

# Ulan Coal

## ENVIRONMENTAL MANAGEMENT STRATEGY

### Document Information and Revision History

<b>Document Purpose</b>	<p>The purpose of the UCML's Environmental Management Strategy (EMS) is to document and implement the systems and processes which provide the means to apply consistent environmental and community management across its site; ensure adherence to UCML's statutory requirements and manage UCML's environmental impacts and regulatory approvals, licences.</p> <p>The EMS has been developed to guide the implementation and maintenance of UCML's Environmental Management System (EMS) and to ensure compliance with the requirements of XCN and Xstrata plc. The EMS is aligned to the principles of ISO14001 (2004) (Environmental Management System); Xstrata plc's Business Principles and Sustainable Development Policy and XCN's Environmental Management Framework (EMF).</p> <p>This EMS forms the core of the UCML's EMS.</p>
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	1	26/10/07	Phil English, Emma Fletcher	Create Master document HSEC-MGP-007 to enable Appendices.
	2	30/4/2008	James Barben, Phil English	Reviewed Table 8.1 Audit Schedule.
3		30/7/2009	Cheryl Holden, Phil English	Annual review includes new Xstrata plc SD Policy, XCN STD's and UCML procedures. Reflects changes to Ulan Surface Operations following completion of mining contract with Downer EDI Mining.



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**APPENDICES**

<b>Appendix</b>	<b>Description</b>
1	List of XCN HSEC Standards
2	UCML Environmental Management System Structure
3	Xstrata Plc SD Policy
4	UCML Environmental and Community Aspects and Impacts
5	Proposed Works Application Form
6	Summary of Legal Instruments
7	Legal Compliance Register
8	Xstrata Coal Climate Change Position Statement
9	HSEC Annual Plan
10	UCML Environmental Objectives and Targets / EC Component of HSEC Annual Plan
11	UCML Organisational Structure and Environmental Roles and Responsibility Register
12	UCML Environmental and Community Training Needs Analysis
13	UCML Intranet HSEC Management System Contents
14	Annual Review Template of UCML EMS
15	Workplace Inspection Checklists



**DEFINITIONS**

<b>Term</b>	<b>Definition</b>
Auditor	Person with the competence to conduct an audit (ISO 9000:2000)
Continual improvement	Recurring process of enhancing the environmental management system in order to achieve improvements in overall environmental performance consistent with the organisations environmental policy (ISO 14001)
Environment	Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interaction (ISO 14001)
Environmental aspect	Element of an organisations activities or products or services that can interact with the environment (ISO 14001)
Environmental impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisations environmental aspects (ISO 14001)
Environmental management system	Part of an organisations management system used to develop and implement its environmental policy and manage its interaction with the environment (ISO 14001)
Environmental management system audit	Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the environmental management system audit criteria set by the organisation are fulfilled (ISO 14001)
Environmental objective	Overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve (ISO 14001)
Environmental performance	Measurable results of an organisations management of its environmental aspects (ISO 14001)
Environmental policy	Overall intentions and direction of an organisation related to its environmental performance as formally expressed by top management (ISO 14001)
Environmental target	Detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives (ISO 14001)
Procedure	Specified way to carry out an activity or a process
Record	Document stating results achieved or providing evidence of activities performed



**ABBREVIATIONS**

<b>UCML</b>	<b>Ulan Coal Mines Limited</b>
AEMR	Annual Environmental Management Report
AFE	Application For Expenditure
AS	Australian Standards
AS/NZS	Australian Standard / New Zealand Standard
BBRA	Broad Brush Risk Assessment
CHPP	Coal Handling Preparation Plant
CCC	Community Consultative Committee
CSI	Corporate Social Involvement
DA	Development Approval
DECC	NSW Department of Environment and Climate Change
DOP	NSW Department of Planning
DPI	NSW Department of Primary Industries
DWE	NSW Department of Water and Energy
EC	Environment and Community
ECM	Environment and Community Manager
ECO	Environment and Community Officer
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMS	Environmental Management System/Strategy
EPL	Environment Protection Licence
FRM	Form
GEM	XCN Group Environment Manager
GRI	Global Reporting Initiative
HSEC	Health, Safety, Environment and Community
ICMM	International Council on Mining and Metals
ISO	International Organisation for Standardisation
MBGS	McElroy Bryant Geological Services
MCA	Minerals Council of Australia
MGP	Management Plan
ML	Mining Lease
NPI	National Pollutant Inventory
POEO	Protection of the Environment Operations Act 1997
POL	Policy



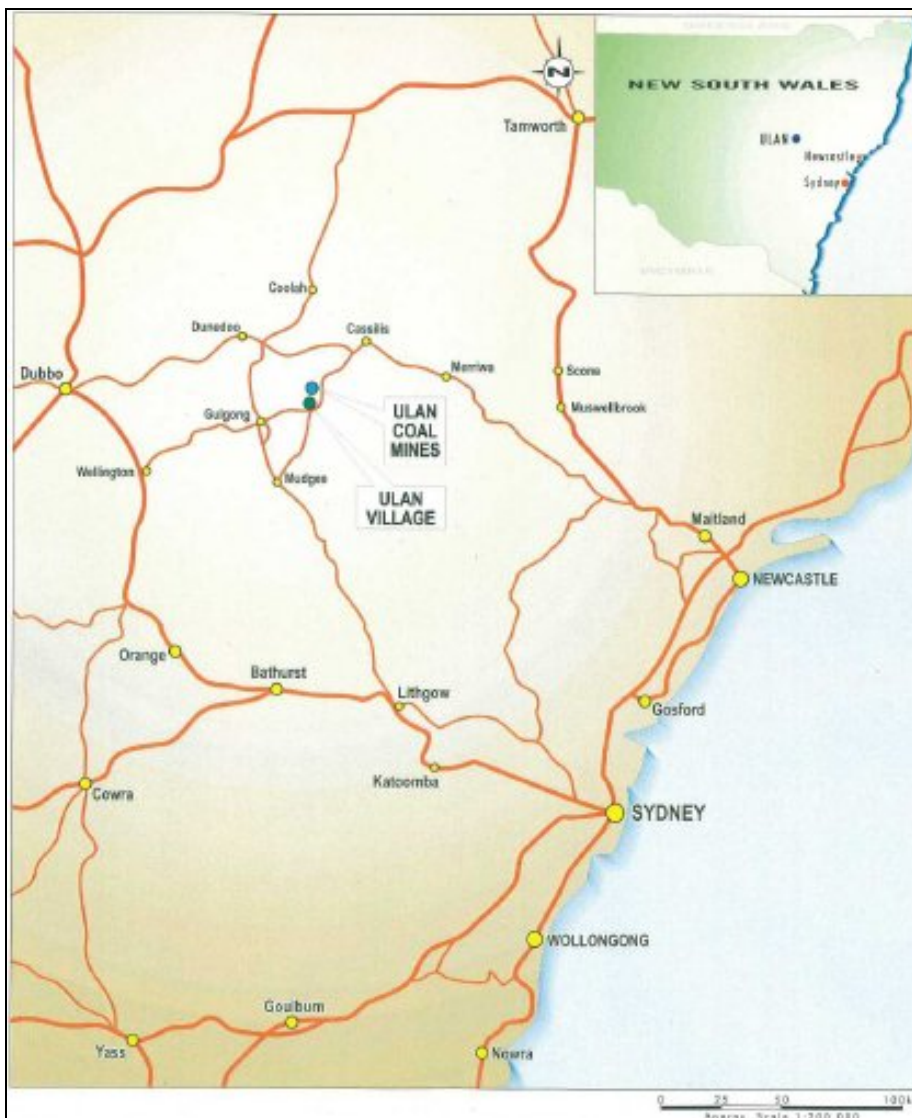
PRO	Procedure
PWA	Proposed Works Application
SD	Sustainable Development
SIP	Social Involvement Plan
STD	Standard
TBT	Toolbox talk
TNA	Training Needs Analysis
XC	Xstrata Coal
XCN	Xstrata Coal NSW
XSD	Xstrata Sustainability Database



**1.0 INTRODUCTION**

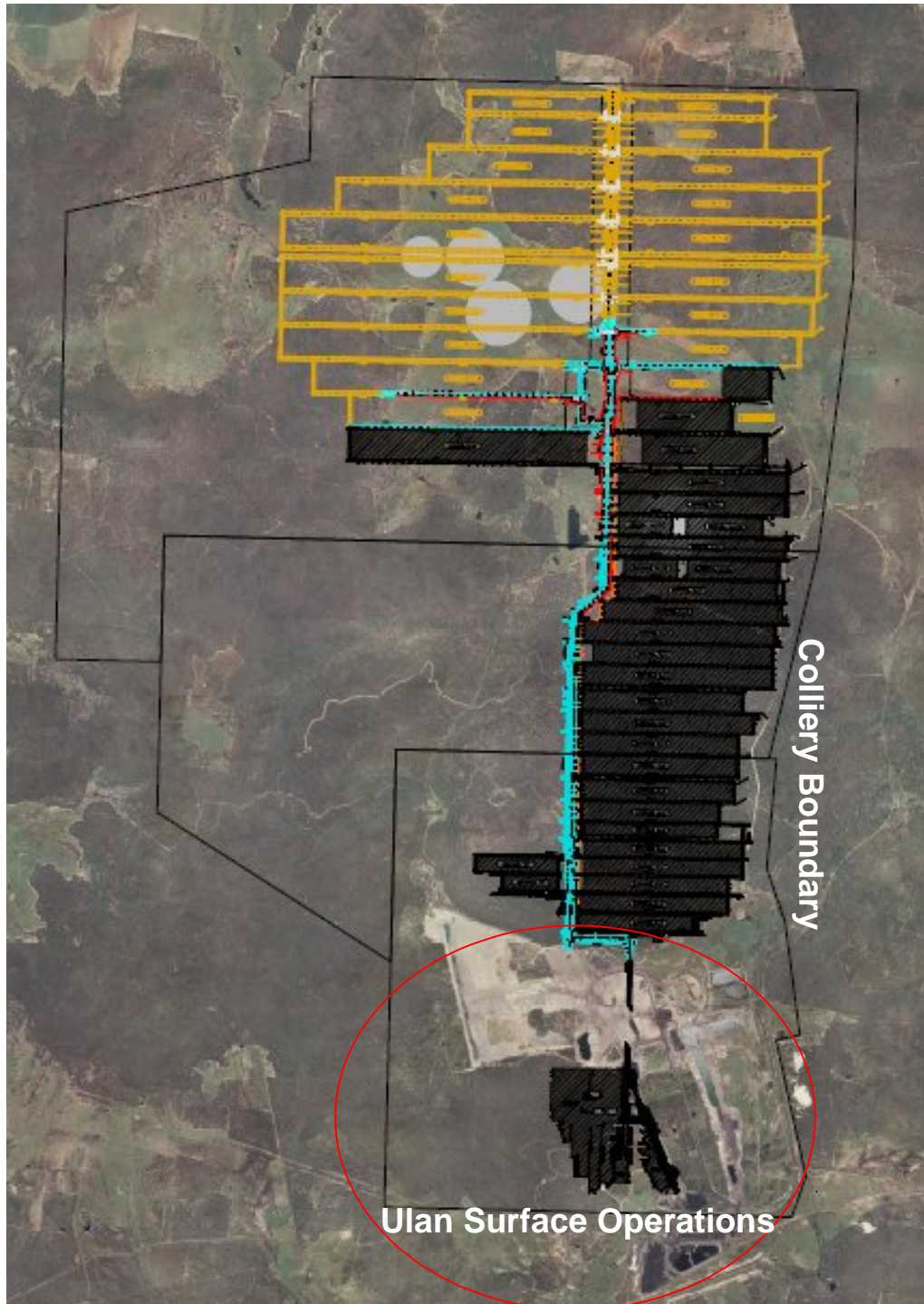
Ulan Coal Mines Limited (UCML) is located near the village of Ulan in the central west of New South Wales, approximately 45 kilometres north-northeast of Mudgee and 25 kilometres northeast of Gulgong (see **Figure 1.1**). UCML has a long history, with coal deposits first worked at Ulan in the early 1920s, with mining continuing sporadically until the mining operations were expanded to include the current open cut mine (1982) and an underground long wall mine (1986). A layout of the existing operations is shown in **Figure 1.2**.

**Figure 1.1 – Ulan Coal Mine**



Approximately 560 people are employed at UCML within the underground and surface operations, of which 90% are from the local Mudgee/Merriwa/Gulgong area. The current expected life of the underground operations at Ulan Coal Mine is to 2021. UCML maintains the management responsibility for surface leases above the underground operations and for land owned/or leased by UCML.

Figure 1.2 Ulan Surface and Underground Operations



Other associated activities with the Ulan mining operation, which are also owned and managed by UCML include the following:

- the Bobadeen Irrigation scheme, which is located north of UCML and within its mining lease area; and
- Bobadeen Basalt Quarry.



UCML is managed by Xstrata Coal NSW (XCN), which owns 90% of the operation. Joint Venture partner Mitsubishi Development holds the remaining 10%. XCN is a division of Xstrata Coal Pty Ltd (XC). UCML is committed to operating in accordance with the Xstrata plc Sustainable Development (SD) Policy as well as the Business Principles and SD Standards.

**1.1 UCML Environmental Context**

Ulan Coal Mine is situated in a rural area and is primarily surrounded by rural landholdings. The village of Ulan is located one (1) kilometre west of the coal handling preparation plant (CHPP) and rail loading facility. The nearest privately owned residence is located approximately one (1) kilometre to the south west of the surface facilities, off Ulan Road, and properties around the Ulan Village. Ulan Village comprises approximately one (1) privately owned residence, a primary school, a church and a hotel.

UCML maintains significant buffer lands as a primary control for environmental impacts from its operations and its landholdings encompass approximately 17,500 hectares. The UCML area is located at the western edges of the Sydney Basin. The Ulan Complex is positioned at the top of the Great Dividing Range and the operation forms part of the head waters for two (2) significant river catchments; the Hunter (via the Goulburn River flowing east) and the Macquarie Catchment (via the Talbragar River flowing west). The Goulburn River flows around the eastern boundary of UCML along a diversion channel that was constructed in 1982. Ulan Creek is a tributary of the Goulburn River, and forms a significant water course for much of the operation. Vegetation communities across UCML represent differing levels of disturbance due to past clearing and grazing activities varying from open woodland to pasture grasslands.

**1.2 UCML Conditions of Consent relevant to the EMS**

The Environmental Management Strategy has been developed in accordance with the conditions of consent specified in **Table 1**. The table summarises the requirements of UCML’s various development approvals and the section of the EMS where the requirement has been addressed.



**Table 1:** Checklist of relevant Consent Conditions which relate specifically to the Environmental Management Strategy

Condition	Management Plan Condition	Section
DA No. 103-5-2005 Schedule 4 Condition 1	Within 6 months of this consent, the Applicant shall prepare and implement a revised Environmental Management Strategy for the Ulan mine to the satisfaction of the Director-General. This strategy must: <ul style="list-style-type: none"> <li>(a) provide the strategic context for environmental management of the Ulan coal mine;</li> <li>(b) identify the statutory requirements that apply to the mine;</li> <li>(c) describe in general how the environmental performance of the mine would be monitored and managed over time;</li> <li>(d) describe the procedures that would be implemented to:                             <ul style="list-style-type: none"> <li>• keep the local community and relevant agencies informed about the operation and environmental performance of the mine;</li> <li>• receive, handle, respond to, and record complaints;</li> <li>• resolve any disputes that may arise during the course of the operation of the mine;</li> <li>• respond to any non-compliance;</li> <li>• manage cumulative impacts; and</li> <li>• respond to emergencies;</li> </ul> </li> <li>(e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the mine; and</li> <li>(f) be updated following each Independent Environmental Audit required by condition 6 below.</li> </ul>	This Document  Section 7.4 Communication and Reporting  Section 8.3 Non-Conformity, Corrective Action and Prevention Action  Section 7.2 Accountability and Responsibility  Section 8.5 Audits
DA No. 103-5-2005 Schedule 4 Condition 2	Within 3 months of the completion of the Independent Environmental Audit (see condition 6 below), the Applicant shall review, and if necessary revise, the Environmental Management Strategy to the satisfaction of the Director-General.	Section 8.3 Non-Conformity, Corrective Action and Prevention Action



## MANAGEMENT PLAN - ENVIRONMENTAL MANAGEMENT STRATEGY

Condition	Management Plan Condition	Section
	<p>satisfaction of the Director-General, prior to submission of any of the environmental management plans.</p> <p>(b) The Environmental Management Strategy shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>(i) statutory and other obligations which the Applicant is required to fulfil during construction and mining, including all approvals and consultations and agreements required from authorities and other stakeholders, and key legislation and policies;</li> <li>(ii) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to environmental management, including the Environmental Officer;</li> <li>(iii) overall environmental management objectives and performance outcomes, during construction, mining and decommissioning of the mine, for each of the key environmental elements for which management plans are required under this consent;</li> <li>(iv) overall ecological and community objectives for the project, and a strategy for the restoration and management of the areas affected by mining operations;</li> <li>(v) identification of cumulative environmental impacts and procedures for dealing with these at each stage of the development;</li> <li>(vi) overall objectives and strategies to protect existing economic productivity within the area affected by mining, including agricultural productivity and other businesses;</li> <li>(vii) steps to be taken to ensure that all approvals, plans, and procedures are being complied with;</li> <li>(viii) processes for conflict resolution in relation to the environmental management of the project;</li> </ul> <p>and</p> <ul style="list-style-type: none"> <li>(ix) documentation of the results of consultations undertaken in the development of the Environmental Management Strategy.</li> </ul> <p>(c) The Applicant shall make copies of the Environmental Management Strategy available to MeSC, MuSC, EPA, DLWC, NPWS, DMR, MSB and the CCC within fourteen days of approval by the Director-General.</p> <p>(d) The Applicant shall prepare the following environmental management plans:</p> <ul style="list-style-type: none"> <li>• Archaeology and cultural management plan (refer Condition 3.3(a))</li> <li>• Flora and fauna management plan (refer Condition 3.4(a))</li> <li>• Erosion and sediment control plan (refer Condition 3.5(a))</li> </ul>	<p style="text-align: center;">Section</p> <p>Section 6.3 Legal and Other Requirements</p> <p>Section 7.2 Accountability and Responsibility</p> <p>Section 6.2 Environmental Aspects and Impacts</p> <p>Section 7.8 Cumulative Impacts</p> <p>Section 6.5 Environmental and Community Management Programs</p> <p>Section 7.4 Communication and Reporting</p> <p>Section 6.5 Environmental and Community Management</p>





**2.0 PURPOSE AND SCOPE**

The purpose of the UCML’s Environmental Management Strategy (EMS) is to document and implement the systems and processes which provide the means to apply consistent environmental and community management across its site; ensure adherence to UCML’s statutory obligation, such as Schedule 4, Condition 1 of DA 103-5-2005; manage and minimise the environmental and community impacts and risks applicable to operations being conducted at UCML; ensure adherence by UCML to the corporate requirements of XC and XCN; and provide the framework for continuous improvement and industry best practices at UCML.

The EMS has been developed to guide the implementation and maintenance of UCML’s Environmental Management System (EMS) and to integrate the requirements of XCN and Xstrata plc. The EMS is aligned to principles of ISO14001 (2004) (Environmental Management System).

This EMS forms the core of UCML’s Environmental Management Framework. It provides direction and guidance, referencing an extensive range of other documentation that forms part of an integrated EMS. The EMS shall provide a framework for effective environment and community management at UCML, describing the process for effective planning, communication, documentation, monitoring, evaluation, review and feedback. UCML aims to maintain and improve upon environmental and community performance, through regular monitoring, review and audits of the EMS to facilitate continual improvement. UCML maintains the following specific aims via the maintenance and implementation of this EMS:

- minimise environmental impact;
- proactive rather than reactive environmental and community management, planning and control;
- facilitate continuous improvement;
- improve operational structure and efficiency with regard to environmental management;
- assist to foster good relations with the community and stakeholders;
- improve environmental performance that goes beyond compliance with applicable laws and company policies and standards;
- effective management of environmental and community risks;
- efficient use of resources; and
- implement and maintain best practice environmental management systems.

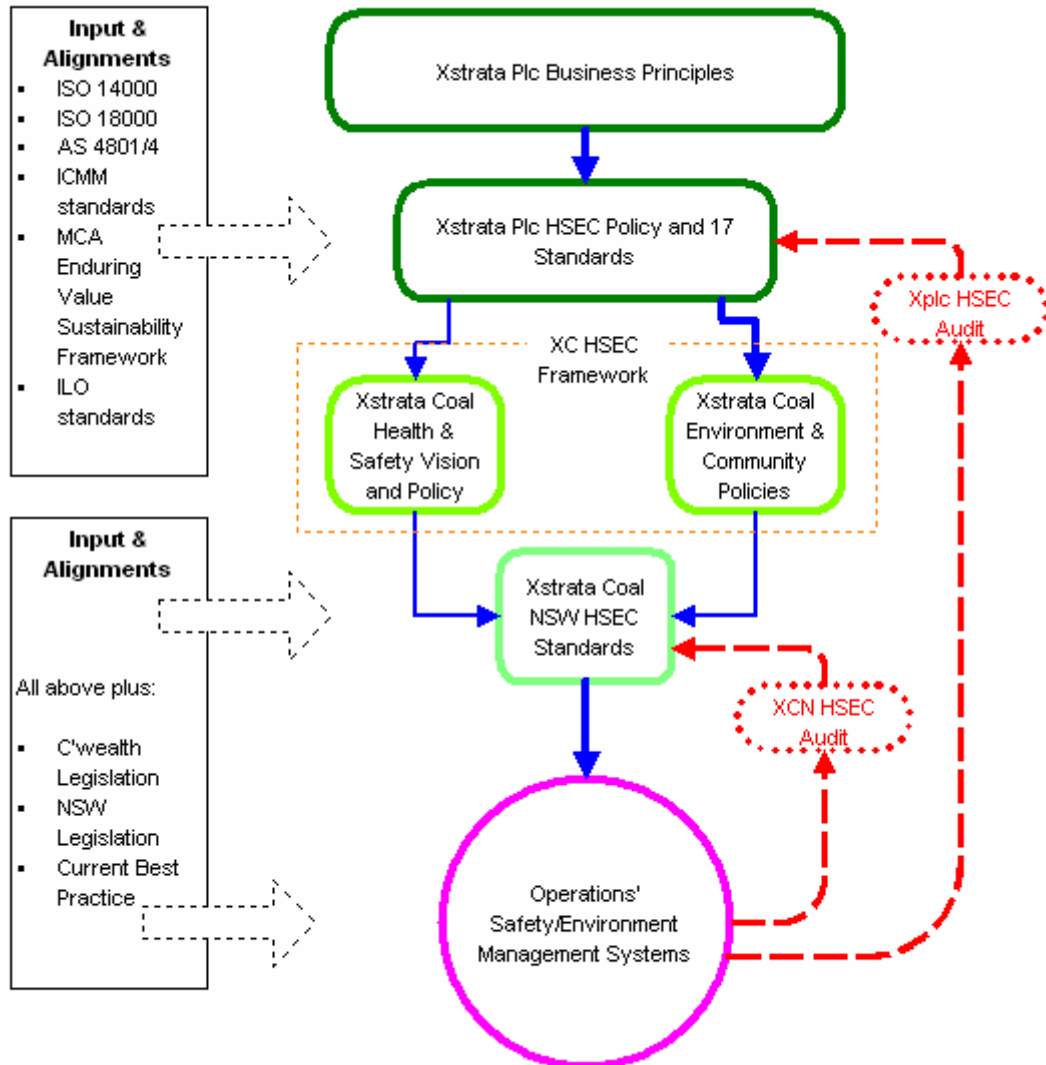
The scope of the EMS applies to all existing and future operations and projects at UCML within the colliery holding boundary and as a minimum, these activities must meet the requirements of the EMS.

Note: References are made to various UCML HSEC Standards throughout the UCML EMS e.g HSEC-STD-011 Document Control. UCML standards have been developed in accordance with the relevant XCN HSEC Standards. Where no UCML standard exists, UCML have adopted the XCN HSEC Standard. Where XCN standards are referenced, these will be identified in the text by the prefix XCN i.e. XCN HSEC STD 1.05 Contractor Management. A list of XCN and UCML HSEC Standards is included in **Appendix 1**.



### 3.0 XCN ENVIRONMENTAL MANAGEMENT FRAMEWORK

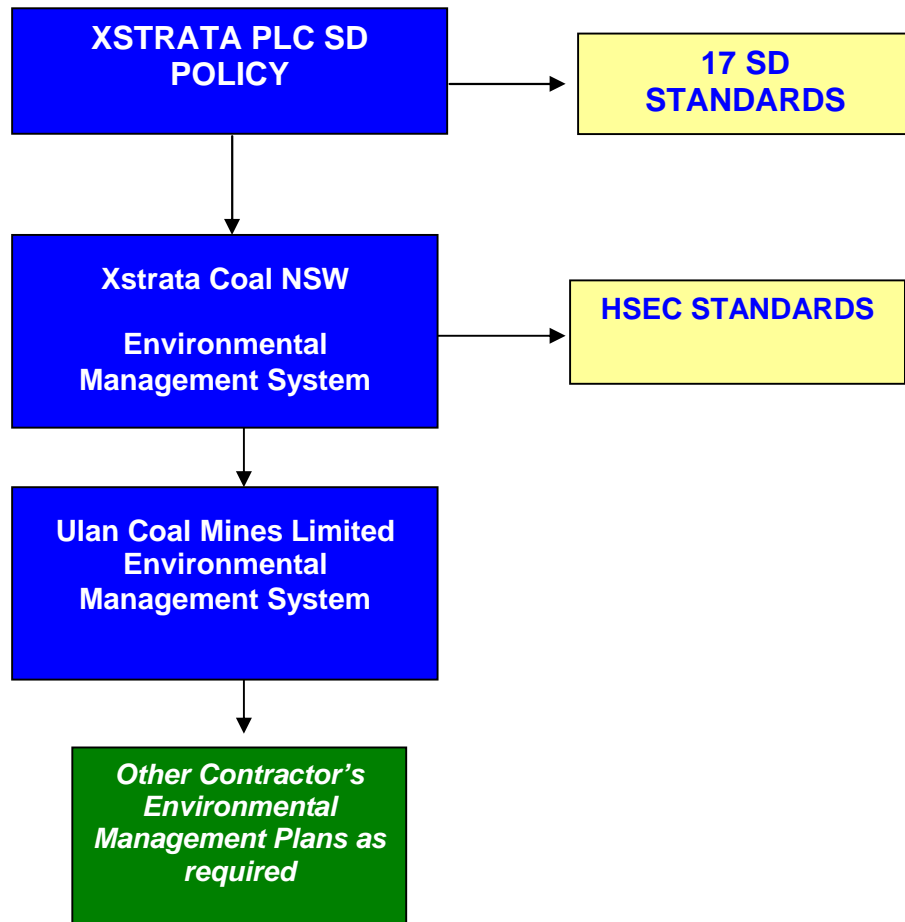
UCML has adopted the principles of *HSEC POL 6.0 XCN Environmental Management Framework*. The model below illustrates the structure of UCML's environmental and community systems and other key principles adopted by UCML within its EMS. Further details of the UCML Environmental Management System are detailed within **Appendix 2**.





UCML, as the owner of the mine and register holder of the various environmental approvals, has the overall responsibility for environmental management of the operation.

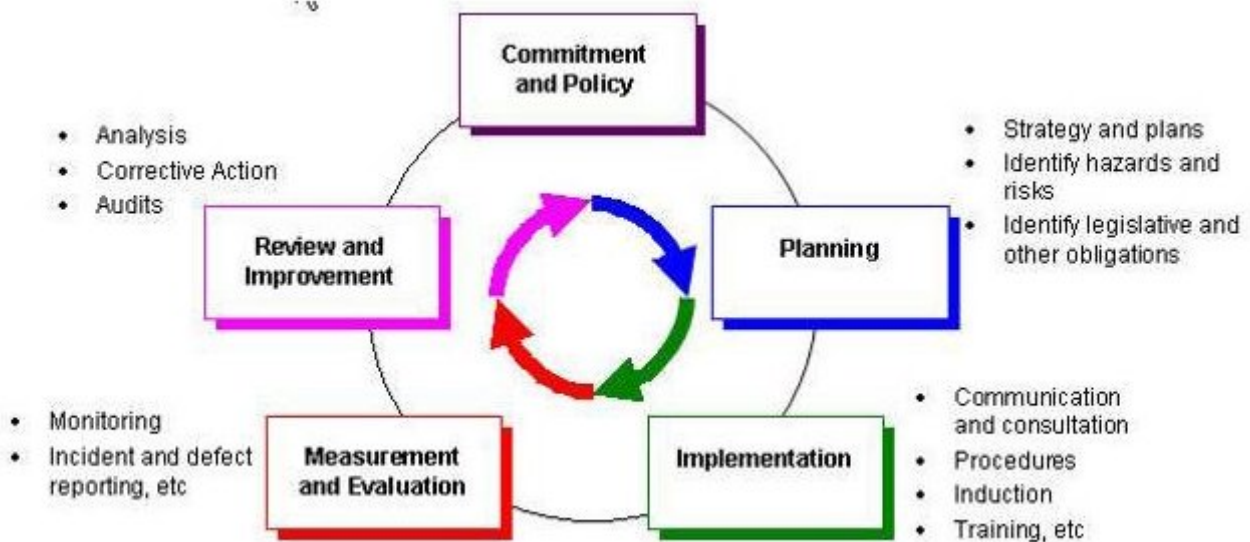
The model below illustrates the relationship of the UCML EMS to the XCN EMS.



Further details on the attributes of the UCML EMS are provided in **Appendix 2**.

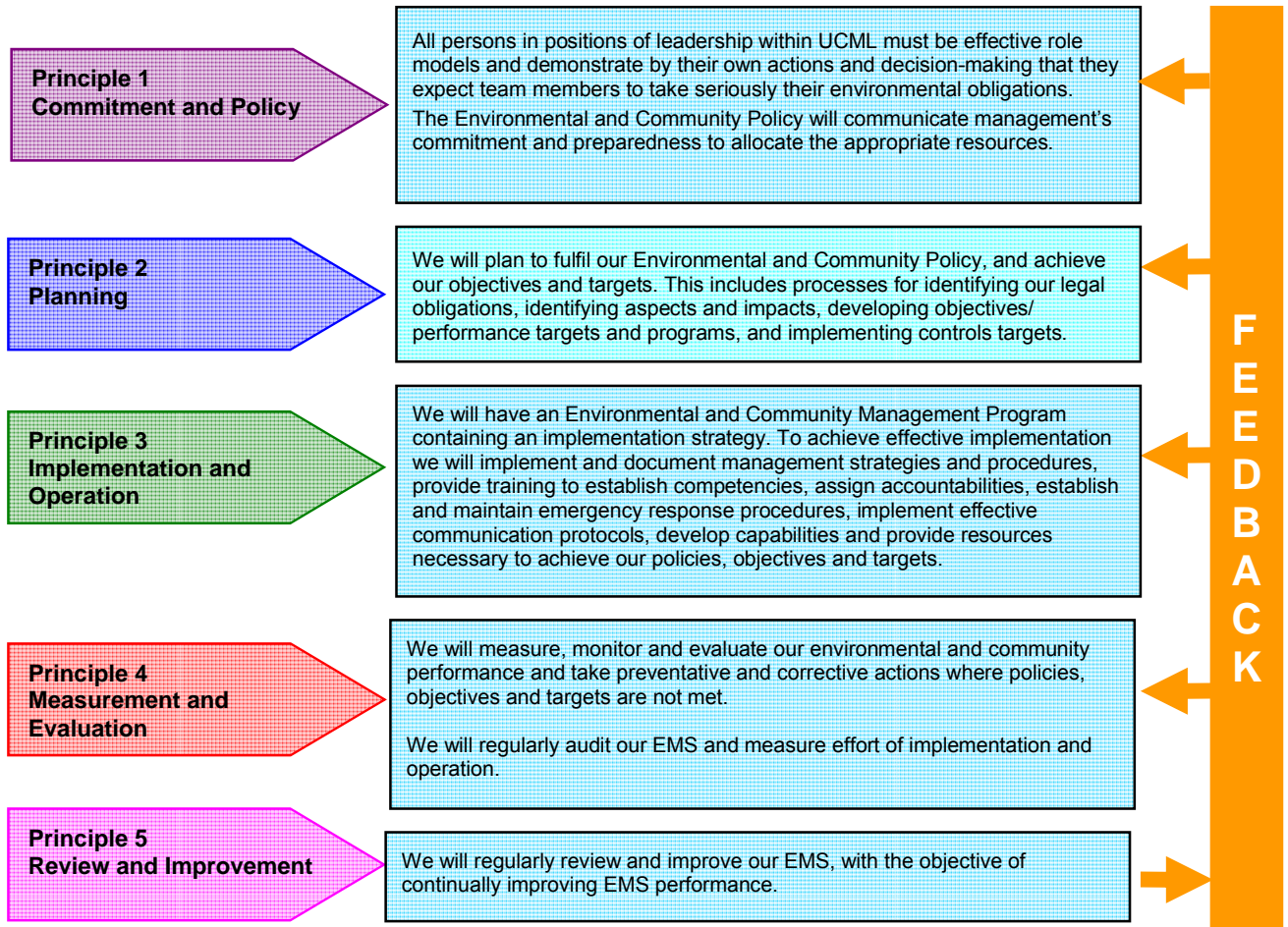
#### 4.0 EMS PRINCIPLES

In developing and applying the UCML EMS, the principles of ISO14001 (2004) (*Environmental Management System*) have been applied. UCML's EMS has been developed to contain the following structural elements:



Using the principles of ISO 14001, and as shown in the figure below, UCML's EMS incorporates the following environmental management principles:

- Commitment and policy;
- Top management commitment and leadership;
- Initial environmental review;
- Environmental policy;
- Planning;
- Environmental aspects and impacts;
- Legal and other requirements;
- Objectives and targets;
- Environmental management programs;
- Implementation and operation;
- Structure and responsibility;
- Training, awareness and competence;
- Communication;
- Environmental Management System and documentation;
- Document control;
- Operations control;
- Emergency response;
- Monitoring and evaluation;
- Monitoring and measurement;
- Non-conformance & corrective & prevention action;
- Records;
- EMS Audit;
- Review and improvement; and
- Management review of Environment Management System.





## 5.0 SUSTAINABLE DEVELOPMENT POLICY

### 5.1 Purpose

UCML has adopted the *Xstrata plc Sustainable Development Policy* (see **Appendix 3**). This policy has the commitment and support of UCML Management.

The *Xstrata plc Sustainable Development Policy* is displayed in prominent locations accessed by the workforce, contractors and visitors, as well as being provided on the Intranet and Internet for internal and external awareness.

### 5.2 Leadership Commitment

Achieving effective and proactive environmental and community management requires leadership.

Managers at the Ulan Complex must demonstrate visible and proactive leadership through their commitment to achieving the goals of the *Xstrata plc Sustainable Development Policy*, participating in HSEC Planning Sessions, allocating appropriate resources for fulfilling environmental projects and enabling environmental input into the current and future operations of the business units.

Managers at UCML will demonstrate commitment by:

- Installing the principles outlined in the environment and community policies into UCML's operations;
- endorsing UCML's Environmental Management system;
- appropriately resourcing UCML's environmental section; and
- committing adequate resources to implement the UCML EMS.



## 6.0 PLANNING FOR ENVIRONMENTAL MANAGEMENT

### 6.1 General

UCML recognises that the successful implementation and operation of an EMS requires an effective planning process with well-defined and measurable outcomes. Underpinning the UCML EMS is the HSEC planning process, as detailed within *HSEC-STD-027 Management Plans, Approvals and Licences* and *HSEC-STD-028 HSEC Planning*. This process is designed to ensure that longer term strategies and environmental management plans are prepared which include environmental objectives, targets and plans to achieve those targets.

### 6.2 Environmental Aspects and Impacts

An environmental aspect refers to an element of an organisation’s activities, products or services which can have a beneficial or adverse impact on the environment. An environmental impact refers to the change which takes place in the environment as a result of the aspect. The identification of environmental and community aspects is an ongoing process that determines the past, current and potential impact of an organisation’s activities on the environment (AS/NZS ISO 14004:2004 Environmental Management Systems - General guidelines on principles, systems and supporting techniques).

Aspects and impacts are identified using a standardised risk process in accordance with UCML’s *HSEC-STD-012 Risk Management*. A copy of this standard is available on the UCML Intranet. This document requires:

- the identification of aspects and impacts (Environment and Community);
- an assessment of the risk associated with those aspects and impacts, and
- identification of the controls necessary to eliminate or otherwise reduce, as far as is practicable, those risks in accordance with the established hierarchy of controls for HSEC purposes.

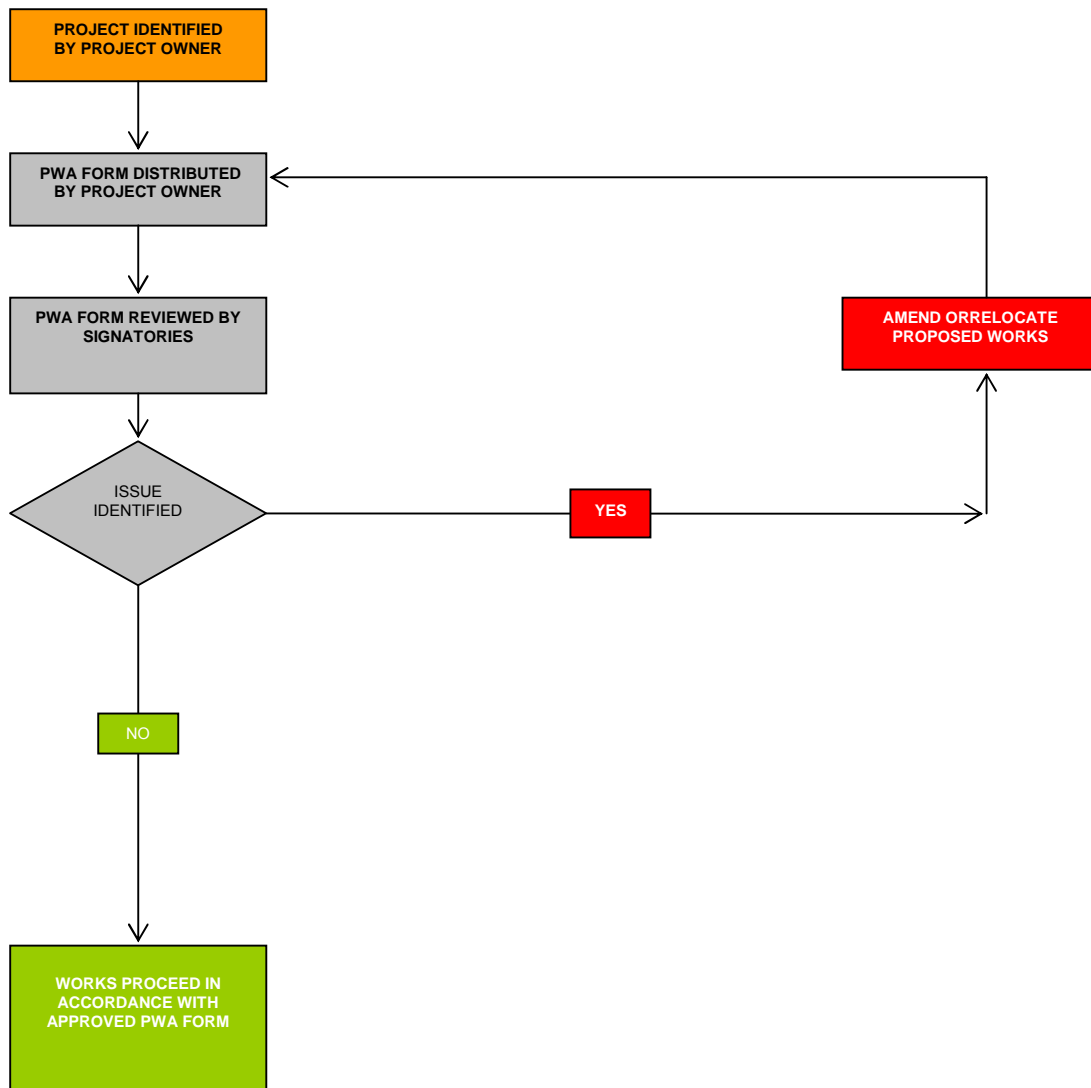
UCML identifies aspects and impacts through a Broad Brush Risk Assessment (of which a copy is located on UCML’s intranet).

A list of the environmental and community aspects and impacts associated with UCML’s operations, as defined by the latest broad brush environmental risk assessment, is included in **Appendix 4**. The management of the key aspects and impacts is to be considered in the development of objectives and targets as detailed in **Section 6.4**.

The operational review of projects prior to being introduced to UCML is managed by *HSEC-FRM-009 Proposed Works Application/Review (PWA)* Form. The introduction of the PWA approval process has been established in order to:

- ensure compliance by UCML with its statutory obligations;
- ensure appropriate environmental controls are adopted for new projects; and
- ensure due consideration is given to potential community impacts identified for new projects.

A PWA is required (as a minimum) for any new project proposed for site. Additional planning instruments may be required prior to the introduction of a new project to site, relative to the scale of the project proposed. A copy of the PWA is maintained on the Intranet (under Planning, Resources Objectives and Targets) and is included in **Appendix 5**. The process for completing a PWA is detailed below.



**6.3 Legal and other requirements**

The planning process requires that UCML identify, have access to, and understand all applicable legal and other requirements directly attributable to the environmental aspects of its activities. These requirements need to be considered when developing environmental management plans and practices.

**6.3.1 Legal Requirements**

Legal and statutory requirements relevant to UCML include:

- environmental legislation, regulations, planning policies;
- mining leases and approvals (e.g. Subsidence Management Plans, Section 126 and 138 approvals etc.);
- development consents;
- Environment Protection Licence (EPL);
- other licences (e.g. Radiation, Dangerous Goods, water licences); and
- permits (e.g. Section 90 permits).



To facilitate that any changes to legislation are effectively identified and communicated, UCML participates in a number of industry associations and other forums. A summary of legal instruments and other requirements relevant to UCML is contained in **Appendix 6**.

To ensure compliance with these legal instruments, UCML have established a Legal Register, as contained in **Appendix 7**. Ongoing compliance with the requirements, as detailed in **Appendix 7**, will be tracked and recorded in accordance with UCML's Record Management System (XstraSafe) and undertaken in accordance with *HSEC-PRO-002 Legal Compliance Procedure*. The UCML Environment and Community Manager will maintain the responsibility for maintaining compliance with the requirements, along with updating the compliance register for UCML operations. A review of UCML legal and other requirements shall also be undertaken annually as part of the EMS review (see **Section 9.0**).

Details of compliance will be recorded in a compliance register and reviewed at least annually and audited by an external auditor at least every 3 years (in accordance with the requirements of DA103-5-2005 and DA113-12-1998). The register contains information such as date of approval and renewal, reporting requirements, last and next reporting date, the conditions related to each document and current compliance status. It is the responsibility of the Environment and Community Officer to ensure that the approvals, licences and permits are kept current, that the appropriate reporting requirements are met and that the Operations Manager is kept informed with respect to changes in legislation. It is also the responsibility of the Environment and Community Officer to keep this register current. The UCML compliance register is managed and updated in XstraSafe and is available on the UCML intranet.

Obsolete documents are to be removed from service and destroyed or retained on file as appropriate in accordance with *HSEC-STD-011 Document Control*. The Environment and Community Officer shall inform and provide a copy to the XCN Group Environmental Manager (GEM) any new or modified permits / consents.

**6.3.2 Other External Stakeholders**

UCML has a number of external stakeholders. A register of external stakeholders is listed in the UCML *Social Involvement Plan (HSEC-MGP-035)*. A register of key stakeholders is to be kept updated in XstraSafe. The register includes names and contact details. The details of stakeholders are updated as required in accordance with *HSEC-STD-010 – Records Management*.

All communications with stakeholders are to occur in a manner that is consistent with the UCML Community Policy. A record of all communications is to be entered into XstraSafe to assist with tracking actions and creating a history log of communications. The procedure for stakeholder communications is outlined in the UCML *Social Involvement Plan (HSEC-MGP-035)*.

UCML's annual objectives and targets will include planned actions for the proceeding twelve (12) months. Community support is reviewed during the annual budget process, in accordance with the XCN Social Involvement Plan. A copy of UCML's *Social Involvement Plan (HSEC-MGP-035)* is kept on the UCML Intranet.

Consultation with all stakeholders will be undertaken in an open and honest manner, respecting cultural issues where appropriate. Where consultation results in conflict, the UCML Environment and Community Officer/Manager will work to resolve the issue in accordance with the development consent requirements.



**6.3.3 Other requirements**

Codes, programs and standards, which XCN (and therefore UCML) is either a signatory or is committed to, impose additional requirements that must be met in addition to legal requirements. A list of codes, programs and standards, to which UCML is committed to, includes:

- Xstrata Coal and XCN HSEC Standards and Policies;
- Australian Minerals Industry – Enduring Value; and
- Australian Greenhouse Challenge.

**XCN HSEC Standards**

UCML is required to address the requirements of the Xstrata Coal and XCN HSEC Standards and Policies in the development, implementation and maintenance of their EMS. XCN has developed a comprehensive set of HSEC standards to address the Xstrata plc standards, as a minimum, and provide guidance to operations such as UCML on their effective implementation. UCML has adopted the XCN HSEC standards. Details regarding the structure of the XCN HSEC management framework are outlined in **Section 3.0**. A list of the XCN HSEC standards and where they are addressed by the UCML EMS is included in **Appendix 1**.

**Australian Minerals Industry**

Xstrata Coal is a signatory to Enduring Value - The Australian Minerals Industry Framework for Sustainable Development. The commitment to Enduring Value has the following obligations:

- progressive implementation of the International Council on Mining and Metals (ICMM) Principles and Elements (see XCN Intranet);
- public reporting of site level performance (on an annual basis, as a minimum), with reporting metrics self-selected from the Global Reporting Initiative (GRI), the GRI Mining and Metals Supplement or self-developed (the GRI developed for UCML is maintained on XstraSafe); and
- assessment of the systems used to manage key operational risks.

UCML is required to progressively implement these obligations.

**Greenhouse Challenge**

Xstrata Coal has signed onto the Australian Greenhouse Challenge and has released a *Climate Change Position Statement (HSEC Pol 1.05 Climate Change Policy)*. A copy of the signed agreement is maintained on the Intranet. A copy of the *Climate Change Position Statement* is included in **Appendix 8**.

Xstrata Coal has a high-level commitment to the abatement and management of greenhouse gas emissions, in tandem with our support for the continued development of coal as a clean source of energy.

UCML has the responsibility to record their site greenhouse data and report this information in accordance with *XCN HSEC STD1.10 HSEC Measurement and Reporting*. UCML are also required to identify possible greenhouse abatement programs in their HSEC Annual Plans (see **Appendix 9** for the 2009 plan) and budgets (**Section 6.4**). UCML continues to progress resource usage efficiencies in accordance with *HSEC-MGP-036 – Product Stewardship*.



**6.3.4 Contractual Requirements**

All service contracts entered into by UCML must be assessed (pre-qualify) to ensure contactors comply with the UCML and XCN EMS, in accordance with *HSEC-MGP-013 - Contractor Management Plan* (developed in accordance with *XCN HSEC PRO 1.05.1 XCN Contractor Prequalification*). With the permission of the Group Environment Manager (for XCN corporate contracts) or the UCML Environment and Community Manager, contractors may elect to operate in accordance with their own EMS, however the UCML EMS will prevail to the extent of any inconsistency. If a contractor requests permission to operate in accordance with their own EMS, the UCML Environment and Community Manager or XCN Group Environment Manager (for XCN corporate contracts) will undertake a review of the contractor’s EMS prior to granting them approval to operate in accordance with their own EMS.

The only exception to this process relates to UCML’s Drilling and Exploration, which is managed by McElroy Bryant Geological Services (MBGS) on UCML’s behalf. In this instance UCML has adopted the MBGS Management System for the management of Drilling and Exploration activities. A copy of the MBGS Drilling and Exploration Site Management Plan can be found on the UCML Intranet.

**6.4 Objectives and Targets**

UCML sets environmental objectives and targets through a formal, documented process. The objectives state what UCML intends to accomplish, that is, the overall goals for environmental performance to meet the Xstrata plc Sustainable Development Policy. The targets define the performance level timeframe to meet specified objectives. UCML also develops performance indicators as the means by which it can be determined whether our objectives have been met. The objectives and targets and associated programs are to be included as the environment and community component of the Annual HSEC Plans (see **Appendix 9** for 2009 HSEC Actions), as required by *HSEC-STD-028 - HSEC Planning*.

The environmental objectives and targets for UCML (see **Appendix 10**) have been developed in consideration of the environmental aspects and impacts identified through broad brush and project specific risk assessments (see **Section 6.2** and *HSEC-STD-012 Risk Management*), legal and other requirements, as well as corporate objectives and targets set by the XCN Executive Environment Management Committee.

The UCML objectives and targets will be reviewed, at least annually, during the budget planning process (see **Section 9.0**), and updated to reflect changes in legislation, operational practices, industry standards and corporate directives.

Progress in achieving the objectives and targets shall be reviewed at least quarterly and details of the review recorded and reported to the Group Environment Manager in accordance with XCN *HSEC STD 1.10 HSEC Measurement and Reporting* (see **Section 7.5**).



**6.5 Environmental and Community Management Programs**

Environmental and Community Management Programs are developed in order to meet various commitments and to improve the environmental performance of the organisation.

Where required, UCML will develop environmental and community programs to address specific objectives and targets included as part of the Annual HSEC Plan (refer to *HSEC-STD-026 – HSEC Measurement and Reporting*). At a minimum, all environmental and community programs should include the following:

- identification of specific actions;
- designation of responsibility;
- resource allocation;
- time frame; and
- review.

A list of the environmental and community programs developed for UCML is included in **Appendix 10**.



**7.0 IMPLEMENTATION AND OPERATION**

**7.1 Resources – Human, Physical and Financial**

The UCML Annual HSEC Plan (**Appendix 9**) provides the direction for implementation of objectives and targets (see **Section 6.4**). To ensure these targets are met, UCML is committed to ensuring that the appropriate human, physical and financial resources are made available for the effective implementation of the *Xstrata plc Sustainable Development Policy*.

**7.2 Accountability and Responsibility**

Environmental management is the responsibility of all employees and contractors. UCML recognises the importance of effective development and implementation of its EMS and the clear definition of roles and responsibilities for environmental management. An organisational structure and a register of roles and responsibilities are included in **Appendix 11**. Roles and responsibilities are to be detailed and documented in relevant environmental management programs and plans and communicated to the relevant personnel.

Specific environmental roles and responsibilities are included in job descriptions. Performance against environmental roles and responsibilities is assessed as part of annual performance appraisals for employees.

**7.3 Environmental Awareness, Training and Competency**

**7.3.1 General**

Effectively implementing and maintaining the UCML EMS depends on the competency of the UCML workforce. Training (at all levels, from employees through to senior management) is an important means of ensuring that the appropriate competencies, and knowledge of legislative obligations, risk management processes and collective responsibilities are held, in order to enable UCML to achieve its environmental and community vision and policies.

Training will be developed and undertaken in accordance with the requirements of *HSEC-STD-034 - Training and Competence Management* and UCML’s Environmental Management System.

Environmental training and education needs will be identified by UCML as follows:

- by conducting a training and education needs analysis (see **Appendix 12**); and
- in response to risk assessments and job observations, when new plant, equipment or processes are introduced or when an incident has occurred.

Induction and environmental awareness training as well as training targeting specific tasks or roles will be competency based to ensure that all personnel have knowledge of the relevant roles and responsibilities. Specific environmental training will be conducted as required to address matters such as major legislation changes or if other significant environmental issues arise.

As outlined in the sections below, at a minimum, training should include issues in relation to conformance, potential environmental impacts and appropriate operational controls, roles and responsibilities and consequences of non-conformance. Environmental training at UCML consists of:

- induction training;
- environmental awareness training;
- tool box talks; and
- Other training, as required by plans/programs, including hazard identification (*HSEC-STD-006 - Hazard and Incident Management*) and emergency training (*HSEC-MGP-002 - Emergency Preparedness*).

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**7.3.2 Environmental and Community Induction**

General environmental and community training (induction) will be undertaken for all new personnel and contractors prior to commencing work on site, in accordance with *HSEC-STD-034 – Training and Competency*. Inductions will be renewed every two years for contractors. Refresher training will be undertaken with UCML personnel as required.

The environmental and community induction course will include:

- the importance of conformance with the *Xstrata plc Sustainable Development Policy*;
- conformance with the XCN HSEC Standards and EMS;
- conformance with the UCML EMS;
- relevant legal and other requirements;
- the potential environmental impacts and associated controls for their work activities;
- their roles and responsibilities in achieving conformance with the environmental and community policies and requirements of the EMS’s, including emergency preparedness and response requirements;
- the potential consequences of non-compliance with environmental and community policies and EMS requirements; and
- ‘*sustainable development*’ and ‘*enduring value*’ in accordance with the ICMM and MCA standards.

A full list of topics covered in the general induction is included in the UCML Environmental and Community Training Needs Analysis (**Appendix 12**).

**7.3.3 Environmental and Community Awareness**

General environmental and community awareness training will be undertaken as required. The training will target the various levels of UCML personnel, as follows;

**Level 1 Training**

Level 1 training is conducted for senior management and supervisory personnel including but not limited to: Underground and Surface Operations Managers, Statutory Mine Manager, Mining Engineer, Environment and Community Officer, Coal Maintenance Engineers and Shift Supervisors.

The awareness course will include:

- the environment and community context within which UCML operates;
- the Xstrata plc SD Policy and the UCML EMS,
- relevant environmental legislation;
- significant environmental aspects and impacts;
- environmental roles and responsibilities;
- emergency preparedness and response requirements;
- the potential consequences of non-compliance with environmental policy and EMS requirements;
- community involvement / relations;
- cultural awareness; and
- hazard and incident management.



**Level 2 Training**

Level 2 training will be conducted for all other relevant UCML employees who have not received Level 1 training. This training shall encompass a general overview and specific information of environmental management tailored to personnel in the field. Level 2 training shall include:

- general environmental awareness;
- Xstrata plc SD Policy;
- key environmental issues on site;
- environmental work procedures;
- incident reporting;
- employee responsibilities;
- environmental emergencies; and
- other issues as required as per *HSEC-STD-012 - Risk Management*.

**Level 3 Training**

Level 3 training will be conducted for the UCML employees and contractors. This training shall encompass a general overview and specific information of environmental management as covered by Level 2 training but tailored towards operators and on-the-ground personnel. This training may be addressed through avenues such as Tool Box Talks and crew talks.

**7.3.4 Tool Box Talks**

Tool box talks will be undertaken on an as-needs basis for specific groups of personnel. This form of training will generally cover topics and issues that are specific to particular work groups, for example, waste disposal at the workshop, or following receipt of complaints relating to a specific issue (e.g. dust), an environmental incident or due to changes in operations (new equipment, procedures etc).

**7.3.5 Evaluation of Training**

In accordance with *HSEC-STD-034 - Training and Education*, regular evaluations of the UCML training program will be undertaken to ensure that adequate skills and knowledge are maintained and that training and education continues to meet the desired outcomes.

**7.3.6 Behavioural Management**

In accordance with *HSEC-STD-029 – Behavioural Management*, UCML will identify and implement a system and process to reinforce behaviour consistent with the Xstrata plc SD Policy as well as UCML’s standards and procedures. This may be incorporated within existing operational behavioural management systems that have been developed for UCML in relation to health and safety (e.g. *HSEC-FRM-026 - Planned Task Observations* on UCML’s Intranet).

**7.3.7 Training Records**

Records will be maintained of all training undertaken, including the results of competency assessment and due date for re-induction or refresher training in accordance with *HSEC-STD-034 - Training and Competency Management*. These records will be maintained by the UCML training department.



**7.4 Communication and Reporting**

**7.4.1 Communication**

Effective communication between XCN corporate management, UCML management, personnel, contractors and stakeholders is important for the successful implementation and maintenance of the UCML EMS. Internal communications include communications within XCN and communications within UCML. External communication includes communication with stakeholders, statutory authorities and contractors. Communication at UCML is undertaken generally in accordance with *HSEC-MGP-035 – Social Involvement Plan*, for external communication, and *HSEC-STD-004 – Communication and Consultation*, for internal communication. Further details relating to these processes are detailed below.

**7.4.1.1 Internal**

There are a number of forums used for internal communications at UCML, such as toolbox talks (TBTs), meetings and training programs. Other forums include:

- Shift pre-start meetings, where crew talks are conducted by the supervisors. This forum is utilised where environmental issues are required to be delivered to the workforce for an upcoming event or as the result of an incident;
- Daily Operational Meetings are conducted Monday to Friday to discuss the previous or upcoming 24 hours’ operations. This meeting is used to discuss incidents, performance and planned actions, and environmental issues, where appropriate. Actions from previous meetings are discussed and tracked for closure;
- Weekly Senior Leadership Team meetings are conducted to discuss operational issues at the mine, including environmental and community issues. The attendees include the UCML Underground Operations Manager, Technical Services Manager, Production Manager, Maintenance Manager and Environment and Community Manager; and
- Regular newsletters (e.g. Weekly Newsletter) are distributed to employees to highlight relevant operational, environmental and community issues (also refer to *HSEC-MGP-035 – Social Involvement Plan*).

Internal communications are to be conducted in accordance with *HSEC-STD-004 - Communication and Consultation* and *HSEC-STD-034 - Training and Competency Management*. Specific internal communication requirements relating to Executive Environmental Committee meetings, critical HSEC and internal incident reporting are described below.

Communication of Critical HSEC Information

In the event of critical HSEC Information, communication is to be undertaken using HSEC alerts in accordance with *HSEC-STD-004 - Communication and Consultation*.

Internal Communication of Incidents

All employees and contractors carrying out work at UCML are to report all non-conformances, environmental incidents, near misses and hazards to their immediate supervisors in accordance with *HSEC-STD-006 - Hazard and Incident Management* and *HSEC-STD-026 - HSEC Measurement and Reporting*. Supervisors are responsible for completing the appropriate documentation, as set out in this procedure, and forwarding it to the Environment and Community Officer who will ensure that the appropriate investigations are carried out and that corrective actions are implemented. All incidents, including those of a minor nature, should be reported to the Environment and Community Officer and Operations Manager. A register of incidents is to be maintained by the UCML Environment and Community Officer and entered into XstraSafe.



Critical and serious incidents are to be communicated as soon as practicable to the applicable XCN General Manager, Chief Operating Officer and Group Environment Manager, in accordance with *HSEC-STD-026 - HSEC Measurement and Reporting*.

*HSEC-PRO-001 – Complaints Procedure* details the manner in which complaints are to be handled by personnel. All community complaints received must be forwarded to the Environment and Community Manager as soon as possible. The Environment and Community Manager is responsible for investigating complaints and providing feedback to the complainant, reporting the details of the complaint to the both Surface and Underground Operations Managers and to XCN via the Group Environment Manager. Handling of complaints should be undertaken in accordance with *HSEC-PRO-001 – Complaints Procedure* and reporting should occur in accordance with *HSEC-STD-026 - HSEC Measurement and Reporting*. All Community Complaints are to be kept in a register in accordance with *HSEC-STD-010 – Records Management*.

Environmental Committee

UCML participates in the XCN Group Environmental Committee, consisting of all Site Environment and Community Officers, Manager External Affairs and the Group Environment Manager. The group convenes on a quarterly basis to discuss environmental and community management initiatives and issues across XCN sites.

HSEC Committee

UCML holds a monthly HSEC meeting with representatives of the workforce to discuss issues pertaining to HSEC, in accordance with *HSEC-STD-004 – Communication and Consultation*. Minutes from these meetings are distributed to committee members two weeks prior to monthly meeting and minutes are displayed on noticeboards for communicating with the workforce.

**7.4.1.2 External**

Communication at the Ulan Surface Operations

Formal communication is undertaken at the Ulan Surface Operations by means of the following:

- Daily operational planning meetings;
- Monthly Environmental meetings involving the UCML Surface Operations Manager, the UCML Environment and Community Officer and key UCML personnel. The aim of the meetings is to discuss any environmental management issues that may arise during the month or from observations recorded during the monthly environmental inspection (undertaken prior to the meeting); and
- an annual EMS review meeting, conducted by the UCML Environment and Community Officer with UCML management at both the Underground and Surface Operations.

Communication with Stakeholders/Community

UCML has developed *HSEC-MGP-035 - Social Involvement Plan (SIP)* in order to establish a consultation process for external engagement (in accordance with XCN *HSEC STD 1.08 Communication and Consultation*). Details of engagement strategies are included in *HSEC-MGP-035 - Social Involvement Plan* however, generally UCML has adopted the following communication methods in the SIP:

- six-monthly community newsletters;
- individual meetings with stakeholders as required;
- Annual Environmental Management Reports (AEMR);
- internet webpage [www.ulancoal.com.au](http://www.ulancoal.com.au);
- quarterly Community Consultative Committee (CCC) meetings. Extraordinary CCC meetings may be called to discuss and inform members of changes in mining operations; and
- Aboriginal Heritage Review Meetings.

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Minutes from these meetings are maintained in accordance with *HSEC-STD-010 – Records Management* and UCML’s statutory obligations in accordance with *HSEC-PRO-002 – Legal Compliance Procedure*.

Where a specific requirement for the establishment of a defined consultation process is required, i.e. a new major project, UCML will develop a specific consultation process/consultation strategy tailored to the project. This process will be at the discretion of the Environment and Community Manager in consultation with the respective Operations Manager(s).

**7.4.2 Reporting**

Internal and external reporting comprises formal reporting, including monthly reports, as well as external statutory reports and voluntary reporting to stakeholders including the preparation of media releases and community newsletters.

**7.4.2.1 Internal**

Monthly HSEC Report

UCML submits a monthly HSEC Report to XCN in accordance with *HSEC-STD-026 – HSEC Measurement and Reporting*.

Monthly reports are to include (however may not be limited to):

- number and details of environmental incidents;
- key environmental issues;
- rehabilitation status;
- status of EMS; and
- non-compliance with legal and other requirements.

Incident Reporting

Critical and serious incidents shall be reported in accordance with *HSEC-STD-026 – HSEC Measurement and Reporting*.

Xstrata Sustainability Database (XSD)

UCML are required to collate and enter a range of environmental and community data in the Xstrata Sustainability Database (XSD) on a monthly basis. Data reported includes:

- Consumables e.g. diesel, tyres etc;
- CSI Expenditure;
- Emissions to air;
- Emissions to water;
- Environmental Protection Expenditure;
- Resource Conservation and Management;
- Waste Disposal and Recycling;
- Wastes Produced.



Complaints

Community complaints are reported in accordance with *HSEC-STD-026 – HSEC Measurement and Reporting* and provided to the GEM as part of the monthly environmental reporting process (see above).

All Community Complaints are kept in a register (XstraSafe) maintained by the UCML Environment and Community Officer, in accordance with *HSEC-PRO-001 – Complaints Procedure*.

**7.4.2.2 External**

All external reporting of environmental matters shall be conducted in accordance with *HSEC-STD-004 - Communication and Consultation* and *HSEC-MGP-035 – Social Involvement Plan*. External reporting includes statutory reporting, incident reporting and other reports including the Public Environment Report.

Specific reporting relating to the media is to be managed in accordance with Xstrata Policy *HSEC Pol 2.1 – Media Policy*.

Statutory Reporting

Statutory reporting to various government departments occurs in accordance with the requirements of UCML’s various consents, conditions, licences and permits.

The Environment and Community Officer is responsible for statutory reporting in a timely manner. The Operations Manager is responsible for authorising statutory reports, however copies of the UCML Annual Environmental Management Reports and Environment Protection Licence Annual Returns are to be provided to the XCN GEM for review prior to submission. Other external reports may also be requested by the XCN GEM for review prior to release. The XCN GEM is responsible for the co-ordination of the production of any additional external reports, with the assistance of UCML (e.g. Xstrata plc HSEC Report).

Other External Reporting

Other external reporting includes the reporting requirements associated with the Australian Minerals Industry, Public Environment report and Xstrata plc HSEC report, coordinated by the XCN GEM. UCML is required to collect and provide data (leading performance indicators e.g. greenhouse emissions) as required.

UCML is also required to provide a National Pollutant Inventory (NPI) Report to the Department of Environment and Climate Change (DECC) on an annual basis, for the 12 month reporting period commencing 1 July.

External Incident Reporting

Environmental incidents requiring external notification are defined in *HSEC-STD-026 – HSEC Measurement and Reporting*. UCML is responsible for reporting incidents externally in accordance with *HSEC-STD-026 – HSEC Measurement and Reporting*.

UCML is required to notify the DECC (in accordance with Section 148 and Section 66 (3)148 of the Protection of the Environment Operation (POEO) Act 1997) of pollution incidents where “a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened.” Legislation requires that the notification is to be undertaken by:

- the person carrying out the activity;
- an employee;
- the occupier of the premises on which the activity occurs; or
- the employer.

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UCML will notify breaches of conditions contained in site specific approvals including development consent conditions and or conditions of the Environment Protection Licence 394.

The XCN GEM and the UCML Environment and Community Manager are responsible for maintaining records of incidents reported externally.

Media

Any media communications must be prepared in accordance with the *Xstrata Policy HSEC Pol 2.1 – Media Policy* and *XCN HSEC PRO1.06.1 Media- communicating with the media in event of a critical incident*.

**7.4.3 Dispute Resolution**

Any dispute arising at UCML is handled following a conflict resolution process. This process is based on communication mechanisms in accordance with *HSEC-STD-004 – Communication and Consultation*. All community conflict resolution issues are recorded as a complaint (see **Section 7.4.2.1**) and managed using participative and consultative mechanisms through UCML’s complaints management process, in accordance with *HSEC-PRO-001 – Complaints Procedure*.

**7.5 Documentation and Document Control**

UCML’s EMS documentation is developed, approved, implemented and maintained in accordance with *HSEC-PRO-001 – Complaints Procedure*. All documents are required to be standardised for publishing on line (intranet) and subject to review and approval by the Environment and Community Manager in consultation with the Surface and Underground Operation Manager(s), as per *HSEC - STD-011- Document Control*. A copy of the UCML Intranet HSEC Management System contents page is included in **Appendix 13**.

**7.6 Operational Control**

Where activities are identified as having an environmental impact, operational controls and procedures must be implemented in order for UCML’s objectives and targets to be realised. To ensure that these activities are carried out in accordance with the objectives and targets of the EMS (and the requirements of *HSEC –STD-028 HSEC Planning*), UCML utilise a range of operational controls, including (but not limited to):

- UCML Environmental Management Plans;
- UCML Environmental Procedures;
- XCN Standards and Procedures (see **Section 6.3.3**);
- Proposed Works Application (PWA) Forms;
- Project Management Manuals;
- UCML Broad Brush Risk Assessment;
- Capital expenditure applications (*FP01.01AFEP AFE Procedures*);
- Contractor selection procedure (as detailed in *HSEC-MGP-013 – Contractor Management Plan*); and
- Change Management procedure (as detailed in *HSEC-STD-030 – Change Management*).



**7.6.1 Environmental Management Plans**

UCML’s Environmental Management Plans (EMPs) have been developed to identify the controls and mitigation measures that are in place on site to manage the potential environmental impacts associated with the operations of UCML. They are integral components of the UCML EMS. The plans identify and define legislative requirements (in accordance with **Appendix 7** and *HSEC-STD-027 Management Plans, Approvals and Licences*), environmental and community aspects and impacts (identified in accordance with *HSEC-STD-012 - Risk Management*) and the actions required in order to satisfy corporate requirements (as identified in **Section 6.3.3**).

EMPs have made reference to (and been developed in accordance with):

- identified environmental aspects and impacts;
- identified objectives and targets;
- internal corporate requirements; and
- regulatory requirements.

EMPs will be accessible via the UCML Intranet and relevant personnel will receive appropriate training in regards to the requirements of these plans. These personnel will have the authority to implement the plans and to stop work should there be any real or potential risk to the environment as a result of mining activities. These EMPs will be properly communicated to the work force via training programs identified in **Section 7.3**.

The EMPs maintained by UCML are detailed in **Appendix 2**.

**7.6.1.1 MBGS Site Management Plan**

UCML’s Drilling and Exploration Program is managed by McElroy Bryant Geological Services (MBGS). UCML has adopted the MBGS Management System for the management of Drilling and Exploration activities. A copy of the MBGS Drilling and Exploration Site Management Plan is located in the MBGS site office. The UCML Environment and Community Officer is required to undertake an annual review of the plan to provide that it is consistent with the UCML EMS and that it adequately addresses the environmental aspects and impacts that have been identified for these components of the UCML mining operation.

**7.6.2 Environmental Procedures**

Documented procedures, stipulating operating criteria, have been established and maintained for activities where the absence of such a procedure or instruction could lead to deviations from the policy, objectives and targets or management plan. Such deviations may lead to environmental impacts. Procedures have been developed in order to support and/or operationalise the requirements of UCML’s environmental management plans. Where practical, environmental procedures will be incorporated into existing operational procedures.

The environmental procedures maintained by UCML are included in **Appendix 2**.



**7.6.3 XCN Standards and Procedures**

As outlined in **Section 6.3.3**, the UCML EMS has been developed in consideration of XCN’s HSEC standards and procedures.

**7.6.4 Proposed Works Application/Review**

Under the EMS, UCML requires the completion of a Proposed Works Application/Review (PWA) Form (*HSEC-FRM-009*) prior to new projects commencing within UCML operations. A copy of the PWA Form is included in **Appendix 5**. The purpose of the PWA Form is to identify hazards, minimise disturbance, and identify potential environmental or social constraints (e.g. archaeological sites) and any other issues. The PWA process requires the following:

- identification of when pre-feasibility / feasibility studies, including biodiversity baseline surveys and HSEC risk assessments are to be conducted for projects as per UCML’s *HSEC-MGP-025 Biodiversity & Land Management*;
- environmental risk assessments to be undertaken where necessary; and
- authorisation from the Environment and Community Officer or Manager prior to the commencement of works.

An inspection of the proposed works area may be undertaken by the Environment and Community Officer as part of the PWA assessment. All controls identified in the PWA must be implemented prior to or during the works. Completed PWA forms are to be maintained by the activity proponent and an electronic copy of the completed form returned to the Environment and Community Manager for filing on the intranet.

**7.6.5 Capital Expenditure Applications**

Environmental and social considerations are included in all capital expenditure applications through the XCN Application for Expenditure (AFE) process. The process for AFE preparation and documentation is outlined in *FB01.01AFED Application for Capital Expenditure*, located on the UCML intranet.

**7.6.6 Contractor Selection**

Contractor selection will be undertaken in accordance with *HSEC-MGP-013 - Contractor Management Plan*. This document has been developed in accordance with *XCN HSEC STD 1.05 Contractor Management*. Selection of contractors shall take into account competence, which is to include consideration of:

- the contractors past environmental performance, including any notices, fines or prosecutions;
- previous performance on other XCN or Xstrata Plc sites;
- qualifications and experience of relevant personnel; and
- the contractor’s Environmental Management System.



**7.6.7 Change Management Procedure**

The management of change at UCML is managed in accordance with *HSEC-STD-030 – Change Management*. This standard has been developed in accordance with *XCN HSEC STD 1.12 Change Management*, for all UCML’s operations and projects to manage risks that may result from change to a process, equipment, materials or substances utilised. Change is defined by the standard as an addition, revision, deletion, modification or replacement to any aspect of the company’s business that has reasonable potential to impact health, safety, environment or regulatory compliance. Examples of changes could include, but not be limited to the following:

- addition of new plant or equipment;
- deviation from the approved plan (e.g. Mining Operations Plan);
- adding to or re-routing existing pipelines; and
- modifying an existing environmental management plan or procedure.

*HSEC-STD-030 – Change Management* requires the identification of the need for change and, with the exception of emergency situations, requires a risk assessment to be completed in order to identify potential environmental and community risks. Where no risks are identified, the change may proceed, however, where risks are identified (that can’t be managed by an existing “Alternate Process”) *HSEC-FRM-033 Change Management Request/Approval (Change Management) Form* is to be completed and approved before the change can proceed.

Completed Change Management forms (with respect to environment and community issues) are filed within a folder that relates to the proposed activity, in accordance with *HSEC-STD-010 – Records Management*. Where required, a copy of the respective Change Management form will be kept within the Technical Services Archives Room in instances such as those where statutory compliance issues may arise as a result of the proposed change. In this case a copy of the completed Change Management form would be stored in statutory folders.

**7.7 Emergency Preparedness and Response**

*HSEC-MGP-002 - Emergency Preparedness* details the UCML Emergency Response Plan, which has been developed in accordance with *XCN HSEC STD 1.06 Emergency Management*. *HSEC-MGP-002 - Emergency Preparedness* is aligned with the XCN Commodity Business Level Crisis Management Plan and is maintained on the intranet. This plan covers potential environmental emergencies as well as other emergency situations that relate to the operations at UCML. All responses to emergencies will be carried out in accordance with this plan. The Emergency Response Plan includes emergency situations identified from risk assessments and assigns responsibilities and lists contacts in case of an emergency, as well as internal and external communication procedures.

Incident investigation shall be undertaken in accordance with *HSEC-STD-006 - Hazard and Incident Management*. In this instance, the Environment and Community Officer is responsible for overseeing the investigation of environmental incidents and emergencies, and shall recommend any further action required to manage the incident.

All employees will be trained in the relevant emergency preparedness as per *HSEC-STD-034 - Training and Competency Management*. Risks shall be identified and reassessed in accordance with *HSEC-STD-012 - Risk Management* utilising a broad brush risk assessment.

As per the requirement of *HSEC-MGP-002 - Emergency Preparedness*, UCML will undertake simulated emergencies to physically test the emergency response system. All records of environmental emergency response scenarios are to be kept in accordance with *HSEC-STD-010 – Records Management*.

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### 7.8 Cumulative Impacts

The environment in which UCML currently operates has significantly changed within recent times. UCML were largely the only extractive operation within the area historically, however with the commencement of the Wilpinjong Coal Mine and Moolarben Coal Project, cumulative impacts have become a significant consideration to UCML’s operations. Further to the coal projects outlined above would be the smaller existing quarrying activities within the immediate vicinity of Ulan Coal Mine. Given the nature of the planning instruments that relate to the newer operations, the onus is largely on these later developments to assess cumulative impacts in conjunction with the existing UCML operations.

If UCML were to extend or develop new activities or operations in the future, cumulative impacts of proposed additional works (in the context of existing operations within the local area) would need to be considered during the environmental impact assessment process. Specific measures would be developed, where necessary, to ensure that any proposed additional works would not result in a significant increase in the cumulative impact upon the environment and local community.

Where possible, UCML will aim to work with surrounding operations to minimise the potential cumulative impacts resulting from the commencement of new operations, in accordance with UCML’s *HSEC -STD-012 - Risk Management* and *HSEC-STD-028 HSEC Planning*.

The site’s current environmental management plans and monitoring program are designed to ensure that the operation’s activities (including proposed new works) do not result in any significant increase in cumulative impacts upon the environment or local community. **Section 7.6** of this EMS outlines the existing operational controls in place at UCML to mitigate the potential impacts of the operation, which would also apply to mitigating cumulative impacts. In accordance with DA 103-5-2005, UCML maintain extra requirements for additional or revised management plans to address potential environmental impacts (and any cumulative effect) as listed below:

- Environmental Noise - development of a Noise Reduction Plan;
- Water – revision of the UCML Water Management Plan to include:
  - Site Water Balance;
  - Erosion and Sediment Control Plan; and
  - Surface and Groundwater Response Plan.



**8.0 MEASUREMENT AND EVALUATION**

**8.1 Monitoring and Measurement**

**8.1.1 EMS Performance**

Regular reviews and evaluation of the UCML EMS are undertaken to ensure compliance with the XCN environmental and community policies (see *HSEC Pol 6.0 XCN Environmental Management Framework*). This is critical to continual improvement. The monitoring system is used to track the performance of the EMS, and enables the identification of corrective actions, where needed, to ensure compliance.

In accordance with *HSEC-STD-002 - Auditing* and *HSEC-STD-026 - HSEC Measurement and Reporting*, the UCML environmental monitoring system includes:

- site inspections;
- internal and external audit results;
- incident and complaint records;
- environmental monitoring results;
- quarterly review of performance against objectives and targets; and
- leading key performance indicators.

UCML performance in relation to EMS implementation is reviewed annually (as a minimum) as part of the EMS review meeting (see **Section 9.0**).

**8.1.2 Environmental Performance**

Specific monitoring programs have been developed to evaluate UCML environmental performance in relation to noise, air quality, water quality, soil and pasture quality, subsidence, biodiversity status monitoring of rehabilitated areas as well as land owned and managed by the operation. Details of each of these monitoring programs are included in the relevant environmental management plans as detailed in **Appendix 2**.

All management plans will include as a minimum:

- documented procedures for the monitoring programs;
- clear allocation of responsibilities;
- recording of information such that performance may be tracked;
- detailed relevant operational controls;
- demonstrated conformance with environmental objectives and targets and compliance with relevant environmental legislation and regulations;
- requirements for recording of equipment calibration and maintenance; and
- processes for ongoing review of both monitoring results and the overall monitoring programs.

**8.2 Evaluation of Compliance**

UCML will evaluate compliance with relevant environmental legislation and regulations in accordance with *HSEC-STD-002 - Auditing* and the statutory provisions as detailed within DA 103-5-2005 and DA 113-12-1998. Reporting of audit findings shall be undertaken in accordance with *HSEC-STD-026 - HSEC Measurement and Reporting* and the respective statutory provisions of the Development Approval.

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**8.3 Non Conformity, Corrective Action and Preventative Action**

Non-conformances are tracked and managed in accordance with *HSEC-STD-026 - HSEC Measurement and Reporting* and associated documentation maintained in accordance with *HSEC-STD-011- Document Control* and *HSEC-STD-010 – Records Management*. *HSEC-STD-026 - HSEC Measurement and Reporting* details the procedure for handling and investigating of non-conformances, including allocation of responsibility, external and internal reporting requirements, and initiating and completing corrective and preventative actions.

Non-conformances may be identified through:

- monitoring programs;
- complaints;
- site inspections;
- internal communication;
- incident reports; and
- audit findings.

Non-compliances will be addressed in accordance with *HSEC-STD-026 - HSEC Measurement and Reporting*. Whereby non-compliances have been identified (and dependant on severity), a corrective action plan must be developed and must include adequate detail of methodology, scope, findings and recommendations to address the non-compliance (where applicable). Details of the corrective action shall include:

- A precise description of the non-conformance;
- The section of the policy, procedure, statutory requirement or process related to the non-conformance (Note, only one clause of the document which fits most closely should be listed); and,
- Objective evidence or proof of why the non-conformance was raised. Documentation compiled following the investigation of the non-compliance shall be retained in accordance with *HSEC – STD-010 – Records Management*.

In accordance with *HSEC-STD-026 - HSEC Measurement and Reporting*, the Operations Manager and Department Managers of the operational area to which the non-compliance has been identified must be provided the opportunity to review the draft findings for comment prior to finalisation of the investigation.

On completion of an Action Plan summarising the recommendations and planned actions, due-by dates will be completed by a Departmental Manager. All corrective action plans will be entered into Xstrasafe for tracking of completion of actions. Reporting of non-compliances shall be in accordance with *HSEC-STD-026 - HSEC Measurement and Reporting*.



**8.4 Control of Records**

UCML’s environmental and community records are to be maintained in accordance with the *HSEC –STD-011- Document Control* and *HSEC-STD-010 – Records Management*. EMS records as evidence of the operation of the EMS should include:

- legislative and regulatory requirements;
- risk and hazard assessments;
- permits;
- environmental aspects and impacts;
- environmental training;
- inspection, calibration and maintenance activities;
- monitoring data;
- details of non-conformances, incidents, complaints and any follow up action taken; and
- environmental audits and management reviews.

In accordance with *HSEC-STD-011- Document Control*, the primary means of controlling documents is via the site’s Intranet.

**8.5 Audits**

The UCML Environment and Community Manager is responsible for the co-ordination of the UCML internal audit schedule, as listed in **Table 8.1**. Internal audits shall be undertaken in accordance with *HSEC-STD-002 - Auditing*. Operational personnel will be included where possible in internal reviews in order to increase awareness and ownership of environmental issues.

Results from the audits and reviews undertaken shall be included in the management review as detailed in **Section 9.0**.

Other external and internal audits will be determined by either XCN’s Executive Environmental Committee or by the level of risk to an aspect of UCML’s operations respectively.

A review of progress towards objectives and targets, which includes the E&C component of the Annual HSEC Plan (see **Appendix 9**) will be undertaken on a quarterly basis by the Environment and Community Manager and reported in a quarterly report to the Operations Manager. This review shall enable the identification of non-conformances and the formulation corrective action where targets are not being met.

Audits shall also be undertaken as required in accordance with the schedule in the table below.

**8.6 Inspections**

The Environment and Community Officer (or delegate) is responsible for undertaking workplace environmental inspections to ensure compliance with the Environmental Management Strategy. A copy of the inspection checklists is included in **Appendix 15**. Other inspections may be undertaken as required e.g. for new projects, as required by the Proposed Works Application process (see **Section 7.6.4** and **Appendix 5**).



**Table 8.1 Audit and Inspection Schedule**

Type of Audit/Inspection	Frequency	Description	Arranged by
XCN Core Hazard Audits	Monthly	Targets 21 Core Hazards as identified by XCN. An audit of each core hazard is undertaken either quarterly, six monthly or annually. Frequency is determined by XCN.	XCN Group Environmental Manager
Site Inspection	Monthly / 6 monthly	A HSEC inspection of the Ulan operations in accordance with Appendix 15 – UCML Work Place Inspections.	ECO or delegate
AEMR Compliance Audit	Annual	Annual compliance audit to be included in AEMR in accordance with DA103-5-2005 and DA113-12-1998	ECO or delegate
Internal Contractor EMS Audit	Annual	Audit of contractor systems against UCML Contractor Management System – <i>HSEC-MGP-013 Contractor Management Plan</i> .	UCML Contracts Manager
DPI/DWE/DECC/DoP	Annual	Inspection of site operations following a review of the latest AEMR.	ECO or delegate
Xstrata plc SD Standards Self Managed Assessment	Annual	Targeted SD assurance audit carried out by site personnel using Xstrata plc SD audit protocol.	Site Audit Coordinator
Internal XCN EMS Audit	2 yearly	Formal XCN systems audit to verify UCML adherence to XCN EMS commitments.	XCN Group Environmental Manager
Xstrata plc SD Assurance Audit – Verification Audit	3 yearly	Targeted SD assurance audit carried out by appropriately trained external auditors using Xstrata plc SD audit protocol.	XCA General Manager
Independent Environmental Compliance Audit	3 Yearly	Conducted by external auditors. Compliance audit of DA103-5-2005 and DA113-12-1998	ECM or delegate
Other Environmental Audits	As determined by the XCN Executive HSEC Committee	Targeted audits on focus areas e.g. hydrocarbons audit.	XCN Group Environmental Manager



**9.0 REVIEW AND CONTINUOUS IMPROVEMENT**

The Site Environment and Community Officer and operations management (including, as a minimum, the Surface and Underground Operations Managers) will undertake an annual review of the EMS, as per the Annual Review Template (see **Appendix 14**). This review is to include the following as a minimum:

- review of audit findings;
- achievement of objectives and targets and associated programs;
- review of environmental and community policies;
- review of aspects and impacts;
- relevance of objectives and targets to current and future conditions; and
- information and concerns of stakeholders.

The annual review shall occur immediately before UCML’s budget planning cycle so that adequate resources can be allocated to provide for continual improvement of the EMS. The outcomes of the review shall be documented and incorporated into the EMS.

UCML’s EMS will be updated and revised every three years (and as necessary) as part of the independent environmental audit (DA 103-5-2005).



## **10.0 REFERENCES**

AS / NZS ISO 14001:1996 – Environmental management systems – Specification with guidance for use.

ISO 14004:2004 - Environmental management systems – General guidelines on principles, systems and supporting techniques.