

E2 - Air quality control

Scope

This standard is applicable to all Rio Tinto business units and managed operations including corporate/administration offices and research facilities located off site. It covers emissions from all sources, including fugitive emissions, during exploration, mining, mineral processing, materials handling, smelting, refining and on-site transport, and also their incremental impacts on the ambient air quality. Where the business or operation is also responsible for ancillary activities (eg power generation) or off-site transport (rail, truck and ship), those activities are also under the scope of this standard. Persons living in construction or company accommodation at the operation are included as part of the local community.

Intent: The intent of this standard is to ensure that Rio Tinto operations have identified and minimised air pollutant emissions and their potential impacts from their activities. This is to be accomplished by evaluating and prioritising them according to the significance of their impact, and taking effective measures to design and implement appropriate controls of emissions to ensure protection of ambient air quality.

Other relevant documents:

- HSEQ management system (or standard E1 EMS for non ABS operations)
- Greenhouse gas emissions standard
- Land use stewardship standard
- Occupational health standards (occupational hygiene aspects)
- Cleaner production principles
- Air quality guidance note

Programme design

1 Planning

- 1.1 Determine and maintain records of background ambient air quality, meteorological characteristics affecting pollutant dispersion and other sources of emission in the vicinity of the operation.
- 1.2 Identify, characterise and document significant pollutant emissions from all sources at the operation, including fugitive emissions, and their method of release into the environment.

- 1.3 Identify and document community health (and nuisance) hazards and environmental impacts associated with the exposure to individual and combined air pollutant emissions from the operation's facilities. Prioritise emission controls and abatement targets on the basis of risk levels determined through a documented risk assessment.
- 1.4 Employ environmental hazard identification and change management procedures for new developments or substantive changes to existing facilities to determine and manage potential adverse risks to ambient air quality.
- 1.5 Demonstrate that, under normal and worst case operating conditions and adverse meteorological conditions, emissions from the operation, current or after a modification, will not cause violation of regional or national air quality regulations, internally derived air quality criteria, and/ or licence conditions.
- 1.6 Develop internal criteria on ambient air quality when government regulations are absent or incomplete to ensure protection of local community health and the environment. The criteria must have formal approval from the operation's managing director (MD) and be in line with internationally accepted regulations, guidelines and methodologies.

2 Implementation and operation

- 2.1 Implement appropriate control procedures or control technologies to manage those emissions selected in the risk assessment as having potential or actual significant environmental or community health impacts.
- 2.2 Prepare emergency procedures to respond to emergency situations, abnormal emission and dispersion conditions, and exceedences of air quality criteria, including immediate measures to protect community health.

3 Performance management

- 3.1 Implement monitoring programmes or use estimation to quantify all significant emissions (point source and fugitive) to an acceptable degree of accuracy. Implement monitoring programmes for relevant ambient air quality parameters using receptor measurements or dispersion models validated to an adequate degree of accuracy to demonstrate protection of environment and community health, and to comply with regulations.
- 3.2 In any monitoring program, identify and use the specifications of local regulatory authorities for:
 - monitoring equipment and scheduling;
 - modelling assumptions;

- modelling programmes; and
- emissions factor.

In the absence of such regulatory requirements, or if incomplete or inadequate adopt recognised internationally acceptable specifications, which must have formal approval from the operation's MD.

4 Revision history

Version no.	Effective date	Prepared by	Authorised by	
1	June 2005	Adelino Taboada	ExCo	
Version no.	Revision date	Revised by	Authorised by	Reason for change
2	December 2008	Adrian van Tonder	Bruce Kelley	Incorporation of suggested changes from operations and alignment with HSEQ management system.