



Ministry of Energy, Mines and Petroleum Resources

Mining & Minerals Division Report of Inspector of Mines Geotechnical

(Issued pursuant to Section 15 of the Mines Act)

Inspection No.: 13437
File: 18040-02-07/MTPO/01
Mine No: 1101163
Emp/Cont: 0 0
Orders H&S: RECL:
Stop Work:

Name of Property: Mount Polley Mine **Permit No.:** M-200

Location: Likely

Owner, Manager: Tim Fisch

Company: Imperial Metals Corporation

Address: Vancouver BC V6C 3B6

Persons Contacted: Tim Fisch, Art Freye, Ron Martel

Type of Mining: METAL MINE - SURFACE

Date of Inspection: August 30, 2006

Copies To: Chris Carr (MEMPR, Victoria), Bruce Milligan (MEMPR, Prince George)

Written response is required from the Mine Manager within 15 days of receiving the report. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia

An inspection of the tailings storage facility (TSF) was carried out in the company of Ron Martel and Bruce Milligan (MEMPR District Inspector). The Bell and Wight Pits, Bell Dump and Northeast Zone Dump were inspected in the company of Art Frye and Bruce Milligan. A meeting to summarize the results of the inspection was held on the afternoon of August 30 (Tim Fisch, Art Frye and Bruce Milligan in attendance).

Tailings Storage Facility

Construction of the Stage 5 dam raise was in progress. On the Main Embankment, the filter zone was constructed to approximately the 947m elevation and the till core was constructed to the 948.2m elevation. Since the last geotechnical inspection, a wide tailings beach has been developed across the Perimeter, Main and South Embankments. Improvements in the beach development is understood to have been achieved following construction of a dyke to raise the tailings pipeline across a previous topographic low near the South Embankment, that was resulting in sag in the pipeline and associated flow losses. With respect to the tailings beach width, the Ministry requests specification of the minimum design beach width that is required for construction and operation.

The inclinometers installed in the toe of the Main Embankment are understood to have been recently monitored and show negligible displacement. As per the conditions of the M-200 Stage 5 construction permit amendment, the inclinometers installed through the lacustrine unit downstream of the Main Embankment shall be monitored to determine possible deflection with respect to the baseline survey using a standard inclinometer probe. Monitoring of piezometers, slope inclinometers and survey monuments shall be carried out in accordance with the OMS manual or as specified by the design consultant. A tailings dam safety review is scheduled for 2006.

Bell Pit

Instability has developed on the west and east sides of the Bell Pit. An August 29, 2006 draft technical memorandum was provided with recommendations for remedial design changes by the design consultant.

Recommendations made by the design consultant for remedial design changes to the west and east wall instability areas shall be implemented.

The Ministry understands that reflective prisms are being surveyed and the slope monitoring data is being assessed daily for the west and east wall instabilities. In addition to the prism monitoring, wireline extensometer and manual crack monitoring devices (e.g., rebar pins) shall be used for manual monitoring and assessment.

For the east wall instability area, a suitably sized rockfall impact barrier shall be placed on the north haulroad below the area of active instability, if raveling or rockfall hazards develop on the haulroad. Threshold monitoring movement rate and operational response criteria shall be developed for the west and east walls of the Bell Pit and submitted to the Ministry within 15 days of the receipt of this report.

Bell Dump

Active dumping on the Bell Dump is occurring on relatively flat ground, but in marsh materials. Tilting trees at the toe of the dump indicates that some shearing may be occurring near the toe of the dump, possibly in saturated materials. In this regard, crest advance rates shall be controlled to allow pore pressures to dissipate. Mount Polley's Standard Dump Procedure, dated February 16, 2006 shall be implemented during dump construction. As stated in the standard procedures, if unusual cracking, settlements overhangs or toe movement has occurred, the pit supervisor shall decide to dump extra short and push, or block off the area and re-assign the trucks to other dump or stockpile areas. The supervisor shall follow the Mine Operations Dump Monitor procedures, dated February 16, 2006, if potential dump instability is observed.

While not in use, the inactive northern portion of the Bell Dump shall be blocked off and limited to light vehicle access only.

Northeast Zone Dump

Operation of the Northeast Dump and TSF Haulage Road shall follow the M200 permit and variance conditions granted by the Chief Inspector.

No geotechnical concerns were noted with respect to the Northeast Zone Dump.

Wight Pit

In general, conditions in the Wight Pit are indicated to be stable. The bench faces and crests appear to be adequately scaled during excavation; however, structural breakback appears to be occurring along geologic structure in some areas. A general improvement in bench performance is indicated to have occurred since the mine started using electronic blast detonators. Recommendations for further refinements to the blast designs are pending following a site visit from the material supplier.

At present, no monitoring is being carried out in the Wight Pit, other than visual inspection. Prism monitoring shall be implemented starting with baseline prisms at the pit crest. Visual inspection of the pit crest shall be conducted on a regular basis.

The Ministry requests a copy of the design consultant's last geotechnical inspection report. A design report is pending for the overburden materials in the southeast pit sector. The Ministry requests a copy of that report when it is completed.