

PROVINCE OF BRITISH COLUMBIA  
MINISTRY OF ENERGY AND MINES

**PERMIT**

**APPROVING WORK SYSTEM AND RECLAMATION PROGRAM**

(Issued pursuant to Section 10 of the *Mines Act* R.S.B.C. 1996, c. 293)

Permit: **M-200**

**Mine No. 1101163**

Issued to: **Mount Polley Mining Corporation**  
**P.O. Box 12**  
**Likely, British Columbia**  
**V0L 1N0**

for work located at the:

**Mount Polley Mine**

This permit contains the following sub-sections:

**Issue Date**

**Permit**

August 3, 1995

Approving Work System

July 11, 1997


Amended Reclamation Permit, Approval to  
Construct Open Pits and Waste Dumps and  
Traffic Control Plan

**Amendments**

As listed on pages 2 and 3.

Amended at Victoria, British Columbia this 23<sup>rd</sup> day of June in the year 2016.



*for*   
\_\_\_\_\_  
Al Hoffman, P.Eng.  
Chief Inspector of Mines

**Amendments**

June 13, 1996	Name Change
September 23, 1996	Approval to Construct Tailings Storage Facility to Elevation 934m
July 11, 1997	Amended Reclamation Permit, Approval to Construct Open Pits and Waste Dumps, and Traffic Control Plan
April 7, 1998	Approval to Construct Tailings Storage Facility to Elevation 940 metres
June 13, 2000	Approval to Construct Tailings Storage Facility to Elevation 944 metres
August 2, 2000	Approving Tailings Storage Facility and Amended Metal Leaching and Acid Rock Drainage Conditions
May 30, 2001	Approval to Construct Tailings Storage Facility to Elevation 945 metres
February 16, 2004	Approving Milling of Ore and Tailings Deposition from the International Wayside Bulk Sample
November 1, 2004	Approving Mining and Reclamation Program for the Northeast Zone and Approving Mine Restart
May 25, 2005	Approving Tailings Storage Facility Stage 4 Construction
August 2, 2005	Approving Haulage Road Construction from Northeast Zone to TSF
November 24, 2005	Approving Mining of Southeast Zone
August 2, 2006	Approving Change of Name and Deletion of Requirement to Monitor Blasting
August 2, 2006	Approving Tailings Storage Facility Stage 5 Construction
March 29, 2007	Approving Northeast Zone Dump Extension
March 29, 2007	Approving Copper Oxide Test Heap Leach Facility
August 31, 2007	Approving Boundary Road
December 5, 2007	Approving Wight Pit High Wall Rehabilitation
February 19, 2008	Permit Approving Tailings Storage Facility Stage 6 Construction
March 6, 2008	Approving Transfer of Road Use, Maintenance and Reclamation Obligations
July 8, 2009	Permit Approving the Pond Zone
August 15, 2011	Approving Mining of the C2 and Boundary zone pits
June 29, 2012	Approving Tailings Storage Facility Stage 8 Construction
October 15, 2012	Approving Tailings Storage Facility Stage 8A Construction
March 25, 2013	Approving Boundary Zone Underground
April 22, 2013	Approving Processing of 15000 Tonnes of Ore from Dome Mountain
July 25, 2013	Approving Northwest PAG Dump Expansion and South Haul Road

August 9, 2013	Approving Tailings Storage Facility Stage 9 Construction
March 17, 2014	Approving Cariboo Phase 4 Expansion
March 27, 2014	Approving Change to Reclamation Security Schedule
June 24, 2014	Approving Waste Rock and Tailings Comingling Research Project
December 17, 2014	Approving TSF Breach Repair and Perimeter Embankment Buttress Design for 2015 Freshet
July 9, 2015	Approving Return to Restricted Restart of Operations
October 22, 2015	Approving Main Embankment Buttress
February 25, 2016	Approving Upstream TSF Construction and 2016 Freshet Water Management
March 17, 2016	Approving Springer Pit Lake Elevation Increase
April 29, 2016	Approving Extension to Restricted Operations and Corner 1 Buttrressing
June 23, 2016	Approving Return to Full Operations and Use of Tailings Storage Facility

**PERMIT AMENDMENT**

**APPROVING RETURN TO FULL OPERATIONS AND  
USE OF TAILINGS STORAGE FACILITY**

Permit: **M-200**

**Mine No. 1101163**

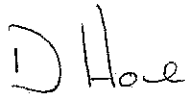
Issued to: **Mount Polley Mining Corporation  
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for work located at the:

**Mount Polley Mine**

Amended at Victoria, British Columbia this 23<sup>rd</sup> day of June in the year 2016.

For



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Al Hoffman, P.Eng.  
Chief Inspector of Mines

## TABLE OF CONTENTS

PREAMBLE.....	3
CONDITIONS.....	5
A.    General.....	5
B.    Health and Safety.....	6
C.    Geotechnical .....	6
D.    Protection of Land and Watercourses.....	11
E.    Reclamation and Closure Program .....	14
APPENDIX 1: QUANTITATIVE PERFORMANCE OBJECTIVES (QPO) .....	19
APPENDIX 2: INFORMATION REQUIRED FOR LONG TERM WATER TREATMENT PLAN .....	22

## **PREAMBLE**

An application entitled “Mount Polley Mine Return to Full Operations” (document 1), prepared by Mount Polley Mining Corporation, dated November 6, 2015 was submitted to the Chief Inspector of Mines (Chief Inspector) on November 6, 2015, in accordance with Section 10.1.2 of the Health Safety and Reclamation Code (Code).

The following supporting information also forms part of the application:

- “Mine Reclamation and Closure Plan Update November 2015” dated November 6, 2015 by Mount Polley Mining Corporation (document 2);
- “Mount Polley Mine Return to Restricted Operations: Mine Plan Synopsis” dated May 21, 2015 by Mount Polley Mining Corporation (document 3);
- “Tailings Storage Facility Detailed Design to Elevation 970m” dated November 3, 2015 by Golder Associates (document 4);
- “Tailings Storage Facility Life of Mine Feasibility Design” dated November 3, 2015 by Golder Associates (document 5);
- “Cariboo-Springer Pit Phase 4 Water Management Plan (TSF 970m Design)” dated November 2, 2015 by Golder Associates (document 6);
- “Response to BCMEM Screening Comments – Quantitative Performance Objectives”, dated January 27, 2016 by Golder Associates (document 7);
- “Review of Cariboo Pit Slope Design” dated January 31, 2014 by Golder Associates (document 8);
- “MPMC-SOP-016: ABA and Soil Sampling” dated March 23, 2016 by Mount Polley Mining Corporation (document 9);
- “MPMC-WORK-016: ABA and Soil Sampling” dated March 23, 2016 by Mount Polley Mining Corporation (document 10);
- “Water Management Plan and System Review” dated March 31, 2016 by Mount Polley Mining Corporation (document 11); and,
- “Permit amendment application to discharge treated water to Quesnel Lake via Hazeltine Creek” dated September 25, 2015 by Mount Polley Mining Corporation (document 12).

The above information was submitted to the Chief Inspector to support the request for approval to return to full mining operations and use the repaired tailings storage facility, following the breach that occurred on August 4, 2014. A long-term water management and discharge plan is currently under development as a requirement of the *Environmental Management Act* Permit (PE11678) held by Mount Polley Mining Corporation. Remediation works related to the area impacted by the tailings dam breach are being carried out under the regulatory authority of the Ministry of Environment.

The Application was referred to the Cariboo Mine Development Review Committee (CMDRC) on February 2, 2016 in accordance with Part 10.3.1 of the Health, Safety and Reclamation Code for Mines in British Columbia (Code). The application was discussed during meetings of the CMDRC on February 4, 2016, March 17, 2016, April 15, 2016 and May 16, 2016. The Application was subject to a 30 day public consultation period and was discussed at community meetings in Likely (January 19, 2016); Williams Lake (January 20, 2016); Quesnel (January 21, 2016); and, with the Williams Lake Indian Band and Xat'sull First Nation (Soda Creek Indian Band) during community meetings on January 28, 2016; March 16, 2016; and, May 18, 2016.

This permit contains the requirements of the Ministry of Energy and Mines. It is also compatible, to the extent possible, with the requirements of other provincial ministries. Nothing in this permit limits the authority of other provincial ministries to set other conditions, or to act independently, under their respective permits and legislation.

Decisions made pursuant to this permit by staff of the Ministry of Energy and Mines will be made following consultation with the Williams Lake Indian Band, Xat'sull First Nation (Soda Creek Indian Band), other provincial ministries and federal departments and agencies, as appropriate, within reasonable timeframes.

Pursuant to Section 9 of the *Mines Act*, the CMDRC will serve as the ongoing advisory committee to the Chief Inspector. The Committee Chair is appointed by the Chief Inspector pursuant to Section 9 of the *Mines Act*. Terms of Reference and Operating Procedures for the CMDRC are established by the Committee Chair in consultation with the Committee members. The Committee will include representatives from the Ministry of Energy and Mines, Ministry of Environment, Ministry of Forests, Lands, and Natural Resources Operations, Williams Lake Indian Band, Xat'sull First Nation, local government (Cariboo Regional District and City of Williams Lake), the Community of Likely, and other government agencies such as the Environmental Assessment Office. The owner, agent or manager (Permittee) and other agencies will be invited to participate as appropriate. The Committee Chair will be responsible for maintaining an up-to-date contact list for Committee members and providing this to the Permittee as required.

The mine is located in the asserted traditional territory of the Williams Lake Indian Band and Xat'sull First Nation. Representatives of the Williams Lake Indian Band and Xat'sull First Nation participated in the CMDRC meetings and extensive discussions of the application.

## CONDITIONS

The Chief Inspector hereby approves the application subject to compliance with the following conditions:

### A. General

#### 1. Compliance with *Mines Act* and Code

All work shall be in compliance with all sections and parts of the *Mines Act* and the Code and the Permittee shall obey all orders issued by the Chief Inspector or his delegate.

#### 2. Departure from Approval

The Permittee shall notify the Chief Inspector in writing of any intention to depart from either the plan of the work system or the program for the protection and reclamation of the surface of the land and watercourses to any substantial degree, and shall not proceed to implement the proposed changes without the written authorization of the Chief Inspector.

#### 3. Requirements of Approval

- (a) All construction shall be completed by or under the supervision of a qualified professional and shall include sufficient field reviews to ensure that all subgrade, excavations, structures, slopes, and facilities are built in conformance with the designs, accepted engineering practices, and the Code.
- (b) Any written recommendations made by a qualified professional relating to stability, health and safety, or environment, shall be followed unless a suitable alternative written recommendation is provided by a qualified professional.
- (c) All designs, work plans, and reports required under this permit shall be made available to any Mine Inspector upon request.

#### 4. Permit Amendment Approval

- (a) The proposed use of the tailings storage facility is authorized.
- (b) The approved milling rate is a maximum of 8.2 million tonnes per year (an average of 22,450 tonnes per day).



5. Permit

This permit is not transferrable or assignable.

6. Sharing of *Mines Act* Permit Condition Deliverables

Unless otherwise requested, the Permittee shall provide the Williams Lake Indian Band, Xat'sull First Nation, Cariboo Regional District, and the community of Likely through the Likely and District Chamber of Commerce, with all deliverables that are required to be submitted to the Chief Inspector under conditions of this permit.

**B. Health and Safety**

1. Mine Emergency Response Plan

An updated Mine Emergency Response Plan (ERP) shall be provided to the Chief Inspector by July 31, 2016. This plan shall follow the Canadian Dam Association Dam Safety Guidelines and Ministry of Energy and Mines guidance available at: [http://www.empr.gov.bc.ca/Mining/HealthandSafety/EmergencyPreparedness/Documents/MERPGuidelines\(V1.2\).pdf](http://www.empr.gov.bc.ca/Mining/HealthandSafety/EmergencyPreparedness/Documents/MERPGuidelines(V1.2).pdf) and shall be developed with input from the First Nations the Cariboo Regional District, and the community of Likely through the Likely and District Chamber of Commerce.

**C. Geotechnical**

1. General

- (a) All designs, work plans, and reports required to be prepared under this permit shall be prepared by, and sealed by a qualified professional. The Chief Inspector requires that pursuant to Section 6.1.1(3) of the Code the qualified person under 6.1.1 of the Code be a Professional Engineer.
- (b) A geotechnical incident report shall be submitted to the Chief Inspector for any dangerous occurrence (as defined by the section 1.7.3 of Code) or any other incident as described in the current "Ministry of Energy and Mines Advice of a Geotechnical Incident".

2. Tailings Storage Facility (TSF)

(a) Engineer of Record

- (i) The manager shall ensure that a Professional Engineer is retained as the Engineer of Record for each tailings storage facility and dam under their management.
- (ii) The Engineer of Record, as a Professional Engineer, has professional responsibility for assuring that a tailings storage facility or dam has been designed and constructed in accordance with the applicable guidelines, standards and regulations.
- (iii) The manager shall notify the Chief Inspector of the retained Engineer of Record, or of any changes to the Engineer of Record, and the notification shall include an acknowledgement by the Engineer of Record.

(b) Design

- (i) The TSF design presented in the report "Tailings Storage Facility Detailed Design to Elevation 970m", dated November 3, 2015 (document 4) is authorized.
- (ii) The Permittee shall appoint a TSF qualified person to be responsible for the coordination of activities related to planning, design, operation, construction, maintenance and surveillance of the TSF and associated site-wide water management. This person shall be identified in writing to the Chief Inspector on receipt of this permit.
- (iii) A design for an emergency spillway, acceptable to the Chief Inspector, shall be prepared by a qualified professional prior to commencement of any construction work that raises the freshet embankment height. Material required for construction of an emergency spillway shall be available at site prior to commencement of any construction work that raises the freshet embankment height.
- (iv) The Mine shall complete the additional investigations of sub-surface along the South Embankment and Perimeter Embankment as recommended by the Engineer of Record. The results of the investigation shall be provided to the Chief Inspector by March 31, 2017.

- (v) The Mine shall complete a stress deformation analysis of the TSF that utilizes the 1:2475 seismic event. The results of the analysis shall be provided the Chief Inspector by March 31, 2017.

- (c) Construction

The tailings storage facility shall be constructed in accordance with the authorized design and under the supervision of the Engineer of Record.

- (d) Operation

The tailings storage facility shall be operated in accordance with the authorized design and the Operation, Maintenance, and Surveillance (OMS) Manual.

- (e) Monitoring

The tailings storage facility shall be monitored in accordance with the OMS Manual and the Quantitative Performance Objectives set forth in the report "Response to BCMEM Screen Comments – Quantitative Performance Objectives" (document 7 and Appendix 1 of this permit).

- (f) Reporting

- (i) An annual dam safety inspection (DSI) for all dams and water management facilities on the mine site shall be completed by a Professional Engineer and submitted to the Chief Inspector by March 31 of the year following the inspection. The report shall follow the current Ministry of Energy and Mines guidelines for DSI reports.
- (ii) The Permittee shall submit an as-built report and as-built construction drawings to the Chief Inspector prior to March 31, following the year of construction.
- (iii) An updated OMS Manual and Emergency Preparedness Plan (EPP) shall be prepared in accordance with accepted industry practice (e.g. current Canadian Dam Association and Mining Association of Canada Guidelines). The updated reports shall consider the comments and recommendations in the report "Mount Polley Mine Tailings Storage Breach Investigation Report of the Chief Inspector of Mines". The reports shall be submitted to the Chief Inspector by December 31, 2016. The OMS, EPP and ERP shall be reviewed annually and updated to reflect changes in status as the facility develops.

3. Open Pit

(a) Design

The Permittee shall submit to the Chief Inspector the pit slope design report for the C2 Pit and Boundary Zone Pit for review prior to pit development.

(b) Monitoring

(i) Geological, geotechnical, and hydrological conditions encountered during pit development shall be assessed to detect early signs of instability and to confirm design basis assumptions. The frequency of assessment shall be determined by a Professional Engineer.

(ii) A pit wall monitoring program shall be implemented to verify acceptable performance, detect early signs of instability, and confirm design basis assumptions. The program should be based on the recommendations of the pit design engineer. The monitoring program shall include details of instrumentation, monitoring frequency, trigger thresholds, and trigger response criteria.

(iii) A Ground Control Log Book, or equivalent, shall be maintained at the mine. At a minimum, the Ground Control Log Book shall include the following information:

- dangerous conditions such as working ground or unstable ground;
- unusual or unexpected geological, hydrogeological, geotechnical conditions;
- records of uncontrolled falls of ground; and,
- rehabilitation requirements.

The Ground Control Log Book shall be read and signed each shift by the shift boss and the Mine Manager or other designated person.

(c) Reporting

Annual inspections of pit slopes shall be undertaken by a Professional Engineer, and an annual report submitted to the Chief Inspector by March 31 of the year following the inspection. At a minimum the report shall include the following information:

- all pits other than those fully reclaimed;
- observations made during the inspections;
- summary of monitoring and instrumentation data;
- assessment of design versus actual bench and pit performance;
- updated pit plans; and,
- conclusions and recommendations.

4. Underground

(a) Monitoring

A Ground Control Log Book or equivalent shall be maintained at the mine. At a minimum, the Ground Control Log Book shall include the following information:

- dangerous conditions such as working ground or unstable ground;
- unusual or unexpected geological, hydrogeological, geotechnical conditions;
- records of uncontrolled falls of ground;
- areas left unsupported at the end of a shift;
- areas of damaged, loaded, or failed support;
- areas with support not meeting design standards; and,
- rehabilitation requirements.

The Ground Control Log Book shall be read and signed each shift by the shift boss and the Mine Manager or other designated person.

(b) Reporting

Annual inspections of underground workings shall be undertaken by a Professional Engineer and an annual report submitted to the Chief Inspector by March 31 of the year following the inspection. At a minimum the report shall include the following information:

- observations made during the inspections;
- summary of monitoring and instrumentation data;
- assessment of excavation stability and effectiveness of the ground control management plan;
- updated mine plans; and,
- conclusions and recommendations.

**D. Protection of Land and Watercourses**

1. Mined Materials Stockpiles

- (a) This permit approves the northwest potentially acid generating (PAG) waste rock stockpile to a maximum mass of 24,250,000 tonnes.
- (b) The Permittee shall assess and define contingency reclamation plans for the ore stockpiles in the event they remain in place at closure. These plans shall be presented in detail in the updated Reclamation and Closure Plan in accordance with permit condition E.9.

2. Metal Leaching (ML) and Acid Rock Drainage (ARD) Monitoring

The Permittee shall maintain an inventory of all mined materials and tailings products stored on site, including information on source, composition, quantity of material, elevation (metres), disposal location, and date of placement. This inventory shall be kept on site and available to any Mine Inspector upon request.

3. Mine Site Water Management and Monitoring

- (a) The Mine Site Water Management Plan shall be updated to reflect changing site conditions and management requirements. Any changes to the Mine Site Water Management Plan shall be provided to the Chief Inspector.
- (b) An updated mine water quality and quantity monitoring program, shall be provided to the Chief Inspector by June 30, 2016. The program shall include water quality, water quantity, and seepage monitoring locations, sampling frequency and parameters, and reporting frequency for all mine areas.

4. Water Quality Predictions

- (a) Updated water quality predictions shall be submitted with the "Draft Technical Assessment Report for the Long-Term Water Management Plan (LTWMP)" due to be submitted to the Ministry of Environment by June 30, 2016.
- (b) The water quality predictions shall be updated as necessary to reflect changes to the mine plan, and to support Reclamation and Closure Plans for the mine, including mitigation design and engineering.

5. Reporting

- (a) The Permittee shall provide a weekly report of Springer Pit Lake water level elevation to the Chief Inspector of Mines until such time that written consent to cease reporting is received.
- (b) The Permittee shall ensure that the Annual Reclamation Report includes analytical data collected in accordance with ML/ARD Material Monitoring, Characterization and Management Program, along with a table that compares relevant monitoring and testwork data to source term concentrations used in water quality predictions.
- (c) Monitoring results and interpretation of surface water quality and quantity monitoring, groundwater monitoring, and seepage monitoring shall be kept up to date in a dedicated database and available to any Mine Inspector on request. The information shall also be reported in the Annual Reclamation Report. Any significant changes or trends in monitored parameters shall be discussed, and those that require additional evaluation and management shall be identified in the report. This work shall be prepared by a qualified professional with experience in assessment of water quality and quantity monitoring data.
- (d) The implications of ML/ARD materials monitoring, surface water, and groundwater quality monitoring results for source term refinement, water quality mitigation and adaptive management shall be discussed in the Annual Reclamation Report.
- (e) The Permittee shall review the Mine Site Water Management Plan at least annually. All review, inspection, monitoring and maintenance activities associated with the Mine Site Water Management Plan shall be reported in the Annual Reclamation Report.

6. Ecological Risk Assessment

The Permittee shall develop and implement a plan to conduct an ecological risk assessment to evaluate the pathways for uptake of metals for receptors relevant to the end land use objectives for the site, and identify any closure remediation activities and long-term monitoring requirements needed to address potential risks identified. This plan shall be developed in consultation with MOE, Williams Lake Indian Band and Xat'sull First Nation. The ecological risk assessment results and interpretations shall be used to inform closure requirements and shall be included in the Reclamation and Closure Plan required under permit condition E.9.

7. Ongoing Reclamation Research

- (a) The Permittee shall develop and implement a reclamation research program that utilizes an adaptive management approach, with results summarized in the Annual Reclamation Report. The scope of the program shall include, but not be limited to, the following considerations:
- (i) geomorphic landform and run-off modeling assessments in order to identify opportunities to shape landforms in a manner that optimizes surface water pathways and soil moisture regimes, reduces infiltration where appropriate, and enhances erosion protection and habitat function and connectivity;
  - (ii) evaluation of the viability of using culturally important species in revegetation prescriptions, where possible, based on land capability modeling;
  - (iii) evaluation of opportunities for amending growth medium to enhance the suitability for reclamation, if necessary, based on land capability modeling;
  - (iv) testwork to determine soil replacement depths and locations required to achieve the end land use and land capability objectives;
  - (v) testwork to develop effective methods for achieving land use and land capability targets for the tailings impoundment, in particular for successful revegetation of tailings sand/beach areas; and,
  - (vi) assessment of de-compaction and surface preparation technologies to ensure that the relative compaction is effectively addressed and soil covered surfaces are prepared in a manner intended to achieve end land use, land capability, and erosion control objectives.
- (b) The Permittee shall update the reclamation success monitoring program for the mine to ensure that it is tailored to the Reclamation and Closure Plan required under permit condition E.9. The monitoring program shall include sampling parameters and measurable performance criteria to evaluate the success of revegetation, habitat restoration, and erosion control prescriptions for achieving the end land use and land capability objectives.
- (c) The Permittee shall evaluate potential contingency options that could be implemented if results of the reclamation success monitoring program indicate



that site-specific end land use objectives may not be fully achieved and include the analysis of the options as part of the Reclamation and Closure Plan required in E.9.

**E. Reclamation and Closure Program**

**1. Reclamation Security**

- (a) The Permittee shall cause to be deposited with the Minister of Finance additional security in the amount of Six Million Six Hundred Eighty One Thousand, Eight Hundred dollars (\$6,681,800.00) bringing the total security for this permit to Thirty One Million Three Hundred and Fifty Thousand, Six Hundred and Eleven dollars (\$31,350,611.00). The security will be held by the Minister of Finance for the proper performance of the approved program and all the conditions of this permit in a manner satisfactory to the Chief Inspector. The Permittee shall deposit the additional security on the installment schedule set out below:

		<u>Cumulative \$</u>
Balance (as of June 23, 2016)		\$24,668,811.00
June 30, 2016	\$510,800.00	\$25,179,611.00
July 30, 2016	\$448,500.00	\$25,628,111.00
August 30, 2016	\$224,250.00	\$25,852,361.00
September 30, 2016	\$224,250.00	\$26,076,611.00
October 30, 2016	\$224,250.00	\$26,300,861.00
November 30, 2016	\$224,250.00	\$26,525,111.00
December 30, 2016	\$224,250.00	\$26,749,361.00
January 30, 2017	\$224,250.00	\$26,973,611.00
February 28, 2017	\$224,250.00	\$27,197,861.00
March 30, 2017	\$224,250.00	\$27,422,111.00
April 30, 2017	\$224,250.00	\$27,646,361.00
May 30, 2017	\$224,250.00	\$27,870,611.00
June 30, 2017	\$1,740,000.00	\$29,610,611.00
June 30, 2018	\$1,740,000.00	<u>\$31,350,611.00</u>

- (b) Over the life of the mine, the security will be adjusted to cover all the costs associated with carrying out all the conditions of this permit. Upon application by the Permittee, the amount of security in condition D.1.(a) may be reduced if mining or development work will create less disturbance and liability, or to reflect reduced liability due to reclamation work completed.

- (c) The Permittee shall submit a “Draft Technical Assessment Report for the Long-Term Water Management Plan (LTWMP)” to the Ministry of Environment by June 30, 2016. If the document does not address the information requirements summarized in Appendix 2 of this permit to the satisfaction of the Chief Inspector, the Permittee shall cause to be deposited with the Minister of Finance additional security in the amount of Three Million Eight Hundred Thousand dollars (\$3,800,000.00).
- (d) If the updated site-wide Reclamation and Closure Plan is not submitted by January 15, 2017, and does not include the information required in the table of concordance as per permit conditions E.9 (a) and (b) to the satisfaction of the Chief Inspector, the Permittee shall cause to be deposited with the Minister of Finance additional security in the amount of Three Million Eight Hundred Thousand dollars (\$3,800,000.00).
- (e) An updated assessment of the assets included under the asset security agreement shall be provided with the Reclamation and Closure Plan due by January 15, 2017.

2. Land Use

The Permittee shall develop an End Land Use Plan based on pre-mining land use and post-mining land capability modeling as per permit condition E.3 as part of the Reclamation and Closure Plan required under permit condition E.9. The End Land Use Plan and capability modeling shall be used to inform the development of site-specific reclamation prescriptions.

3. Capability

- (a) The Permittee shall prepare and include in the Reclamation and Closure Plan required under permit condition E.9, a quantitative inventory with maps of pre- and post-mining land capability. The inventory and mapping shall specify the site series with the ecosystem classifications.
- (b) For each site series targeted and inventoried for the post-closure landscape, the Permittee shall provide descriptions of the parent materials, surface soil properties and depth, slope and slope position, aspect, available moisture holding capacity, capability objective, and revegetation prescription in the Reclamation and Closure Plan required under permit condition E.9.

4. Revegetation

The Permittee shall restore land capability, ecosystem function, and traditional aboriginal uses where appropriate. Revegetation practices shall be conducted with the intent of establishing appropriate species and densities that are similar to naturally occurring ecosites at similar elevations, aspects, and climatic conditions. Details of the proposed re-vegetation programs, including species and densities prescribed for specific areas, and sources of revegetation supplies, shall be included in the Reclamation and Closure Plan required under permit condition E.9.

5. Growth Medium

Permit conditions D.2.(a) to (c) of the July 25, 2013 *Mines Act* permit amendment are rescinded and replaced with the following conditions:

- (a) On all lands to be revegetated, the growth medium shall satisfy end land use, land capability, and water quality objectives.
- (b) The Permittee shall develop a site-specific soil replacement plan designed to achieve land capability and land use targets defined as per the End Land Use Plan under permit condition E.2 and post-closure land capability modeling under permit condition E.3.
- (c) The Permittee shall ensure that opportunities to reduce infiltration through waste rock and ore stockpiles that will be reclaimed are evaluated concurrent to development of the soil replacement plan.
- (d) An assessment shall be conducted in order to identify contingency options (i.e., alternatives to soil previously stockpiled or salvaged from disturbance footprints approved in this amendment) that can be implemented in the event that soil volumes available on site are insufficient to source the soil replacement plan. This shall include a survey and assessment of additional resources of soil materials that could be used.
- (e) Soil replacement operations that occur shall be monitored to ensure the minimum depths are achieved and a confirmation sampling plan shall be implemented to ensure quality of soil used for reclamation purposes will achieve end land use and capability objectives. All results must be presented in the Annual Reclamation Report.

- (f) Surface preparation shall occur in a manner and extent that ameliorates the severity of compaction that exists prior to, and after, placement of growth medium, and addresses end land use, land capability, and erosion control objectives.

6. Erosion Control

Permit condition D.3.(b) of the July 25, 2013 *Mines Act* permit amendment is rescinded and replaced with the following condition:

The Permittee shall ensure that erosion potential is minimized to the extent practicable through landform configuration, appropriate surface preparation, development of maintenance-free vegetation covers, and self-sustaining drainage control features and watercourses.

7. Tailings Storage Facility

An assessment shall be conducted to evaluate the options available for reclamation and closure designs of the TSF. The assessment shall evaluate options for maximizing long-term stability, minimizing long-term monitoring and maintenance requirements, and integrating site-wide land capability and land use objectives. The assessment and results shall be included in the Reclamation and Closure Plan required under permit condition E.9, and shall be used to establish proposed reclamation prescriptions, post-closure monitoring programs and the liability cost estimate provided in that report.

8. Underground Openings

An assessment shall be conducted to evaluate the options available for closure designs of the underground openings. The assessment shall evaluate options for maximizing long-term stability, minimizing long-term monitoring and maintenance requirements, and consider end land use objectives. The assessment and results shall be included in the Reclamation and Closure Plan required under permit condition E.9, and shall be used to establish proposed closure prescriptions, post-closure monitoring programs and the liability cost estimate provided in that report.

9. Reclamation and Closure Plan

- (a) The Permittee shall develop a table of concordance in support of the updated site-wide Reclamation and Closure Plan in consultation with the Chief Inspector, Williams Lake Indian Band and Xat'sull First Nation. The final version of this document shall be submitted to the Chief Inspector by July 31, 2016.

(b) On or before January 15, 2017, the Permittee shall submit a site-wide Reclamation and Closure Plan. At a minimum, the plan shall include the following information:

- an updated end land use plan and land capability inventory;
- an updated reclamation program with detailed site-specific reclamation prescriptions, including soil replacement and revegetation;
- closure objectives and criteria for each mine component/reclamation unit;
- the current status of the mine plan and reclamation obligations;
- a compilation and interpretation of all monitoring including ML/ARD characterization, water quality and quantity;
- an updated site-wide water quality and quantity predictions that have been used to inform reclamation and closure planning;
- a reclamation research program;
- closure and maintenance activities;
- contingency plans;
- a detailed schedule outlining when the reclamation activities for each component of the reclamation prescription for each reclamation unit will be conducted;
- a breakdown of outstanding liabilities and associated costs; and,
- an update to the table of concordance required under permit condition E.9.(a) that references the location of required information within the Reclamation and Closure Plan.

All other terms and conditions remain.

APPENDIX 1: QUANTITATIVE PERFORMANCE OBJECTIVES (QPO) PAGE 1 OF 3

1413803-055-TM-Rev1-3020  
 April 4, 2016

Quantitative Performance Objective		Value	Source / Comment / Action
TSF Capacity Impoundment Filling Schedule	970 m Tailings Elevation	27.8 million tonnes	Impoundment Filling Schedule 20.6 million m <sup>3</sup> at 1.35 tonnes / m <sup>3</sup> and 1.0 % deposition angle.
	970 m Tailings Elevation	Q1 2020	Mine plan (MP/MC 2015a). Based on deposition starting on May 2016 and a 22,000 tonnes/day nominal tailings production rate.
Beach Width	Inspection frequency	Daily	Beach Width
	Normal Operating Zone	> 100 m	Portion of beach above operating pond level. Minimum during normal operating conditions after beach developed along Corner 1 embankment.
	Concern Zone	80 to 100 m	Increase pumping from TSF to other facilities and increase monitoring frequency of beach width and freeboard, particularly in area of reduced beach width.
	Buffer Zone	20 to 60 m	Maximize pumping from TSF to other facilities and increase monitoring frequency of beach width, freeboard and piezometers, particularly in area of reduced beach width.
	Unsafe or Out of Compliance Operating Zone	0 to 20 m	Same actions as for Buffer Zone. Suspend slurry deposition activities if reduced beach width is unrelated to freshet event or IDF. Freshet generally expected each year between March and June.
Operating Pond Storage Volume	Minimum	1 million m <sup>3</sup>	TSF Water Management Provided by MP/MC.
	Maximum	1.5 million m <sup>3</sup>	Based on maintaining 100 m beach width.
	Minimum	3 m	Provided by MP/MC. Minimum pond depth at barge location.
	Maximum	4 m	Based on maintaining 100 m beach width.
Freeboard	Inspection frequency	Daily	Inflow design flood (IDF) based on the probable maximum precipitation (PMP) 24-hour event combined with the 1 in 2 year snowmelt. Golder (2015)
	Normal Operating Zone	≥ 1.1 m	Increase pumping from TSF to other facilities and increase monitoring frequency of freeboard and beach width, particularly in areas of reduced beach width.
	Concern Zone	1.0 to 1.1 m	Maximize pumping from TSF to other facilities and increase monitoring frequency of freeboard, beach width and piezometers, particularly in areas of reduced beach width.
	Buffer Zone	0.5 to 1.0 m	Same actions as for Buffer Zone. Suspend slurry deposition activities if reduced freeboard is unrelated to freshet event or IDF. Freshet generally expected each year between March and June.
	Unsafe or Out of Compliance Operating Zone	< 0.5 m	Same actions as for Buffer Zone. Suspend slurry deposition activities if reduced freeboard is unrelated to freshet event or IDF. Freshet generally expected each year between March and June.
Construction Schedule Till (Zone S) Transition (Zone T), Filter (Zone F), Drain Rock and Filter Sand	To elevation 970 m	Year 2	Construction Materials Availability and Schedule Golder (2015).
	73,950 m <sup>3</sup> (to El. 970)	As needed for construction	Sourced from specific borrow areas or from the excavation of water management structures.
	69,230 m <sup>3</sup> (to El. 970)	10,000 to 20,000 tonnes/day	Sourced from crushing waste rock (mining operations or waste rock dumps) or from screening waste rock and filter from borrow sources.
	424,200 m <sup>3</sup> (to El. 970)	16,300 m <sup>3</sup> /day (tailings discharge)	Sourced from tailings discharge. Additional tailings available within TSF. Provided by MP/MC.
Upstream Fill (Zone U) - Tailings Sand or Rockfill Rockfill (Zone C)	11 million tonnes/year (direct haul run-of-mine waste rock)	11 million tonnes/year (direct haul run-of-mine waste rock)	Sourced from direct haul run-of-mine waste rock. Additional rock available from dumps/stockpiles Provided by MP/MC.
	1,134,300 m <sup>3</sup> (to El. 970)	11 million tonnes/year (direct haul run-of-mine waste rock)	Sourced from direct haul run-of-mine waste rock. Additional rock available from dumps/stockpiles. Provided by MP/MC.



APPENDIX 1 CONTINUED: QPO PAGE 2 OF 3

Quantitative Performance Objective	Value	Source / Comment / Action
Survey Monuments	Data gathering frequency Normal Operating Zone	Once every two weeks. Baseline readings to be determined when installed. Horizontal displacement measured perpendicular to the embankment. Increase monitoring frequency of survey monuments, slope inclinometers, slope acceleration arrays (SAAs) and piezometers around the area of concern. Complete inspection of embankment near the area of concern.
	Concern Zone	Horizontal and/or vertical displacement between 0.01 and 0.05 m Suspend activities in area of concern and maximize pumping from TSF to other facilities. Increase monitoring frequency of all survey monuments, slope inclinometers, SAAs and piezometers. Install in-place inclinometer in nearby slope inclinometer if available. Complete inspection of TSF embankments.
	Buffer Zone	Horizontal and/or vertical displacement between 0.05 and 0.2 m Same actions as for Buffer Zone and suspend slurry deposition and any other activities in the TSF.
	Unsafe or Out of Compliance Operating Zone	Horizontal and/or vertical displacement > 0.2 m Once every two weeks. The profiles reported in the 2015 annual dam safety inspection are to be used as baseline. A copy of the figures presenting the slope inclinometer baseline readings is attached. Wander plot to be used to confirm direction of movement.
Slope Inclinometers	Data gathering frequency Normal Operating Zone	Downstream displacement < 3 mm across the thickness of the glaciolacustrine unit (GLU). Downstream displacement < 5 mm in other units.
	Concern Zone	Downstream displacement between 3 and 10 mm across the thickness of the GLU. Downstream displacement between 5 and 10 mm in other units.
	Buffer Zone	Downstream displacement between 10 and 20 mm.
	Unsafe or Out of Compliance Operating Zone	Downstream displacement > 20 mm in other units. Suspend activities in area of concern and maximize pumping from TSF to other facilities. Increase monitoring frequency of all slope inclinometers, SAAs, survey monuments, and piezometers. Install in-place inclinometer. Complete inspection of TSF embankments. Same actions as for Buffer Zone and suspend slurry deposition and any other activities in the TSF.
Slope Acceleration Arrays (SAAs)	Data gathering frequency Normal Operating Zone	Daily. Downstream displacement < 1 mm The profiles reported in the 2015 annual dam safety inspection are to be used as baseline. A copy of the figures presenting the SAAs baseline readings is attached.
	Concern Zone	Downstream displacement between 1 and 3 mm Increase monitoring frequency of SAAs, slope inclinometers, survey monuments and piezometers around the area of concern. Install in-place inclinometer in nearby slope inclinometer if available. Complete inspection of embankment near the area of concern.
	Buffer Zone	Downstream displacement between 3 and 10 mm Suspend activities in area of concern and maximize pumping from TSF to other facilities. Increase monitoring frequency of all slope inclinometers, SAAs, survey monuments, and piezometers. Install in-place inclinometer in nearby slope inclinometer if available. Complete inspection of TSF embankments.
	Unsafe or Out of Compliance Operating Zone	Downstream displacement > 10 mm Same actions as for Buffer Zone and suspend slurry deposition and any other activities in the TSF.
Piezometers	Data gathering frequency Normal Operating Zone	Once every two weeks. Increase or decrease < 0.5 m for piezometers in the foundation downstream of the fill core or cut-off wall The piezometric levels reported in the 2015 annual dam safety inspection are to be used as baseline. The piezometric levels will take time to return to baseline levels after construction to raise or buttress the embankments. A copy of the figures presenting the piezometric baseline readings is attached.
	Concern Zone	Increase between 0.5 and 3 m for piezometers in the foundation downstream of the fill core or cut-off wall Increase monitoring frequency of piezometers, slope inclinometers, SAAs, and survey monuments around the area of concern. Install in-place inclinometer in nearby slope inclinometer if available. Complete inspection of embankment near the area of concern.
	Buffer Zone	Increase between 3 and 12 m for piezometers in the foundation downstream of the fill core or cut-off wall Suspend activities in area of concern and maximize pumping from TSF to other facilities. Increase monitoring frequency of all slope inclinometers, SAAs, survey monuments, and piezometers. Install in-place inclinometer in nearby slope inclinometer if available. Complete inspection of TSF embankments.
	Unsafe or Out of Compliance Operating Zone	Increase > 12 m for piezometers in the foundation downstream of the fill core or cut-off wall Same actions as for Buffer Zone and suspend slurry deposition and any other activities in the TSF.

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 1413503-095-TM-Rev1-5000  
 April 4, 2016



APPENDIX 1 CONTINUED: QPO PAGE 3 OF 3

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1413803-085-TM-Rev1-8000  
 April 4, 2016

Table 2: TSF Piezometer Trigger Values during Construction

Quantitative Performance Objective		Value	Source / Comment / Action
Piezometers	Normal Operating Zone	Increase of piezometric levels equivalent to a B-bar value < 0.30 at Corner 1 Upper GLU unit (equivalent to 8.6 m for a 13 m embankment raise)	The piezometric levels reported in the 2015 annual dam safety inspection are to be used as baseline. The piezometric levels will take time to return to baseline levels after construction to raise or buttress the embankments. A copy of the figures presenting the piezometric baseline readings is attached.
		Increase of piezometric levels equivalent to a B-bar value < 0.1 at Corner 1 till or glaciofluvial units (equivalent to 2.9 m for a 13 m embankment raise)	
	Concern Zone	Increase of piezometric levels equivalent to a B-bar value between 0.3 and 0.45 and at Corner 1 Upper GLU unit (equivalent to 8.6 to 12.9 m for a 13 m embankment raise)	Increase monitoring frequency of piezometers, slope inclinometers, SAAs, and survey monuments around the area of concern. Install in-place inclinometer in nearby slope inclinometer if available. Complete inspection of embankment near the area of concern.
		Increase of piezometric levels equivalent to a B-bar value between 0.1 and 0.2 at Corner 1 till or glaciofluvial units (equivalent to 2.9 to 5.7 m for a 13 m embankment raise)	
Buffer Zone	Increase of piezometric levels equivalent to a B-bar value between 0.45 and 0.5 at Corner 1 Upper GLU unit (equivalent to 12.9 to 14.3 m for a 13 m embankment raise)	Suspend activities in area of concern and maximize pumping from TSF to other facilities. Increase monitoring frequency of all slope inclinometers, SAAs, survey monuments, and piezometers. Install in-place inclinometer in nearby slope inclinometer if available. Complete inspection of TSF embankments.	
	Increase of piezometric levels equivalent to a B-bar value between 0.2 and 0.25 at Corner 1 till or glaciofluvial units (equivalent to 5.7 to 7.2 m for a 13 m embankment raise)		
Unsafe or Out of Compliance Operating Zone	Increase of piezometric levels equivalent to a B-bar value > 0.5 at Corner 1 Upper GLU unit (equivalent to 14.3 m for a 13 m embankment raise)	Same actions as for Buffer Zone and suspend slurry deposition and any other activities in the TSF.	
	Increase of piezometric levels equivalent to a B-bar value between 0.25 and 0.3 at Corner 1 till or glaciofluvial units (equivalent to 7.2 to 8.6 m for a 13 m embankment raise)		



**APPENDIX 2: INFORMATION REQUIRED FOR  
 DRAFT LONG TERM WATER TREATMENT PLAN – PAGE 1 OF 2**

IR #	Information Requirement	Included In TAR/ separate Memo	Completion by June 30, 2016	Clarification/Notes
IR-1	Provide report that clearly outlines the rationale and derivation of geochemical source terms and solubility limits for each of the major mine facilities including ore stockpiles, waste rock dumps, tailings impoundment, embankment, and tailings. Source terms should be developed for a full suite of parameters including but not necessarily limited to pH, Alk, SO <sub>4</sub> , Al, As, Ca, Cd, Co, Cu, Fe, Mg, Mn, Mo, Ni, Pb, Sb, Se, U, V, Zn, NO <sub>3</sub> , NO <sub>2</sub> and NH <sub>3</sub> . Operational source terms should be validated with site monitoring data.	Information will be included in the TAR.	Yes	Provided to MEM May 18, 2016 in draft SRK source term report; final version will be appended to the TAR. pH and alkalinity are not being modeled; rationale will be provided in the TAR.
IR-2	Compile a MLIARD Management Procedure Manual. The manual should include direction on how to design, plan and implement in-pit monitoring, tailings monitoring, in-pit segregation, waste rock placement, and conformatory waste dump monitoring. With the exception of procedures for the segregation and placement of PAG and NPAG waste rock, many of these procedures have been provided to MEM during the review period in the form of SOPs and the 2015 Annual Environmental and Reclamation Report for the Mount Polley Mine. However, the requested information should be amassed into a single document written with the intent and sufficient detail to provide MPMC equipment operators and staff with the necessary information to carry out these procedures.	Information will be provided as a separate memo.	Yes	Monitoring data are included in the Annual Environmental and Reclamation Report for confirmation of rock dump monitoring data. A summary of the segregation plan will formally be submitted.
IR-3	The water quality model should be calibrated with on-site water quality monitoring results. Predicted concentrations for the water treatment plant discharges and water quality prediction model nodes should be compared with operating monitoring data for the full suite of parameters listed above for IR#1.	Information will be included in the TAR.	Yes	The water quality model is calibrated based on site water quality monitoring results (requested in IR#10). The results of the model showing the predicted values versus monitoring data will be provided in the modeling memo (appendix to TAR). A comparison of future predictions to the observed range of concentrations observed in the site monitoring data will also be included. Prediction trends, and the key controls on site water during the trends will also be presented.
IR-4	The rationale and implementation of proposed closure / remediation strategies should be clearly stated for key facilities including open pits, ore stockpiles, PAG waste rock, NPAG waste rock, pit backfill and tailings. These conditions should be accounted for and accurately represented in the post-closure water quality model.	Information will be included in the TAR.	Yes	
IR-5	Provide a conservative evaluation in the site-wide water balance and water quality model of seepage losses from all mine components that could interact with the groundwater system. This includes, but is not limited to the following components: TSF, Boundary, Cariboo, Wight and Springer pits, NEZ, SERDS, Temporary NW PAG Stockpile. In addition, potential for seepage from the ore stockpiles, magnetite and sulphur stockpiles should be assessed. If seepage from a component has not been included, rationale for the exclusion must be provided.	Information will be included in the TAR.	Yes	TAR will include seepage estimates from the following facilities: TSF, Boundary, Cariboo, Wight and Springer pits, NEZ, SERDS, Temporary NW PAG Stockpile.
IR-6	Clearly present sensitivity analyses on key parameters that control TSF seepage (and other groundwater flows across the site).	Information will be included in the TAR.	Yes	
IR-7	Provide a proposed investigation plan and associated timeline to ultimately provide a clear and defensible explanation of the rapid tracer breakthrough at GW12-2b beginning in mid-2015. The investigation must assess all potential sources (including, but not limited to PAG waste stockpile, haul road, seepage losses from unlined sumps/ditches) as well as their magnitudes and behaviours. The investigation must also definitively address the apparent discrepancies between the significant groundwater inflows reported in the well logs (e.g., increasing from 60 to 100 gpm across the screened interval in GW12-2a) and single-well response test results that suggest low permeability in the vicinity of the wells (which should not have allowed for such rates of groundwater inflow during drilling). This may have an impact on long-term water quality in the vicinity of Springer Pit and Bootjack Lake, and also suggests that actual conditions are substantially different from those previously assumed by groundwater modeling efforts.	Information will be provided as a separate memo.	Yes	A plan and timeline for addressing this IR, but not the investigation outcomes that are contingent on additional field testing, will be provided by June 30.
IR-8	In the absence of the results of the investigation plan required in IR-7, the site-wide water balance model and water quality model must conservatively account for all reasonably foreseeable sources of loadings to groundwater and ultimately Bootjack Lake. This shall include a clear explanation and rationale for how mass loadings from other site facilities (including, but not limited to PAG waste stockpile, haul road, seepage losses from unlined sumps/ditches) are accounted for in the modeling.	Information will be provided as a separate memo.	No	In the absence of complete knowledge of the sources controlling water quality changes in GW12-2b, a conservative approach will be completed to evaluate the influence of seepage on Bootjack Lake. A rationale for how mass load from other site facilities (e.g., NW PAG pit) is accounted for in the modeling will be provided.
IR-9	Provide all available hydrology information for the Hazeltine, Edney and Bootjack Creek monitoring stations, with a focus on the recent installations (post-breach). Information should include: • Rating curves (equations, error metrics, data grades) • Table of manual measurements • Benchmark surveys, and notes on required adjustments to the staff gauging/transducers as a result • Photos (upstream and downstream) If a discharge to Hazeltine Creek is selected as the preferred (or one of several) long-term water management options, the rate that contact water is moved off-site is related in part to the dilution capacity in Hazeltine Creek. This has direct implications for the maintenance of a neutral site water balance, including the TSF operating pond volumes. Flows in Hazeltine Creek also impact the dilutive capacity, and thus the WTP discharge targets (rate and quality). • Include all available data for Bootjack Creek, to be used for dilution calculations in Bootjack Lake (Springer Pit water – via surface spillway at closure, and groundwater seepage from the Springer Pit lake).	Information will be included in the TAR.	Yes	Discharge to Hazeltine Creek is not the long-term option.

**APPENDIX 2 CONTINUED: INFORMATION REQUIRED FOR  
 DRAFT LONG TERM WATER TREATMENT PLAN – PAGE 2 OF 2**

IR #	Information Requirement	Included in TAR/Separate Memo	Completion by June 30, 2016	Clarification/Notes
IR-10	Present a discussion, along with supporting plots and models, of the WBM-WQM calibration. This should be done for both flow (volumes, annual distribution, etc.) and all relevant water quality parameters that are listed in IR-1, particularly all parameters of concern (POCs, including selenium). The report should present the rationale for those parameters that are not carried through to the environmental effects assessment.	Information will be included in the TAR	Yes	pH and alkalinity are not included in the site water quality model as the geochemical characterization indicates the mine site drainage will continue to be neutral. Rationale to be provided in the TAR.
IR-11	Provide summaries of the data supporting all model inputs (e.g., mine plan, reclamation and closure plan, climate, measured surface and ground water quality, geochemical source terms, surface water flows, groundwater levels, hydrogeological hydraulic testing, groundwater well drilling logs) and detail the assumptions made in parameterizing the model (e.g., statistical distribution of water quality parameters, runoff coefficients, wet- and dry-year, groundwater flow paths and rates). Present the modeling exercise in a clear and transparent manner, and describe all assumptions made in the model and sensitivity analyses conducted with supporting information provided.	Information will be included in the TAR	Yes	
IR-12	Present water balance and water quality predictions for the proposed MI operations period (4 years) and for the reclamation and closure phase. This includes, but is not limited to the following mine site components and downstream receivers: Receiving Environment • Hazeltine Creek, below the Polley Lake weir • The Quensen River, if this is selected as one of the effluent discharge points • Quensen Lake, Boodjack Lake and Polley Lake Mine Site • CCS • Springe Pit • Cariboo Pit • 8km Sump • NW Sump • Mine Drainage Creek Sump • Boodjack Creek Sump • South Seepage Pond • Main Embankment Seepage Pond • PETBP • TSF supernatant pond • All ore stockpiles (Cariboo, No. 1, No. 3 and Oxide)	Information will be included in the TAR	Yes	Resolution of the water quality model will be modified to distinguish the effects of ore stockpiles. The base case model will use the source term discussed in SRK (2016). A conservative source term, based on the information available, will also be evaluated in a sensitivity scenario to evaluate selenium concentrations from stockpiles that remain at surface during closure.
IR-13	Present an analysis of discharge rates (and duration) required to maintain a neutral site water balance, and maintain the TSF pond within design and permitted levels. • Present estimates for a range of climatic conditions.	Information will be included in the TAR	Yes	
IR-14	Present a detailed effluent discharge management plan that includes the following information: • Monitoring stations and thresholds used to set discharge rates, including a specific management plan for selenium • Allocation of site staff responsibility • Operation plan for Polley Lake weir • Response times for altering discharge rates based on streamflows in Hazeltine Creek, sediment pond levels, WTP influent chemistry, etc. • Other operational considerations, and potential mitigation strategies to handle larger than expected volumes of water on-site.	Information will partially be included in the TAR and other supporting documents.	Yes	
IR-15	Present the potential upset conditions and/or discharge restrictions that would impact the ability to maintain a neutral site water balance and the contingency measures that would be implemented to address these. Specifically, present this information for: • A high-magnitude freshet, followed by a wetter than average spring season (2014 would be an appropriate surrogate); • Periods where WTP discharge rate to Hazeltine Creek is limited or precluded due to natural flows consuming Quensen Lake effluent capacity; • Proposed shutdowns of the water discharge plant for servicing, maintenance, or repairs; • A situation in which effluent chemistry does not meet discharge criteria; • Any other issue that requires the movement of water out of Springe Pit earlier than predicted, or an large TSF drain down in the event that further dam construction activities are required; and • Other foreseeable circumstances that would reduce overall capacity to discharge water off-site.	Information will be included in the TAR	Yes	
IR-16	Provide an updated standalone mine water quality and quantity monitoring program specific to the Mines Act permit that includes water quality (surface and groundwater), water quantity (flow and groundwater levels), seepage monitoring points, locations, frequency, parameters, rationale, reporting structure and frequency. This will cover all current and proposed stations/sites within and immediately adjacent to the mine site boundaries for the operational, closure, and post-closure periods. Reference to the current CEMP can be made for details on the SOPs, QA/QC practices, monitoring methodology.  It is understood that changes may be made to the monitoring plans in the future, however, the Chief Inspector requires a monitoring plan that is reflective of the current mine plan and Reclamation and Closure Plan.	Information will be provided as a separate memo.	Yes	
IR-17	Provide the locations, rationale, and estimated depths for additional monitoring wells to be installed in 2016 within and immediately adjacent to the mine boundaries where there is potential for migration of seepage from mine-related features.	Information will be provided as a separate memo.	Yes	
IR-18	Provide the hydrology monitoring protocols, including division of responsibility between site staff and contractors. List activities/schedules/season changes that site staff are required to confirm with the responsible Qualified Professional prior to implementing.	Information will be provided as a separate memo.	Yes	