

SCHEDULE E - FORM 6

THE MINES AND MINERALS ACT

MINING LEASE;

ENVIRONMENTAL IMPACT ASSESSMENT AND ACTION PLAN

1. The EIA forms an essential component of the Feasibility Study (**Schedule E - Form 5**) which constitutes the key document of the **Programme of Development and Mining Operations** to be appended to the lease.
2. The nature, extent and details required in an EIA depends on the type, location, environmental sensitivity and scale of the proposed mining operation, and the explicit nature and magnitude of its operational impacts, as determined through documentation and evaluations of the approved **Programme of Exploration Operations**, and analysis of advanced exploration base-line surveys provided by the lease applicant to the Director.
3. All mining lease applications and subsequent approved programmes of development and mining operations shall require an EIA containing part or all of the following elements, as determined by the Director.
4. Base-line Survey

Such surveys, realistically initiated at an early advanced exploration stage, shall, at the discretion of the Director, include all or a portion of the following items:

- (1) Surface water analysis
 - (2) Groundwater analysis
 - (3) Soil and Silt analysis
 - (4) Plant and animal inventory
 - (5) Present land use, water use analysis
 - (6) Present socio-economic analysis
5. Environmental Management Plan
 - (a) The applicant shall provide the Director with details of operating procedures and devices designed, in consideration of the base-line data described in Section 4, to protect the environment from unnecessary degradation during and following the mining operation.

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- (b) The Director reserves the right to require the proponent to alter, delete, or add procedures or devices when such alteration, deletions or additions are deemed necessary to ensure the protection of the environment.
- (c) The issues of concern shall, at the discretion of the Minister, include all or a portion of the following items:
 - (1) Management and control of surface water, mine water, and process water;
 - (2) Prevention and/or control of seepage;
 - (3) Protection of aquatic and terrestrial eco-systems;
 - (4) Control of aerial emissions;
 - (5) Noise and vibration control;
 - (6) Backfilling plans;
 - (7) Rehabilitation and landscaping plans;
 - (8) Storage of fuels and disposal of lubricating oils;
 - (9) On site storage of chemicals and hazardous materials
- (d) Reclamation and rehabilitation shall be carried out as described in the Environmental Management Plan.
- (e) Whenever possible, reclamation and rehabilitation shall be conducted on a progressive basis during the mining operation.
- (f) Rehabilitated land shall be vegetated with a permanent vegetative cover or otherwise stabilized to the satisfaction of the Minister.
- (g) Upon analysis and approval of the Environmental Management Plan, the Director may require the posting of a reclamation and rehabilitation bond.
- (h) The amount of the bond shall be calculated on the basis of the costs outlined by the holder, and may be submitted sequentially based on progressive satisfaction of approved elements in the plan. Such costs and the required security shall include an estimated aggregate current cost for labour, equipment, supplies and services to conduct one or more of the following restoration activities:
 - (1) removal of buildings and plant facilities
 - (2) protective capping of pits, adits, declines and shafts

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- (3) stabilization of tailings areas, steep rock faces, drainage containment areas
- (4) surface contouring
- (5) re-vegetation

Acceptable bond forms include cash, a letter of credit from an internationally accredited bank, a surety or other negotiable bond or other approved security. The elements of the amount of bonding is to be reviewed and adjusted at every two year interval.

6. Environmental Monitoring During Mining Operation

- (a) The holder shall, during the mining operation, conduct or have conducted monitoring programs as specified by the Director to document the quantity and quality of effluents being discharged or emitted to the environment and the effect of those effluents on the environment.
- (b) The monitoring programs shall, at the discretion of the Director, include all or a portion of the following items:
 - (1) Effluent quantity and quality;
 - (2) Surface water quantity and quality;
 - (3) Groundwater quality;
 - (4) Groundwater hydrology;
 - (5) Atmospheric quality;
 - (6) Sound and vibration;
 - (7) Monitoring of aquatic and terrestrial eco-systems.

7. Off-site Activities

- (a) The applicant shall provide the Director with details of all off-site activities associated with the proposed mining operation.
- (b) Off-site activities shall be operated in a manner consistent with good environmental practices and in compliance with all relevant laws.
- (c) Off-site activities include all or a portion of the following items:
 - (1) Transportation methods;
 - (2) Traffic patterns and density;
 - (3) Construction and maintenance of roads;
 - (4) Sewage disposal and water supplies for off-site facilities;
 - (5) Off-site product storage.