

2012

Annual Activities Report



Prepared By:

Tlcho Engineering and Environmental Services

Faro Mine Complex

Faro, Yukon

Cover photo of Faro Pit

Photo taken by: Craig McKinnon, Laboratory Technician

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Acronyms and Abbreviations

AVR	Air Vacuum Release
COR	Certificate of Recognition
CVP	Cross Valley Pond
DES	Denison Environmental Services
DVTP	Down Valley Treatment Plant
EDI	Environmental Dynamics Inc.
ETA	Emergency Tailings Area
FCD	Faro Creek Diversion
FMC	Faro Mine Complex
FMTS	Faro Mill Treatment System
FP	Faro Pit
GID	Grum Interceptor Ditch
GSC	Grum Sulphide Cell
GTP	Grum Effluent Treatment Plant
HMI	Human Machine Interface
INAC	Indian and Northern Affairs Canada
IP	Intermediate Pond
JHSC	Joint Health and Safety Committee
KCB	Klohn Crippen Berger
LCD	Little Creek Dam
MSDS	Material Safety Data Sheets
NEID	North East Interceptor Ditch
NFRD	North Fork Rock Drain
NWID	North Wall Interceptor Ditch
PLC	Programmable Logic Controller



PQL	Practical Quantitation Limit
PVR	Pressure Reducing Valve
QA/QC	Quality Assurance and Quality Control
RCD	Rose Creek Diversion
RCDC	Rose Creek Diversion Canal
RO	Reverse Osmosis
RPD	Relative Percent Difference
SPP	Sheep Pad Ponds
TEES	Tlicho Engineering and Environmental Services
UPS	Uninterruptable Power Supply
VFD	Variable Frequency Drive
VP	Vangorda Pit
WCB	Worker's Compensation Board
YEC	Yukon Electric Company
YG	Yukon Government – Assessment and Abandoned Mines Branch



1. Introduction

1.1 Background

Active mining at the Faro Mine Complex was undertaken in two (2) locations; the Faro Mine and Vangorda Plateau Mine. Mining and ore processing ceased in 1992 and 1998, at each mine site respectively. Since 1998, when the owner at the time, Anvil Range Corporation, went into receivership, the mine has been considered permanently dosed. From February 1998 until February 2009, the mine property was managed by Deloitte and Touché Inc. acting as the court appointed interim receiver. Since March 1, 2009, the mine property has been managed through Indian and Northern Affairs Canada (INAC) and the Yukon Government (YG), with the care and maintenance components being contracted to private companies. From March 2009 until March 2012, the care and maintenance activities were conducted by Denison Environmental Service (DES). As of April 1, 2012, Tlicho Engineering and Environmental Services (TEES) have replaced DES as the care and maintenance contractor.

Historically, activities at the Faro and Vangorda Plateau mine sites were regulated under numerous water licences. Until December 31, 2003, activities were regulated by two (2) separate water licences, QZ95-003 and ION89-002, Faro and Vangorda Plateau Mines respectively. Upon expiration of water licences QZ95-003 and ION89-002 and after a review process, a single water licence, QZ03-059, for FMC was issued. This allowed for an authorised continuation in care and maintenance activities and for a final closure and reclamation plan to be developed. This water licence expired in February 2009 and as of March 2009 all activities undertaken at the Faro Mine Complex have been regulated by the *Waters Act*.

Under the management of INAC and YG, mine closure planning and care and maintenance activities have occurred simultaneously. In 2012, as well as conducting care and maintenance activities, TEES has played a supporting role in aspects of the closure planning and undertaken significant improvements to the site.

1.2 Report Outline

The 2012 Annual Activities Report is outlined in the sections listed below, with associated appendices. The report is organised, where required, into the Faro Mine/Rose Creek Drainage and Vangorda Plateau Mine/Vangorda Creek Drainage within these sections.

- Introduction
- Water Management
- Environmental Monitoring
- Maintenance
- Health and Safety
- AYFN Participation Review

Environmental monitoring locations, facilities and the general layout out of the Faro Mine Complex are illustrated by map sheets in the Maps section of this report.



2. Water Management

2.1 Contaminated Water

Pits and ponds that have been created during the life of the Faro Mine Complex have accumulated water from natural in flows. Due to leaching from the surrounding structures and subsequent chemical reactions, the accumulated water is contaminated. To prevent the contaminated water from influencing the surrounding environment, it is managed through a treatment process on the Faro and Vangorda sides of the Faro Mine Complex.

On the Faro side of the mine property there are five (5) areas where contaminated water is stored; the Intermediate Pond, Emergency Tailings Area, S-Wells, Zone II and Faro Pit.

The Intermediate Pond (IP) accumulates water from the Main Rock Dump, Guardhouse Creek and the Rose Creek aquifer and diversion. Seasonally, water in the IP is pumped to the Faro Mill Treatment System (FMTS) for treatment.

The S-Wells system is designed to pump sequestered, contaminated groundwater coming from the Intermediate Rock Dump to Faro Pit daily, thereby mitigating the concern of water quality of Rose Creek from being influenced.

The Emergency Tailings Area (ETA) is contaminated water seeping from the Main Rock Dump and the surrounding ground. This contaminated water is collected in a sump and is seasonally pumped to the FMTS for treatment.

Zone II is a backfilled section of Faro Pit where contaminated groundwater accumulates. This contaminated water is pumped to Faro Pit seasonally, thereby mitigating the concern of water quality in Rose Creek from being influenced.

Faro Pit is an accumulation of natural in flows, water pumped from the S-Wells and water pumped periodically from Zone II. Seasonally, the water in Faro Pit is pumped to the FMTS for treatment.

On the Vangorda side of the mine property there are five (5) areas where contaminated water is stored; Grum Pit, Grum Sulphide Cell, V15/Moose Pond Area, Little Creek Dam and Vangorda Pit.

Water has accumulated in Grum Pit from natural in flows; however, dewatering from this pit has yet to occur. From 2004-2011, Grum Pit has undergone in-situ bioremediation using phytoplankton in an effort to reduce contamination.

In 2010, a heavy duty liner and cover were constructed and installed to reduce contamination from the Grum Sulphide Cell (GSC) in the Grum Rock Dump from entering the Moose Pond Area and subsequently Vangorda Creek. As a part of this effort, a lined sediment pond and an unlined contingency storage area were constructed to catch runoff. In 2012, analytical analysis of the stored runoff water exhibited high Zinc concentrations, therefore, it was determined that this water would be relocated to Vangorda Pit seasonally.



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Moose Pond is a combination of Grum Creek and seepage water from the Grum Rock Dump, which has been diverted to prevent contamination of Vangorda Creek. In 2011, a pumping system was designed and installed between V15 and Moose Pond, to relocate the contaminated water to Vangorda Pit. This system has yet to be commissioned.

Contaminated seepage and runoff water from the Vangorda Rock Dump is collected in a pond contained by Little Creek Dam (LCD). This contaminated water is pumped to Vangorda Pit seasonally, thereby mitigating the likelihood of the water quality of Vangorda Creek from being compromised.

Vangorda Pit is an accumulation of natural in flows and water pumped periodically from LCD and the GSC. Seasonally, water in Vangorda Pit is pumped to the Grum Effluent Treatment Plant (GTP) for treatment.

To ensure the integrity of the pits and dams and to monitor treatment volumes, water elevations are measured and reported on a scheduled basis (Figure A-1 to Figure A-6). As well as elevations, water volumes transferred around the property are recorded (Table A-1).



2.1.1 Intermediate Pond

All activities for the Intermediate Pond in 2012 are summarised below.

January

Routine monitoring of the IP occurred in January. There were no major activities to report.

February

Routine monitoring of the IP occurred in February. The major activities are outlined below.

- The equipment required for the barge, such as pumps and motors, to be installed for the treatment season were inspected and prepared.

March

No information available on-site at time of composition.

April

Routine monitoring of the IP occurred in April. The major activities are outlined below.

- In preparation for the treatment season, the IP barge was painted and both pumps were installed. All components were tested to ensure they were functioning correctly.

May

Routine monitoring and maintenance of the IP occurred in May. The major activities are outlined below.

- On the 3rd of May at 10:45, water was cycled from the IP to the FMST and treated, to ensure the system was functioning properly.
- Near the end of the month a low voltage issue occurred at the IP which knocked out the IP pumps. The Site Electrician restarted the pumps and could not explain the low voltage event.

June

Routine monitoring and maintenance of the IP occurred in June. The major activities are outlined below.

- Due to decreasing water elevations in the IP, the barge was extended further into the water.

July

Routine monitoring and maintenance of the IP occurred in July. There were no major activities to report.

August

Routine monitoring and maintenance of the IP occurred in August. There were no major activities to report.



September

Routine monitoring and maintenance of the IP occurred in September. The major activities are outlined below.

- The barge at the IP was shut down at 17:00 on September 23rd. Decommissioning will take place in the following month.

October

Routine monitoring of the IP occurred in October. The major activities are outlined below.

- Pumps and motors were removed from the Intermediate barge. The IP walkway and barge was removed from the pond.

November

Routine monitoring of the IP occurred in November. There were no major activities to report.

December

Routine monitoring of the IP occurred in December. The major activities are outlined below.

- The walkway to the IP barge was repaired.



2.1.2 Emergency Tailings Area

All activities for the Emergency Tailings Area in 2012 are summarised below.

January

Routine monitoring of the ETA occurred in January. There were no major activities to report.

February

Routine monitoring of the ETA occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of the ETA occurred in April. There were no major activities to report.

May

Routine monitoring and maintenance of the ETA occurred in May. The major activities are outlined below.

- On May 10th, a 30HP pump was installed in the sump and began pumping to FMTS at 13:45.

June

Routine monitoring and maintenance of the ETA occurred in June. There were no major activities to report.

July

Routine monitoring and maintenance of the ETA occurred in July. The major activities are outlined below.

- The sump drop cover fabricated by the Site Welder was completed and installed.



August

Routine monitoring and maintenance of the ETA occurred in August. The major activities are outlined below.

- Through monitoring it was observed that the ETA pump was having difficulties meeting the pumping expectations for this area. The pump was removed and a rebuilt pump was installed. No noticeable improvements occurred. This pump was replaced with another rebuilt pump however, the same result occurred. Upon communication with the pump suppliers it was determined the pumps had not been rebuilt, only cosmetically refurbished. The three “rebuilt” pumps were deconstructed and the parts were utilised to architect a working pump. This pump was then deposited in to the drop box and worked correctly.

September

Routine monitoring and maintenance of the ETA occurred in September. The major activities are outlined below.

- It appeared the 30HP pump had been collecting debris from the drop box. To remedy this issue, the collection and drop box were cleaned and the pump was replaced with a high 30HP pump. This pump was removed and cleaned three times throughout the month.
- The pumping system was shut down at 15:00 and removed on September 23rd.

October

Routine monitoring of the ETA occurred in October. There were no major activities to report.

November

Routine monitoring of the ETA occurred in November. There were no major activities to report.

December

Routine monitoring of the ETA occurred in December. There were no major activities to report.



2.1.3 S-Wells

All activities for the S-Wells in 2012 are summarised below.

January

Routine monitoring and maintenance of the S-Wells occurred in January. The major activities are outlined below.

- During the installation of necessary software updates for the PLC and HMI programs, the S-Wells pumping system ceased to work automatically. While this issue was troubleshot by the Site Electrician, Site Superintendent and a programmer from PLC Technical Services, the S-Wells system was run manually with water level measurements being taken to ensure that the pump was sufficiently covered. Investigations determined that the current issue stemmed from different driver versions and settings being installed and the problem seemed to be rectified. After these corrections were made, however, cold weather alarms overnight turned the S-Wells pumps on and off several times resulting in the SPW2 pipeline freezing. The PLC Technical Services programmer came back to site and disabled the low temperature alarms and checked the system. The SPW2 pipeline was thawed and snow was pushed against the seacan to decrease cold air infiltrating the seacan.

The VFD then malfunctioned and failed to hold water levels at the programmed set point of 0.1m and continued to pump past the low set point of 0.05m, indicating a program failure. Upon further communication with PLC Technical Services and program updates it was verified that all corrective actions were successful and the S-Wells were functioning correctly.

February

Routine monitoring and maintenance of the S-Wells occurred in February. The major activities are outlined below.

- Due to a power failure the SPW2 and SPW3 pipelines froze. Steaming rectified this issue.
- In the middle of the month the AVR valve was removed, cleaned and put back into service however, it did not seal properly and was replaced with the AVR from the V15 pipeline.
- Adjustments were made to the VFD and HMI to decrease SPW3 oscillation.
- At the end of the month the well head from SPW2 had to be removed as an indicator probe was stuck 50 cm down the well. The removal of the probe was completed successfully.

March

No information available onsite at time of composition.



April

Routine monitoring and maintenance of the S-Wells occurred in April. The major activities are outlined below.

- In the middle of the month observations were made of water pooling around the S-Wells seacan. These observations continued throughout the month and it was determined that the pooling was “melt” water from the surrounding environment. Analytical analysis of the pooling water displayed high concentrations of Zinc, so the water was pumped to the S-Wells sump to prevent it entering Rose Creek.
- During the middle of the month the main sump level began increasing, this led to continual checks to ensure the pump maintained accurate sump levels. These checks observed an increase in effluent water to the seacan however; nothing could be done to decrease the flow using the HMI as it was password protected. Until the password could be discovered the system was switched from the 2” line to the 4” line. During this switch the expansion loop was observed to be frozen and was removed.

May

Routine monitoring and maintenance of the S-Wells occurred in May. The major activities are outlined below.

- When required, the pooling around the S-Wells was pumped to the sump.

June

Routine monitoring and maintenance of the S-Wells occurred in June. The major activities are listed below.

- In the middle of June, power issues occurred at the S-Wells. The S-Wells system on the 14th had to be run on manual due to these electrical issues. The VFD also began having issues and had to be run on bypass mode. The Site Electrician attempted to troubleshoot why the S-Wells would not work on automatic mode. Upon consultation with Ron Nelson from Precision Pump and Services, the S-Wells began working correctly except for the VFD which was still running on bypass mode.
- The surge protector which was not working correctly arrived at the end of the month, with installation occurring immediately.

July

Routine monitoring and maintenance of the S-Wells occurred in July. The major activities are outlined below.

- The S- Wells continued to run manually for the month. Ron Nelson, from Precision Pump and Services was on-site to run diagnostics. It was determined the S-Wells drive required diagnosis, which could not be completed on-site. The S-Wells drive was changed out and sent to Advanced Drives for diagnosis.
- On July 5th, the pooling around the S-Wells seacan needed to be pumped back to the sump.



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August

Routine monitoring and maintenance of the S-Wells occurred in August. The major activities are outlined below.

- The S- Wells continued to run manually for the month.

September

Routine monitoring and maintenance of the S-Wells occurred in September. The major activities are outlined below.

- The S- Wells continued to run manually for the month.

October

Routine monitoring and maintenance of the S-Wells occurred in October. The major activities are outlined below.

- At the start of the month, the S-Wells surge protection system pilot valve arrived and was installed.
- The new VFD arrived and was installed.
- The solenoids for SPW2 and SPW3 were disconnected for maintenance i.e. removal of scaling. Upon completion of the routine maintenance, the solenoids were reconnected.

November

Routine monitoring and maintenance of the S-Wells occurred in November. The major activities are outlined below.

- The first red indicator light for the S-Wells heat trace was not functioning. The control box was checked to determine the issue and it was concluded a temperature sensor failure had occurred.
- The 4" line froze due to cold weather. The line was switched to the 2" line while sections of the 4" line were taken apart, steamed and put back together.

December

Routine monitoring and maintenance of the S-Wells occurred in December. There were no major activities to report.



2.1.4 Zone II

All activities for the Zone II in 2012 are summarised below.

January

Routine monitoring and maintenance of the Zone II occurred in January. The major activities are outlined below.

- A new output card was purchased and installed for the PLC as the old card did not transmit the flow. Upon installation, the new card appeared to be functioning correctly.
- In the middle of January the correct components for the PRV pilot system were received from Precision Pumps and Services. The necessary re-plumbing work was completed.

February

Routine monitoring and maintenance of Zone II occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring and maintenance of Zone II occurred in April. There were no major activities to report.

May

Routine monitoring and maintenance of Zone II occurred in May. There were no major activities to report.

June

Routine monitoring and maintenance of Zone II occurred in June. The major activities are outlined below.

- A flow test was attempted at PW-10-06; however, there was insufficient water to complete the test.

July

Routine monitoring and maintenance of Zone II occurred in July. The major activities are outlined below.

- The power was reconnected to the old Zone II deep well and pumping to Faro Pit began on July 4th at 12:15.



August

Routine monitoring and maintenance of Zone II occurred in August. The major activities are outlined below.

- On the 7th, pumping from the original Zone II well to Faro Pit ceased at 7:45.

September

Routine monitoring and maintenance of Zone II occurred in September. The major activities are outlined below.

- Pumping from the original Zone II well to Faro Pit was restarted on September 10th at 8:00. Due to power outages, pumping was stopped and started various times with the final shutdown occurring on September 22nd at 7: 15.

October

Routine monitoring and maintenance of Zone II occurred in October. The major activities are outlined below.

- A new well was drilled in the Zone II area.
- The Zone II seacan was disconnected and moved from the PW-10-06 well and reinstalled and connected to the new well, CH12-Z2-PW01.
- The transducer was placed in the Zone II seacan.

November

Routine monitoring and maintenance of Zone II occurred in November. The major activities are outlined below.

- Prep work occurred for the new Zone II well hookup. The 3'' heat trace line for the well hookup was installed by the Site Electrician.

December

Routine monitoring and maintenance of Zone II occurred in December. The major activities are outlined below.

- 3'' and 4'' inch pipe line work continued with it being completed by the middle of the month.
- The level II transducer and deep well pump was introduced into the new well.



2.1.5 Faro Pit

All activities for Faro Pit in 2012 are summarised below.

January

Routine monitoring of Faro Pit occurred in January. There were no major activities to report.

February

Routine monitoring of Faro Pit occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring and maintenance of Faro Pit occurred in April. The major activities are outlined below.

- The Faro barge was steamed in preparation for the treatment season.

May

Routine monitoring and maintenance of Faro Pit occurred in May. The major activities are outlined below.

- On May 2nd, the Faro barge began pumping water to the mill to check for leaks.
- The in-line flow meter was installed in the Faro Pit 30" pipeline on May 3rd.
- Water treatment for Faro Pit began on May 7th at 13:00.

June

Routine monitoring and maintenance of Faro Pit occurred in June. There were no major activities to report.

July

Routine monitoring and maintenance of Faro Pit occurred in July. There were no major activities to report.

August

Routine monitoring and maintenance of Faro Pit occurred in August. There were no major activities to report.



September

Routine monitoring and maintenance of Faro Pit occurred in September. The major activities are outlined below.

- Pumping of Faro Pit to the FMFS ceased on September 23rd at 8:15.

October

Routine monitoring and maintenance of Faro Pit occurred in October. The major activities are outlined below.

- The Faro barge was decommissioned i.e. pumps were removed and stored for the winter.

November

Routine monitoring of Faro Pit occurred in November. There were no major activities to report.

December

Routine monitoring of Faro Pit occurred in December. There were no major activities to report.



2.1.6 Grum Pit

All activities for Grum Pit in 2012 are summarised below.

January

Routine monitoring of Grum Pit occurred in January. There were no major activities to report.

February

Routine monitoring of Grum Pit occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of Grum Pit occurred in April. There were no major activities to report.

May

Routine monitoring of Grum Pit occurred in May. There were no major activities to report.

June

Routine monitoring of Grum Pit occurred in June. The major activities are outlined below.

- The Northeast wall of the pit sloughed off in June increasing the concerns of the Grum Pit stability.

July

Routine monitoring of Grum Pit occurred in July. There were no major activities to report.

August

Routine monitoring of Grum Pit occurred in August. There were no major activities to report.

September

Routine monitoring of Grum Pit occurred in September. There were no major activities to report.

October

Routine monitoring of Grum Pit occurred in October. There were no major activities to report.

November

Routine monitoring of Grum Pit occurred in November. There were no major activities to report.



December

Routine monitoring of Grum Pit occurred in December. There were no major activities to report.



2.1.7 Grum Sulphide Cell

All activities for the Grum Sulphide Cell in 2012 are summarised below.

January

Routine monitoring of the GSC occurred in January. There were no major activities to report.

February

Routine monitoring of the GSC occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring and maintenance of the GSC occurred in April. The major activities are outlined below.

- In the middle of April, the Godwin pump was placed near the Lined Pond for pumping to Vangorda Pit.
- New pontoons and hoses were mobilized for the Godwin pump.

May

Routine monitoring and maintenance of the GSC occurred in May. The major activities are outlined below.

- The GSC was pumped intermittently from the Lined Pond to Vangorda Pit for the month of May. The pumping schedule was dependent on the recharge rate of the Pond.

June

Routine monitoring and maintenance of the GSC occurred in June. There were no major activities to report.

July

Routine monitoring and maintenance of the GSC occurred in July. The major activities are outlined below.

- The GSC was pumped intermittently from the Lined Pond to Vangorda Pit for the month of July. The pumping schedule was dependent on the recharge rate of the ponds.



August

Routine monitoring and maintenance of the GSC occurred in August. The major activities are outlined below.

- The Godwin pump was removed from the GSC.
- The final remnants of water in the Lined Pond were pumped into the Unlined Pond for the removal of spare lining floating in the Lined Pond.
- To support the hydro seeding project, a fabricated drag was pulled behind the dozer to help uneven the surface thereby requiring less effort for the seeding process.

September

Routine monitoring and maintenance of the GSC occurred in September. The major activities are outlined below.

- To accommodate for freshet in 2013, water was pumped from the Lined Pond to the Unlined Pond.

October

Routine monitoring of the GSC occurred in October. There were no major activities to report.

November

Routine monitoring of the GSC occurred in November. There were no major activities to report.

December

Routine monitoring of the GSC occurred in December. There were no major activities to report.



2.1.8 V15/Moose Pond Area

All activities for the V15/Moose Pond Area in 2012 are summarised below.

January

Routine monitoring and maintenance of the V15/Moose Pond Area occurred in January. The major activities are outlined below.

- During routine monitoring, the seacan was found to have no power. The power was restored and the sump dewatering pump resumed.
- As the output card in the seacan did not transmit flow data to the PLC, a new card was ordered, installed and appeared to be working properly.

February

Routine monitoring and maintenance of the V15/Moose Pond Area occurred in February. The major activities are outlined below.

- There was a power outage to the V15 area at the beginning of the month. The sump pump was set to run on the light plant if required. The power was restored by the Site Electrician by resetting the breaker at the Grum sub-station.

March

No information available on-site at time of composition.

April

Routine monitoring and maintenance of the V15/Moose Pond Area occurred in April. The major activities are outlined below.

- The V15 pumping system was inspected to determine requirements for start-up.

May

Routine monitoring of the V15/Moose Pond Area occurred in May. There were no major activities to report.

June

Routine monitoring of the V15/Moose Pond Area occurred in June. There were no major activities to report.

July

Routine monitoring of the V15/Moose Pond Area occurred in July. There were no major activities to report.



August

Routine monitoring of the V15/Moose Pond Area occurred in August. There were no major activities to report.

September

Routine monitoring of the V15/Moose Pond Area occurred in September. There were no major activities to report.

October

Routine monitoring and maintenance of the V15/Moose Pond Area occurred in October. The major activities are outlined below.

- The UPS for V15 was relocated to outside of the 600V panel.

November

Routine monitoring and maintenance of the V15/Moose Pond Area occurred in November. The major activities are outlined below.

- The in-line sump heater was not working. To temporarily rectify this issue, the heat was being drawn for the sump from the main seacan heaters until a replacement heater arrived.

December

Routine monitoring and maintenance of the V15/Moose Pond Area occurred in December. The major activities are outlined below.

- The inoperative heater from the in-line sump was disconnected and removed.
- A new vent fan thermostat was installed.



2.1.9 Little Creek Dam

All activities for the Little Creek Dam in 2012 are summarised below.

January

Routine monitoring of LCD occurred in January. There were no major activities to report.

February

Routine monitoring of LCD occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of LCD occurred in April. There were no major activities to report.

May

Routine monitoring and maintenance of LCD occurred in May. The major activities are outlined below.

- On May 22nd, at 13:30, a 30HP pump was set up and began pumping water from LCD to Vangorda Pit.

June

Routine monitoring and maintenance of LCD occurred in June. The major activities are outlined below.

- Due to a power outage the pumping was shut off at LCD on June 11th at 18:30. Pumping was not restarted when the power resumed.

July

Routine monitoring and maintenance of LCD occurred in July. The major activities are outlined below.

- Pumping from LCD to Vangorda Pit began at 8:30 on July 19th and continued until July 24th at 11:30.

August

Routine monitoring of LCD occurred in August. There were no major activities to report.

September

Routine monitoring of LCD occurred in September. There were no major activities to report.

October

Routine monitoring of LCD occurred in October. There were no major activities to report.



November

Routine monitoring of LCD occurred in November. There were no major activities to report.

December

Routine monitoring of LCD occurred in December. There were no major activities to report.



2.1.10 Vangorda Pit

All activities for Vangorda Pit in 2012 are summarised below.

January

Routine monitoring of Vangorda Pit occurred in January. There were no major activities to report.

February

Routine monitoring of Vangorda Pit occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of Vangorda Pit occurred in April. There were no major activities to report.

May

Routine monitoring of Vangorda Pit occurred in May. There were no major activities to report.

June

Routine monitoring and maintenance of Vangorda Pit occurred in June. The major activities are outlined below.

- At the start of the month the pump, motor and Vangorda barge were installed with walkways, floats and flex hoses being installed a few days later.
- On June 13th, pumping from Vangorda Pit to the GTP began at 13:30.

July

Routine monitoring and maintenance of Vangorda Pit occurred in July. The major activities are outlined below.

- The pumping system at Vangorda Pit was shut-down from July 13th to July 18th, as there was no lime in the GTP.
- The Vangorda barge was relocated into deeper waters.

August

Routine monitoring and maintenance of Vangorda Pit occurred in August. The major activities are outlined below.

- On August 18th, pumping from Vangorda Pit ceased at 11:00.
- The Vangorda barge was decommissioned and removed.



September

Routine monitoring of Vangorda Pit occurred in September. There were no major activities to report.

October

Routine monitoring of Vangorda Pit occurred in October. There were no major activities to report.

November

Routine monitoring of Vangorda Pit occurred in November. There were no major activities to report.

December

Routine monitoring and maintenance of Vangorda Pit occurred in December. The major activities are outlined below.

- The seals were replaced on the Vangorda barge and the pump motors were sent out for service.



2.2 Water Treatment

At the Faro Mine Complex there are two (2) treatment systems to manage the contaminated water stored on the property. Contaminated water is moved from its storage location to the relevant treatment system. Here, lime and flocculent are added to precipitate and settle out contaminants, thereby producing dischargeable water. From the treatment systems, treated water travels into a settling pond where it is released into the environment.

See Table A-2 and Table A-3 for a comparison between the volumes of water treated versus the volumes of lime consumed.

Contaminated water on the Faro side of the property is seasonally pumped from Faro Pit, the ETA and the Intermediate Pond to the FMFS for treatment. Treated water then travels from the FMFS to the Cross Valley Pond (CVP) for discharge into Rose Creek.

To ensure the integrity of the dam and monitor discharge volumes, water elevations and flow measurements are completed on a scheduled basis (See Figure A-7 and Table A-1, respectively).

Contaminated water on the Vangorda side is seasonally pumped from Vangorda Pit to the GTP for treatment. Treated water then travels from the GTP to the V25 Clarification Pond before the effluent overflows into the environment via the Grum Interceptor Ditch (GID). To monitor discharge volumes, flow measurements are completed on a schedule basis (See Table A-1).

The by-product from treatment and subsequent settling is in the form of sludge. At the FMFS, the sludge produced from settling is pumped on an as required basis to the sludge cells located at the Secondary Tailings Impoundment. In winter sludge is mixed, bulked and then piled for long-term storage.

At the GTP the sludge settles in the V25 Clarification Pond. In winter, sludge is mixed, bulked and then transported to the Grum Overburden for long-term storage. Sludge removal is completed to accommodate for the sludge produced in upcoming treatment seasons.



2.2.1 Faro Mill Treatment System

All activities for the Faro Mill Treatment System in 2012 are summarised below.

January

Routine monitoring and maintenance of FMTS occurred in January. The major activities are outlined below.

- Modifications were made to the emergency shower in the mill and a new shower head was installed.
- In the latter part of the month, the Site Welder fabricated a bracket and stand for the installation of a heater outside of the shower.

February

Routine monitoring and maintenance of FMTS occurred in February. The major activities are outlined below.

- The heater for the emergency heater was installed and new ductwork was fabricated to direct hot air into the shower.

March

No information available on-site at time of composition.

April

Routine monitoring and maintenance of FMTS occurred in April. The major activities are outlined below.

- Preparation work in FMTS began in April for the upcoming water treatment seasons. The activities included pump and plant checks, repairs, electrical work and cleaning up the water treatment areas.
- During an inspection of the plant, it was determined the filter socks above the lime bay were in disrepair. They were removed.
- The overhead pipeline in the lime bay was removed as it posed a health and safety concern.
- The lighting in FMTS workshop required repair.
- Assembly of the water line from Faro Pit to the Flocculent/ Lime mix was assembled mid-month, as well as the pipeline running from the IP seacan to the mill.
- The gland water hand valve and other valves to the water supply line for the Clarifier were leaking and replaced.



May

Routine monitoring and maintenance of FMTS occurred in May. The major activities are outlined below.

- Water from Faro Pit was introduced into the FMTS on May 2nd to ensure all the equipment was working properly i.e. pumps, tanks etc.
- Water from the IP was introduced to the FMTS on May 3rd at 10:45 and re-circulated back to the IP to ensure that the system was working correctly.
- On May 4th at 12:30 the FMTS started discharging treated water to the Cross Valley Pond.
- Minor electrical issues arose during start-up however, they were rectified.
- The packing in the Clarifier underflow pump was changed.

June

Routine monitoring and maintenance of FMTS occurred in June. The major activities are outlined below.

- The probes in the FMTS were calibrated by the Site Electrician to ensure their accuracy.
- On the 10th there was a power outage. During the time it took for YEC to identify and resolve the electrical issue there was no water treatment occurring.
- Prior to the power outage the rake on the Clarifier could not be raised due to a faulty gear. This gear was replaced prior to the re-initialisation of electricity to the mine site.
- In the middle of the month, the Site Millwright observed the Thickener rake drive-chain was badly out of alignment, the drive sprocket was worn and the reduction motor was in need of attention.

July

Routine monitoring and maintenance of FMTS occurred in July. The major activities are outlined below.

- The old Faro Mill heating plant opening was closed off to reduce asbestos exposure.
- Two gland water pump valves were replaced.
- The lime agitator was repaired.

August

Routine monitoring and maintenance of FMTS occurred in August. The major activities are outlined below.

- The FMTS lime agitator, which was repaired in July, required further repair which was completed.
- The FMTS lime pump packing was replaced.
- The door to the lime bay was repaired.



September

Routine monitoring and maintenance of FMFS occurred in September. The major activities are outlined below.

- With the conclusion of treatment on the 23rd, a leak test was conducted on the Clarifier and Thickener tanks prior to draining.
- Upon the completion of the leak test, decommissioning of the FMFS began. This included but were not limited to:
 - Removal of the flow meter
 - Removal of probes
 - Draining of water from valves, pumps, pipes and tanks
 - Cleaning of the flocculent system

October

Routine monitoring and maintenance of FMFS occurred in October. The major activities are outlined below.

- Decommissioning of the FMFS continued in October. Activities included but were not limited to:
 - Draining of lime
 - Draining and dismantling of the underflow pumps
 - Hopper bin clean up
 - Repair of pumps
 - Repair of lime auger
 - Movement of instruments such as probes to the Guardhouse for winter storage

November

Routine monitoring and maintenance of FMFS occurred in November. The major activities are outlined below.

- The head box, Thickener and Clarifier tanks were cleaned out.
- Auxiliary lighting was put in place for ultrasound testing which occurred in December.

December

Routine monitoring and maintenance of FMFS occurred in November. The major activities are outlined below.

- Repairs were made to the 3'' lime loop for the upcoming treatment season.
- The 24'' pipeline fell off the stand at the IP. This will be dealt with in 2013.



2.2.2 Cross Valley Pond

All activities for the Cross Valley Pond in 2012 are summarised below.

January

Routine monitoring of the CVP occurred in January. There were no major activities to report.

February

Routine monitoring of the CVP occurred in February. The major activities are outlined below.

- A pipe extension was installed on the X5 siphon intake which will facilitate steaming, if required in early spring.

March

No information available on-site at time of composition.

April

Routine monitoring and maintenance of the CVP occurred in April. The major activities are outlined below.

- The 16" siphon was steamed and placed in the channel for discharge.
- On the 12th, the siphon began discharging water from the CVP. Discharge continued throughout the treatment season except for temporary shut-downs such as the installation of an in-line flow meter.

May

Routine monitoring and maintenance of the CVP occurred in May. There were no major activities to report.

June

Routine monitoring and maintenance of the CVP occurred in June. The major activities are outlined below.

- The catwalk created for X5 was installed to allow for easier sampling and flow control of the siphon.

July

Routine monitoring and maintenance of the CVP occurred in July. There were no major activities to report.

August

Routine monitoring and maintenance of the CVP occurred in August. There were no major activities to report.



September

Routine monitoring and maintenance of the CVP occurred in September. The major activities are outlined below.

- Observations of colour changes at the CVP were made. Therefore discharging ceased on the 27th.

October

Routine monitoring of the CVP occurred in October. There were no major activities to report.

November

Routine monitoring of the CVP occurred in November. There were no major activities to report.

December

Routine monitoring of the CVP occurred in December. There were no major activities to report.



2.2.3 Grum Effluent Treatment Plant

All activities for the Grum Effluent Treatment Plant in 2012 are summarised below.

January

Routine monitoring of the GTP occurred in January. There were no major activities to report.

February

Routine monitoring of the GTP occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of the GTP occurred in April. There were no major activities to report.

May

Routine monitoring and maintenance of the GTP occurred in May. The major activities are outlined below.

- Preparation for treatment began at the GTP. The flocculent pumping system was assembled and preventative maintenance was conducted on the lime feed system.
- The Gorman- Rupp diesel pump, which was rebuilt, was prepared for operation.
- All pumps, lines and valves were inspected and any identified issues were rectified.

June

Routine monitoring and maintenance of the GTP occurred in June. The major activities are outlined below.

- The lime slayer auger was mounted and the lime silo rotary valve was inspected to ensure the proper rotation was occurring.
- In the middle of the month, the seals on the Vangorda pump had mechanical failures. It was determined the pumps should run until the clarifier pond was full or the seals completely failed.
- The seals on the Vangorda pump had to be removed and replaced.
- The plant began operating on the 27th, with minimal issues.

July

Routine monitoring and maintenance of the GTP occurred in July. The major activities are outlined below.

- The booster pump started and stopped three times. It was determined shut down would have to occur of this pump via the multiline lockout and that it would require manual operation for the rest of the treatment season.



August

Routine monitoring and maintenance of the GTP occurred in August. The major activities are outlined below.

- On August 18th the GTP ceased treating Vangorda Pit water and decommissioning commenced. This included but was not limited to:
 - Draining of lime
 - Hopper bin clean up
 - Vangorda booster pump clean up
 - Inspection and repair of pumps
 - Decanting of water from the Clarification Pond

September

Routine monitoring of the GTP occurred in September. There were no major activities to report.

October

Routine monitoring of the GTP occurred in October. There were no major activities to report.

November

Routine monitoring of the GTP occurred in November. There were no major activities to report.

December

Routine monitoring and maintenance of the GTP occurred in December. The major activities are outlined below.

- The seals were replaced on the booster station.



2.2.4 Sludge Summary

All activities for sludge management in 2012 are summarised below.

January

Routine management of sludge occurred in January. All activities are outlined below.

- Sludge was mixed for 43 hours in January on the Vangorda side and 19 hours on the Faro Side.

February

Routine management of sludge occurred in February. All activities are outlined below.

- The D5 was used to pack and freeze the truck turn around in the Clarification Pond in the middle of February.
- By the 20th sludge was being hauled from the Clarification Pond to the holding cell on the Grum Overburden.

March

No information available on-site at time of composition.

April

There were no sludge management activities to report for April.

May

There were no sludge management activities to report for May.

June

There were no sludge management activities to report for June.

July

There were no sludge management activities to report for July.

August

There were no sludge management activities to report for August.

September

Routine management of sludge occurred in September. All activities are outlined below.

- On the Faro side, water was observed leaking out of the Faro Sludge Cell into the Secondary Tailings Impoundment. Employees and equipment were mobilised and the leak was plugged off with a temporary fill. The sludge line was disconnected and diverted to the IP. Repairs were immediately completed and the sludge line was reconnected.



October

There were no sludge management activities to report for October.

November

Routine management of sludge occurred in November. All activities are outlined below.

- Work was initiated for the expansion of the Faro Sludge Containment Area. The containment area was completed by mid-month and transfer of sludge from the cell began.

December

Routine management of sludge occurred in December. All activities are outlined below.

- Work was primarily comprised of bulking of the Faro Sludge Cell and mixing of sludge on the Grum side.



2.3 Freshwater Systems

Historically, a number of freshwater systems travelled through the current mine property. To prevent contamination from mining activities these systems are rerouted via diversions, flumes and ditches. Currently, on the Faro side of the mine property, Rose Creek is now diverted around the tailing impoundments. Freshwater to the north is captured and rerouted to Rose Creek through the North Wall Interceptor Ditch (NWID). Faro Creek is diverted from its original path through Faro Pit, to the North Fork of Rose Creek.

On the Vangorda side of the mine property, freshwater north of the mine property is captured in the GID and diverted around Grum Pit, through the Sheep Pad Ponds (SPP) and into Vangorda Creek. Vangorda Creek is diverted from its original path through Vangorda Pit via a flume and back into Vangorda Creek downstream of the mine property. Freshwater northeast of the mine property is captured and diverted into Dixon Creek.



2.3.1 Rose Creek Diversion

All activities for the Rose Creek Diversion in 2012 are summarised below.

January

Routine monitoring of the RCD occurred in January. There were no major activities to report.

February

Routine monitoring and maintenance of the RCD occurred in February. The major activities are outlined below.

- A small amount of glaciation was observed intermittently during the month.
- A steel barrel was removed from the middle of the channel.

March

No information available on-site at time of composition.

April

Routine monitoring of the RCD occurred in April. There were no major activities to report.

May

Routine monitoring of the RCD occurred in May. There were no major activities to report.

June

Routine monitoring of the RCD occurred in June. The major activities are outlined below.

- Freshet peaked on June 9th with no issues.

July

Routine monitoring of the RCD occurred in July. There were no major activities to report.

August

Routine monitoring of the RCD occurred in August. There were no major activities to report.

September

Routine monitoring of the RCD occurred in September. There were no major activities to report.

October

Routine monitoring of the RCD occurred in October. There were no major activities to report.

November

Routine monitoring of the RCD occurred in November. There were no major activities to report.



December

Routine monitoring of the RCD occurred in December. There were no major activities to report.

2.3.2 North Wall Interceptor Ditch

Routine monitoring the North Wall Interceptor Ditch occurred throughout 2012 with no major activities to report.



2.3.3 Faro Creek Diversion

All activities for the Faro Creek Diversion in 2012 are summarised below.

January

Routine monitoring of the FCD occurred in January. There were no major activities to report.

February

Routine monitoring of the FCD occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of the FCD occurred in April. There were no major activities to report.

May

Routine monitoring of the FCD occurred in May. There were no major activities to report.

June

Routine monitoring of the FCD occurred in June. The major activities are outlined below.

- At the beginning of June slight slumping was observed near the limestone, the slumping did not change throughout the month.
- Freshet peaked on June 9th with no issues.

July

Routine monitoring of the FCD occurred in July. There were no major activities to report.

August

Routine monitoring of the FCD occurred in August. There were no major activities to report.

September

Routine monitoring of the FCD occurred in September. There were no major activities to report.

October

Routine monitoring of the FCD occurred in October. There were no major activities to report.

November

Routine monitoring of the FCD occurred in November. There were no major activities to report.



December

Routine monitoring of the FCD occurred in December. There were no major activities to report.

2.3.4 Grum Interceptor Ditch

Routine monitoring the Grum Interceptor Ditch occurred throughout 2012 with no major activities to report.



2.3.5 Sheep Pad Ponds

All activities for the Sheep Pad Ponds in 2012 are summarised below.

January

Routine monitoring of SPP occurred in January. There were no major activities to report.

February

Routine monitoring of SPP occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of the SPP occurred in April. The major activities are outlined below.

- On the 18th, the siphon was installed and was charged.

May

Routine monitoring of the SPP occurred in May. The major activities are outlined below.

- On the 3rd at 09:15, the SPP siphon began running and was shut-down at 08:15 on the 5th.
- On May 10th, the SPP were pumped for eight (8) hours.
- On the 22nd and 23rd, the SPP were pumped.

June

Routine monitoring of SPP occurred in June. There were no major activities to report.

July

Routine monitoring of SPP occurred in July. There were no major activities to report.

August

Routine monitoring of SPP occurred in August. There were no major activities to report.

September

Routine monitoring of SPP occurred in September. There were no major activities to report.

October

Routine monitoring of SPP occurred in October. There were no major activities to report.



November

Routine monitoring of SPP occurred in November. There were no major activities to report.

December

Routine monitoring of SPP occurred in December. There were no major activities to report.



2.3.6 Vangorda Flume

All activities for the Vangorda Flume in 2012 are summarised below.

January

Routine monitoring of Vangorda Flume occurred in January. There were no major activities to report.

February

Routine monitoring of Vangorda Flume occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of Vangorda Flume occurred in April. There were no major activities to report.

May

Routine monitoring of Vangorda Flume occurred in May. There were no major activities to report.

June

Routine monitoring and maintenance of the Vangorda Flume occurred in June. The major activities are outlined below.

- Water levels began to increase at the start of June and by June 9th peak freshet had arrived causing damage to the flume.
- The trash rack at the top and bottom of the flume were deaned out during the month to ensure no blockages occurred.
- The swimming hole had a gas pump installed to pump this water into the flume.
- The Vangorda drop box was observed to have rill erosion due to overflow.

July

Routine monitoring of Vangorda Flume occurred in July. There were no major activities to report.

August

Routine monitoring of Vangorda Flume occurred in August. There were no major activities to report.



September

Routine monitoring and maintenance of the Vangorda Flume occurred in September. The major activities are outlined below.

- Due to the damage received in freshet, repairs to the Vangorda Flume were carried out. Two (2) sections replaced and other sections were repositioned and anchored. As the flow had a greater velocity than expected, additional pumps had to be added to in order to complete the repairs.
- Rip rap was added, where required, throughout the flume system.

October

Routine monitoring and maintenance of the Vangorda Flume occurred in October. The major activities are outlined below.

- Repairs to the Vangorda Flume continued into October with the project being completed by mid-month.

November

Routine monitoring of Vangorda Flume occurred in November. There were no major activities to report.

December

Routine monitoring of Vangorda Flume occurred in December. There were no major activities to report.



2.3.7 Northeast Interceptor Ditch

All activities for the Northeast Interceptor Ditch in 2012 are summarised below.

January

Routine monitoring of NEID occurred in January. There were no major activities to report.

February

Routine monitoring of NEID occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

Routine monitoring of NEID occurred in April. There were no major activities to report.

May

Routine monitoring of NEID occurred in May. There were no major activities to report.

June

Routine monitoring of NEID occurred in June. The major activities are outlined below.

- Slumping was observed on the 5th and monitored for the rest of the month for any immediate changes.

July

Routine monitoring of NEID occurred in July. There were no major activities to report.

August

Routine monitoring of NEID occurred in August. There were no major activities to report.

September

Routine monitoring of NEID occurred in September. There were no major activities to report.

October

Routine monitoring of NEID occurred in October. There were no major activities to report.

November

Routine monitoring of NEID occurred in November. There were no major activities to report.



December

Routine monitoring of NEID occurred in December. There were no major activities to report.



3. Environmental Monitoring

The Environmental Monitoring Program required under the Care and Maintenance Contract is largely a continuation and refinement of the programs that have been carried out under previous water licences and contracts.

The routine Environmental Monitoring Program was comprised of the following:

- Water quality and flow rate monitoring as outlined in Appendix C of the Care and Maintenance contract
- Additional water quality and flow rate monitoring during water treatment
- Monthly depth profile monitoring of the CVP
- Reporting of results to emLine and through monthly reports
- Monthly downloading and submission of hydrological data
- Monthly downloading and review of meteorological data
- Geotechnical monitoring based on recommendations from geotechnical consultants
- Non Routine monitoring activities

All activities undertaken by the TEES Environmental Department are described in further detail below.



3.1 Rose Creek Drainage Monitoring Program

In 2012, water quality was monitored throughout the Rose Creek Drainage system in accordance with Appendix C of the Care and Maintenance Contract, with samples being collected by trained staff employed by TEES. A total of 347 routine surface, seepage and ground water samples were collected. All routine sample locations, required monitoring frequencies as stated in Appendix C and actual monitoring dates are outlined in Table B-1.

In 2012, water analyses for Rose Creek Drainage samples were conducted by Maxxam Analytics in Vancouver, British Columbia. Maxxam Analytics is accredited through the Canadian Association for Laboratory Accreditation. In addition to Maxxam Analytics, analyses of Turbidity were performed at the FMC Laboratory. The FMC Laboratory undergoes biannual proficiency testing in a variety of parameters thereby allowing an ability to report results in an official capacity. All water quality results, as well as bio-assay data, are provided in Table B-2 to Table B-5.

Due the unique capability of the FMC Laboratory to provide immediate feedback, it is used to advise site management during water treatment and/or discharge operations of the effluent and treated water quality. Water samples were collected on a daily (or more frequently, if required) basis at the FMTS, X5 and X14, and Zinc concentrations were analysed (Table B-6 to Table B-11). These results are reported to site management and YG in daily reports.

To ensure the effluent water quality entering Rose Creek, monthly CVP depths profiles were performed and Zinc concentrations were analysed (Table B-12 to Table B-23).

In addition to routine sampling, quality assurance and quality control (QA/QC) measures were undertaken. In 2012, a total of 38 quality control samples (corresponding to 10.9%) were collected and analysed. Using the methods outlined in section 3.3 of this report, extensive assessment, and subsequent actions, were carried out. Documentation for all assessment undertaken is included in Appendix B, Table B-24 to Table B-34.



3.2 Vangorda Creek Drainage Monitoring Program

Similar to the Rose Creek Drainage, water quality was monitored throughout the Vangorda Creek Drainage system in accordance with Appendix C of the Care and Maintenance Contract, with samples being collected by trained staff employed by TEES. A total of 213 routine surface and seepage water samples were collected. All routine sample locations, required monitoring frequencies as stated in Appendix C and actual monitoring dates are outlined in Table C-1.

In 2012, water analyses for Vangorda Creek Drainage samples were conducted by Maxxam Analytics in Vancouver, British Columbia. Maxxam Analytics is accredited through the Canadian Association for Laboratory Accreditation. In addition to Maxxam Analytics, analyses of Turbidity were performed at the FMC Laboratory. The FMC Laboratory undergoes biannual proficiency testing in a variety of parameters thereby allowing an ability to report results in an official capacity. All water quality results, as well as bio-assay data, are provided in Table C-2 to Table C-5.

Due the unique capability of the FMC Laboratory to provide immediate feedback, it is used to advise site management during water treatment and/or discharge operations of the effluent and treated water quality. Water samples were collected on a daily (or more frequently, if required) basis at V25 and V25BSP, and Zinc concentrations were analysed (Table C-6 to Table C-8). These results were reported to site management and YG in daily reports.

In addition to routine sampling, quality assurance and quality control (QA/QC) measures were undertaken. In 2012, a total of 18 quality control samples (corresponding to 8.5%) were collected and analysed. Using the methods outlined in section 3.3 of this report, extensive assessment, and subsequent actions, were carried out. Documentation for all assessment undertaken is included in Appendix C, Table C-9 to Table C-19.



3.3 Quality Assurance and Quality Control

To successfully complete the QA/QC program, TEES's employees diligently follow a well defined series of procedures. These procedures are designed to maximize the accuracy of the QA/QC sample and analysis by reducing the variability and bias throughout the entire process. By following these procedures, both field sampling techniques and laboratory procedures are checked.

QA/QC samples are collected on both the Rose Creek and Vangorda Creek Drainages monthly and collection sites are randomly chosen. QA/QC sampling is performed at a frequency of approximately 10% of all the locations set out in Appendix C of the Care and Maintenance Contract.

QA/QC samples in 2012 consisted of the following:

- Field Blanks
- Duplicates
- Splits
- Lab vs. Field Comparison
- High/ Low Analysis

All sampling techniques and analysis undertaken is described further below.

3.3.1 Field Blanks

Field blanks are used for the assessment of potential contamination from handling procedures and exposure to the environment. A field blank sample is when laboratory deionised water is taken to the sampling site, exposed to the environment and treated in the exact same manner as the parent sample. Samples are then analysed and the results are compared to the values of Maxxam Analytics' deionised water.

If a field blank result was a detection limit or less than the Practical Quantitation Limit (PQL), it was considered acceptable and not examined further. If the field blank results was greater than the PQL but less than the retest limit, the results was further examined to ensure it was correctly entered into emLine and greater than the PQL. If the field blank results were greater than the retest limit, the result was again examined further and if no explanation for the suspicious value could be identified and if the results report indicated it had not been retested by the laboratory, a retest was requested to confirm the value.

3.3.2 Duplicates and Splits

Duplicates are used for the assessment of field techniques and laboratory procedures. A duplicate sample is when a second sample is collected from the same sampling site immediately following the collection of the parent sample. Identical sampling techniques are performed but new filtering equipment is used.

Splits are used in the assessment of laboratory repeatability. A split sample is when a 4L sample is collected and split evenly between the two sets of sample bottles using the same filtering equipment with the aim of obtaining two identical samples.



Duplicate and split results were assessed using the relative percent difference method (RPD). The RPD is the absolute value of the difference between the sample results and duplicate or split results, divided by the average of the two results.

As long as the values are greater than the PQL, the RPD method provides an indication of the difference between the two (2) results. However, if the one (1) or both of the results are below the PQL, the RPD method is invalid.

For duplicate and split assessment, a RPD of between 50% and 100% for metals required further investigation of the results to verify that both were greater than the PQL and correctly entered into emLine. If the RPD was greater than 100% for metals or 50% for general parameters, the results were again further examined and, if no explanation for the discrepancy between the values could be identified and it was not indicated in the results report that a retest had already occurred, a retest was requested to confirm the value.

3.3.3 Lab versus Field Comparison

Lab versus field comparisons are used in the assessment of field equipment calibration and parameter acquisition techniques. A quality comparison between Maxxam Analytics results and field collected data for Conductivity and pH was performed. Using the RPD method, differences between 20% and 50% or a difference of 1.50 pH units prompted a retest request for the lab results. However, due to the short hold times for Conductivity and pH, retests were not requested.

3.3.4 High/Low Analysis

High and low result warnings in the emLine database occur when a value falls outside of the 10 year historic range. High and low values were not investigated further if the flagged results were a detection limit, the 10 year statistics were based on fewer than 10 results or the flagged result was less than the 10 year high/low plus/minus one (1) 10 year standard deviation.

High values were investigated further if they were greater than the 10 year historical high plus one (1) standard deviation to verify that the value was correctly entered into emLine. If the value exceeded the 10 year historical high plus two (2) standard deviations, no explanation for the discrepancy could be identified and the results report did not indicate that a retest had already occurred, if possible, a retest was requested to confirm the value.

Low values were investigated further if they were greater than the 10 year historical high minus one (1) standard deviation to verify that the value was correctly entered into emLine. If the value exceeded the 10 year historical high minus two (2) standard deviations, no explanation for the discrepancy could be identified and the results report did not indicate that a retest had already occurred, if possible, a retest was requested to confirm the value.

If no explanation for a high or low values was identified, and the retest confirmed the result, one (1) of five (5) result flags was added to the result in emLine. The result flags are as follows:

- Value is High
- Value is Low
- Result Questionable
- Calibration Suspect



- Susp. Equip. Error

An addition, if a result flag is added to a parameter, emLine allows the database to disregard the result when evaluating imported data. If either of the two (2) subsequent results for that parameter at that site were greater than, or within 20% RPD of the high/low value, the result was considered corroborated, and the result flag was removed from emLine.

3.3.5 Retest Results

To verify suspicious results, if possible, retests were requested. Retest values only replaced the original value in emLine if the RPD between the retest and original result was greater than 20%. If the RPD between the retest and original value was less than 20%, the retest result was inserted as a comment at that date and site for the suspicious parameter, and the original result remained as the reportable value in emLine.



3.4 Hydrology Monitoring

In 2012, hydrological monitoring was undertaken throughout the Rose Creek and Vangorda Creek Drainages at the prescribed frequencies in Appendix C of the Care and Maintenance Contract. Monitoring was undertaken at specified sites by in-line flow meters, in-stream (depth/velocity profiles), weir measurements or estimation methods. In winter, frequencies were reduced at some sites as prevalent conditions prevented useable data from being obtained. All data was collected by trained staff employed by TEES and is outlined in Table D-1 and Table D-2.

In addition to the flow requirements in Appendix C, continuous flow monitoring took place as per a request from YG. Seven (7) data loggers were installed at specific locations in the Rose and Vangorda Creek Drainages as follows:

- FCD-1 (the head end of the Faro Diversion)
- R7 (Upstream of the FMC in the North Fork of Rose Creek)
- X2 (Upstream of the tailings facility in the North Fork of Rose Creek)
- X14 (Downstream of the tailings facility in Rose Creek)
- V1 (Upstream of Vangorda Pit in Vangorda Creek)
- V27 (Upstream of the Vangorda Creek/Shrimp Creek confluence)
- V8 (Downstream of the town of Faro and Vangorda Falls in Vangorda Creek)

All data logger values collected in 2012 were submitted to YG for analysis; therefore no data logger values are included in this report.



3.5 Meteorological Monitoring

3.5.1 General

Two climate stations were in operation at the FMC in 2012;

- Faro Climate Station located on the plateau of the Faro Waste Rock Dump
- Grum Climate Station located north of the Grum Overburden vegetation trials

Both the Faro and Grum climate stations operate in the same fashion; data is recorded every 5 seconds, averaged and logged on an hourly basis for the following parameters:

- Temperature
- Relative Humidity
- Wind Speed
- Wind Direction
- Soil Moisture
- Soil Temperature at two depths
- Soil Heat Flux
- Net Radiation
- Albedo
- Incoming Solar Radiation
- Snow Depth
- Precipitation

This data was collected on a monthly basis. Tables and figures of the results for the 2012 Meteorological Monitoring at the Faro and Grum Climate stations are in Appendix E.

3.5.2 Maintenance

In 2012, a battery issue arose at the Faro Climate Station which prevented the collection of a complete data set. As a result, bimonthly battery checks have been implemented to ensure the battery at both the Faro and Grum Climate Stations are charged and correctly functioning.

Due to continuing issues with the solar panel at the Faro Climate Station, a new panel was ordered and installed in January, 2012.

As the precipitation gauges fill, they require routine inspection and decanting to maintain precise measurements. On November 14, 2012, the precipitation gauges at both the Faro and Grum Climate Stations were decanted and the antifreeze/glycol solution, that prevents freezing, was replaced.

3.5.3 Snow Pack Monitoring

Snow pack monitoring was performed in February and March 2012 to provide a preliminary indication of the water volumes that would have to be managed during spring freshet. Monitoring was comprised of two (2) components:



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- Snow depth gauge readings, taken from a series of snow depth gauges installed at successive elevations on each aspect (north, south, east, and west) of the Faro Rock Dump and on the south and west aspects of the Vangorda Rock Dump.
- Snow surveys performed on two (2) snow courses on each of the Vangorda Rock Dump and Faro Rock Dump, and one (1) snow course in the forested area above the tailings facilities.

Results of the monitoring were reported to YG in the February and March 2012 Monthly Environmental Reports and, therefore, are not repeated here.

In addition to the snow pack monitoring, maintenance work was performed on the snow depth gauges on both Rock Dumps throughout the summer of 2012. This consisted of straightening and leveling the snow depth gauges where required.



3.6 Geotechnical Monitoring

Geotechnical monitoring at the FMC is divided among the following four areas:

- Rose Creek Drainage (Faro Side)
- Faro Pit Slope Stability
- Vangorda Creek Drainage (Vangorda Side)
- Grum Pit Slope Stability

All data collected on-site was submitted to YG and analysed by Klohn Crippen Berger (KCB), a geotechnical consultant contracted through YG. An independent geotechnical annual report will be submitted by the consulting firm featuring an instrumentation review of data submitted, the findings and any recommendations. Therefore, no geotechnical data is included in this report.

3.6.1 Rose Creek Drainage

In 2012, the routine Geotechnical Monitoring Program undertaken for the Rose Creek Drainage was based on the 2010 monitoring program recommended by BGC Consultants Inc in the *"2009 Annual Geotechnical Evaluation and Instrument Review – Various Facilities at Faro Mine, Yukon"*. The focus of the monitoring program was the stability of the following structures:

- Intermediate Dam
- Cross Valley Dam
- Secondary Tailings Dam
- North Fork of Rose Creek Rock Drain (NFRD)
- Rose Creek Diversion Channel (RCDC)
- North Wall Interceptor Ditch (NWID)

Monitoring of these locations was carried out through daily and monthly inspections, water level elevations, thermistor readings, hydraulic and pneumatic piezometer readings, slope indicator readings, water stages and discharge measurements. All monitoring was performed by trained TEES staff. All routine monitoring locations, required monitoring frequencies and actual monitoring dates are outlined in Table F-1.

During two (2) site inspections by KCB, extra monitoring locations were added to the Geotechnical Program. For the Rose Creek Drainage, monitoring of the head pond level and downstream flow of the K8 Rock Drain on the haul road was added.

Recommendations from the KCB *"Faro Mine Complex 2011 Annual Geotechnical Review"* listed short and long term maintenance to be completed. Actions items completed in 2012 for the Rose Creek Drainage are below:

- Ensure that the site Environmental Department are taking photos of the pits from the same vantage point. A procedure and a map to identify the correct vantage points was developed and implemented.



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- Document seepage locations from RCDC into the tailings impoundment area after fresh snow fall conditions. A map was developed and GPS coordinates were acquired. Photos are taken whenever seepage is noticed and submitted to YG.
- K8 Rock Drain to be identified with flagging on the Haul Road. Flagging was installed and a map was developed identifying the K8 Drain location.
- Clear vegetation along the upper and middle channel reaches of the NWID Channel, including the access road and berms to facilitate future inspections. Clearing has begun with the weather dictating the progress.
- Contingency measures for NFRD for the potential of flood impact on the main access road. It was determined that YG Highways owns the culverts on the main road.

3.6.2 Faro Pit Slope Stability

In 2012, the routine Geotechnical Monitoring Program undertaken for the Faro Pit Slope Stability was based on the 2010 monitoring program recommended by BGC Consultants Inc in the *"2009 Annual Geotechnical Evaluation and Instrument Review – Various Facilities at Faro Mine, Yukon"*.

Due to historical instability and the proximity of the Faro Creek Diversion (FCD), the integrity of the east wall of Faro Pit requires ongoing evaluation. Therefore, slope stability monitoring consisted of the following:

- Crest Regression Measurements
- Water Stages and Discharge Measurements in FCD
- Regular inspections, with photographic documentation, of the east wall

All monitoring was performed by trained TEES staff. All routine monitoring locations, required monitoring frequencies and actual monitoring dates are outlined in Table F-1.

3.6.3 Vangorda Creek Drainage

In 2012, the routine Geotechnical Monitoring Program undertaken for the Vangorda Creek Drainage was based on the 2010 monitoring program recommended by SRK Consulting Inc. In the *"2009 Annual Inspection – Waste and Water Management Facilities – Vangorda / Grum, Faro Mine Complex, Yukon"*.

The focus of the monitoring program was the stability of the following structures:

- Little Creek Dam (LCD)
- Vangorda Rock Dump (including seepage collection system)
- Vangorda Creek Diversion
- Sludge Pond Embankment
- GTP Clarification Pond
- Grum Interceptor Ditch (GID)
- Sheep Pad Settling Pond (SPP)
- Grum Rock Dump and V15 Collection Ditch
- Vangorda Pit

Monitoring of these locations was carried out through daily and monthly inspections, water level elevations, thermistor readings, hydraulic and pneumatic piezometer readings, water stages and discharge measurements. All monitoring was performed by trained TEES staff. All routine monitoring locations, required monitoring frequencies and actual monitoring dates are outlined in Table F-2.



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During two (2) site inspections by KCB, extra monitoring locations were added to the Geotechnical Program. For the Vangorda Creek Drainage, visual inspections for seepages on the downstream slope of the Moose Pond berm, including “Kaori’s Seep”, with flow measurements if seepages are noticed.

Recommendations from the KCB “*Faro Mine Complex 2011 Annual Geotechnical Review*” listed short and long term maintenance to be completed. Actions items completed in 2012 for the Vangorda Creek Drainage are below:

- Replace damage geotextile and missing rip rap in the spillway channel of the SPP. All actions were completed.
- Replace erosion damaged section of the V15 ditch upslope of Moose Pond. All actions were completed.
- Assess Vangorda Rock Dump weirs and weir plates to be repaired or replaced. All weir locations as well as required repairs have been forwarded to Operations for execution. Sites that could benefit from weir installation were also identified.

3.6.4 Grum Pit Slope Stability

In 2012, the routine geotechnical monitoring program undertaken for the Grum Slope Stability was a continuation of the program being performed by the previous contractor. Due to visible instability of the east wall of Grum Pit in recent years, evaluation of the wall’s integrity is required. Therefore, slope stability monitoring consisted of the following:

- Monitoring of the North and South Array Pins
- Regular inspections, with photographic documentation, of the east wall

All monitoring was performed by trained TEES staff. All routine monitoring locations, required monitoring frequencies and actual monitoring dates are outlined in Table F-2. However, during a site inspection in September 2012, cracking was noticed at the second pin in the north array of monitoring pins. A concern for the health and safety of the on-site crew lead to a cessation in monitoring past the third pin. Therefore, from September 2012, no data is available for review.

Recommendations from the KCB “*Faro Mine Complex 2011 Annual Geotechnical Review*” listed short and long term maintenance to be completed. Actions items completed in 2012 for the Grum Pit Slope Stability are below:

- Remove vegetation around the north array of the Grum Pit monitoring pins to facilitate the ability to check for ground deformations and cracks. All actions were completed.



3.7 Non Routine Activities

In addition to routine monitoring, several projects and follow up monitoring events were undertaken as part of the 2012 overall activities as special projects. The results of the non routine activities were summarised using a memorandum format and submitted in the “Special Projects” section of the Monthly Environmental Reports. The following is a list of all special projects undertaken and submitted to YG:

DES; *“2012 Snow Survey Results – February 22nd”*, March 2nd, 2012

DES; *“2012 Snow Survey Results”*, March, 2012

TEES; *“Grum Sulphide Cell Ponds Sampling”*, May 2012

TEES; *“Moose Pond Water Balance”*, May, 2012

TEES; *“Grum Sulphide Cell Ponds Sampling”*, June, 2012

TEES; *“Moose Pond Water Balance”*, June, 2012

TEES; *“Ore Transfer Pad Seepage”*, June, 2012

TEES; *“Grum Sulphide Cell Ponds Sampling”*, September, 2012

TEES; *“Faro Waste Rock Dump Toe Groundwater Sampling”*, October 11th, 2012

TEES; *“Grum Sulphide Cell Ponds Sampling”*, October, 2012

TEES; *“FMC Lab Proficiency Testing – October 2012”*, December 13th, 2012

The FMC Laboratory also provided on-site analytical analyses to CH2M Hill. The results were reviewed by the Site Manager and submitted to CH2M Hill in an official capacity.



4. Maintenance

For operations to be successfully performed, regular inspections and maintenance of the mine property, its infrastructure and equipment must be undertaken as per the Care and Maintenance Contract. This was achieved in 2012 through daily/monthly inspections of facilities and structures, pre-start inspections on all equipment and reporting of any issues.

Through these diligent inspections and reports, preventative maintenance could be carried out in a timely manner. This also allowed for significant issues to be identified and rectified by appropriate means. As all structures and stationary infrastructure, roads, ditches and culverts are inspected on a daily/monthly basis. All mobile equipment maintenance and repairs were tracked by the Vehicle Manager – Fleet Edition. All equipment hours and service and expense summary for 2012 can be found in Table G-1 and Table G-2 respectively.

More detailed information for maintenance performed in 2012 is outlined below.



4.1 Structures and Stationary Infrastructure

In 2012, daily monitoring for tailings dust occurred and specific equipment was brought to site to perform dust suppression duties. However, due to high amounts precipitation, tailings dust was not an issue.

January

- To assist YG at Mt. Nansen, DES loaned four employees and the steam truck to remove ice along a fresh water diversion ditch.
- Yukon Electric Company (YEC) was on-site to read the meters.
- Furnace issues at 450 Campbell continued throughout the month. Modifications were made to the fuel filtration set up to stop the furnace from cutting in and out. It is suspected the tank had sediment in it and was never properly flushed out during installation. The nozzle and filter were also changed twice in January; this seems to have solved the issue.
- The multi zone control circuit at 428 Dawson was not working. A new thermostat was installed upstairs which remedied the issue.
- Snow overhangs were knocked off the shops and north side of the Cat Bays.
- A water line in the FMC laboratory was found to be frozen at the entrance of the crawl space. A heater was placed under the lab, but the line was not thawed by the end of the day. A tap was left on overnight which thawed the line overnight. It was discovered that filters for the RO unit had also froze, which caused several of them to crack. These filters were replaced and a heater was placed in the crawlspace to keep the temperature suitable.
- An alarm was on for the Guardhouse fire suppression system. Sometime through the night the system lost air pressure and the sprinkler line was filled with water. The system was immediately shut down and drained as much as possible but outside lines were already frozen due to extremely cold temperatures. The steam truck was used to thaw the lines, and an auxiliary air compressor was used to recharge the system with air prior to purging each drain valve to ensure all water was out of the sprinkler lines. No obvious air leaks were discovered but the system was left charged with air for the night to check for a drop in pressure. The following day the fire suppression system was examined for air leaks. It was determined that a leakage of air should not have caused the unit to pressurise with water. The system was recharged with water but discovered that the water jockey pump was not shutting off and was causing the pressure relief valve to open and relieve excess pressure. It was believed the water pressure switch had malfunctioned and a new one was ordered.
- Total North was on-site at the end of the month to complete the required work for the new communication system. The fax machine line in the Guardhouse was installed as well as a link to the warehouse and the Norcan shop.
- The top of the gas filling containment structure, was removed, shovelled, repaired, and replaced.
- Fuel for the Dry furnaces was found to be gelled up in the filter, despite previously draining the tanks and refilling them with arctic fuel. Conditioner was added to the tank, lines were thawed and filters changed before the furnaces in the Dry could be restarted.
- Due to the freeze up in the Dry, the shower valves cracked. The Site Millwright changed the shower valves.



February

- The power was out in the Cat Bays. A full hot suit was donned to reset a tripped breaker which restored power to the Cat Bays.
- A waste oil heater in Norcan Shop ceased working. Upon investigation, it was determined that a high pressure fuel pump had seized and resulted in a broken motor and pump coupler. These parts were replaced with parts from an old heating unit. The retrofitted parts failed and new spare parts were used to rebuild the broken components. The unit was re-assembled and restarted.
- The new water pressure switch for Guardhouse fire suppression system water jockey pump was installed by the Site Electrician. The system was reengaged but the pump would not produce enough pressure to shut the system off. Total Fire Protection was on-site and rectified this issue and completed the testing on the fire suppression system.
- The Guardhouse had a new light installed on the stairs as the lighting was not sufficient.
- A handrail was constructed for 248 Dawson, because of the sunken driveway, to assist when refueling.
- The furnace at 450 Campbell had the nozzle and filter changed and the lines were bled. The furnace did not have any issues for the rest of the month.

March

No information available on-site at time of composition.

April

- The fan in the lab for the microwave digester was not working. A screw on the impeller was tightened and the fan began working properly.
- Light repairs were completed in the fire pump building as well as the electrical shop.
- The furnace, oil tank and lines at 450 Campbell were looked at to determine why the furnace was not functioning.

May

- At the beginning of May, brush and trees below the power lines south of the Guardhouse were removed to ensure they would not hinder the power on-site and to allow for safe work conditions.
- The FMC laboratory fume hood had a low flow alarm sounding. The issue was analysed and it was determined, by the Site Electrician, further air flow was required.
- The Site Electrician removed some unnecessary switches in the Environment office.
- Plans were laid out for the repair work at 450 Campbell due to the noxious diesel smell emanating from the dwelling.



June

- On June 10th, a power outage which lasted over three days and affected FMC as well as the Town of Faro occurred. The Guardhouse was put on standby power until YEC could identify and resolve the power issue.
- Communications to the FMC site was lost and the Site Electrician investigated the Rose Hill Repeater. It was determined the batteries had low voltage and were replaced. The Site Electrician also installed a LED breaker to indicate lights in the 3E MCC room.
- Work continued at 450 Campbell with the removal and replacement of drywall in the basement. All rugs were removed and replacement flooring was ordered. The house was painted prior to flooring installation.

July

- The Site Carpenter finished all the necessary repairs to 450 Campbell. Repairs to the furnace lines are to be completed in July.
- The power was turned on to the Grum shop for Pelly Construction to help demobilise their triplex structure. This was removed from the inside gate.
- The Down Valley Treatment Plant (DVTP) was examined to determine the power requirements to operate the plant.
- Power requirements for the new water treatment plant were discussed with CH2M Hill.

August

- The shed used to power up the Guardhouse equipment hot line was determined to be a safety hazard and deconstruction began on the building. The electrical components of this shack were removed and the structure was disposed of at the on-site dump.
- The Grum power was turned on for Environmental Dynamics Inc (EDI).
- The Grum lunch room heater was repaired.

September

- On both sides of the FMC property, old rusted metal barrels used to mark geotechnical instruments and groundwater wells were removed and replaced with clean plastic barrels.
- The power was shut off to areas which would not require heat for the winter months.
- On the Faro side of the property, the construction for the new Guardhouse equipment hot line shack continued with the structure being completed at the end of the month.
- The potable water system conditioners and backwash functions were checked to determine why chlorine was not being injected into the potable well. The chlorine injection rate was changed from 0.7 to 0.6.
- On the Grum side the blasting sign can cut-out were pulled and the lube shack can risers were removed.



October

- The site power was switched to standby in preparation for the planned power outage by YEC.
- The repeater was checked to ensure the internet and phone power configuration was working correctly.
- In the Guardhouse, the conference room floor was repaired.
- A rain gutter was installed over the Environment office's main door.
- Snow fencing was installed around the Vangorda drop box.
- A high voltage sign was installed on the Grum substation fence.
- At 428 Dawson, electrical cords were constructed, the thermostat was installed for furnace #2 and the loose counter trim was repaired.
- The shower at 638 Yates was re-caulked.
- New stairs were constructed for the oil tank at 450 Campbell Street.

November

- The potable water pipeline froze due to heat trace failing on the line. Water had to be hauled from Rose Creek until the new heat trace arrived. Upon arrival and the lines being thawed, the heat trace was installed and water was restored to the potable water seacan.
- The internet and telephones would not work. Inspection of the Rose Hill Repeater found no output from the UPS. The units were plugged directly in to the wall and Total North was informed. Once repaired, the phones were plugged back into the outlet from the inverter.
- During the monthly health and safety inspections, numerous lights around the Guardhouse were found to be burned out. These were replaced and it was determined two (2) of the lights required new ballasts and replacement would occur in 2013.

December

- During the cold snap in the middle of December the lab water lines froze due to poor insulation and heating. A water bleeder line was installed to prevent future freezing. To improve the temperature in the building, two (2) plug-in heaters were installed inside the building and snow was pushed around the outside skirting. Windows and doors were covered with plastic to maintain a suitable temperature.
- A breaker in the lab began tripping when a heater was plugged in. The heater was removed as it was overdrawing the capacity. A 1500W baseboard heater was installed in the breezeway to assist in keeping the building temperature suitable.
- Loose shelves in the warehouse were secured.
- A carbon dioxide sensor was broken in the welding shop and is going to be replaced in 2013.
- The Rose Hill Repeater was checked and the light indicting power was changed.
- A solenoid in the potable seacan was changed and the chlorine injection system was worked on. The injector was not working properly and a replacement is on order.
- A 15KW heater was installed in the ambulance bay.
- A water leak occurred at 638 Yates and was repaired the same day.



4.2 Roads, Ditches and Culverts

January

Routine monitoring and maintenance of roads, ditches and culverts occurred in January. All major activities are outlined below.

- Snow was cleared from the roadways; however, some sites such as Grum, could not be accessed initially due to heavy drifting. These were eventually cleared with the assistance of the loader.
- Bottle cages around the old warehouse were moved to help facilitate snow removal.
- Culvert pipe markers were installed behind the Faro Mill to identify the culvert ends.

February

Routine monitoring and maintenance of roads, ditches and culverts occurred in February. All major activities are outlined below.

- Snow was removed around the hot line and the Guardhouse.
- On the Vangorda side, the grader was used to clean access to the town, around the Pelly buildings and the access road.
- The steamer and Case backhoe were used to heat, thaw and remove ice at the DVTP 6' culvert and to remove the glaciation which blocked the discharge end of the culvert.
- The steamer and the Case backhoe were used to heat, thaw and remove ice at the X5 twin culverts to prevent water from backing up the DVTP 6' culvert.

March

No information available on-site at time of composition.



April

Routine monitoring and maintenance of roads, ditches and culverts occurred in April. All major activities are outlined below.

- Snow removal occurred around site and the roadways. On the Faro side, the Case backhoe removed snow around the buildings.
- The Case backhoe was used to remove the snow on the ramp down to the ETA sump and drained water which had accumulated in the yard.
- On the Vangorda side, the dozer opened up the access road to V27 and pushed snow off of the shoulder of the roads.
- The Case backhoe cleaned snow off the pad for the propane tanks at the Grum Administration building and opened the road to the Vangorda Rock Dump.
- Snow was removed from the Vangorda Pit ramp.
- The culverts on site were repeatedly steamed to maintain the flow of water. Steaming of the ETA culvert occurred multiple times throughout April.
- The culvert at the V15 seacan was backing up; it was steamed and the water appeared to be flowing without interruptions.
- The Grum till dump ditch had water flowing throughout the day. The ditch did not become an issue, but it was monitored.
- The Vangorda Rock Dump collection ditch had ice removed to ensure the flow of water.

May

Routine monitoring and maintenance of roads, ditches and culverts occurred in May. All major activities are outlined below.

- In preparation for freshet, the heavy equipment was strategically located to allow for immediate use.
- Gravel from the Rose Creek gravel pit was accumulated for road surfacing material.

June

Routine monitoring and maintenance of roads, ditches and culverts occurred in June. All major activities are outlined below.

- During freshet, the Vangorda Flume required maintenance with use of the Case backhoe to maintain it's locale and to remove stumps, twigs, trees, etc, from the trash racks at the top and bottom of the flume.
- The road adjacent to the Vangorda Flume was raised in one section due to increased water levels. This was achieved by hauling pit run from the Rose Creek gravel pit.
- To assist Tervita, a subcontractor for CH2M Hill, the excavator worked on a drill pad on the Vangorda side, the Link Belt worked on drill pads close to the Guardhouse, the Case backhoe spread pit run on the drill pad on the road to X14 and the D9 dozer was used to prepare drill pads on the Faro Rock Dumps.
- A catwalk was installed at the X5 siphon.



July

Routine monitoring and maintenance of roads, ditches and culverts occurred in July. All major activities are outlined below.

- Heavy equipment support was provided to CH2M Hill.
- Material to create berms around X14 drilling site was loaded, hauled and placed for CH2M Hill to prevent contaminants entering the stream and water during freshet from reaching the road.
- The culverts at the Horse Corrals that were washed out during freshet were replaced.
- A culvert was installed to redirect the flow coming from the ore transfer pad.

August

Routine monitoring and maintenance of roads, ditches and culverts occurred in August. All major activities are outlined below.

- Further material was placed on X14 area for road maintenance.
- Rip rap was hauled and placed at the Vangorda Flume.
- Gravel was spread along the Vangorda Flume road for the road elevation upgrade.

September

Routine monitoring and maintenance of roads, ditches and culverts occurred in September. All major activities are outlined below.

- Heavy equipment provided support for the repairs on the Vangorda Flume by hauling and placing pit run at the bottom of the flume.
- The road was improved to the Grum Pit power poles for future installation and repairs of the Grum dewatering system, which is to occur in 2013.
- Support was given to CH2M Hill for the aquifer testing Down Valley by creating pipe crossings on the road by the CVP.

October

Routine monitoring and maintenance of roads, ditches and culverts occurred in October. All major activities are outlined below.

- Snow was cleared to allow access to the main areas of site.
- Gravel and rip rap was hauled for road repairs around Moose Pond, Vangorda Flume and the SPP.
- A new access to the power drop was built in the Grum Pit.
- Brush was cleared along NWID to ensure the ditch structure would not be compromised due to vegetation growth.
- Debris and wood was removed along the Faro Diversion.
- Ice was removed from the Vangorda Flume.



November

Routine monitoring and maintenance of roads, ditches and culverts occurred in November. All major activities are outlined below.

- The new Zone II pad was developed for the seacan relocation.
- Snow removal occurred around the Guardhouse and main roads.
- Glaciations were observed at the Faro Diversion, V15 and X5.

December

Routine monitoring and maintenance of roads, ditches and culverts occurred in December. All major activities are outlined below.

- The culverts at V25-BSP, DVTP, V15, and X5 were steamed out repeatedly throughout December.
- Ice was removed from the X5 channel and the overflow was excavated.



4.3 Mobile Equipment

January

All routine maintenance and inspections of mobile equipment occurred in January. There were no major activities to report.

February

All routine maintenance and inspections of mobile equipment occurred in February. There were no major activities to report.

March

No information available on-site at time of composition.

April

All routine maintenance and inspections of mobile equipment occurred in April. The major activities are outlined below.

- Diagnosis of a hydraulic leak on the Link Belt excavator occurred.
- Repairs were made to the Environmental Department's ice auger.
- Batteries were installed in the quads (Units Q-002, Q-003).
- Repairs were made to the boiler system on the steamer truck.
- The TEES Chevrolet units were outfitted with new seat covers and floor mats.
- L-16 was sent to Whitehorse Motors for repairs as they could not be completed on-site.
- The batteries on Unit H-005 were drained as the master switch had been left on. The unit required boosting.

May

All routine maintenance and inspections of mobile equipment occurred in May. The major activities are outlined below.

- Assessments were completed on the light duty vehicles, gensets, outboard motors, etc by Horseman Mechanical.
- Safety mechanisms were added to all remaining light vehicles i.e. buggy whips and beacons.
- Inland Kenworth was on site to replace the turbo on the Volvo loader.
- Modifications were made to the lime truck so it could dump the new U20 seacans.



June

All routine maintenance and inspections of mobile equipment occurred in June. The major activities are outlined below.

- Inland Kenworth was on-site for inspections of the heavy equipment.
- Fountain Tire had a mechanic on site working on the light vehicles and attempting to repair the units which had front end issues, such as ball joints and tie rods.
- The 16G grader had the new summer cutting edges prepared.
- Unit H-002 had the plow mount removed and a front bumper will be fabricated in time for winter snow removal.
- The grader, due to tie rods ends failing, was down for most of the month. This was repaired by the end of the month and the grader was back in service.

July

All routine maintenance and inspections of mobile equipment occurred in July. The major activities are outlined below.

- Following Inland Kenworth's assessment of all the heavy equipment, significant repair work was performed.
- Unit E-10 had new cutting edges installed and made adjustments to the engine valves.
- The hoist cylinder on Unit H-023 was replaced with a 160" hoist cylinder.

August

All routine maintenance and inspections of mobile equipment occurred in August. There were no major activities to report.

September

All routine maintenance and inspections of mobile equipment occurred in September. There were no major activities to report.

October

All routine maintenance and inspections of mobile equipment occurred in October. There were no major activities to report.



November

All routine maintenance and inspections of mobile equipment occurred in November. The major activities are outlined below.

- Brake wear indicators were installed on the front of the loader.
- Preliminary transmission repairs were made to the Kenworth T-800 dump truck.
- An initial review of the requirements on how to install the plow on the front of the International dump truck was made.
- The summer fuel was replaced in the old Miller Welding machine.
- The Arctic Cat and Skidoo snowmobiles were serviced for winter use.

December

All routine maintenance and inspections of mobile equipment occurred in December. The major activities are outlined below.

- A plow was installed on Unit H-007.
- The D9 dozer was troubleshot as to why it was not starting properly.
- Air leak repairs were made on the grader blade lock pin.
- Repairs were made to the transmission on the Kenworth T-800 dump truck.
- The TEES Chevrolets had issues with the Urea tanks and needed to be thawed and winterised. The urea tank malfunctions were taken to Klondike Motors in Whitehorse for the required warranty work.
- The equipment that could not be plugged in on the hot line during the Christmas shut down was moved into the shops.



5. Health and Safety

TEES strives for a positive health and safety culture to be developed at the FMC. To achieve this, all employees are instructed in the correct procedure for the reporting of incidents, including near misses, and are encouraged to participate in the on-site health and safety plan.

Statistics have shown that the implementation of preventative measures assist in decreasing the possibility of more injuries and/or fatalities. Therefore, it is TEES' policy that all near misses and incidents are reported, that risk assessments and job hazard analyses are performed on all tasks completed at the site, that safe work procedures are developed for routine tasks and that all employees are made aware of the site's hazards.

To further assist in preventing potential incidents, safety meetings are held monthly, with toolbox meetings occurring every morning with the entire TEES staff. A toolbox meeting is also performed in each department, by department supervisors, prior to the commencement of the daily tasks.

As per Yukon regulations, a joint health and safety committee (JHSC) has been developed at FMC, comprised of management and employee representatives. The JHSC meet on a monthly basis to discuss and propose possible improvements to encountered incidents and observed health and safety concerns.

Monthly inspections occur on the facilities on the mine site and the safety equipment. The following outlines all the inspections that occur.

- Portable fire extinguisher inspections
- Emergency shower inspections
- Seacan and Stationary Oxygen Monitor inspections
- Portable M40 multi gas monitors are calibrated and bump tested
- Inspections on workspaces and areas

Detailed information for the FMC safety program, training and incidents reported, is outlined below.

January

A site safety meeting was conducted on the 10th. The safety topic for the meeting was safe return to work (post holidays) and a refresher site orientation. Safety training in January included online courses in TDG, WHIMIS and Incident Command Systems.

Health and Safety incidents for the month of January include:

Incident

An employee injured their back from lifting and pushing the skimmer repeatedly.

Response

The employee was instructed on proper body mechanics for the task at hand.



February

A site safety meeting was conducted on the 8th. The safety topic for the meeting was a video entitled “Shake Hands with Danger” discussing the risks of working around heavy equipment. Safety training included Occupational First Aid and Emergency Medical Responder Certification and Propane Handling.

Health and Safety incidents for the month of February include:

Incident

An employee slipped when stepping off of the grader on uneven ground at Vangorda. The employee suffered aches and sharp pains.

Response

Employees were instructed on the importance of paying attention to the surrounding environment.

March

No information available on-site at time of composition.

April

As TEES was the new contractor on-site, health and safety actions included a mass site orientation followed by “Bear Aware” Training from Conservation Officer Ken Alderson, which assisted in the identification of bear signs as V27. The job hazard analysis template and working at heights permit was approved and posted.

Health and Safety incidents for the month of April include:

Incident

Unauthorised individuals entered the site during non-working hours. No damage or theft was reported, except, the keys were missing from Link Belt excavator. The RCMP was notified and the suspects were detained, questioned and released when the keys had been returned. Upon further investigation it was found that three fire extinguishers had been discharged at or near the entrance to the Faro Mill.

Response

All keys on the heavy equipment are to be turned into to a key box at Security and signed out at the beginning of each shift, the same procedure as the light vehicles. The long term plan to address unwanted visitors during off hours is to be developed.

Incident

The Sellick forklift had damage to the throttle cable and bracket when trying to flip a garbage bin over. Damage to equipment occurred, however, this was repaired by the on-site maintenance staff.

Response

Process for flipping the bins has ceased until a new procedure has been developed and the bin that was part of the incident has been removed from service.

Incident

An employee backed up a light duty pick up without checking the rear view mirror and missed another light duty pick up.

Response

The individual was instructed in the TEES proper backing up procedure.



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Incident

An employee placed an empty coffee pot on an unheated burner. Upon contact, the coffee pot broke.

Response

No mitigation necessary, reporting was done for near miss and damage to FMC property.

Incident

An employee, who was wearing their hard hat, knocked his head on an overhead obstruction at the Faro Mill.

Response

First aid was given to the employee with no loss time. Preventative actions include the use of reflective tape and better lighting in the Mill.

May

The health and safety audit was conducted with two (2) external auditors on the Faro Mill Treatment System. Fit testing for the 7700 respirator series began, procedures for underflow tunnel entry was completed and posted and the Emergency evacuation procedures were approved and posted.

Health and Safety incidents for the month of May include:

Incident

An issue with the YEC power grid occurred affecting the FMC.

Response

All systems were reset and operational within an hour.

June

A health and safety audit of the Faro Mill was carried out by two (2) external auditors. One (1) auditor focused on the safety aspect and the other on hygiene in and around the Faro Mill. Both auditor reports have been submitted to YG. Some of the initial recommendations are being worked on or have been completed with more planning required on others. TEES is reviewing comments in the report and is building an action plan around outstanding recommendations.

The Joint Health and Safety Committee was formed and safe work practices were drafted and revisions are being completed as supervisors and employees offer suggestions for improvements.

Health and Safety incidents for the month of June include:

Incident

A power outage occurred at site due to a downed power line which was struck by lightning.

Response

The outage, which lasted for 48hrs, was documented.

Incident

H-1 Kenworth lime truck was found to be leaking oil (approximately 1 L).

Response

Research is being completed for drip trays.

Incident

An employee lost footing and feet slipped out from under them. No injury reported or first aid needed.



Response

Instruction was given on preventative action. The slips and fall topic was discussed in the following morning toolbox meeting.

Incident

A beaver is starting to build a dam at the intersection of X5 and Rose Creek

Response

The Conservation Officer was notified and an action plan is in place to have the beavers and dam removed.

Incident

Numerous oil leaks were discovered at the Grum turn off from main road. Date of the leaks is unknown.

Response

Clean up contaminated areas with equipment. This cleanup will be completed as equipment becomes available.

Incident

While moving garbage at the landfill pit, the D9 Dozer track picked up a piece of steel which caused damage to the step.

Response

Minor damage has been fixed and topic of paying attention to the task at hand, was discussed at the toolbox meeting.

July

Hearing tests were scheduled, the first JHSC meeting was held with further nominations for committee members, emergency radio procedures were posted with updated evacuation maps and fire alarm procedures for the Guardhouse were completed, approved and posted.

Health and Safety incidents for the month of July include:

Incident

Conditions of the YG road to the mine site are in serious need of repair

Response

The proper YG department has been notified.



August

A WCB inspection was completed and the report had a variety of tasks which were to be completed in a timely manner. Most tasks were completed immediately while others required further planning. The Emergency Radio Alarm Evacuation drill was practiced and documented. Safety training in August included online course in operating a pleasure craft and an afternoon seminar on Geotechnical Monitoring.

Health and Safety incidents for the month of August include:

Incident

YG employee backed into AEL light duty pick up causing damage to the front bumper.

Response

The incident did not involve any TEES employees. Proper preventative action and repair procedures to be followed were discussed with YG.

September

Fire Protection was on-site to complete the yearly fire extinguisher inspections at FMC and the guest houses. Safe Work Procedures were being discussed with employees by their supervisors to ensure the validity and accuracy of them. Safety training in September included Leadership for Excellence.

Health and Safety incidents for the month of September include:

Incident

TEES employees found chain broken on the access gate at the top of the Vangorda Flume roadway.

Response

The incident was reported and the chain to lock the gate was replaced.

Incident

A two-way radio fell out of Environmental Technician's pocket and was swept away in the creek.

Response

Preventive action was given as to radio handling procedures.

Incident

Power was lost due to a fallen tree in Carmacks.

Response

Power was restored. The incident was documented.

Incident

A TEES employee spread a mislabelled bucket of salt on the walkway to the lunchroom. The bucket contained Magnafloc 10 and caused the walkway to become more slippery.

Response

The walkway was steamed off. More care to be given when labelling containers.

Incident

Water leaking out of the Faro Mill Sludge cell wall into Tailings area was reported.

Response

Employees and equipment were mobilised. Leak was plugged off with a temporary fill in the sludge



pond. Sludge line was disconnected and diverted to Intermediate Pond. Permanent repairs were completed and sludge line was reconnected.

October

Routine monthly inspections occurred in October. Procedures were drafted for extracting employees from V27 and V4, if required. Training sessions were given on PPE inspection and maintenance and fire extinguisher classifications. Safe operating procedures were reviewed with employees. Safety training in October included online courses in TDG and WHMIS.

Health and Safety incidents for the month of October include:

Incident

The Sellick Forklift hitch was damaged when used to tow car hauler trailer.

Response

Minimal damage was caused to the Sellick Forklift however; the car hauler trailer had significant damage done. This was repaired by the welder. A sign will be posted on the back of the forklift stating it is not to be used for towing. As well retraining will be giving to the employees involved.

Incident

An employee spilled coffee on top of the landing of the staircase and did not clean it up.

Response

In the following morning toolbox employees were given instructions on how to deal with spills and the importance of cleaning up spills.

Incident

The FMC lab was not informed to "shut down" when the potable water froze.

Response

Inform lab not to operate when unsafe.

November

Mark Ruelle was contracted to assist with the internal COR audit. The internal audit went well and identified deficiencies which were easily remedied. An external audit was conducted by Bill Barrack for COR. A new MSDS was placed in the Norcan Shop. Reminders at toolbox meetings were given in regards to the cold temperatures and the road conditions. A job hazard assessment was completed for the first aid attendant and methods to mitigate the identified risks were immediately implemented.

Health and Safety incident for the month of November include:

Incident

An employee was working on the Zone II pipeline and fusing pipe, when said person slipped and fell on the ice. First Aid was given and lost employee time was a result of this incident.

Response

To encourage employees to pay attention to the tasks at hand and the surrounding environment.



December

Unofficial results from the external COR audit gave TEES a score of 93%. As well, the external audit identified areas of improvements for the TEES health and safety program which will be completed in 2013. With the suggestions from supervisors and employees SWP and SJP were improved. Safety training in December included Leadership for Excellence.

Health and Safety incidents for the month of December include:

Incident

An employee was working at the sludge cell and at daily shutdown was left at the sludge cell. The employee began walking home.

Response

Employees are to be in constant contact with their supervisor and security. A new sign in and sign out system has been implemented. As well, supervisors are not allowed to leave the site until every employee is accounted for.

Incident

An employee was backing into the potable water seacan and ended up grazing one of the guiding poles. No injury or property damage occurred.

Response

The employee was instructed on TEES backing up policy and driving safety mechanism.

Incident

The right lever on the Guardhouse garage door was not pulled back all the way and became bent when the door was opened.

Response

There are two (2) levers and the broken one was removed.



6. Affected Yukon First Nations Participation Review

6.1 Background

6.1.1 TEES' AYFN Training Program Rationale

Beginning in 1994, Aboriginal Engineering Ltd. built a business with the mandate to train local Affected First Nation members in both technical and non-technical work. In 2009, Tlicho Engineering & Environmental Services Ltd. was incorporated and it adopted a similar mandate to AEL. To date, AEL/TEES has successfully trained more than 300 northern Aboriginal residents in a variety of roles such as heavy equipment operators, surveyors, quality control technicians, environmental technicians, hazardous material specialists and supervisors.

In recent years, there has been an exponential growth of interest in northern projects from large southern corporations. The recent Canadian economic downturn has sparked further interest and has expanded the interest to medium sized companies from the south. This poses a serious threat for northern companies as companies from the south have access to a larger number of highly skilled labour and technical people. In addition, they are able to hire these skilled individuals at a lower wage. This situation is encountered in every tender competition for northern contracts. Every effort is made to keep AEL/TEES' mandate while outbidding competitors for work on these northern projects. AEL/TEES believes that, through a successful training and development program, Affected Yukon First Nation (AYFN) residents and Yukoners will succeed in building a wide set of skills in mine site remediation and production mine activities. These skills will enable them to engage in future remediation and development projects in the mining industry.

Many of TEES' current employees faced barriers that blocked them from pursuing careers in the mining industry, whether in remediation or full production mines. Some of those barriers included youth criminal records, wellness and attendance issues. Training and development programs may be expanded to incorporate counselling and career development geared to address these barriers. Activities could include working with a contact from the Department of Justice on the application process to get pardons for previous criminal records. This would afford trainees the opportunity to obtain work at other mines within the Yukon. By addressing these barriers, a higher rate of success for trainees is foreseen, in both beginning and continuing on a career path that will benefit the person individually, as well their family and their community.

Training and Development initiatives and activities that reflect optimum alignment with the operational requirements for care and maintenance and future site remediation at the Faro Mine Complex will form the basis for the plan. Training and development initiatives and activities may include, but are not limited to, work experience opportunities, job shadowing, role cross-training, secondments or formal courses and programs of study. These initiatives and activities are designed to update and expand the skills and knowledge required for individuals to make a continuing contribution, in both current and future roles, to the work of TEES and the Faro Remediation Project.



6.1.2 AYFN Training Program Objectives

With the combination of safety information and practices, knowledge, and skills development acquired through this program, the trainees will be prepared for employment in positions within the mining industry and beyond. This program will allow the trainees to experience aspects of care & maintenance, remediation and mining work that may prove of interest to them and ultimately lead to a career. It will also provide work experience that will result in the development of skills that are transferable across mining, construction and environmental monitoring projects. This will open employment opportunities not just in the north, but also across Canada and worldwide.

6.2 Opportunities Offered

The 2012 training and development program was the first phase of TEES' efforts to develop the necessary skills for trainees to work within the Faro Mine Complex, in roles that aligned with operational requirements. The program was implemented with respect to Participation Area (1) and was based on 4 days on/3 days off work rotation during the active operational season.

Upon review of applications, and working closely with the Community Coordinators, opportunities were offered to eight (8) candidates. Six (6) AYFN trainees (4 from Ross River, 2 from Watson Lake) were recruited and they began their employment with TEES near the end of June 2012. The duration of the AYFN training program was 11 weeks. It began with an Environmental Health and Safety (EH&S) course, which focused on:

- Meeting the regulated requirements for working at remote mines in the Yukon
- Developing the necessary skills and knowledge to work within the parameters of a company's Health and Safety plan

For the duration of the program, the trainees had the opportunity to participate in the following areas:

- On-site training and skills development:
 - Security/first aid
 - Water treatment operations
- Formal and Informal Apprentice/Traineeships:
 - Warehouse and inventory
 - Environment
 - Environmental and geotechnical site assessments with CH2M Hill
 - Trades – Electrical, Millwright, Welding, Heavy Equipment
- Formal certification programs:
 - One (1) scholarship to support further technical or university education – To be issued before March 2013



6.3 Successes

6.3.1 Training and Capacity Building

The AYFN trainees embarked on the program by attending the Environmental Health and Safety course. The course was successfully completed and trainees obtained their HAZWOPER, WHMIS, First Aid and TDG certifications.

By rotating the participants through each post every two weeks, they had the opportunity to work with different people, be exposed to various site operations activities and gain an understanding of what is involved in each department/trade. The rotation was well received and will enable the participants to make a more informed decision regarding their future steps.

As part of the capacity building, and working with the Affected Yukoners and First Nations, trainees and communities advised TEES that the program offered was well received. Positive feedback from the communities and trainees included the course layout, selection process and how the program was delivered. The community coordinators advised that the training opportunity posters were well presented and included all the information needed.

The trainees advised that the atmosphere at the mine site was very warm, and that they all felt like they were “part of the team”.

6.3.2 Relationship with Other TEES Members and Contractors

Overall, the participants showed discipline, attentiveness and enthusiasm when presenting themselves to work. TEES employees worked closely with AYFN trainees, incorporating them to their normal daily tasks and assigning them responsibilities. This promoted a team spirit and helped the participants feel appreciated for their contribution.

AYFN trainees worked closely with the other contractors on site, such as CH2MHill. The contractor reported to TEES that the participants showed discipline, attentiveness and enthusiasm. All AYFN trainees were well received by both CH2M Hill and EDI.

6.3.3 Attendance

Throughout the duration of the program, efforts were made to commend work attendance of the AYFN trainees. TEES had to proceed with one dismissal in order to maintain the successful participation of the rest of the group. Minor issues were quickly addressed and corrected; the participants were punctual and continued with the program for the majority of its duration.

6.3.4 Performance

All participants received very good feedback from their respective trainers. TEES proceeded with the offer of part-time employment to one particular trainee who showed exceptional performance throughout the program. This particular trainee, worked as a regular employee well into October.



6.4 Areas for Improvement and Mitigation Measures

TEES found that, for the most part, working with the community coordinators worked well. The community coordinators were important, as they were the first point of contact for TEES to spread the word in the communities, liaison, and advertise. However, while working with Pelly Crossing we had a low and late response. The coordinator did not agree with our selection. To mitigate, we allowed Pelly to bring forward their recommendations. In the end, the response was not well received by the community. There was confusion with what TEES was to provide with respect to training and the people that were recommended backed out at the last minute.

We initially proposed to have 12 trainees. Our final number was six (6) trainees; two (2) candidates from Watson Lake and four (4) candidates from Ross River.

For the duration of the program, we found we had challenges with travel to and from the communities, and consumption of alcohol after working hours with the candidates from Ross River. Another major challenge was securing a full time AYFN coordinator. We recruited and hired one individual who assured TEES that they would be dedicated to this program. Within a month of employment, the coordinator left and never returned. Currently we do not have an AYFN Coordinator at the Faro Mine Complex. TEES is currently advertising to staff this position.

6.5 Costs

A summary of all costs associated with the 2012 AYFN Program are outlined in Appendix H.

6.6 Recommendations for Future Training

TEES will be providing a Hazwoper training program in Pelly Crossing March 22-28th, 2013. Based on our discussions with Pelly Crossing it was determined that there are no hotels or B&Bs available to support this program. Hotel arrangements have been made in Carmacks for the training period. TEES will bring Ross River, Watson Lake and Faro candidates to Pelly Crossing for the certified Hazwoper training. The Hazwoper training will provide for long-term capacity building within the AYFN communities and the Faro Mine Complex, by preparing individuals for future remediation activities at the site.

During the winter of 2013, TEES would like to approach Tudilini for a price quote to supply fuel to the site. Currently the larger fuel deliveries are purchased through AFD Petroleum. AFD Petroleum provides large fuel haul all year round. AFD is not considered AYFN, but is Other Yukon First Nations.

TEES is currently exploring opportunities for AYFN businesses to provide heavy equipment for the site.

2013/2014 Participation Plan “All About Water”

TEES would like to focus on “All About Water” during the 2013 season. TEES is exploring opportunities with ECO out of Calgary under the BEAHR program. By collaborating with ECO, TEES will be able to meet our contractual obligations, by providing long-term capacity building and certifiable programs to AYFN candidates. The program would mainly focus on water sampling and environmental monitoring duties for positions such as Environmental Technician or Water Treatment Operators. TEES has provided a draft proposal to YG that describes the focus for 2013 in more detail for consideration.