

# DRAFT Yukon Mine Site Reclamation and Closure Policy for New Mines

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# **Yukon Mine Site Reclamation and Closure Policy for New Mines**

## **Introduction**

Since the Gold Rush of 1898, mining has featured prominently in building and defining the Yukon's economy, shaping its communities, and contributing to economic development.

Public expectations have evolved over the decades. The public now expects responsible development that is based on sustainable development principles, including protection of the environment and protection of public and worker health and safety. The public also recognizes that the under funded environmental and social costs associated with past mine closures cannot be repeated.

With devolution of resource management responsibilities in April 2003, Yukon now has the opportunity to develop its own mine site reclamation and closure policy that recognizes these new public expectations. The basis for this policy is that mine owners are responsible for planning, implementation and financing of mine site reclamation and closure, and must assume the cost for closure liabilities when doing business in the Yukon, and must provide assurance so that government will not assume such liabilities.

This mine reclamation policy reflects government's broad priorities in environmental protection, responsible economic development and fiscal responsibility. It is the aim of the Government of Yukon to provide policy and regulatory clarity regarding mine reclamation and closure matters, so that projects can be developed and managed in a responsible manner.

## **Application**

This policy applies to quartz mines in the Yukon that are developed on lands where mineral rights are administered by the Commissioner.

In the event of resumption of activities at an historic mine-site, elements of this policy will be brought to bear to the extent possible, particularly to those activities undertaken since April 1, 2003. In all cases, the Yukon Government will ensure that arrangements with respect to existing mines remain cost-neutral to Yukoners.

This policy applies to reclamation and closure related activities occurring at quartz mines which are at or beyond the development stage. It does not apply to the prospecting, exploration or advanced exploration stages of a mineral property. It also does not apply to placer mines. These activities are guided by other policies and are subject to specific legislation.

## **THE POLICY**

***The Yukon Mine Site Reclamation and Closure Policy for New Mines consists of our Policy statement, our Goals and our Implementation Principles.***

### **POLICY STATEMENT:**

“Environmentally responsible mining exploration, development, operations and public policies are predicated on maintaining a healthy environment and, on closure, returning mine sites and affected areas to viable, and, wherever practicable, self sustaining ecosystems that are compatible with a healthy environment and with human activities”

(Whitehorse Mining Initiative Leadership Council Accord)

### **OUR GOALS:**

Mine operators must manage their mine sites in an environmentally sound manner and these sites must be reclaimed to meet the objectives stated in this policy.

Public and environmental health and safety will be fully protected. Any potential discharges during mine operation and following mine closure, which could harm the receiving environment or the public, must be managed.

A reclamation and closure plan that returns the mine site to a viable and, wherever practical, self sustaining ecosystem, will be developed by the mine operator for each mine site. This plan will be in place and approved by government prior to mine development.

The approved reclamation and closure plan will be updated by the mine operator periodically to reflect results of ongoing environmental and technical studies, and this updated plan will be approved by government and financial assurance adjusted accordingly.

Mining reclamation and closure activities will contribute to meaningful economic development and be sensitive to traditional knowledge and land uses.

Financial assurance for mine reclamation and closure will provide for full security to be held for the implementation of the approved reclamation and closure plan, as well as reasonable mitigative contingencies,

Financial assurance mechanisms will be reasonable, flexible and responsible.

Exploration of old mine sites will be encouraged where new development may lead to environmental legacy cleanup opportunities.

## **IMPLEMENTATION PRINCIPLES:**

The following principles respecting mine site reclamation should provide proponents, regulators and government departments with certainty, clarity and consistency regarding expectations of the Yukon government for mine reclamation and closure.

### **1. General**

The operator of a mine site is responsible for the care, maintenance and abandonment of the site in accordance with the existing legislative framework. Every mining operation is required to fund the full cost of reclamation and closure.

Progressive reclamation should be pursued in reclamation and closure planning and implementation to the greatest extent practical.

The precautionary approach will be used in reclamation and closure planning. This approach recognizes that the absence of full scientific certainty will not be used as a reason to postpone decisions if there is a possibility of serious or irreversible harm.

The implementation of this policy should be carried out in a manner that recognizes the value of mining to the social and economic advancement of Yukon.

Regulators will ensure that the approved reclamation and closure plan is incorporated into the appropriate license.

### **2. Reclamation Planning**

Mine site reclamation and closure is an integral component of overall mine planning, development and operation. The design of these phases must consider mine reclamation and closure measures.

Every mine will have an approved reclamation and closure plan before proceeding with mine development activities.

Every mine will have an approved plan that provides for measures to be taken in the event of a temporary and/or seasonal closure.

The mine closure plan and reclamation objectives will be developed in consultation with all relevant government departments, the affected First Nations, local communities and other interested stakeholders.

The selection of key reclamation and closure measures should be based upon best practicable technology along with current and comprehensive technical information. The use of leading edge technological and scientific measures is encouraged when supported by feasibility assessments

Every reclamation and closure plan will incorporate plans for ongoing environmental and technical studies, with clear objectives, completion dates and reporting requirements.

An environmental monitoring plan will be maintained and implemented by the mine operator to provide the framework for progressive reclamation activities and plan adjustments as needed.

Mine-site reclamation and closure plans will be refined and updated as results of the study plan and monitoring programs are obtained. Mine-site reclamation and closure plans should adapt to new and improved technologies and/or methodologies

### **3. Post-Closure Responsibility**

Following mine closure, mine owners or their successors will continue to be responsible for the site, including remediation of any additional environmental complications which may develop.

The Yukon government will acknowledge that the mine owner has successfully completed mine closure once the closure and decommissioning requirements are met, a specified period for stabilization has transpired and any financial instruments needed to support long term care and maintenance are in place. The precise nature of this acknowledgement will be determined within 2 years of the effective date of this policy.

### **4. Financial Assurance**

Adequate financial assurance will be provided by mine owners to ensure that the cost of reclamation (including shutdown, closure and post-closure, and related environmental monitoring in the approved reclamation and closure plan) is borne by the mine owner rather than Yukon government.

The total financial assurance for reclamation and closure required will be equal to the total outstanding reclamation liability for land and water combined, as determined by government, on the basis of the approved reclamation and closure plan and at the time of the periodic site assessments.

Estimates of reclamation costs, for the purpose of financial security, will be based on the cost of having the necessary reclamation work done by a third-party contractor. These estimates will also include contingency factors appropriate to the particular work to be undertaken.

Security for mitigative contingencies may be required for higher risk components, and, if required, the amount will be based on risk assessment and on site conditions.

The financial assurance instrument for mine-site reclamation and closure shall provide Government with the ability to access the full amount of security at any time that it may be needed. Consideration will be given to alternate (non cash) forms of security provided they meet certain criteria that protect the Yukon's interests and objectives.

Progressive reclamation may reduce the value of financial assurance required by government. Where progressive reclamation results in an overall lowering of environmental liability at the mine site, financial assurance will be reduced. If the outstanding liability increases, mine owners will have to provide additional financial assurance.

### **5. Risk Assessment**

A "risk management" approach may be utilized in the development of the reclamation and closure plan by the mine operator. This approach should be designed to enable the mine operator and government agencies to fully understand the likelihood and consequence of failure in order to assess reclamation and closure options and to ensure that risks associated with the mine site reclamation and closure plan are addressed to the satisfaction of Yukon. There may be instances where another approach would be more appropriately utilized.

### **6. Government Decision-making and Accountability**

Reclamation and closure requirements will be as clear and predictable as possible, to minimize uncertainty for industry and government. These processes will also be transparent and accessible to the public.

Government agencies will ensure that communication and consultation with proponents, affected First Nations and applicable non-government organizations is comprehensive, transparent and timely.

There will be, to the greatest extent possible, co-ordination among the various regulatory authorities with respect to the management of lands and water to facilitate the consistent application of this policy, particularly as it relates to the provision of financial assurance for environmental liability.

Government will assess the effectiveness of this policy every five years. Appropriate adjustments to the policy will be made to ensure that it is effective.

## **IMPLEMENTATION GUIDELINES:**

*In Order to implement our Policy, the following section provides guidelines and a general explanatory framework. This should assist regulators, mine proponents and others to better understand the context of the policy and to implement it in a fair and consistent manner.*

### **1. Reclamation Planning**

Where feasible and practical, planned reclamation and closure activities will consider economic benefits to local communities and First Nations, including those most affected by the mine and its closure.

Scientific, traditional and local knowledge will be considered in reclamation and closure planning and implementation of the plan by operators and government agencies.

In developing the reclamation and closure plan, the mine operator should consult with the affected communities, affected First Nations, interested parties and the public to identify their views on long-term considerations for the area.

Temporary and/or seasonal closure plans are to be reviewed and approved by regulatory authorities. These plans will include a monitoring and reporting program for the duration of the temporary closure period.

Regulators will ensure that, after an appropriate period of temporary closure, the mine operator will either seek an extension of the temporary closure period, or will implement the approved reclamation and closure plan.

### **2. Elements of a Reclamation and Closure Plan**

A reclamation and closure plan should fully address, but not be limited to, the following:

- Reclamation objectives, including closure design criteria;
- The progressive reclamation of the site during the life of the operation;
- The removal or stabilization of any structures and workings;
- The design of tailings and waste rock disposal areas;
- The reclamation and re-vegetation of the surface disturbances wherever practicable;
- Methods for protection of water resources;
- A cost estimate of the work required to close and reclaim the mine; and
- A plan for ongoing and post closure monitoring and reporting at the site. These plans should include the establishment of thresholds and identified adaptive management responses should such thresholds be reached.

Plans should identify technically and economically feasible methods of decommissioning and reclaiming mine components within reasonable timeframes.

### **3. Reclamation Guidelines**

Regulatory authorities will utilize guidelines and regulatory standards where practical when reviewing and approving reclamation and closure plans.

Guidelines may provide for the application of best management practices and best available technologies that meet the overall site closure objectives.

Government will focus on performance objectives as much as possible rather than specifying the activities needed to accomplish the objective.

Government will develop and use guidelines where these would assist in providing clarity for reclamation and closure requirements.

### **4. Reporting and Updating of Plans**

Reclamation and closure plans must be updated by the mine operator periodically throughout the entire mine life. The frequency of updating will be commensurate with the phase of development and reclamation activity and at a minimum every 5 years.

The update should demonstrate how standards and legislative requirements have been met, what reclamation has been undertaken, as well as how reclamation features are performing in relation to approved reclamation and closure objectives contained in the plan.

Regulators will ensure appropriate mechanisms in licenses to review these updated reclamation and closure plans and to require additional information if necessary. The lead agencies will make best efforts to agree on a schedule, procedures and elements for review.

The mine owner will be required to provide, at a minimum, an annual reclamation status report. Such a status report should, at a minimum, include details on the progressive reclamation work performed that year and any updates on the status of studies, results and implications to future studies and reclamation measures.

### **5. Financial Security**

Site liability will be determined as the outstanding cost to implement the approved reclamation and closure plan plus reasonable mitigative contingencies.

Regulators may require a review of security provisions for several reasons including: reclamation being completed during the period, risks changing



significantly, areas not successfully reclaimed in previous periods, new environmental studies or monitoring results, or significant new work at the site.

Security for reasonable mitigative contingencies may also be required and the amount will be based on the risk assessment and on site conditions. It is understood that mitigative contingency may not represent 100% of possible costs, but it should be based on a reasonable estimate of potential costs.

The mine owner is responsible for maintaining financial assurance during any temporary closure and for long-term monitoring and/or care and maintenance. Financial mechanisms acceptable to government are required to be in place. In the event of a sale, existing financial security must remain in place until government has approved replacement security from the new owner.

The regulator will ensure there are no lapses in the ability of government to access financial security if and when it may be required.

At each periodic review, the mine owner will calculate the amount of outstanding liability for reclamation and closure requirements and provide this assessment to government. In the absence of an assessment by the mine owner, Government will calculate the outstanding liability.

The Yukon government will complete a review of the site liability at a minimum of every 24 months. This review should assess the adequacy of the current liability estimate as well as the expected change in site liability over the next 24 month period. Security to be posted should provide for adjustments during the next 24 month period so that 100% coverage is available at all times. The amount of security held will be reviewed and may be adjusted within the 24 month period depending on the activities at the site.

If liability is reduced and financial security can be released, government will do so on a timely basis. Prior to any such release, government will take into consideration the risks associated with remaining liabilities as well as past corporate performance.

A "Reclamation Security Release Agreement" may be utilized as a suitable mechanism to release security.

Government may allow for a hold-back of financial security release to allow sufficient time to determine the success of the reclamation effort undertaken for critical components.

## **6. Post Closure Reclamation and Final Decommissioning**

Once reclamation and closure work is completed, monitoring will be conducted by the mine operator with respect to the effectiveness of the mitigation measures.

The duration of the required monitoring phase will depend on the risks associated with the potential impacts on the environment.

Government will continue to maintain an appropriate amount of financial assurance to cover the monitoring phase and any mitigative contingencies.

Mine operators are responsible for post closure reporting and compliance.