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MOUNT POLLEY MINE
Tailings Storage Facility
2012 Construction

As-Built Report

Submitted to:

Mount Polley Mining Corporation,
Likely, BC

Submitted by:

AMEC Environment & Infrastructure,
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Burnaby, BC

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SUMMARY

This report presents the as-built report documenting the 2012 construction of the Mount Polley Mine Corporation (MPMC) tailings storage facility (TSF). On site construction monitoring by AMEC personnel in 2012 started in mid-May with the placement of till core material on the TSF. At this time AMEC also provided training to the Mt. Polley inspectors who for the majority of the construction season a provided construction monitoring of all construction activities including Zone S (till core), Zones F & T (sand and gravel) placement, Zone U (upstream support) and Zone C (downstream rockfil). Foundation preparation for the till core abutment contacts was observed and approved by AMEC.

Construction of the Stage 8 raise of the TSF began in early May. An AMEC representative was on site to observe the start of the construction and to provide training for the MPMC responsible for the construction monitoring. AMEC provided periodic visits throughout the construction season to verify the the materials and construction methodology satisfied the specifications. Core construction for the 2012 construction period was suspended on October 26.

The 2012, Stage 8 embankment raise consisted of the placement of:

- Zone U, comprising of tailings sand cells along the South and Perimeter Embankments and a portion of the Main Embankment and NAG rockfill along the majority of the Main Embankment where insufficient tailings line pressure precludes tailings discharge;
- Compacted Zone S as the core of the embankment;
- Preparation of abutments tie-in on the perimeter and south embankments;
- Zones F downstream of the core of the dam
- Zone T downstream of Zone F, and
- Zone C downstream of Zone T.

In 2012, the TSF till core was completed to a minimum elevation of 963.8 m. Filter and transition materials were placed to a minimum elevation of 962.7 m (along the Perimeter embankment).

The Stage 8 original design specified that the till core to be raised via a modified centerline design (upstream) to an elevation of 963.5 m. However, the updated mine plan indicates that the impoundment would be required to be raised above the current final design elevation 970m and to support such an expansion the core was realigned from the modified centerline design to a centerline design.

MPMC performed all related earthwork construction for Zone U (Upstream fill), Zone T (Transition) and Zone C (NAG Rock Shell). Material placement and related earthwork construction for Zone S and Zone F were completed by Peterson Contracting Ltd (Peterson). MPMC monitored daily construction, issuing daily reports, material sampling, and conducted instrumentation data gathering internally. AMEC reviewed daily reports, performed laboratory test on the provided samples, reviewed provided instrumentation data, and conducted site visits during critical staged of construction and at minimum on a monthly basis.

1.0 INTRODUCTION

The Mount Polley Mine is located in central British Columbia, approximately 60 km northeast of Williams Lake. The main access route is via Likely Road. The turnoff to the Mine is located approximately 1.5 km east of Morehead Lake with the Mine located another eleven km to the southeast, along the Bootjack Lake Forest Service Road. The Mount Polley mine commenced production in June 13, 1997. Ore is crushed and processed by selective flotation to produce a copper-gold concentrate. The mill throughput rate is approximately 20,000 tonnes per day (approx. 7.3 million tonnes per year). Mill tailings are discharged as slurry into the Tailings Storage Facility (TSF) located on the south area of the Mine property.

Tailings slurry is conveyed from the concentrator to the TSF via a tailings discharge pipeline. The tailings are deposited into the impoundment through spigots on the embankment crest. A floating reclaim pump recycles process water from the supernatant pond in the TSF for use in the mill processing circuit. Sediment and seepage collection ponds are designed to intercept runoff from the surface and seepage from the embankment respectively. Drains, instrumentation (piezometers and inclinometers) and monitoring wells are constructed in and around the TSF to assist in monitoring the performance of the facility.

Drawing 2011AB.01 presents a plan of the as-built condition of the Mount Polley Mine site. **Error! Reference source not found.** shows an aerial view of the site from 2012.

MPMC milled approximately 35.3 M tonnes of ore between start-up in 1997 and October 2012. The mine entered into care and maintenance status for the period from October 2001 to February 2005, operations re-started in March 2005.

The starter dam for the TSF embankment was constructed in 1996 to a crest elevation of 927.0m. The starter dam was constructed out of a homogeneous compacted till fill. Discharge of the tailings into the impoundment commenced in the summer of 1997. The TSF embankment was raised in subsequent years as follows:

- To elevation 934.0 m in 1997.
- To elevation 936.0 m in 1998.
- To elevation 937.0 m in 1999.
- To elevation 941.0 m in 2000.
- To elevation 942.5 m in 2001.
- To elevation 944.0 m in 2004.
- To elevation 946.0 m in 2005.
- To elevation 949.0 m in 2006.
- To elevation 950.9 m in 2007.
- To elevation 951.9 m in 2008.
- To elevation 953.9 m in 2009.
- To elevation 958.0 m in 2010.
- To elevation 960.1 m in 2011.
- To elevation 963.8 m in 2012.

The TSF embankments are zoned earth and rockfill dams. In 2012 MPMC crews and equipment were responsible for the placement of Zone U, Zone T, and Zone C. Placement of Zone S and Zone F was performed by Peterson. As-built sections of the embankment are shown on Drawings 2011AB.04 through 2011AB.06.

1.1 Documentation Requirements

This report includes the relevant as-built information for 2012 raise. The scope of this report includes the following:

- Description of the 2012 raise design, and design modifications that were implemented during construction;
- Description of conditions encountered during construction;
- Inspection reports, field and laboratory test results including sample locations and test standards and/or methodologies;
- Description of the quality assurance and quality control (QA/QC) procedures and results;
- Photographs documenting construction progress and final conditions;
- As-built drawings;
- Confirmation that the 2012 TSF construction was carried out in accordance with the design intent.

2.0 2012 CONSTRUCTION OVERVIEW

2.1 General

The Mount Polley TSF is comprised of one overall embankment that is approximately 4.5 km in length. The embankment is subdivided into three (3) sections; referred to as the Main Embankment, Perimeter Embankment and South Embankment. Heights vary along the embankment and are approximately 52 m, 34 m, and 24 m for the Main, Perimeter and South embankments respectively. The 2012 Stage 8 raised consisted of an overall height change of approximately 3.7 from an elevation of 960.1 to 963.8 m.

2.2 2012 Dam Design

The drawings appended to this report include design and as-built sections of the TSF embankment current as of the end of 2012. The drawings, in plan view, show the locations of the readout stations for the instrumentation (piezometers, inclinometers), and in section view show the relative placement of the instruments within the embankment and its foundation.

The original 2012 Stage 8 TSF embankment raise design targeted an elevation of 963.5 m. In the early summer MPMC requested that the embankment design be modified to allow for construction of the embankment to an elevation on 965 m. AMEC prepared a design package presenting the stability analyses and IFC drawings for the raise to El. 965 m. The package was submitted by MPMC to the MEM for approval. The design package included the change from the modified (upstream) centreline design (which was completed to El. 963.5 m to a centreline design above 963.5 m.

Upstream Fill (Zone U)

- Comprised of tailings or waste rock where tailings placement infeasible;
- Cell construction is to be utilized wherever possible;
- Reworking of the tailings is needed to ensure proper distribution within the cell; and
- NAG/PAG rock fill can be utilized where the tailings placement is not possible.

Till Core (Zone S)

- Comprises compacted, low hydraulic conductivity till fill;
- Material is to be well graded and as specified in 2011AB.03;
- Minimum compacted width of 5.0 m;
- Continuous full width overlap between the previous Stage 7, Stage 8 and Stage 8a;
- Placed in maximum of 300 mm thick lifts;
- Compaction of minimum of 95% of maximum density as determined by the Standard Proctor compaction test (ASTM D 698); and
- Periodic sampling from the borrow pit and dam surface to verify suitability of the material.

Filter (Zone F)

- Comprises well-graded sand and gravel
- Material is to be free draining and as specified in 2011AB.03;

- Minimum 1.8 m in width;
- The transition between new and existing filter material is to be continuous with a minimum of 1.0 m overlap;
- Placed in maximum of 600 mm thick lifts;
- Compacted by a 10 ton vibratory smooth drum;
- Periodic samples are to be collected for laboratory testing.

Transition (Zone T)

- Comprises relatively fine waste rock
- Material is to be free draining and as specified in 2011AB.03;
- New material is to be placed in maximum of 600 mm thick lifts;
- Minimum 1.8 m in width;
- Compacted by uniform routing of haul trucks and spreading equipment.

Rock Fill (Zone C)

- Comprises run-of-mine waste rock
- Nominal maximum particle size of 1m;
- Pavement like surface between consecutive layers is to be scarified.

3.0 CONSTRUCTION MONITORING PROGRAM

Construction Monitoring during the 2012 construction season was mainly carried out by MPMC personnel. AMEC's Support Engineer reviewed daily construction records and performed regular site visits to monitor the quality of construction and assess MPMC's monitoring of the construction.

3.1 AMEC Support Engineer

AMEC's Support Engineer provided on-site supervision during the following periods:

- May Site Visit: May 14 to May 17, May 29 to June 1
- June Site Visit: June 25 to June 28
- July Site Visit: July 3 to July 6, July 9 to July 13, July 16 to July 18, July 25 to July 29
- August Site Visit: August 13 to August 15, August 28 to August 29
- September Site Visit: September 20 to September 21
- October Site Visit: October 25

While on site the responsibilities of AMEC's Support Engineer were as follows:

- Monitor, train, and assist MPMC personnel with the requirements of construction monitoring;
- Monitor, sample, and requisition tests of the borrow areas, as required;
- Monitor and perform QA testing of compacted till core soils, as required;
- Review and approval of proposed borrow soils;
- Review and approval of transition and filter material, processing methodology and monitoring practices;
- Monitor and approve the filter trench excavation and preparation;
- Monitor and approve abutment preparation;
- Address any concerns or out-of-compliance situations observed and recorded during construction;
- Carry out the quality control field and laboratory testing;
- Direct the MPMC personnel to address the survey requirements, results, etc.; and
- Meet as required with MPMC to review the construction program.

While in the office the responsibilities of AMEC's Support Engineer were as follows:

- Review daily construction reports submitted by MPMC personnel;
- Review compaction results submitted by MPMC personnel;
- Plot and review instrumentation readings submitted by MPMC personnel;
- Address any concerns or out-of-compliance situations noted by MPMC personnel; and
- Coordinate with MPMC personnel and AMEC's Project Manager/Senior Engineer.

3.2 AMEC Senior Support

AMEC's Senior support Engineer visited site on the following dates:

- D. Dufault: August 13/14

3.3 MPMC Field Inspector

MPMC Field Inspectors were responsible for the following:

- Monitor and maintain a photographic record of ongoing construction activities;
- Review borrow pit material to verify material consistency;
- Delineate embankment zones with stakes (every 25 to 50 m);
- Perform QC compaction testing of placed Zone S material (as per material placement specifications);
- Collect material samples for QC laboratory testing;
- Conduct as-built surveys of various zones;
- Prepare and submit daily construction reports;
- Collect and submit instrumentation data; and
- Report out-of-compliance situations to AMEC's Support Engineer.

3.4 QA/QC Testing

A summary of the testing requirements is given in Table 3.1.

Table 3.1: Embankment Material Types and QA/QC Testing Requirements

MATERIAL TYPE	ON-SITE TESTING	OFF-SITE TESTING	SAMPLE COLLECTION SCHEDULE
Zone S Till Core	Source Classification: Visual inspection of borrow material. In-Place Testing: Visual inspection of zone dimension, and material. ND Density Testing (D6938-10) MDI Density Testing (D680-05) Moisture Content (D4318-10)	Source Classification and In-Place Testing : Proctor (D698-07 / D4718-07) Atterberg (D421-07 / D4318-10) Hydrometer Gradation (D421-07 and D422-07) Sieve Gradation (D6913-09)	Source Classification : One (1) per biweekly per source or one (1) per 10,000 m^3 per source In-Place Testing: One (1) per offset biweekly per source or one (1) per 6,500 linear meters per source Moisture Content: One (1) per 1000 linear meters per lift per day
Zone F Filter	During Production/Transportation: Wash Sieve Gradation (C117-04 and C136-06) During Placement: Visual inspection of material size, compaction, preparation, and zone dimension. Wash Sieve Gradation (C117-04 and C136-06)	During Production/Transportation: Wash Sieve Gradation (C117-04 and C136-06) In-Place Testing: Wash Sieve Gradation (C117-04 and C136-06)	During Production/Transportation: One (1) per 5,000 m^3 per stockpile A duplicate sample for off-site testing one (1) per stockpile In-Place Testing: One (1) per placement event or one (1) per 2,500 linear meters A duplicate sample for off-site testing one (1) per 4,500 linear meters
Zone T Transition	In-Place Testing: Wash Sieve Gradation (C117-04 and C136-06) Confirmation of waste rock inertness, as required. Visual inspection of material size, compaction, preparation, and zone dimension.	In-Place Testing: Wash Sieve Gradation (C117-04 and C136-06)	In-Place Testing: One (1) per 5,000 m^3 material placed. A duplicate sample for off-site testing one (1) per 10,000 m^3
Zone C Rockfill	Confirmation of waste rock inertness, as required. Visual in-place inspection of material size, preparation, and placement.	Not Applicable	Not Applicable

During the 2012 construction season, the testing frequencies as outlined above were generally maintained.

3.5 Instrumentation Monitoring

During the 2012 construction period, MPMC personnel monitored the vibratory wire instrumentation along the embankments generally once every two weeks. Inclinometers were monitored generally every two weeks during the 2012 construction period; inclinometer readings were offset a week from the piezometer readings.

For the period prior and after the 2012 construction period through the end of 2012, monthly readings were carried out by MPMC personnel.

4.0 2012 TSF STAGE 8 EMBANKMENT RAISE CONSTRUCTION OVERVIEW

4.1 General

Construction of the Stage 8 raise entailed a raise of approximately 3.7 m from approximate El. 960.1 m to El. 963.8 m. Till core placement took place between May 14 and October 26, 2012. This section provides a brief summary of the 2012 construction activities for the TSF. Drawings AB2011.04 through AB2011.06 show the plan view and as-built sections of the embankment in relation to the design. A selection of photographs showing various stages of the 2012 TSF construction are presented in Appendix C.

4.2 Abutment Preparation

To accommodate the 2012 embankment raise, the south and perimeter abutments were extended. Abutment preparation was conducted as follows:

- Bulk removal of overburden (including previously placed waste rock fill) by MPMC.
- Test piting to confirm that a minimum of 2 m of till was present beneath the embankment core. The test pits were located upstream and downstream of the core limits such that the existing soils found under the till core contact were not compromised. Bedrock was not encountered in any of the test pits.
- To accommodate a drainage trench detail implemented in past raises, aligned along the toe of the dam, a ditch approximately 0.6 to 1.0 m in depth and 2.0 m in width was excavated along the Perimeter and on the South Embankments downstream of the abutment core extensions. On the South Embankment the corrugated drainage pipe extended and placed at the base of the trench. The trenches were than backfilled with filter material (Zone F).
- Prior to placement of the drainage blanket the exposed native abutment material was proof-rolled with a 10 ton vibratory smooth drum compactor.
- The drainage blanket was placed to the full extents of the embankment shell. The blanket consisted of a 0.6 m thick lift of Zone F material.

4.3 Fill Placement

4.3.1 Zone U – Upstream Shell

The majority of the embankment upstream shell was constructed of end of pipe spigotted tailings utilizing cells, reworked with a dozer, and shaped with the aid of en excavator; the majority of this work was carried out without AMEC supervision. Where the tailings could not be used for shell construction due to pipeline and pumping limitations, NAG waste rock was used. NAG waste rock was used as Zone U along the central portion of the Main Embankment between Corner 2 and Corner 3. In addition due to poor tailings grain size distribution the perimeter embankment was also built up and intermixed with NAG waste rock. The NAG was transported by haul truck and placed/shaped by excavators and dozers. Prior to 2012 Zone S placement, AMEC's Support Engineer inspected the NAG waste rock to ensure that large boulders (diameter > 1 m) were not placed near the Zone U/Zone S interface.

4.3.2 Zone S – Till Core

The placement of Zone S material was performed by Peterson and generally was executed as follows:

- Prior to placement of the first lift of till core for the 2012 raise the existing Zone S/abutments were prepared by proof-rolling with a 10 ton vibratory smooth drum roller. Areas that were noted to be soft or affected by the frost were removed and replaced with approved Zone S material.
- The top 0.1 m of the prepared surface was scarified with the aid of a dozer/grader, to promote good bonding between successive lifts.
- The surface was moisture conditioned as required to further promote proper bonding of successive till lifts.
- The till was placed in 0.3 m thick lifts via rock trucks, and was spread with the aid of a dozer.
- Compaction was achieved by a 10 ton smooth drum vibratory compactor, with occasional haul traffic.
- On average, for every two (2) to three (3) lifts placed, the downstream face of the till was trimmed and shaped by an excavator to maintain design lines.

4.3.3 Zone F – NAG Filter Rock

The material utilized for Zone F was crushed on site and stockpiled around the embankment for use on the dam. Haul trucks were used to stockpile and transport the material to the TSF embankment. Refer to Drawing 2011.02 for stockpile locations used during the 2012 construction.

Prior to placement of Zone F material, the previously placed filter material was exposed to ensure vertical continuity of the filter. This was carried out by excavator as part of the trimming process for the core. The filter material was placed on the embankment by Peterson in 0.6 m lifts. The material was transported by dump trucks and spread/shaped with the aid of excavator, grader, and a loader.

The placed Zone F material was lightly compacted in conjunction with Zone T material, by 10 ton smooth drum compactor and haul truck trafficking.

4.3.4 Zone T – Transition NAG Rock

The material utilized for Zone T was crushed on site and transported to the embankment on as needed basis along the entire length of the embankment. Zone T material was hauled and placed by MPMC in 0.6 m to 1.2 m thick lifts with the aid of a loader and grader. Prior to placement of the Zone T material, the interface between the lifts was exposed or/and scarified to remove any pavement like surfaces.

The compaction of the transition material was achieved with a 10 ton smooth drum compactor and haul truck trafficking.

4.3.5 Zone C – Downstream Shell NAG Rock

Zone C material was placed by MPMC. Prior to placement, where pavement like surfaces had developed the surface was scarified with the aid of grader/dozer, to avoid continuous, low hydraulic conductivity zones within the rockfill shell, and thus promote downward drainage through the rockfill. The NAG rock was transported from active mining areas to the embankment via haul truck and placed and spread by dozers.

4.4 Survey Control

Survey control requirements for the 2012 raise of the TSF included the following:

- Staking out the upstream and downstream of the Zone S; the stakes were generally placed every 25 to 50 m along the entire length of the embankment, and as requested by Peterson;
- Maintaining the downstream crest stationing during embankment construction;
- Verifying that a 5 m width was maintained during construction;
- Establishing and verifying the Zone F/T transition line for placement of Zone T material;
- Confirming that the minimum width of Zone F and Zone T were achieved by conducting spot checks;
- Survey pick-up of the locations of in-situ density tests;
- Collecting and storing data as required for the as-built record; and
- Providing location and elevation data as required by the AMEC Support Engineer.

4.5 Quality Control and Quality Assurance Testing

QA/QC testing of the fills used in the construction of the embankment involved on-site and off-site tests. On-site testing was restricted due to the limited availability of the on-site laboratory. The results of these tests are presented in Appendix A.

A summary of the quantities of each different material type and the number and types of tests performed on the fills is provided in Table 4.1.

Table 4.1: TSF Summary of Material Quantities and Laboratory testing

Material Type	Source Of Material	Volume Placed (m^3)	QA/QC Tests Performed
Zone C – Downstream Shell NAG Rock	Springer Pit (ROM)*		Visual
Zone T – Transition NAG Rock	Springer Pit (Road Crush product)		2 gradations (MPMC) 1 Gradations (AMEC)
Zone F – NAG Filter Rock	Springer Pit (Filter Crush)		11 Gradations (MPMC) 4 Gradations (AMEC)
Zone S - Till Core	Perimeter Borrow	0	15 Proctor 18 Gradation 18 Atterberg limits 20 QA ND field density (AMEC) 778 QC ND field density(MPMC) 36 Laboratory Moisture tests
	Total Fill Volume Placed	**283,350**	

*Run of mine material (no processing required)

4.5.1 Zone S – Till Core

During the 2012 construction season, the perimeter borrow pit, located downstream of the Perimeter Embankment between Corner 1 and Corner 1.5, was utilized as the till borrow pit for core construction. The location of the borrow pit is shown on Drawing 2011AB.02. Till material found in the borrow pit was generally consistent, within the specification and was classified as a low plastic Silt, sandy, some clay with some to trace gravel. A glaciolacustrine unit was encountered interbedded within the till in some areas of the borrow pit.

The glaciolacustrine material typically meets the core material specification, however due to its poor workability, this material was wasted or whenever possible intermixed with till in a ratio of 1 part glaciolacustrine and 2 parts till.

The in-situ density and moisture content of the compacted till were determined by a nuclear densometer (ASTM D6938-10, ND). Where field test results indicated that the specified 95% Standard Proctor Maximum Dry Density (SPMDD) was not achieved, the area was re-compacted until satisfactory test results were achieved. Samples of till were also collected and periodically sent to AMEC's Prince George lab facility for geotechnical index testing. Additional detail regarding the QC/QA tests was presented in Table 3.1 with testing results presented in Appendix A.

The SPMDD value used in the field was selected from the first SPMDD (2094 kg/m^3) lab result for the 2012 construction season and adjusted as necessary based on observations of the soil. The average of the SPMDD lab results over the 2012 construction season was 2055 kg/m^3.

In general, the fills achieved 95% SPMDD. Test results were recorded and entered into a spreadsheet. Plots of the test results were prepared and are presented in Appendix A.

4.5.2 Zone F – NAG Filter Rock

Filter Zone F was produced by running run-of-mine NAG waste rock through the mill crusher. The processed material was fairly consistent and was slightly coarse at the bottom end but was deemed acceptable. Samples of this material were tested and the results are presented in Appendix A.

4.5.3 Zone T – Transition Zone

Transition Zone T was produced by running run-of-mine NAG waste rock through the mill crusher. Samples of this material were tested and results are presented in Appendix A.

4.5.4 Zone C – Downstream Shell NAG Rock

Downstream Shell Zone C rockfill was visually checked to ensure filter compatibility with the upstream adjacent Zone T material. The Zone C material placed was deemed acceptable.

4.6 Conformance of 2012 Construction with Design Intent

Based on AMEC's periodic observations of the construction, review of reports prepared by MPMC when AMEC was not on site, and the QA/QC records, the 2012 Stage 8/Stage 8a raise of the dams is judged to have been carried out in conformance with design intent.

4.7 2012 Out of Compliance Items

Items listed below are currently out of compliance, however do not pose any immediate concern, and are to be corrected prior or at the beginning of the 2013 construction season.

- Zone F and Zone T (962.7 m) are approximately 1 m lower in elevation compared to the Zone S (963.8 m) but remain above pond level. Zones F and T are required to be maintained above the tailings/pond level at all times. MPMC is to monitor the elevation of the tailings during the winter and early spring and raise the level of the filtration material as needed.

- The width of the core till was noted to be less than the minimum 5 m in width, in the last 1 to 2 lifts, along multiple sections of the embankment. MPMC was informed of this out of complicate item, and prior to placement of the new lift as part of the 2013 construction season, the core is to be widened to the required 5 m minimum width. This will be achieved by trenching in till material on the upstream side of the core. The material is to be placed in the trench utilizing the same specifications as per section 2.2 of this report.

5.0 INSTRUMENTATION MONITORING

5.1 General

The piezometric data organized by planes is presented in Appendix B

5.2 New Instrumentation

In 2012, a site investigation program to replace a slope inclinometer on the perimeter embankment that showed a compression failure. The Program consisted of two (2) new slope inclinometers along the downstream side of the perimeter embankment were added. One added directly near the failing slope inclinometer and the second one near the Vibrating Wire J1. The new slope inclinometers are scheduled to be initialized in early 2013.

5.3 Piezometers

In 2012 the piezometers indicated the following general trends for the TSF embankment:

- Vibrating Wires along the Plane H have been destroyed. MPMC reported that a section of the upstream fill failed and the vibrating station sloughed into the tailing pond. The two (2) lost vibrating wires were measuring pore pressure in the tailing and upstream fill, and are not to be replaced.

  Pore pressures in foundation soils in and around the TSF embankment were noted as stable with minor fluctuations, except for A19, D1 and J1. A19 and J1 were installed in the late 2011 during the 2011 instrumentation program and are still stabilizing. A19 is the only vibrating wire in the foundation soils that is showing an increase and as it is the deepest installed vibrating wire it might need a longer period of time to stability. A similar justification can be said for J1, however as it is the only vibrating wire in the area in late 2012 a slope indicator was installed in that vicinity. D1 is continuing to show an upward phreatic surface increase, the second slope inclinometer was installed in this vicinity.

- Pore pressures in the till core are found to be stable, with a slightly increasing trend in response to the rising pond level.

- Pore pressures in filter and drains remained mainly level without any major increases.

- Pore pressures in the tailings and upstream fill experienced an upwards trend in response to the rising pond level. Piezometers installed at a lower elevation within the upstream tailings experienced lower response relative to the piezometers near the pond elevation, likely the result of proximity to the upstream under-drainage system.

5.4 Slope Inclinometers

In general, in 2012, the inclinometers indicated the following trends for the TSF embankment:

- SI01-02 showed an approximately 4-5 mm displacement in the A Axis (perpendicular to the main embankment) over the course of the entire year. This movement rate as remained consistent more or less over the last 5 years. The observed displacement is well within tolerable limits.

- SI06-03 showed an approximate 2-3 mm displacement in the A Axis (perpendicular to the main embankment) over the course of the entire year. These movements are within tolerable limits.

- No notable displacement has been noted on SI06-01, SI06-02, SI11-01, and SI11-02.

- SI11-04 has to date indicated displacement suggestive of compression rather than lateral displacement. Such a pattern of displacement sometimes occurs as a result of the installation process. Although it appeared that the compression displacement stabilized for several readings the last reading taken in early December appears to indicate the continual compression displacement.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions drawn on the basis of this as-built report are as follows:

1. The TSF embankment was raised to a minimum crest elevation (till core) of 963.8 m and (filter and transition) of 962.7 m in 2012.

2. At 963.5 m the embankment design changed from a modified centerline (upstream) design to a true centerline design.

3. The 2012 raise of the TSF embankment was carried out in conformance with design intent.

4. Monitoring of the TSF embankment via instrumentation and visual inspections indicated the following:

    a. Surveys of inclinometers within the downstream shell of the dam indicate that movements are minor and well within tolerable limits.
    b. Foundation pore pressures have been stable.
    c. Pore pressures in the till fill of the dam have increased slightly due to the pore pressure increase of the tailings.
    d. The TSF embankment is performing in accordance with its design intent.

Recommendations made on the basis of this as-built report are as follows:

1. Complication of the downstream transition material to en elevation of 963.8 m prior to 2013 construction period.

2. Trenching in the till core, where required to meet the 5 m minimum width design, of 1 to 2 lifts on the upstream side.

3. Continue to monitor the instrumentation and initialize newly installed 2012 slope indicators as soon as possible, but specifically prior to 2013 construction season.

7.0 REPORT CLOSURE

This report has been prepared for the exclusive use of Mount Polley Mine Corporation for specific application to the area within this report. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibility of such third parties. AMEC accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. It has been prepared in accordance with generally accepted geotechnical and tailings dam engineering practices. No other warranty, expressed or implied, is made.

Respectfully submitted,

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DRAWINGS

APPENDIX A

MATERIAL TESTING RESULTS

APPENDIX B

INSTRUMENTATION PLOTS

APPENDIX C

2012 CONSTRUCTION SEASON PHOTOS