MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILING STORAGE FACILITY

REPORT ON STAGE 4 CONSTRUCTION
(REF.NO. VA 101-1/10)

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EXECUTIVE SUMMARY

The Mount Polley gold and copper mine is owned and operated by Mount Polley Mining Corporation (MPMC). It is located in central British Columbia, 56 kilometres northeast of Williams Lake. The mine was in operation from June 1997 till September 2001 when MCMP decided to suspend the operation due to low copper and gold prices. Since then the mine was in care and maintenance period until 2004 when MCMP decided to reopen the mine and raise the Tailing Storage Facility (TSF).

The Stage 4 construction was designed to raise the TSF maximum elevation to El. 948.0 m. Construction of Stage 4 started in June, 2005 and Knight Piésold Ltd. provided design, construction supervision and quality assurance/quality control (QA/QC) services for the embankment raise. Knight Piésold Ltd. also conducted on-going reviews of all instrumentation and monitoring records during construction.

This report documents the Stage 4 construction that includes the completion of the Main, Perimeter and South Embankments to El**. 94??** m. It contains a discussion of the construction methods used to complete the work, the results of quality assurance tests carried out during construction and a review of the instrumentation monitoring results during Stage 4 construction.

This confirmed that the work was completed and the facility was performed in accordance with the design objectives. Each case was carefully evaluated and determined to have no adverse affect on the facility.

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SECTION 1.0 - INTRODUCTION

1.1 PROJECT DESCRIPTION

The Mount Polley gold and copper mine is owned and operated by Mount Polley Mining Corporation (MPMC). It is located in central British Columbia, 56 kilometres northeast of Williams Lake, as shown on Figure 1.1. Ore is crushed and processed by selective flotation to produce a copper-gold concentrate. The current mill throughput rate is approximately 20,000 tonnes per day (7.3 million tonnes per year). The mine was in production from June 1997 until September, 2001 In September, 2001 MPMC suspended the operations due to low copper and gold prices. The mine reopened in March, 2005. An overall site plan of the Mount Polley Mine is shown on Drawing 101-1/10-100.

Mill tailings are discharged as a slurry into the Tailings Storage Facility, which has been designed to provide environmentally secure storage of the solid and liquid components. During the Stage 4 construction the tailings were discharged from South Embankment for a several weeks. The majority of the time the tailings were discharged from a single point near the west end of the Perimeter Embankment. This may cause problems at the west end of the Perimeter Embankment if a single discharge point is used on a long term basis. It is important to develop a tailings deposition strategy to ensure that an adequate beach is maintained along all embankments.

Knight Piésold Ltd. was originally engaged by Imperial Metals Corporation to provide engineering services for the design of the Tailings Storage Facility in 1989. Over the period since, Knight Piésold Ltd. has provided the following services:

- Detailed design of all stages of the Tailings Storage Facility and Ancillary Works completed to date.
- Preparation of contract documents and technical specifications for all stages of the Tailings Storage Facility construction to date.
- Construction supervision and quality assurance/quality control (QA/QC) for all stages of the Tailings Storage Facility completed to date.
- Site investigations and evaluations for engineering design and construction materials suitability.
- Consulting services on all aspects of the operation and monitoring of the Tailings Storage Facility.

The tailings embankments were recently raised under Stage 4 construction to El. 948.0 m **(NOT YET COMPLETED as of JAN 2006).** Work started in May 2005 and finished in **????**. Knight Piésold Ltd. provided design, construction supervision and quality assurance/quality control (QA/QC) services for the embankment raise. Knight Piésold Ltd. also conducted on-going reviews of all instrumentation and monitoring records during construction and completed an annual inspection of the facility. The annual inspection is documented in a separate report. This report gives the details of Stage 4 construction.

1.2 TAILINGS STORAGE FACILITY

The Tailings Storage Facility is comprised of the following:

- A pipeline system conveys the tailings slurry via gravity from the Millsite to the Tailings Storage Facility. This system includes movable discharge sections with one end dump discharge to distribute the tailings along the embankment crest.

- A Millsite Sump and Southeast Sediment Pond provide additional make-up water to the system by collecting drainage from the millsite and Southeast Waste Dump. Millsite runoff is directed from the Millsite Sump into the tailings line near the mill. Flows from the Southeast Sediment Pond enter the system at the reclaim booster pump station or at the T2 Tailings Drop Box.

- Graded earthfill and rockfill embankments with internal filters and drains retain the tailings solids in the Tailings Storage Facility. The embankments have been raised in stages by a combination of centreline and modified centreline approaches. A 5 metre high downstream rockfill buttress has been constructed at the Main Embankment to enhance embankment stability. This buttress is located from the valley bottom to El. 920 m.

- A low permeability basin liner (natural and constructed) covers the base of the entire facility to provide containment of process fluids and to minimize the potential for seepage through the underlying soils.

- A foundation drain and pressure relief well system located downstream of the Stage 1B Main Embankment prevent the build-up of pore pressure in foundation and collect seepage from the base of the Tailings Storage Facility. Upstream toe drains were installed during Stage 3 construction on the Main and Perimeter embankments. These upstream toe drains also prevent the build-up of pore water pressure. Additional upstream toe drains will be installed during the Stage 5 construction program.

- Seepage collection ponds located downstream of the Main and Perimeter Embankments were excavated in low permeability soils to store water collected from the embankment drains and from local runoff. Water from these ponds is pumped back into the Tailings Storage Facility and ultimately to the mill for use in the milling process.

- Instrumentation in the tailings, embankments and foundations, including vibrating wire piezometers, survey monuments, slope inclinometers and the measurement of drain flows, is used to monitor the performance of the Tailings Storage Facility.

- A reclaim water system, comprised of a barge mounted pump station in an excavated channel, an in-line booster pump station and a pipeline for recycling

process water to the mill, is used to remove water from the Tailings Storage Facility for use in the mill process.

- A system of monitoring wells installed around the Tailings Storage Facility is used for groundwater quality monitoring.

This description of the Tailings Storage Facility components has been included for information purposes. Work was not undertaken on all of the components during the Stage 4 construction program.

1.3 SCOPE OF REPORT

This report documents the Stage 4 construction. It includes a discussion of the construction methods used to complete the work, the results of quality assurance tests carried out during construction and a review of the new instrumentation and monitoring results from the construction program. Summaries and recommendations from the instrumentation reviews are included. The report also includes a complete and updated set of drawings issued as "As Constructed" for Stage 4.

SECTION 2.0 - STAGE 4 CONSTRUCTION

2.1 GENERAL

The Stage 4 raise of the Mount Polley Mine Tailings Storage Facility was constructed in 2005 and 2006. The work consisted mostly of raising the embankments but also included a small amount of work on the tailings basin and the installation of an upstream toedrain along the South Embankment **(Not yet completed as of Jan 2006).** Drawing 101-1/10 - 100 provides an overall plan view of the embankments and the facility. The Stage 4 Perimeter Embankment Plan is presented on Drawing 101-1/10-220 while the Perimeter Embankment sections and transition zones details are shown on Drawing 101-1/10-225. The Stage 4 South Embankment plan and section are shown on Drawings 101-1/10-230 and 101-1/10-235.The Stage 4 Main Embankment Plan is shown on Drawing 101-1/10-210. Main Embankment sections are shown on Drawing 101-1/19-215.

Stage 4 construction consisted of the following:

- **Completion Zone S placement on the South, Perimeter and Main Embankments from El. 944.0 m to El. 948.0 m.**
- **Completion of the upstream placement of CBL and Zone U to from El. 944.0 m to El. 948.0 m .**
- **Installation of three new inclinometers at ultimate toe of the Main Embankment.**
- **Installation of two new piezometers on the Main and Perimeter Embankments**
- **Installation of a downstream toe drain along the South Embankment.**

*******BOLD ITEMS HAVE NOT YET BEEN COMPLETED AS OF JAN 2006******

Knight Piésold Ltd. provided construction supervision and technical direction of the work under the management and administration of MPMC. The earthworks were completed by MPMC.

2.2 SCOPE OF WORK

2.2.1 General

The Stage 4 construction program comprised work on the following main areas:

- Investigations
- Tailings Embankments
- Basin Liner
- Tailings Discharge System
- Instrumentation

A description of each of the main components of the Stage 4 construction program is presented in the following sub-sections.

2.2.2 Investigations

Materials investigations were completed in 2000 and 2001 to support construction and design of the Tailings Storage Facility. Borrow Areas 2 and 3, located downstream of the Main Embankment left (east) abutment and Borrow Area 5, upstream of the South Embankment, were investigated to determine the availability and suitability of Zone S material. A total of 80 boreholes (DH01-01 to 80) were drilled in April, 2001. The results of the borrow area investigations are presented in Appendix A.

2.2.3 Tailings Embankments

The Stage 4 construction program included raising the Main, Perimeter and South Embankments to from El. 944.0 m to El. 948.0 m. The Stage 4Main Embankment is approximately 1,220 metres long, with a maximum height of about 39 metres. The Stage 4 Perimeter Embankment is approximately 1,750 metres long, with a maximum height of about 19 metres. The South

Embankment is currently approximately 500 metres long, with a maximum height of about 8 metres.

The scope of work for construction of the embankments included the following:

- Survey control of embankment construction.
- Foundation preparation to ensure a tie-in with competent natural ground.
- Placement and compaction of the fill materials in their respective zones in accordance with the Technical Specifications.
- Evaluation of embankment materials through detailed lab testing. The material testing was completed in the site soils laboratory and at an independent laboratory.

As-built construction details for the embankments are shown on the drawings included with this report.

2.2.4 Basin Liner

*******Test pits are required on all exposed areas upstream of the South Embankment the ensure that there is a minimum of 2 meters of till.**

2.2.5 Tailings Discharge System

The scope of work for the tailings discharge system during Stage 4 construction included producing "sand cells" along the South and Perimeter Embankments. The "sand cell" method of placing the upstream running surface for the trucks was done between chainages 6+50 to 9+75 on the South Embankment and along the entire Perimeter Embankment. Photos 8 through 20 in Appendix D show the South Embankment "sand cell" test section. Photos 21 through 27 in Appendix D show the Perimeter Embankment "sand cells".

Sand Cell S1 was the first "sand cell" trial completed at the Mount Polley tailings storage facility. The trial was located on the South Embankment between chainages 6+50 to 8+25. The S1 cell used of 3 sets of 3 spigots to discharge tailings into a cell 175m long by 18m wide (Photo 10 Appendix D). A layer of CBL was placed so that the tailings could flow through the cell (See photo 8, 9, 10 and 11 in Appendix D). A D7 cat was used in the slurry in order to help squeeze out the fines, and compact the coarse sand (See photo 12 and 13 in Appendix D). The drain was made with 2 24 inch culverts. As the elevation of the sand in the cell increased the drains were raised (See photo 15 in Appendix D). As you can see the drains are completely submerged in photo 15. 2 24 inch culverts were used initially and proed to be too small to handle the flow.

It took 7.5 hours to get the first foot of sand to be placed (see photo 14 in Appendix D). The rate of deposition increased after the CBL was covered in sand. The productivity of this type of cell is dependent on the gradation of the tailings, and amount of water in the slurry. Ore from the Wight pit produced tailings containing approximately 64% passing the 200 mesh. After the tailings were hydraulically placed in the cell, less than 20% passed the 200 mesh in cell S1. This "sand cell" method produced a very compact running surface for the 777 haultrucks upstream of the core.

Sand Cells S2 and S3 were the second part of the South Embankment "sand cell" trial. This trial consisted of 2 panels side by side. The tailings were open ended in to each panel (1 discharge point rather than 9). S2 would run for 4 to 5 hours then left to dry while S3 ran for 4 to 5 hours. These panels were only run during the day shift. The panels were prepped and the drains were set in the morning before the valves were opened. S2 is located between chainages 8+25 and 9+00. S3 is located between chainages 9+00 and 9+75.

This has proved to be a good size panel using the D7G cat. After these trials it was determines that the ideal "sand Cell dimensions at this facility are to 100 m to 150 m long and 20 m wide. The productivity could be increased if the cat was fitted a U blade rather than a straight blade. The Hitachi 270 hoe was used to set the drains. One drain was shared for two panels for cells S2 and S3. A sand berm was moved so that each panel could use the drain exclusively. This would be acceptable if the valves did not leak. Since the valves do leak each panel needs its own drain. The leaky valves fill the panel when it is

not drained and cause a layer of fines to build (See photo 16, 17, 18 and 19 in Appendix D).

Fines collect in any area where the water is moving slowly. If the cat stops working the sand for more than a few minutes, the fines will collec tin the panel. It is important to make sure that the drains are at the endpoint of the cell. 2 24 inch pipes were used as the drain, these were running at full capacity. This proved to be difficult to install and lift even for an experienced operator. A wash out occurred for this reason as seen in photo 19 in Appendix D. Using a single pipe as a drain will reduce the risk of the drains washing out.

The "sand cells" had the following problems:
The ore from the Bell pit was produced tailings which contained too much water in the slurry, the gradation was too fine (70%+ passing the 200 mesh), and there was lime in the slurry. The lime caused the fines to settle

Project management and equipment availability was a problem. The sand cells were slowing the productivity of the till placement because the pipes were in the way. Due to the inconsistency of the tailings slurry the productivity of the cell is variable. For these reasons, the ideal time of year to place sand with this method is during the winter.

2.2.6 Instrumentation

Slope Inclinometers SI01-01 and 02 were installed at the downstream toe of the Main Embankment in July of 2001 to monitor any movements in the foundation below the embankment. Locations of the slope

inclinometers are shown on Drawing 11162-13-250 and drill hole logs are presented in Appendix A.

A total of two (2) vibrating wire piezometers were installed during Stage 4 construction to monitor pore pressures under the CBl layer on the Main and Perimeter Embankments. **The locations of the installed piezometers are shown on Drawings ???.**

2.3 CONSTRUCTION SEQUENCE AND RESPONSIBILITIES

Construction of the Stage 4 embankment raise commenced in May 2005 and was completed in **????**. MPMC was responsible for:

- sand cell placement.
- Relocation of tailings pipelines and appurtenances.
- Fill placement of Zones F, C and T from Chainage on all embankments.

- The work began with the placement of Geotextile at the west end of the Perimeter Embankment (see photo 3 and 4 in Appendix D). The CBL layer was then placed upstream of the core on all embankments (see photo 5, 6 and 7). The CBL layer provides a running surface for the trucks and will increase the stability of the embankments. Photo 6 in Appendix D shows that the void space in the tailings is filled with tailings. A layer of Zone T placed on top of the CBL before the Zone U was placed. This was done in order to ensure that a good filter relationship is present. The Zone S was placed during the day shift and the Zone U was placed at night.

2.4 CONSTRUCTION SUPERVISION AND QUALITY ASSURANCE

Knight Piésold Ltd. provided construction quality assurance and control (QA/QC) services and QC lab testing for Stage 4 construction of the Tailings Storage Facility. The MPMC Material Testing Laboratory located at the site and Geo North Engineering Services Ltd., of Prince George, British Columbia provided laboratory services during the Stage 4(IP) construction program. Key items addressed by Knight Piésold Ltd. included:

- Foundation inspection and approval prior to fill placement.
- Assessment of borrow material suitability.
- Inspection of fill placement procedures.
- In-situ testing of the placed and compacted fill for moisture content and density.
- Collection and testing of control and record samples at the required frequencies.
- Installation and monitoring of instrumentation.

The QA/QC procedures were similar to previous construction programs. During placement of fill materials, Control (prior to placement) and Record (after compaction) samples of the materials were collected for laboratory testing. Control testing was typically carried out on materials in borrow pits or from source locations to determine their suitability for use in the work. Record testing was typically performed on materials after placement and compaction to document the level of workmanship achieved and to ensure that the design objectives were met.

Both Control and Record testing were used as a basis for modifying the construction procedures as and when necessary. Estimated quantities are also summarized on **?????** with the Control and Record testing requirements and frequencies. Control test results are summarized in Appendix B. Record test results are discussed throughout this report and are summarized in **???Figures 2.1 to 2.14 and tabulated in Appendix C.???**A minor portion of the work was completed in winter and required intensive monitoring. However, the work was carried out at all times in accordance with the Technical Specifications, as described in the "Tender Documents for Stage 3

Tailings Facility Construction, Ref. No. 11162/13-2", April 14, 2000. The QA/QC program confirmed this compliance with the Technical Specifications and the field and laboratory test results indicate that the design objectives were achieved, as discussed in Section 2.5.

2.5 EARTHWORKS

2.5.1 General

Stripping and preparatory work was completed on all foundation and abutment areas to ensure that a good tie-in was achieved with the natural ground and with the Stage 3 embankment. Organic debris and topsoil were removed according to the Technical Specifications. Foundation approval was required by the Engineer prior to the placement of any fill material.

Earthworks for the Stage 3 Tailings Storage Facility construction comprised the following zones and materials:

- Zone S - fine grained glacial till.
- Zone U- Silty sand and gravel .
- Zone F - processed gravel and sand filter.
- Zone T - select rockfill transition zone.
- CBL - rockfill zone.
- Basin Liner - fine grained glacial till.

The gradation requirements for the fill materials are shown on Drawing 101-1/10 -104. Results of these, together with density, moisture content and other tests, are discussed in the following sections.

2.5.2 Zone S

Zone S forms the low permeability core and seal zones for the Main, Perimeter and South Embankments. The material used in Zone S was fine grained glacial

till from Borrow Area No. 3, which is located downstream of the left (East) abutment of the Main Embankment.

The Specification for Zone S material required placement and compaction in maximum 300 mm thick horizontal lifts. The compaction specification was 95 percent of the Standard Proctor maximum dry density.

Record tests on the compacted Zone S fill included the following:

- Moisture Content (ASTM D2216)
- Particle Size Distribution (ASTM D422)
- Laboratory Compaction (ASTM D698)
- Specific Gravity (ASTM D854)
- Atterberg Limits (ASTM D4318)
- Field Density by Nuclear Methods (ASTM D2922)
- Field Moisture Content by Nuclear Methods (ASTM D3017)

A total of ********* complete Record Tests of Zone S material were made. An additional ******** field density and moisture content tests were made by the nuclear densometer.

The particle size analyses showed that the Zone S glacial till is a well-graded sandy silt with some clay and gravel. All of the test results were within the specified limits for the material. The gradation curves of the Zone S Record Tests are shown on **Figure 2.1.**

Atterberg limits testing was carried out on five samples. The plastic limits of these samples ranged from **13.4 to 14**, with a median of 13.7. The liquid limits ranged from 22.5 to 24.5, with a median of 24.4. The plasticity index ranged from 8.8 to 10.8, with a median of 10.0. The material is classified as CL in the Unified Soil Classification System (inorganic clay of low to medium plasticity).

The median field moisture content as measured with the nuclear densometer was 10.2 percent, while the median optimum moisture content was 8.8 percent.

The median deviation from the optimum moisture content was 1.7 percent wet of optimum. Material too wet for direct placement in the Zone S fill was avoided in the borrow areas.

The median field dry density, as measured with the nuclear densometer, was 2109 kg/m^3, while the median Standard Proctor maximum dry density was 2115 kg/m^3. Percent compaction values for all nine Record Tests ranged from 98 percent to 105 percent. The median percent compaction from the nuclear densometer tests was 99.1 percent. These results indicate that the compaction specification of 95 percent was achieved. Each lift of Zone S was tested prior to the placement of the next lift. If any test failed to meet the compaction requirements, the area in question was re-compacted until the minimum compaction requirements were met. Of the 379 nuclear densometer tests, only one failed the compaction requirement. The material in this area was allowed to remain in place based on visual inspections carried out by the Engineer.

Histograms were generated to illustrate the results of the field density and moisture content testing. The histograms in Figures 2.2 to 2.4 present the field moisture content, Standard Proctor optimum moisture content and deviation from optimum for the Zone S Record samples, while Figures 2.5 to 2.7 show the measured field dry density, the Standard Proctor maximum dry density and the corresponding percent compaction. Figures 2.8 to 2.11 display the results of 379 field density and moisture content tests conducted in Zone S with the nuclear densometer during Stage 3 construction.

Specific gravity was determined for five samples. The median result was 2.62, which is consistent with values measured on similar materials during previous construction programs.

2.5.3 Zone F

2.5.4 Zone T

2.5.5 Zone C

Zone C is a rockfill zone immediately downstream of Zone T in the Main and Perimeter Embankments. The material used in Zone C was rockfill which was quarried from the Rock Borrow.

The Specification for Zone C called for placement and compaction in maximum 1000 mm thick horizontal lifts. This was followed and compaction was achieved with a 10 ton vibratory smooth drum roller augmented with 85 tonne haul trucks.

Record tests on Zone C consisted of Particle Size Distribution (ASTM D422). A total of five(5) Record Tests were completed on Zone C. The results showed that Zone C is a well graded cobbly gravel with trace boulders and sand. All of the test results were within the specified limits for Zone C. Gradation curves are shown on Figure 2.17.

2.5.6 Basin Liner

2.6 EMBANKMENT DRAIN SYSTEMS

2.7 TAILINGS DISCHARGE SYSTEM

The tailings discharge system includes a single HDPE pipeline approximately 7,000 metres in length from the Millsite to the left (west) abutment of the Perimeter Embankment. Downstream of this, the system included pipework to route the tailings

through cyclones for Zone CS construction, or to a number of discharge points on the embankment crest.

Construction activities related to the tailings discharge system included the following:

2.8 INSTRUMENTATION AND MONITORING

2.8.1 General

Construction activities related to instrumentation and monitoring systems included installing the following:

- Vibrating wire piezometers
- Groundwater monitoring wells
- Slope inclinometers
- Survey monuments

Details of these installations are presented in the following sub-sections.

2.8.2 Vibrating Wire Piezometers

A total of seven(7) vibrating wire piezometers were installed during Stage 3 construction, as summarized below and on Table 2.3. Details of the as-built piezometer locations are shown on Drawings 11162-13-250, 251, 254, 258 and 259 with instrumentation details shown on Drawing 11162-13-256.

Three(3) piezometers were installed in the foundation under the Zone C buttress (one each at Planes A, B and C) to monitor pore pressures in the foundation.

One(1) piezometer was installed in the foundation under the South Embankment (Plane F) to monitor pore pressures in the foundation.

Three(3) piezometers were installed in the Zone F (one each at Planes D, G and H) to monitor the performance of the filter.

No unexpected or anomalous pore pressures were observed while monitoring these or the previously installed vibrating wire piezometers during construction. Some of the piezometers in the Zone S fill responded to the increased load from the additional material placed on the embankments. However, the increases did not result in any delays in construction.

The pore pressures in the tailings reflected the pond level. A total of 59 vibrating wire piezometers have been installed at the Tailings Storage Facility. Of these, 53 remain in operation. The results of all piezometer monitoring are discussed in detail in the KP document "Report on 2000 and 2001 Annual Inspection", (Ref. No. 11162/14-2, October 3, 2001) and in the site progress reports.

2.8.3 Groundwater Monitoring Wells

Three(3) groundwater monitoring wells were installed downstream of the South Embankment during Stage 3 construction to monitor groundwater quality and water levels to the South of the Tailings Storage Facility. The borehole logs and installation details are presented in Appendix A. The as-built locations are shown on Drawing 11162-13-254 and are also provided on Table 2.2.

MPMC staff measure the piezometric levels within the wells and collect samples for water quality testing. The results of the water quality monitoring have been reported by MPMC in the report "2000 Annual Environmental Report, Effluent permit 11678". This report has been submitted to the appropriate agencies (Ministry of Environment, Lands and Parks and Ministry of Energy, Mines and Northern Development).

2.8.4 Slope Inclinometers

Two(2) slope inclinometers were installed immediately downstream of the Stage 3 Main Embankment to monitor any movements within the foundation materials. The borehole logs and installation details are presented in Appendix A. The as-built locations are shown on Drawing 11162-13-250 and are also presented on Table 2.2.

KP engineering staff monitored the slope inclinometers five times in August, 2001. This initial monitoring creates an average base file, to which all subsequent monitoring is compared. The first readings of these inclinometers are scheduled for November, 2001.

2.8.5 Survey Monuments

Six(6) survey monuments were installed on the crests of the Main and Perimeter Embankments to monitor any future settlements of the crest. The as-built locations are shown on Drawings 11162-13-250, 251 and 254 and are tabulated on Table 2.2. The installation details are presented on Drawing 11162-13-256.

2.9 DESIGN MODIFICATIONS

Knight Piésold Ltd. employs a strict procedure for making design modifications (changes or substitutions) in the field. All design change requests are submitted in writing by the Resident Engineer to the Knight Piésold Ltd. Vancouver Office for review and evaluation. If approved by the Project Principal, the design change request is forwarded to the Owner and Contractor in a formal, written decision.

Some modifications to the design and Technical Specifications were implemented during the Stage 3 construction program in order to adapt to site conditions. All modifications were approved on a technical basis by Knight Piésold Ltd. and on a permitting basis by the appropriate regulatory agencies. All modifications were also

accepted and approved by Mount Polley Mining Corporation prior to their implementation.

The documentation associated with design modifications for Stage 3 construction are presented in Appendix E. Some minor modifications were made during Stage 3 construction other than those included in Appendix E. These modifications will have no significant impact on the design and operation of the facility. These were treated as "field fit" solutions and were not required to go through the formal design modification process. Field fits and approved design changes are shown on the as-built drawings.

SECTION 3.0 - CONCLUSIONS AND RECOMMENDATIONS

Stage 4 of the Mount Polley Mine Tailings Storage Facility began im May of 2005. The construction program included the completion of the Main, Perimeter and South Embankments to El. 948 m. Technical supervision of the work included QA/QC testing and monitoring of instrumentation. This confirmed that the work was completed and the facility was performing in accordance with the design objectives. A few minor deviations from the Technical Specifications were made in the Zones U. However, each such case was carefully evaluated and determined to have no adverse affect on the facility.

The sand cells have the potential to save money. There were a few problems that we encountered during the Stage 4 construction that be easily solved. The problems were maily project management issues. Equipment availability was a problem. The sand cells regularly had no equipment and/or operators to run them. The D9 worked well, however it broke down regularly. The D7 encountered very few problems and should be used for sand cells in future construction programs. The D7 would be much more productive if it was fitted with a U blade.

For the Stage 5 core raise the till should be completed first, then the sand cells should run after the Zone S is complete. This will ensure that the sand cells do not hinder the productivity of the Zone S. The gradation of the tailings changes depending on which pit is being mined. This makes a schedule hard to follow because tailings from the bell pit are unsuitable for sand cell production. The tailings from the bell pit typically have a finer gradation and also have lime added. The lime makes the finer particles settle in the cell instead of being washed out the drain. For this reason the sand cells cannot run according to a set schedule because delays are unavoidable. The cells should only run in the winter or after all the till has been completed and the other construction activities have stopped. The piping gets in the way during the summer and slows productivity in other areas of construction. The sand produced in the cells is an excellent running surface for the trucks and has a good filter relationship with the till.

An updated operating performance review has been made of the Tailings Storage Facility and it is presented in a separate document entitled "Report on 2005 and 2006 Annual Inspection" (Ref. No. 101-1/11, **DATE)**. From this, Knight Piésold Ltd. recommends that the pond level in the Tailings Storage Facility be closely monitored to ensure that the water level does not encroach on the required freeboard of the Stage 4 embankments. The reclaim barge and reclaim line should also be closely monitored to ensure that they remain in good working order. The tailings deposition is primarily from a single point at the west Perimeter Embankment. This will cause a problem at the west Perimeter Embankment because the tailings will deposit adjacent to the embankment very quickly. There is potential for the tailings to overtop the the west Perimeter Embankment. In order to avoid this problem the west Perimeter Embankment should be built up this winter. Another solution to this problem is to develop a tailings discharge plan so that tailings beaches are maintained on all embankments.

SECTION 4.0 - REFERENCES

A complete listing of all Knight Piésold Ltd. reports prepared for the Mount Polley Mine Project is shown below. These reports are available for review.

1) Imperial Metals Corp. Mt. Polley Project, Report on Geotechnical Investigations and Design of Open Pit, Waste Dumps and Tailings Storage Facility, Ref. No. 1621/1, February 19, 1990.

2) Imperial Metals Corp. Mt. Polley Project, Report on Project Water Management, Ref. No. 1624/1, February 6, 1995.

3) Imperial Metals Corp. Mt. Polley Project, Report on 1995 Geotechnical Investigations for Mill Site and Tailings Storage Facility, Ref. No. 1623/1, March 14, 1995.

4) Imperial Metals Corp. Mt. Polley Project, Tailings Storage Facility and Ancillary Works, Part 10 - Technical Specifications, Ref. No. 1625/3, March 25, 1995.

5) Imperial Metals Corp. Mt. Polley Project, Tailings Access Road and Tailings/ Reclaim Pipelines, Part 6 - Technical Specifications, Ref. No. 1625/4, May 17, 1995.

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SECTION 5.0 - CERTIFICATION

This report was prepared and approved by the undersigned.

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