

ANGLOGOLDASHANTI

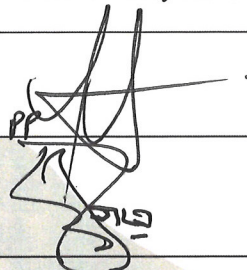
MANAGEMENT STANDARD		
AIR QUALITY		
DOCUMENT CUSTODIAN	Group Environment: Sustainability	DATE: 6 July 2017
REVIEWED BY	AGA Environment Steering Committee	
REVISION APPROVED BY	D.C. Noko Executive Vice President Sustainability	
BRIEF DESCRIPTION OF REVISIONS		
<p>Revision 02:</p> <ul style="list-style-type: none"> • Condensing the requirements of Revision 1 • Removal of performance assessment framework • Title change (replacement of "Guideline" with "Standard") • Modification of document identification nomenclature <p>Revision 03:</p> <ul style="list-style-type: none"> • Fugitive emission sources are included in the requirements for setting air quality performance criteria and monitoring and controls (section 5.3.2) • Minor clarifications and text edits • Removal of 'guidance'-type footnotes • Update of template 		

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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 (AGA) sites and is often closely regulated. In several jurisdictions, in addition to point source emissions standards, ambient air quality standards may be 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. OBJECTIVES

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

5. REQUIREMENTS

5.1. LEGISLATIVE AND OTHER REQUIREMENTS

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

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5.2. ASSESSING AIR QUALITY IMPACTS

- 5.2.1 A baseline assessment¹ must be conducted to assess actual and potential air quality impacts resulting from point and fugitive emission sources 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 development of new projects must be risk 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, PM2.5, 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 current version of the IFC Environmental, Health, and Safety General Guidelines, Air Emissions and Ambient Air Quality must be adopted.
- 5.3.2 The monitoring and control points applicable to point and fugitive emissions in order to achieve 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 controls, management practices, 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.

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

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, ANALYSIS AND RESPONSE

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

5.5.2. Maintenance and calibration (or verification) of air quality monitoring equipment must be conducted, by an appropriately qualified person or organisation, 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 internally to relevant department(s) in order to develop and implement corrective actions.

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 incidents and performance against host country and other requirements² must be carried out as required.

6. GLOSSARY

6.1 Manager refers to the manager in direct control of the whole site.

6.2 Point sources are discrete, stationary, identifiable sources of emissions that release pollutants to the atmosphere.

6.3 Fugitive source air emissions refer to emissions that are distributed spatially over a wide area and not confined to a specific discharge point, such as dust off tailings storage facilities or from vehicles travelling on unpaved roads.

6.4 Mine lifecycle encapsulates all stages of a mine project, from exploration to operation and closure.

6.5 Operation refers to a producing mine.

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

² Including GRI environmental indicators

6.7 Site is used when referring collectively to gold producing operations and Greenfields and Brownfields exploration and expansion projects.

7. REFERENCES:

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

http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/our+approach/risk+management/ehsguidelines

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