



Report Date: June 12, 2017

File: 11678

Report Number: 053611

Mount Polley Mining Corporation
P.O. BOX 12 LIKELY, BC V0L 1N0

Dear Mount Polley Mining Corporation

Re: Non-compliance Advisory Letter, Permit 11678, Mount Polley Mine, Effluent

On April 12, 2017, Ministry of Environment, Environmental Protection Division staff conducted an inspection of your facility, Mount Polley Mining Corporation located at Mount Polley Mine with authorization number 11678 under the *Environmental Management Act*. Ministry staff were accompanied on site by Colleen Hughes, Mount Polley Mining Corporation.

Failure to comply with the terms and conditions set out in your authorization is an offence under the *Environmental Management Act* (EMA).

A person who fails to comply with a provision of EMA may be found guilty of an offence and could be liable, on summary conviction, to a penalty. For your reference, EMA and all related and pertinent British Columbia Laws can be found at <http://www.bclaws.ca/>.

It should also be noted that, as an alternative to prosecution of the offence mentioned above, the Ministry may initiate action to impose an administrative penalty against Mount Polley Mining Corporation. The *Administrative Penalties Regulation (EMA)* (B.C. Reg. 133/2014) (APR) was brought into force in 2014. The APR describes the prescribed provisions of the *EMA* as well as that of specified regulations under which administrative penalties can be assigned.

This Advisory, the alleged violations and the circumstances to which it refers will form part of the compliance history of Mount Polley Mining Corporation, and will be taken into account in the event of future non-compliance.

Please note that this authorization is considered to be out of compliance until such a time as it can be confirmed to meet the authorization requirements.

Inspection Details:

Requirement Description:	1. AUTHORIZED DISCHARGES, 1.1 1.1.2: 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. 1.1.2 The authorized discharge period is continuous.
Details/Findings:	The discharge to Hazeltine Creek was abated on 30 March 2017. There had been zero discharge between 30 March 2017 and the date of the inspection, therefore compliance with this section was not applicable at the time.
Compliance:	Not Applicable
Actions to be taken:	
Requirement Description:	1.1 AUTHORIZED DISCHARGES, 1.3 1.3.1: This section applies to the discharge of seepage water from Springer Pit to Ground. The site reference for this discharge is E307887. 1.3.1 The Permittee must maintain Springer Pit water levels at less than 1025 meters above sea level (masl) to limit seepage towards Bootjack Lake.

Ministry of Environment

Compliance
Environmental
Protection Division

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Details/Findings:	As of 10 April 2017, the water level in the Springer Pit was reported as 1004.64 masl.
Compliance:	In
Actions to be taken:	
Requirement Description:	2. GENERAL REQUIREMENTS, 2.1 Maintenance of Works and Emergency Procedures 2.1: The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the Permittee which prevents effective operation of the authorized works or leads to an unauthorized discharge, the Permittee must take appropriate remedial action and notify the Director immediately. The Director may require the Permittee to reduce or suspend operations to protect the environment until the authorized works have been restored, and/or corrective steps taken to prevent unauthorized discharges. 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. Records of these inspections must be kept on site and made available for inspection by an Officer.
Details/Findings:	<p>During the inspection, Colleen reported that there is a team dedicated to conducting daily inspections of all water management works on site. Inspection checklists were provided upon request. Items on the checklist included available freeboard, clear pipes, sprinkler operation, fish fence maintenance, and pump maintenance.</p> <p>Several areas of the surface water control works, e.g. SER diversion ditch have been reinforced with rip-rap in the past year.</p> <p>The Spring 2017 ditch inspections had not been conducted at the time of inspection as freshet was still ongoing. Colleen anticipated these would be conducted by the end of April. The 2016 Spring and Fall ditch inspection results were provided upon request. These included the findings of the inspections and recommended action items.</p> <p>Golder Associates conducted a hydraulic assessment of the Long Ditch and West Ditch through 2016. Action items identified as a result of the assessment included excavation, armouring and upgrading of overflow structures (culverts). A copy of the report was provided upon request.</p> <p>Colleen reported that the fish exclusion barriers at the top of Hazeltine Creek had recently been replaced due to erosion of the banks/creek bed.</p>
Compliance:	In
Actions to be taken:	
Requirement Description:	2. GENERAL REQUIREMENTS, 2.2 Bypasses 2.2: Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.
Details/Findings:	No bypasses were observed at the time of inspection.
Compliance:	In
Actions to be taken:	
Requirement Description:	2. GENERAL REQUIREMENTS, 2.4 Surface Runoff and Mine Drainage Control 2.4.2: To the maximum extent possible, seepage and runoff from the open pits, rock disposal sites, and from down gradient of the tailings impoundment must be collected and conveyed to treatment works, the tailings impoundment, mill or open pits. Recycling of on-site water and evaporation enhancing techniques must be practiced 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 are maintained and reported quarterly.

Details/Findings:	The contact water collection system around the PAG piles to the North West of the site (NW Ditch) were inspected, as well as the Long Ditch, and works around the Southern and Main Embankment. Colleen reported that all contact water collected onsite is discharged to the Tailings Storage Facility (TSF). Due to cold weather, there were no evaporation enhancing techniques in operation at the time of inspection.
Compliance:	In
Actions to be taken:	
Requirement Description:	2. GENERAL REQUIREMENTS, 2.4 Surface Runoff and Mine Drainage Control 2.4.4: The tailings impoundment must provide adequate storage, beach width and freeboard as required by Mines Act Permit M-200. All other effluent storage ponds, seepage ponds, and surface runoff ponds must provide at least 0.5 meters of freeboard. If at any time free board is less than 0.5 meters in any other pond, the Permittee must notify the Director following procedures in section 2.1 above.
Details/Findings:	All water storage ponds inspected (NW Sump, 9km Sump, Boundary Sump, SERDs Sump, Long Ditch Sump, Central Collection Sump, Till Borrow Pit, Main Embankment Seepage Pond and South Seepage Pond) all had in excess of 0.5m freeboard.
Compliance:	In
Actions to be taken:	
Requirement Description:	2. GENERAL REQUIREMENTS, 2.14 Metal Contaminated Soil Milling 2.14: Tailings from the mill processing of metal contaminated soils from off mine site sources may be discharged to the tailings impoundment provided the Permittee has notified and obtained written approval from the Director prior to receiving these materials at the mine site. Records of the volumes processed must also be maintained and reported as part of the routine reporting requirements.
Details/Findings:	As reported by Colleen at the time of the inspection, there has been no processing of metal contaminated soils from off mine site sources. Therefore this section is not applicable at this time.
Compliance:	Not Applicable
Actions to be taken:	
Requirement Description:	3. MONITORING AND REPORTING REQUIREMENTS, 3.4 Water Flow Measurement 3.4: The Permittee must provide and maintain suitable flow measuring devices and record staff gauge measurements, during open water, at surface water stations W1b (Morehead Creek), W4A (North Dump Creek), W5 (Bootjack Creek) W12 (6K Creek), H1 (continuous, Upper Hazeltine Creek), H3(Edney Creek), H4 (Polley Lake outlet) and H2 (continuous, Lower Hazeltine Creek), located approximately as shown on the attached Site Plans, or at alternative monitoring stations satisfactory to the Director. Springer Pit water elevation shall be monitored and recorded on a monthly basis. Staff gauge readings must be taken at the same time as stream flow measurements and/or water quality sampling are collected at the same or associated sites. 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 June 15th but prior to August 31st of each calendar year. The water elevation must be measured in all groundwater wells each time they are sampled for water quality.
Details/Findings:	At the time of the inspection, flow measuring devices had yet to be installed in the creeks following winter. Colleen anticipated that they would be installed the following weekend. Therefore compliance with this section could not be determined.
Compliance:	Not Determined
Actions to be taken:	

Requirement Description:	<p>3. MONITORING AND REPORTING REQUIREMENTS, 3.5 Outfall and Pipeline Commissioning and Inspection</p> <p>3.5: The Pipeline from the Actiflo treatment plant to Quesnel Lake must include a leak detection and containment system. The Pipeline must pass pressure and leak testing protocols approved by a Qualified Professional and the findings reported to the Director for review prior to being put into service. The use of effluent meeting the characteristics of section 1.2.3 during testing of the pipeline is authorized, but after each test it must be either bled into the diffuser system for lake discharge or managed in another manner acceptable to the Director. The Permittee must develop and implement a routine visual inspection program for the outfall and pipeline and submit it to the Director 30 days prior to commencing pipeline operations under section 1.2 of this permit. Records of the routine visual inspections must be kept on site and made available for inspection by an Officer. The Permittee must ensure that a comprehensive inspection and testing program of the pipe line and outfall is conducted and includes an annual leak and pressure testing of the pipeline and an underwater inspection of the diffuser every 2 years to ensure they remain in good working order. The annual inspection and testing reports with recommended remedial actions if required must be submitted to the Director within 60 days of completion of the inspections. A sign must be maintained along the alignment of the outfall facing Quesnel Lake above the high water mark. The sign must identify the nature of works. The wording and size of the sign must be acceptable to the Director. Signs must also be posted along the effluent pipeline right-of-way at points of public access to identify the right-of-way. All signs must include emergency contact information.</p>
Details/Findings:	The pipeline to Quesnel Lake has yet to be constructed. This section is therefore not applicable at this time.
Compliance:	Not Applicable
Actions to be taken:	
Requirement Description:	<p>3. MONITORING AND REPORTING REQUIREMENTS, 3.8 Quality Assurance</p> <p>3.8: The Permittee must maintain a "Quality Assurance Manual" consistent with "British Columbia Field Sampling Manual for Continuous Monitoring plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples 2013 Edition (Permittee)", 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 the Director 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.</p>
Details/Findings:	The most recent Quality Assurance Manual update was received on 3 April 2017.
Compliance:	In
Actions to be taken:	

Requirement Description:	<p>3. MONITORING AND REPORTING REQUIREMENTS, 3.9 Reporting</p> <p>3.9 Previous Amendment: During the period of treated effluent discharge authorized by section 1.2 above, a weekly report must be submitted to the Director, summarizing the volume of treated effluent discharged, an updated Springer Pit lake elevation and related observation well levels, water quality results for treated effluent and Springer Pit related wells, and a summarized analysis of the treated effluent continuous turbidity/TSS discharged. Each report must be submitted within seven days of the previous week and must include the most recent water quality results available.</p> <p>During the period of treated effluent discharge authorized by section 1.2 above, the Permittee must upload monitoring data required under section 3.1 above to the Ministry Environmental Monitoring System database, within 45 days of the end of the month in which the data is collected.</p> <p>The Permittee must maintain all 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. In addition, the model assessments for Springer Pit groundwater and the outfall plume dispersion into Quesnel Lake must be reviewed and comments submitted quarterly. All quarterly reports must be submitted within 45 days of the end of the three month period during which the data was collected.</p> <p>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:</p> <ul style="list-style-type: none"> (a) all monitoring sample quality results required under the permit, (b) an evaluation of quality assurance, including collection, sampling, and data handling protocols, (c) an evaluation of the treatment plant operation and control, (d) an evaluation of the impacts of the mining operation on the receiving environment from the previous year, (e) a summary of any non-compliance with the permit and other incidents that may have led to impacts to the receiving environment, (f) an update to the water balance, (g) an update to models for Springer Pit groundwater discharge and the outfall dispersion in Quesnel Lake, (h) an update to the long term water management plan, (i) a review and update of the assessment of ARD potential and water quality impacts from mine waste management,
Details/Findings:	<p>This requirement was added to the permit as part of the amendment dated 29 April 2016. It has been subsequently amended as part of the amendment of 7 April 2017. As this requirement was in effect at the time the 2016 Annual Report was prepared (Q3-Q4 2016 and Q1 2017), the 2016 Annual Report will be assessed for compliance against this section.</p> <p>The discharge of tailings to Springer Pit was authorized in July 2015. Tailings was discharged to the Springer Pit until 27 June 2016, when discharge of tailings to the TSF recommenced. Between April 29 2016 (date of amendment requiring weekly reports) and 27 June 2016, weekly reports including all required information were submitted, as required.</p> <p>All quarterly reports were submitted and data has been entered into EMS throughout 2016, as required.</p> <p>The 2016 Annual Report was submitted on 31 March 2017.</p> <p>The following information was included in the 2016 Annual Report:</p> <ul style="list-style-type: none"> b) an evaluation of quality assurance, including collection, sampling, and data handling protocols; e) a summary of any non-compliance with the permit and other incidents that may have led to impacts to the receiving environment. f) an update to the water balance; g) an update to models for Springer Pit groundwater discharge and the outfall dispersion in Quesnel Lake; h) an update to the long term water management plan; and i) a review and update of the assessment of ARD potential and water quality impacts from mine waste management.

Compliance:	In
Actions to be taken:	In the interests of facilitating the review process for the Annual Reports, please ensure all items required by this section for inclusion in the Annual Report, are clearly identified in the contents page of the report.
Requirement Description:	<p>3. MONITORING AND REPORTING REQUIREMENTS, 3.9 Reporting</p> <p>3.9 Previous Amendment: During the period of treated effluent discharge authorized by section 1.2 above, a weekly report must be submitted to the Director, summarizing the volume of treated effluent discharged, an updated Springer Pit lake elevation and related observation well levels, water quality results for treated effluent and Springer Pit related wells, and a summarized analysis of the treated effluent continuous turbidity/TSS discharged. Each report must be submitted within seven days of the previous week and must include the most recent water quality results available.</p> <p>During the period of treated effluent discharge authorized by section 1.2 above, the Permittee must upload monitoring data required under section 3.1 above to the Ministry Environmental Monitoring System database, within 45 days of the end of the month in which the data is collected.</p> <p>The Permittee must maintain all 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. In addition, the model assessments for Springer Pit groundwater and the outfall plume dispersion into Quesnel Lake must be reviewed and comments submitted quarterly. All quarterly reports must be submitted within 45 days of the end of the three month period during which the data was collected.</p> <p>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:</p> <ul style="list-style-type: none"> (a) all monitoring sample quality results required under the permit, (b) an evaluation of quality assurance, including collection, sampling, and data handling protocols, (c) an evaluation of the treatment plant operation and control, (d) an evaluation of the impacts of the mining operation on the receiving environment from the previous year, (e) a summary of any non-compliance with the permit and other incidents that may have led to impacts to the receiving environment, (f) an update to the water balance, (g) an update to models for Springer Pit groundwater discharge and the outfall dispersion in Quesnel Lake, (h) an update to the long term water management plan, (i) a review and update of the assessment of ARD potential and water quality impacts from mine waste management,
Details/Findings:	<p>The 2016 Annual Report was deficient of the following information:</p> <ul style="list-style-type: none"> a) all monitoring sample quality results required under the permit. While the majority of monitoring results are included in the report, several sets of results were left out. The report states that these missing results (i.e. sediment quality monitoring, benthic invertebrate monitoring, plankton and chlorophyll monitoring, fish monitoring, vegetation monitoring, soil monitoring, and soil invertebrate monitoring) will be presented in documents associated with either the HHRA, the ERA, or both, which are due in 2017. This does not satisfy the permit requirement for this information to be included in the Annual Report. c) an evaluation of the treatment plant operation and control. While section 6.1 of the 2016 Annual Report explains how the Water Treatment Plant operates, there is no evaluation of how the system has operated throughout 2016. d) an evaluation of the impacts of the mining operation on the receiving environment from the previous year. While water quality guideline exceedances were listed for each of the sample locations, there is no discussion of the impacts of these exceedances on the receiving environment, from the previous year.
Compliance:	Out

Actions to be taken:	Provide the information required by subsections a, c, and d of this section, to be included with the 2016 Annual Report. In the interests of facilitating the review process for the Annual Reports, please ensure all items required by this section for inclusion in the Annual Report, are clearly identified in the contents page of the report.
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As well as the onsite component, this inspection also included a review of the 2016 Annual Report.

COMPLIANCE HISTORY

2016-08-12 IR27427 - Advisory of Non-Compliance. Exceedance of discharge limits.
2016-06-14 IR28467 - Notice of Compliance.
2016-03-04 IR26347 - Advisory of Non-Compliance. Exceedance of discharge limits and failure to report non-compliance as required.
2016-01-28 IR25206 - Advisory of Non-Compliance. Failure to conduct sampling as required.
2015-12-03 IR24325 - Advisory of Non-Compliance. Failure to provide outfall signage.
2015-08-19 IR21685 - Notice of Compliance.
2015-02-25 IR19565 - Advisory of Non-Compliance. Failure to maintain works in good working order, unauthorized bypass and inadequate surface run-off control works.
2015-02-23 IR19552 - Advisory of Non-Compliance. Failure to maintain works in good working order, unauthorized bypass and inadequate surface run-off control works.
2015-02-02 IR18407 - Advisory of Non-Compliance. Failure to maintain works in good working order and unauthorized bypass.
2015-01-27 IR19386 - Notice of Compliance.

Please be advised that this inspection report will be published on the provincial government website in 7 days.

If you have any questions about this letter, please contact the undersigned.

Yours truly,

Jack Green
Environmental Protection Officer

cc:

Attachments:

Deliver via:

Email: Fax: Mail:
Registered Mail: Hand Delivery:

Ministry of Environment	Compliance	Mailing Address:	Telephone: 250 398 4530
	Environmental	400-640 Borland St	Facsimile: 250 398 4214
	Protection Division	Williams Lake BC V2G 4T1	Website: www.gov.bc.ca/env

DISCLAIMER:
Please note that sections of the permit, regulation or code of practice referenced in this inspection record are for guidance and are not the official version. Please refer to the original permit, regulation or code of practice.

To see the most up to date version of the regulations and codes of practices please visit
<http://www.bclaws.ca>

If you require a copy of the original permit, please contact the inspector noted on this inspection record or visit:
<http://www2.gov.bc.ca/gov/topic.page?id=DF89089126D042FD96DF5D8C1D8B1E41&title=Publically%20Viewable%20Authorizations>

It is also important to note that this inspection record does not necessarily reflect each requirement or condition of the authorization therefore compliance is noted only for the requirements or conditions listed in the inspection record.