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## INFORMATION NOTICE

July 2016

Ministry of Environment

# An Overview for the Mining Pre-application Process

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### What is the Purpose of this Information Notice?

This Information Notice is intended to provide proponents of mining projects with an overview of the pre-application and screening process for a waste discharge application required under the *Environmental Management Act* (EMA). Guidance documents related to the pre-application process include: EMA *Technical Guidance 1: Environmental Impact Assessment and Technical Assessment Report Terms of Reference*; and EMA *Technical Guidance 2: Table of Concordance*.

Proponents are strongly advised to review the Ministry of Environment [website](#), including the [Mines and Smelting](#) section, to access the related guidance documents listed above, as well as other appropriate guidance documents such as the [Joint Application Information Requirements for Mines Act and Environmental Management Act Permits](#) document. This document sets out the information that is required to support a joint application for a Mines Act permit issued by the Ministry of Energy and Mines and an effluent discharge permit under EMA issued by the Ministry of Environment.

This Information Notice is divided into three sections: Section 1: Pre-Application Process; Section 2: Table of Concordance; and Section 3: Environmental Impact Assessment and Technical Assessment Report Terms of Reference.

## Section 1: Pre-Application Process

### Purpose

The pre-application process is a series of steps and tools designed to facilitate the discussion and documentation of the development of application requirements. The ultimate goal is to make the application review process more efficient by providing clear direction on the specific project based application requirements.

## Pre-Application Process Overview

The pre-application process involves two parts:

1. Technical Gate Process.
2. Screening Gate Process.

The final outcome of the pre-application process is the acceptance or refusal of the draft application package for a full review by the Ministry of Environment. Please refer to Tables 1 and 2 for details.

Figure 1. The Pre-Application Process.

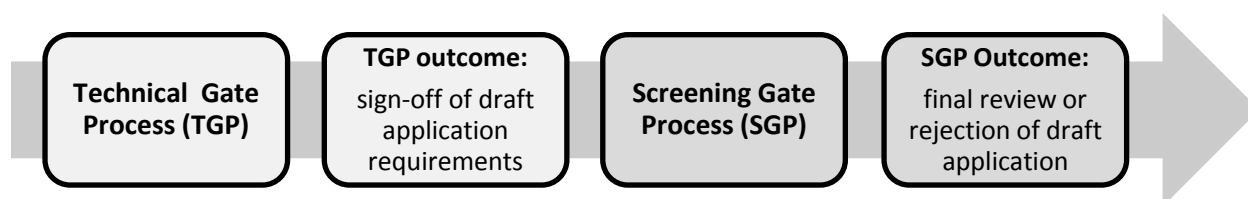


Table 1. Overview of the Technical Gate Process.

1) Technical Gate Process			
Purpose	Steps	Inputs	Outputs
To determine and document: <ul style="list-style-type: none"> <li>• The technical information required for the Technical Assessment Report.</li> <li>• First Nations and public engagement requirements.</li> <li>• Other administrative or technical requirements.</li> </ul>	<ol style="list-style-type: none"> <li>1. The applicant submits the Preliminary Information Package.</li> <li>2. The Ministry of Environment reviews the submitted information.</li> <li>3. Pre-application meeting(s) take place to discuss the draft application requirements.</li> <li>4. The final draft application requirements, detailed in the Information Requirements Table &amp; Application Instruction Document, are agreed upon and signed-off.</li> </ol>	<ul style="list-style-type: none"> <li>✓ Preliminary Information Package.</li> <li>✓ The Application Instruction Document and the Information Requirements Table.</li> <li>✓ Pre-application meeting(s) attended by the Environmental Protection Officer, appropriate Subject Matter Experts, and the applicant with their supporting staff or contractors.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Completed and signed Application Instruction Document and Information Requirements Table.</li> </ul>

★ *The Application Instruction Document lists the basic administrative information requirements and notification requirements of the draft application. When required, the Information Requirements Table lists the detailed technical*


**Table 2. Overview of the Screening Gate Process.**

<b>2) Screening Gate Process</b>			
<b>Purpose</b>	<b>Steps</b>	<b>Inputs</b>	<b>Outputs</b>
To determine if: <ul style="list-style-type: none"> <li>The draft application adheres to the requirements agreed to at the Technical Gate, as documented in the Application Instruction Document and Information Requirements Table.</li> <li>The draft application is acceptable for a full review by the Ministry of Environment.</li> </ul>	<ol style="list-style-type: none"> <li>The applicant submits the draft application.</li> <li>The Ministry of Environment screens the draft application (against the requirements in the Application Instruction Document and Information Requirements Table).</li> <li>The ministry either rejects the draft application or accepts it for a full review.</li> </ol>	<ul style="list-style-type: none"> <li>✓ Draft application package.</li> <li>✓ Application Instruction Document.</li> <li>✓ Information Requirements Table.</li> <li>✓ Table of Concordance.</li> <li>✓ Technical Assessment Report.</li> <li>✓ Environmental Protection Officer/Subject Matter Expert review.</li> <li>✓ Application fees.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Acceptance or refusal of the draft application package for a full review by the Ministry of Environment.</li> </ul>

## Pre-Application Tools

### Screening Thresholds

The Ministry of Environment uses thresholds and other guidance tools in discussions with applicants to determine whether or not a project will require an EMA authorization (e.g. the Waste Discharge Regulation – [Schedule 1](#) and [Section 65](#) of EMA).

 *If an EMA authorization is required, the applicant enters the pre-application process.*

### Pre-Application Meeting(s)

In advance of the first pre-application meeting, the applicant must provide the Preliminary Information Package to the Ministry of Environment. This package includes a Project Description and Overview, and a Baseline Information Summary as described in [Technical Guidance 1: Environmental Impact Assessment and Technical Assessment Report Terms of Reference](#). It is also recommended that a draft

Information Requirements Table be included to streamline the discussions.

### **Information Requirements Table**


The Information Requirements Table is based on the Table of Concordance (see Section 2) and is intended as a guide to assist proponents by identifying the potential project specific information requirements for the Technical Assessment Report and Environmental Impact Assessment Report. Also, should it be required, the Information Requirements Table defines and tracks the methods associated with specific information requirements. During the pre-application meeting(s), the Ministry of Environment and the applicant discuss and agree upon which items in the Information Requirements Table will be included in the Technical Assessment Report.

### **Method Review**

The method review is part of the Information Requirements Table discussion and agreement between the Ministry of Environment and the applicant on any specific methods that the applicant will use in the Technical Assessment Report, based on the specifics of each project. Required methods will be documented by completing the appropriate columns in the Information Requirements Table. Method requirements may range from simple confirmation of adherence to established Ministry of Environment guidance (e.g. adherence to the [Water and Air Baseline Monitoring Guidance Document](#)), to describing complex, site-specific modelling (e.g. numerical groundwater modelling). The intent of documenting required methods during the pre-application process is to streamline the Environmental Impact Assessment review of the application by the Ministry of Environment after it passes screening. For more complex methods, a Method Package (a letter or report detailing the method(s)) may be required.

### **Application Instruction Document**

The Application Instruction Document is a letter used to summarize other information required for a draft permit application. It includes the Information Requirements Table, requirements for public and First Nation engagement, and any additional project specific application requirements. The Ministry of Environment sends the Application Instruction Document and the Information Requirements Table to the applicant to be signed. Once they are signed by both the Ministry of Environment and the applicant, the Technical Gate process is complete.

 *If the draft application adheres to the requirements in the Application Instruction Document and Information Requirements Table then it should be acceptable for a full review by the Ministry of Environment. If accepted, the Screening Gate and pre-application processes are complete.*

### **Preliminary Information Package**

The applicant submits the Preliminary Information Package to the Ministry of Environment prior to the first pre-application meeting. The package is intended to provide the ministry with an overview of the proposed project (or proposed changes to an existing project) and a summary of the baseline monitoring and assessment information. It provides just enough detail to assist with the initial

consideration of the information requirements that will be outlined in the Information Requirements Table. Its format is similar to the draft application (submitted later in the Screening Gate Process); however, the draft application is much more detailed (see Section 3). Two key aspects of the Preliminary Information Package are the *Project Description and Overview* and the *Baseline Information Summary*.

- **Project Description and Overview**

The Project Description and Overview is an important component of the Preliminary Information Package. Its purpose is to provide an introduction to the proposal; including background information on the mining project, the proponent, and an overview of the mine and development plans.

By providing information such as the project location, maps, conceptual site plans, proposed changes to existing sites, etc., the Project Description and Overview contributes to the pre-application discussions between the Ministry of Environment and the applicant and helps to ensure that the pre-application process runs smoothly and quickly.

- **Baseline Information Summary**

Another key component of the Preliminary Information Package is the characterization and presentation of baseline environmental conditions. This information is a critical element in discussions between the applicant and the Ministry of Environment regarding the Information Requirements Table. The summary should include a review and overview of existing baseline programs, results and assessments in order to:

- ✓ Describe meteorological and climatic conditions;
- ✓ Describe geology, geochemistry and topography;
- ✓ Characterize surface water hydrology and groundwater hydrogeology;
- ✓ Establish a water balance for the drainage area;
- ✓ Document surface water and groundwater uses within and downstream of the project area;
- ✓ Determine surface water, groundwater and sediment quality prior to disturbance; and
- ✓ Describe aquatic ecosystem attributes such as fish and fish habitat, tissue residues, and periphyton and benthic invertebrate communities.

★ *For draft applications proposing changes to an existing project, the baseline information summary should include an overview of monitoring programs and existing information.*

## **Modifying a Signed Information Requirements Table or Application Instruction Document**

As discussed, the final draft application requirements are detailed in the Information Requirements Table and the Application Instruction Document which are agreed to and signed by both the Ministry of Environment and the applicant. A signed Information Requirements Table or Application Instruction

Document may be modified after the pre-application process. However, modifying these signed documents is a formal process, and requires the applicant to make a request to the Ministry of Environment. The ministry then reviews the request, discusses it with the applicant and decides whether or not to accept the modification request. Acceptance will be based in large part on whether or not the request will result in an improved or more relevant draft application.

The formal nature of the modification request will ensure that both the Ministry of Environment and the applicant have the same expectations with which to prepare and to screen the draft application. If the requested modification is a major change to the proposed activities, the ministry may request re-starting the entire pre-application process to ensure the best direction can be supplied to the applicant.



## Section 2: Table of Concordance

### What is the Purpose of the Table of Concordance?

The [Table of Concordance](#) is intended as a guide to assist proponents by listing and locating the information contained in the comprehensive Technical Assessment Report and supporting Environmental Impact Assessment report for EMA applications for mines.

### How Should the Table of Concordance Be Applied?

The Table of Concordance should be used to inform reviewers about the contents of the Technical Assessment Report/Environmental Impact Assessment report, linking the application requirements set out in the Information Requirements Table to the contents of the technical aspects of the EMA application.

The Table of Concordance identifies where the information requirements depicted in the Application Instruction Document and Information Requirements Table are located within the application (e.g. where the information can be found in the accompanying Technical Assessment Report and Environmental Impact Assessment report). Additionally, the Table of Concordance lists the qualified professionals that prepared the information. The Ministry of Environment's Environmental Protection Division will then use the Table of Concordance as a tool to review the draft application. Only complete applications will be considered for detailed review and processing.

# Section 3: Environmental Impact Assessment and Technical Assessment Report Terms of Reference

## Purpose

The Terms of Reference for the Technical Assessment Report and Environmental Impact Assessment are intended for proponents of major mine projects applying for an effluent discharge permit under EMA. A detailed Technical Assessment Report and Environmental Impact Assessment report are part of the draft application and should contain the requirements outlined in the Information Requirements Table.

The primary purpose of the Technical Assessment Report is to provide the Ministry of Environment with enough information to understand the application fully as well as the potential impacts on the environment. The purpose of the Terms of Reference is to provide guidance about fulfilling the information requirements that will be required in the Technical Assessment Report as prescribed in the Information Requirements Table.



## Key Information Requirements of the Technical Assessment Report

### Project Description and Overview

An introduction to the draft application that provides background information on the mining project, the proponent, and an overview of the mine and development plans.

### Baseline Information

Characterization and presentation of baseline environmental conditions is required as it is a critical element in applying for permits under EMA. A baseline program must collect and assess sufficient physical, chemical and biological information to:

- ✓ Describe meteorological and climatic conditions;
- ✓ Describe geology, geochemistry and topography;
- ✓ Characterize surface water hydrology and groundwater hydrogeology;
- ✓ Establish a water balance for the drainage area;
- ✓ Document surface water and groundwater uses within and downstream of the project area;
- ✓ Determine surface water, groundwater and sediment quality prior to disturbance; and



- ✓ Describe aquatic ecosystem attributes such as fish and fish habitat, tissue residues, and periphyton and benthic invertebrate communities.

Proponents should also follow the [Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators](#) (ENV 2016) and the [B.C. Field Sampling Manual](#) (Clark 2003).

While the type and quantity of baseline data collected will vary by site, an application should include the following information:

<b>General Application Information Requirements</b>	
✓ <b>Summary</b>	An overview of the existing baseline environmental conditions.
✓ <b>Meteorology and climate</b>	A demonstration of how weather and climate will affect all aspects of the project.
✓ <b>Geology</b>	A description of regional and deposit (ore) geology.
✓ <b>Geochemistry</b>	Metal Leaching/Acid Rock Drainage characterization for all materials and mine components. Also, a description of the mineralogy and element content of the waste materials influencing site water chemistry.
✓ <b>Topography, surface drainage features and natural hazards</b>	A description of pre-mine topography and surface drainage features and information on any natural hazards relevant to the mine.
✓ <b>Water Quantity</b>	A summary of the results of the surface water hydrology study (a minimum of 2 years of data is recommended) and the groundwater study (a minimum of 1 year of quarterly data is recommended).
✓ <b>Water Quality</b>	A summary of the results of the water quality baseline. Including groundwater (a minimum of four quarterly samples over one year is recommended before permit application) and surface water (a minimum of monthly sampling for one year is necessary). To determine water quality guideline or objective attainment, 5 samples in 30 days during critical flows (high and/or low) or biologically relevant periods, are necessary.
✓ <b>Sediment Quality</b>	A detailed summary of sediment quality. Sampling should occur at a minimum of once per year during summer low flow periods.
✓ <b>Aquatic Resources</b>	Multiple years of data are recommended; including, information on periphyton and benthic invertebrate community measures, fish and fish habitat, and a tissue residue database.

## Discharges and Treatment

Detailed waste treatment and discharge information must be included. This information should establish the location, frequency, duration, quantity and quality of each of the proposed discharges. It should also include a description of the sources of waste (e.g. mine works contact water and process water), storage facilities and waste treatment works anticipated over the life of the mine. It must also describe the



design and intended performance of any proposed pollution control.

★ *The Ministry of Environment uses the Best Achievable Technology (BAT) policy in consideration of discharge standards.*

### **Environmental Effects Prediction**

The applicant must also assess potential residual environmental effects and evaluate the risks of the mine on human health and water users including aquatic and terrestrial resources. This predictive work considers the mine plan and proposed mitigation techniques, and builds on the available baseline environmental data and waste discharge characteristics anticipated over the life of the mine and post-closure.

★ *The environmental effects assessment should also consider cumulative effects within the watershed.*

### **Discharge and Environmental Monitoring Requirements**

The proponent must propose monitoring and reporting programs that enable the on-going evaluation of waste management performance, the receiving environment condition, and the evaluation of impact predictions made during the permit application.

Monitoring programs should include sites at reference or control locations, end of pipe, and exposure sites such as edge of initial dilution zone, and far field locations. Increased sampling frequency and a weight of evidence approach to the monitoring program is necessary early in mine life to support adaptive management.

Basic requirements include monitoring programs for discharge, receiving environment, and aquatic effects. Also, quality assurance protocols must be followed and described.

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*Over the life of the mine, monitoring requirements may be adjusted to reflect the results of ongoing assessment work.*

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★ *Applicants should develop the Technical Assessment Report with the assistance of appropriately qualified professionals.*

## **References**

British Columbia Ministry of Environment (ENV). 2016. Technical Guidance 6: Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators, Version 2, Environmental Protection Division and Environmental Sustainability and Strategic Policy Division, Victoria, B.C. Available online at:  
<http://www2.gov.bc.ca/gov/content/environment/waste-management/industrial-waste/mining-smelting/guidance-documents>

British Columbia Ministry of Environment (ENV). 2014. Technical guidance 1: Environmental impact assessment and technical assessment terms of reference. Victoria, BC (CA): Environmental Protection Division, Regional Operations Branch. Available online at:

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<http://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/sampling-methods-quality-assurance/bc-field-sampling-manual>