagement Guideline to include media management process and standard for correspondence to agencies
		2. Centennial Coal Stakeholder Engagement strategy developed and implemented.
P4 Environmental impacts are recognised and minimised	P4.1 Clear, valid repeatable environmental data is collected, analysed and reviewed to inform decision making	1. Regional impacts are identified and opportunities assessed, TARPS developed to manage regional impacts.
	P4.2 Implement management priorities succession for adverse environmental impact to avoid, prevent, mitigate, ameliorate.	
	P4.3 Unavoidable or residual adverse environmental impacts are temporary.	
P5 legal obligations are known and respected	P5.1 Comply with relevant environmental regulatory requirements as a minimum	1. Audit, analyse and review legal platform for operations
P6 Environmental management is integrated into our business	P6.1 Awareness and education programmes are implemented to increase management	1. Complete a Training Needs Analysis as required by the EMS

	capacity	2. Develop a Q&A reference sheet or Guideline for Managers
	P6.2 Training is provided to ensure adequate competency at all levels of employees and contractors	3. Undertake Managers awareness/ behavioural change workshop
		4. Complete Environmental Training competencies for staff positions
P7 Environmental performance is continually improved	P7.1 Suppliers of goods and/or services are encourages to adopt principles and practices that are comparable to our own	1. Develop a list of preferred Environmental Service Suppliers
		2. Establish working alliances with Preferred Environmental Service suppliers
	P7.2 Strategic alliance/partnerships are considered and pursued to achieve better environmental outcomes from goods and/or services	3. Develop a strategic alliance with a SME supplier to improve environmental performance / outcome
		4. Develop a standard for the supply of goods and services.
P8 Natural resources are used efficiently	P8.1 Use of natural resources is monitored and assessed	1. Assess ACARP and other research projects on alternatives to current natural resource usage
	P8.2 Alternatives to natural resources usage are reviewed and sustainably implemented.	2. Identify key natural resources to monitor, develop measurement standard
P9 Performance is assessed and reported	P9.1 Operations and activities are regularly audited	1. Establish a Preferred Environmental Auditor and relevant guidelines/ expectations
	P9.2 Environmental performance is reported to interested and affected parties in an open and timely manner.	2. Develop environmental performance indicators in line with GRI (develop a definitions standard for indicators)
		3. Develop a guideline for Early Warning and Near Miss identification and management (incorporate into Performance Measurement and Reporting Standard

12.4 Appendix 4 – Environmental Responsibility Plan

Mechanical Engineer

- Compressor shed and surrounds,
- Workshop,
- Washdown Bay**,**
- Bulk Store,
- Hardstand area,
- Water Supply shed,
- Motor shed near drift portal & surrounds,
- Coal Processing Plant – Conveyor, Sizing Plant, Product bin, storage bin**.**

Production Manager

- Workshop
- Transport drift,
- No 1. Drift Portal,
- Stone dust shed,
- Bulk oil store,
- Hardstand area.

Electrical Engineer

- Sub Station including all electrical installations and appliances,
- Pump Station / Downcast Shaft,
- Bush Pumps & Telstra tower
- Helipad.
- Mine fan and surrounds.

Environmental Coordinator

- Maturation Pond,
- Pollution Control Dam,
- Oil/Water Separator,
- Drive in sumps,
- Rehabilitation and subsidence sites
- Licensed Discharge Points,
- Helipad,

Coal Stockpile/distribution contractor

- Stockpile Area

Fassifern/ Geologists

- Core shed and immediate area

12.5 Appendix 5 – Aspects and Impacts Register

Awaba Colliery Activity Elements	Land and landform	Water quantity/ quality	Air quality	Waste minimization	Sustainability	Visual Amenity	Culture and Heritage	Noise	Pollution Control	Community	Flora, fauna and biodiversity	Energy and greenhouse gas	Traffic
Inputs and Supplies				√	√							√	√
Existing Mining Operations	√	√	√	√	√	√	√	√	√	√	√	√	√
Underground Operations	√	√	√	√			√		√	√	√	√	
Surface Operations	√	√	√	√		√	√	√	√	√	√	√	√
Discontinued Operations	√	√	√	√		√	√	√	√	√	√	√	√

12.6 Appendix 6 - History of Revision

Rev.	Date	Rev. By	Checked	Auth. By	Comments
0	November 2011	N. Manley	J. Dunwoodie	G. Watson	

13 ASSOCIATED DOCUMENTS

13.1 Organisational & Awaba Documents

- Centennial Coal Environmental Management Strategy Framework Document – July 2007
- Change Management System
- Permit/Authority to Commence work
- Awaba Environmental Business Plan
- HSMS - Non Conformance Notice

13.2 Statutory

- Awaba Legal Register
  - Environmental Protection Licence 443

13.3 Risk Assessments

- Awaba Environmental Risk Assessment Dated January 2011
- Awaba Water Management Risk Assessment Dated August 2011

13.4 Environmental Work Procedures

- EWP001 – Spill Response
- EWP003 – Environmental Incident Reporting
- EWP004 – Community Contact
- EWP006 – Onsite Disposal of Hydrocarbon Waste
- EWP008 –Environmental Weekly Inspection
- EWP009 – Refuelling Service Pods
- EWP012 – Duplicate Water Sampling
- EWP013 – Monitoring Procedure
- EWP014 – Inspections of Environmental Responsible Areas
- EWP015 – Permit to Clear or Disturb Land
- EWP016 – Surface Storage Areas for Materials Containing Hydrocarbons
- EWP017 – Public Safety Inspection
- EWP018 – Watercourse Inspection
- EWP019 - Surface Cleaning and Waste Management Procedure
- EWP020 – Monitoring During PCD Discharge Event
- EWP021 – EPA – OEH Notifiction

13.5 Centennial Standards & Guidelines

- ECMS 02 General Minimum Standard
- ECMS 03 Incident Reporting
- ECMS 04 Stakeholder Contact and Engagement
- ECMS 05 Newsletters
- ECMS 06 Auditing and Inspection
- ECMS 07 Waste
- Centennial Coal's Media Standard
- ECMG 01 Basic Environmental Performance Guide

- ECMG 02 Environmental Risk Assessment
- ECMG 03 Environmental Incident Reporting
- ECMG 04 Stakeholder Control and Engagement
- ECMG 06 Audit and Inspection
- ECMG 07 Waste Management
- ECMG 08 Environmental Induction Employees and Contractors Assessment
- ECMG 09 Site Environmental Induction Employees and Contractors
- ECMG 10 Site Environmental Induction Visitors
- ECMG 11 Site Environmental Induction New Staff
- ECMG 12 Site Environmental Induction Mine Worker

13.6 Management Plans

- Awaba Stakeholder Engagement Plan;
- Bushfire Management Plan;
- Air Quality and Greenhouse Gas Management Plan
- Noise Management Plan;
- Water Management Plan;
- Biodiversity Management Plan;
- Post Mining Heritage Mining Mangement Plan;
- Aboriginal Cultural Heritage Management Plan;
- Rehabilitation Management Plan;
- Extraction Plan;
- Contractor Management Plan.

13.7 International Standards

- AS/NZS ISO 14001:2004 Environmental Management Systems – Requirements for guidance of use.