

MINES ACT PERMIT

Annual Reclamation Report Format Requirements

Updated January 2016

A. GENERAL INFORMATION

1. Submission, by March 31, of an Annual Reclamation Report that presents activities conducted in the previous year is a requirement of the Health, Safety and Reclamation Code for Mines in British Columbia (Part 10.1.5). Please provide the following:

	Deliver To:	Comments:
1 Hard Copy	<i>Attention:</i> Diane Howe, Deputy Chief Inspector – Permitting	Print double-sided whenever possible
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"><i>By Courier:</i> 6th Floor 1810 Blanshard Street Victoria, BC</td> <td style="width: 50%;"><i>By Mail:</i> PO Box 9320 Stn Prov Govt Victoria, BC V8W 9N3</td> </tr> </table>	
<i>By Courier:</i> 6 th Floor 1810 Blanshard Street Victoria, BC	<i>By Mail:</i> PO Box 9320 Stn Prov Govt Victoria, BC V8W 9N3	
1 Electronic/ Digital Copy	MEM Permitting and Reclamation (permrecl@gov.bc.ca)	Email or FTP is preferred. If submitting by other methods, please provide details via email for tracking purposes.

REMINDER: You are responsible for ensuring compliance with all conditions under the *Mines Act*, the Code and your permit. Please ensure that all information required by your permit is included in your Annual Reclamation Report.

B. COVER LETTER/EMAIL

The Annual Reclamation Report submission must be accompanied by a cover letter ([Table 3](#)) that includes the following data entered in the tabulated format shown below:

Company:		
Mine Name:		
Mines Act Permit #:		
	Previous Report (e.g., 2014)	Current Report (e.g., 2015)
Total Disturbance Area (ha)		
Total Reclaimed Area (ha)		
Total Exempt Area (ha) (i.e., pit walls)		
Total Liability Estimate		
Date for next Five Year Mine Plan and Reclamation Plan update (if required)		

C. REPORT FORMAT REQUIREMENTS

The Annual Reclamation Report must describe activities conducted in the previous year (or years), describe plans for activities to be conducted in the upcoming year, and follow the general format provided below.

COVER PAGE

- “Annual Reclamation Report for 2015” *Mines Act* Permit Number: _____
- Name of Property:
- Company Name:
- Names and Phone Numbers of Mine Manager AND Person Responsible for Reclamation/Environment:
- Company and Authors of Reclamation Report (if different from above):
- Date:

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EXECUTIVE SUMMARY

- Summarize the essential information in one page or less.

1.0 INTRODUCTION

- Provide a brief history of the project.
- Describe the general location of the site and provide a location map.
- Describe the baseline and/or regional environmental/ecological conditions.
- Describe the regional management plans.
- Identify the goals and objectives of the reclamation program, including approved end land use(s) and land capability objectives.
- Summarize all reclamation activities conducted at the site and tabulate areas reclaimed ([Table 1](#)).
- Discuss how the current program fits into the concept of “progressive and ongoing reclamation.”

2.0 MINING PROGRAM

Describe:

- Surface development to date.
- Current life of mine plan.
- Surface development in the past year.
- Surface development projected over the next five years.

Discuss:

- Areas disturbed (location, aspect, and size in hectares).
- Disposal/storage locations and volumes of tailings, waste rock, coarse rejects, ore, low grade ore, overburden, and other.
- Stockpiling of surface soil materials (location, volume, and characteristics).

NOTE: Provide digital maps of the current *Mines Act* permit boundary, including disturbed areas, mine components/facilities, waste disposal locations, and soil stockpiles depicted graphically on contour maps, ortho-photo mosaic overlays, or other similar methods, at a scale of 1:10,000 or better. Clearly indicate the map projection used.

3.0 ENVIRONMENTAL PROTECTION PROGRAM

Describe the Environmental Protection Program over the past year and projected for the next year, including the following (where applicable):

Environmental Protection Program:	Report Requirement:
Environmental Management Systems/Plans	- Summarize the environmental management plans implemented.
ML/ARD Characterization and Management	<ul style="list-style-type: none"> - Describe static and kinetic testing programs. - Provide raw, cumulative, and summary data (e.g., acid base accounting, mineralogical, and elemental composition). - Provide an inventory of volumes of all materials excavated, exposed, created or disturbed during mining (e.g., waste rock, tailings, ore, low grade ore, coarse reject and other) by ML/ARD classification. - Complete and present Table 2.
Surface Water Quality and Quantity	<ul style="list-style-type: none"> - Summarize the drainage monitoring program, including flows and water quality at monitoring locations both on and off of the mine property. - Include data range and central tendencies for data summaries. - Include maps depicting hydrologic features and monitoring locations. - Include figures illustrating time series of parameters including pH, sulphate, alkalinity, acidity, base cations, major metals, trace elements, and major nutrients.
Groundwater Quality and Quantity	- As above under Surface Water Quality and Quantity.
Water Quality Prediction, Mitigation, and Treatment	<ul style="list-style-type: none"> - A comparison of predicted versus measured water quality should be provided. - Summarize existing and proposed ML/ARD (and any other water quality problem) prevention, control, and treatment methods that have or will be implemented at site.
Water Management	<ul style="list-style-type: none"> - Describe and map pre-mining drainages/watersheds. - Describe and map current configuration of water management features and infrastructure, and changes to natural drainages/watersheds.
Erosion and Sediment Control	<ul style="list-style-type: none"> - Describe erosion and sediment control activities (project-specific, routine, and/or seasonal/event-based). - Describe monitoring programs (and summarize results) to assess effectiveness of erosion and sediment controls.
Soil Salvage and Stockpiling	<ul style="list-style-type: none"> - Map of soil and overburden stockpiles. - Tabulate volumes of soil and overburden stockpiles and identify sources of origin (i.e., salvage locations). - Describe soil characteristics and suitability for reclamation. - Describe activities conducted to protect soil stockpiles.
Vegetation Management	- Describe vegetation monitoring and management (e.g., construction clearing, invasive plant species, and metal uptake).
Wildlife Protection	<ul style="list-style-type: none"> - Summarize programs for preventing wildlife-human interactions and wildlife monitoring. - Provide results were applicable (including summary of incidental observations).
Archaeological Resources	- Describe archaeological and heritage sites identified.
NOTE: If possible, please include representative and annotated photos.	

NOTE: Reports to the Ministry of Environment (MOE) may also include some of the information required for ML/ARD and drainage monitoring. If so, the MOE report can be included with the Annual Reclamation Report under separate cover, or as part of a combined report.

4.0 RECLAMATION PROGRAM

Describe the Reclamation Program over the past year and projected for the next 5 years, including the following (where applicable):

Reclamation Standard:	Report Requirement:
Long-Term Stability	- Stability of waste dumps, dams, impoundments, pits, borrows, roads, and watercourses.
Revegetation	- Describe, for both temporary and permanent revegetation treatments, application area, species selection, application specifications, amendments/fertilizers, locations, objectives (such as trials, erosion control, and final reclamation for specified end land use). - Describe the revegetation evaluation/effectiveness program(s) for both temporary and permanent revegetation treatments.
Growth Medium	- Describe soil replacement depth/volumes, locations, application area, surface preparation, decompaction, and drainage/erosion control. - Describe the soil monitoring program.
Landforms	- Describe landscaping, contouring, and resloping previously conducted (specify application area).
Structures and Equipment	- Describe removal of equipment, scrap/recyclables, and treatment of foundations.
Waste Dump Reclamation	- Describe progressive and final reclamation on waste dumps (include details such as material characteristics, locations, elevations/heights, size of areas, slope angles, and aspects).
Watercourse Reclamation	- Describe progressive and final reclamation for watercourses.
Open Pit Reclamation	- Describe progressive and final reclamation for open pits.
Impoundment Reclamation	- Describe progressive and final reclamation for impoundments.
Road Reclamation	- Describe progressive and final reclamation for access and mine haul roads.
Infrastructure Decommissioning/Reclamation	- Describe decommissioning/reclamation of infrastructure (e.g., buildings, power distribution and transmission lines, fuel farms, etc).
Securing Openings	- Describe activities conducted to secure potentially dangerous surface areas and underground openings.
Disposal of Chemicals and Reagents	- Describe programs for chemical management and disposal.
Reclamation Research	- Describe research activities, for example, plant species selection, optimal soil depths for specified end land uses, surface preparation/erosion control techniques, native species collection, propagation, transplanting, landforming, drainage modeling, and water body reclamation. - Describe research collaborations and outreach. - Detailed research programs documented in standalone reports may be submitted under a separate cover.
5 Year Reclamation Plan	- Describe the nature and scope of reclamation and research programs for the next 5 years.
NOTE: If possible, please include representative and annotated photos.	

NOTE: Reclamation areas must be shown on contour maps or ortho-photo mosaic overlays at the same scale as the surface development map. Digital GIS files may also be submitted.

5.0 RECLAMATION LIABILITY COST ESTIMATES

Complete the Ministry of Energy and Mines' **Excel Costing Spreadsheet** ([Version 3.5.1](#)) to provide a detailed estimate of the total expected costs of outstanding reclamation obligations over the current planned life of the mine, including long-term costs for monitoring, maintenance, and water treatment (if required).

NOTE: This costing information may be filed as a separate confidential report.