

MANAGING SUSTAINABILITY





SUSTAINABILITY POLICY STATEMENT

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Mineral Deposits Limited (MDL) is a mining, mineral processing and exploration company operating on an international scale.

Our objective is to ensure that we conform to sustainable development principles and our aim is to make a significant, positive sustainable social impact.

We have developed an integrated Management System that incorporates the requirements of the following standards:

AS/NZS ISO14001	Environmental management systems – Specification with guidance for use.
AS/NZS 4801	Occupational health and safety management systems – Specification with guidance for use.
AS/NZS 4360	Risk Management
Performance Standards	International Finance Corporation (IFC) Performance Standards and Equator Principles

In addition, to achieve our objective we will:

- ◆ Maintain full compliance with relevant legislation and other requirements.
- ◆ Identify project risks and implement mitigation measures and improvement programs.
- ◆ Implement 'best practice' options to minimise pollution and other potential adverse impacts from operations and activities.
- ◆ Consult and establish partnerships with regulatory authorities, surrounding communities, other interest groups and employees to identify the most effective approach to alleviate adverse impacts and achieve improved performance.
- ◆ Identify training needs and establish a training and development matrix for all positions.
- ◆ Conduct the necessary training for management, personnel and contractors to competently perform their roles.
- ◆ Develop and action measurable objectives and targets in support of this policy.
- ◆ Implement audit programs and regularly review aspects of the Management System and documented procedures.
- ◆ Promote a culture of personal responsibility for safety and the environment.

**WE ARE COMMITTED TO
SUSTAINABLE DEVELOPMENT PRINCIPLES**



SUSTAINABILITY MANAGEMENT SYSTEM

SYSTEM OVERVIEW

MDL is committed to establishing and maintaining procedures which identify aspects of our activities, products or services that we can control and over which we can be expected to have an influence, in order to determine those which have or can have significant impact on safety, health, environment, community and socio-economics. Operational processes and/or infrastructure used by MDL are to be objectively and expertly assessed and the risk quantified.

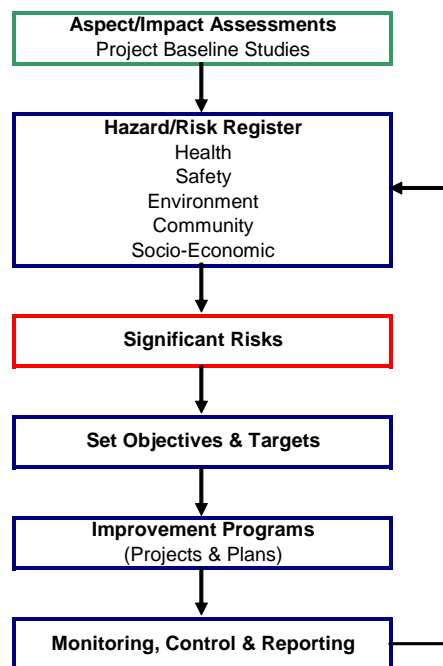
Safety, health, environmental, community and socio-economic aspects of MDL's operations are to be managed using an integrated management system model which closely aligns to international and Australian standards.

MDL has developed a process for identifying hazards and risks and then recording them in project hazard/risk registers. These hazard/risk registers are developed to assist MDL to manage safety, health, environmental, community and socio-economic risks relating to projects. Project Environmental Impact Studies, Environmental Management Plans, International Finance Corporation (IFC) Performance Standards and Equator Principles are incorporated as part of the risk management process.

Hazard/Risk registers aim to identify and record all hazards and risks and also to develop the measures necessary to mitigate (control) those deemed significant. MDL will work to verify the effectiveness of this process on a continuous basis through internal audits, inspection processes and monitoring and measurement practices.

Where significant risks have been identified, improvement programs (projects / plans) are developed using community consultation processes and business planning and budgeting cycles.

Corporate objectives and targets for achieving business goals and performance requirements are set and reviewed annually with reference to identified risks.



Integrated Management System Flow Sheet



PROCESS DISCUSSION

Aspect / Impact Identification and Risk Assessment

As an example, below we discuss the process in the environmental context.

MDL develops documents and maintains project hazard/risk registers. The Hazard/Risk Register is initially developed using the approved project Environmental Impact Statement (EIS).

The hazard/risk register identifies:

Aspects: Elements of the organisation’s activities, products or services that can interact with the environment.

Impacts: Any change to the environment, whether adverse or beneficial, wholly or partially resulting from the organisation’s activities, products or services.

The register is to be documented as a spreadsheet which identifies the process and its related aspects, impacts, hazard/risk assessment (for raw and residual risk), controls (system, physical and behavioural), legal and other requirements. A hazard/risk rating calculator is to be used to calculate risk (*Appendix 1*).

Identification of Significant Environmental Aspects

Aspects with a residual risk score greater or equal to 18 are to be considered “significant” hazards/risks. MDL may choose to manage such risks and hazards using Management Plans (MPs) and/or Improvement Plans (IPs).

Completion of an MP or IP could result in a decreased risk score, while an environmental incident may result in an increase.

Updating Hazard/Risk Registers

Registers are to be regularly updated (at least annually) to reflect current activities / practices carried out by MDL.

Registers may require updating following:

- changes to activities or practices
- elimination of issues
- improving the effectiveness or scope of existing controls
- an assessment of alternatives
- replacement or refurbishment of equipment
- completion of remedial action plans
- results of audits
- result of an incident investigation
- completion of improvement programs (IPs), improvement projects / plans
- review of emergency response exercises
- community and staff communication processes
- changes to legal requirements

Document Control and Records Management

Hazard/Risk Registers are made available to all MDL project personnel via the company intranet.

Records of risks and hazards that are no longer relevant to a project are archived and retained for a period of no less than 7 years.

Objectives and Targets

Following the identification of any risks through the Hazard Identification and Risk Assessment (HIRA) process and recording those risks in the hazard/risk register, objectives and targets are developed as the first step in reducing the risks identified as significant. *Table 1* shows an example of potential objectives and targets across all the different areas of sustainability management.

	Objectives	Targets
Safety	Maintain the safety of MDL personnel, contractors, visitors and the wider community	Zero fatalities, Lost Time Injuries and Medical Treatment Injuries.
Health	To positively impact on the health and wellbeing of employees and local communities	Implementation of pre-employment assessments, Occupational Health assessments and improved preventative health programs.
Environment	To adopt risk control measures which have a positive net effect on the environment	Control measures with positive impacts
Community	Empower individuals to self-manage local community improvements	Development and implementation of adult educational programs and development of sustainable programs targeted at youth and women’s groups.
Socio-Economic	Provide Senegalese employment opportunities	Develop Senegalese workforce through Competency Based Training processes based upon Training Needs Analysis outcomes. Use Learning Ability Assessment (LAB) to ensure fair and transparent employment practices

Table 1: Example objectives and targets



Example Improvement Programs

Safety

Traffic and Road Safety Programs

MDL will be working towards upgrading the road infrastructure in the areas around both project sites. This will lead not only to a safer environment for MDL employees but also improved safety for the wider community as a majority of the upgrade work will focus on public roads.

Health

Integrated Malaria Control Program

A program of Internal Residual Spraying (IRS), continuous monitoring for efficacy of chemicals, larvae treatment in standing water, education and preventative measures has been instigated by MDL to ensure that the risk to both employees and the wider community is minimised; targets are measured against the Roll Back Malaria Program (RMB) as proposed by the World Bank.

Water Pumping and Treatment

A number of water bores have been installed in the villages that surround the two project areas to provide easy access to clean water for local villagers. Previous to MDL's installation of these bores some villages had significant problems securing a reliable source of water.

Environment

Grand Côte Zircon Project Rehabilitation

MDL's exemplary record of project site rehabilitation will continue across both the Grande Côte Zircon project and the Sabodala Gold project. The dunes of the Grande Côte are to be re-contoured and planted with species of plants ideal for stabilisation of the dune system in order to ensure the lowest possible impact on the environment.

Community

Developing Education Infrastructure

At both the Sabodala Gold Project and the Grand Cote Zircon Project MDL is in the process of building kindergartens to provide better educational opportunities for the children of the area.

Socio-Economic

Significant Local Employment

Wherever possible MDL is seeking to employ people local to the project areas, especially as the projects become more established and local workers can be sufficiently trained to replace expatriate workers. Both the Grande Côte Zircon Project and Sabodala Gold Project will require significant numbers of local workers throughout the life of the projects.

An example Improvement Program Form is included as *Appendix 2*.

Monitoring Control and Reporting

Progress of MDL improvement programs (projects / plans) is monitored on a regular basis. Hazard/Risk registers are reviewed and updated following successful implementation of improvement programs.

Achievements relating to corporate objectives and targets are reported annually. Revised objectives and targets are developed in conjunction with the annual budgeting cycle.



APPENDIX 1: USING THE HAZARD/RISK CALCULATOR

- STEP 1** Determine Probability
- STEP 2** Determine Consequence
- STEP 3** Calculate Risk Rating
- STEP 4** Set Priorities

STEP 1: Determine Probability

PROBABILITY		
Almost certain	A	Is expected to occur in most circumstances (everyday/ weekly event)
Likely	B	Likely to occur at some stage (typically once a month)
Possible	C	Possibility of occurring at some time (typically once a year)
Unlikely	D	Not likely to occur (typically once every 5 years)
Rare	E	May occur only in exceptional circumstances (typically once every twenty-five years)

STEP 2: Determine Consequence

Consequence		People	Environmental	Community	Property / Production
Insignificant	1	Minor injury Slight negative impact on individual health	Negligible, reversible environmental impact, requiring very minor or no remediation	Slight negative impact on individuals in local community	Could cause minor damage <\$10K
Minor	2	Significant reportable injury (Medical treatment injury, Restricted work injury, Lost time injury) Major impact on health of several people.	Minor, reversible environmental impact, requiring minor remediation such as a non-reportable environmental incident eg a minor oil spill	Flare-up of issues in affected communities Media criticism	Could cause moderate damage \$10-\$100k
Moderate	3	Major injury to one or more persons Severe health impacts on a number of people	Moderate, reversible environmental impact with short-term effect requiring moderate remediation such as a reportable incident not likely to result in prosecution eg a minor water discharge	Significant public criticism (eg community complaints, NGO or media "taking up the issue") Major negative impact on economic viability	Could cause major damage \$100K-\$1M
Major	4	Single fatality Severe irreversible disability or impairment (PDI- Permanent Disability Injury)	Serious environmental impact, with medium-term effect, requiring significant remediation or resulting in prosecution	Loss of community's economic viability Significant damage to reputation of the operations	Could cause major damage \$1M-\$10M
Catastrophic	5	Multiple fatalities Major permanent negative health impacts on a large number of people	Disastrous environmental impact, with long-term effect, requiring major remediation, regulatory intervention or premature closure of the operation	Public international condemnation Major breakdown of social order of affected community	Unplanned mine closure Greater than \$10M



STEP 3: Calculate Risk Rating

PROBABILITY		CONSEQUENCE				
		Insignificant	Minor	Moderate	Major	Catastrophic
		1	2	3	4	5
Almost Certain	A	High 11	High 16	Extreme 20	Extreme 23	Extreme 25
Likely	B	Med 7	High 12	High 17	Extreme 21	Extreme 24
Possible	C	Low 4	Med 8	High 13	Extreme 18	Extreme 22
Unlikely	D	Low 2	Low 5	Med 9	High 14	Extreme 19
Rare	E	Low 1	Low 3	Med 6	High 10	High 15

STEP 4: Set Priorities

Risk Score		Priority
1-5	Low	Low Priority Risk reduction measures not normally undertaken
6-9	Medium	Medium Priority Risk reduction measures considered
10-17	High	High Priority Risk reduction measures implemented
18-25	Extreme	Extreme Priority Risk Unacceptable, changes to procedure or design required immediately.



APPENDIX 2: IMPROVEMENT PROGRAM FORM EXAMPLE

Improvement Program : Integrated Malaria Control Program		
Objective: To positively impact on the health and wellbeing of employees and the local community		
Target: To reduce the incidence of malaria in local communities according to RBM targets		
Key Performance Indicator: Number of reported malaria cases		
Target Date: Ongoing	Accountable:	Signature:
Aspect Number:		

Tasks	Who	Resources	When	Proposed/ Approved	% Complete
1. Identity possible malaria risk areas.				Approved	100
2. Consult with community to further identify malaria problems areas.				Approved	100
3. Consult chemical suppliers for the most appropriate chemical to use.				Approved	50
4. Liaison with community committees to establish sensitising for malaria spraying program.				Approved	25
5. Identify and plot water ponds that may contribute to mosquito breeding and larvae, treat as necessary.				Proposed	0
6. Carry out residual spraying for all structures in the community and on site.				Approved	100
7. Review of the effectiveness of the program through various quality control processes.				Proposed	0
8. Analyse malaria statistics via on site clinic and regional hospitals.				Proposed	0

Notes: This is one of the projects being undertaken to ensure compliance with IFC Performance standard 4.