

Community and Environment Management Standards

AngloGold Ashanti's Community and Environment management standards have been designed to provide clarity to commitments made in the community and environment policy as well as the community and environment values. The standards are to be included by sites in their ISO14001 certification audits within 3 years of approval. Management standards are developed on a needs basis. Guidance and other documents in support of the standards will be developed as necessary. Approved management standards are provided in Appendix 1.

| Document Number | Document title | EXCOM Approval date | Date for full compliance | ISO14001 Certification Scope |
|-----------------|--|---------------------|---|------------------------------|
| STD 01 | Water | 23 June 2009 | 23 June 2011 | 23 June 2012 |
| STD 02 | Land Use | 23 June 2009 | 23 June 2011 | 23 June 2012 |
| STD 03 | Air Quality | 23 June 2009 | 23 June 2011 | 23 June 2012 |
| STD 04 | Chemicals | 23 June 2009 | 23 June 2011 | 23 June 2012 |
| STD 05 | Waste | 23 June 2009 | 23 June 2011 | 23 June 2012 |
| STD 06 | Closure and Rehabilitation | 30 July 2009 | 30 July 2011 | 30 July 2012 |
| STD 07 | Biodiversity | In draft | 2 years after approval | 3 years after approval |
| STD 08 | Land Acquisition | In draft | 2 years after approval | 3 years after approval |
| STD 09 | Stakeholder Engagement | In draft | 2 years after approval | 3 years after approval |
| STD 10 | Social Investment and Local Economic Development | In draft | 2 years after approval | 3 years after approval |
| STD 11 | Cultural Heritage and Sacred Sites | In draft | 2 years after approval | 3 years after approval |
| STD 12 | Indigenous Peoples | In draft | 2 years after approval | 3 years after approval |
| STD 13 | Artisanal and Small Scale Mining | In draft | 2 years after approval | 3 years after approval |
| STD 14 | Community Complaints and Grievances | In draft | 2 years after approval | 3 years after approval |
| STD 15 | Cyanide | In draft | Already required under the Cyanide Code | Already included |
| STD 16 | Incident Classification and Reporting | 23 June 2009 | Immediate | Immediate |
| STD 17 | Purchasing and Product Stewardship | To be drafted | To be advised | To be advised |
| STD 18 | New / Capital project planning | To be drafted | To be advised | To be advised |
| STD 19 | Business Development/ Due Diligence | To be drafted | To be advised | To be advised |

Appendix 1

List of Approved Management Standards

| Document Number | Appendix Number | Document title |
|-----------------|-----------------|---------------------------------------|
| STD 01 | Appendix 1A | Water |
| STD 02 | Appendix 1B | Land Use |
| STD 03 | Appendix 1C | Air Quality |
| STD 04 | Appendix 1D | Chemicals |
| STD 05 | Appendix 1E | Waste |
| STD 06 | Appendix 1F | Closure and Rehabilitation |
| STD 16 | Appendix 1G | Incident Classification and Reporting |

Appendix 1A

AngloGold Ashanti Water Quality Management Standard



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| MANAGEMENT STANDARD | | |
|---|---|---------------------------|
| WATER | | |
| POLICY CUSTODIAN | Corporate Office Environment and Community Affairs Department | |
| AUTHORISED BY | AngloGold Ashanti Executive Committee | DATE: 23 June 2009 |
| BRIEF DESCRIPTION OF CHANGES | | |
| <p>Second Revision: Condensing the requirements of Revision 1; removal of performance assessment framework; title change (replacement of “Guideline” with “Standard”). Modification of document identification nomenclature.</p> | | |



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1. INTRODUCTION

Managing water responsibly and ensuring that adverse impacts on local and regional water resources are avoided, is a major consideration for all AngloGold Ashanti (AGA) sites. Water management parameters are easily quantified and therefore are the subject of frequent scrutiny by governments, NGOs and communities. This standard sets common requirements for managing water resources, broadly in terms of water quality and consumptive use.

2. OBJECTIVE

The objectives of this document are as follows:

- 2.1 To ensure that reliable information regarding potential and actual water quality impacts on local and regional water resources is generated, analysed and acted upon at an appropriate spatial scale that allows for effective water quality management¹ by AGA sites.
- 2.2 To ensure that operations are able to optimise their consumptive water use² and achieve their water quality objectives via a robust water balance model that also permits forecasting the potential water management impacts of design changes on local and regional water resources.
- 2.3 To ensure that actual and potential impacts arising from water resource use are avoided where possible, or managed according to mandatory host government requirements, reasonable community expectations and the AngloGold Ashanti's values, which state: "We respect the environment" and "We are committed to continually improving our processes in order to prevent pollution..."

3. ACCOUNTABILITY AND RESPONSIBILITY

Overall accountability for implementing this standard lies with the Manager in direct control of the site. Responsibility for its implementation can be delegated to a designated person(s) who should clearly understand their role(s) and responsibilities.

¹ Including the maintenance of legal compliance.

² Through for example, site water use minimisation strategies.



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4. SCOPE

- 4.1 This standard defines a common approach to the management of water³, including its quality and consumptive use at AGA managed operations. It is applicable to all phases of the mining project lifecycle.
- 4.2 Where AGA has no operational responsibility but a significant equity stake, and an equivalent standard is not in place, this standard must be made available to the operator for application.
- 4.3 Onsite contractors and subcontractors are required to adopt this standard unless they have an alternative water management standard, approved in writing by AGA.

5. REQUIREMENTS

5.1 LEGISLATIVE AND OTHER REQUIREMENTS

The management of water at AngloGold Ashanti sites must be in compliance with applicable international treaties, national laws and regulations, environmental licence conditions and any other binding obligations.

5.2 WATER QUALITY MANAGEMENT

5.2.1 Risk Assessment

- 5.2.1.1 A baseline⁴ water quality risk assessment must be conducted as early as possible in the site's life, to identify actual and potential impacts on background water quality and neighbouring communities, arising from AGA activities. For exploration projects, this assessment should form part of the baseline environmental assessment for the project, and be appropriately updated when the project progresses from the detailed design stage to the commissioning and operational phases.
- 5.2.1.2 The water quality parameters assessed during this process must include an appropriate⁵ suite of physical, chemical and biological constituents.
- 5.2.1.3 The identified local and regional water quality risks, in particular, potential non-compliance to host country usage requirements and regulatory or adopted⁶ effluent

³ Meaning surface and groundwater water, including that which drains into underground and open pit mines.

⁴ In this context, **baseline** assessment refers to the initial thorough assessment conducted at the site and may be conducted during any phase of the project. It establishes the status quo with respect to impacts generated from site operations.

⁵ Appropriate to the local geological and topographical setting, prevailing human population activities, the probable mine design and in conformance with host country expectations.



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standards, must be clearly documented in the baseline assessment. Water quality management objectives must be developed in response to the potential risks identified in the baseline assessment, and appropriate⁷ preventive and/or corrective actions must be developed and implemented.

5.2.1.4 Where effluent quality standards are not specified by host governments, the effluent guideline values referred to in section 1.1 (Water Use and Quality subsection) of the IFC Environmental, Health, and Safety Guidelines: MINING⁸ and/or in section 1.3 of the IFC Environmental, Health, and Safety Guidelines: GENERAL EHS GUIDELINES⁹ must be adopted as effluent quality targets.

5.2.1.5 The baseline assessment must, as a minimum, be reviewed every 3 years, or more frequently as significant changes in site activities occur, or as statutory requirements dictate.

5.2.2 Water Quality Monitoring Programme

5.2.2.1 Sites must establish a surface and ground water monitoring programme in response to the identified local and regional water quality risks including the legal and/or adopted effluent standards. The water quality monitoring programmes must detail:

- i. responsibilities for execution of the monitoring programme
- ii. locations of where routine samples to should be taken,
- iii. required sampling and preservation protocols,
- iv. analytical parameters required per sample,
- v. frequency of sampling; and
- vi. sample quality/custody controls.

⁶ See section 5.1.1.4.

⁷ Depending on whether the risk relates to an already producing mine or new project, this could take the form of implementing a new water effluent treatment process or redesigning future production processes to avoid water resource impacts.

⁸ These Guidelines can be obtained at the following URL:
[http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_Mining/\\$FILE/Final+-+Mining.pdf](http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_Mining/$FILE/Final+-+Mining.pdf)

⁹ These Guidelines can be obtained at the following URL,
[http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS/\\$FILE/Final+-+General+EHS+Guidelines.pdf](http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS/$FILE/Final+-+General+EHS+Guidelines.pdf)



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5.2.2.2 The appropriateness of the water quality monitoring programme must be evaluated and maintained either through the periodic review of the baseline assessment, or as statutory requirements dictate.

5.2.2.3 Analyses of collected samples must be undertaken as required by country regulatory authorities, or alternatively at laboratories providing defensible analytical results through the use of recognised quality control measures, e.g. ion balances and/or third party verification.

5.2.2.4 The results of surface and groundwater analyses must be maintained in a protected electronic format, suitable for ease of communication to internal and external parties. The original (physical or electronic) certificates of analysis from laboratories must be safely stored.

5.2.3 Analysis and Response

5.2.3.1 Results and trends in water quality must be analysed regularly against water quality management objectives and the prevailing effluent standards.

5.2.3.2 The frequency of analysis must be as regulatory requirements dictate or, if there are none, at intervals appropriate to the attainment and assurance of site water quality management objectives.

5.2.3.3 Groundwater plume modelling:

- i. Groundwater plumes should be monitored with the aid of an appropriate groundwater model which allows for tracking of solute transport and modelling the evolution of groundwater plumes over time.
- ii. The construction of this model must be preceded by a good understanding of geological conditions on site (i.e. a conceptual site model).
- iii. All data used during modelling must be validated, and of good quality¹⁰.

5.2.3.4 Corrective and preventive actions¹¹ must be implemented to ensure achievement of water quality management objectives. An emphasis should be placed on proactive responses rather than reactive responses.

¹⁰ Good quality data is obtained by practising sample collection, preservation and analytical methods that are best suited to determining the groundwater constituents of interest. Various methods can be used to assure (validate) confidence in the data collected. These include the taking of duplicate samples, analysis by accredited laboratories, field water quality checks during sampling and the using analytical confidence tools such as cation and anion balances.



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5.2.4 Reporting

5.2.4.1 Reporting on water quality results must be in accordance with regulatory and AGA corporate office reporting requirements that includes incident notification and reporting and GRI environmental Indicators.

5.3 WATER USE MANAGEMENT

5.3.1 Water Balance Model

5.3.1.1 Operations must develop and maintain a water balance model¹² that includes the following three design components;

- I. New Inflows (**I**)¹³,
- II. Inventory Storage (**S**)¹⁴
- III. Outflows (**O**)¹⁵.

The mathematical relationship between the three components is: **[I + ΔS - O = 0]**

5.3.1.2 The following considerations must be incorporated into the design and operation of water balance models;

- i. Where relevant, compliance against regulatory withdrawal and discharge limits must be shown in water balance model reports. Internal water use objectives, such as consumption optimisation targets should also be shown.
- ii. The resolution¹⁶ of water balance models should be appropriate to the nature and scale of operations and must allow for effective water management decisions.

¹¹ Corrective and preventive actions may but are not limited to include: up-gradient storm water deflection structures, lining of contaminated water dams, silt collection structures, erosion controls and groundwater interception bores.

¹² A basic water balance model is a numerical representation of an operation's water flow system, including piped reticulation and external factors such as rainfall and evaporation. A series of periodically captured records of inflows, outflows and inventory changes constitute a water balance database that permits an analysis of trends and facilitates water management planning decisions.

¹³ New water inflow sources should at least be classified into at least four types; surface water withdrawals, groundwater withdrawals and inflows to mine workings, captured precipitation, and supply from water utilities or third parties.

¹⁴ Meaningful changes in water inventory should be measured. Water storage facilities include water reservoirs and dams as well as water contained in processing circuits such as leach tanks and heap leach pads, thickeners, tailings facilities and mine workings.

¹⁵ Outflows include accidental and planned surface water discharges to the environment, transfers to third parties, evaporation - including ventilation system moisture losses; seepage losses to groundwater and other non-recoverable water uses such as irrigation and dust suppression



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- iii. The target water balance model accuracy¹⁷ must be $\pm 10\%$. Continued imbalances outside of this tolerance range must trigger a review and update if necessary.
 - iv. The water balance model architecture should reflect the key activities on the entire site, e.g. process plant, the mine, tailings facilities, water dams, office areas and where relevant, mine accommodation.
 - v. Water balance model data must be updated¹⁷ at least monthly intervals as a minimum.
 - vi. Where required for operational purposes, forecasting capacity must be built into water balance models e.g. to forecast the long term water consumption requirements or inventory changes¹⁸, as a result of changing water use patterns.
- 5.3.1.3 Major internally recycled water streams should be identified¹⁹ and quantified²⁰ in the water balance model.
- 5.3.1.4 Appropriate methods of water volume measurement, in keeping with the performance requirements of the water balance model, or as may be directed by regulators, must be used. These may include mechanical or automatic flow and totalisation devices, calculation (volume differences), slurry density calculations, or estimates²¹.

¹⁶ A water balance model of a very high resolution where virtually all flows and inventories are monitored may be impractical to maintain and may provide no more management value than a water balance model of lesser resolution. Host country requirements may specify particular flows that need to be accounted for in the model.

¹⁷ The accuracy of water balance models is dependant on both the accuracy of routine volume measurements and the resolution of the model.

¹⁸ See: The AngloGold Ashanti Limited, Tailings Management Framework, Standard of Practice section 3.6, relating to water balance requirements when water is accumulated on a TSF.

¹⁹ Potential sources of recyclable water streams in the water balance can include; process water streams (e.g. refrigeration or cooling water circuits); drainage water from leach pads, process ponds and decant from tailings storage facilities; washdown water; and treated effluent from water treatment plants.

²⁰ According to the G3 Technical Protocols, the calculation of the volume of water recycled or reused is based on the volume of water demand satisfied by recycled or reused water, in the place of further withdrawals .Site water balances should state the total volume of water recycled in cubic meters per relevant time period (m3/month or m3/year) and also as a percentage of total water withdrawals

²¹ The quality of estimation methods used must stand up to external scrutiny.



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5.3.2 Analysis and Response

- 5.3.2.1 Analysis of results of actual water use patterns against host country regulatory, and internal water use objectives, must be undertaken as per regulatory requirements or at an interval appropriate to achieve water use management objectives.
- 5.3.2.2 Remedial and preventative actions must be initiated to correct deviations from regulatory requirements and site water use objectives.

5.3.3 Reporting

- 5.3.3.1 Reporting on water use performance against regulatory and AGA requirements²² must be performed undertaken as required.

6 GLOSSARY

- 6.1 **Waste storage facilities** refers to all constructed facilities for the storage of waste, including waste rock dumps, tailings storage facilities, spent heap leach pads and landfill sites.
- 6.2 **Operation** refers to a producing mine.
- 6.3 **Project** refers to an exploration project or a new mine expansion.
- 6.4 **Site** is used when referring collectively to gold producing operations and to exploration and expansion projects.
- 6.5 **Mining lifecycle** encapsulates all stages of a mine project, from exploration to operation and closure.
- 6.6 **Permit** is used to denote any environmental approval, authorisation or license issued by host government departments and containing legally binding performance requirements.

²² Including incident reporting requirements and the relevant G3 GRI Environmental Indicators.



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Appendix 1B

AngloGold Ashanti Land Use Management Standard



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| MANAGEMENT STANDARD | | |
|---|---|---------------------------|
| LAND USE | | |
| POLICY CUSTODIAN | Corporate Office Environment and Community Affairs Department | |
| AUTHORISED BY | AngloGold Ashanti Executive Committee | DATE: 23 June 2009 |
| BRIEF DESCRIPTION OF CHANGES | | |
| <p>Second Revision: Condensing the requirements of Revision 0; removal of performance assessment framework; title change (replacement of "Guideline" with "Standard"). Modification of document identification nomenclature.</p> <p>Third Revision: Inclusion of community considerations in the land use management process. Change of title to Land Use Management, from Land Management.</p> | | |



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1. INTRODUCTION

Mining is a temporary land use, and although activities can span many decades, if poorly controlled, residual impacts can last for many generations.

Mining companies hold tenure to land for exploration and mining in various forms, ranging from full ownership to concessions or a lease of tenements. Regardless of the form of land holding, mining companies are not only stewards of the land under their control and influence, but are also responsible to host governments and communities for leaving it in a condition that ensures the optimisation of post closure outcomes.

Activities associated with mineral exploitation give rise to numerous types of temporary and permanent activities on land including: exploration drilling, development of mining pits, ore processing plants, overburden and waste storage, water supply and treatment, offices, and recreation and accommodation facilities. The total extent of land disturbed for these multiple uses is often referred to as the mine footprint.

The change of existing land use or securing access to land for new mining or exploration activities can be controversial, especially where communities are affected. If insensitively managed, this change process can result in a hostile relationship developing between the site and affected communities, which may pose a threat to long term production viability. In keeping with the company's commitment that "We want communities and the societies in which we operate to be better off for us having been there", the needs of affected communities in planning and making decisions regarding land use change, are vital.

Recognising that land management issues at each site are unique, this standard sets out generic requirements to ensure that land-related environmental burden liabilities¹ which may accrue to AngloGold Ashanti (AGA) and community-related threats are minimised or avoided.

2. OBJECTIVE

The objectives of this document are:

- 2.1 To outline a common approach to the management of land resources at sites under the control and influence of AGA.

¹ Primarily the associated financial liability caused by mining-related disturbance to land in company managed areas, including onsite and offsite impacts that result in the need for rehabilitation.



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- 2.2 To ensure that impacts on land resulting from AGA activities are managed in line with host government requirements, the reasonable expectations of communities and AngloGold Ashanti's values.

3. ACCOUNTABILITY AND RESPONSIBILITY

Overall accountability for implementing this standard lies with the Manager in direct control of the site. Responsibility for its implementation can be delegated to a designated person(s) who should clearly understand their role(s) and responsibilities.

4. SCOPE

- 4.1 This standard applies to the management of land resources held privately or under concession, lease or tenement.
- 4.2 Onsite contractors and subcontractors are required to adopt this standard unless they have an alternative land management standard, approved in writing by AGA.
- 4.3 Where AGA has no operational responsibility but a significant equity stake, and an equivalent standard is not in place, this standard must be made available to the operator for application.
- 4.4 This standard excludes requirements specific to the development of decommissioning and closure² plans appropriate to the mining lifecycle stage because these are addressed by the AGA Closure and Rehabilitation Standard, and to closure liability estimation.

5. REQUIREMENTS

5.1 Legal Requirements And Community Expectations

- 5.1.1 Site operators are required to maintain the requisite licences, permits and/or authorisations for the different land use activities³ carried out. Regulatory conditions applicable to land use management must be fulfilled.
- 5.1.2 Existing agreements attached to land title deeds or formally and informally entered into with neighbours, including communities, must be honoured.

5.2 Categorisation of Land Disturbance Status

- 5.2.1 To facilitate land management planning and reporting, information on the disturbance status of all land owned, under mining concession or leased by the site must be maintained as per the categories listed below:

² The closure phase is a period extending beyond the usual operational life of a mine.

³ For example, prospecting or exploration drilling, sinking of shafts or excavation of pits, processing plants, waste storage facilities, soil borrow pits, water storage dams, heap leach facilities, recreational and accommodation areas.



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- i. Total land owned or managed under lease, concession or tenement for production and exploration activities, in hectares.
 - ii. Extent of land undisturbed by company activities⁴, in hectares.
 - iii. Extent of land disturbed by company production activities⁵ and not yet rehabilitated, in hectares.
 - iv. Extent of land disturbed by non-production activities⁶, in hectares.
 - v. Extent of land rehabilitated to an agreed closure standard, in hectares.
- 5.2.2 The land disturbance status⁷ must be updated at the end of the calendar year to reflect changes in additional land area disturbed or successfully rehabilitated.

5.3 Managing Land Use Change

- 5.3.1 Environmental and social impact assessments, including baseline biodiversity and landscape function studies, must be undertaken by qualified specialists before the commencement of new projects or major changes such as expansions to existing operations, in order to anticipate, avoid or minimise associated impacts on land and on potentially affected communities. Land management use changes in conflict or post-conflict areas require specialised impact assessments by appropriate experts.
- 5.3.2 Where not specified by host country regulation, the environmental and social impact assessment considerations will be as specified in sections 4 to 12 (Social and Environmental Assessment) of the International Finance Corporation's (IFC) Performance Standard 1: Social and Environmental Assessment and Management System (dated 30 April, 2006)⁸.
- 5.3.3 During exploration and mine development activities, the extent of land disturbed by production activities must be minimised in order to limit the associated

⁴ Some concession areas may be 'disturbed' by pre-mining land uses such as agriculture, rural settlements or 'artisanal mining'. There should be careful delineation of these activities, in a GIS or equivalent system, as well as, inventorying pre-AGA mining-related land disturbance.

⁵ Includes land disturbed by infrastructure related directly to mining and ore processing, such as mine shafts, pits, metallurgical plants, water and energy supply equipment, waste storage facilities, supplier/contractor site offices, etc.

⁶ Includes land disturbed by activities such as mine accommodation, recreational facilities, etc but excludes land disturbed within the company-managed concession/lease area by non-company or associated activities such as agricultural activities, residential areas, illegal occupations, etc.

⁷ This information and updating interval is aligned with the G3 reporting requirement (MM EN23)

⁸ The corresponding IFC Guidance Note 1: Social and Environmental Assessment and Management Systems provides further explanation and context for the requirements. See the full Standard on:
[http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/pol_PerformanceStandards2006_PS1/\\$FILE/PS_1_SocEnvAssessmentMgmt.pdf](http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/pol_PerformanceStandards2006_PS1/$FILE/PS_1_SocEnvAssessmentMgmt.pdf). IFC Guidance Note 1 can be found on:
[http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/pol_GuidanceNote2007_1/\\$FILE/2007+Updated+Guidance+Note_1.pdf](http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/pol_GuidanceNote2007_1/$FILE/2007+Updated+Guidance+Note_1.pdf)



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restoration liabilities and where relevant, the potential for damaging conflicts with affected communities.

- 5.3.4 A formal site-based system to assess the potential impacts of and authorise the utilisation of land previously undisturbed by AGA mining or exploration activities must be maintained. This system must ensure regular identification of areas no longer required for operational activities and that can be made available for concurrent rehabilitation. Additionally, the system must ensure that legal and impact assessment requirements associated with additional land disturbance are adhered to, and where necessary that the stakeholder engagement processes are undertaken as required in the AGA Stakeholder Engagement Standard, document number STD 008.

5.4 Managing Land Use Impacts

- 5.4.1 Post-mining land use objectives should be developed and revised at appropriate intervals, in consultation with the host country governments and host communities. Refer to the AGA Closure and Rehabilitation Standard, document number STD 006.
- 5.4.2 A structured rehabilitation programme must be developed for each site, taking cognisance of the impact and timing of mining and exploration plans and which methodically assesses and addresses impacts⁹ caused by AGA's land use activities, in line with the agreed post-mining land use objectives. Refer to the AGA Closure and Rehabilitation Standard, document number STD 006.

5.5 Information and Reporting

- 5.5.1 Information related to land use change, disturbance and land rehabilitation activities, including monitoring and performance assessment data, must be retained until the site has been granted an exit certificate, and then handed to the relevant government authorities.
- 5.5.2 Reporting of land management statistics and rehabilitation performance must be done according to host government and AngloGold Ashanti requirements including, but not limited to, progress reports against land management objectives, incident reporting, and relevant GRI environmental indicators.

⁹ Through activities that cause physical, biological and chemical changes to the environment such as the clearance of vegetation, acidification of water and soils and disturbance of natural habitats as well as adverse socio-economic impacts on communities.



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6. GLOSSARY

- 6.1 **Waste storage facilities** refers to all constructed facilities for the storage of waste, including waste rock dumps, tailings storage facilities, spent heap leach pads and landfill sites.
- 6.2 **Operation** refers to a producing mine.
- 6.3 **Project** refers to an exploration project or a new mine expansion.
- 6.4 **Site** is used when referring collectively to gold producing operations and to exploration and expansion projects.
- 6.5 **Mining lifecycle** encapsulates all stages of a mine project, from exploration to operation and closure.
- 6.6 **Land** and **land resources** refer to the physical landscape, with its inherent and interrelated geological, topographical, biological and hydrological components.
- 6.7 **Permit** is used to denote any environmental approval, authorisation or license issued by host government departments and containing legally binding performance requirements.
- 6.8 **Concurrent rehabilitation is the** rehabilitation of redundant facilities and disturbed land during the operational life of a project, without waiting for mine closure and in line with agreed closure objectives, thereby reducing final closure costs.



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Appendix 1C

AngloGold Ashanti Air Quality Management Standard



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| | | |
|---|---|---------------------------|
| MANAGEMENT STANDARD | | |
| AIR QUALITY | | |
| POLICY CUSTODIAN | Corporate Office Environment and Community Affairs Department | |
| AUTHORISED BY | AngloGold Ashanti Executive Committee | DATE: 23 June 2009 |
| BRIEF DESCRIPTION OF CHANGES | | |
| <p>Second Revision: Condensing the requirements of Revision 1; removal of performance assessment framework; title change (replacement of "Guideline" with "Standard"). Modification of document identification nomenclature.</p> | | |



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1. INTRODUCTION

Air is often a significant and easily observed pathway for the transport of pollutants liberated from site activities to the environment, including neighbouring communities. Air quality is an important environmental aspect at AngloGold Ashanti sites and is often closely regulated. In several jurisdictions, in addition to point source emissions standards, ambient air quality standards are increasingly being specified at the site boundaries, recognising the cumulative effect of point source emissions and fugitive emissions.

In the context of this document, air quality management refers to the management of all contributory sources of degraded ambient air quality, including point source emissions and fugitive emissions.

2. OBJECTIVE

To ensure that point source and fugitive air emissions are proactively managed in accordance with host country requirements, the Values and Business Principles of AngloGold Ashanti, and where relevant, community requirements.

3. ACCOUNTABILITY AND RESPONSIBILITY

Overall accountability for implementing this standard lies with the manager in control of the site. Responsibility for its implementation can be delegated to a designated person(s) who should clearly understand their role(s) and responsibilities.

4. SCOPE

- 4.1 This standard presents systematic requirements relating to the management of air quality impacts and is applicable to AGA managed activities during all phases of the mine lifecycle.
- 4.2 Where AGA has no operational responsibility but a significant equity stake, and an equivalent standard is not in place, this standard must be made available to the operator for application.
- 4.3 This standard excludes the management of air quality emissions that can potentially impact on the health of employees in the workplace, since these are managed under the occupational health requirements of AngloGold Ashanti.



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5. REQUIREMENTS

5.1 Legislative and Other Requirements

5.1.1 The management of air quality at AngloGold Ashanti sites must be in compliance with applicable international treaties, national laws and regulations, environmental licence conditions and any other binding obligations.

5.2. Assessing Air Quality Impacts

5.2.1 A baseline¹ assessment² must be conducted to assess actual and potential air quality impacts resulting from point and fugitive emission sources operated at the site. This may require the development of an air dispersion model capable of predicting ambient air quality changes both locally (on the fence-line) and at a distance (e.g. in nearby communities).

5.2.2 Potential air quality impacts arising from the installation of new processes and the development of new projects must be assessed and the requisite authorisation/s must be obtained in advance of commissioning any equipment that produces air emissions which are controlled by a regulator.

5.2.3 The parameters to be assessed must be appropriate to the geographic setting, climate and the nature of activities and may include, but are not limited to:

- i. Particulates (TSP, PM₁₀, PM_{2.5}, as appropriate).
- ii. Nitrogen Oxides (NO_x).
- iii. Sulphur Oxides (SO_x).
- iv. Volatile Organic Carbons (VOC).
- v. Heavy Metals (As, Hg, Pb, Zn, etc).
- vi. Carbon Oxides (CO_x).
- vii. Ozone Depleting Substances (ODS).

5.3. Defining Applicable Air Quality Performance Standards

5.3.1 Where air emissions and/or ambient air quality requirements are not stipulated by host country regulators in permits/licences or other applicable environmental authorisations, the relevant air quality performance guidelines as stipulated in the

¹ In this context, **baseline** assessment refers to the initial qualitative and/or quantitative assessment conducted at the site. It may be conducted during any phase of the project. It establishes the status quo with respect to impacts generated from site activities.

² The format of this assessment can be in any effective format, for example; a desktop assessment combined with more a focussed emissions inventory.



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current version of the IFC Environmental, Health, and Safety General Guidelines³ must be adopted.

5.3.2 The monitoring and control points applicable to point source emissions and ambient air quality performance standards should be explicitly identified.

5.4. Air Quality Management Plans

5.4.1 AGA managed activities must develop an Air Quality Management Plan, which includes strategies, operational controls⁴, management practices⁵, monitoring requirements and performance review mechanisms for ensuring adherence to applicable air quality performance standards.

5.4.2 Responsibility for the implementation of the air quality management plan must be documented.

5.4.3 To facilitate communications and to maintain good relationships with communities whose ambient air quality is potentially worsened by AGA activities, relevant community engagement processes must be maintained.

5.5. Air Quality Monitoring And Analysis

5.5.1 Air quality monitoring⁶ must be conducted where significant potential for air quality impacts has been identified in the baseline assessment, or as regulatory conditions stipulate⁷.

5.5.2 Maintenance and calibration (or verification) of air quality monitoring equipment must be conducted to ensure the integrity of the collected monitoring data.

5.5.3 Where applicable, conformance to air quality performance standards must be modelled at the facility boundary using a relevant air quality dispersion model. Sites should maintain a weather station to facilitate air dispersion modelling, unless reliable alternative data sources are readily available.

5.5.4 Non-compliance to ambient and/or emission standards must be identified and communicated as appropriate, for example through the site's incident reporting system, in order to develop and implement corrective actions.

³ These Guidelines can be obtained at the following URL, [http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_General_EHS/\\$FILE/Final+-+General+EHS+Guidelines.pdf](http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_General_EHS/$FILE/Final+-+General+EHS+Guidelines.pdf)

⁴ This may include emissions control equipment such as scrubbers, electrostatic precipitators, vacuum hoods, vegetative screening and wetting down of haul roads, etc, as appropriate.

⁵ Including planned maintenance schedules.

⁶ This may be source or receptor based monitoring, depending on the prevailing situation. Suitable locations of ambient air quality monitoring stations including upstream and downstream locations and should be derived from the results of the baseline assessment.

⁷ Sites must develop and implement monitoring/inspections programs to verify that air emission controls are operating properly.



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5.6. Information Management And Reporting

- 5.6.1 Information generated as a result of air quality management activities, including monitoring, shall be maintained for communication to internal and external parties, as may be required.
- 5.6.2 Reporting on air quality management statistics must be done in accordance with regulatory requirements, and where relevant, AngloGold Ashanti Corporate office requirements, including but not limited to, incident reporting requirements and the relevant Global Reporting Initiative's G3 Environmental Performance Indicators.

6. Glossary

- 6.1 **Point sources** are discrete, stationary, identifiable sources of emissions that release pollutants to the atmosphere. They are typically located in processing plants.
- 6.2 **Fugitive source** air emissions refer to emissions that are distributed spatially over a wide area and not confined to a specific discharge point. They originate from activities where exhausts (e.g. diesel smoke) are not captured and passed through a stack. Fugitive emissions have the potential for much greater ground-level impacts per unit than stationary source emissions, since they are discharged and dispersed close to the ground, such as dust from TSF's.
- 6.3 **Mine lifecycle** encapsulates all stages of a mine project, from exploration to operation and closure.
- 6.4 **Operation** refers to a producing mine.
- 6.5 **Project** refers to an exploration project or a new mine expansion.
- 6.6 **Site** is used when referring collectively to gold producing operations and to exploration and expansion projects.

7. References:

- 7.1 IFC & World Bank Group Environmental, Health, and Safety Guidelines GENERAL EHS GUIDELINES, April 30, 2007.



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Appendix 1D

AngloGold Ashanti Chemicals Management Standard



| MANAGEMENT STANDARD | | |
|---|---|---------------------------|
| CHEMICALS | | |
| POLICY CUSTODIAN | Corporate Office Environment and Community Affairs Department | |
| AUTHORISED BY | AngloGold Ashanti Executive Committee | DATE: 23 June 2009 |
| BRIEF DESCRIPTION OF CHANGES | | |
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1. INTRODUCTION

Many different chemicals are used in the mining and extraction process. The chemicals used can vary greatly in the degree of hazard they pose to the environment. In particular the potential negative impacts of hazardous chemical use must be anticipated and avoided through appropriate controls, or where feasible, substituting them with low hazard chemicals. In cases however, where no economically viable substitutes are available, hazardous chemicals need to be responsibly and carefully managed, whilst deriving maximum efficiency from their use.

2. OBJECTIVES

The objectives of this document are:

- 2.1 To provide an assessment framework for identifying those chemicals being used at the AngloGold Ashanti (AGA) managed sites that can be harmful to the environment.
- 2.2 To set out key elements of a proactive approach to the management of environmentally hazardous chemicals¹, thereby preventing potentially negative impacts on the environment from the use of chemicals.

3. ACCOUNTABILITY AND RESPONSIBILITY

Overall accountability for implementing this standard lies with the Manager² of the site. Responsibility for its implementation can be delegated to a designated person(s) who should clearly understand their role(s) and responsibilities.

4. SCOPE

- 4.1 This standard defines the AGA approach to the management of environmentally hazardous chemicals. It relates to the identification, selection, purchase, transportation, handling, storage, use and disposal of such chemicals.
- 4.2 Onsite contractors and subcontractors are required to adopt this standard unless they have an alternative chemicals management standard approved in writing by AngloGold Ashanti.
- 4.3 Where AGA has no operational responsibility but a significant equity stake, and an equivalent standard is not in place, this standard must be made available to the operator for application.

¹ This term is explained in section 5.3.3.

² The manager in direct control of the whole site.



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4.4 Exclusions:

4.4.1 This standard does not apply to radioactive substances.

4.4.2 The management of cyanide at AngloGold Ashanti operations will be according to the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold.

5. REQUIREMENTS

5.1 Legislative and Other Requirements

5.1.1 The management of chemicals at AngloGold Ashanti sites must be in compliance with applicable international treaties, national laws and regulations, environmental licence conditions and any other binding obligations.

5.2 Register of Chemicals

5.2.1 A Chemicals Register must be developed and maintained for the site, which inventories all reactive organic and inorganic chemical substances purchased, stored and used. This Register must include gasses, liquids, gels, emulsions, powders and solid chemicals that are used on the site including by contractors.

5.2.2 For each chemical used at the site, the Chemicals Register should include the following information;

- i. the chemical name or its major constituents, if it is a mixture;
- ii. the UN number, if available;
- iii. the (Dangerous Goods) class to indicate special precautions in its handling;
- iv. whether a Material Safety Data Sheet (MSDS) is available;
- v. the primary areas where each chemical is stored and used;
- vi. typical quantities maintained;

5.2.3 Before a new chemical is introduced at an AngloGold Ashanti site, suppliers must be required to provide relevant information on its inherent health, safety and environmental risks, including the MSDS.

5.3 Classification according to Environmental Risk

This standard adopts a risk-based approach to the management of chemicals.

5.3.1 The inherent risk posed by each chemical listed on the Chemicals Register must be assessed using a structured methodology, for example HIRA (Hazard Identification and Risk Assessment).



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- 5.3.2 Risk evaluation must consider the level of potential exposure resulting from the volumes or concentration used and characteristics such as corrosiveness, explosiveness and the toxicity of the chemical.
- 5.3.3 The risk evaluation must permit those chemicals considered to be hazardous to the environment to be differentiated as Environmentally Hazardous Chemicals (EHCs).

5.4 Risk Avoidance during the Selection and Purchase of EHCs.

- 5.4.1 The risk introduced to the site by the use of EHCs should be avoided at the selection and purchase stage.
- 5.4.2 An approval process must be implemented to oversee and manage the purchase of new EHCs. This process must consider the cost of environmental risk mitigation resulting from the responsible use of the chemical and consider the use of less harmful substitutes³ as alternatives.

5.5 Mitigating the Risk of Using EHCs

The risk associated with the use of EHCs needs to be mitigated through controls that are flexible and proportionate to the level of risk presented by each substance. This includes controls to be applied whilst transporting, storing, handling and using EHCs, and when disposing of unused or expired EHCs and their packaging.

5.6 Managing EHCs during Decommissioning

The management of EHC inventories during the decommissioning of an entire site or part thereof requires upfront planning to minimise the potentially expensive post-closure disposal of EHCs. Equally important is that planning and executing the decontamination of plant and equipment and the safe disposal of EHC residues is undertaken whilst trained personnel and appropriate resources are still on site.

5.7 Emergency Preparedness and Response

- 5.7.1 Emergency preparedness and response plans shall be maintained current to ensure that appropriate responses can be taken following incidents involving EHCs that can threaten the safety of people and the environment. Where appropriate, for example with transportation incidents, these plans should be coordinated with local and regional emergency response agencies.

³ It is noted that in several cases, no technically and/or economically viable substitutes are available (e.g. sodium cyanide).



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5.7.2 Training and communication of procedures governing the management of EHCs and emergency response plans should be done in simple language that is easily understood by relevant staff.

5.7.3 Sites must ensure that the necessary emergency response equipment and response team skills⁴ are maintained.

5.8 Monitoring and Measurement

5.8.1 Environmental monitoring programmes, including inspection programmes, must be established and maintained to assess whether EHCs are impacting upon the environment.

5.9 Reporting and Record Keeping

5.9.1 Reporting on EHC incidents and performance against host country and other requirements⁵ must be performed as required.

5.9.2 Records of community complaints, enquiries and responses involving EHCs shall be maintained.

5.10 General

5.10.1 Each site should ensure that there is adequate financial and/or infrastructural provision made for the responsible management of Environmentally Hazardous Chemicals (EHCs) as well as their residues and wastes before these chemicals are delivered.

5.10.2 Actual and high potential near miss environmental incidents involving EHCs shall be investigated and preventive measures developed and implemented.

5.10.3 Sites must ensure that EHC risk mitigation controls are included in the scope of their internal audit programmes.

6. GLOSSARY

6.1 **Operation** refers to a producing mine.

6.2 **Project** refers to an exploration project or a new mine expansion.

6.3 **Site** is used when referring collectively to gold producing operations and to exploration and expansion projects.

⁴ Skills include competencies such as spillage containment, accident site management, site cleanup and disposal, first aid and emergency medical treatment. Other resources include appropriate vehicles, chemical containment and cleanup 'spill kits', communication devices, demarcation and barricading equipment and self-contained breathing apparatus.

⁵ Including GRI environmental indicators.



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Appendix 1E

AngloGold Ashanti Waste Management Standard



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| MANAGEMENT STANDARD | | |
|---|---|---------------------------|
| WASTE | | |
| POLICY CUSTODIAN | Corporate Office Environment and Community Affairs Department | |
| AUTHORISED BY | AngloGold Ashanti Executive Committee | DATE: 23 June 2009 |
| BRIEF DESCRIPTION OF CHANGES | | |
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1. INTRODUCTION.

Waste is any substance or object which its producer or the person in possession of it discards or intends to discard. A wide spectrum of wastes is generated throughout the mining lifecycle. These range from inert to reactive, benign to highly toxic, organic to inorganic, and arise from the commercial, industrial and domestic activities of the company. Hazardous wastes typically require compliance with regulatory controls. The management of low hazard and non-hazardous waste tends to be based on economic considerations.

This document provides a framework for the management of non-mineral waste in AngloGold Ashanti managed sites.

2. OBJECTIVE

The objective of this document is to ensure that actual and potential impacts arising from waste generation, handling, transportation and disposal are managed in accordance with host country requirements and the Values and Business Principles of AngloGold Ashanti.

3. ACCOUNTABILITY AND RESPONSIBILITY

Overall accountability for implementing this standard lies with the Manager in control of the site. Responsibility for its implementation can be delegated to a designated person(s) who should clearly understand their role(s) and responsibilities.

4. SCOPE

- 4.1 This waste management standard defines the approach¹ to the management of waste products at AGA managed sites.
- 4.2 This standard applies to valueless waste streams which may be generated during the mining and processing of the ore or the treatment of water, for example; chemical precipitates of arsenic or sulphur.
- 4.3 Where AGA has no operational responsibility but a significant equity stake, and an equivalent standard is not in place, this standard must be made available to the operator for application.
- 4.4 Onsite contractors and subcontractors are required to adopt this standard unless they have an alternative waste management standard, approved in writing by AGA.

¹ Including activities of waste generation, collection, segregation, storage, transport and disposal.



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4.5 Exclusions:

- 4.5.1 This waste management standard does not apply to radioactive substances and mineral wastes such as tailings and waste rock.
- 4.5.2 The management of cyanide at AngloGold Ashanti managed sites will be according to the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold.

5. REQUIREMENTS

5.1. Legal and Other Requirements

AngloGold Ashanti managed sites must manage all wastes and on-site waste disposal facilities in compliance with applicable international treaties, national laws and regulations, environmental licence conditions and any other binding obligations.

5.2. Classification of Waste Streams on Environmental Risk

- 5.2.1. A register of the different waste streams generated under normal and abnormal conditions by the site must be developed and maintained.
- 5.2.2. The identified waste streams must be characterised and classified either as hazardous² or non-hazardous. Those subject to regulatory controls must be clearly distinguished.
- 5.2.3. Secondary categorisation of wastes should be done to suit the particular circumstances of the site³.

5.3. Development of Waste Management Programmes

- 5.3.1. Sites must develop waste management programmes⁴ in the context of the legal and other obligations applicable to the different types of waste identified. Documented waste management programmes must be maintained.
- 5.3.2. The waste management programmes must be informed by the following hierarchy of waste management strategies:

² Hazardous waste is waste that has the potential, even in low concentrations, to have a significant adverse effect on public health and the environment because of its toxicological, chemical and physical properties, or is waste classified as such by host country law.

³ For example; non-hazardous waste streams can be further classified into: recyclable/non-recyclable, ferrous & non-ferrous metals, wood, paper, cardboard, plastic, etc. Hazardous wastes can also be further classified into recyclable or non-recyclable, with further logical subcategories, such as asbestos, fluorescent tubes, electronic, hydrocarbons, PCB-contaminated transformer oils, cyanide-contaminated waste, solvents, sewage, etc.

⁴ These programmes should be integrated into the site Environmental Management System through, for example, site specific procedures.



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- i. **Waste avoidance** – practices which minimise the generation of waste through e.g. purchasing practices aimed at reducing volumes of packaging; ensuring waste materials are recyclable, etc.
- ii. **Waste reduction** – practices which reduce waste production at source through e.g. more efficient use of physical resources or maintaining optimum levels of substances which are prone to expiring.
- iii. **Waste reuse** – where objects or materials can be reused directly or after refurbishment, such as electric motors, pump components or printer cartridges.
- iv. **Waste recycling** – using waste materials, such as waste heat, metal, plastic, wood and paper, as raw material inputs into other processes or industries.
- v. **Waste treatment** – transforming a nuisance or hazardous waste into a form that is easier to manage, e.g. through chemical stabilisation, or the chemical extraction of toxic constituents through, for example, precipitation.
- vi. **Waste disposal** – the disposal of hazardous & sub-economic waste to appropriately licensed, constructed and managed waste disposal facilities.

5.4 Components of Waste Management Programmes

5.4.1 Segregation, handling and storage

- 5.4.1.1 Measures to segregate⁵ waste types according to their chemical and physical characteristics or disposal method must be specified in waste management programmes.
- 5.4.1.2 The location and design specifications⁶ of waste transfer and disposal facilities must be suited to the waste type being managed and ensure protection of the environment and the health and safety of people.

5.4.2 Transport and disposal

- 5.4.2.1 The regulatory requirements relating to the transportation of hazardous & non-hazardous waste materials in host countries must be specified in the waste management programmes.
- 5.4.2.2 Waste disposal on AGA property, including in landfill sites, pits and via co-disposal in rock dumps, may take place only if approved by the host country government.

⁵ Where feasible, segregation should be performed at source since this lowers the potential for waste mixing and contamination and usually as a consequence, the overall cost of waste handling.

⁶ Including engineered protection measures such as a firm, waterproof base; liners, protection from the ingress and egress of storm water from surrounding areas; and drainage into a containment area to prevent contaminated water from entering the environment.



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- 5.4.2.3 Proof of safe offsite disposal of hazardous waste materials must be maintained.
- 5.4.2.4 Where off-site disposal is done by contractors, the contractor must provide proof of registration to conduct such business and the proof of safe disposal.

5.5 Monitoring

Where waste transfer, sorting or disposal activities present a risk of land and water becoming contaminated, suitable monitoring programmes to enable corrective and preventative actions must developed and implemented.

5.6 Emergency Preparedness and Response

Sites must include appropriate responses to hazardous waste incidents in their emergency preparedness and response planning.

5.7 Reporting

- 5.7.1 Information⁷ on hazardous and non-hazardous waste materials must be collated and reported in accordance with regulatory and AGA corporate office reporting requirements.
- 5.7.2 The results of monitoring conducted to verify the integrity of environmental protection measures must be maintained.

5.8 Closure

AGA operations must adapt and incorporate their waste management programmes into the Mine Closure Plan, taking into account the reduced level of resources on site.

6. GLOSSARY

- 6.1 **Operation** refers to a producing mine.
- 6.2 **Project** refers to an exploration project or a new mine expansion.
- 6.3 **Site** is used when referring collectively to gold producing operations and to exploration and expansion projects.
- 6.4 **Mining lifecycle** encapsulates all stages of a mine project, from exploration to operation and closure.

⁷ Information such as that required for GRI reporting, e.g. quantities and types of wastes produced (e.g. wood, metals, hydrocarbons, etc) and the final disposal destination (e.g. landfill, reuse, or recycled, etc).



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Appendix 1F

**AngloGold Ashanti Closure and Rehabilitation Management
Standard**

| | | |
|-------------------------------------|---|---------------------------|
| MANAGEMENT STANDARD | | |
| CLOSURE AND REHABILITATION | | |
| POLICY CUSTODIAN | Corporate Office Environment and Community Affairs Department | |
| AUTHORISED BY | AngloGold Ashanti Executive Committee | DATE: 30 July 2009 |
| BRIEF DESCRIPTION OF CHANGES | | |
| First version. | | |



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1. INTRODUCTION

Underpinning this standard are two of AngloGold Ashanti's values:

- The communities and societies in which we operate will be better off for AngloGold Ashanti having been there.
- We respect the environment.

Three components of AGA's integrated environment and community policy are also especially relevant:

To achieve these values we will:

- comply with all applicable laws, regulations and requirements.
- manage efficiently and safely the resources under our stewardship and respect the values, traditions, and cultures of the local and indigenous communities in which we operate.
- ensure financial resources are available to meet our closure obligations.

Closure of all AGA managed sites needs to be carefully planned and implemented in order to meet these commitments. Good closure planning is a value-adding exercise which reduces closure costs, optimises post-mining land use options, and can help to reduce life of mine operating costs. The values statements recognise that social and environmental issues are interrelated and both affect how host communities perceive and remember a site and its parent company(ies) during and after closure; thus an integrated approach is necessary.

Guidance to assist sites to meet this standard is included in a Closure Guideline and a Financial Model for Mine Closure.

In order to avoid repetition, reference to objectives, plans, etc., should be understood to include both environmental and social aspects.

2. OBJECTIVES

The objectives of this standard are to:

- 2.1 Ensure that AngloGold Ashanti's exploration and operating sites are closed in line with host country requirements, if any, and the company's values, business principles and policies. Sites should be left in a condition which is safe, stable and minimises adverse impacts on people and the environment.
- 2.2 Maximise the post-activity land use that provides an enduring, positive legacy for the landholder and local community, and
- 2.3 Align closure and operational planning throughout the mine lifecycle.



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3. ACCOUNTABILITY AND RESPONSIBILITY

Accountability for implementing this standard lies with the General Manager, or equivalent, at the site. Responsibility for its implementation can be delegated to a designated person(s) who must clearly understand his/her role(s) and responsibilities. The person responsible for implementing the standard must be suitably qualified or experienced to undertake the task.

4. SCOPE

- 4.1 This standard defines the approach to closure planning at AGA managed sites.
- 4.2 Exploration sites must adopt and comply with the provisions of this standard as appropriate to ensure cessation of activities in a manner that meets the standard's objective.
- 4.3 Where AGA has no operational responsibility and an equivalent standard is not in place, the operator must be encouraged to apply this standard.
- 4.4 Onsite contractors and subcontractors are required to adopt this standard unless they have an alternative standard, approved in writing by AngloGold Ashanti.
- 4.5 The International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold must be complied with in regard to closure requirements related to cyanide management.
- 4.6 The AGA Tailings Management Framework and Heap Leach Management Framework must be complied with in regard to closure requirements related to tailings management and heap leach management, respectively, as applicable.

5. GUIDING PRINCIPLES

The following principles underlie this standard:

- 5.1 Closure planning and implementation must comply with all applicable legal and other requirements;
- 5.2 Closure planning is a core business activity which starts during the exploration phase and continues throughout the life of mine;
- 5.3 Closure planning should be based on early consideration, assessment, evaluation and application of alternatives in order to minimise closure and post-closure liabilities;
- 5.4 Closure plan(s) should be flexible so as to identify and incorporate innovative approaches, new data and operational changes;
- 5.5 The operation is responsible for ensuring that its closure plan(s) are implemented;
- 5.6 Engagement of stakeholders and social partners is critical to successful closure planning; and
- 5.7 The key disciplines responsible for planning and execution at different stages of the mine life-cycle, for example mining, social and environmental management, engineering, feasibility and design planning; financial management, risk management and strategic planning, are all required to work together in an integrated way.



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6. REQUIREMENTS

6.1 Legal and Other Requirements

Sites must plan and implement closure in compliance with all applicable laws, regulations and other binding obligations.

6.2 Risk Assessment¹

- 6.2.1 The closure planning process must involve identification and assessment of the risks associated with closure of the site.
- 6.2.2 Measures proposed to be implemented during closure must be subjected to a risk assessment, as applicable, to assess whether they will be able to stand up to post-closure conditions.
- 6.2.3 The above assessments must take into account longer-term cycles and variations in the local climate.

6.3 Consultation and Communication

- 6.3.1 The Stakeholder Engagement Management Standard must be used as the basis for engaging with stakeholders, as applicable.
- 6.3.2 Key stakeholders must be identified and consulted and their interests and views must be recorded and considered in developing the plans described in sections 6.5 following.
- 6.3.3 Engagement and communication with stakeholders regarding closure planning must be appropriate to the lifecycle stage of the site.

6.4 Closure Land Use Objectives

- 6.4.1 Closure land use objectives must be developed and revised at appropriate intervals, in consultation with the host country government, at the national, provincial and local levels, as appropriate, and host communities.
- 6.4.2 Closure land use objectives must seek to ensure the long-term safety, health, function and viability of the affected communities and environments.
- 6.4.3 Closure land use objectives must inform site and rehabilitation designs, the selection of scientifically sound and economically feasible mitigation technologies to address physical, biological and chemical disturbance, and appropriate post closure monitoring.
- 6.4.4 The objectives must include, but are not limited to the following:
 - 6.4.4.1 Minimise costs, but not at the expense of meeting the other objectives;
 - 6.4.4.2 Minimise pollution;
 - 6.4.4.3 Remediate degraded areas, polluted soils and water;
 - 6.4.4.4 Establish sustainable ecosystems;
 - 6.4.4.5 Maximise the use of existing structures and infrastructure for future economic benefit;

¹ Refer to the draft AGA risk management policy and standard. Risk management guidelines are currently in preparation.



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6.4.4.6 Provide a safe environment; and

6.4.4.7 Facilitate sustainable livelihoods of affected communities, in accordance with the Social Investment and Local Economic Development Management Standard and the Stakeholder Engagement Management Standard, as applicable.

6.5 Conceptual Closure Plan

6.5.1 Unless a site already has an interim or final closure plan, a conceptual closure plan must be prepared prior to project approval to ensure that closure is technically feasible and socially acceptable and that closure plans and costs are included in the project feasibility studies.

6.5.2 The conceptual closure plan identifies post-mining land use objectives, which enable the establishment of criteria to guide detailed design.

6.5.3 Contextual information comes from approvals, environmental and social impact assessment (ESIA) and feasibility studies, including stakeholder engagement.

6.6 Interim Closure Plan

6.6.1 An interim closure plan must be prepared as required by the mining permit or license, or within three years of commissioning the site to ensure that it is consistent with closure land use objectives.

6.6.2 The interim closure plan must include, as a minimum, the following:

6.6.2.1 Site-specific objectives and performance targets, with a timetable for their achievement.

6.6.2.2 A list and assessment of risks and benefits associated with the preferred closure options.

6.6.2.3 A list of relevant legal obligations associated with site closure.

6.6.2.4 A rehabilitation plan to ensure effective rehabilitation of disturbed areas.

6.6.2.5 Completion criteria, which are indicators that, upon being met, demonstrate successful closure. Completion criteria must be set in consultation with key stakeholders, reviewed periodically and modified if necessary.

6.6.2.6 Details of material characterisation issues and their management.

6.6.2.7 A temporary closure plan (care and maintenance plan) – see section 6.11.

6.6.2.8 A decommissioning plan setting out how infrastructure and services will be removed, if appropriate, and contaminated soil and water will be remediated.

6.6.2.9 A post-closure monitoring programme. Its duration must be determined through a risk assessment.

6.6.2.10 A stakeholder information and consultation plan.

6.6.2.11 A communication plan, targeted at internal and external stakeholders.

6.6.2.12 Information from and conclusions drawn from assessment of the knowledge base (see section 6.11).

6.6.2.13 A records and document management plan to ensure that these are retained and stored appropriately.



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6.6.2.14 Closure cost estimates (see section 6.12).

6.6.2.15 Sufficient information to make decisions in the case of unplanned, premature closure.

6.7 Final Closure Plan

6.7.1 The final closure plan is agreed with the regulatory authorities and prepared in consultation with stakeholders.

6.7.2 It must be finalised at least three years before closure is anticipated.

6.7.3 It must include, as a minimum, the following:

6.7.3.1 Updated, detailed information and plans listed in section 6.6.2.

6.7.3.2 Details of the skills required by the team tasked with implementing the plan, and when they will be needed.

6.7.3.3 Roles, responsibilities and timelines for achievement of objectives.

6.8 Alternative Options

When closure plans are developed or revised, alternative options must be considered and evaluated in order to determine the most cost-effective option that meets this standard's requirements.

6.9 Review

6.9.1 The intermediate closure plan must be reviewed and updated when significant changes are made to the operational plan or if key information, such as when relevant environmental or community studies become available.

6.9.2 The intermediate closure plan and knowledge base must be updated at least every three years.

6.9.3 In the last three years of operation, the final closure plan and knowledge base must be updated at least annually.

6.10 Rehabilitation Programme

6.10.1 A rehabilitation programme must be developed to assess the extent of impacts on land and to develop, implement, monitor, assess and refine rehabilitation methodologies in line with agreed closure objectives and/or environmental permit conditions.

6.10.2 The rehabilitation programme must address the phasing of concurrent rehabilitation and rehabilitation performed during the closure phase of the mine. Rehabilitation should be carried out as soon as possible in line with the closure objectives, without waiting for cessation of activities, in order to reduce operational and long-term environmental costs and liabilities.

6.10.3 Rehabilitation designs must be based on adequate and scientifically sound information and where relevant, integrated with site biodiversity and water management plans.

6.10.4 The rehabilitation programme must include information on responsibilities for budgeting, developing, scheduling and executing detailed rehabilitation plans. Rehabilitation designs should



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be based on demonstrated technologies that constitute a low risk of failure, e.g. stable landforms for capped waste facilities, etc.

6.11 Temporary closure (care and maintenance)

- 6.11.1 Care and maintenance is required for sites which must be temporarily closed. The care and maintenance plan must be updated and implemented immediately, taking into account the potential for future operations at the site.
- 6.11.2 The plan must document the legal obligations and notifications that may be required if the operation is placed on care and maintenance.
- 6.11.3 Plans to retain and maintain key infrastructure (including machinery) and prevent potential contamination from the operation must be implemented.
- 6.11.4 As far as possible, rehabilitation should be undertaken on disturbed areas that are a source of continuing pollution, even if it is possible that some of these areas will be disturbed in the future.

6.12 Knowledge Base

A knowledge base of the context in which the site is being developed or operates must be developed and maintained. It must include, but need not be limited to:

- 6.12.1 National, regional and local legal and regulatory requirements, and site-specific permit and approval requirements for closure;
- 6.12.2 Characterisation of the pre-mining and current socio-economic, cultural and environmental context, including information gained in technical studies, survey and monitoring data, risk assessments, research and stakeholder engagement exercises;
- 6.12.3 All agreements made with stakeholders;
- 6.12.4 An inventory of the site infrastructure, including legacies and potential contaminant sources; and
- 6.12.5 Applicable data and lessons learnt from other sites.

6.13 Financial Estimates

The estimated cost of implementing the closure plan must be updated at least annually in accordance with the AGA Financial Model for Mine Closure.

7. GLOSSARY

- **Closure** is the period of time when the exploration or production activities of a site or part thereof have ceased, and final decommissioning and/or rehabilitation are carried out.
- **Closure plan** is a generic term and means the conceptual, intermediate or final closure plan, as appropriate.
- **Completion criteria** are specific to each site and reflect its unique set of environmental, social and economic circumstances. Where possible, they should be quantitative and capable of objective verification.



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- **Knowledge base** means a database containing all the information referred to in 6.11, providing the means for collection, organisation and retrieval of knowledge.
- **Operation** refers to a producing mine.
- **Project** refers to an exploration project or a new mine expansion.
- **Rehabilitation** is understood to mean the return of disturbed land to a safe, stable and self-sustaining condition. “**Reclamation**” and “**restoration**” are also used in some countries.
- **Site** is used when referring collectively to operations and projects.
- A **stakeholder** is a person, group or organization with the potential to be affected by or to affect the process, or outcome, of closure of the site. They include (AGA Stakeholder Engagement Action Plan Guide (2007)) shareholders; employees, their families and employer representatives; communities in which we operate; business partners; and governments. Many stakeholders will be impacted by the outcome of the site’s closure to a greater extent than those planning it. Consult the guide for more detailed information.

8. REFERENCES

The following documents may be consulted for additional information:

- 8.1 International Council on Mining and Metals (2008): *Planning for Integrated Mine Closure: Toolkit*.
<http://www.icmm.com/page/758/integrated-mine-closure>.
- 8.2 Australian Government Department of Resources, Energy and Tourism (2006): *Mine Closure and Completion*, part of the series “Leading Practice Sustainable Development Program for the Mining Industry”.
http://www.ret.gov.au/resources/mining/leading_practice_sustainable_development_program_for_the_mining_industry/Pages/mineclosure_handbook.aspx
- 8.3 Australian Government Department of Resources, Energy and Tourism (2006): *Mine Rehabilitation*, part of the series “Leading Practice Sustainable Development Program for the Mining Industry”.
http://www.ret.gov.au/resources/mining/leading_practice_sustainable_development_program_for_the_mining_industry/Pages/mine_rehab_handbook.aspx



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Appendix 1G

AngloGold Ashanti Incident Classification and Reporting Management Standard

| MANAGEMENT STANDARD | | |
|--|---|--------------------|
| INCIDENT CLASSIFICATION AND REPORTING | | |
| POLICY CUSTODIAN | Corporate Office Environment and Community Affairs Department | |
| AUTHORISED BY | AngloGold Ashanti Executive Committee | DATE: 23 June 2009 |
| BRIEF DESCRIPTION OF CHANGES | | |
| First Revision: N/A | | |



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1. INTRODUCTION

In the course of undertaking its gold production and/or exploration activities, AngloGold Ashanti sites may bring about incidents that impact negatively on the environment and or communities, to varying levels of severity. In order to reduce the reputational, financial or legal liability associated with these incidents, the organisation requires an effective internal process for identifying, communicating and responding to these events. This management standard defines internal environmental and community incident classification and reporting criteria, which permit a coherent and prompt communication of the most serious incidents. Moreover, this communication process allows for management responses to be initiated where appropriate, and the timely preparation of responses to address external enquiries.

2. OBJECTIVE

The objective of this management standard is to provide operations with requirements for the classification and reporting of environmental and community incidents to the corporate office.

3. DEFINITIONS

See attached tables for detailed incident type and severity classifications.

4. ACCOUNTABILITY AND RESPONSIBILITY

Overall accountability for implementing this standard lies with the Manager of the site. Responsibility for its implementation can be delegated to a designated person(s) who should clearly understand their role(s) and responsibilities.

5. SCOPE

The requirements of this management standard apply to all AngloGold Ashanti's managed sites, including operating mines, closure sites and exploration projects.

6. REQUIREMENTS

- 6.1. All sites must maintain environment and community monitoring systems to detect and evaluate whether potentially negative environmental and community events fall into reportable incident and severity classifications, as outlined in Annexure 1.
- 6.2. Incidents meeting the reportable criteria must be notified as soon as practicable to the Vice President Environment and Community Affairs, via electronic mail.
- 6.3. Follow-up reports outlining event details and actions taken, must follow within a period of 14 days.



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7. REPORTING

Periodic summary reporting must be in accordance with regulatory and AGA corporate office quarterly reporting requirements.

8. REVISIONS

This management standard will be reviewed to assess its relevance on a periodic basis and or in accordance with changes to company policy.

9. GLOSSARY

- 9.1 **Operation** refers to a producing mine.
- 9.2 **Project** refers to an exploration project or a new mine expansion.
- 9.3 **Site** is used when referring collectively to producing operations and to exploration and expansion projects.



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ANNEXURE 1

Environmental Incident Classification Criteria

| Not Reportable to Corporate Office | | | Reportable to Corporate Office | | |
|--|---|---|---|--|---|
| Incident type | Minor | Moderate | High | Major | Extreme |
| Loss of containment <i>Includes process liquors, saline water, hydrocarbons, powdered materials, wastewater, seepage water or tailings material.</i> | Uncontrolled release not exceeding 500m ³ or affecting an area less than 1,000 m ² in extent; that: <ul style="list-style-type: none"> impacts on disturbed land, and does not alter receiving surface water or groundwater quality parameters; and can easily be cleaned up; and does not contain potentially harmful chemicals at toxic concentrations. | Uncontrolled release not exceeding 1,000m ³ , or affecting an area less than 5,000m ² in extent, that: <ul style="list-style-type: none"> has minor impacts on soil and native vegetation but not priority flora or significant species; or alters receiving surface water or groundwater quality parameters by no more than 5% and does not contain potentially harmful chemicals at toxic concentrations. | Uncontrolled release not exceeding 5,000m ³ , or affecting an area less than 1 hectare in extent, that: <ul style="list-style-type: none"> causes the loss of native vegetation including incidental priority / rare flora; or impacts on soil requiring soil treatment; or alters receiving surface water or groundwater quality parameters by more than 5%; or contains harmful chemicals at potentially toxic concentrations; or results in the injury or the death of fauna; or results in public or regulator complaints. | Uncontrolled release not exceeding 10,000m ³ , or affecting an area less than 10 hectares in extent that: <ul style="list-style-type: none"> causes the loss of priority / rare local flora populations; or impacts on soil requiring significant treatment or soil replacement; or alters receiving surface water or groundwater quality parameters by more than 10%; or contains harmful chemicals at toxic concentrations; or results in fauna deaths and/or loss of priority or rare species; or results in public or regulator action; or becomes potentially detrimental to human health, through for example contamination of the human food chain. | Uncontrolled release >10,000m ³ , or affecting an area >10 hectares in extent, with long-term, persistent and widespread ecosystem and human health impacts. |



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| Not Reportable to Corporate Office | | | Reportable to Corporate Office | | |
|------------------------------------|--|---|---|---|---|
| Incident type | Minor | Moderate | High | Major | Extreme |
| Unauthorised waste disposal | Disposal of waste outside of a designated area but that does not: <ul style="list-style-type: none"> • cause irreversible soil contamination over an area less than 500m² in extent; or • impact on surface water or groundwater. | Disposal of waste outside of a designated area causing: <ul style="list-style-type: none"> • minor irreversible soil contamination over an area less than 2,500m² in extent; or • alteration of receiving surface water or groundwater quality parameters by no more than 5%; • failure to meet regulatory requirements for safe waste disposal of environmentally hazardous waste. | Disposal of waste outside of a designated area causing: <ul style="list-style-type: none"> • impacts on native vegetation including priority / rare flora over an area less than 2 hectares in extent; or • irreversible impacts on soil quality requiring soil treatment or replacement; or • alteration of receiving surface water or groundwater quality parameters by more than 5%; or • the injury or the death of fauna; or • results in public complaints | Disposal of waste outside of a designated area causing: <ul style="list-style-type: none"> • impacts on native vegetation causing loss of priority / rare flora population over an area less than 10 hectares in extent; or • irreversible impacts on soil quality requiring significant treatment and soil replacement; or • alteration of receiving surface water or groundwater quality parameters by more than 10%; or • results in fauna deaths and/or loss of priority / rare species populations; or • potential for human health impacts through for example, contamination of the human food chain. | Disposal of waste that has widespread human health impacts or ecosystem impacts over an area exceeding 10 hectares in extent. |



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| Not Reportable to Corporate Office | | | Reportable to Corporate Office | | |
|---|--|---|---|---|---|
| Incident type | Minor | Moderate | High | Major | Extreme |
| Unauthorised land disturbance | Minor unauthorised land disturbance that: <ul style="list-style-type: none"> impacts on native vegetation over an area less than 500m² in extent but does not impact an environmentally sensitive area; or causes a reversible impact on growth medium resources (topsoil). | Minor unauthorised land disturbance that: <ul style="list-style-type: none"> impacts an environmentally sensitive area less than 2,500m² in extent or priority / rare flora; or causes a reversible impact on growth medium resources (topsoil). | Significant unauthorised land disturbance that: <ul style="list-style-type: none"> leads to the loss of priority / rare flora population in an area less than 1 hectare in extent; or causes a reversible impact on growth medium resources (topsoil); or results in significant public complaints | Significant unauthorised land disturbance that: <ul style="list-style-type: none"> leads to the loss of priority / rare flora threatening population survival in an area less than 25 hectare in extent; or causes an irreversible loss of growth medium resources (topsoil); results in significant public complaints | Significant unauthorised land disturbance that has widespread ecosystem and human socio economic impacts over an area exceeding 25 hectares in extent and that results in significant public complaints |
| Unauthorised or unplanned air emissions (including dust and gases) | Minor air emission event that: <ul style="list-style-type: none"> results in public complaints; and does not exceed air quality or regulatory standards; and has no potential for public health impact. | Air emission event that: <ul style="list-style-type: none"> results in public complaints; or exceeds point source air quality or regulatory standards; and has a low potential for public health impact. | Air emission event that: <ul style="list-style-type: none"> results in significant public complaints; or exceeds point source and ambient air quality or regulatory standards; and has a moderate potential for public health impacts in plume areas. | Significant air emission event that: <ul style="list-style-type: none"> results in significant public complaints; or exceeds point source and ambient air quality or regulatory standards; or impacts visibly on an area > 2 hectares of priority vegetation ; or results in the loss of priority / rare flora or fauna population and has high potential for public health impacts in plume areas. | Serious air emission that: <ul style="list-style-type: none"> results in a significant public outcry; or impacts on the ecosystem over an area exceeding 25 hectares; or results in public health impacts. |
| Incident remediation cost | Less than US\$100,000. | Greater than US\$100,000 but less than US\$1 million. | Greater US\$1 million but less than US\$10 million. | Greater than US\$10 million but less than US\$50 million. | Greater than US\$50 million. |



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| Not Reportable to Corporate Office | | | Reportable to Corporate Office | | |
|--|---|--|---|--|--|
| Incident type | Minor | Moderate | High | Major | Extreme |
| Legal or regulatory infringements | <ul style="list-style-type: none"> A fine greater than US\$10,000. | <ul style="list-style-type: none"> Incident of legal non-compliance which must be reported to the regulatory authorities; or a fine greater than US\$50,000. | <ul style="list-style-type: none"> Incident of non-compliance to regulatory or license conditions resulting in written threat of action against the operation by regulatory bodies; or A fine of US\$100,000 or more. | An incident that results in an injunction against continuing operations. | The operation's regulatory license to operate is suspended or revoked. |



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Community Incident Classification Criteria

| Not Reportable to Corporate Office | | | Reportable to Corporate Office | | |
|--|---|--|--|---|--|
| Incident Type | Minor | Moderate | High | Major | Extreme |
| Active community opposition | Minor opposition from community stakeholders for example, raised noise levels from increased production, haulage or construction. | Claim that the host community does not support the project or operation including in the local/regional media or through other interested stakeholders such as NGOs. | Repeated claim of opposition from significant sections of the host community. Breaches of legal rights of the community including failure to follow processes to gain regulatory approval. | Repeated claims of opposition from significant sections of the host community supported by NGO activists. Commencement of legal action by the significant sections of the community or the whole community against the company. | Widespread community outrage that results in the Group's regulatory license to operate being suspended or revoked by the regulatory authorities. |
| Indigenous or traditional cultural heritage disturbance/ rights infringements | Accidental damage or disturbance to cultural heritage, including Indigenous sites, but in a way which is consistent with any management plans agreed with affected parties (during exploration, construction, development, operation or closure). | Disturbance or damage to cultural heritage or traditional rights in a way which is inconsistent with management plans agreed with the local community or the Indigenous traditional owners. Damage may result in non-compliance with legislation; and/or result in concern from the community or traditional owners. | Disturbance or damage to particularly significant cultural heritage or traditional rights in a way which is inconsistent with management plans agreed with the local community or Indigenous traditional owners. Damage results in non-compliance with legislation and/or results in serious concern from the community or traditional owners. | Damage to particularly significant cultural heritage, or traditional rights that breach regulatory operating conditions, and results in an injunction against continuing the operation/activities and/or protest. | Disturbance or damage to particularly significant cultural heritage and traditional rights that results in the Company's regulatory license to operate being suspended or revoked by the regulatory authorities and/or widespread protest. |
| Human rights | Low level concern linking the operation to minor human rights incidents in the community, for example, single short-term incident where access to basic necessities had been restricted. | Allegation or report linking the operation to human rights incident in the community, for example, interference with personal freedoms, inadequate compensation, or poor resettlement practices. | Credible or verified report linking the operation to human rights incidents in the community that breach our international undertakings or national legislation. | Numerous credible reports linking the operation to serious human rights incidents in the community. A formal investigation by an international NGO, ombudsman or government / institutional body provides evidence the company is in breach of, or complicit in, human rights violations. | Human rights related issues have led to government interventions that result in the Company's regulatory license to operate being suspended or revoked by the regulatory authorities. |



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| Not Reportable to Corporate Office | | | Reportable to Corporate Office | | |
|--|--|---|--|---|---|
| Incident Type | Minor | Moderate | High | Major | Extreme |
| Structural damage to public or private property | Minor subsidence damage to community infrastructure or property from company activities, for example road causing vehicle damage, dust on vehicles, blasting activities. | Minor unauthorised/unplanned damage to community property; or <ul style="list-style-type: none"> disturbance to a community amenity resulting in non-compliance with management plans agreed with the local community e.g. serious and protracted dust issues with compensation required; or community complaints from non-compliance with management plans and operating procedures. damage results in a non-compliance with legislation. | Moderate irreparable community property damage directly caused by the company's activities, for example, irreversible damage to private vehicles, dwellings. | Major disturbance or damage to public property that represents a serious breach of agreed management plans. Damage represents a breach of regulatory operating conditions and results in an injunction against continuing the operation/activities. | Widespread disturbance or irreparable damage to public property that results in the Group's regulatory license to operate being suspended or revoked by the regulatory authorities. |
| Noise and ground vibration | Minor noise / vibration event that: <ul style="list-style-type: none"> results in public complaints; and does not exceed regulatory standards. | Noise / vibration event that: <ul style="list-style-type: none"> results in public complaints; and exceeds regulatory standards. | Noise / vibration events that: <ul style="list-style-type: none"> result in significant public complaints; and exceed regulatory standards on multiple occasions. | Noise / vibration events that: <ul style="list-style-type: none"> result in significant public complaints; and continually exceed regulatory standards. | Noise / vibration events that result in the operation's regulatory license to operate being suspended or revoked. |
| Reputation – government, media, community, NGO | Local public concern. No or low level interest from local media and regulator. | Adverse local/regional media attention. Widespread awareness of the issue within the community and reputation adversely affected with a small number of people. Heightened scrutiny and attention from regulator. | Adverse regional/national media attention. High awareness of the issue in the region, significant community concern and criticism from NGOs. Hardship from regulator and some difficulties in gaining approvals. Sustainability credentials moderately affected. | Escalating adverse and protracted national/international media attention. Damaging NGO campaign and significant public outcry. Commencement of legal action. Government intervention – may lose license to operate or not gain approvals. Sustainability credentials are significantly tarnished. | Damaging NGO campaign and serious public outcry reported widely in International media. Government intervention - regulatory license to operate suspended or revoked or forfeiture of tenements or project. Reputation severely tarnished. Share price may be affected. |



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