November 7, 2012

MOUNT POLLEY MINING CORPORATION
SUITE 200
580 HORNBY ST
VANCOUVER, BC
V6C 3B6

Dear Permittee:

Enclosed is Amended Permit 11678 issued under the provisions of the Environmental Management Act. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the Environmental Management Act to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the Environmental Management Act. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Southern Interior Region - Cariboo. Plans, data and reports pertinent to the permit are to be submitted to Environmental Protection, at Ministry of Environment, Regional Operations, Southern Interior Region - Cariboo, Suite 400 - 640 Borland St., Williams Lake, BC V2G 4T1.
Yours truly,

Douglas J. Hill, P.Eng.
for Director, Environmental Management Act
Southern Interior Region - Cariboo

Enclosure

cc: Environment Canada
MINISTRY OF 
ENVIRONMENT

PERMIT
11678

Under the Provisions of the Environmental Management Act

MOUNT POLLEY MINING CORPORATION

SUITE 200
580 HORNBY ST
VANCOUVER, BC
V6C 3B6

is authorized to discharge effluent to the land and surface water from a copper-gold mine-mill complex located near Likely, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may lead to prosecution.

This Permit supersedes and amends all previous versions of Permit 11678 issued under Part 2, Section 14 of the Environmental Management Act.

1. AUTHORIZED DISCHARGES

1.1 This section applies to the discharge of effluent from a COPPER-GOLD MINE AND ORE CONCENTRATOR to a tailings impoundment. The site reference number for this discharge is E225309.

1.1.1 The monthly average authorized rate of discharge of slurry is 54,500 cubic meters per day.

1.1.2 The authorized discharge period is continuous.

1.1.3 The characteristics of the discharge must be typical concentrator tailings from the milling of ore or metal contaminated soil, mill site runoff, rock disposal site runoff, open pit water, and septic tank effluent from a copper-gold mine and mill complex.

1.1.4 The works authorized are a septic tank; tailings discharge line; open pits; tailings impoundment; seepage collection and recycle system; mine, mill,
and rock disposal site runoff collection ditches and sumps; tailings supernatant recycle systems; sediment pond(s); and related appurtenances located approximately as shown on the attached Site Plans.

1.1.5 The authorized works must be complete and in operation when the discharge commences.

1.1.6 The maximum elevation of the tailings impoundment supernatant is 1000 meters above sea level.

1.1.7 The location of the facilities from which the discharge originates is within Mineral Leases No. 345731, No. 345731 and No. 410495, Cariboo Mining Division, Cariboo Land District.

1.1.8 The location of the point of discharge (tailings impoundment) is five kilometres southeast of Mount Polley, on Mineral Claim 514039, Cariboo Mining Division, Cariboo Land District.

1.2 This section applies to the discharge of DAM FILTERED WATER from the tailings impoundment drains, and other sources of mine water as approved by the Director in writing, to Hazeltine Creek. The site reference for this discharge is E289717.

1.2.1 The authorized annual maximum volume discharged must not exceed 1.4 Million cubic meters per year.

1.2.2 The total volume of effluent discharged each day (cubic meters per day) must not exceed 35% of Hazeltine Creek discharge for the same day as measured at nearby monitoring station W7 (EMS site E208038).

1.2.3 The authorized discharge period is continuous from April to October inclusive of each year.

1.2.4 The characteristics of the discharge must be equal to or better than:

Total Suspended Solids 25 mg/litre (maximum)

96hr LC50 rainbow trout 100% effluent V/V (minimum)

48 hr LC50 Daphnia magna 100% effluent V/V (minimum)
pH must be greater than 6 pH units and less than 9.5 pH units

1.2.5 The Permittee must cease discharging immediately if the effluent fails to meet the characteristics in Section 1.2.4. The discharge may resume only if two subsequent re-tests demonstrate that the effluent meets the characteristics in Section 1.2.4.

1.2.6 At least 30 days prior to commencing a discharge each year, the Permittee must submit to the Director for approval, an Annual Discharge Plan, as outlined in Section 2.6 below, that stipulates the expected volume, timing, and duration of effluent released to Hazeltine Creek, and which must demonstrate how the targets in Table 1 will be attained at a downstream monitoring site known as W7 - upper Hazeltine Creek. The discharge must be conducted for that year in accordance with the approved Annual Discharge Plan. The Annual Discharge Plan may be amended, or the discharge suspended, by the Director based on any information collected by Environmental Protection in connection with this discharge.

1.2.7 No discharge is authorized until Mines Act Permit M-200 Traditional Use Study requirement is met.

1.2.8 The authorized works are a settling pond or tank, pipeline, flow control valve, continuous flow meter and outlet structure.

1.2.9 The authorized works must be complete and in operation when the discharge commences.

1.2.10 The location of the facilities from which the discharge originates is the same location as set out in Sections 1.1.7 and 1.1.8 (tailings impoundment).

1.2.11 The location of the point of discharge is Hazeltine Creek within License of Occupation 516031.

2. GENERAL REQUIREMENTS

2.1 Maintenance of Works and Emergency Procedures

The Permittee must inspect the pollution control works regularly and maintain them in good working order. In the event of an emergency or condition beyond the control of the Permittee which prevents continuing operation of the approved
method of pollution control or which impairs the operation of approved works, the Permittee must notify Environmental Protection:

a) By telephone (250-398-4530) if the condition occurs between the hours of 08:00 and 16:30, Monday to Friday on normal working days; and,
b) By facsimile transmission (250-398-4214) if the condition occurs at any other time.

All such reports must be received within 24 hours of detection of the occurrence.

In addition, emergencies involving spills to the environment (as defined in the Spill Reporting Regulation) must be reported immediately to the Provincial Emergency Program (1-800-663-3456).

2.2 **Bypasses**

The discharge of effluent which has bypassed the designated treatment works is prohibited unless the approval of the Director is obtained and confirmed in writing.

2.3 **Process Modification**

The Director must be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge.

2.4 **Surface Runoff and Mine Drainage Control**

2.4.1 To the maximum extent possible, seepage and runoff from the open pits, rock disposal sites, and from down gradient of the tailings impoundment must, when the mine or mill is operating, be collected and conveyed to the tailings impoundment, mill or open pits. Recycling of on-site water and evaporation enhancing techniques must be practised to the maximum extent practicable. Inactive open pits may be used for storage of mine water, tailings impoundment supernatant or mill site runoff provided records of volumes transferred to any pit is maintained.

2.4.2 Unless required for operational purposes, surface runoff from undisturbed areas and groundwater pumped from upgradient of pits or other disturbed areas must be diverted so that it does not flow to the tailings impoundment, or to the mine and mill areas. Water quality must be maintained during construction and operation from upgradient areas when being diverted to natural watercourses.
2.4.3 Surface runoff control works must be provided for all areas disturbed by roads, open pits, rock disposal sites, and the mill and ore storage area. The surface runoff control system must convey all flows up to a 1 in 10 year 24-hour storm event, and must withstand all flows up to a 1 in 200 year 24-hour storm event without significant damage.

2.4.4 The tailings impoundment must provide 1.0 meter of freeboard plus storage for the Probable Maximum Precipitation (PMP), and all other effluent storage ponds, seepage ponds, and surface runoff ponds must provide at least 0.5 meter of freeboard, up to a 1 in 200 year 24-hour storm event. If at any time the freeboard in the tailings impoundment is reduced to less than 1.0 meters plus the PMP, or less than 0.5 meters in any other pond, the Permittee must notify Environmental Protection following procedures in Section 2.1 of this permit. After initially reporting such an occurrence, the Permittee must report the freeboard weekly until such time as the required freeboard is re-established. Freeboard is defined as the difference in elevation between the contained liquid level and the top of the berm structure at its lowest point. The lowest point does not include a spillway where a discharge is authorized or where the supernatant over flows to a downstream collection pond that is part of the authorized works.

2.4.5 Sedimentation of watercourses must be prevented during construction and operation of any mine structures or facilities. The Director may specify and require implementation of measures to prevent sedimentation of watercourses caused by construction or operational activity at the site.

2.4.6 All ponds, ditching, and other runoff or seepage collection and diversion works must be inspected at least twice per year, once in the spring after freshet and once in the fall before freeze-up.

2.5 **Environmental Emergency Response Plan**

The Permittee must maintain an Environmental Emergency Response Plan which includes adequate procedures for responding to all probable environmental emergencies, including spills, associated with the Mount Polley Mine operation and mine site area, and procedures for the suspension of the effluent discharge to Hazeltine Creek if required. The Permittee must keep this plan up to date, and appropriate mine personnel must be made aware of its contents. The plan must include a notification protocol for advising the Soda Creek Indian Band and the Williams Lake Indian Band of significant emergency events at the mine site.
2.6 **Annual Discharge Plan**

The Annual Discharge Plan required in section 1.2.6 must outline the expected volume, timing, and duration of effluent released to Hazeltine Creek. The Annual Discharge Plan must take into account recent hydrology and snowpack information, mine water balance information, and background water quality information. The Annual Discharge Plan must demonstrate how the water quality targets in Table 1 will be attained at downstream monitoring site W7, located upstream of a bridge over Hazeltine Creek and approximately 800 m downstream of the point of discharge. The Annual Discharge Plan must include limits on the maximum volume of effluent discharged per day, referencing flow rate and the proportion of effluent in the creek; and must include limits on the concentration of contaminants in source water(s) as necessary to meet the downstream water quality targets. The Annual Discharge Plan must identify the sources of mine water and the percent of each source in the total effluent discharge for each day. The Annual Discharge Plan must demonstrate how the discharge will be managed to prevent erosion, undesirable temperature changes in Hazeltine Creek, and any other undesirable affects to the fish habitat in the creek.

**Table 1 – Target levels for Hazeltine Creek at W7**

<table>
<thead>
<tr>
<th>Parameter – water sample</th>
<th>Units</th>
<th>30-day Mean</th>
<th>Parameter – water sample</th>
<th>Units</th>
<th>Maximum</th>
<th>Parameter – water sample</th>
<th>Units</th>
<th>Mean</th>
<th>Parameter – sediment sample</th>
<th>Units</th>
<th>Mean</th>
<th>Parameter – Fish Muscle Rainbow Trout</th>
<th>Units</th>
<th>Mean</th>
<th>Parameter – creek substrate</th>
<th>Units</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrate</td>
<td>mg/l</td>
<td>3</td>
<td>Sulphate</td>
<td>mg/l</td>
<td>100</td>
<td>Total Cadmium</td>
<td>µg/l</td>
<td>0.025</td>
<td>Total Selenium</td>
<td>µg/g dw</td>
<td>2</td>
<td>Total Selenium</td>
<td>µg/g wet wt</td>
<td>1</td>
<td>Chlorophyll a</td>
<td>mg/m²</td>
<td>100</td>
</tr>
<tr>
<td>Total Copper</td>
<td>mg/l</td>
<td>0.007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total Selenium</td>
<td>µg/g dw</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Total Selenium</td>
<td>µg/g wet wt</td>
<td>1</td>
</tr>
<tr>
<td>Total Molybdenum</td>
<td>mg/l</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total Selenium</td>
<td>µg/g wet wt</td>
<td>1</td>
<td>Chlorophyll a</td>
<td>mg/m²</td>
<td>100</td>
</tr>
<tr>
<td>Total Selenium</td>
<td>mg/l</td>
<td>0.002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total Selenium</td>
<td>µg/g wet wt</td>
<td>1</td>
<td>Chlorophyll a</td>
<td>mg/m²</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*annual mean based on samples taken during the discharge period of April to October
The Director may review and revise these target levels based upon review of the monitoring data, environmental effects monitoring, and any other relevant information, including approved B.C. Water Quality Guidelines.

2.6.1 The data collected for Hazeltine Creek at W7 must be compared against the targets in Table 1 at least once per week. The 30-day mean must be recorded and reported to Environmental Protection weekly as a rolling five week mean.

2.6.2 The Permittee must notify the Director immediately if any target set out in Table 1 has been exceeded at monitoring site W7, or if any limits set out in the Annual Discharge Plan are exceeded in the discharge.

2.6.3 The Permittee must cease discharging as soon as possible if any target in Table 1 is exceeded. The Permittee may resume the discharge if the discharge plan is amended to ensure targets in Table 1 can be achieved. Amendments to the discharge plan are of no effect unless approved by the Director in writing.

2.7 Communication Plan

The permit holder must develop a communication plan that addresses the sharing of environmental data with the Soda Creek Indian Band and the Williams Lake Indian Band. This plan must be developed in consultation with the Soda Creek Indian Band and the Williams Lake Indian Band.

The Permit holder must participate in and support a Public Liaison Committee which meets at least annually to share information about mine activities and the results of monitoring programs with interested members of the public.

2.8 Posting of Security

The Permittee must maintain security with the Minister of Finance as a condition of the Permit Approving Mine Plan and Reclamation Program issued by the Ministry of Energy, Mines and Natural Gas pursuant to the Mines Act.
3. MONITORING AND REPORTING REQUIREMENTS

3.1 Surface and Groundwater Monitoring Plan

The Permittee must submit for approval of the Director by January 31, 2013 a plan developed by a qualified professional to monitor the quality and quantity of effluent sources and discharges, and quality and quantity of surface and groundwater associated with the discharges. The Permittee must maintain the monitoring plan, and any updates to the plan must be submitted 30 days prior to implementation for approval of the Director. This plan must be reviewed and updated by a qualified professional on an annual basis with results of the review reported in the annual report required in Section 3.8. The plan must include all sampling sites, frequency of sampling, parameters to be analysed, and minimum detection limits.

The plan must include continuous monitoring of the discharge authorized under section 1.2 and of the water in Hazeltine Creek for discharge, conductivity and temperature, and must include at least weekly sampling of the effluent discharged under section 1.2 and at monitoring site W7 while the discharge is occurring.

The Director may approve the monitoring plan with conditions, and may amend the plan upon review of monitoring data or any other relevant information.

3.2 Biological Monitoring and Lake Sampling Program

The Permittee must develop a biological monitoring program to assess environmental effects on the receiving environment. The Permittee must submit each year to the Director, a protocol developed by a qualified professional for sample collection, sample analysis and data analysis for the program at least 60 days prior to commencing data collection. The plan must include but not be limited to the mine site, Hazeltine Creek, Edney Creek, Bootjack Lake and Polley Lake.

The program must include documentation of wildlife occurrences and an annual photo survey of Hazeltine Creek at pre-selected observation sites to document any visible changes to creek habitat. The program must also include monitoring for selenium in biota and sediment from the receiving waters noted above.

An annual lake sampling program for Polley and Bootjack Lakes must include:

a) dissolved oxygen, temperature and conductivity profile sampling at spring and fall overturn,
b) water chemistry sampling during spring and fall overturn; and,  
c) secchi disk measurements two times a month, occurring between spring and fall overturn.

The lake sampling locations must include sites known as P1 and P2 on Polley Lake and B1 and B2 on Bootjack Lake. A rational for sampling depths must be included. The lake sampling program must be conducted in accordance with the lake sampling and biological monitoring protocols that must be included in the Quality Assurance Manual required in Section 3.7 of this permit.

3.3 **Toxicity Testing**

Acute and chronic toxicity tests of discharges to the Hazeltine Creek authorized under section 1.2 of this permit must be conducted as follows in Table 2.

**Table 2 Bioassay Sampling**

<table>
<thead>
<tr>
<th>Acute Bioassay</th>
<th>Frequency</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>96hr LC50 rainbow trout</td>
<td>Monthly*</td>
<td>Effluent from site E289717</td>
</tr>
<tr>
<td>48 hr LC50 Daphnia magna</td>
<td>Monthly*</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chronic Bioassay</th>
<th>Frequency</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC25 Toxicity using Early Life Stages of Salmonid Fish (Rainbow Trout) - embryo/alevin</td>
<td>Twice annually*</td>
<td>35% Effluent from E289717</td>
</tr>
<tr>
<td>7 day Ceriodaphnia dubia reproduction</td>
<td>Twice annually* (one at high and one at low creek flow)</td>
<td></td>
</tr>
</tbody>
</table>

*only when a discharge has occurred within that calendar month
* Director may reduce frequency to once annually based on review of previous three years of data

3.4 **Flow Measurement**

The Permittee must provide and maintain suitable flow measuring devices and record staff gauge measurements, during the non-freezing period, at surface water stations W1b (Morehead Creek), W4 (North Dump Creek), W5 (Bootjack Creek) and W12 (6K Creek), located approximately as shown on the site plan. These staff gauge readings must be taken at the same time as water samples are collected.

Date issued: May 30, 1997
Date amended: November 7, 2012 (most recent)

Douglas J. Hill, P.Eng.
for Director, *Environmental Management Act*
Southern Interior Region - Cariboo

Permit Number: 11678
at the same or associated sites. The Permittee must provide and maintain a suitable flow measuring device and record continuously during the non-freezing period the flow at surface water station W7. The water elevation must be measured in all groundwater wells each time they are sampled for water quality. A stage discharge curve must be developed for all staff gauges, and all staff gauges and flow measuring devices must be checked and calibrated once per year, after spring freshet.

3.5 Climate Monitoring

The Permittee must maintain a meteorological station and measure continuous daily precipitation; daily maximum, minimum and mean temperature; and daily open pan evaporation or suitable alternative as approved by the Director.

3.6 Sampling and Analysis Procedures

Sampling must be carried out in accordance with the procedures described in "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2003 Edition (Permittee)", or most recent edition, or suitable alternative procedures as authorized by the Director.


Analyses must be carried out in accordance with procedures described in the latest version of "British Columbia Environmental Laboratory Manual: for the analysis of water, wastewater, sediments, biological materials and discrete ambient air samples. 2009”, or the most recent edition, or by suitable alternative procedures as authorized by the Director.

Copies of the above manuals may be purchased from Queen’s Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov’t. Victoria, British Columbia, V8W 9V7.
(1-800-663-6105 or (250) 387-6409). A copy of the manual is also available for inspection at all Environmental Protection offices.

3.7 **Quality Assurance**

The Permittee must maintain a “Quality Assurance Manual” consistent with “British Columbia Field Sampling Manual for continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, (2003 Permittee Edition)”, or most recent edition. The Permittee must ensure that all data submitted as a requirement of this permit is produced in accordance with the Quality Assurance Manual, that data is handled and reviewed in accordance with protocols established in the manual, and is accompanied by quality assurance data required by the manual. The Permittee must provide Environmental Protection with any updates to this manual within 30 days of adoption.

Analysis of samples for parameters designated under the Environmental Data Quality Assurance Regulation must be at a laboratory registered for the designated parameter under the Regulation. In addition, the Permittee must participate in quality assurance audits as required by the Regulation.

3.8 **Reporting**

Maintain water sample analysis, flow measurements and water balance, quality assurance data and field measurement data for inspection and submit the data, suitably tabulated, to Environmental Protection, once every three months. All reports must be submitted within 45 days of the end of the three month period during which the data was collected. The sample analysis data and field measurement data must be submitted in an electronic format suitable for entry into the provincial database system known as EMS.

The Permittee must submit a comprehensive annual report, in a format suitable for public release, by March 31st of each year. The annual report must include:

a) all water quality monitoring results required under the permit,
b) an evaluation of the impacts of the mining operation on the receiving environment from the previous year,
c) a summary of any non-compliance with the permit and other incidents that may have led to impacts to the receiving environment,
d) an update to the water balance and water management plan,
e) a review and update of the assessment of ARD potential and water quality
impacts from mine waste management,
f) a comparison of monitoring data with water quality guidelines, predictions and targets,
g) an update on the progress of reclamation and any updates to the reclamation plan,
h) the results of any biological monitoring that may have been done; and,
i) the annual report must include the groundwater monitoring results for the preceding twelve months.

The annual report must be submitted to the Director by March 31st each year. Commencing March 31, 2013 and at least every five years following, a report interpreting data trends and possible environmental impacts for groundwater must be completed by a qualified professional and submitted to the Director.

A copy of the annual report must be deposited with the Cariboo Regional District Library within 30 days of the report being submitted to the Director.

The Director may require modification to the monitoring program based on the evaluation of the annual report and on any other information collected by Environmental Protection in connection with this discharge.

3.9 Audit

Monitoring data for Hazeltine Creek and the authorized discharge to Hazeltine Creek, and the analysis of that data as it will be presented in the annual report must be reviewed and audited by a third party qualified professional. Furthermore, the findings of the audit must be appended to the annual report. The audit of monitoring data and data analysis must consider: data quality and completeness, protocols and procedures from the QA Manual for the monitoring program, current water quality guidance documents established by the Ministry of Environment, and standard operating procedures and data handling protocols in place for Mount Polley Mine.

3.10 Toxicity Failure Reporting

The Permittee must immediately notify the Director of any toxicity failure. For the purpose of this section, a sample is considered to have failed the specific toxicity test if:

a) 96hr LC50 rainbow trout: Using 100% effluent concentration, more than 50% of the fish die within a 96 hour test period.
b) **48 hr LC50 *Daphnia magna***: Using 100% effluent concentration, more than 50% of the organisms die within a 48 hour test period.

c) **EC25 Toxicity using Early Life Stages of Salmonid Fish (rainbow trout) – embryo/elevin**: Equal to or less than 35% effluent concentration is estimated cause greater than 25% nonviable alevins.

d) **7 day Ceriodaphnia dubia reproduction**: Equal to or less than 35% effluent concentration is estimated cause greater than 25% inhibition of reproduction.

The Permittee must investigate to determine the cause of the toxicity failure. Reasonable efforts must be made to obtain preliminary and in progress results from the analytical laboratory for the toxicity testing. The Permittee must make immediate arrangements to retest in the event of a failure. The Director may require additional toxicity testing based on the evaluation of results from toxicity testing.

### 3.11 Non-compliance Reporting and Exceedances

Each data submission must include a statement outlining the number of exceedances of permitted levels and targets that occurred during the reporting period. The dates of the exceedances must be clearly identified in the data submission and an explanation as to the cause of the exceedances and a description of the measures taken to rectify the situation must be provided. Should no exceedance(s) have occurred over the reporting period, a statement to that effect must be included in the data submission.