MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY

OPERATION, MAINTENANCE AND SURVEILLANCE MANUAL

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KP ULTIMATE ELEVATION DESIGN REF. NO. VA101-001/08-1

AMEC CONSTRUCTION MONITORING MANUAL FILE NO. VM00560C

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LIST OF ABBREVIATIONS

ABR	Anaerobic Biological Reactor
AMEC	AMEC Environment & Infrastructure, a Division of AMEC Americas Limited
COI	Communities of Interest
COO	Chief Operating Officer
DSR	Dam Safety Review
GPM	Gallons Per Minute
Imperial	Imperial Metals Corporation
KP	Knight Piésold
MEM	British Columbia Ministry of Energy and Mines
MESCP	Main Embankment Seepage Collection Pond
Mines Act	British Columbia Mines Act, Health & Safety Regulation Codes
MMER	Metal Mines Effluent Regulation
MOE	British Columbia Ministry of Environment
MPMC	Mount Polley Mining Corporation
OMS	Operations, Maintenance and Surveillance
PESCP	Perimeter Embankment Seepage Collection Pond
PMP	Probable Maximum Precipitation
SAG	Semi-autonomous Grinding
SERDS	Southeast Rock Dump Site
SESCP	South Embankment Seepage Collection Pond
tpd	tonnes per day
TSF	Tailings Storage Facility

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OPERATION, MAINTENANCE AND SURVEILLANCE MANUAL

1.0 OBJECTIVE

This Operations, Maintenance and Surveillance (OMS) Manual applies to the Tailings Storage Facility (TSF) and related water management structures at the Mount Polley mine. The OMS Manual is a document mandated by the regulatory bodies governing the operation of Mount Polley Mine.

Under the British Columbia Mines Act, Health & Safety Regulation Codes (Mines Act), Section 10.5.2, it is stated that, "An Operation, Maintenance and Surveillance (OMS) manual shall be prepared and provided to an inspector and all employees involved in the operation of a major dam or major impoundment prior to commissioning. This manual shall be revised regularly during operations, decommissioning and closure of the structure". The Mount Polley Mine TSF falls under the "operating" category as outlined in the Mines Act.

Additionally, based on a Previous Permit M-200 amendment, entitled, "Amendment to Permit M-200 Permit Approving Stage 8 Construction" executed for Al Hoffman, P.Eng, Chief Inspector of Mines on June 29, 2012, the following regulatory conditions exist in regards to construction of the TSF:

> The Operation, Maintenance and Surveillance manual shall be updated in 2012 as recommended in the 2011 As-Built report.

This OMS Manual describes the roles and responsibilities of Mount Polley site personnel for the management of the TSF and associated facilities; describes in detail the facility; described engineering and design of the components; establishes the procedures and processes for operation, surveillance and maintenance of the facility; explains documentation associated with the OMS; and, outlines emergency procedures.

2.0 ROLES AND RESPONSIBILITIES

Personnel involved in the safe operation, maintenance, surveillance and supervision of the TSF and related water management infrastructure are not limited to those employed by Mount Polley. In addition to the individuals interacting with the facilities on a first-hand basis, there is an extensive group of design professionals and regulatory representatives involved in the successful implementation of the OMS. Key personnel are identified in Table 2.1 – Key Personnel. An organizational chart showing reporting links within the organization and communication links to external organizations is included as Figure 2.1 – Personnel Organizational Chart.

Title	Name	Contact Information				Responsibilities
General Manager	Tim Fisch	Home:	(250) 398-2200	Cell:	(250) 267-1856	Responsible for overall activities of Mine and Mill (including the TSF).
		Office:	(250) 790-2215 ext. 200			
		E-mail:	TFisch@mountpolley.com			
Tailings Project Manager	Luke Moger	Home:		Cell:	(250) 267-8552	Responsible for planning of tailings construction activities and daily management of the contruction activities, equipment, and related components. Plans for future design raises and submits required permit admendments. Responsible for updating the OMS manual and arranges for an annual inspection of the TSF.
		Office:	(250) 790-2215 ext. 113			
		E-mail:	LMoger@mountpolley.com			
Mill Operations Superintendent	Doug Ablett	Home:	(250) 392-1152	Cell:	(250) 303-1479	Responsible for the mill operations crew carrying out routine activities.
		Office:	(250) 790-2215 ext. 145			
		E-mail:	DAblett@mountpolley.com			
Mill Maintenance Superintendent	Darcy Hannas	Home:	(250) 392-1152	Cell:	(250) 267-7024	Responsible for day-to-day maintenance and inspections of TSF pipelines and all associated ditch, sump and pond systems. Also plans and co-ordinates barge moves.
		Office:	(250) 790-2215 ext. 102			
		E-mail:	DHannas@mountpolley.com			
Mine Operations Manager	Art Frye	Home:	(250) 492-4023	Cell:	(250) 809-4595	Responsible for the mine operations crew carrying out routine activities.
		Office:	(250) 790-2215 ext. 406			
		E-mail:	AFrye@mountpolley.com			
Environmental Superintentent (Acting)	Art Frye	Home:	(250) 492-4023	Cell:	(250) 809-4595	Responsible for ensuring that mining and milling activities comply with the requirements of the applicable regulations governing the mining, milling and tailings facilities.
		Office:	(250) 790-2215 ext. 406			
		E-mail:	AFrye@mountpolley.com			
Senior Safety Co-ordinator	Wally Rennie	Home:	(250) 398-2915	Cell:		Responsible for promoting safety initiatives in all aspects of Mine and Mill operations (including the TSF).
		Office:	(250) 790-2215 ext. 185			
		E-mail:	WRennie@mountpolley.com			
Engineer of Record Project Manager	Laura Wiebe	Home:		Cell:		Familiar with the technical aspects as well as maintenance and inspection requirements of the TSF. Responsible for providing the engineered drawings and associated support in TSF design.
		Office:	(604) 295-6360			
		E-mail:	Laura.Wiebe@amec.com			
Ministry of Energy and Mines	George Warnock	Home:		Cell:		Responsible for the review of tailings construction activities and for permitting of dam raises.
		Office:	(250) 565-4327			
		E-mail:	George.Warnock@gov.bc.ca			

Table 2.1 – Key Personnel

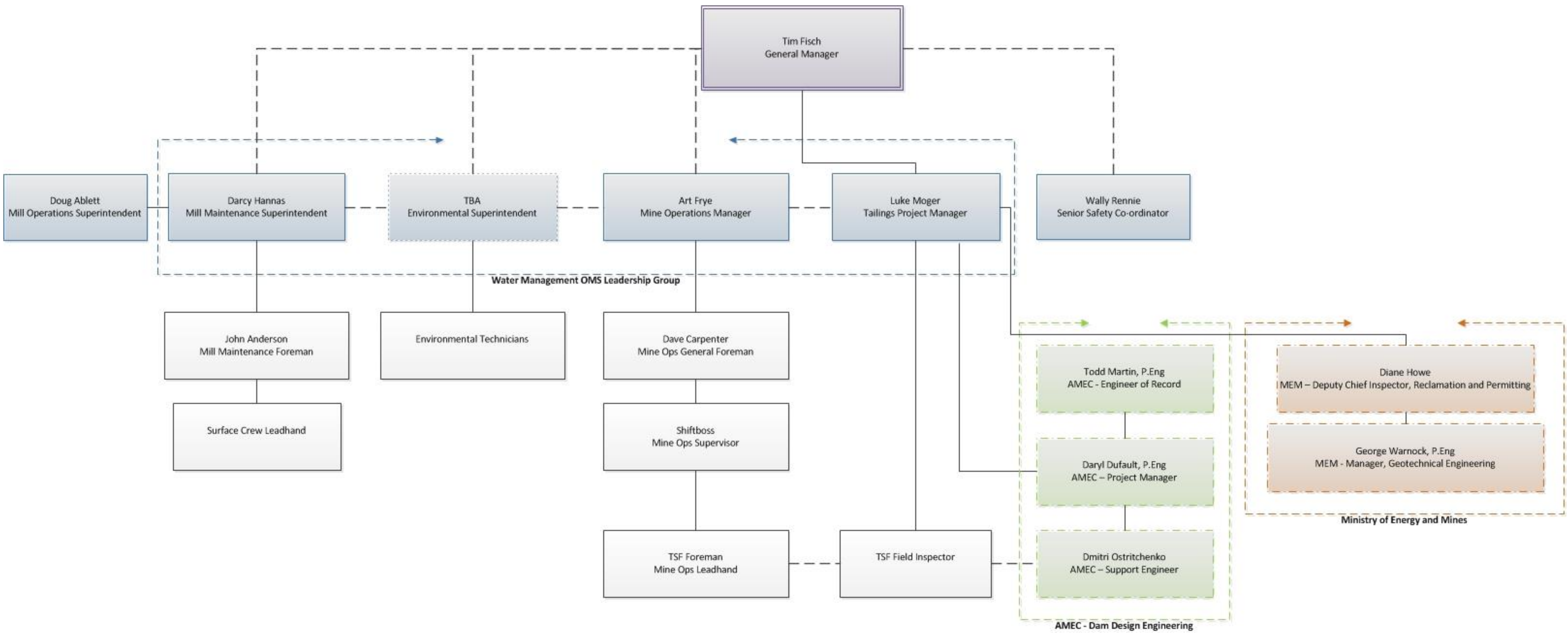


Figure 2.1 – Personnel Organizational Chart

2.1 Management Structure

The management structure consists of both internal (to Mount Polley) and external individuals. Internally, there is a core leadership group consisting of the senior representatives from all departments directly involved in the application of the OMS. Included in this group (the Water Management OMS Leadership Group) are the Mill Maintenance Superintendent, the Environmental Superintendent, the Mine Operations Manager and the Tailings Project Manager. Though all direct reports to the Mine Manager by position, for the purposes of the OMS, all efforts are collaborated through one individual; the Tailings Project Manager. The Mill Operations Superintendent and the Senior Safety Co-ordinator also compliment this team, but do not form the core decision-making body for site-wide water management.

Direct reports (and associated structures) to the respective individuals in the Water Management OMS Leadership Group still follow normal site-wide relationships in application of the OMS. External individuals are co-ordinated through the Tailings Project Manager through their respective representatives. Details of these positions are graphically illustrated in Figure 2.1 – Organizational Chart with details of specific positions and responsibilities being as further defined in this OMS.

2.2 Design Group (AMEC)

As per the Mines Act, "Major impoundments, water management facilities and dams shall be designed in accordance with the criteria provided in the Canadian Dam Association, Dam Safety Guidelines". Additionally, "Tailings impoundments, water management facilities, dams and waste dumps shall be designed by a professional engineer" (Section 10.1.5 and Section 10.1.8 respectively).

In the case of the Mount Polley TSF, AMEC Environment & Infrastructure, a Division of AMEC Americas Limited (AMEC) is the Design Engineer currently retained to fulfill these requirements. The current working AMEC team consists of, in order of seniority: Steve, P.Eng. (AMEC Principal Engineer); Laura Wiebe, P.Eng. (AMEC Project Manager and Engineer of Record); and Dmitri Ostritchenko (AMEC Support Engineer).

Any deviation from permitted design documents requires the approval of the Design Engineer as well as the British Columbia Ministry of Energy and Mines (MEM).

2.3 Regulatory Group (Ministry of Energy and Mines)

As-built and annual reports pertaining to the TSF are, each year, submitted to and reviewed by representatives of the MEM. Based on the information in these reports (reports being provided by the Design Engineers retained by Mount Polley mine), in conjunction with annual construction manuals provided by the Design Engineer, MEM permits each "phase" of TSF construction (historically on an annual basis).

Currently, the individual responsible for the review of all relevant technical information pertaining to the TSF is the MEM Manager of Geotechnical Engineering: George Warnock, P.Eng. The individual responsible for the amendment of the M-200 Mining Permit in accordance with the proposed annual dam raise is the MEM Chief Inspector of Mines, Al Hoffman, P.Eng.

2.4 Construction Group

During construction periods, roles and responsibilities of individuals involved will follow that of the design consultant's Annual Construction Manual.

2.4.1 MPMC Field Inspector and Mine Technicians

Mount Polley Mining Corporation (MPMC) is to provide a full-time field inspector to monitor daily embankment expansion construction. The MPMC Field Inspector is to have support and co-operation from the senior MPMC personnel and construction team.

The specific responsibilities of MPMC's Field Inspector are as outlined in the Annual Construction Manual.

2.4.2 AMEC Support Engineer

The AMEC Support Engineer will provide full-time construction monitoring at the commencement of construction. After the MPMC Field Inspector has achieved sufficient confidence and commensurate approval, the AMEC Support Engineer will provide primarily remote assistance by reviewing daily reports and instrumentation data as required. The AMEC Support Engineer will also conduct monthly site visits (actual frequency to be determined by site performance) to verify construction methods and specifications are being followed.

The specific responsibilities of MPMC's Field Inspector are as outlined in the Annual Construction Manual.

2.4.3 AMEC Project Manager

AMEC's Project Manager will have overall responsibility for AMEC's role with upcoming and future dam raising projects. AMEC's Project Engineer will also act as the Engineer of Record for the TSF. He will review all monthly construction progress reports and liaise with the AMEC Senior Geotechnical Engineer and MPMC's Project Manager to review any problems that may arise.

The AMEC Project Manager will also liaise with the AMEC Support Engineer and the MPMC's Tailings Project Manager (and through him MPMC's Field Inspector), and will make site visits as deemed necessary during construction. The exact timing and duration of the site visits will be determined in consultation with the MPMC Tailings Project Manager so that critical aspects of the construction can be viewed during these visits.

The specific responsibilities of MPMC's Field Inspector are as outlined in the Annual Construction Manual.

2.4.4 AMEC Senior Geotechnical Engineer

AMEC's Senior Geotechnical Engineer will review monthly construction and instrumentation reports as required and review the as-built/annual review reports. AMEC's Senior Geotechnical Engineer is familiar with the site and will make site visits only if deemed necessary by the AMEC Project Manager or MPMC Tailings Project Manager.

2.4.5 MPMC Project Manager

MPMC's Tailings Project Manager shall assume overall responsibility for MPMC construction management and MPMC supervision, monitoring, and quality control testing activities when AMEC is not on site. This person shall ensure that the design specifications and the QA/QC requirements as outlined in this manual are followed. In the absence of the MPMC Tailings Project Manager, the MPMC Mine Technicians dedicated to the TSF embankment will take responsibility, under the supervision of the Mine Operations Manager.

MPMC's Tailings Project Manager shall liaise with AMEC's Support Engineer and AMEC's Project Manager to discuss construction progress, any problems encountered and their resolution, and the timing of site visits by AMEC personnel to view the construction.

The specific responsibilities of MPMC's Field Inspector are as outlined in the Annual Construction Manual.

2.4.6 MPMC Mine Operations Manager

The MPMC Mine Operations Manager will address any concerns raised by the Field Inspector/Support Engineer as related to any potential environmental issues or concerns.

2.5 Operation, Maintenance and Surveillance

The TSF is an active site year-round. Personnel involved day-to-day span multiple departments at Mount Polley, with activities co-ordinated through the Tailings Project Manager. The two primary parties involved in the day-to-day operation of the TSF are the mill group and the mine group who report to the Mill Maintenance Superintendent and the Mine Operations Manager respectively.

2.5.1 Mine Manager

The Mine Manager is responsible for the overall activities of Mount Polley Mine, inclusive of the TSF.

2.5.2 Tailings Project Manager

The Tailings Project Manager is responsible for the planning, co-ordination and daily management of all construction activities. This includes interpreting the site water balance to project annual dam raising requirements as well as calculating and scheduling material, equipment and manpower requirements for the construction of the TSF. The Tailings Project Manager is also responsible for the administration of any contractor work required at the TSF.

In an administration setting, the Tailings Project Manager is responsible for the annual updating of the OMS and for the completion and distribution of the as-built/annual reports as well as construction manuals. The Tailings Project Manager is also responsible for co-ordinating permitting of dam raises with MEM.

2.5.3 Mine Operations Manager

The Mine Operations Manager is responsible for directing the operating crews (with the guidance of the Tailings Project Manager) in carrying out all applicable activities; namely, those involving mine equipment and personnel.

Activities are co-ordinated through a chain-of-command existing within the Mine Operations Department that follows the Mine Operations Manager down through the Mine Operations General Foreman, The Mine Operations Supervisors and the TSF Foremen.

2.5.4 Environmental Superintendent

The Environmental Superintendent is responsible for ensuring that mining and milling activities comply with requirements of applicable regulations. The Environmental Superintendent is also responsible for the control of the site water balance.

The Environmental Superintendent is also responsible for the co-ordination of the Environmental Department, made up of Environmental Technicians.

2.5.5 Mill Maintenance Superintendent

The Mill Maintenance Superintendent is responsible for directing the mill crews in carrying out all applicable activities; namely, those involved with TSF pipelines and associated ditch, sump and pond systems. The Mill Maintenance Superintendent is also responsible for co-ordinating barge moves (with the assistance of the Tailings Project Manager).

Activities are co-ordinated through a chain-of-command existing within the Mill Maintenance Department that follows the Mill Maintenance Superintendent down through the Mill Maintenance Foreman and the Surface Crew Leadhand.

2.5.6 Mill Operations Superintendent

The Mill Operations Superintendent is responsible for the operation of the Mill facilities. Specifically, the Mill Operations Superintendent is responsible for the production and monitoring of tailings material that reports to the TSF.

2.5.7 Senior Safety Co-ordinator

The Senior Safety Co-ordinator is responsible for promoting safety in all aspects of mine and Mill operations, inclusive of the TSF.

2.6 Competency and Training

As outlined in the MPMC Tailings Management Framework, overall responsibility of the tailings management falls under Don Parson, Chief Operating Officer (COO) of Imperial Metals Corporation (Imperial). As part of this responsibility, the COO will put in place an appropriate management structure and provide assurance to Imperial (and through it MPMC) and its communities of interest (COI) that the TSF is managed responsibility.

On site, it is the responsibility of the supervisory personnel involved in the operation, maintenance and surveillance of the TSF to train individuals falling under their management. Competency in the various roles is provided through existing orientation and training programs and is to be administered in correspondence with the procedures existing at Mount Polley Mine. Review of the OMS with individual workers is the responsibility of each supervisor to which the worker reports. It is the responsibility of all site personnel to be continually aware of visual indications of facility performance.

Each training session must be documented, and a record kept. The records will contain a detailed list of site activities for which the trainee was trained on, and be signed by the person who provided/supervised the training.

Internally, the operation, surveillance and maintenance of the TSF and associated systems involve both the Mill Maintenance and Mine Operation departments. Working under their respective supervisors, the required duties of these two parties are co-ordinated through the Tailings Project Manager. The Tailings Project Manager is also responsible for co-ordinating between MPMC and both the Design Engineer and MEM.

2.7 Managing Change

Review of the OMS Manual is to be conducted annually. Changes to the design or operating plan for the TSF and related pipelines and structures must be reviewed, approved and documented by the Tailings Project Manager. Design changes may be submitted to the Engineer of Record for review. Operational changes will be reviewed and approved by the Mine General Manager. In all cases, documentation of the change, including as-built records, are required.

The operating procedures and personnel at the Mount Polley Mine may change during the operation of the Mine. It is the responsibility of the Tailings Project Manager to ensure that the OMS Manual is updated to reflect these changes (in the absence or change of such person, it shall become the responsibility of the Mine Operation Manager). It will also be the responsibility of the Tailings Project Manager (in the absence or change of such person, it shall become the responsibility of the Mine Operation Manager) to update the OMS Manual in the event of regulatory change. Substantial revisions to the OMS Manual shall be submitted to the MEM.

3.0 FACILITY DESCRIPTION

The following section provides information about the Mount Polley mine facility. Included in this section is a facility overview and site conditions.

3.1 Facility Overview

Mount Polley is an alkalic porphyry copper/gold deposit hosted within brecciated plagioclase porphyry. While the principal copper-bearing mineral is chalcopyrite, other copper minerals are present, especially in oxidized zones. These other minerals include bornite, malachite, chrysocolla, and azurite. Gold is present principally as inclusions in copper sulphides and as free liberated grains.

3.1.1 Ownership

MPMC is a subsidiary of Imperial, owner of Mount Polley Mine and property. Imperial is a Canadian mining company, with its corporate head office in Vancouver, British Columbia. Imperial is active in the acquisition, exploration, development, mining and production of base and precious metals, and key properties are: the operating Mount Polley open pit copper/gold producing mine in central British Columbia; the operating Huckleberry open pit copper/molybdenum producing mine (50% interest) in northern British Columbia; exploration stage Sterling (gold) in Nevada, USA; and development stage properties Red Chris (copper/gold), Ruddock Creek (zinc/lead), and Catface (copper), all in British Columbia.

MPMC was formed in 1996 through a joint venture between Imperial and Sumitomo Corporation (SC Minerals Canada Limited) by means of loan financing. Imperial increased its interest in the Mount Polley mine to 100% in December 2000 by acquiring Sumitomo's 47.5% interest.

3.1.2 Location

Mount Polley mine is an open pit copper/gold mine located in central British Columbia (Figure 3.1.2.1), 56 kilometres (km) northeast of Williams Lake (latitude 52° 33’ N and longitude 121° 38’ W).

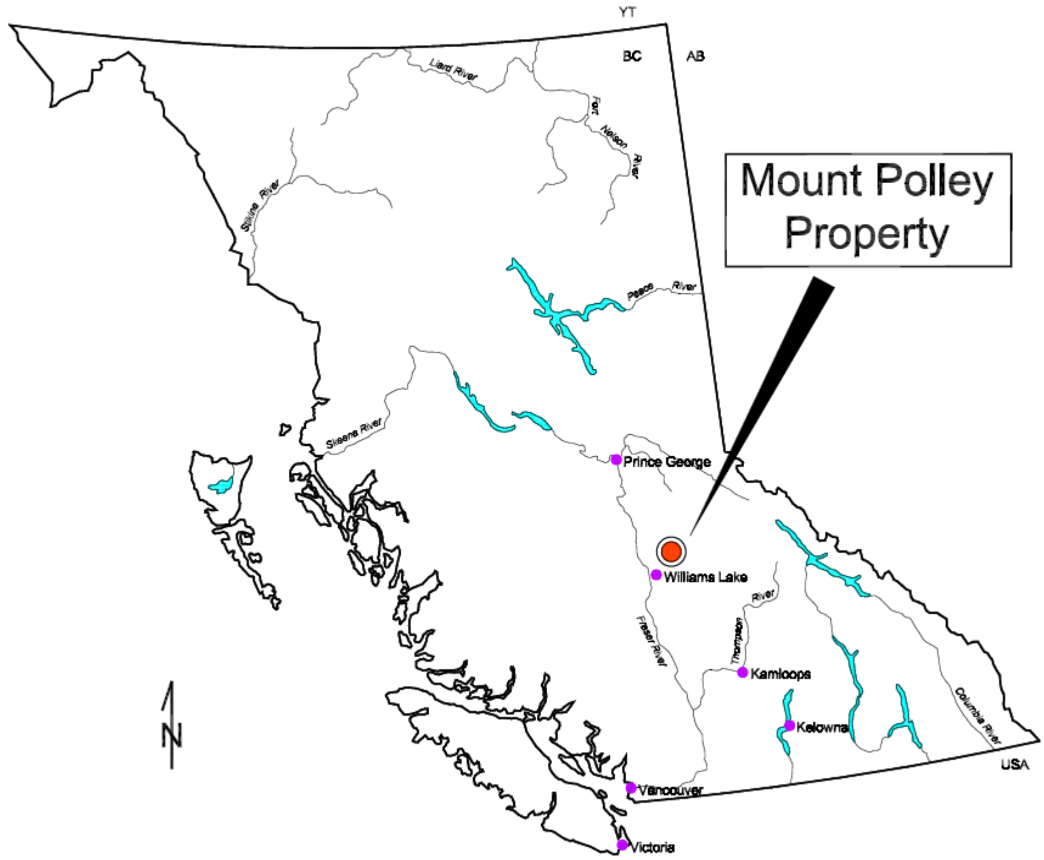


Figure 3.1.2.1 - Location Map

3.1.3 Site Layout Plan

A current site aerial is included as Figure 3.1.3.1, exhibiting the mill and crusher sites, the TSF, active (Springer) and historic (Cariboo, Pond, SEZ, Wight) pits, active underground (Zuke Zone), and active (North Bell, SERDS) and historic (Boundary, Highway to Heaven, NEZ) dumps.

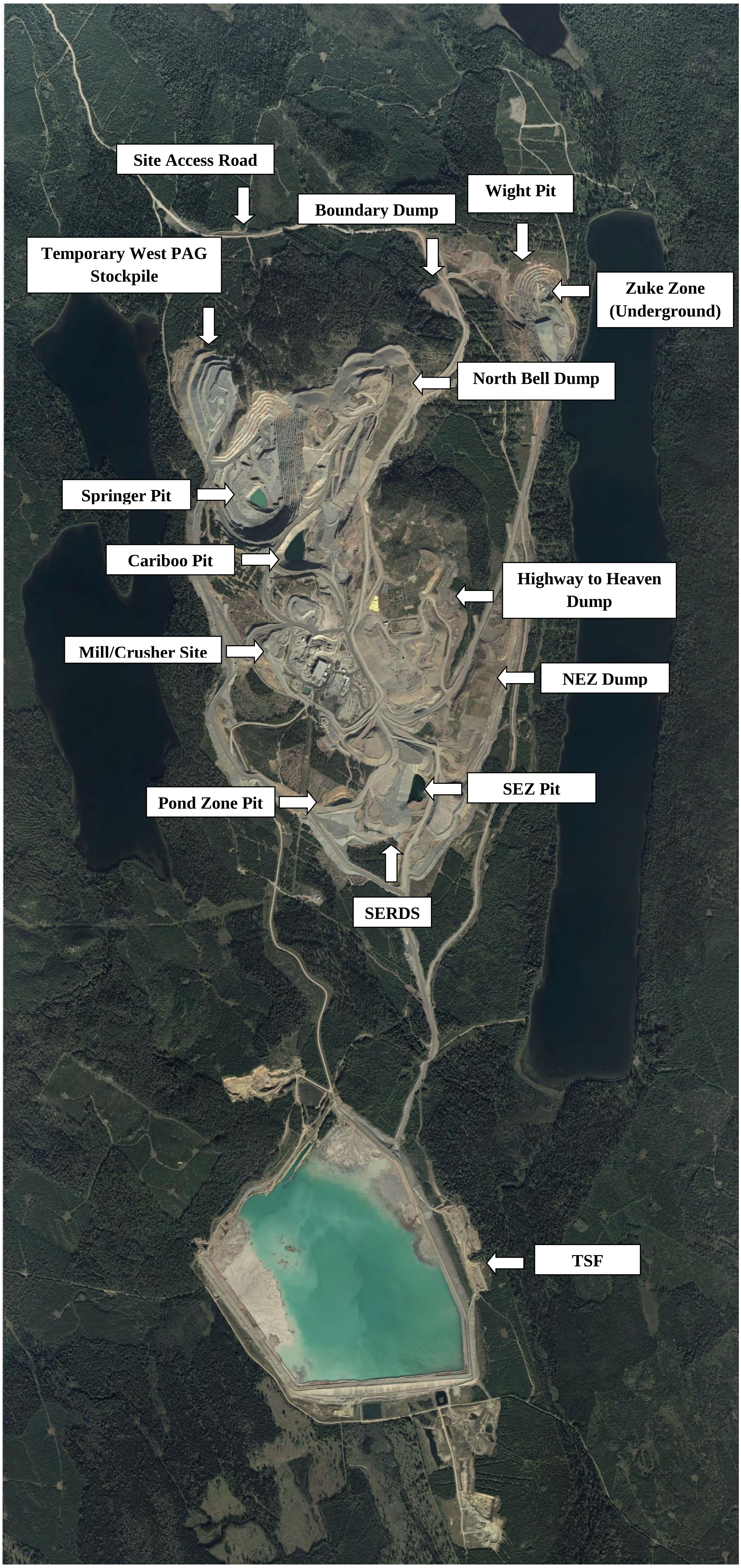


Figure 3.1.3.1 – 2012 Site Aerial

3.1.3.1 Water Management

The TSF was previously operated under a water deficient condition; meaning more process water was needed than available in the supernatant pond. This condition changed once the mill started up again in February 2005. The mine is now operating under surplus conditions, which means there is more water in the system than is required. Therefore, a combination of careful water management and tailings deposition is required to maximize the storage potential in the TSF without compromising the freeboard or embankment stability. All mine-influenced water is captured and stored in the TSF, while all clean (non-mine-influenced water) is returned to receiving environments.

Figure 3.1.3.1.1 illustrates the water management systems in place, which are described in detail in Section 4.1 of this report.

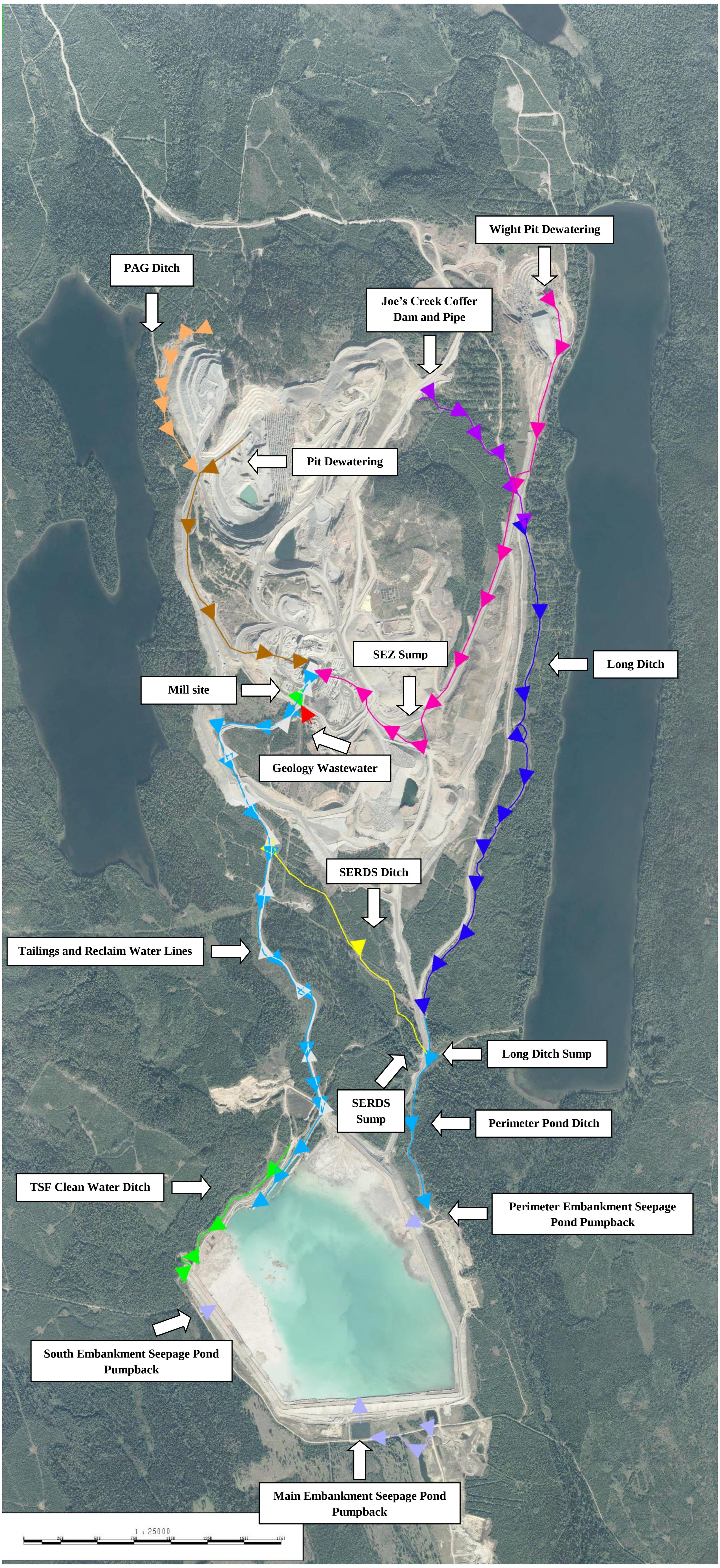


Figure 3.1.3.1.1 – Water Management Schematic

3.1.4 Mine Operation History

Construction of the 18,000 tonne per day (tpd) mill feed Mount Polley Mine and milling facility began in May 1996, and was completed in June 1997. Mining operations continued until September 2001, at which time operations were suspended due to low metal prices. In August 2004, Imperial completed a feasibility study which included an updated ore reserve statement and a new mining plan, and confirmed the viability of restarting operations at Mount Polley Mine. In October 2004, a mining permit amendment and a mining lease were granted, and milling operations commenced in March 2005 and have been in continuous operation since. Ore is crushed and processed by selective flotation to produce a copper-gold concentrate; currently, mill throughput is approximately 21,000 tpd.

3.1.5 Mineralization

In general, high grade feed from the Springer pit consists of potassium feldspar and albite-altered breccias. Copper mineralization occurs mostly as disseminated, veined and blebby chalcopyrite. Minor bornite and trace quantities of covellite, chalcocite and digenite are also present. Copper oxides (true oxides, carbonates and silicates) are present in varying quantities throughout the deposit, depending on the zone. Malachite/azurite occurs as powdery fracture-fill. Chrysocolla occurs in fractures and veinlets and as blebs of up to two centimetres (cm), and will only be abundant in the upper part of the south Springer. Magnetite content within the breccia is expected to be highly variable depending on location and correlated strongly with copper and gold grades. High grade (Cu-Au) magnetite ‘pipes’ have not been identified in the Springer, but may still be found during mining. Drilling in the Springer has located zones of mineralized, magnetite and garnet-rich calc-silicate alteration. The size and configuration of the final Springer pit is still under revision as extensions of the mineralization continue to be discovered at depth and to the northwest. A 73,000 tonne (t) sample of highly oxidized copper mineralization was mined and test milled from the 1170/60 elevation of the upper south Springer in September 2001. This sample was used to test the recovery and milling characteristics of this type of high copper oxide mineralization using the existing mill. The sample had a head grade of 0.37% copper and 0.58 g/t gold, with a 70% copper oxide ratio. The recovery of copper from this test was only 16.4%, however, the gold recovery was 67.3%, showing that gold recovery is largely independent from the oxide copper content [note: copper oxide ratio = copper oxide assay in % / total copper assay in %].

3.1.6 Mining

Mining operations employ standard hard rock mining industry drilling and blasting techniques prior to loading and hauling to the crushing facilities. Currently, operations at Mount Polley mine include the open-pit mining of the Springer pit. The open-pit loading equipment is a combination of P&H 2100/2300 shovels and loaders, and the haulage fleet includes Caterpillar 793F and Caterpillar 785C trucks. Various support equipment is also utilized in the mining operation.

3.1.7 Milling Process

The primary crusher pocket has capacity to accept material from a 150t truck and ore is processed through a semi-autonomous grinding (SAG)/ball mill circuit producing a copper/gold concentrate.

In the Mount Polley mill, run-of-mine ore from the open pits is dumped into the feed pocket of the primary gyratory crusher to reduce the rock to a nominal 200mm. A hydraulic rock breaker is used to break the oversize material, and the crushed ore is discharged onto an apron feeder which feeds onto a conveyor to the coarse stockpile. Ore is reclaimed from underneath the stockpile by four vibrating feeders and conveyed to a vibrating screen.

In preparation for flotation, ore from the feed stockpile is conveyed to a grinding circuit, consisting of parallel rod mill/ball mill circuits and a pebble mill circuit; crusher product is first fed to a rod mill, and then to a ball mill. Ball mill discharge is pumped to cyclones, where the coarse particles are separated to return to the ball mill, while the finer particles proceed to the three pebble mills. Cyclones are again used to return oversize material to the mills, while the fines, now at the necessary size for mineral separation, are pumped to the flotation circuit.

The flotation circuit separates the valuable minerals from the waste rock, producing a concentrate. Initial separation is done in a rougher/scavenger circuit, where tailings flow by gravity to the TSF. Rougher concentrate is further upgraded in a cleaner circuit to produce the final product. Cleaner tailings are recycled to the rougher/scavenger circuit.

The concentrate is dewatered in two stages: settling reduces the water content to roughly 35-40%, while pressure filtration further reduces it to approximately 8%. Water removed is utilized as process water. Concentrate is stored in the load-out building and loaded on to 40t trucks for shipping.

3.1.8 Tailings Management

Tailings are deposited as slurry into the TSF. Throughput from the milling process operates between 900t/h and 1200 t/h, with an average of 920t/hr in 2012. Tailings are transported to the TSF from the mill via a gravity-flow system of 24” Sclairpipe, where flow is manipulated for upstream dam construction of Zone U (Sand Cells) and for beach management.

3.2 Site Conditions

This section addresses: climate; land surface drainage; hydrology and water quality; geology, surrounding land use and tenure; and, vegetation and wildlife.

3.2.1 Climate

As a requirement of Effluent Permit PE 11678, meteorology data has been collected at the mine site, primarily to provide site-specific precipitation and evaporation data for use in water balance predictions and closure planning.

Mean monthly temperatures range from 13.7°C in July to –10.7°C in January, with a mean annual temperature of 4.0°C. Prevailing winds are from the northwest in the winter months and from the south and southwest during the summer months. Precipitation is well distributed throughout the year, ranging from 600 millimetres (mm) to 800mm annually (averaging 755mm), with 300mm falling as snow. Detailed weather information can be obtained from the Annual Environmental and Reclamation Report.

3.2.2 Land Surface Drainage

Mount Polley mine is located near the eastern edge of the Fraser Plateau physiographic sub-division, which is characterized by rolling topography and moderate relief. The mine site is situated along a topographic height of land known as the Mount Polley Ridge which has a maximum elevation of 1266m at the summit of Mount Polley, and runs northeast to southwest between Polley and Bootjack Lakes, The drainage system is clustered within the "dogleg" bend of the Quesnel River, west of Quesnel Lake. Drainage within this system is characterized by the saddle between the Bootjack and Polley Mountain peaks, which divides the drainage flow into two generally opposite directions. Approximately 60% of the drainage travels into the Morehead Lake watershed that empties into the Quesnel River about 20km downstream of Likely. The remainder drains to the southeast, and enters Quesnel Lake about 13km upstream of its outlet. Figure 3.2.2.1, while not up to date with respect to the mine site, provides a good overview of the regional water system.

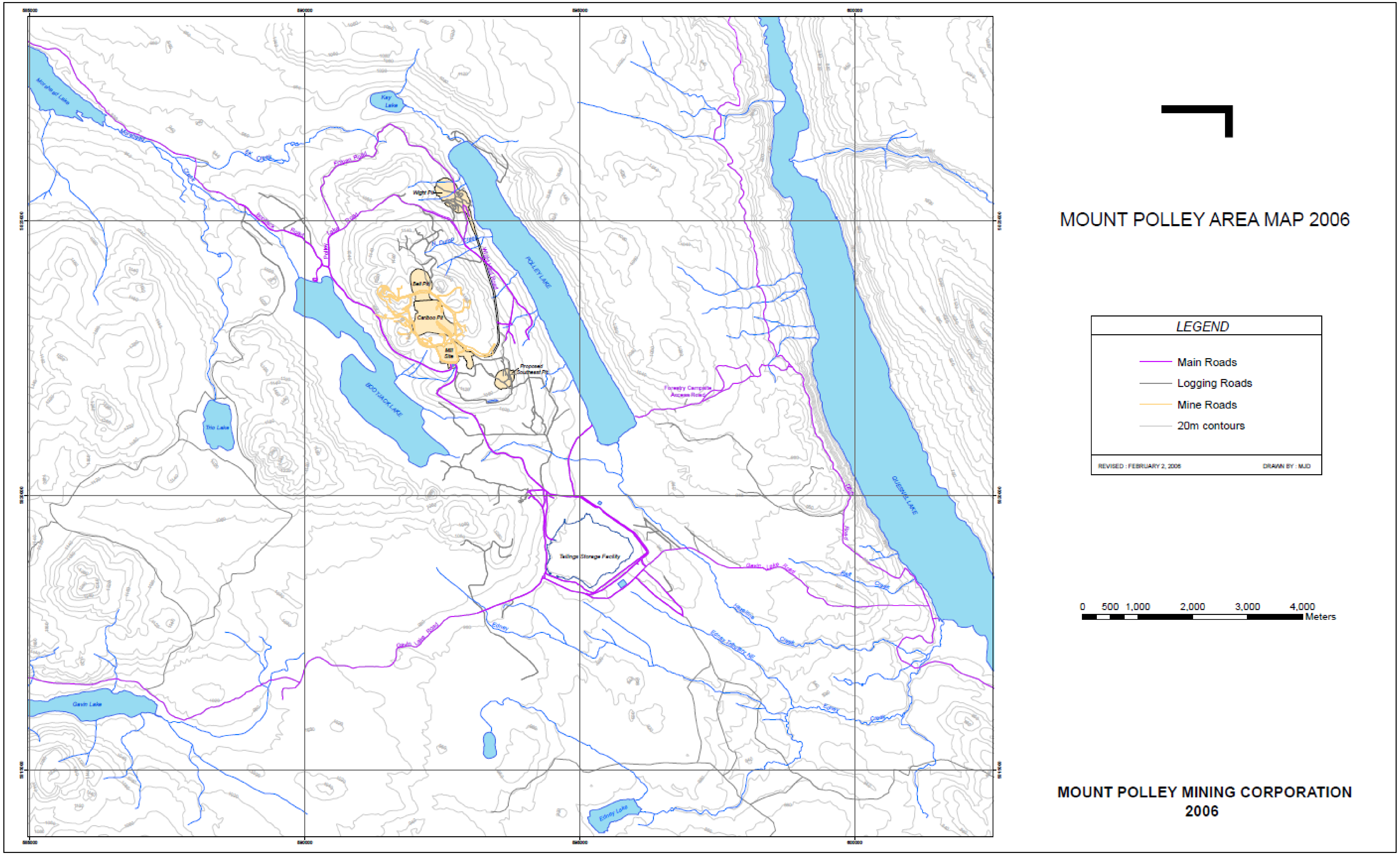


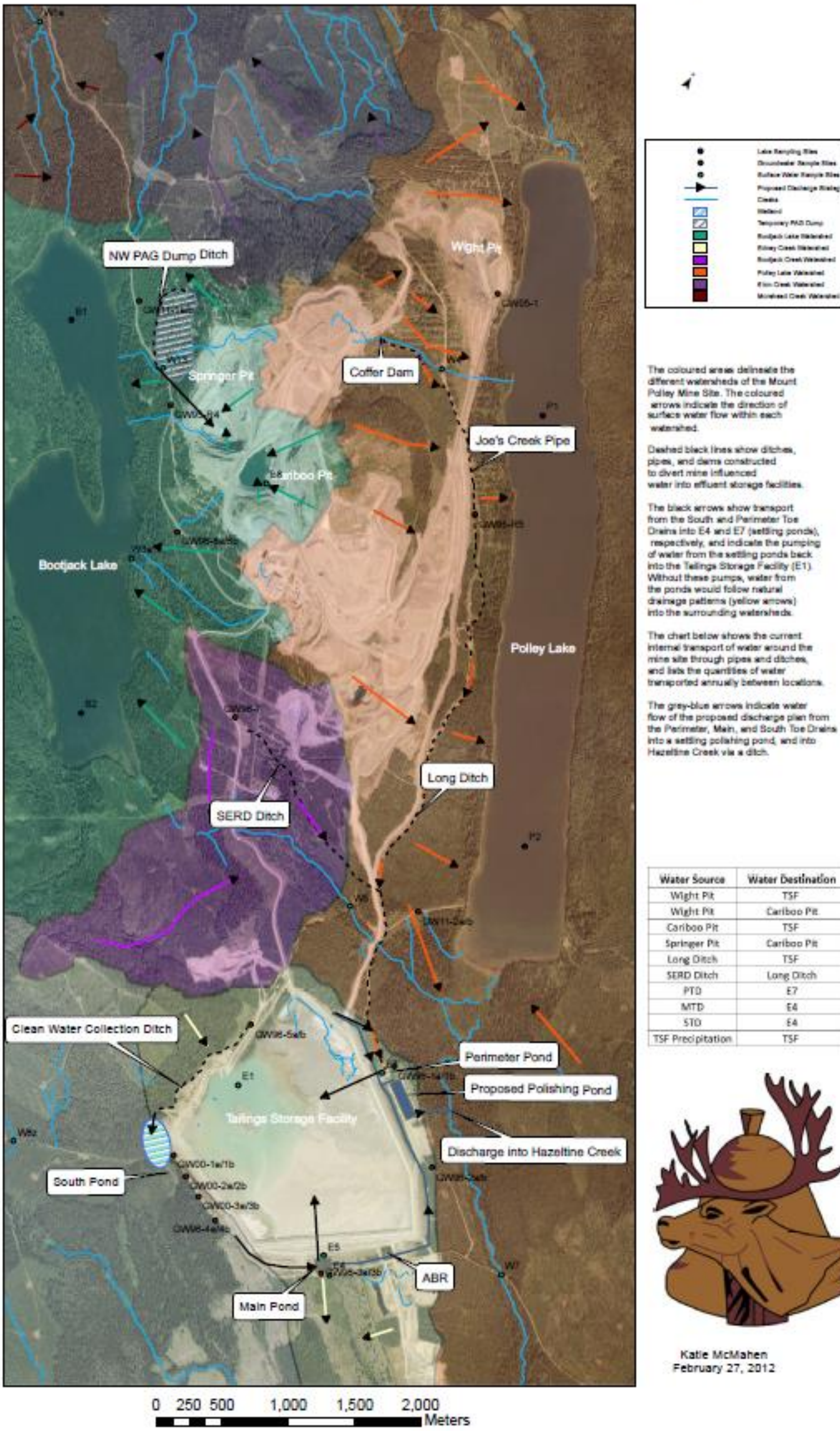
Figure 3.2.2.1 – Area Map

Polley Lake, at an elevation of 926m, has a surface area of about 200ha and drains the east side of Mount Polley and the west side of the plateau between the Quesnel River system and Polley Lake. It is drained to the southeast by Hazeltine Creek, which joins Edney Creek before entering Quesnel Lake. A small tributary of Hazeltine Creek is Bootjack Creek, which collects the greater part of its water from the south slope of Mount Polley, downstream of Bootjack Lake. The Southeast Rock Dump Site (SERDS) is located within this watershed.

In the saddle between Mount Polley and Bootjack Mountain is Bootjack Lake at elevation of 985m and a surface area of 268ha. Because of its location, some of its waters had naturally drained to the southeast via Bootjack Creek, but a man-made diversion now forces its entire content to the northwest into Morehead Lake (elevation 912m) via Morehead Creek. Morehead Creek has a length of about 2.5km. Its main tributary is Trio Creek, about 0.75km upstream of the lake. Drainage area of Morehead Creek above its confluence with Trio Creek is about $14km^2$. The temporary West PAG stockpile, C2 Pit, and much of the South Road are located in this watershed.

A map of these mine site watersheds, as well as constructed water collection and diversion facilities is included as Figure 3.2.2.2.

Mount Polley Mine Watershed Map 2011



The coloured areas delineate the different watersheds of the Mount Polley Mine Site. The coloured arrows indicate the direction of surface water flow within each watershed.

Dashed black lines show ditches, pipes, and dams constructed to divert mine influenced water into effluent storage facilities.

The black arrows show transport from the South and Perimeter Toe Drains into E4 and E7 (settling ponds), respectively, and indicate the pumping of water from the settling ponds back into the Tailings Storage Facility (E1). Without these pumps, water from the ponds would follow natural drainage patterns (yellow arrows) into the surrounding watersheds.

The chart below shows the current internal transport of water around the mine site through pipes and ditches, and lists the quantities of water transported annually between locations.

The grey-blue arrows indicate water flow of the proposed discharge plan from the Perimeter, Main, and South Toe Drains into a settling polishing pond, and into Hazeltine Creek via a ditch.

Water Source	Water Destination	m^3/year
Wight Pit	TSF	1,000,000
Wight Pit	Cariboo Pit	400,000
Cariboo Pit	TSF	175,000
Springer Pit	Cariboo Pit	435,000
Long Ditch	TSF	900,000
SERD Ditch	Long Ditch	225,000
PTD	E7	604,000
MTD	E4	450,000
STD	E4	688,200
TSF Precipitation	TSF	~800,000

Katie McMahen
February 27, 2012

Figure 3.2.2.2 – Watershed Map

3.2.3 Hydrology and Water Quality

As per permit PE 11678, water quality monitoring is carried out according to the Surface Water and Groundwater Monitoring Plan developed by MPMC. This plan is reviewed and updated annually by a Qualified Professional and must be approved by the Ministry of Environment (MOE). Currently, three (3) single groundwater wells and fifteen (15) pairs of deep and shallow groundwater wells are monitored, eighteen (18) surface water sites (five effluent sites and twelve stream sites) and supplemental surface water locations. A map of these sampling locations is provided in Figure 3.2.3.1. Acute and chronic toxicity testing of the effluent for discharge is also required under PE 11678.

In conjunction with water sample collection, permit PE 11678 requires hydrological monitoring at sites W1b (Morehead Creek), W4 (North Dump Creek), W5 (Bootjack Creek), W7 (Hazeltine Creek), and W12 (6K Creek). Supplemental monitoring is completed at Edney Creek (W10), the Long Ditch, the SERDS Ditch, Joe's Creek Pipe, and the Perimeter and South Toe Drains to provide data for the site water balance. Data from staff gauge and flow measurements (as well as pressure transducers at some stations) are used to develop stage-discharge curves for these locations. Continuous flow data is required at W7 and the effluent discharge outlet. To further monitor water quantity, the static water level of groundwater wells are recorded each time they are sampled.

A Biological and Lake Sampling Plan is submitted to the MOE annually as per PE 11678. Lake sampling is completed at two (2) sites in both Polley Lake and Bootjack Lake, and typically entails: lake profiles of in situ parameters after spring and fall overturn; surface to bottom water quality samples after spring and fall overturn; and bi-monthly secchi disk measurements between spring and fall overturn. Biological monitoring occurs at, but is not limited to, the mine site, Hazeltine Creek, Edney Creek, Bootjack Lake, and Polley Lake. Monitoring includes documentation of wildlife occurrences, photo surveys tracking stream productivity, periphyton chlorophyll a levels, and selenium concentrations in fish tissue and sediment.

Additional monitoring will take place in accordance with the federal Metal Mines Effluent Regulations (MMER) when mine effluent is being discharged into Hazeltine Creek. This will include water quality monitoring, toxicity testing, and Biological monitoring studies which will monitor environmental effects on fish, an invertebrate species, a plant species and an algal species.

All above information is reported in the Annual Environmental and Reclamation Report. A full list of sites and coordinates is included in Appendix B.

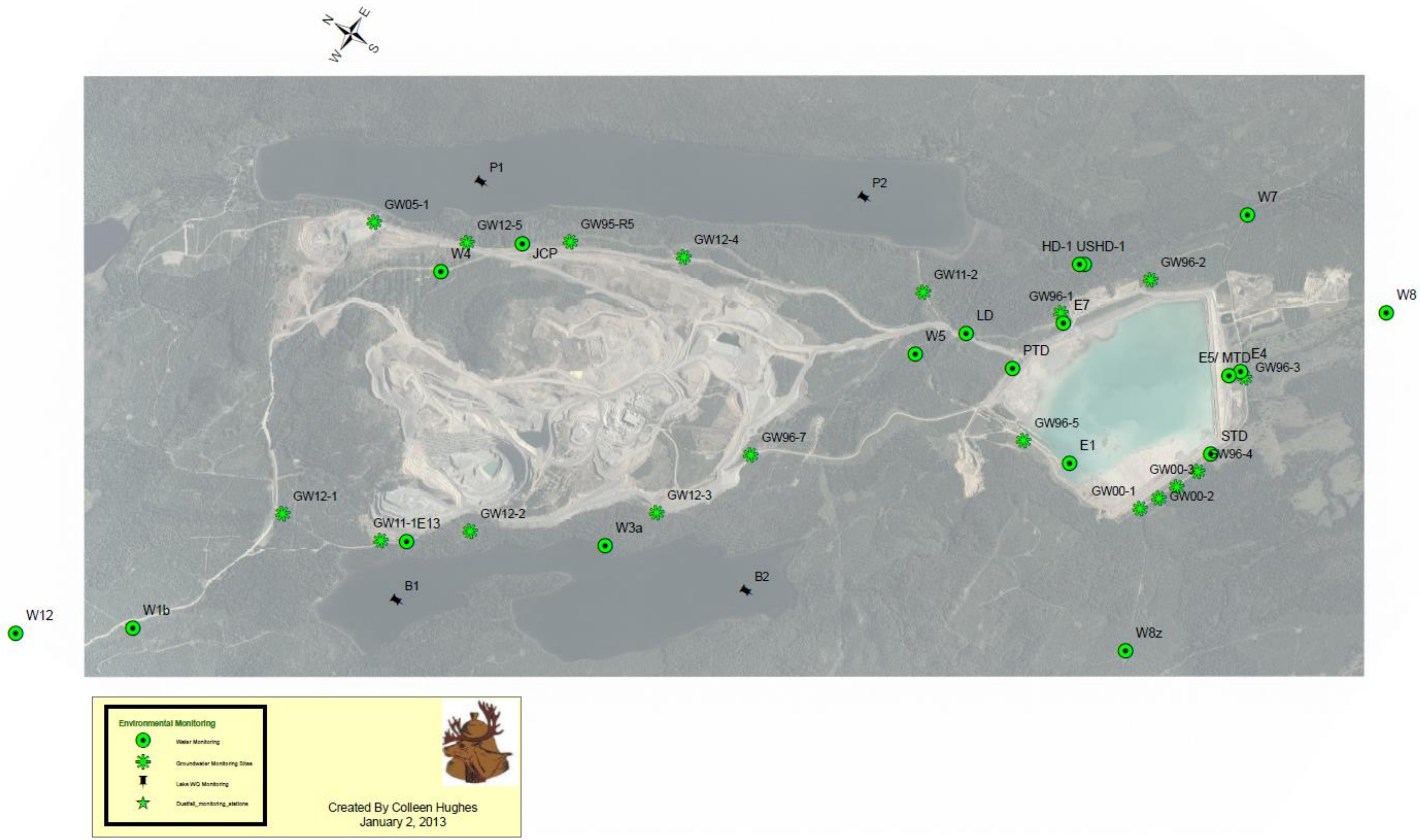


Figure 3.2.3.1 – Sampling Locations Map

3.2.4 Geology

Mount Polley is an alkalic porphyry copper/gold deposit. It lies in the tectono-stratigraphic Quesnel terrane or Quesnellia, which extends from south of the United States border to north-central British Columbia. The characteristic component of Quesnellia is a Middle Triassic to Early Jurassic assemblage of volcanic, sedimentary and plutonic rocks which formed in an island arc tectonic setting, outboard of the ancestral North American continental margin in the early Mesozoic. Quesnellia hosts several major porphyry copper deposits such as Highland Valley, Copper Mountain, Afton-Ajax and Mount Milligan, all generated by early Mesozoic, calc-alkalic or alkalic island-arc magmatism.

Mount Polley itself is a complex of intermediate intrusions which were emplaced into the Triassic sedimentary-volcanic succession in the waning stages of arc magmatism, near the end of the Triassic (around 205 Ma). Mount Polley lies in the hinge zone of the regional syncline. The intrusive complex is about six km long (north-northwest) and three km wide, lying between Polley Lake in the east and Bootjack Lake in the west. A large nepheline syenite intrusion, the Bootjack Stock, occurs south of Mount Polley. It is the same age as Mount Polley and is part of the overall intrusive centre, but is not associated with significant mineralization.

The Mount Polley intrusions are typically monzodiorite, but range from diorite (oldest) to monzonite (youngest) - not all are porphyritic. They are undersaturated in silica, and have an alkalic or shoshonitic chemical signature, with quartz being very rare. Some intrusions are texturally distinct, or form discrete dike-like bodies, but most of the igneous rocks are compositionally similar, variably altered, and have indistinct contact relations. In addition to the intrusions, there are zones of polymictic magmatic-hydrothermal breccias, some of which are related to mineralization events. These breccias, and some intrusions that are particularly rich in inclusions, have previously been incorrectly interpreted as volcanic breccias.

Hydrothermal alteration is characterized by potassic (potassium feldspar and locally biotite), albite and magnetite metasomatism, with zones of garnet or actinolite-rich calc-silicate. Mineralization and most of the alteration at Mount Polley occurred in the late stages of igneous activity.

3.2.5 Surrounding Land Use and Tenure

Hunting throughout the region is a common recreational activity as habitats for moose and deer are common. The mine site is located in MU-2, and access to the site is prohibited under the Mines and Trespass Act. The project is within the territory of the guide/outfitter G.M. Elliot of Likely.

Polley Lake and Bootjack Lake both have forestry recreation sites that are equipped with boat launches, campsites, toilets, and picnic tables which are used by the public on a regular basis during the camping and hunting seasons.

3.2.6 Vegetation and Wildlife

Forest cover consists of red cedar, Douglas fir and sub-alpine fir, with lesser black cottonwood, trembling aspen and paper birch also present. Much of the surrounding area has been clear-cut by commercial logging.

The baseline wildlife and wildlife habitat assessment for the Mount Polley mine included all lands and waters that would be directly affected by original mine development. A buffer zone of 1.5km was also included in the assessment. The baseline report concluded that the project would cause local alterations in wildlife habitat, but the alterations would be minor and short term (life of the project).

4.0 KEY COMPONENTS OF THE FACILITY

Tailings slurry is conveyed from the milling process plant to the TSF via a tailings discharge pipeline. The tailings are deposited into the impoundment through discharge pipeline on the embankment crest. Discharge location is controlled through the addition or subtraction of lengths of pipe in combination with gate systems. When possible, tailings are used to construct sand cells (an upstream material component of the dam design). A floating reclaim pump recycles process water from the supernatant pond in the TSF for use in the mill processing circuit. Sediment ponds and seepage collection ponds are designed to intercept runoff from the surface and seepage from around the mine site and direct it to the tailings basin. Drains, instrumentation and monitoring wells are constructed in and around the TSF to assist in monitoring the performance of the facility. Additional details are available in the reports referenced in Appendix A. As-built drawings for the latest construction program are included within this Appendix A.

4.1 Water Management

Currently, the total inflow into the TSF from precipitation and surface runoff exceeds losses from evaporation and storage of water within the voids of deposited tailings. Thus, MPMC mine site is operating under a net annual water surplus condition, with the accumulating surplus being stored in the TSF and the Cariboo Pit. MPMC transfers water as needed between the TSF and the Cariboo Pit.

MPMC maintains a water/mass balance model which is updated on a regular basis with actual tonnages (milled/mined) and surveyed TSF pond water elevations to maintain the accuracy of the model and TSF pond level projections.

Wherever possible, clean (non-mine-influenced) water is separated from mine-influenced water and returned to the surrounding receiving environment.

4.1.1 Mine-Influenced Water Ditch and Sump Systems

Ditch and sump systems are in place such that any and all mine-influenced water is collected and contained. Some water is reclaimed (recycled) in the milling process, while all excess mine-influenced water is collected and reports to the TSF.

4.1.1.1 Pit Dewatering

Water is removed from active open pits by blasting and digging sumps into the bench floor and installing submersible pumps. Water is pumped from the pits to the Mill, with excess water not used in milling operations reporting to the TSF.

4.1.1.2 Northwest PAG Sump and Ditch System

The Northwest PAG Sump and Ditch System collects runoff water from the Temporary West PAG Stockpile through open gravity-fed ditch flow. Water is then pumped from the Northwest PAG Sump back into the Springer Pit; where it is dewatered (along with Pit Water) and reports to the TSF via the Mill.

4.1.1.3 Mine Drainage Creek Sump

Water from seeps collected along the west side of the property running parallel to the waste haul road are captured in the Mine Drainage Creek Sump and pumped to the Mill.

4.1.1.4 Wight Pit Dewatering

Due to the underground operations in the Zuke Zone (a portal into the pit floor of the once-open-pit operations in the Wight Pit), the Wight Pit is dewatered. Dewatering of the underground utilizes a pumping system that transfers the water from the Wight Pit to the Mill.

4.1.1.5 SEZ Sump

The SEZ Sump has been removed from the pumping system.

4.1.1.6 Joe’s Creek Coffer Dam and Pipe

Seepage from the North Bell Dump is collected through a coffer dam (Joe’s Creek Coffer Dam) and buried gravity-fed pipe system (Joe’s Creek Pipe), and is transferred across the Wight Pit haul road to the start point of the Long Ditch.

4.1.1.7 Long Ditch

The Long Ditch is a gravity-fed open ditch system that runs along the east side of the mine property between the mine disturbance footprint and Polley Lake. The Long Ditch itself runs from the Wight Pit haul road to the Long Ditch Sump. After receiving water from Joe’s Creek Pipe and the Wight Pit, the Long Ditch intercepts various dump and surface runoffs before being collected in the Long Ditch Sump.

4.1.1.8 Long Ditch Sump

The Long Ditch Sump collects water from the Long Ditch. At the end of the Long Ditch, prior to entering the sump, water is directed into a gravity-fed pipe taking the water to the Perimeter Pond Ditch (over Bootjack

Creek). An overflow structure is in place whereby water exceeding the design capacity will report to the Long Ditch Sump, from where any water not captured by the design system is fed into a back-up system consisting of a second gravity-fed pipe; also reporting to the Perimeter Pond Ditch (over Bootjack Creek).

4.1.1.9 Orica Ditch

The Orica Ditch runs west-east and is below the Orica explosive storage site. Water is fed to the SERDS Ditch via a gravity-fed open ditch system.

4.1.1.10 SERDS Ditch

The SERDS Ditch runs west-east and is below the SERDS Dump. Water is fed to the SERDS Sump via a gravity-fed open ditch system.

4.1.1.11 SERDS Sump

The SERDS Sump is located adjacent (across the haul road) from the Long Ditch Sump. The SERDS Sump collects water from the SERDS Ditch and feeds into a gravity-fed pipe. This water is conveyed over Bootjack Creek to the same Perimeter Pond Ditch system that water from the Long Ditch Sump reports to. An overflow structure is installed in the SERDS Sump such that any design overflow will report to the Long Ditch Sump, to be handled by aforementioned the gravity-fed pipe installed there.

4.1.1.12 Perimeter Pond Ditch

The Perimeter Pond Ditch receives water from the outflow pipe (and overflow pipe) from the Long Ditch Sump as well as the SERDS Ditch and reports through an open gravity-fed ditch system to the Perimeter Embankment Seepage Collection Pond (PESCP).

4.1.1.13 Mill Site Ditch

The Mill Site Ditch runs around the Northwest side of the Mill Site to the Southeast Corner; a system complimented by a containment berm directing water to the Mill Site Sump.

4.1.1.14 Mill Site Sump

The Mill Site Sump is bled into the tailings line and thus directed to the TSF.

4.1.1.15 Geology Wastewater

Wastewater from the exploration/geology building is bled into the tailings line and thus directed to the TSF.

4.1.1.16 TSF Embankment Seepage Ponds

The Main, Perimeter and South Embankment Seepage Collection Ponds are located at the downstream toe of the Main, Perimeter and South Embankments respectively. The ponds collect drainage water from the toe and foundation embankment drains as well as from local runoff. Additionally, the PESCP collects water from the Long Ditch and SERDS Ditch systems (as described above). All water collected in these ponds is pumped back into the TSF basin.

4.1.1.17 Anaerobic Biological Reactor

A 100 gallon per minute (GPM) Anaerobic Biological Reactor (ABR) was commissioned and constructed at Mount Polley Mine in December 2009. The objective of this ABR is to passively reduce metal and sulphate concentrations through biological activity, thereby providing a better opportunity for meeting water quality discharge requirements. The ABR feed flow is the Main Toe Drain which collects seepage through the Main Embankment of the TSF. From the ABR outflow, water passes through a retention pond before returning to the Main Embankment Seepage Collection Pond (MESCP), from where it is pumped back into the TSF.

4.1.1.18 Reclaimed Water

The reclaim water line runs adjacent to the tailings line, and transfers water from the reclaim barge in the TSF Pond through the booster station and to the mill. Water pumped into the mill building is used as process water, with the option of directing surplus water to the TSF or to the Cariboo Pit.

4.1.2 Clean Water Ditch and Sump Systems

Wherever possible, clean (non-mine-influenced) water is separated from mine-influenced water and returned to the surrounding receiving environment.

4.1.2.1 New Access Road

Clean water to the north and east of the Mine Site is controlled by a series of under-road culverts and road side ditching along the New Access Road to ensure the water reports to natural receiving environments.

4.1.2.2 Joe’s Creek (Clean Water) aka North Dump Creek

Mine-influenced water in this system is collected through the aforementioned dam and buried pipe system at Joe’s Creek. Clean water collected below this point flows through an existing drainage towards Polley Lake – a culvert carrying it under the Wight Pit haul road.

4.1.2.3 TSF Clean Water Ditch (Corner 5 to Corner 4)

Clean water to the west of TSF development is directed away from the facility and into a small wetland below the South Embankment.

4.1.2.4 Bootjack Creek

Bootjack Creek is a natural creek running west-to-east along the southern half of the mine property. Bootjack Lake used to flow into the creek, but no longer does due to the construction of a dam for the Morehead Lake hydro project. The creek is crossed by mine infrastructure at two locations: the light-duty vehicle access along the TSF road, and a heavy duty access along the TSF haul road. A corrugated steel culvert carries the flow under the light-duty access, and the TSF haul road runs over a man-made bridge structure called Bootjack Bridge.

4.1.2.5 Corner 5 Clean Water Ditch

A ditch and culvert system exists along the east side of the tailings and reclaim line ditch between the Mill Site and TSF that collects clean water and releases it into the natural receiving environment to the northeast of the TSF.

4.1.2.6 Mill Site (Clean Water)

Clean water to the south of the Mill Site is directed under the waste haul road by means of two side-by-side corrugated steel culverts, reporting to Bootjack Lake via the Mine Drainage Creek.

4.1.2.7 Wight Pit (Clean Water)

Clean water to the north and north-east of the Wight Pit is captured by a series of ditches to stop it entering the pit area and direct it into natural receiving environments.

4.1.3 Dust Control Systems

Water is re-used around the Mine Site for dust suppression in dry months (primarily the summer). Water trucks are used for dust suppression on the haul road network, and sprinkler systems are utilized for dump watering and water management.

4.1.3.1 Springer Pit Water Filling Station

Water de-watered from the Springer Pit reports to the Springer Pit water filling station. Water is stored in a large tank and drawn out by mobile water trucks for application as dust suppression on mine haul roads. Overflow from the tank is reclaimed to the Mill Site, the excess not used in the milling process reporting to the TSF.

4.1.3.2 SERDS Water Filling Station

Water is stored in a large tank and drawn out by mobile water trucks for application as dust suppression on mine haul roads. Overflow from the tank is reclaimed to the Mill Site, the excess not used in the milling process reporting to the TSF.

4.1.3.3 Tailings Water Filling Station

Water de-watered from the MESCP can be diverted to the water filling station. Water is drawn out by mobile water trucks for application as dust suppression on mine haul roads.

4.1.3.4 TSF Sprinklers

Sprinkler systems are set up along the Perimeter Embankment and Main Embankment, drawing water from the PESCP and MESCP system respectively. These systems are used to reduce free water stored in the TSF by means of applying over vegetated areas.

4.1.3.5 NEZ Dump Sprinklers

Sprinkler systems are set up along the NEZ Dump, drawing from the Wight Pit De-watering system. This system is used to reduce free water stored in the TSF by means of applying over reclaimed areas.

4.1.3.6 High Ox Dump Sprinklers

Sprinkler systems are set up along the High Ox Dump, drawing from the Pit De-watering system. This system is used to reduce free water stored in the TSF by means of applying over reclaimed areas.

4.2 Tailings Management

Tailings from the milling process report to the TSF by means of a gravity flow piping system. The tailings line runs adjacent to the reclaim water line (flowing in the opposite direction) and runs from the mill, past the booster station, to the TSF.

4.2.1 Tailings Line

The tailings line carries waste material from the milling process from the Mill to the TSF. The tailings line runs under the waste haul road encased in a multi-plate structure, continuing in a containment ditch which, in the event of a pipe break, drains into the TSF. Figure 4.2.1.1 illustrates the orientation of the tailings line.

At the termination of the tailings line as indicated in Figure 4.2.1.1, there exists a knife gate system that allows flow to be directed to the east or to the south around the TSF. This is designed such that tailings flow can be manipulated in either direction as per construction and beach management requirements.

Figure 4.2.1.1 - Tailings Line Mill to TSF

4.2.2 TSF Facility

The TSF is comprised of one overall embankment that is approximately 4.2km in length. The embankment, based upon original separate embankments, 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 48m, 30m, and 20m respectively (based upon the Main, Perimeter and South nomenclature).

The design of the TSF is as further described in Section 5.2.

4.3 Instrumentation

The tailings embankment and associated facilities are constructed with instrumentation to assist in monitoring the facility. The various components are as follows:

- Vibrating Wire Piezometers;
- Slope Inclinometers; and
- Groundwater Monitoring Wells.

The locations of the piezometers and slope inclinometers are on the drawings located in Appendix C.

4.3.1 Geotechnical Instrumentation

In 2012, additional instrumentation was installed to supplement existing instruments. Two inclinometers were installed at this time based on the recommendations of the design consultant.

4.3.1.1 Inclinometers

Overall, ten (10) inclinometers have been installed around the TSF embankment; seven (7) along the main embankment and three (3) along the perimeter embankment. Slope inclinometers are installed to measure the displacement of the embankment. One (1) of the inclinometers has sustained damage (SI01-01) and is no longer functional.

4.3.1.2 Vibrating Wire Piezometers

Overall, 114 piezometers have been installed around the TSF embankment. Piezometers have been installed in the TSF embankment fills, foundations and the impounded tailings upstream of the compacted till core zone. Currently, 81 of the piezometers are still functioning.

Geotechnical instrumentation requirements and recommendations are reviewed each year as part of the As-built Report and Annual Review provided by the design consultant.

4.3.2 Groundwater Wells

For background information and a location map of groundwater wells, see Section 3.2.3 – Hydrology and Water Quality. There are 37 active groundwater wells at Mount Polley Mine; Table 4.3.2.1 provides the names and corresponding coordinates of the wells as illustrated in Figure 3.2.3.1 – Sampling Locations Map.

Groundwater well locations and monitoring are reviewed annually by a Qualified Professional.

Groundwater Sample Sites		
Name	Easting	Northing
95-R-5	593667.00	5823787.00
GW96-1a	595413.00	5819947.00
GW96-1b	595413.00	5819947.00
GW96-2a	596040.00	5819467.00
GW96-2b	596040.00	5819467.00
GW96-3a	595773.00	5818307.00
GW96-3b	595773.00	5818307.00
GW96-4a	594893.00	5818240.00
GW96-4b	594893.00	5818240.00
GW96-5a	594320.00	5819640.00
GW96-5b	594320.00	5819640.00
GW96-6	593653.00	5822867.00
GW96-7	592947.00	5821533.00
GW96-8a	591853.00	5822480.00
GW96-8b	591853.00	5822480.00
GW96-9	595507.00	5818293.00
GW00-1a	594368.00	5818476.00
GW00-1b	594371.00	5818476.00
GW00-2a	594651.00	5818338.00
GW00-2b	594657.00	5818336.00
GW00-3a	594896.00	5818238.00
GW00-3b	594900.00	5818238.00
GW05-01	593027.00	5825267.00
GW11-1a	590679.00	5823787.00
GW11-1b	590679.00	5823787.00
GW11-2a	594939.00	5821024.00
GW11-2b	594939.00	5821024.00
GW12-1a	590420.67	5824612.57
GW12-1b	590420.53	5824617.37
GW12-2a	591154.53	5823179.94
GW12-2b	591153.57	5823176.64
GW12-3a	592147.58	5822101.88
GW12-3b	592147.96	5822098.48
GW12-4a	594117.41	5822894.27
GW12-4b	594115.97	5822890.94
GW12-5a	593199.48	5824568.66
GW12-5b	593197.11	5824582.25

Table 4.3.2.1 – Groundwater Well Coordinates

5.0 ENGINEERING AND DESIGN OF COMPONENTS

5.1 Water Management

All water management structures are designed in accordance with the environmental parameters as set out in MOE-issued permit PE 11678 and MEM-issued Current Permit M-200.

5.1.1 Mine-Influenced Water Systems

Mine-influenced water ditch and sump systems are designed with best practices at the time of construction to contain projected volumes of water. Design of all ditch and sump components interacting with mine-influenced water is revisited each year to ensure continued suitability given latest available site data and design practices.

5.1.1.1 Pit Dewatering

Water is removed from active open pits by blasting and digging sumps into the bench floor and installing submersible pumps. Water is pumped from the pits to the Mill, with excess water not used in milling operations reporting to the TSF. Pump and pipe selection are varied in order to best effectively complete the above-described function.

5.1.1.2 Northwest PAG Sump and Ditch System

The existing Northwest ditches currently collect seepage from the temporary West PAG stockpile located adjacent and along the length of the NAG stockpile base area. Two open-flow ditches run parallel to the toe of the dump at a 50m offset, located close to the Springer Pit at the northwest boundary of the property. The lower ditch, flowing northwest, is 675m in length at an average grade of 7.0%. The upper ditch, flowing southeast, is 450m in length at an average grade of 7.5%. Both ditches feed into a third collection sump below the Upper Sump.

From the third sump, water is collected and pumped back into the Pit Dewatering system by means of a 10” HDPE pipe connected to a grid-powered 58hp Flygt Pump (with another in parallel as redundancy). Once in the Springer Pit, the water is collected as part of Pit Dewatering, described in Section 5.1.1.1.

The upper and lower sumps were constructed to manage potential mine-influenced water from the Temporary West PAG Stockpile to the east of the system after construction in 2011 and 2012. In 2013, a larger (third) sump was brought online in addition to a dedicated power line to feed a water-level regulated pumping system connected to mine power, with both sumps now feeding into this third sump. Figure 5.1.1.2.1 illustrates the components of the Northwest PAG Sump and Ditch System.

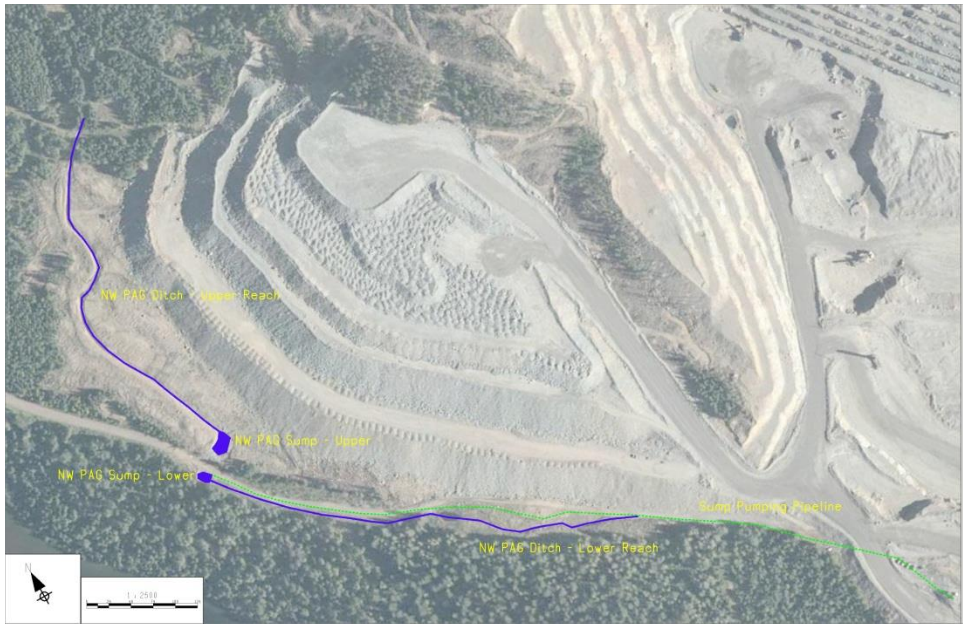


Figure 5.1.1.2.1 - NW PAG Ditch and Sump System

5.1.1.3 <u>Mine Drainage Creek Sump</u>

Water from seeps collected along the west side of the property running parallel to the waste haul road are captured in the Mine Drainage Creek Sump and pumped to the Mill. Currently, this is powered by a generator set running a level-set 58hp Flygt pump.

5.1.1.4 <u>Wight Pit Dewatering</u>

The previously mined Wight Pit is now utilized as the site of a portal for a new underground mining operation (Zuke Zone). Due to the operations under the old pit, dewatering is continued to keep the workings operable.

Water is collected in the Wight Pit Sump, housing a 150hp Tsurumi medium-head pump that transfers water to Booster Tank #1 (housing one 140hp Flygt high-head pump) by means of approximately 500m of 10” steel pipe. From Booster Tank #1, water is pumped by means of 850m of 10” steel pipe to a “Y” where water can be either directed to the Long Ditch or to the Mill (now bypassing the once-active SEZ Sump).

From the “Y”, if water is directed to the Long Ditch, it is carried by approximately 775m of 10” HDPE pipe to the mouth of the Long Ditch; an open-flow mine-influenced water ditch that runs along the entire east side of the Mount Polley Mine site, further described in Section 5.1.1.8.

From the “Y”, if water is directed to the Mill, it is carried by approximately 400m of 10” steel pipe to Booster Tank #2 (two 140hp Flygt high-head pumps). From Booster Tank #2, water is carried 3,200m of mixed 10” pipe to the Mill reclaim water tank, branching off at the NEZ Dump Sprinklers and the SERDS Water Filling Station. Figure 5.1.1.3.1 illustrates the Wight Pit Dewatering System.

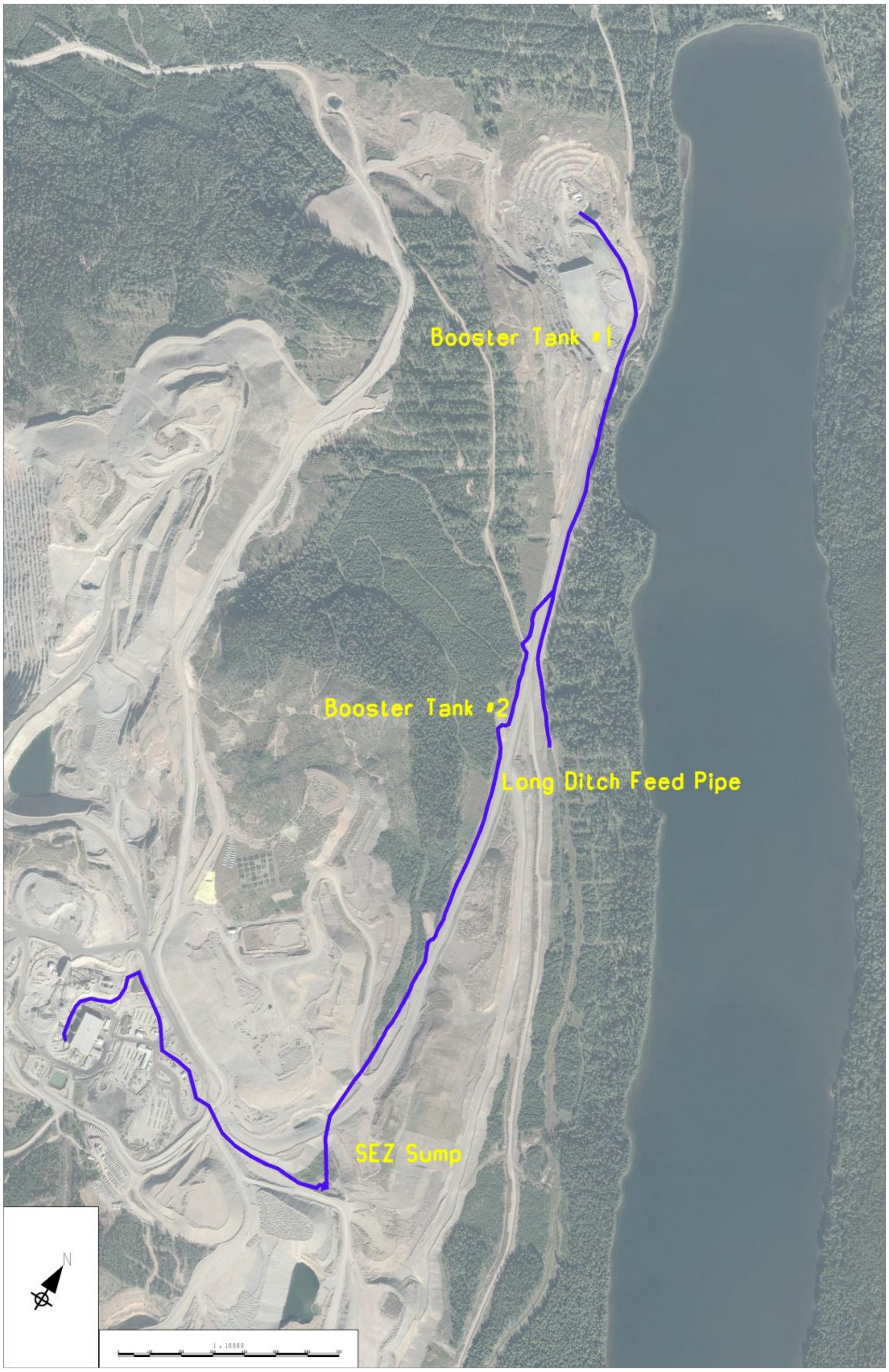


Figure 5.1.1.4.1 – Wight Pit Dewatering

5.1.1.5 SEZ Sump

The SEZ Sump is now offline.

5.1.1.6 Joe's Creek Coffer Dam and Pipe

Joe's Creek consists of a sump and dam system with a secondary overflow sump constructed and fed by a buried culvert from the first sump to the second. Both sumps feed into a 1,400m 12" HDPE pipe that carries the water to the mouth of the Long Ditch; an open-flow mine-influenced water ditch that runs along the entire east side of the Mount Polley Mine site, further described in Section 5.1.1.7. Figure 5.1.1.6.1 illustrates Joe's Creek Coffer Dam and Pipe.

Figure 5.1.1.6.1 – Joe's Creek Coffer Dam and Pipe

5.1.1.7 Long Ditch

The Long Ditch collects water from the Wight Pit Dewatering (when directed so at the "Y" – see Section 5.1.1.4 for further details) and Joe's Creek Pipe (see Section 5.1.1.6 for further details) in addition to east-running run-off from the mine site. The Long Ditch is 3,650m in length with an average grade of 0.9%, terminating in the Long Ditch Sump. Figure 5.1.1.7.1 illustrates the Long Ditch System.

Figure 5.1.1.7.1 – Long Ditch

5.1.1.8 Long Ditch Sump

The Long Ditch Sump is 15m wide by 15m long and 6m deep, collecting water at the terminus of the Long Ditch. The Long Ditch Sump acts as an overflow storage for water not being captured by the pipe installed upstream of the Sump in the Long Ditch. This 590m of 30” HDPE pipe has an overall grade of 1.2% and carries water over the Bootjack Creek Bridge. In the case of emergency events, water not captured in the 30” pipe reports to the overflow storage sump (Long Ditch Sump) and is transported by 505m of 22” HDPE pipe from the Long Ditch Sump to the Perimeter Pond Ditch (over the Bootjack Creek Bridge) at an overall grade of 1.6%. Figure 5.1.1.8.1 depicts the Long Ditch Sump system.

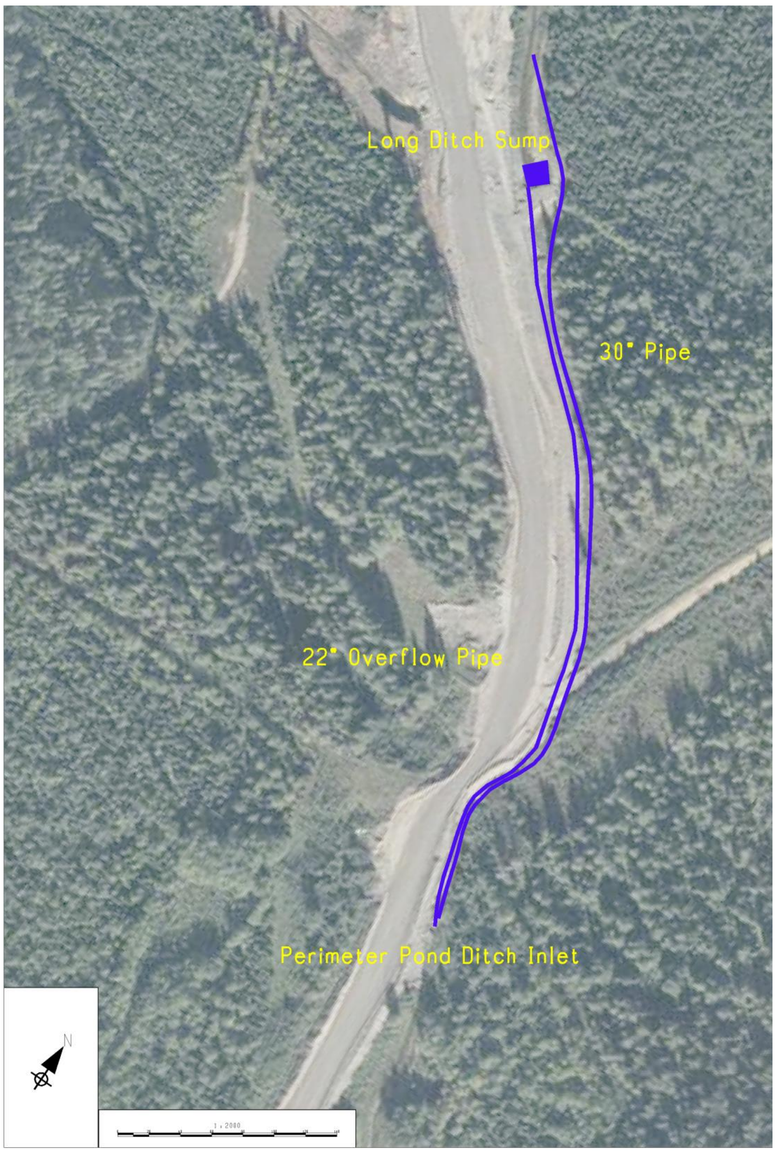


Figure 5.1.1.8.1 – Long Ditch Sump

5.1.1.9 Orica Ditch

The Orica Ditch is a 725m long open-flow gravity ditch with an average grade of 0.9% that feeds into the SERDS Ditch. Figure 5.1.1.9.1 includes a depiction of the Orica Ditch.

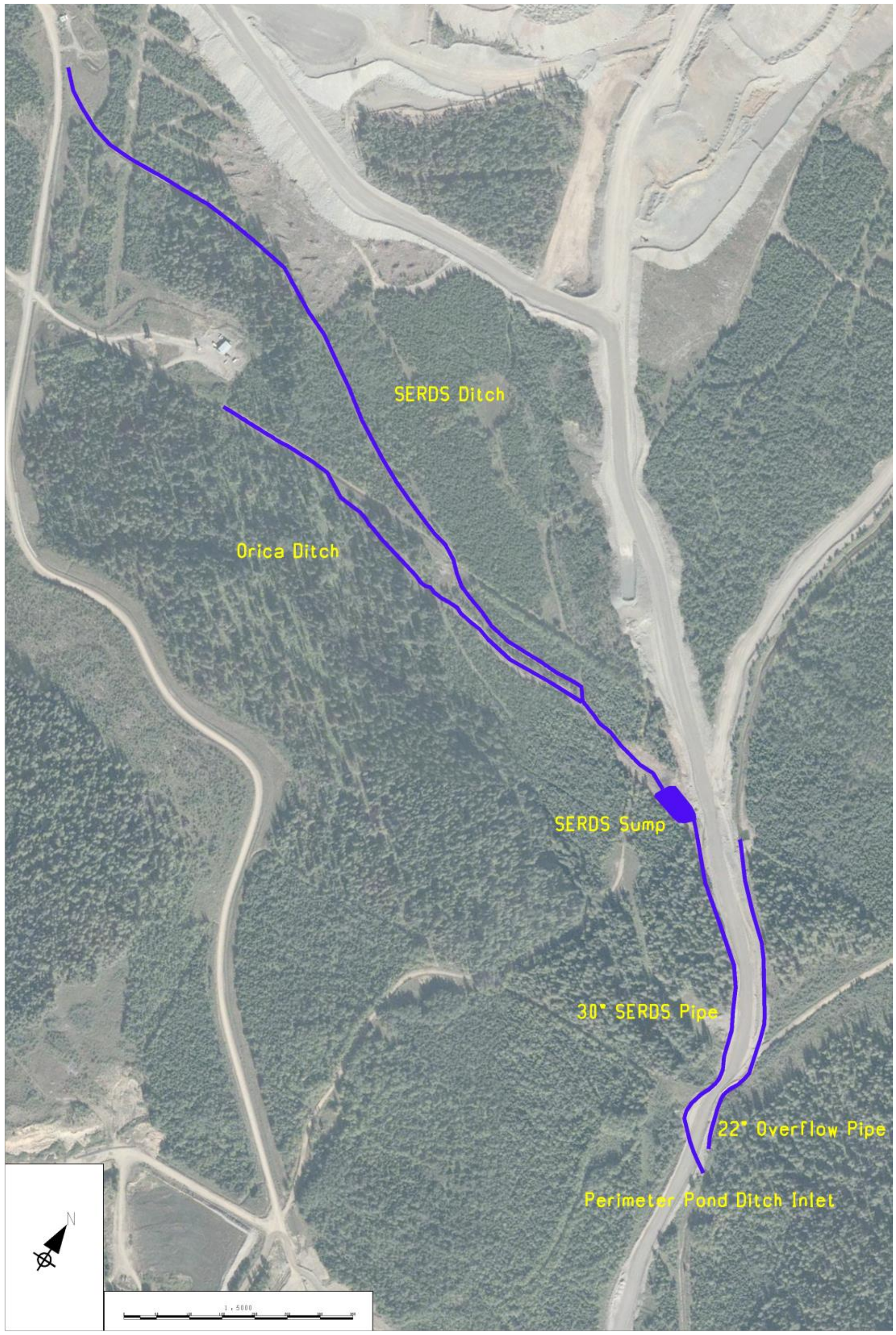


Figure 5.1.1.9.1 – SERDS Ditch and Sump System

5.1.1.10 SERDS Ditch

The SERDS Ditch is a 1,475m long open-flow gravity ditch with an average grade of 3.8% that feeds into the SERDS Sump. Figure 5.1.1.9.1 depicts the SERDS Ditch and Sump system.

5.1.1.11 SERDS Sump

The SERDS Sump is 25m wide by 60m long and averages 1m deep, collecting water at the terminus of the SERDS Ditch. 590m of 30" HDPE pipe with an overall grade of 2.2% carries water over the Bootjack Creek Bridge and into the Perimeter Pond Ditch. In the case of emergency events, water not captured in the 30" pipe reports to the overflow storage sump (Long Ditch Sump) and is transported to the Perimeter Pond Ditch as outlined in Section 5.1.1.8. Figure 5.1.1.9.1 depicts the SERDS Ditch and Sump System.

5.1.1.12 Perimeter Pond Ditch

The Perimeter Pond Ditch is an 870m long open-flow gravity ditch with an average grade of 0.9% that feeds into the PESCP. Figure 5.1.1.12.1 depicts the Perimeter Pond Ditch.

Figure 5.1.1.12.1 – Perimeter Pond Ditch

5.1.1.13 Mill Site Ditch

The 225m long Mill Site Ditch collects water from around the Mill Site and directs it into the Mill Site Sump. Figure 5.1.1.13.1 depicts the Mill Site Sump and Ditch System.

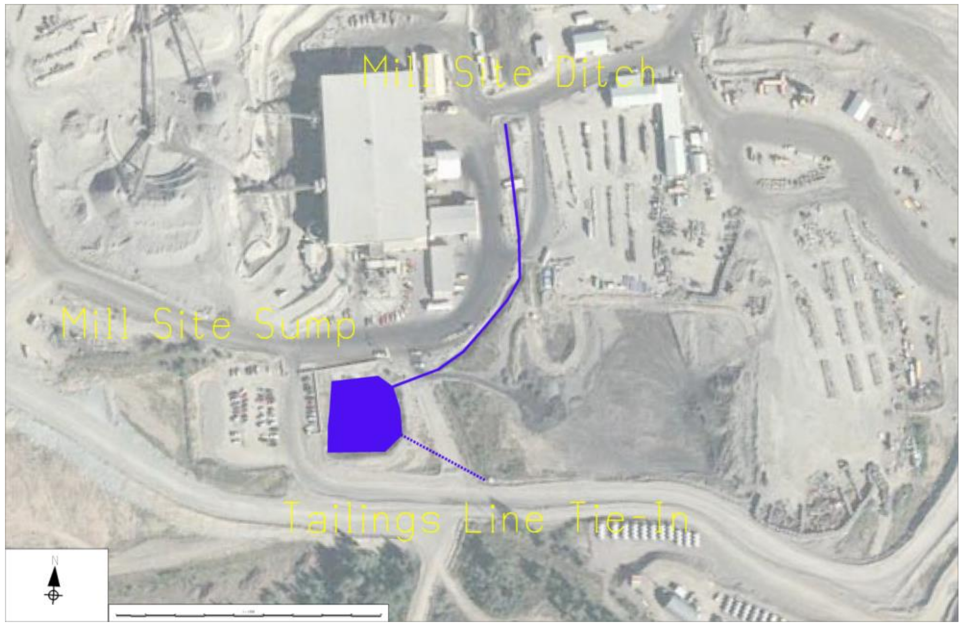


Figure 5.1.1.13.1 – Mill Site Sump and Ditch System

5.1.1.14 Mill Site Sump

The Mill Site Sump is located south of the Mill building. Runoff water from the mill site area is collected along diversion ditches and directed to the sump.

The water collected in the sump is either pumped back to the mill or allowed to flow by gravity to an inlet point (T1) on the tailings pipeline. Discharge from the manhole is conveyed to the reclaim line in an 8 inch (200mm) HDPE pipeline. The pipeline is buried through the Mill site area and runs in the pipe containment channel, where it is connected to the 22 inch DR17 HDPE tailings line via a prefabricated tee in a section of the pipeline that flows by gravity (non-pressurized flow).

Figure 5.1.1.13.1 depicts the Mill Site Sump and Ditch System.

5.1.1.15 Geology Wastewater

Wastewater from the exploration/geology building is bled into the tailings line and thus directed to the TSF.

5.1.1.16 TSF Embankment Seepage Ponds

The Main, Perimeter and South Embankment Seepage Collection Ponds are located at the downstream toe of the Main, Perimeter and South Embankments respectively. The ponds collect drainage water from the toe and foundation embankment drains as well as from local runoff. Additionally, the PESCP collects water from the Long Ditch and SERDS Ditch systems (as described above). All water collected in these ponds is pumped back into the TSF basin. The PESCP and MESCP run off grid-powered pumping systems with level sensor control pumping run from the Mill Control Room. The South Embankment Pond, receiving substantially less inflow, runs off a manually monitored system with a generator-run pump.

An upstream toe drain on the Main and Perimeter embankments allows for the controlled removal of process water from the upstream face of the embankment. Foundation and chimney drains are also included in the embankments to prevent build-up of excess pore pressures beneath the embankment and to transfer groundwater and/or seepage to the seepage collection ponds located at the downstream toe of the Main and Perimeter Embankments. Inflows sources to these ponds are used to facilitate monitoring of flow rates and water clarity from the embankment drains and diversion channels.

The PESCP is dewatered by two 200HP peerless pumps feeding 12" HDPE pipe. The MESCP is dewatered by two 200HP peerless pumps feeding a 10" HDPE Pipe. The South Embankment Seepage Collection Pond (SESCP) is dewatered by a single 13hp Flygt pump. Overflow culverts are present in all of the ponds in order to preserve structural integrity of the design in the case of a breach situation. All de-watering from these systems reports to the tailings pond.

5.1.1.17 Anaerobic Biological Reactor

The Phase I ABR was commissioned on December 16th, 2009, utilizing an excavated pond measuring 110m long by 75m wide. A valve set was installed on the existing Main Embankment toe drain in order to control inflow to the system. The toe drain pipe is 6" HDPE, and was fed into a 2" HDPE pipe "header", from which flow was dispersed through eleven (11) capped 2" HDPE pipe "fingers" in which holes were drilled to promote upward flow into the ABR. Figure 5.1.1.17.1 depicts the design of the pipe network providing flow to the ABR.

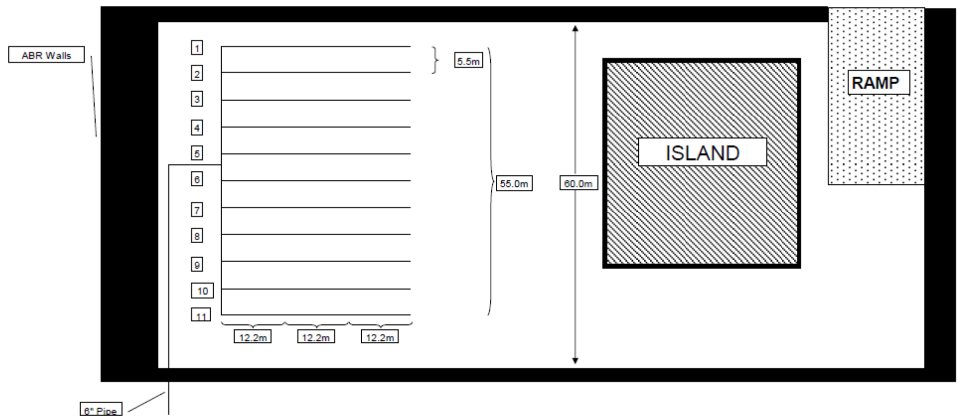


Figure 5.1.1.17.1 – ABR Pipe Schematic

The pipes and the bottom of the pond were then covered with an organic mix (manure and woodchips) and then straw. The organic material was capped with rock. Figure 5.1.1.17.2 depicts the design organic placement in the ABR, and Figure 5.1.1.17.3 depicts the placement of the material in the field.

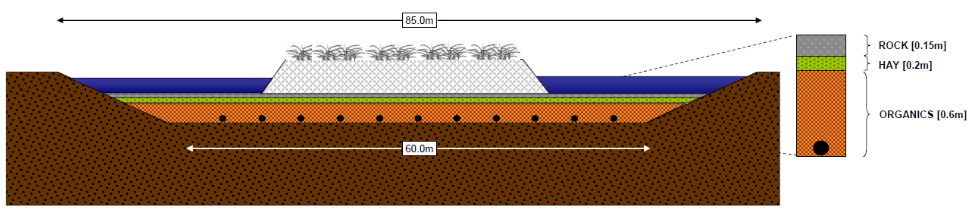


Figure 5.1.1.17.2 – ABR Organics Schematic

Figure 5.1.1.17.3 – ABR Organics Placement

Outflow from the system is directed into the Duck Pond by means of a 24” HDPE pipe under Gavin Lake Road, and then reports through a ditch system back to the MESCP. Figure 5.1.1.17.3 depicts the flow path of the ABR.

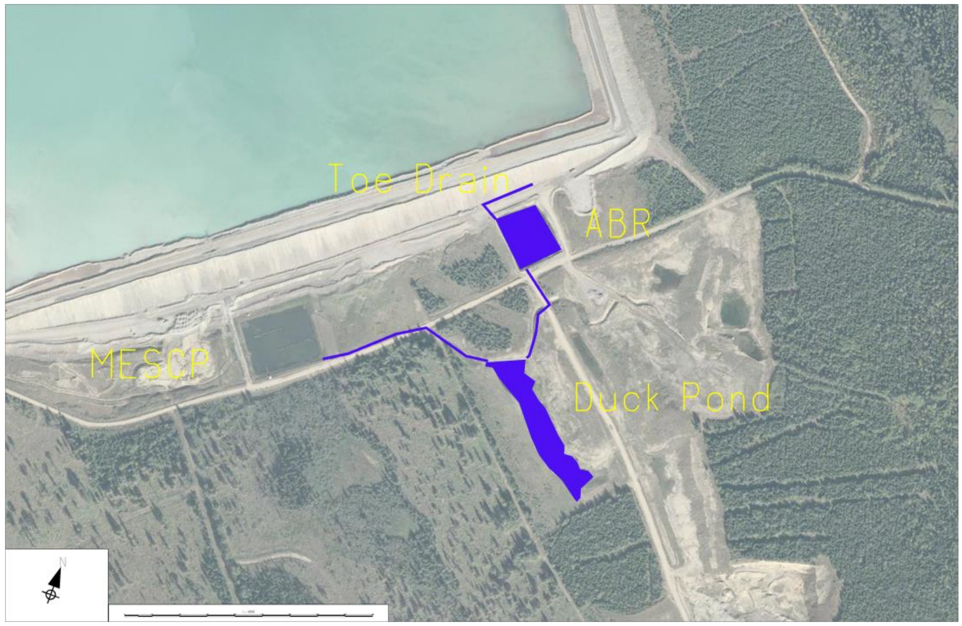


Figure 5.1.1.17.4 – ABR Flow

5.1.1.18 Reclaimed Water

The primary source of reclaimed water on site is from the TSF. A barge located along the west side of the tailings pond area draws free-standing water from the surface of the TSF by means of four 250hp pumps. Water is pumped from the TSF through 3,100m of 24” sclairpipe to the Reclaim Booster Station at an average grade of 6.6%. The Reclaim Booster Station houses five 250hp in-line pumps that provide the pressure head to get the reclaim water to the Mill building. An additional 1,800m of 24” sclairpipe is used to transport the water between the Reclaim Booster Station and the Mill at an average grade of 5.0%.Water pumped to the Mill reports to the Process Water Tank. Components of the Reclaim Water System include:

- A floating Reclaim Pump Barge; C/W Spargers
- A 24” diameter steel pipe connecting the barge to the reclaim line;
- A 24” diameter HDPE pipe from the steel pipe to the Booster Pump Station;
- A Booster Pump Station beside the T2 Dropbox; and

- A 24” diameter HDPE pipe from the Booster Pump Station to the Mill site.

The reclaim pipeline is located beside the tailings pipeline on the shoulder of the access road. The pressure rating of the HDPE pipeline decreases as it approaches the booster pump station and mill site.

The booster pump station is located mid-way along the reclaim pipeline, beside the T2 Dropbox. Two overflow pipes connect the sump beneath the pump station to the T2 Dropbox to ensure water will not overflow in the pump station sump.

Figure 5.1.1.18.1 depicts the components of the Reclaim Water System.

Figure 5.1.1.18.1 – Reclaim Water System

5.1.2 Clean Water Systems

Clean water ditch and sump systems are designed with best practices at the time of construction to return water to suitable (and where possible, natural) receiving areas.

Design of all ditch and sump components is revisited each year to ensure continued suitability given latest available site data and design practices, and also to identify in what areas, if any, clean water can be separated from mine-influenced water.

5.1.2.1 New Access Road

Culverts under the New Access Road vary in size from 24” to 36” and are corrugated metal culverts. Water was directed into existing drainages where possible.

5.1.2.2 Joe’s Creek (Clean Water) aka North Dump Creek

Two (2) 36” culverts were installed underneath the Wight Pit Haul road to collect clean water (mine-influenced water being collected by Joe’s Creek Sump and Pipe System - see Section 5.1.1.6 for details) and carrying it through the natural drainage to Polley Lake. Figure 5.1.2.2.1 depicts where this drainage and where the culverts are buried under the road.

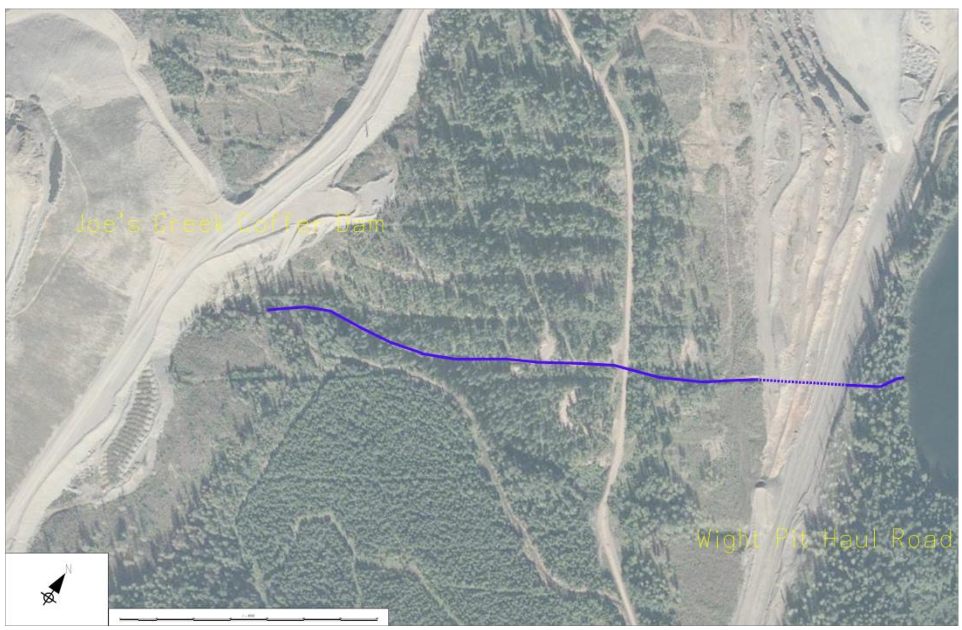


Figure 5.1.2.2.1 – Joe’s Creek (Clean Water) aka North Dump Creek

5.1.2.3 TSF Clean Water Ditch (Corner 5 to Corner 4)

The clean water ditch to the east of the TSF is re-developed in accordance with the increasing elevation with continued dam construction. Currently, the TSF Clean Water Ditch is 1,550m in length with an average grade of 2.0%. Figure 5.1.2.3.1 depicts the TSF Clean Water Ditch.

Figure 5.1.2.3.1 – TSF Clean Water Ditch

5.1.2.4 Bootjack Creek

Bootjack Creek is a 3,300m natural creek running west-to-east along the southern half of the mine property. The creek is crossed by mine infrastructure at two locations: the light-duty vehicle access along the TSF road, and a heavy duty access along the TSF haul road. A 1.3m corrugated steel culvert carries the flow under the light-duty access, and the TSF haul road runs over a man-made bridge structure called Bootjack Bridge. Figure 5.1.2.4.1 depicts Bootjack Creek and associated infrastructure.

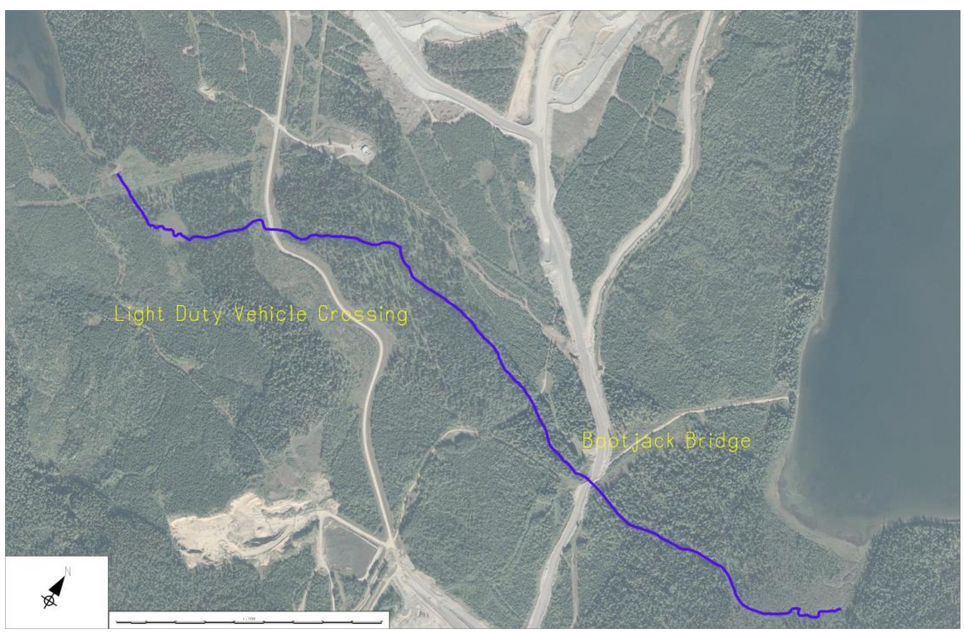


Figure 5.1.2.4.1 – Bootjack Creek

5.1.2.5 <u>Corner 5 Clean Water Ditch</u>

A 300m ditch feeds through a 24” culvert and is directed away from the TSF to the east to prevent clean water from entering the TSF. Figure 5.1.2.5.1 depicts the Corner 5 Clean Water Ditch System.

Figure 5.1.2.5.1 – Corner 5 Clean Water Ditch

5.1.2.6 <u>Mill Site (Clean Water)</u>

Two (2) corrugated metal culverts, each 24” in size carry clean water from the Mill Site under the Waste Haul road. These culverts allow water to follow pre-disturbance flow channels. Figure 5.1.2.6.1 depicts the location in which these culverts cross the Waste Haul Road.

Figure 5.1.2.6.1 – Mill Site (Clean Water)

5.1.2.7 <u>Wight Pit (Clean Water)</u>

A 1,175m ditch "horseshoes" around the Wight Pit to prevent clean water from entering the pit working; returning the water to natural drainage patterns. Figure 5.1.2.7.1 depicts the Wight Pit Clean Water Ditch System.

Figure 5.1.2.7.1 – Wight Pit Clean Water

5.1.3 Dust Control Systems

Dust Control Systems are designed to optimize water recycling and dust suppression on site. All water used as dust control is captured by existing mine-influence containment structures.

5.1.3.1 Springer Pit Water Filling Station

The Springer Water Filling Station is designed to provide water to mobile equipment on site for application as dust suppression.

5.1.3.2 SERDS Water Filling Station

The SERDS Water Filling Station is designed to provide water to mobile equipment on site for application as dust suppression.

5.1.3.3 Tailings Water Filling Station

The Tailings Water Filling Station is designed to provide water to mobile equipment on site for application as dust suppression.

5.1.3.4 TSF Sprinklers

TSF Sprinklers are designed to provide water evaporation and dust suppression on site.

5.1.3.5 NEZ Dump Sprinklers

NEZ Dump Sprinklers are designed to provide water evaporation and dust suppression on site.

5.1.3.6 High Ox Dump Sprinklers

High Ox Dump Sprinklers are designed to provide water evaporation and dust suppression on site.

5.2 Tailings Management

Mill tailings are discharged as slurry into the TSF, which has been designed to provide environmentally secure storage of the solid tailings and supernatant for mill process. As the solids settle out of the slurry, process fluids are collected and recycled back to the mill for re-use in the milling process. There is no surface discharge of any process solution from the TSF. The basis of design must address the following:

- Permanent, secure and total confinement of all solid tailings material within a lined engineered impoundment;
- Secure and reliable transportation of the tailings from the mill to the TSF;

- Collection and transport of runoff from waste rock storage areas to the TSF;
- Temporary storage of supernatant water on the tailings beach, as required, with maximum recycling to the mill to produce a zero discharge condition for process water;
- Collection of all free draining liquids from the tailings deposit. Temporary storage is provided in lined external ponds. The water from the ponds is pumped into the supernatant pond and recycled to the mill to ensure that no discharge occurs;
- Inclusion of monitoring facilities in the TSF to confirm that the design objectives and operating requirements are being met; and
- Staged development of the facility to enable modifications and upgrades to be implemented based on operating experiences and to distribute the capital expenditures over the life of the project.

5.2.1 Tailings Line

Tailings slurry is conveyed from the Concentrator through approximately 7,000m of HDPE pipe to the TSF where it is discharged along the embankment crests. The pipeline includes the following components:

- Two short sections of 30” mm diameter DR 15.5 HDPE pipe included at the start of the two pipeline sections at the Concentrator;
- A 24” mm diameter DR 11 HDPE pipe from the Concentrator to the T2 Dropbox;
- The T2 Drop box (not in use);
- A Pressure sensor device near the booster station;
- A 24” diameter DR 15.5 HDPE pipe from the T2 Drop box to the TSF;
- “Y” valve assembly at 5 corners;
- A Dump Valve at the start of the Perimeter Embankment & start of the South Embankment;
- Sand cell skids with valve assemblies on the Perimeter & South Embankments; and
- Moveable discharge sections (~100m of 24” HDPE pipe).

The tailings pipeline is located on the shoulder of the access road from the mine. Tailings slurry is gravity fed to the TSF through the tailings pipeline. The tailings pipeline has a variable downhill slope that ranges from flat to 8.0% that ensures drainage.

5.2.2 TSF Facility

The tailings embankment consists of the Main, Perimeter and South Embankments. The embankments are constructed using zoned earth fill and rock fill and have been raised in stages by a combination of centreline and modified centreline approaches. Details of the design and construction are reported in various reports and are referenced in Appendix A.

The design and construction monitoring of the TSF embankments through 2010 was completed under the direction of Knight Piésold Limited (KP). AMEC assumed the role of Engineer of Record for the TSF as of January 28th, 2011. The overall embankment has incorporated a staged expansion design utilizing a modified centerline construction methodology up until elevation 963.5m, at which point it is now centreline construction.

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 934.0m in 1997.

To elevation 936.0m in 1998.

To elevation 937.0m in 1999.

To elevation 941.0m in 2000.

To elevation 942.5m in 2001.

To elevation 944.0m in 2004.

To elevation 946.0m in 2005.

To elevation 949.0m in 2006.

To elevation 950.9m in 2007.

To elevation 951.9m in 2008.

To elevation 953.9m in 2009.

To elevation 958.0m in 2010.

To elevation 960.1m in 2011.

To elevation 963.5m in 2012.

5.2.2.1 Design Consultant

AMEC is the Design Engineer currently retained to design the TSF, "in accordance with the criteria provided in the Canadian Dam Association, Dam Safety Guidelines" as referenced in the Mines Act. AMEC provides an Annual Construction Manual which is administered by MPMC and verified by AMEC.

5.2.2.2 As-Built Report/Annual Review

AMEC prepares an As-Built Report and Annual Review summarizing the construction methodology followed and documenting the as-built dam conditions for the each construction season. This as-built report is typically combined with the annual review report. The report provides confirmation that the dam was raised in conformance with design intent, and serves as a guide for construction of TSF embankment in subsequent years.

MPMC marks-up the construction drawings based on as-built surveys of the raised dam. These marked-up drawings are used by AMEC to produce CADD as-built drawings for the report.

5.3 Instrumentation

5.3.1 Geotechnical Instrumentation

Geotechnical instrumentation required for the TSF is designed by the Engineer of Record and operated and maintained by MPMC personnel. Geotechnical instrumentation suitability is reviewed as part of the annual reporting measures and recommendations on continued suitability evaluated at this time.

5.3.2 Groundwater Wells

The groundwater wells on site are constructed out of 2” PVC casing (except 95R-5 which has 5” casing). The casing is in a pre-drilled borehole that is 6” in diameter. The bottom of the casing has an end plug and fits into a steel casing shoe, surrounded by bentonite chips. The lower portion of the casing is slotted to allow infiltration of groundwater and is surrounded by filter sand, and separated from other water bearing horizons by bentonite. The middle portion of the casing is surrounded by a cement-bentonite grout. The upper portion of the casing is surrounded by sand and/or a layer of bentonite. Above the ground surface, there is a J-plug in the top of the casing (to prevent anything from falling in), and it is protected by a stand up metal casing which is fixed in cement and has a protective locking cap.

The wells are typically installed in pairs of “nested” wells (one shallow, one deep) to monitor the groundwater at different depths – usually at the first water bearing horizon in the overburden or bedrock, and a lower one in a water bearing horizon of the bedrock at a target zone.

6.0 Operation

All operation of water management structures as outlined in this OMS Manual is completed in accordance with design criteria, regulatory requirements, company policies and sound operating practices, encompassing all significant aspects of, and activities for, the economical, safe and environmentally responsible disposal and storage of tailings and management of water.

6.1 Water Management

Currently, MPMC does not discharge any mine-influenced water from site. For this reason, all systems are designed to, in order of application: separate mine-influenced and non-mine-influenced water; recycle mine-influenced water in on-site processes; and, finally, store mine-influenced water in the TSF. All infrastructure in the site water management in place at Mount Polley mine, as outlined in Section 4.0 and further detailed in Section 5.0, are designed and operated with this overarching set of priorities. All water management is completed in accordance with requirements under Permit M-200 and PE 11678.

The TSF is required to have sufficient live storage capacity for containment of runoff from the entire contributing catchment area during a 24-hour Probable Maximum Precipitation (PMP) event. This volume of storm water would result in an incremental rise in the tailings pond level of approximately 0.39m. The TSF design also incorporates an allowance of 0.9m of freeboard for wave run-up. Therefore, the normal and maximum operating pond levels are as follows:

- Normal Operating Level – Water level at least 1.3m below the embankment crest;
- Maximum Operating Level – Water level is 0.9m below the embankment crest, which also means the loss of storage capacity for a 24-hour PMP event.

Tailings deposition will cease if the pond level reaches maximum operating level and the removal of water from the pond will commence using the reclaim barge. The area downstream of the dam will also be evacuated and access restricted as per the Emergency Preparedness Plan.

There are no restrictions, with respect to dam safety, on the rate of filling of the supernatant pond up to the normal operating pond level or rate of emergency draw down within the pond.

6.1.1 Sump and Ditch Systems

The seepage collection ponds and recycle pumps generally operate without requiring any external adjustments. However, the following special circumstances require adjustments to the operating procedures:

- In the event of an emergency that may compromise a water-storage facility, all diversion ditches that feed the ponds may need to be directed away. Also, if water quality and permits allow, discharge of water may be possible.
- Under freezing conditions, the pumps are operated on a timed pumping cycle based on site conditions to prevent the pipes from freezing. The pumps will turn on and off based on the cycle time rather than water level. Once the temperatures return to normal the pumps can operate under normal conditions.

6.1.2 TSF Embankment Seepage Collection Ponds

As mentioned above, the PESCP is the only of the major (Perimeter, South and Main) ponds that collects water other than that from the toe and foundation embankment drains or local runoff. For each of the three, a corrugated steel pipe connects each pond to a seepage recycle sump where recycle pumps are located. Level sensors in the PESCP and MESCP control the pumping frequency, while the SESCP is run based off monitoring height.

6.2 Reclaim Barge and Pipeline

The floating reclaim pump barge is located in the TSF in an excavated channel. The barge is accessible from land along an access walkway. The floating reclaim pump barge was designed externally; refer to the manufacturer's manual for details related to operations, inspections and maintenance.

The reclaim pipeline does not require any external adjustments during normal operations. However, during maintenance periods, barge relocation or during a prolonged shutdown under extreme cold conditions, the reclaim system should be drained via a drain valve located on the barge.

The Pump Barge and Booster Pump Station may be operated from the Mill control room. Both pumps may also be operated locally from the barge or pump station to provide water as required at the Mill site.

6.3 Tailings Basin

The projected rate at which the tailings basin will fill, combined with storage provisions for make-up and storm water, determine the rate of rise for the embankment. The anticipated filling schedule and staged construction sequence is shown in Appendix D.

Close monitoring of the pond elevation, depth, area and volume is important for the following reasons:

- To monitor and maintain required freeboard;
- To ensure that there is a sufficient volume of water available as make-up water while the pond is frozen and precipitation is at a minimum;
- To monitor water recoveries;
- To enable monitoring of the supernatant pond depth/area/volume so that tailings characteristics such as dry density can be determined; and
- To enable the correlation of the pond level with other data, such as the piezometer pressures and drain flow quantities.

Adjustments to the basin filling curve may be required due to variation between actual and projected mill throughput rates, tailings deposition characteristics, water inputs and outputs and in-situ tailings density. Adjustments to these variables will change the rate of rise for the tailings and embankments.

6.4 Tailings Transport and Deposition

Tailings are gravity-fed from the mill to the TSF through HDPE pipe. Deposition of tailings occurs through single-point discharge from this HDPE pipe, and, to the maximum extent possible, is utilized in "Sand Cell" construction. Mill Operations run at a target of 20,000tpd; with the resulting tailings (and associated water) reporting to the TSF through the abovementioned system. The operational requirements of tailings deposition are catered to the design requirements of the Annual Construction Manual.

The objectives of the long-term tailings deposition strategy are to:

- Maximize the storage capacity of the facility;
- Maintain the supernatant pond in the area of the reclaim barge so as to maximize the amount of process water available for reclaim;
- Provide upstream stability and wave-breaking capacity; and
- Establish free draining tailings beaches adjacent to the embankments to facilitate future embankment raises and to enhance embankment stability.

A staged tailings deposition strategy is currently being implemented by MPMC, and one of the objectives of this plan is to ensure that tailings solids are deposited along the extent of all three embankments. The fundamental requirement of the tailings deposition plan is to ensure that a blanket of tailings solids is present immediately upstream of all embankments and along the abutments. There is a fundamental objective to establish beaches adjacent to the embankments, but it is not necessary to continuously maintain a minimum width of exposed beach adjacent to the embankment, and periodic, temporary (less than two month duration), shallow flooding (less than 0.5m depth) of the beaches is anticipated.

6.4.1 *Tailings Properties*

Tailings properties are as described in the Tailings Transport Design Review completed in 2013 by Ausenco Limited. Select properties are included in Table 6.4.1:

Throughput and Operation Hours		
Description	**Value**	**Comments**
Plant Operating Time	365 d/yr	There is a budgeted 93% availability during this period.
Plant Operating Hours	24 h/d	There is a budgeted 93% availability during this period.
Plant throughput range	600 t/h – 1,300 t/h	Dry metric tonnes per hour (t/h)
Plant nominal throughput	920 t/h	Based on 22,000t/day average

Site Environmental Conditions		
Description	**Value**	**Comments**
Process Plant Site Elevation	~ 1106.0 masl	Elevation of the bottom of the pipe leaving the mill; there is a box into which the tailings are diverted before exiting the system by gravity.
Tailings Impoundment Elevation	~ 915 masl	Initial (Starter Dam)
Tailings Impoundment Elevation	~ 1000 masl	Final (2023 Mine Plan)
Max Recorded Temperature	+33.3°C	Based on site monitoring since 2006
Min Recorded Temperature	-33.7°C	Based on site monitoring since 2006

Slurry Characteristics		
Description	**Value**	**Comments**
S.G.	2.7	
pH	11.8	
Solids Concentration	36%	The slurry concentration ranges from 34% solids when operating at minimum tonnage to 41% solids when operating at peak tonnage. The nominal design solids concentration was set at 36% solids.

Particle Size Distribution		
Tyler Mesh	**Mesh Size**	**Cumulative % Passing**
28	(595 µ)	100
65	(212 µ)	91
100	(149 µ)	78
150	(105 µ)	68
200	(74 µ)	57
270	(53 µ)	49
325	(44 µ)	56
400	(37 µ)	41

Table 6.4.1 – Tailings Properties

6.4.2 *Deposition Management*

The abovementioned deposition strategy is implemented by sequentially rotating the tailings discharge point along the entire length of the Perimeter, Main and South embankments on the upstream face, which allows inactive areas of the tailings beach to partially dry and consolidate. Ideally, beaches are formed around the entire upstream perimeter of the TSF and all supernatant water is centralized around the reclaim barge.

Deposition is advanced from the Corner 5 “Y” along either the Perimeter or South Embankment, continuing along the Main Embankment from both of these configurations. Deposition is advanced in ~100m sections of HDPE pipe that are flanged and added in accordance with beach management and dam raising requirements. Addition of pipe is completed in accordance with the Tailings Pipe Handling and Care Instructions and when valve sets are added (to manage placement into the tailings basin), are completed in accordance with Procedure M35 – Operation of Valves on Tailings Line; both included in Appendix E.

6.4.3 Beach Management

Tailings settle in the TSF and form beaches with three distinct slopes. A sandy beach develops as the coarser tailings fraction settles more rapidly adjacent to the embankment. The average beach slope above water is about 0.5 percent. As the tailings flow into the supernatant pond it forms a submerged beach with a slope of one to two percent. Finer tailings particles are transported further into the supernatant pond before settling at a slope of about 0.3 percent.

Beach management is based around balancing beach height and advancement around the TSF, with the goal of established beaches channeling water away from embankments and towards the TSF Supernatant Reclaim Barge. The allowable freeboard at the TSF is 1.3m, consisting of a 24-hour PMP event allowance in addition to a wave-run-up factor. Deposition plans are managed around this freeboard allowance, and are the responsibility of the Tailings Project Manager, with support from the Leadership Group. When possible, Sand Cell construction is utilized in order to maximize the use of tailings material in the construction of design requirements. The advantages to this are two-fold: the reduction of material required to be imported to build the upstream (Zone U) component of the TSF; and the reduction of material being stored in the TSF (as it is being utilized in the structure's construction). When Sand Cell construction is not possible, single point-discharge around the TSF is employed for beach construction.

6.4.4 Sand Cells

Sand Cells are used in satisfying the Zone U (CBL) requirements in the Annual Construction Manual, and aid in the formation of beach management. Sand Cells are built in 100m lengths, corresponding to the length of flanged sections of HDPE tailings pipe. They are 25m-30m wide, as per design constraints, and vary in height with the beach management requirements (height vs. advancement around dam). They are constructed by creating a "cell" out of existing tailings and Run-of-Mine rock with a decant structure at the end of the cell. Tailings are introduced into the cell by single-point discharge from the tailings line, and allowed to flow through the cell, the coarser layer being contained in the cell to build Zone U (CBL). This is aided by a modified bulldozer, which "works" the material in order to optimize the material retention. The fine or "slimes" fraction then reports to the tailings pond by means of the decant structure and forms beaches. Management of Sand Cell tailings flow is completed in accordance with Procedure MO19 – Sand Cell Construction – Communication Procedure.

Tailings deposited into sand cells and worked by a dozer along the upstream zone (Zone U) of the tailings embankment are also considered to be 'tailings beach'. One of the objectives of the tailings deposition plan currently being implemented by Mount Polley mine is to allow for sufficient flexibility to enable these sand cells to be constructed. It is recognized that this deposition strategy may result in short term flooding of the sandy tailings beaches elsewhere within the impoundment, but that the depth of flooding along the submerged tailings beaches must be no greater than 0.5m depth before tailings deposition is re-instated over that section of flooded beach.

6.4.5 Tailings Pipe

The deposition of tailings over the beach in the TSF is accomplished by single point discharge. Static bypass valves are located at the start of the Perimeter and South Embankments to allow discharge of tailings during relocation of discharge sections. A "Y" valve assembly at 5 corners allows for the distribution to the Perimeter/Main or to the South/Main embankments. Deposition (and beach construction) is controlled by adding or removing lengths of HDPE pipe along the embankments as required.

The tailings discharge pipeline does not require any external adjustments during normal operations. The discharge pipeline will drain by gravity to the TSF in the event of a mill shutdown or power failure. However, the following points must be remembered during operation of the pipeline:

- Never leave all valves closed along the tailings discharge pipeline as they may be permanently blocked from sanding or suffer damages from excessively high pressures (refer to Appendix E Procedure M35); and
- Ensure that there is an open pathway for tailings to exit before the pipeline is filled (refer to Appendix E Procedure M35).

6.5 Instrumentation

All instrumentation components must be read regularly. The monitoring frequency for each is outlined on the schedule in the Annual Construction Manual, as it the schedule by which data must be collected, plotted and reported. The design engineering firm (AMEC) must be notified of any anomalous trends. Additional readings and inspections may also be required after any Unusual Event or Observation, at the request of the Engineer of Record or Tailings Project Manager.

6.5.1 Geotechnical Instrumentation

Geotechnical instrumentation data is gathered by MPMC personnel in accordance with the frequencies determined by the design consultant in the Annual Construction Manual, and submitted to AMEC for review.

A summary of the existing vibrating wire piezometers and inclinometers is presented in the Annual Construction Manual with trigger levels, which if exceeded, will require investigation and possible contingency or remedial actions.

Operation of Geotechnical Instrumentation is completed to satisfy the requirements of the Annual Construction Manual.

6.5.1.1 Inclinometers

During active construction, the slope inclinometers are to be read, and the data downloaded and submitted to AMEC Support Engineer, bi-weekly. During non-active construction the data should be read, downloaded and submitted monthly. The AMEC Support Engineer shall be responsible for interpreting and analyzing data collected. Based on dam performance, the reading frequency may be increased or decreased at the sole discretion of the AMEC Engineer of Record.

Inclinometer instrumentation is operated in accordance with the Inclinometer Operation Manual and collected data is provided to the design consultant in accordance with the Annual Construction Manual.

6.5.1.2 Vibrating Wire Piezometers

During active construction, piezometers are to be read, recorded, and submitted to the AMEC Support Engineer bi-weekly. The MPMC Field Inspector shall indicate on these plots when construction activities have taken place within 100m of S.O.L chainage from the piezometers. This is required so that changes in piezometric pressures and measured displacements can be correlated with construction activities. During non-active construction the data should be read, recorded, and submitted monthly. The AMEC Support Engineer shall be responsible for interpreting and analyzing data collected. Based on dam performance, the reading frequency may be increased or decreased at the sole discretion of the AMEC Senior Geotechnical Engineer.

Inclinometer instrumentation is operated in accordance with the Piezometer Operation Manual and collected data is provided to the Design Engineer in accordance with the Annual Construction Manual. Data may be entered on the Piezometer Data Sheet, included for reference in Appendix E.

Geotechnical instrumentation operational requirements and recommendations are reviewed each year as part of the As-built Report and Annual Review provided by the design consultant.

6.5.2 Groundwater Wells

MPMC has a Quality Assurance/Quality Control (QA/QC) Manual, which is required under Effluent Permit 11678 issued by the MOE under the *Environmental Management Act*. This manual was last updated on January 31, 2013.

The QA/QC Manual includes a Groundwater Well Standard Operating Procedure and Groundwater Well Work Method for the operation of groundwater wells at Mount Polley Mine; all are included for reference in Appendix E.

7.0 MAINTENANCE AND SURVEILLANCE

As outlined in this document, water management on site is comprised of several components and associated facilities. These components and facilities must be inspected and maintained regularly to ensure that any changes to the TSF conditions, performance, or a potentially hazardous condition can be identified and promptly addressed.

7.1 General

The Mill Maintenance Superintendent is responsible for ensuring that surveillance is carried out regularly. The Mill Maintenance Superintendent is responsible for daily management of the TSF water management systems and directs an operating crew to carry out routine activities. The Tailings Project Manager is responsible for directing and co-ordinating all TSF construction to the specifications of the design engineering firm retained. A list of site personnel and associated responsibilities are provided in Table 2.1.

The Tailings Project Manager will conduct a Dam Surveillance walkover at least once per quarter. All Dam Surveillance reports should be reviewed by the Mill Maintenance Superintendent and filed at the Mount Polley Mine Site. Additional (non-routine), documented "drive-bys" of the TSF and associated facilities will be required following extreme or unusual events, The Mine Operation Manager must be made aware of any unusual events or observations, and must contact the Engineer of Record as required. Typical examples of unusual events and observations to be made during such walkovers are outlined in Unusual Events and Actions, included in Appendix E.

An Inspection Log is provided in Appendix E to help guide the observation and surveillance process. The inspection log covers major items related to the TSF and associated facilities. Additional details are provided in the following sections.

7.2 Water Management Systems

The seepage collection ponds and recycle pumps shall be inspected, by the surface crew, according to the schedule outlined in the Inspection Schedule and an Inspection Log completed as provided in Appendix E. Typical observations to be made during surveillance are as follows:

- Water levels in collection ponds;
- Pump back flow rates from pumps;
- Evidence indicating seepage from the collection ponds;
- Evidence indicating erosion or instability on the slopes of the ponds;
- The overflow culverts and pipelines between the monitoring sumps and recycle sumps are free of any obstructions; and

- Ensuring that the discharge end of the seepage recycle pipeline isn't submerged in tailings.

Additional observations will also be required under special circumstances as follows:

- Monitor the pumping from ponds during freezing conditions to ensure that the pumping cycle is adequate at keeping the pipes from freezing and in keeping the pond level constant; and
- Monitor the water quality in the ponds during spring freshet to ensure that the seepage water from the TSF is at acceptable levels if water permits allow for discharge.

The Unusual Events and Actions document identifies additional events and circumstances that will require increased observations and documentation.

7.3 Tailings Pond

The pond level must be at least 1.3m below the crest elevation under normal operating conditions. Emergency procedures, discussed in Section 9.0, must be followed if the pond reaches the maximum operating level. Regular inspections of the pond level must be carried out according to the schedule outlined in the Inspection Schedule. An Inspection Log is provided in Appendix E.

Additional pond level inspections are required after an Unusual Event; additional observations will need to be documented.

7.4 Tailings Embankment

Regular surveillance of the embankments and associated structures should follow the schedule outlined in the Inspection Schedule. An Inspection Log is provided in Appendix E. Typical observations to be made during surveillance include:

- Evidence indicating dam structure deformation (e.g. slope bulging, tension cracks on the crest or crest settlement);
- Evidence indicating seepage, runoff or erosion;
- Clarity and quantity (visual estimate) of seepage water entering the seepage collection sumps;
- Possible evidence indicating piping downstream of the embankments; and
- Other unusual conditions in the TSF area.

The embankment and associated structures do not require regular maintenance; however, specific maintenance items may be identified as a result of regular observations and surveillance of the embankment.

The Unusual Events and Actions document outlines additional observations that will need to be documented after any unusual event.

7.5 Tailings Discharge Pipeline

The tailings discharge pipeline will be inspected and maintained regularly to ensure that the system operates properly. The Inspection Schedule provides a schedule for regular surveillance of the pipeline. An Inspection Log is provided in Appendix E. Typical observations to be made during surveillance include:

Locations of external excessive wear or damage of the pipeline;

- Evidence indicating leakage from the pipeline; and
- Ensuring a constant grade of all pipelines leading onto the embankments, maintaining a proper flow, to prevent sanding up or freezing of the lines.

A Mill Operations Daily Tailings Checklist is included in Appendix E

The Unusual Events and Actions document outlines additional observations that will need to be documented after any unusual event. Repairs to the discharge pipeline, dropbox and/or discharge sections may be required after any such unusual event.

7.6 Reclaim Pipeline

The reclaim pipeline, pump barge and booster pump station shall be inspected according to the Inspection Schedule and an Inspection Log completed as provided in Appendix E. Typical areas to inspect during surveillance of the reclaim pipeline include:

- Locations of excessive wear of the pipeline (filed with maintenance department);
- Evidence indicating leakage from the pipeline;
- Monitoring of the TSF Pond and Barge elevations to ensure that a gradient is maintained in the steel pipe. The barge ramp may need to be relocated higher or a new channel excavated for the re location of the barge;
- The de-icing system for the pump barge should be checked to ensure that it is working prior to freezing conditions; and

Additional inspections are required after any unusual event. The Unusual Events and Actions document outlines additional observations that will need to be documented. Repairs to the reclaim pipeline, barge and/or pump station may be required after any such unusual event.

7.7 Instrumentation

7.7.1 Geotechnical Instrumentation

Generally, the instruments do not require regular maintenance but may require occasional maintenance as follows:

- The piezometer wires may need to be extended as construction continues;
- The piezometer wires may need to be cut and re-attached if the readout box is unable to acquire any data;
- Piezometer wires that are exposed may become corroded and may need to be trimmed until a fresh surface is exposed to allow readings to be taken;
- Piezometer units are to be covered in crush to mark and protect their locations; and
- All instrumentation areas should be clear of large rocks and debris.

7.7.2 Groundwater Wells

Decommissioning and replacement of existing groundwater wells and construction of groundwater wells at new monitoring locations are addressed by a third party Qualified Person in a site groundwater assessment which is completed every five (5) years, as required by permits.

Well development is completed as soon as possible after installation of new wells, and is completed on any wells where water being purged contains significant amounts of sediment (the presence of sediment is noted in sampling observations).

During bi-annual sampling, any wells missing PVC J-pugs, casing protector lids, or locks are noted and fixed.

8.0 DOCUMENTATION

8.1 Design Consultant As-Built Report

Annual Inspections of the tailings impoundment and associated facilities are required to evaluate the current and past performance of the facility and to observe potential deficiencies in its condition, performance and/or operation. The Environmental Superintendent is responsible for arranging the inspections. This level of dam safety evaluation should be based on detailed observations made by the Engineer of Record on site and the relevant information on the TSF operations collected by site personnel. Additional reviews may be required also as a follow up to the report of an unusual event or observation.

The Environmental Superintendent or designate should accompany the Engineer of Record during the annual inspection. The Engineer of Record will evaluate the safety of the TSF and incorporate a routine review of the following:

- The consequences classification of the dam;
- The operations and maintenance manual;
- The availability of all documents pertaining to dam safety on site;
- The site surveillance practice; and
- Changes in relevant regulatory requirements since the last inspection.

The Engineer of Record will issue an annual inspection report after completing the review. The report will include the following:

- Conclusions on the status of the TSF;
- Statements indicating completion of recommendations from previous inspections and reviews; and
- Recommendations, if necessary.

The General Manager and the MEMRH should review each annual inspection report. Copies of the reports should be made available on site and are available in the office of the Engineer of Record. The General Manager should prepare and execute an appropriate action plan to ensure that all recommendations made in the annual inspection report are followed. This action plan should be documented.

The design consultant's as-built report will also outline any modifications made in the field to the initial methods of foundation preparation; borrow soils excavation, hauling, placement, and compaction; or other relevant work. Documentation of any such refinements made during construction will be of benefit for subsequent embankment raises. The as-built report will also include recommendations pertinent to the construction and QA/QC monitoring of future construction.

8.2 Dam Safety Review

The principle objective of a Dam Safety review (DSR) is to ascertain that a dam has an adequate margin of safety, based on the current engineering practice and updated design input data. A DSR may also be carried out to address a specific problem.

A qualified engineer will be responsible for conducting each DSR at the TSF. The engineer conducting the DSR must be qualified to conduct safety evaluations and be familiar with the designs and other site-specific conditions and requirements pertaining to operations of the impoundment and associated facilities; but ideally should not have been involved in the design, construction or operation of the TSF.

Routine DSR's at the TSF will be scheduled, confirmed or revised at the time of each annual inspection. The next DSR for the TSF is scheduled for 2016.

A detailed scope of work for each DSR will be defined by the engineer prior to conducting the review, and be consistent with current engineering practice at the time it is conducted. Each DSR will evaluate the safety of the TSF and incorporate a detailed review of the following:

- The consequences classification of the dam;
- The adequacy of past annual inspection practice, the annual inspection recommendations, and their implementation;
- The Operation and Maintenance Manual; and
- Timing for the next regular DSR.

Each DSR report should include conclusions and, if necessary, recommendations pertaining to the safety of the TSF. Copies of the DSR will be sent to the Environmental Superintendent and the MEMRH for review. Similar to the annual inspection report, an action plan should be prepared by the Environmental Superintendent to address the DSR recommendations. A copy of each report will be sent to the MEMRH and will also be available at the site and at the office of the Engineer of Record.

9.0 EMERGENCY PROCEDURES

All operation of water management structures as outlined in this Operation, Maintenance and Surveillance Manual, including that relating to emergency procedures, is completed in accordance with regulatory requirements, company policies and sound operating practices, encompassing all significant aspects of, and activities for, the economical, safe and environmentally responsible disposal and storage of tailings and management of water.

9.1 General

This Emergency Preparedness and Response Plan will enable Mount Polley mine to identify emergency and hazardous conditions threatening the TSF, expedite effective response actions to prevent failure, and reduce loss of life and property damage should failure occur.

In the event that Mount Polley mine is unable to comply with any of the terms and conditions of the permit, due to any cause, Mount Polley mine will:

1. Immediately notify the MEM of the failure to comply;

2. Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the non-compliance, correct the problem, and if applicable, repeat sampling and analysis of any non-compliance immediately; and,

3. Submit a detailed written report to the MEMRH within thirty (30) days (five days for upsets and bypasses), unless requested earlier by the MEMRH. The report will contain a description of the non-compliance, including exact dates and times, if the non-compliance has not been corrected, the anticipated time it is expected to continue, and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance.

9.2 Warning Signs

Three levels of emergency conditions (or warning signs) can be identified with respect to the site operations. These are defined as follows:

9.2.1 Level 1

Unusual conditions that do not yet represent a potential emergency, but do require prompt investigation and resolution.

9.2.2 Level 2

Conditions that represent a potential emergency, if sustained or allowed to progress, but no emergency situation is imminent.

9.2.3 Level 3

An emergency defined by either failure of a significant component of the TSF and/or associated facility or a significant failure of the performance of a component of the TSF. Such failure may have already occurred, or be imminent.

9.3 Situations

Typical situations that would be classified under the three levels of emergency conditions (Level 1, 2 or 3) and the actions to be taken are outlined in Emergency Levels (included in Appendix E) and described below:

9.3.1 Level 1 Situation

The action in the event of a Level 1 Emergency Condition will typically involve an investigation, intensified monitoring, inspecting and/or testing, and defining and implementing possible corrective measures.

Construction equipment will be available at the mine and include, but not be limited to, an excavator, a grader, haul trucks and a bulldozer. Material will be available both at the TSF and at the mine for use in repairing or remediation of any damaged areas.

9.3.2 Level 2 Situation

The first action in the event of a Level 2 Emergency Condition is to discuss and define an action plan, at the site, under the direction of the Environmental Superintendent. After such a plan is prepared, it must be presented to the Mine Manager for approval. Construction equipment should be made available, if required, at short notice.

9.3.3 Level 3 Situation

The first actions in the event of any Level 3 Emergency Condition are:

- Check that all persons who could possibly be affected are safe; and
- Initiate the appropriate chain of communications.

The person who initiated the communication should then stand-by at a safe location near the problem area and await further instructions or decisions. All those involved in emergency response, after first having communicated with the appropriate parties, should consider two types of actions as first steps in the emergency response, with respect to the protection of human life and health, environment and property:

- What can be done to prevent the situation from worsening?
- What can be done to reduce the consequences of the impending or actual failure?

Any such action must be presented to the Mine Manager who will decide on its implementation in consultation with the MEMRH.

9.4 Incident Notification Procedures

The following incident notification procedures are to be followed for all emergency conditions.

9.4.1 Level 1 and Level 2

The notification procedures are as follows:

- The person first noticing a Level 1 or Level 2 Emergency Condition shall notify the General Manager and initiate corrective actions and intensified monitoring.
- The General Manager shall notify the Engineer of Record as appropriate.

9.4.2 Level 3

The notification procedure for a Level 3 Emergency Condition is as follows:

- The person noticing a Level 3 Emergency Condition shall notify the General Manager and initiate corrective actions and/or intensified monitoring, as appropriate.
- The General Manager shall notify Mount Polley Corporate office, Mount Polley Tailings Project Manager, and the Engineer of Record.

In the event of an emergency situation that will result in an actual or potentially imminent dam failure, or release of untreated water, the General Manager shall also notify the MEMRH.

Names and telephone numbers for the key contacts are given in Table 2.1

10.0 REFERENCE DOCUMENTS

The following documentation, referenced in this OMS, can be found in Appendix A:

	Appendix A
1	Amendment Permit M200 Approving Tailings Storage Facility Stage 8 Construction June 2012
2	Mount Polley Mine Tailings Storage Facility - Stage 9 2013 Construction Monitoring Manual
3	Tailings Management Framework (Under TSM Protocols)
4	Amendment Permit 11678 under the Provisions of the Environmental Management Act
5	2012 Environmental and Reclamation Report
6	Annual Monitoring Plan - 2013 (PE-11678)
7	Mount Polley Mine - Tailings Storage Facility 2012 As-Built Report
8	Mount Polley Mine - Tailings Storage Facility 2012 Annual Review
9	M-200-Amd Permit Aug 15 2011
10	Mount Polley Mining Corporation Tailings Transport Design Review

The following documentation, referenced in this OMS, can be found in Appendix E:

	Appendix E
1	Tailings Pipe Handling and Care Instructions
2	M35 - Operation of Valves on Tailings Line
3	MO19 - Sand Cell Construction - Communication Procedure
4	Piezometer Field Data Sheet
5	Slope Indicator Manual
6	Piezometer Manual
7	MPMC - Quality Assurance and Quality Control Manual
8	MPMC-SOP-001 (Groundwater Sampling)
9	MPMC-WORK-001 (Groundwater Sampling)
10	Unusual Events and Actions
11	Inspection Log
12	Inspection Schedule
13	Emergency Levels
14	Mill Ops - Daily Tailings Check

11.0 CERTIFICATION AND DISTRIBUTION

11.1 Control of this Manual

This manual will be controlled by the Tailings Project Manager. Copies will be maintained at the following locations:

One (1) copy for Mount Polley Mining Corporation (Vancouver office),

One (1) copy for the Mine's General Manager,

One (1) copy for the Mine Operation Manager's office,

One (1) copy in the Tailings Project Manager's office,

One (1) copy for the Mill Superintendent,

One (1) copy for the Mill Maintenance Superintendent,

One (1) copy for the Operating Crew (Mill Shifter's Office),

One (1) copy for the Design Engineer of Record; and

One (1) copy for the MEM Geotechnical Manager.

The Tailings Project Manager is responsible for maintaining a record of the location of each copy of the OMS Manual and to ensure the copies in these locations are kept up to date.

11.2 Distribution of the Manual

A letter of transmittal that clearly identifies the distribution list must accompany each revision of this manual. An update may comprise the entire manual or be limited to specific pages or sections. A copy of each transmittal letter must be kept on record in the office of the Tailings Project Manager. Each revised page of the manual must be clearly marked as to the revision date prior to replacement. The replaced pages must be filed and kept on record in the office of the Tailings Project Manager.

11.3 Certification of the Manual

This report was prepared and approved by the undersigned.

Prepared by:

Luke Moger

Project Engineer, Tailings Project Manager

Approved by:

Tim Fisch

General Manager