E6 - Noise and vibration control

Scope

This standard is applicable to all Rio Tinto business units and managed operations including admin/corporate offices and research facilities located off site. It covers noise and vibration arising from exploration and operations, including mining, mineral processing, materials handling infrastructure and on-site transport, which may significantly impact on people, communities and the surrounding environment. 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.

Occupational noise and vibration exposure is not covered by this standard but rather by the Occupational health standards B2 and B3.

Intent: The intent of this standard is to ensure that Rio Tinto operations minimise their noise and vibrations impacts on the surrounding environment and communities. This includes impacts on biota, people, heritage aspects and surrounding land use. Control is to be accomplished by identifying noise and vibration sources, evaluating and prioritising the sources according to significance of potential impacts

then taking effective measures to design and implement appropriate controls.

Other relevant documents:

- HSEQ management system (or standard E1 EMS for non ABS operations)
- Land use stewardship standard
- Occupational health standards
- Biodiversity guidance note
- Noise and vibration control guidance note

Programme Design

1 Planning

1.1 Develop, document and maintain knowledge of:

a) the baseline, and for existing operations, background noise and vibration levels; and

b) the key receptors and impacts that may result from noise and vibration emissions.

1.2 Employ change management procedures and predictive modelling of near and far field noise and vibration levels as part of the pre-feasibility and feasibility study for:

a) new developments;

b) significant expansions; and

c) changes to existing activities and facilities.

The model will, where applicable, incorporate baseline/background data, community expectations, and regulatory requirements and identify significant exposures to sensitive receptors.

1.3 Identify which components of the facility and which activities are the key contributors to external noise and vibration levels; understand the generation and propagation of noise and vibration and evaluate the potential environmental impact under a range of meteorological and operating conditions.

1.4 Develop internal criteria on noise and vibration performance 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 a procedure to manage noise and vibration where an assessment based on modelling and/or monitoring results indicates the need, in order to meet regulatory requirements and accommodate community expectations.

2.2 Deleted.

2.3 Adopt a hierarchy of noise and vibration controls, with engineering or design controls for noise sources being the first option implemented. If due to safety reasons this is not permissible consider other control processes.

2.4 Incorporate and maintain noise and vibration control requirements into design and operational criteria for relevant exploration and mining activities, including drilling and blasting, processing activities and new facilities.

2.5 Incorporate noise and vibration performance criteria into purchasing requirements for relevant, equipment and machinery.

3 Performance measurement

3.1 Have a procedure in place for monitoring of noise and vibration levels in potentially affected neighbouring areas, including employee/contractor accommodation units.

3.2 Implement a monitoring program to assess noise and vibration impact on the environment and communities under normal and worst case operating conditions and adverse meteorological conditions. The monitoring programme will:

a) support operational control;

b) verify compliance with targets and legal requirements; and

c) periodically validate and maintain the relevance of near and far-field noise and vibration models.

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.