

Joint Information Requirements Table
for
Mines Act and Environmental Management Act Permits

Prepared by:

British Columbia Ministry of Energy, Mines and Petroleum Resources
&
British Columbia Ministry of Environment and Climate Change Strategy

September 2019

Introduction

The Information Requirements Table (IRT) serves as the single list of information requirements for a *Mines Act* (MA) permit application, issued by the Ministry of Energy, Mines and Petroleum Resources (EMPR), and an effluent discharge permit application under the *Environmental Management Act* (EMA), by the Ministry of Environment (ENV). The IRT is intended to:

- Be used in conjunction with the document entitled, “Joint Application Information Requirements for *Mines Act* and *Environmental Management Act* Permits”¹ and is intended for use in the development of both new and/or permit amendment applications. The information contained within the IRT will be developed to meet the unique nature of each project.
- It is also to be used in conjunction with all other guidance provided by either ENV or EMPR².
- Inform clients of the detailed information required to support MA and EMA permit applications and ensure all the information necessary to support the MA and EMA applications is provided; and
- Aid ENV and EMPR technical staff during the screening phase.

Overview

The IRT is intended to aid proponents and reviewers through the coordinated authorizations review process: during the pre-application stage to determine the information requirements, prior to submitting an application, and in screening, to ensure the required information has been included in the application submission.



It is recommended that proponents carefully review the entire Joint Application Information Requirements for *Mines Act* and *Environmental Management Act* Permits and consider any possible information requirements that may apply to their project proposal. If a specific methodology from the Joint Application Information Requirements guidance document is being proposed, this should be identified in the IRT and initially be described at a high level by proponents during the pre-application stage. More detail or specific Information Requirements can be added by adding in new lines into the IRT in the appropriate section.

After proponents have created a first draft of the IRT, reviewers will carefully review the project proposal and draft IRT prior to meeting with proponents to identify any missing information requirements or areas that require further discussion. The pre-application phase is most often an iterative set of discussions between the proponent and technical reviewers, regarding the information requirements and any specifics and/or methodologies that may be required in a joint MA/EMA permit application.

¹ <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/permitting>

² <https://www2.gov.bc.ca/gov/content/environment/waste-management/industrial-waste/mining-smelting>

Once complete, the province will send the final IRT to proponents for their use in preparing their application. A copy of the IRT must accompany the application submission by proponents and must indicate the locations of each information requirement within the application (far right-hand column).

It is important to note that changes in a project proposal may occur during the pre-application, screening, and/or review phases of the process. These changes may require a reassessment of the information required for an application. Proponents and reviewers will work together to discuss these changes and identify any revisions or additional information requirements.

Abbreviations

CEMP	Construction Environmental Management Plan
CSM	Conceptual Site Model
<i>EMA</i>	<i>Environmental Management Act</i>
EMPR	Ministry of Energy, Mines and Petroleum Resources
ENV	Ministry of Environment and Climate Change Strategy
IFC	Issued for Construction
IRT	Information Requirements Table
<i>MA</i>	<i>Mines Act</i>
ML/ARD	Metal Leaching and Acid Rock Drainage
WHMIS	Workplace Hazardous Materials Information System

Application Sign-Off

Project: _____

Applicant Representative:

Name: _____

Title: _____

Applicant Signature to indicate Agreement with Requirements

_____ Date signed: _____

Ministry of Environment and Climate Change Strategy, Environmental Protection Division

Application (AMS Tracking #: _____), Tentative Authorization #: _____

Ministry Representative:

Name: _____

Title: _____

Ministry Representative Signature to indicate Agreement with Requirements

_____ Date signed: _____

Ministry of Energy, Mines, and Petroleum Resources, Major Mines Office

Ministry Representative:

Name: _____

Title: _____

Ministry Representative Signature to indicate Agreement with Requirements

_____ Date signed: _____

<p style="text-align: center;">Information</p> <p style="text-align: center;">(refer to "Joint Application Information Requirements for Mines Act and Environmental Management Act Permits" for additional info on each section)</p>	<p style="text-align: center;">Requirements</p>	<p style="text-align: center;">Comments</p>	<p style="text-align: center;">Location in Final Application</p>
1. INTRODUCTION AND PROJECT OVERVIEW			
1.1. Application Background	Required <input type="checkbox"/> Methods		
1.2. Proponent Information	Required <input type="checkbox"/> Methods		
1.3. Project Overview			
1.3.1. Project History	Required <input type="checkbox"/> Methods		
1.3.2. Overview of Products and Markets, and Projected Project Benefits	Required <input type="checkbox"/> Methods		
1.3.3. Location, Access and Land Use	Required <input type="checkbox"/> Methods		
1.3.4. Mine Components and Off-Site Infrastructure	Required <input type="checkbox"/> Methods		
1.3.5. Mine Development and Operations	Required <input type="checkbox"/> Methods		
1.3.6. Mine Design and Assessment Team	Required <input type="checkbox"/> Methods		
1.3.7. Spatial Data	Required <input type="checkbox"/> Methods		
1.3.8. Concordance with Environmental Assessment Conditions	Required <input type="checkbox"/> Methods		
1.4. Regulatory Framework	Required <input type="checkbox"/> Methods		
1.5. Indigenous Engagement			
1.5.1. Background	Required <input type="checkbox"/> Methods		
1.5.2. Asserted and Established Rights and Interests	Required <input type="checkbox"/> Methods		
1.5.3. Engagement Efforts	Required <input type="checkbox"/> Methods		
2. BASELINE INFORMATION			
2.1. Summary	Required <input type="checkbox"/> Methods		
2.2. Meteorology and Climate	Required <input type="checkbox"/> Methods		
2.3. Geology			
2.3.1. Regional Geology	Required <input type="checkbox"/> Methods		
2.3.2. Deposit (Ore) Geology	Required <input type="checkbox"/> Methods		
2.3.3. Surficial Geology, Terrain, and Geohazard Mapping	Required <input type="checkbox"/> Methods		
2.3.4. Natural and Seismic Hazards Assessments	Required <input type="checkbox"/> Methods		
2.3.5. Soil Survey and Soil Characterization for Reclamation	Required <input type="checkbox"/> Methods		
2.4. Geochemical Characterisation and Source Terms			
2.4.1. Geochemical Characterization	Required <input type="checkbox"/> Methods		
2.4.2. Geochemical Source Terms	Required <input type="checkbox"/> Methods		
2.5. Topography and Surface Drainage Features	Required <input type="checkbox"/> Methods		
2.6. Water Quantity			
2.6.1. Surface Water Quantity	Required <input type="checkbox"/> Methods		
2.6.2. Groundwater Quantity	Required <input type="checkbox"/> Methods		
2.7. Water Quality			
2.7.1. Surface Water Quality	Required <input type="checkbox"/> Methods		
2.7.2. Groundwater Quality	Required <input type="checkbox"/> Methods		
2.8. Sediment Quality	Required <input type="checkbox"/> Methods		
2.9. Fisheries and Aquatic Resources			
2.9.1. Periphyton and Benthic Invertebrate Community Measures	Required <input type="checkbox"/> Methods		
2.9.2. Fish and Fish Habitat	Required <input type="checkbox"/> Methods		
2.9.3. Tissue Residues	Required <input type="checkbox"/> Methods		

<p style="text-align: center;">Information</p> <p style="text-align: center;">(refer to "Joint Application Information Requirements for Mines Act and Environmental Management Act Permits" for additional info on each section)</p>	<p style="text-align: center;">Requirements</p>	<p style="text-align: center;">Comments</p>	<p style="text-align: center;">Location in Final Application</p>
2.10. Ecosystems and Wildlife	Required <input type="checkbox"/> Methods		
2.11. Land Status and Use	Required <input type="checkbox"/> Methods		
2.12. Archaeology	Required <input type="checkbox"/> Methods		
2.13. Cultural Use	Required <input type="checkbox"/> Methods		
3. MINE PLAN			
3.1. Mine Plan Overview	Required <input type="checkbox"/>		
3.2. Existing Development	Required <input type="checkbox"/>		
3.3. Life of Mine Plan	Required <input type="checkbox"/>		
3.4. Detailed Five Year Mine Plan	Required <input type="checkbox"/>		
3.5. Mine Facility Designs and Development			
3.5.1. Open Pits	Required <input type="checkbox"/>		
3.5.2. Underground Workings	Required <input type="checkbox"/>		
3.5.3. Processing Plant (Mill) and Associated Facilities	Required <input type="checkbox"/>		
3.5.4. Tailings Storage Facility and Associated Infrastructure	Required <input type="checkbox"/>		
3.5.5. Waste Rock Dumps	Required <input type="checkbox"/>		
3.5.6. Water Management Structures	Required <input type="checkbox"/>		
3.5.7. Ore, Overburden, Soil and Construction Stockpiles	Required <input type="checkbox"/>		
3.5.8. Mine Access and Mine Haulage Roads	Required <input type="checkbox"/>		
3.5.9. Power Supply and Distribution Infrastructure	Required <input type="checkbox"/>		
3.5.10. Explosives Storage Facilities	Required <input type="checkbox"/>		
3.5.11. Ancillary Facilities and Support Infrastructure	Required <input type="checkbox"/>		
4. RECLAMATION AND CLOSURE PLAN			
4.1. End Land Use and Capability Objectives	Required <input type="checkbox"/>		
4.2. Reclamation Approaches			
4.2.1. Soil Resources	Required <input type="checkbox"/>		
4.2.2. Landform Design and Erosion Control	Required <input type="checkbox"/>		
4.2.3. Revegetation Strategy	Required <input type="checkbox"/>		
4.2.4. Progressive Reclamation/Sequencing	Required <input type="checkbox"/>		
4.2.5. Reclamation Research	Required <input type="checkbox"/>		
4.2.6. Reclamation Monitoring	Required <input type="checkbox"/>		
4.2.7. Habitat Compensation Works	Required <input type="checkbox"/>		
4.3. Trace Element Uptake in Soils and Vegetation	Required <input type="checkbox"/> Methods		
4.4. Contaminated Sites, Human Health and Ecological Risk Assessment	Required <input type="checkbox"/> Methods		
4.5. Disposal of Chemicals, Reagents, Hazardous Materials and Contaminated Materials	Required <input type="checkbox"/> Methods		
4.6. Groundwater Well Decommissioning	Required <input type="checkbox"/> Methods		
4.7. Reclamation and Closure Prescriptions			
4.7.1. Structures and Equipment	Required <input type="checkbox"/>		
4.7.2. Waste Rock Dump Reclamation	Required <input type="checkbox"/>		
4.7.3. Tailings Storage Facility Reclamation	Required <input type="checkbox"/>		
4.7.4. Open Pit Reclamation Prescriptions	Required <input type="checkbox"/>		
4.7.5. Watercourse Reclamation Prescriptions	Required <input type="checkbox"/>		
4.7.6. Road Reclamation	Required <input type="checkbox"/>		

<p style="text-align: center;">Information</p> <p style="text-align: center;">(refer to "Joint Application Information Requirements for Mines Act and Environmental Management Act Permits" for additional info on each section)</p>	<p style="text-align: center;">Requirements</p>	<p style="text-align: center;">Comments</p>	<p style="text-align: center;">Location in Final Application</p>
4.7.7. Schedule	Required <input type="checkbox"/>		
4.8. Detailed Five-Year Mine Reclamation Plan	Required <input type="checkbox"/>		
4.9. Temporary Shutdown	Required <input type="checkbox"/>		
4.10. Post-Closure Monitoring and Maintenance	Required <input type="checkbox"/>		
4.11. Reclamation Cost Estimate			
4.11.1. Conventional Reclamation and Closure	Required <input type="checkbox"/>		
4.11.2. Post-Closure Monitoring	Required <input type="checkbox"/>		
4.11.3. Post-Closure Maintenance (excluding Water Treatment)	Required <input type="checkbox"/>		
4.11.4. Life of Mine Water Treatment	Required <input type="checkbox"/>		
5. MODELLING, MITIGATION, AND DISCHARGES			
5.1. Summary	Required <input type="checkbox"/>		
5.2. Conceptual Site Model	Required <input type="checkbox"/> Methods		
5.3. Site-Wide Water Balance Model	Required <input type="checkbox"/> Methods		
5.4. Surface Water Quality Model	Required <input type="checkbox"/> Methods		
5.5. Groundwater Model			
5.5.1. Conceptual Hydrogeologic Model	Required <input type="checkbox"/> Methods		
5.5.2. Numeric Hydrogeologic Model	Required <input type="checkbox"/> Methods		
5.6. Mitigation Methods			
5.6.1. Best Achievable Technology Evaluation	Required <input type="checkbox"/> Methods		
5.6.2. Volume and Quantity Control Methods	Required <input type="checkbox"/> Methods		
5.6.3. Geochemical Attenuation Processes	Required <input type="checkbox"/> Methods		
5.6.4. Water Treatment			
5.6.4.1. Description	Required <input type="checkbox"/>		
5.6.4.2. Location	Required <input type="checkbox"/>		
5.6.4.3. Detailed Design	Required <input type="checkbox"/>		
5.6.4.4. Treatment Effectiveness	Required <input type="checkbox"/>		
5.6.4.5. Performance Risks	Required <input type="checkbox"/>		
5.6.4.6. Influent and Effluent Water Quality	Required <input type="checkbox"/>		
5.6.4.7. Waste and By-Products	Required <input type="checkbox"/>		
5.6.4.8. Maintenance	Required <input type="checkbox"/>		
5.6.4.9. Emergency Response Plans	Required <input type="checkbox"/>		
5.6.4.10. Monitoring Plans	Required <input type="checkbox"/>		
5.6.4.11. Schedule	Required <input type="checkbox"/>		
5.6.4.12. Cost Estimate	Required <input type="checkbox"/>		
5.7. Domestic Water/Sewage Treatment	Required <input type="checkbox"/> Methods		
5.8. Effluent Discharge	Required <input type="checkbox"/> Methods		
5.9. Initial Dilution Zone	Required <input type="checkbox"/> Methods		
6. ENVIRONMENTAL ASSESSMENT PREDICTIONS			
6.1. Aquatic Resources	Required <input type="checkbox"/> Methods		
6.2. Terrestrial Resources	Required <input type="checkbox"/> Methods		
7. ENVIRONMENTAL MONITORING			
7.1. Environmental Monitoring Program Design	Required <input type="checkbox"/> Methods		

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7.2. Mine Site Water Monitoring Program	Required <input type="checkbox"/> Methods		
7.3. Discharge Monitoring Program	Required <input type="checkbox"/> Methods		
7.4. Environment Monitoring Program	Required <input type="checkbox"/> Methods		
7.5. Post-Closure Environmental Monitoring Program	Required <input type="checkbox"/> Methods		
7.6. Aquatic Effect Monitoring Program	Required <input type="checkbox"/> Methods		
8. HEALTH AND SAFETY			
8.1. Occupational Health and Safety Program			
8.1.1. Occupational Health Risk Assessment	Required <input type="checkbox"/>		
8.1.2. Ergonomics	Required <input type="checkbox"/>		
8.1.3. Emergency Wash Facilities	Required <input type="checkbox"/>		
8.1.4. Hazardous Dust	Required <input type="checkbox"/>		
8.1.5. Lunchrooms, Mine Dry, and Sanitary Conveniences	Required <input type="checkbox"/>		
8.2. Post-Permitting Requirements			
8.2.1. Issued for Construction Plans	Required <input type="checkbox"/>		
8.2.2. Letters of Assurance	Required <input type="checkbox"/>		
8.2.3. Occupational Health Programs	Required <input type="checkbox"/>		
8.2.4. Workplace Hazardous Materials Information System (WHMIS)	Required <input type="checkbox"/>		
8.2.5. Additional Information and Certifications	Required <input type="checkbox"/>		
9. MANAGEMENT PLANS			
9.1. Environmental Management System	Required <input type="checkbox"/>		
9.2. Surface Erosion Prevention and Sediment Control Plan	Required <input type="checkbox"/>		
9.3. Soil Management Plan	Required <input type="checkbox"/>		
9.4. Construction Environmental Management Plan	Required <input type="checkbox"/>		
9.5. ML/ARD Management Plan	Required <input type="checkbox"/>		
9.6. Mine Site Water Management Plan	Required <input type="checkbox"/>		
9.7. Discharge Management Plan	Required <input type="checkbox"/>		
9.8. Vegetation Management Plan	Required <input type="checkbox"/>		
9.9. Invasive Plant Management Plan	Required <input type="checkbox"/>		
9.10. Wildlife Management Plan	Required <input type="checkbox"/>		
9.11. Archaeological Management and Impact Mitigation Plan	Required <input type="checkbox"/>		
9.12. Mine Emergency Response Plan	Required <input type="checkbox"/>		
9.13. Mine Site Traffic Control Plan	Required <input type="checkbox"/>		
9.14. Fuel Management and Spill Control Plan	Required <input type="checkbox"/>		
9.15. Combustible Dust Management Plan	Required <input type="checkbox"/>		
9.16. Chemicals and Materials Storage, Transfer, and Handling Plan	Required <input type="checkbox"/>		
9.17. Waste (Refuse and Emissions) Management Plan	Required <input type="checkbox"/>		