



Government of Yukon
Department of Energy, Mines and Resources

Quartz Mining
License Application Guide
February 2010



Table of Contents

1.0	Introduction	3
2.0	Yukon Assessment and Regulatory Processes.....	3
3.0	Quartz Mining License Overview	4
3.1	Legislation, Policies and Guidelines.....	4
3.2	Parts of the Quartz Mining License	5
3.3	Licensing and Assessment Processes	8
4.0	Information Requirements and General Guidance	9
4.1	Initiating the Process.....	9
4.2	Coordinating the Assessment and Licensing Applications	9
4.3	Letter of Intent.....	9
4.4	Part 1: Mine Development.....	9
4.4.1	General Site Plan.....	9
4.4.2	Reclamation and Closure Plan	12
4.5	Part 2: Mine Construction and Operation	13
4.5.1	Project Specific Mine Plans.....	13
4.5.2	Environmental Protection Plans	15
4.6	Issuance of the Quartz Mining License	15
4.7	Construction and Operation of a Mine.....	16
4.8	Post-Operation and Closure	17
5.0	References and Resources	17
Appendices		
	Appendix A YESAB Executive Committee Rules Screening Process	18
	Appendix B Quartz Mining License Checklist.....	19
	Appendix C Relative Timelines from Mine Start-Up to Closure.....	20

1.0 Introduction

The Quartz Mining License Application Guide is for individuals or companies seeking to develop a quartz (hard rock) mine within Yukon. This guide will aid clients who have explored mineral resources within their claim area and wish to move forward with mine development.

Government of Yukon's Department of Energy, Mines and Resources (EMR) has developed this guide to assist clients when applying for a Quartz Mining License. The governmental licensing process was developed to be responsive, flexible and to ensure mining clients are able to pursue developments in a sustainable and innovative manner.

The guide has been organized for clients seeking to understand:

- the sequencing of Yukon's assessment and regulatory process;
- the steps and requirements specific to the Quartz Mining License; and,
- the type and detail of information expected from mining clients for licensing.

2.0 Yukon Assessment and Regulatory Processes

The regulation of quartz mining within Yukon Territory was devolved from the federal government to Government of Yukon in 2003. As a result, the Government of Yukon has full authority over its resources and is the sole administrator of a stable and direct mining development permitting process. The territorial legislation called the *Quartz Mining Act* (herein referred to as "the *Act*") governs the authority to stake, record and maintain mining claims for the purpose of exploration and/or development.

The *Act* also enables Government of Yukon to issue licenses and regulate developments as they proceed from design through to construction, operation, reclamation, decommissioning and finally closure. Specifically, section 135 of the *Act* states: "no person shall engage in development or production otherwise than in accordance with a license."

As the sole administrator of the mine licensing process, Government of Yukon officials can respond with greater local capacity to the unique physical, social and economic setting found within Yukon.

Mine permitting and development typically follows mineral exploration and the completion of environmental baseline studies to establish an understanding of the mineral potential and existing environmental conditions. Through preliminary and advanced exploration, clients typically become acquainted with the organizations that conduct assessment and licensing activities. These organizations include the Yukon Environmental and Socio-economic Assessment Board (YESAB) and its Designated Offices, the Yukon Water Board, Government of Yukon's Department of Energy, Mines and Resources, various Government of Canada departments, First Nation governments, and others.

Similar to other jurisdictions, mining within Yukon requires a project assessment in advance of permitting. Yukon's assessment process was established in 2005 as per Yukon First Nation land

claims Umbrella Final Agreement. The *Yukon Environmental and Socio-economic Assessment Act (YESAA)* provides for project-level assessments throughout the territory for all types of projects on all government lands.

Proposed quartz mines require an assessment under *YESAA*. The scale of assessment is defined by the Assessable Activities, Exceptions and Executive Committee Projects Regulations, which distinguishes the type of assessment based on thresholds. Production level quartz mining projects are typically assessed as Executive Committee Screenings. A flowchart of this process is found in Appendix A. Within the Executive Committee Screening process, activities proposed as part of a project are reviewed to determine the potential effects to the environment and society. Further, the Executive Committee assessment considers how measures may be applied to mitigate significant adverse effects. The assessment draws upon the expertise of territorial, federal, and First Nations government agencies as well as input from stakeholders and the public.

Although permits and licenses cannot be issued in advance of completing the Yukon Environmental and Socio-economic Assessment, many regulatory processes can simultaneously begin their internal review of an application while the assessment is underway. Regulatory approvals of mine developments will consist of a number of authorizations issued by various government regulators and will be specific to the scale, type and location of the proposed project.

The Yukon Water Board may also commence its internal review while allowing the Yukon Environmental and Socio-economic Assessment to be undertaken and finalized. A Water Licence is required for the use of water or deposit of waste and is typically required for production level projects. The *Waters Act* is Yukon's legislation that regulates these activities and is administered by the quasi-judicial Yukon Water Board who issues the licence. It is recommended that an application to the Yukon Water Board for the necessary license is undertaken around the same time as the Quartz Mining License.

The assessment of production level activities will include all activities required for the construction, operation, reclamation, decommissioning and closure of a mine. Applications for major licenses, such as a Water Licence and a Quartz Mining License, will also include a review of the various stages associated with mine production.

3.0 Quartz Mining License Overview

3.1 Legislation, Policies and Guidelines

The *Quartz Mining Act* is the legislation which covers the administration of Quartz Mining Licenses. The provisions for mine licensing are contained in Part 2 of the *Act*, from section 135 onward. Other aspects of the licensing process are covered under the Security Regulation that is part of the *Act*, and the Yukon Mine Site Reclamation and Closure Policy, both of which are explained in more detail below. Copies of all these documents are available through the Government of Yukon website at www.miningyukon.com.

In developing a mine in Yukon, a mine owner must provide financial security to address the site's reclamation and closure liability. Outstanding reclamation and closure liability is based on the cost to reclaim and close the mine site, as detailed within the approved reclamation and closure plan. The reclamation and closure liability of a site is reassessed periodically (minimum every two years) to reflect the impact of operations as well as progressive reclamation.

Pursuant to the *Act*, the Security Regulation identifies the forms of security that can be required for quartz mining projects and outlines the process for determining the amount of security required and the method for return. A plain language guide is available online under the Yukon Mine Site Reclamation and Closure Policy, also located at www.miningyukon.com.

The Yukon Mine Site Reclamation and Closure Policy is Government of Yukon's overarching policy for the reclamation and closure of quartz mines within Yukon. The policy delineates the following general principles:

- The mine operator is responsible for the reclamation, care, maintenance and abandonment of the site in accordance with the existing legislative framework and the goals and principles in this policy and accompanying guidelines. Every mine operator is required to fully fund the cost of reclamation and closure in a manner set forth in this policy.
- Reclamation and closure planning and implementation provides for progressive reclamation to the greatest extent practical during mining operations.
- The precautionary approach will be used in reclamation and closure planning.
- The adaptive management approach is recognized as a valuable tool for reclamation and closure planning.
- Reliance on long term active treatment is not considered acceptable for reclamation and closure planning.
- The implementation of this policy is carried out in a manner that recognizes the value of mining to the social and economic advancement of Yukon.

3.2 Parts of the Quartz Mining License

The Quartz Mining License is the key regulatory requirement for permitting a quartz mine. The license serves as a regulatory and decision making framework that delineates how a company will develop and manage the mine over the life of the project. The license has been organized to recognize the evolution of project design and to provide mining clients with the flexibility required to be innovative.

The licensing process begins with the submission of a letter of intent by the proponent requesting a Quartz Mining License (see section 4.3). This notification is used to formalize the intent to proceed with licensing, enabling EMR staff to work with clients on the specific information required for the project.

As part of the licensing process, clients are required to submit various plans containing the detail needed to understand the functionality and feasibility of the proposed development. The types of plans required may best be described to belong in two categories depending on the stage of project development: (1) Mine Development, which provides clients with permission to proceed with initial site construction activities that do not require a Water Licence; and (2) Mine Construction and Operation, which enables clients to proceed with mine construction and operation after the issuance of the Water Licence. Requirements of the license at the different stages in development are discussed below.

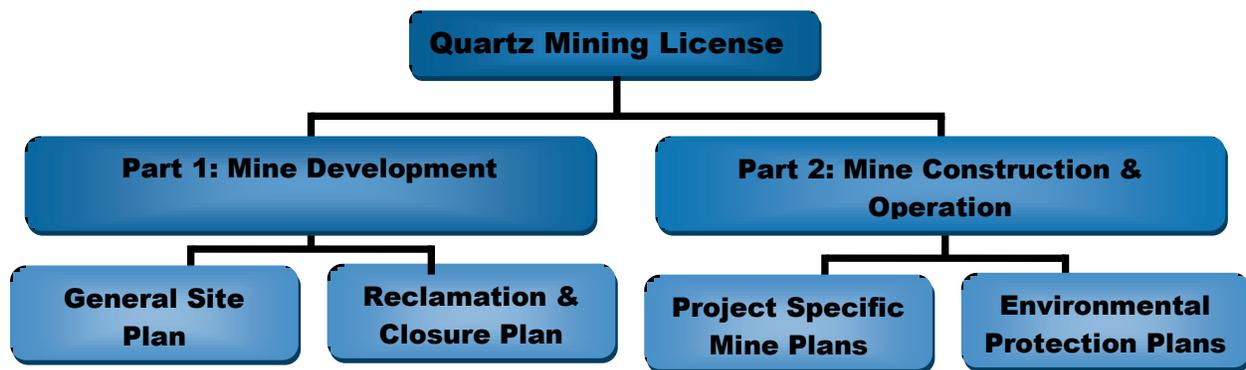


Figure 1.0: Quartz Mining License Plans Chart

Part 1: Mine Development

Mine Development requires the submission of two plans: the General Site Plan and the Reclamation and Closure Plan.

The General Site Plan details planned initial site construction activities and environmental management considerations.

The Reclamation and Closure Plan is intended to describe those objectives, plans and activities to be undertaken by the client. This plan also details required security information. Once development and production activities have terminated, the approved Reclamation and Closure Plan must be implemented. Monitoring must be conducted by the client to ensure the effectiveness of the mitigation measures.

Part 2: Mine Construction and Operation

Mine Construction and Operation requires the submission of mine specific plans that detail infrastructure components such as roads, mine operations, tailings management facilities, processing facilities, etc. With commencement of construction and operations, clients will be required to meet monitoring and reporting requirements as well as seek approval for plan amendments. Progressive reclamation should be ongoing throughout the duration of the project.

The specific information requirements for the various plans are described in section 4.0 of this guide.

The Quartz Mining License itself requires approval and signing by the Minister of Energy, Mines and Resources, whereas all plans submitted under the license may be approved by the Chief of Mining Land Use. By enabling the Chief of Mining Land Use to approve plans, the Yukon government is able to ensure a faster turn-around and reduces the need for license amendments.

Timelines associated with the license and the required information to meet the timelines are contained within the text of the license. Schedules appended to the license contain a listing of mineral claims covering the project and plans to be submitted for approval.

To facilitate innovations that come from the formation of plans and engineered designs, the Quartz Mining License process provides for the flexibility needed to improve plans without delays in the regulatory process. For instance, if during detailed design, a client identifies efficiency in hauling distances by moving the proposed mill 10 metres, an updated plan may be submitted for approval by the Chief of Mining Land Use.

Where a site is authorized under a Mining Land Use Approval, it may be appropriate to maintain this approval in addition to a new Quartz Mining License. Yukon government's EMR - Mineral Resources Branch will be able to advise clients on the best approach to proceed with specific licenses. Further, any components that are not proposed to occur within the claims area (for example a road on airstrip) will require a permit under the *Territorial Lands (Yukon) Act*.

3.3 Licensing and Assessment Processes

The chart below provides an overview of the Quartz Mining License process as well as its interaction with the assessment and water licensing processes. Where appropriate, Quartz Mining License Guide sections have been listed.

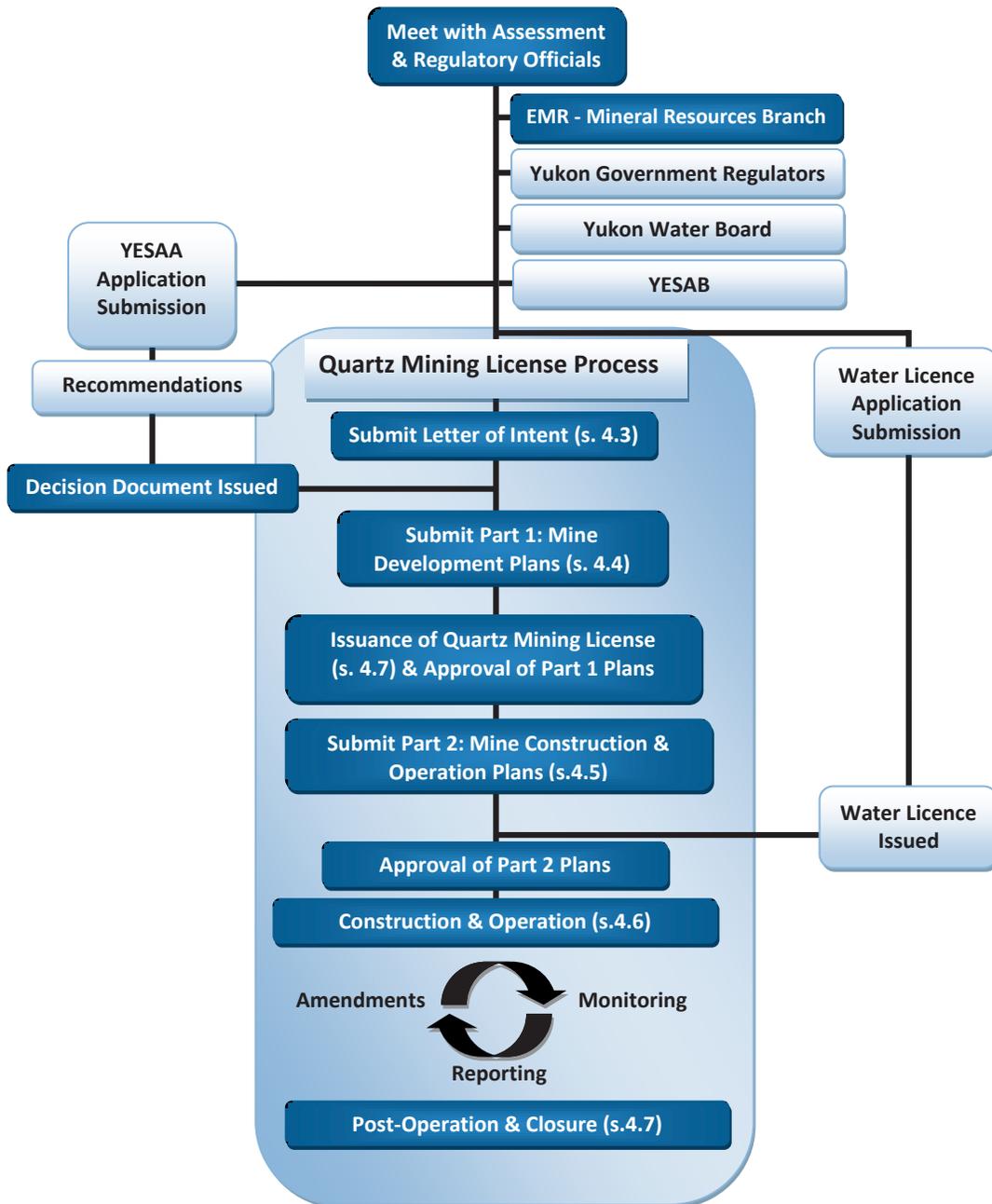


Figure 2.0: Quartz Mining Licensing and Assessment Processes Chart

4.0 Information Requirements and General Guidance

4.1 Initiating the Process

Prior to formally commencing the process, clients meet with Government of Yukon representatives through EMR's Mineral Resources Branch to identify:

- client background and details;
- intended mine development;
- baseline work undertaken;
- expected timeline for mine development; and,
- other information that may be pertinent to the permitting process.

4.2 Coordinating the Assessment and Licensing Applications

It is recommended that a roundtable meeting be held with the various regulators and assessment staff where clients present an overview of the proposed project and discuss the coordination of assessment and permitting.

The meeting will help clients gain a better understanding of the processes involved. A Quartz Mining License client's checklist for clients is provided within Appendix B and an example of a typical permit and assessment sequence has been provided in Appendix C.

4.3 Letter of Intent

A Letter of Intent is required for the initiation of the Quartz Mining License process. The submission of this letter is a requirement of the *Act* and is intended to introduce the project to the regulatory system.

4.4 Part 1: Mine Development

As mentioned in section 3.2, the Quartz Mining License is a single license divided into parts. Part 1 of the license requires the submission of two plans for Mine Development which outline the activities that the client proposes to undertake in advance of obtaining a Water Licence. Only those activities which do not require a Water Licence may proceed as part of this phase. Part 1 of Mine Development requires the submission of a General Site Plan and a Reclamation & Closure Plan.

4.4.1 General Site Plan

It is recognized that the details of mine development and its associated schedule will evolve through the design and permitting process. For this reason, EMR requests the provision of a General Site Plan. Within this plan, the client provides an overview of the vision and objectives for development. This plan also includes a preliminary schedule for the proposed project.

All primary activities as related to site preparation are encompassed within this plan and reflect the status of the Water Licence (i.e. if the Water Licence has not been issued, this section does not include any works that require a Water Licence). EMR Mineral Resources Branch should be contacted to ensure the appropriate project components have been included. The areas listed below may be described within the General Site Plan if they relate to a specific project.

Transportation Infrastructure

This section would encompass infrastructure to detail the transportation requirements during site development and operation. Depending on the specific project location and the infrastructure requirements, the plan may include:

- information regarding use of existing access;
- plans for upgrading existing roads;
- plans and design for new roads, including gate installation, if applicable;
- plans and design for the creation/upgrade of an airstrip; and,
- winter haulage plans.

Transportation plans should be sufficient to meet the demands of any proposed works, including the movement of equipment to the site.

Site Layout and Infrastructure Construction

This section of the plan identifies the proposed layout of infrastructure and any works to be undertaken for site preparation. The site layout and infrastructure portion of the plan includes, but is not limited to, descriptions of the industrial complex, the mine and camp set-up, borrow sources and fuel storage. The identification of site layout in relation to mineral claims is also provided as part of the plan.

Environmental Management Plan

The Environmental Management Plan should address concerns that may occur with the implementation of Part 1 of the Quartz Mining License. It is recognized that these plans will evolve with the design of the project. Under the Environmental Management Plan, standard operating procedures are identified, detailed and followed to ensure that construction and development activities have a minimal impact on the environment.

While it is recognized that there are general environmental techniques and procedures to minimize environmental damage, site-specific conditions may require a solution unique to the project location. There are a number of components that may form part of the Environmental Management Plan, and details should be discussed with EMR Mineral Resources Branch who can help clarify the specific considerations to be included.

Below are the typical components of the Environmental Management Plan:

a. Sediment and Erosion Control

Controlling erosion and sedimentation is essential to minimizing potential effects to the environment and ensuring the stability of infrastructure. In general, activities are managed to:

- minimize the disturbance to vegetation and limit the area of clearing;
- minimize the length of time that unstable soils, susceptible to erosion, are exposed;
- stabilize soils susceptible to erosion as soon as practical by seeding or installing erosion control measures; and,
- ensure effective installation of sediment control measures (silt fences, sediment traps, etc.) before the commencement of works.

b. Environmental Monitoring

A monitoring plan is also to be included within the Environmental Management Plan. The purpose of monitoring is to track the effects of site activities so that potential environmental impacts are identified before they become a problem. Environmental monitoring will ensure a high standard of environmental protection and compliance with all regulatory requirements.

Although monitoring activities and priorities vary between sites and construction works, these components are described for activities proposed to be conducted within Part 1 of the Quartz Mining License.

c. Emergency Response

Areas to be addressed within this section include hazardous material, explosives and spill contingencies. In Yukon, the transportation, storage and handling of hazardous chemicals, fuel and other hydrocarbon products, such as motor oil and lubricants, are governed by a number of territorial and federal acts, regulations and guidelines. The general intent of legislation and regulations governing these activities is to protect human health and property, ensure public safety, protect wildlife and the ecosystem and avoid environmental damage by reducing the risk and impacts of spills and leaks.

Under Yukon's Quartz Mining Land Use Regulation, the Government of Yukon governs the storage and handling of petroleum products and chemicals by requiring:

- secondary 110% containment for fuel in storage over 4,000 litres;
- containment, clean-up and reporting of fuel spills; and,
- appropriate handling and disposal of waste petroleum products.

The Environmental Management Plan must include a spill contingency plan that delineates the steps for response and clean-up of any spills of fuel or other hazardous materials. The following are considered within a spill plan:

- personal safety measures;
- protection of human health and safety;
- identification of products and potential dangers;
- suggested emergency action plan;
- contact information in case of a spill; and,
- worker education.

d. Wildlife Protection

In this section, the client will outline how they propose to avoid wildlife disturbance at the site through:

- the establishment of wildlife protection policies;
- educate employees and contractors about potential wildlife issues and mitigation;
- manage activities and transportation on access roads and trails to avoid wildlife mortality;
- eliminate movement barriers from wildlife access routes; and,
- avoid disturbance or harassment of wildlife in the area of production.

e. Heritage Resources Management

The Environmental Management Plan includes a section which identifies how a project will ensure the protection of heritage resources. The *Historic Resources Act* requires the reporting of archaeological, palaeontological (fossil bones) or other objects that are likely of historic value, or any remains that may be human. Sites containing archaeological or paleontological remains or burial sites must be marked and protected by the operator/mining client, from any further disturbance and the Chief of Mining Land Use must be promptly notified. If archaeological objects are found please contact the Yukon Archaeologist; if palaeontological objects (ice age animal bones) are found contact the Yukon Palaeontologist.

f. Worker's Health and Safety

Clients are bound by the rules and regulations of the *Workers' Compensation Act*. For the purpose of the Quartz Mining License, the Environmental Management Plan should include consideration of worker health and safety as it relates to mine development and emergency response plans.

4.4.2 Reclamation and Closure Plan

Reclamation and closure is recognized as an integral part of mining, and therefore is included as part of pre-construction planning. Reclamation refers to activities undertaken by the client that are intended to clean a site, or return it to pre-development conditions both for temporary and permanent closure. Through reclamation, a client minimizes the likelihood of adverse environmental impacts over a sustained period of time.

According to Yukon Mine Site Reclamation and Closure Policy, the Yukon public expects responsible development based on principles of sustainable development, including comprehensive measures for the protection of the environment and public health and safety. Stemming from this policy, the Mine Closure Technical Guidelines delineate the following principles:

- to ensure the development and viability of a sustainable, competitive and healthy quartz mining industry that operates in a manner that upholds the essential socio-economic and environmental values of the Yukon;
- to ensure mine operators manage their mine sites in an environmentally sound manner and reclaim these sites to meet the principles stated in this policy;
- to fully protect public and environmental health and safety and ensure that any potential discharges during mine operation and following mine closure will be managed to prevent harm to the receiving environment or to the public;
- to ensure a government-approved reclamation and closure plan, prepared by the mine operator, to return the mine site to a viable and, wherever practical, self sustaining ecosystem, is in place prior to mine development;
- to ensure any approved reclamation and closure plan is updated by the mine operator periodically to reflect results, of new information (such as ongoing environmental and technical studies), changes to operations, and progressive reclamation, and that this updated plan is approved by government and financial security requirements are adjusted accordingly; and,

- to ensure mine operators provide financial assurance in the form of security and that the cost of reclamation (including but not limited to shutdown, closure and post-closure, and related environmental monitoring in the approved reclamation and closure plan) is met by the mine operator.

For more information on the development of a Reclamation & Closure Plan please refer to the Yukon Mine Site Reclamation and Closure Policy.

Financial liability is considered and addressed within the overall Reclamation and Closure Plan. Financial liability is based on the type of development, proposed activities and their specific location. Security is obtained by Government of Yukon to ensure that where mine development has been undertaken, government would be able to reclaim an area if a client was unable to fulfill this obligation.

Within the development of plans, the client is to provide an understanding of the financial liability associated with a site throughout the life of the project. The license will provide direction on the financial security that a client will be required to provide.

For more information regarding securities, please refer to the Financial and Technical Guideline created by EMR. The flexibility of the process enables the client to proceed with work in a manner that meets the specific needs of their project while adhering to Yukon permitting requirements.

4.5 Part 2: Mine Construction and Operation

The second part of the Quartz Mining License requires the provision of plans detailing all mining components throughout the life of the mine. The preparation of construction and operation plans will relate directly to the type of mining proposed. For instance, if a mine is proposed to utilize open pit mining techniques, then a plan detailing design, construction, operation, and reclamation will be required for this component.

It is important to ensure that all components have been designed to meet the proposed scale of development. For example, proposed road developments will be required to handle the traffic associated with construction, operation, and closure. Please ensure that all phases of development have been considered. Further, all engineered drawing must be sealed by a professional engineer registered within Yukon.

By working with EMR Mineral Resources Branch, a client can identify the specific information that will be required and the best way to package/present the information for review and approval by the Government of Yukon.

4.5.1 Project Specific Mine Plans

Mine Construction and Operation requires the submission of more in-depth plans for infrastructure development. A list of potential mine components and information requirements has been included below. Please note clients should contact the EMR Mineral Resources Branch to ensure they understand the requirements specific to their project.

Transportation Infrastructure

Information should include the details of all transportation activities and any designs that will be used to meet the proposed mine development, operation and closure plans. Consideration should be given to all seasons of proposed use and the load requirements for infrastructure construction, operation and decommissioning.

Underground Mine Development and Operation

For projects involving underground mining, include the following information:

- planned mining approach;
- pre-construction plans and drawings;
- list of the main equipment to be used;
- plans for ventilation and escape;
- construction details for ramps and rises, and portal development;
- plans for backfilling, development mining, pre-sequencing and scheduling, haulage, explosives management, ground support, waste rock handling, mine stability monitoring, etc.;
- and,
- identify the organizational and management structure as well as the proposed schedule for work.

Open Pit Development and Operation

If open pit mining will be undertaken, include the following information:

- planned mining approach;
- pre-construction plans and drawings;
- list of the main equipment to be used;
- designs for open pit development;
- plans for development, pre-sequencing and scheduling, haulage, explosives management, waste rock handling, etc.; and,
- identify the organizational and management structure and the proposed schedule for work.

Mill Construction and Operation

Plans for mill development and operation include:

- mill design;
- details of milling rates, production rates, and methods;
- schedule for ramp-up and start dates;
- plans for and identification of stockpiles;
- details for reagent use and storage; and,
- requirements for load-out and trucking.

Tailings and Water Infrastructure Management

Tailings management includes:

- strategy for containment;
- summary of site investigations and outcomes;

- design for containment and dam structures, spillways, channels, and seepage collection; and,
- plans for construction and operation of all facilities.

In addition, a water balance/management plan should be provided for the site for all stages of development, including designs and plans for all water structures.

Overburden/ Borrow Pits/ and Waste Rock

Include a description of mining methods, stripping ratios and the amount of ore, waste and overburden to be removed per year. This plan includes the following information for each component utilized:

- method for extraction;
- method for storage;
- locations of each site and plans for characterization to be completed; and,
- quantities required or created and stored.

4.5.2 Environmental Protection Plans

The Mine Construction and Operation - Environmental Protection requires the submission of various plans which may include but are not limited to:

- Sediment and Erosion Control;
- Environmental Monitoring and Surveillance;
- Hazardous Materials Management;
- Spill Contingency;
- Heritage Resources Protection;
- Wildlife Protection;
- Waste Management; and,
- Emergency Response.

All adaptive management plans that are used to manage environmental considerations should outline and describe:

- management objective;
- monitoring criteria;
- thresholds for action; and,
- reporting methods.

In this case, environmental considerations include both general and site specific environmental requirements outlined in the license.

4.6 Issuance of the Quartz Mining License

The general components held within the license include:

- approval and signature of the Minister of Energy, Mines and Resources and the effective date of the license;
- definitions that pertain to the license and project which stem from the act and regulations;

- an outline of contact information and the correspondence which will be undertaken as part of the license;
- an outline of the authorized activities and key license dates;
- license term and conditions that will apply to the proposed mine development for production and reclamation;
- the area in which development and production will be permitted to take place;
- identification of the mining method, reserves and production rates that are permitted as part of the license;
- listing of plans to be submitted for approval; and,
- delineation of licensee obligations such as the provision of designs that are sealed by a professional engineer.

The license with terms and conditions will be issued after the completion of the YESSA review assessment process, the issuance of a Decision Document and the finalization of acceptable Mine Development plans. It will be phased to require the submission, review and approval of various plans prior to the commencement of mine construction and operation.

4.7 Construction and Operation of a Mine

Contacts between the client and EMR will be ongoing throughout the process from the planning and permitting phase through to mine closure.

After full implementation of the Quartz Mining License, clients can begin mine construction and operation. In recognition of the evolution that occurs as a client moves through detailed design and on the ground development, EMR has provided for flexibility within its permitting system. The license will clearly identify the expectations that Government of Yukon has for a client throughout the duration of the license. During this process clients will be required to:

- adhere to the reporting requirements contained within their Quartz Mining License;
- submit as-built drawings for mine infrastructure;
- provide various reports such as an Annual Report and an updated Reclamation & Closure Plan;
- provide amended plans and designs for review and approval where appropriate; and,
- provide monitoring results as required by their Quartz Mining License.

The quartz mining process licensing has been designed to encourage innovation through design and project implementation. There may be instances in which a plan will need to be updated or altered to reflect local conditions or changes in technology or the results of monitoring and the implementation of adaptive management plans. Where this occurs, clients are encouraged to update the original plans submitted to EMR. This process is used to ensure projects are developed in an environmentally and socially sustainable manner.

Clients should be certain that the major components of their project are fixed prior to environmental assessment and then smaller detailed design alterations could be dealt with by the regulator through the permitting process. For example, if open pit mining is proposed as part of the assessment and the discovery of future reserves requires clients to pursue underground mining, the project may require another assessment.

4.8 Post-Operation and Closure

Progressive reclamation should be an ongoing activity through all stages of mine development and production with the approved Reclamation and Closure Plan being implemented once the decision to cease mining has been made. As per the approved Plan, one of the key requirements for the mine operator will be monitoring to determine the effectiveness of their mitigation measures. The duration of this monitoring will be determined by the risks associated with the potential environmental impacts. Clients are also responsible for post closure reporting and compliance. Appropriate security will continue to be held by the Government of Yukon until the success of the reclamation has been proven.

5.0 References and Resources

Government of Yukon Contact:

Mineral Resources Branch
Department of Energy, Mines and Resources (EMR)
Government of Yukon
Box 2703 (K-9)
Whitehorse, Yukon Y1A 2C6
phone: (867) 633-7952
fax: (867) 456-3899
email: mining@gov.yk.ca

Internet Web Sites of Interest:

EMR - Mineral Resources Branch: www.emr.gov.yk.ca/mining

- Quartz Mining Act
 - Reclamation and Closure
 - Financial and Technical Guidelines
 - Royalty Provisions
 - Security Regulations
- } www.emr.gov.yk.ca/mining/hardrockmining.html

Yukon Environmental and Socio-economic Assessment Board: www.yesab.ca

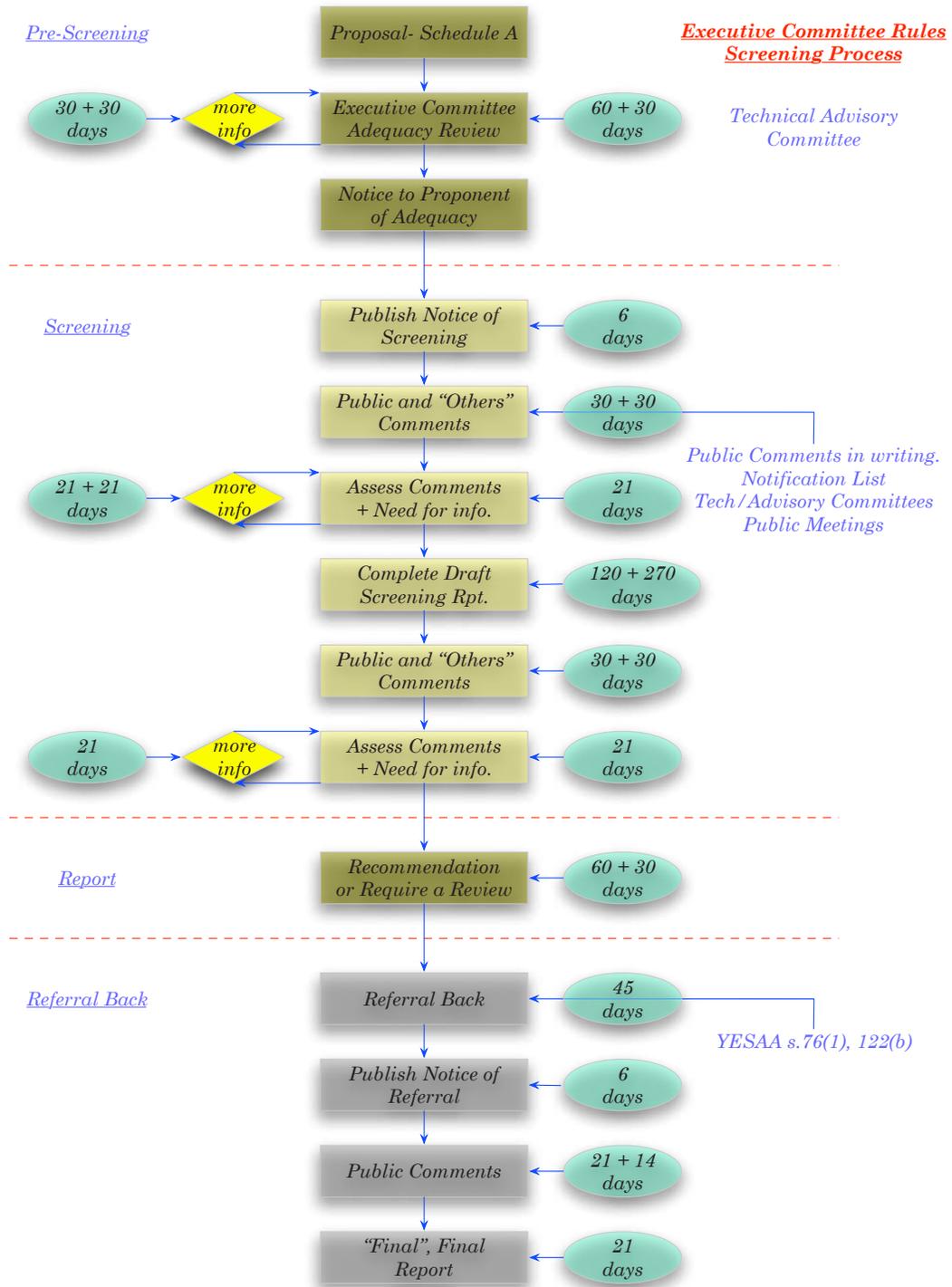
Yukon Water Board: www.yukonwaterboard.ca

Yukon Workers' Compensation Health and Safety Board: www.wcb.yk.ca

Environment - Environmental Affairs:

www.environmentyukon.gov.yk.ca/branches/environmental_programs.php

Appendix A YESAB Executive Committee Rules Screening Process



For more information visit www.yesab.ca

Appendix B Quartz Mining License Checklist

Below is a list of steps which clients undertake in pursuing a Quartz Mining License. Where appropriate, sections associated with the Quartz Mining License Guide have been included to provide reference information.

<p>Initiation of the Quartz Mining License Process</p> <ul style="list-style-type: none"><input type="checkbox"/> Meet with Energy, Mines and Resources (EMR) Mineral Resources Branch.<input type="checkbox"/> Provide Regulators and Assessors with an Overview of the Proposed Development.<input type="checkbox"/> Prepare and Submit a Letter of Intent (s. 4.3).
<p>Part 1: Mine Development</p> <ul style="list-style-type: none"><input type="checkbox"/> Meet with EMR staff to discuss and define information requirements.<input type="checkbox"/> Prepare a General Site Plan and a Reclamation and Closure Plan for Part 1: Mine Development (s. 4.4).<input type="checkbox"/> Submit the Part 1 plans.<input type="checkbox"/> Meet with EMR staff to ensure that all information requirements have been met.<input type="checkbox"/> Provide any additional information that may be requested to complete Part 1 of the license requirements.<input type="checkbox"/> Review all license documents to ensure plans and timelines are understood.
<p>Part 2: Mine Construction and Operation</p> <ul style="list-style-type: none"><input type="checkbox"/> Meet with EMR staff while preparing Part 2: Mine Construction and Operation Plans, to ensure appropriate level of detail is provided in the correct format.<input type="checkbox"/> Prepare Part 2: Mine Construction and Operation Plans (s. 4.5).<input type="checkbox"/> Submit the Part 2 plans.<input type="checkbox"/> Meet with EMR staff to ensure that all information requirements have been met.<input type="checkbox"/> Provide any additional information that may be requested to complete Part 2 of the license requirements.<input type="checkbox"/> Review all license documents to ensure plans and timelines are understood.
<p>Construction and Operation of a Mine</p> <ul style="list-style-type: none"><input type="checkbox"/> During the construction and operation of the mine provide ongoing monitoring reports to government regulators (s. 4.6).<input type="checkbox"/> Apply for amendments to project design and operations as appropriate.<input type="checkbox"/> Provide periodic updates to Reclamation & Closure Plan and security adjustment.<input type="checkbox"/> Ongoing progressive reclamation.
<p>Post-Operation and Closure</p> <ul style="list-style-type: none"><input type="checkbox"/> Implement Closure Plan.<input type="checkbox"/> Monitor to ensure reclamation effectiveness.

Appendix C Relative Timelines from Mine Start-Up to Closure

Assessment and Regulatory Step	Timelines: Relative Sequencing of Events from Mine Start-Up to Closure
Assessment and Regulatory Start-up Tasks	
Introductory Meetings with EMR – Mineral Resources Branch	[Redacted]
Introductory Meetings with Yukon Government Regulators	[Redacted]
Introductory Meetings with Yukon Water Board	[Redacted]
Introductory Meetings with YESAB	[Redacted]
YESAA Assessment Process	
Preparation of YESAA Project Proposal	[Redacted]
Submission of YESAA Project Proposal	[Redacted] ♦
YESAB Adequacy Review	[Redacted]
YESAB Screening	[Redacted]
Decision Document	[Redacted]
Quartz Mining License Process	
Submit Letter of Intent	[Redacted] ♦
Yukon Government QML Review	[Redacted]
Submit Part 1: Mine Development Plans	[Redacted] ♦
Issuance of License and Approval of Part 1 Plans	[Redacted] ♦
Submit Part 2: Mine Construction and Operations Plans	[Redacted]
Approval and Implementation of Part 2 Plans	[Redacted]
Mine Construction and Operation: Monitoring/Reporting/Amendments/Progressive Reclamation	[Redacted]
Water Licence Process	
Internal Review of Application	[Redacted]
Formal Processing of Licence	[Redacted]
Issuance of Licence	[Redacted] ♦
Mine Construction	
Non-Water Related Construction	[Redacted]
Mine Construction	[Redacted]
Reclamation and Closure	
Implement Closure Plan	[Redacted]
Monitor Post-Closure	[Redacted]

