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This is the second in a series of announcements that the department will be undertaking over the next few months, addressing and updating NWT mining. This draft policy follows the release of the discussion paper on amendments to the NWT mining royalty regime.

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This news release is also available through the Internet at <http://www.inac.gc.ca>.

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*Mine Reclamation*



## **CONSULTATION DOCUMENT**

# **MINE RECLAMATION POLICY FOR THE NORTHWEST TERRITORIES**

**Canada**

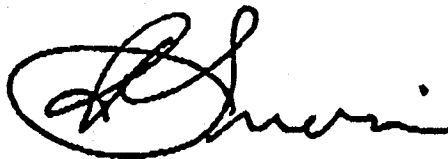
**DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
MINE RECLAMATION POLICY FOR THE NORTHWEST TERRITORIES**

**MINISTER'S MESSAGE**

*We are seeing great changes and advancements being made in the management of natural resources in the Northwest Territories. This is taking place at a time when several new mines are being developed and the life of a number of existing mines is coming to an end. Given this situation, it is essential that policies related to mine reclamation be updated. This updating will help provide certainty for industry, the public and regulators.*

*I believe, this policy does not impose any particularly new or onerous burdens on the mining industry. The policy seeks to enhance certainty, and responds to a generally accepted practice by the industry, that a comprehensive plan for how to reclaim the lands used in active mining is needed.*

*This policy sets out how the Department of Indian Affairs and Northern Development is involved in overseeing the planning and implementing of the process for closing down mines in a generally acceptable way and outlining the assurances that industry must provide to ensure that the work is done to an acceptable standard.*



**Ronald A. Irwin, P.C., M.P.**

## **DIAND'S MINE RECLAMATION POLICY FOR THE NORTHWEST TERRITORIES**

### **SUMMARY**

All mines in the Northwest Territories will be planned, operated, closed and decommissioned in an environmentally sound manner in accordance with an approved reclamation plan.

The Minister requires mining companies:

- \* to submit a mine reclamation plan and have it approved before commencing production; it will be kept updated as plans change, along with annual reports of reclamation progress;
- \* to conduct progressive reclamation of the mine, to the extent feasible, given the mining methods employed; and
- \* to provide the Crown with financial assurance adequate to ensure that the site is reclaimed at the expense of the mining company.

**INTRODUCTION:** The massive staking rush of the past three years coupled with the anticipation that this rush will soon translate into several new mines is one pressing reason for developing this policy. Another is the unprecedented change planned to take place as the co-management of natural resources is anticipated.

As part of the government initiative on the streamlining of environmental regulation of mining, the regulatory regime must remain competitive with other Canadian jurisdictions, so that the mining industry can continue to play its vital role in the economic development of the North.

It must be accepted that the process of mining which converts very small amounts of the earth's surface into valued commodities, all of which help sustain our standard of living, also permanently changes the shape of the surface of the earth and the water regime immediately around the mine. Mine-induced landscape changes which do occur are not necessarily detrimental and are kept to a minimum.

The need is to ensure that the minor landscape changes are conducted according to some widely accepted principles and conforming to a plan that has been adequately reviewed. This policy outlines the approach to be followed.

## II

### **Principles for Mine Reclamation**

Mine reclamation in the NWT must be based on the following principles:

- ♦ Mines at the end of their operational lives shall be left in a condition so that they will:
  - eliminate hazards to public health and safety; (mine safety is the responsibility of the GNWT)
- and minimize:
  - impacts on the environment; and
  - negative effects on the use of surrounding lands.
- ♦ The cost of reclamation, closure and final decommissioning of a mine is the responsibility of the mining company.
- ♦ Each new mine should be developed only if it can support the estimated costs of reclamation.
- ♦ Planning for, and costing of reclamation, closure and decommissioning shall be an integral part of the development and operation of a mine.
- ♦ The regulatory regime governing mine reclamation needs to provide the industry and the public with certainty.

### **Objectives of the Mine Reclamation Plan:**

The following objectives must be fully addressed in the development of the reclamation plan:

- ♦ Reclamation of the site shall be undertaken progressively during the life of the operation, to the extent feasible, given the mining and processing methods employed.
- ♦ Any structures and workings remaining at the site after closure must be physically stable and eliminate any threat to public safety.
- ♦ Tailings and waste rock disposal areas must meet generally accepted engineering standards for slope stability and erosion control.

### III

- ◆ Water quality of drainage from the site must continue to meet or exceed currently accepted standards.
- ◆ The site must be left in a condition which will minimize long-term care and maintenance requirements.
- ◆ The company must give an undertaking to complete the plan as approved and obtain the Ministerial release document on completion of implementation.

#### Mine Reclamation Plan

All proposals for a new mine will include a comprehensive mine reclamation plan, as this is critical to the long-term future and environmental legacy of the development site. The authority to request a single plan derives from two Acts: the *Territorial Lands Act* for the land-based portion through the surface lease and the water portion under the *Northwest Territories Waters Act*. For greater efficiency a combined plan will be required to cover both requirements in an integrated whole.

#### Content of a Mine Reclamation Plan

The mine reclamation plan will include:

- ◆ Detailed measures for the reclamation, closure and decommissioning of the mine including but not necessarily limited to:
  - buildings and other structures
  - roads and airstrips
  - tailings disposal facilities and management
  - waste rock disposal management
  - granular material deposits and open pits
  - petroleum and chemical storage areas and facilities
  - pipelines and electrical transmission lines
  - sewage and waste disposal areas and facilities
  - mine and site drainage systems
  - mine workings
  - mine shaft, adit and decline openings
  - water quality leaving the site
  - revegetation of the site where practicable
  - air quality
  - approaches to recycling materials
- ◆ A cost estimate of the reclamation work required to close the mine in each year of the proposed operating life. Review of the cost estimates will take into account the

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- ◆ differences which could arise between the mining company performing the work and an independent contractor, if the work is done as a result of a default.
- ◆ A list of contingency measures for temporary closure of the mine, outlining specific actions and their scheduling, to be taken during the temporary closure. As temporary closure is commonly an uncertain condition, the schedule will be necessarily progressive as each week, month, season or year passes.
- ◆ A plan for post-closure monitoring of the site including both schedule and reporting frequencies. For a monitoring program to be meaningful, it must include provision for appropriate progressive responses which trigger action whenever exceeded.

#### Progress Reporting on Reclamation

For maximum efficiency it is desirable that both the regulator and the mine operator have adequate understanding of both progress and problems, as ultimately both have the same objective of a well reclaimed site. A status report on progress toward mine reclamation, at a mutually agreed frequency, is highly desirable on progress toward mine reclamation. This need not be an elaborate document. For example, it could indicate that the 100,000 tonnes of tailings proposed to be deposited during the reporting period was in fact only 93,500 tonnes which were deposited in the approved tailings facility and it still has xx percent capacity open.

#### Mine Reclamation Plan Updates

As mining plans evolve, and where these changes require significant modifications to the reclamation plan, a plan update will be required, in addition to the status report. This will involve consultation with appropriate agencies such as the Water Board and may involve additional environmental screening. A significant part of any review will include evaluating the degree to which the revised reclamation plan will cost more or less than the former plan and evaluating the fiscal assumptions with regard to the financial assurance already in place.

#### Financial Assurance

The responsibility for ensuring provision of financial assurance is split between the Water Board for water related aspects and DIAND land administrators, through the land leases for the land portion. DIAND will ensure that there is formal discussion with the Water Board to ascertain that the financial assurances requested by both groups meet two criteria:

1. that cumulatively they are adequate for the site specifics of each mine; and
2. that they are not excessive or punitive as a result of any duplication of coverage.

**V**

Each mining company should be required to provide sufficient project-specific financial security to cover the estimated cost of reclamation of the work to date and work anticipated for the year ahead. Some funds will normally be provided immediately before mining begins with additional build-up during the operational life of the mine. The form and timing of the provision of this security should be determined by the financial condition of the company, the economics of the project, the risk to the environment, the environmental track record of the company and the site-specific technical aspects of the project. Provision will be made for the use of reclamation trusts as a security option. Such funds will be administered by a third-party trustee, such as a trust company. Annual statements of the funds in trust will be required by the Minister.

Where the circumstances of non-compliance with the reclamation plan by a mining company are such that reclamation costs are incurred by the Crown, it is the responsibility of DIAND to claim against the financial assurances posted, and to ensure any reclamation work required is carried out.

**Post-Closure Reclamation and Final Decommissioning**

At the end of the useful mine life, the most recent updated and approved mine reclamation plan will be the basis for the final decommissioning of the mine. The amounts of financial assurance will be reduced or refunded as the reclamation work is completed successfully.

Once the reclamation work required by the plan is completed, the site will be allowed to stabilize, during which time monitoring will be conducted by both the company and DIAND. (Other agencies may also have monitoring roles.) The duration of the monitoring phase will be confirmed at the time of closure and will be dependent on the risks associated with the potential impacts of the mine to the environment. During this period, the mining company will continue to be responsible for the site, including the remediation of any problems which develop. The monitoring period could be extended if clearly warranted by conditions at the site.

When the objectives of the approved and as-amended plan have been fully met, the Minister will give the mining company a written acknowledgement that it has complied with the terms and conditions of the mine reclamation plan, and approve the site as being decommissioned. This would release the company from any further responsibility for compliance with the mine reclamation plan. This release document would not necessarily preclude all environmental liabilities.

Some mines are anticipated to require long-term care after closure.

1) when acid mine drainage requires neutralization by a water treatment plant: this would lead to the need to maintain the plant until satisfactory water quality is established and successfully manage the resulting sludge in the long term, or otherwise dispose of it; or

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2) when the retainment structures around a tailings facility require periodic monitoring and maintenance.

Each mining company should be required to provide sufficient project-specific financial security to cover the estimated cost of reclamation of the work to date and work anticipated for the year.

Where there is a reasonable probability of a predicted long-term liability, the Minister may retain an appropriate amount of financial assurance to cover requirements for the site. In such cases, the mining company would retain responsibility for the care of the site and maintain a claim to any remaining financial assurance. In the event of bankruptcy or other demise of the mining company, the Crown would become responsible for the site and would use the financial assurance to maintain the site in accordance with the previous arrangements.

### Transition Rules for Existing Mines

The reclamation measures required of existing producing mines would need to recognize the economic status of these operations, including the remaining mine life. Reclamation would have to be evaluated on a case-by-case basis, taking into account the specific situation of the operation, the potential environmental impacts and the constraints imposed by other legislation.

Any additional financial assurance required from existing producing mines would take into account the financial capacity of the mining company to provide the additional financial assurance, as well as the magnitude of risks posed by the operation.

Existing mines which are temporarily closed at the time of announcing this policy would be required to provide an acceptable up-to-date reclamation plan at the time of resumption of operations, which would require that appropriate amounts of financial assurance be put in place. This reclamation plan would include the measures to be undertaken in the event of further suspension of operations and the timing of these measures.