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Ambient Air Quality Training and Monitoring Program Faro Mine Complex

Faro, Yukon

GOVERNMENT OF YUKON

March 10, 2015

SLR Project No.: 208.04601.00000



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**AMBIENT AIR QUALITY TRAINING AND MONITORING PROGRAM
FARO MINE COMPLEX
FARO, YUKON**

SLR PROJECT #: 208.4601.00000

Submitted by
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For

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Distribution: 1 electronic copy and 1 hard copy – Government of Yukon
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1.0 INTRODUCTION

SLR Consulting (Canada) Ltd. (SLR) was retained by the Government of Yukon (GOY) to provide on-site training in the use of GOY owned portable air samplers and to provide environmental consulting services for the implementation of an ambient air quality monitoring program at the Faro Mine Complex (FMC) located near Faro, Yukon. The ambient air monitoring program was operated in the area of the construction of a water treatment facility at the FMC. The scope of work was prepared in association with the Government of Yukon quote request no.41320824 dated April 24, 2014.

1.1 Background

The Faro Mine Complex site was a lead/zinc mine located near Faro, Yukon which opened in 1969 and operated as Canada's largest open-pit lead/zinc mine for almost 30 years. In 1998 the mine was placed into receivership. It was determined in 2003 that the mine would not reopen and that a long-term closure plan would be needed to be prepared and implemented. Since that time, planning for remediation and closure of the FMC has been ongoing. Numerous studies and assessments have been undertaken to determine options that address the protection of the environment and human health and safety, while balancing economic costs and benefits. In 2009, the management of the Faro Mine Complex became the responsibility of the Government of Yukon.

2.0 OBJECTIVES

GOY installed an interim water treatment facility in the area south of the abandoned mill building, which was historically used as the load out area for the lead and zinc concentrate produced by the mine. In this area, metal concentrations in the soils were known to be elevated. During construction activities, the generation of fugitive dust was expected. With the generation of fugitive dust, the potential for transport of airborne metals by particulate matter existed.

GOY's objectives for the program were broken into two categories. The first objective was to have select GOY employees as well as selected on-site personnel working for Tlicho Engineering and Environmental Services Ltd. (TEES) trained in the operation and use of the Airmetrics TAS MiniVol portable particulate samplers that had been previously purchased by GOY for prior sampling programs at the mine. The second objective was to deploy the samplers during the construction phase of the water treatment facility with the assistance of SLR and the newly trained on-site personnel.

SLR's role in the program was to provide training for GOY and TEES staff and to assist with the initial program design. SLR conducted a reconnaissance of the proposed construction area and provided guidance to GOY and TEES regarding monitoring location selection. SLR generated a work plan and sampling schedule based off the anticipated construction timeline. TEES employees were responsible for the implementation of the program including, all on-site sample collection, chain of custody documentation, and submittal of the samples to the analytical lab for analysis. SLR was tasked with gathering the analytical and meteorological data and with generating this final program report.

The air monitoring program was designed to aid GOY in determining the potential of off-site fugitive dust being generated by construction activities to affect the air quality in adjacent areas of the mine property, and to compare the results to established ambient air quality standards.

The original program was intended to measure Total Suspended Particulate (TSP) and associated trace metal concentrations over a 24-hour average using the MiniVol portable particulate sampler. The objectives of the program were updated by TEES and GOY (with consultation by SLR) as more information pertaining to the construction activities and schedule, and available monitoring equipment developed.

Included in the final air monitoring program was the measurement of particulate matter less than 10 µm in aerodynamic diameter (PM₁₀), trace metals associated with this particulate matter size fraction and the measurement of TSP and trace metals over a 8-hour time period using the GilAir-3 personal sampling pump.

SLR made some recommendations during the course of the program design and implementation that were not adopted GOY. Among these were that GOY conduct occasional 15-minute area samples to determine if the short term exposure limits for total particulate concentrations or if individual components of the particulate (eg. lead, zinc) were being approached.

In lieu of the 15-minute area samples, SLR recommended that GOY implement realtime downwind particulate monitoring to alert any nearby workers if significant plumes of particulate were leaving the worksite since this particulate could have been comprised of significant concentrations of lead and/or zinc. It is SLR's understanding that GOY conducted a real-time particulate monitoring program to assist in the implementation of appropriate dust mitigation measures to protect personnel and local air quality outside of the construction exclusion zone. Data generated from the real time monitoring program was not considered part of the air monitoring program and were reported separately by the contractor that conducted this monitoring.

3.0 AIR QUALITY GUIDELINES

Analytical results for analyzed parameters including particulate matter and trace metals have been compared to air quality standards provided by the GOY. In the absence of GOY standards, air quality standards in use by other regulatory agencies within Canada have been used for comparison purposes.

3.1 Particulate Matter

The 24-hour integrated particulate matter samples, total suspended particulate (TSP) and particulate matter less than 10 µm in aerodynamic diameter (PM₁₀), sampling results were compared to the Government of Yukon Standard, as outlined in "Yukon Ambient Air Quality Standards (April 2010, updated September 2014)".

No applicable standards were available for the comparison to the 8-hour integrated sampling results of TSP and PM₁₀.

3.2 Trace Metals

In the absence of Government of Yukon Standards, 24-hour airborne trace metal results were compared to "Ontario's Ambient Air Quality Criteria" (April 2012)".

The 8-hour integrated sampling results using the MiniVol and GilAir-3 samplers were compared to the Government of Yukon "Yukon Occupational Health Regulations". In the absence of a Government of Yukon standard, WorkSafe BC Occupational Health and Safety regulations outlined in "Table of Exposure Limits for Chemical and Biological Substances" updated February 1, 2015 were referenced.

4.0 SCOPE OF WORK

As outlined in the Government of Yukon quote request no.41320824 dated April 24, 2014. The original proposed scope of work included:

1. Design and develop an air monitoring and sampling program during the site preparation phase of the construction of a water treatment system at the Faro Mine Complex using GOY supplied Airmetrics TAS MiniVol air samplers.
2. Develop a Health and Safety Plan for conducting the air monitoring and sampling program.
3. Implement the air monitoring and sampling program.
4. Travel to the Faro Mine Complex to inspect equipment and set-up the program. Travel to the FMC at least one additional time during the program operation and/or completion of the program.
5. Provide all sampling media and accredited laboratory services for the program.
6. Provide training for up to six (6) on-site individuals in the basics of establishing and conducting air monitoring/sampling programs including operation and care of equipment and sampling media, and sample handling and tracking.
7. Submit a report of the program including interpretations, the findings of the analysis, comparison to established Health and Safety regulations and guidelines and discussion of the training component of the program.

The actual scope of work was altered due to additional sampling equipment being introduced (GilAir-3 pumps), equipment failures, and on-site personnel's availability for the field activities. Details of the final scope of work are provided in the following sections.

4.1 Health and Safety

SLR developed a site-specific Health and Safety plan (HASP) designed for the potential risks associated with the nature and extent of contaminants and the potentially hazardous conditions associated with the project site. SLR also attended to mine site health and safety orientation prior to conducting the training program. A copy of SLR's site specific health and safety plan was provided to GOY prior to SLR's first site visit.

4.2 Site Personnel Training

SLR conducted two site visits for the purpose of training of on-site personnel in the use of the Airmetrics TAS MiniVol sampler and an introduction to the Gilian GilAir-3 sampling pump. The first site visit was conducted on May 14, 2014 in which the majority of the training program associated with the equipment use was conducted.

A follow up site visit was conducted by SLR on June 10, 2014 to verify correct equipment operation and sample submission and meeting with GOY and TEES. Details of the training are provided in section 5.0

4.3 Air Quality Monitoring and Sampling

Ambient air sampling was conducted using a battery powered Airmetrics TAS MiniVol portable sampler supplied by GOY. The MiniVol sampler draws air at a rate of 5 litres/minute through the sampler inlet (TSP) and then through a 47 mm Teflon filter. TSP particulate is collected on the Teflon filter and submitted to an analytical laboratory for analyses. In addition to the TSP size fraction, the MiniVol sampler inlet can be fitted to sample particulate matter of the PM₁₀ size fraction. Sampling was conducted for a period of 24-hours. Following analyses for particulate matter, the filters were then analyzed for airborne trace metals.

Additionally, GOY and TEES added 8-hour sampling to the program which was conducted using the Gilian GilAir-3 personal sampling pump supplied by GOY. Ambient sampling at each location was conducted for a period of 8 and/or 24 hours on a 3-day sampling schedule in order to capture fugitive dust generation representative of construction activities associated with the water treatment system construction. It should be noted the intent of the 8-hour sampling was for comparison to the local occupational health standards using the available equipment. This portion of the program was not meant to constitute an industrial hygiene air sampling program as no personnel sampling was conducted and no industrial hygienists were present on-site.

The proposed sampling schedule was conducted in accordance with the National Air Pollution Surveillance (NAPS) 3-day sampling. The proposed sampling schedule is provided in Appendix A. 8-hour sampling was conducted using the GilAir-3 personal sampling pumps from May 27 through June 10, 2014, while 8-hour and 24-hour sampling was conducted using the Airmetric TAS MiniVol Samplers from June 4 through June 20, 2014. Additional sampling was also conducted on June 25, 28, and July 2, 2014, however samples collected on these days were not submitted for analytical analyses.

24-hour sampling was compared to relevant ambient air standards. 8-hour area sampling was compared to occupational standards during the typical work shift hours to help document concentrations that workers could potentially be exposed to. Preliminary sampling locations were determined by SLR during the initial site visit, but modified by TEES slightly at the start of the program. Four (4) stationary locations in the area of the construction activities were selected for the sampling program:

- Norcan Shop (NCS)
- Emergency Tailings Area (ETA)
- Gasoline Fuel Tank (GFT)
- Tailings Pump house (TPH)

Sampling locations are shown in Figure 1.

Following the training program SLR was not on-site for sampling. All sampling and sample submission was conducted by on-site TEES staff.

4.3.1 Gilian GilAir-3 Sampling pumps

Sampling using the Gilian GilAir-3 sampling pumps was conducted at the four sampling locations on May 27, 28, 29 and June 4 and 10, 2014. The filters were submitted to ALS in Edmonton, Alberta. Coordination of the filter submission for the GilAir -3 sampling pumps was conducted by GOY.

4.3.2 Airmetrics TAS MiniVol Samplers

Sampling using the Airmetrics TAS MiniVol samplers was conducted at the four sampling locations on June 4, 7, 10, 12, 13, 17, and 20, 2014. Sampling was also conducted on June 25, 28, and July 1, 2014 however collected samples were not submitted for analyses.

All field work associated with the sampling (filter loading, sampler set-up, filter retrieval, chain of custody preparation, and submission to the laboratory) was conducted by TEES. Analytical results from the GilAir-3 samplers were provided to SLR by GOY.



Figure 1. Air Quality Monitoring and Sampling Location Plan.

5.0 AIR MONITORING EQUIPMENT TRAINING PROGRAM

As part of the air quality monitoring program, SLR conducted an on-site training program to select GOY employees and on-site personnel focusing on the use of the Airmetrics TAS MiniVol portable air sampler for air monitoring. The on-site training program was conducted by SLR Senior Air Quality Specialist J.B. Dennison on May 14, 2014 and was attended by the following personnel: Kim Stehelin; Emilie Hamm; Zuneza Cove; Chantel Fulton; Wendy Michell-Larocque; Amanda Chaulk; and Sukie Sidhu.

The training program consisted of a classroom educational presentation and a hands-on use of the Airmetrics TAS MiniVol portable air sampler. The following topics were covered in the classroom portion of the training program:

- Introduction to Air Quality Monitoring (Regulatory Requirements, Human Health Considerations, Model Integration, Transport Issues).
- Discussion of Examples of AQ Sampling Equipment (Gaseous Analyzers, Manual and Automated Particulate Samplers, Meteorological Monitoring Sensors and Data Acquisition Systems).
- Operations Training for the Airmetrics MiniVol - Tactical Air Sampler (Operational and Calibration Theory, Filter Setup and Retrieval, Chain of Custody and Field Sheet Instruction).
- Discussion of the Existing Giant Mine Remediation AQ Program (Program Objectives, Equipment, Reporting and Relevancy to Faro Mine Program).
- Discussion of the Planned Faro Mine AQ Program (Program Objectives, Sampling Locations, Logistics and Sampling Schedule).
- A demonstration of the use of personal sampling pumps and the theory of operation (Gilian GilAir-3 Pumps) was added to the training program while on-site at the request of GOY.

The hands-on component of the training program included set-up, calibration, and troubleshooting of Airmetrics MiniVol TAS Sampler. A pre-sampling calibration of the samplers proposed for the program was conducted by SLR. In addition to the original training program, at the request of GOY, SLR provided a general overview of the operation of the Gilian GilAir 3 personal sampling pump. A copy of SLR's training program is presented in Appendix B.

SLR conducted a follow-up site visit on June 10, 2014. Activities conducted during that site visit included:

- Met with GOY for a project update including discussion of real time monitoring;
- Inspection of final air sampling site locations selected by TEES.
- Meeting with TEES for additional laboratory submission training.
- Verification of instrumentation and operation of the on-site meteorological station.

5.1.1 Training Results

The training sessions were well attended and feedback was positive both during and after the session. Following the training program SLR evaluated each trainee in terms of hand on use of the MiniVol sampler. All trainees were proficient in the use of the MiniVol sampler.

6.0 AIR QUALITY MONITORING PROOGRAM RESULTS

6.1 METEOROLOGY DATA

This section of the report summarizes the observed wind and temperature data that are collected at an on-site meteorological station known as the “Faro Climate Station”. Meteorological data collected at the Faro Climate Station included: wind speed, wind direction, temperature, relative humidity, solar radiation, and precipitation. The meteorological data is collected and averaged on an hourly interval and stored by a data logger. Meteorological data from the Faro Climate Station was provided to SLR by GOY.

6.1.1 Horizontal Wind Speed and Wind Direction

During the sampling period of May 27 through June 20, 2014, hourly measurements of horizontal wind speed and horizontal wind direction were collected. Average hourly wind speeds over the sampling period was 2.6 m/s with the most frequent winds from the south, followed by south-southeast winds. Calm winds (<1 m/s) occurred approximately 10% of the time. Daily average winds speeds and wind directions are summarized in Table 1. A graphical representation of the monitoring period horizontal wind speed and directions is presented in Figure 2.

Table 1
Wind Speed/Wind Direction – (May 27, 2014 – June 20, 2014)

Date	24-Hour Average Wind Speed (m/s)	Predominant Wind Direction ^(a)
May 27, 2014	2.24	None
May 28, 2014	2.45	None
May 29, 2014	2.49	None
May 30, 2014	2.69	S/SSW
May 31, 2014	4.07	SW
June 1, 2014	2.63	W/WNW
June 2, 2014	2.71	NNW/N
June 3, 2014	2.25	None
June 4, 2014	2.04	None
June 5, 2014	2.20	None
June 6, 2014	2.23	None
June 7, 2014	2.97	None
June 8, 2014	2.32	None
June 9, 2014	2.77	WSW/W
June 10, 2014	NA	NA
June 11, 2014	NA	NA
June 12, 2014	NA	NA
June 13, 2014	2.18	SE/SSE
June 14, 2014	1.84	None
June 15, 2014	1.87	None
June 16, 2014	2.41	None
June 17, 2014	4.89	SSE
June 18, 2014	3.22	SSW/SW
June 19, 2014	2.25	None
June 20, 2014	3.29	None

(a) Winds were determined to be predominant for the day if winds were from a particular direction or two adjacent directions for 13 or more hours in the day.

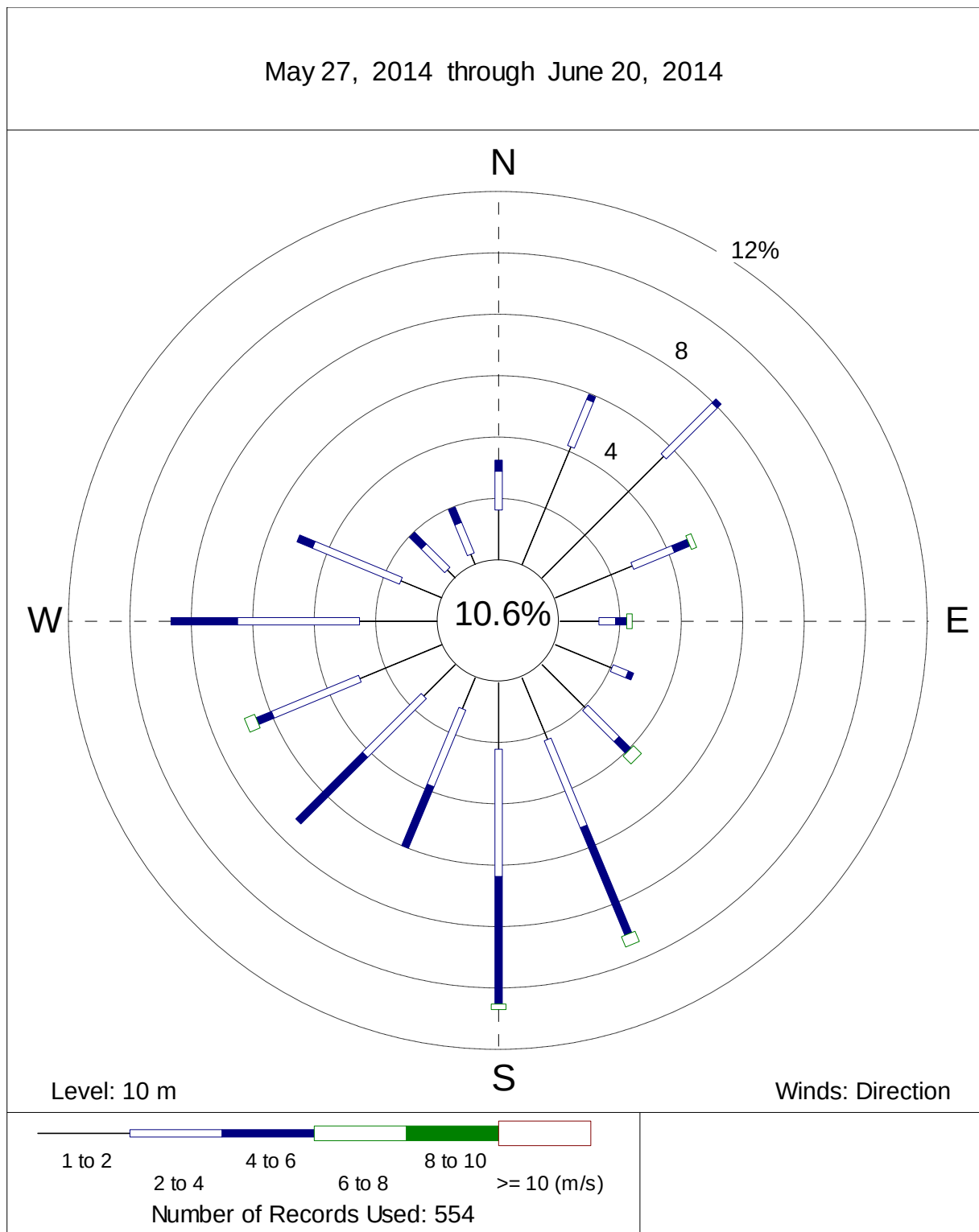


Figure 2: Windrose analysis (%) – (May 27, 2014 – June 20, 2014).

6.1.2 Temperature

Ambient temperatures at the Faro Mine Complex were recorded for the sampling period of May 27, 2014 through June 20, 2014. The mean temperature during the sampling period was 8.5 °C. Hourly temperatures ranged from a low of 2.2 °C on June 4, 2014 to a high of 17.0 °C on May 30, 2014. Ambient temperatures measured are shown in Figure 3. Temperature data from 16:00 June 10 through 13:00 June 12 was missing as a result of routine site maintenance and calibration work conducted by a TEES contractor.

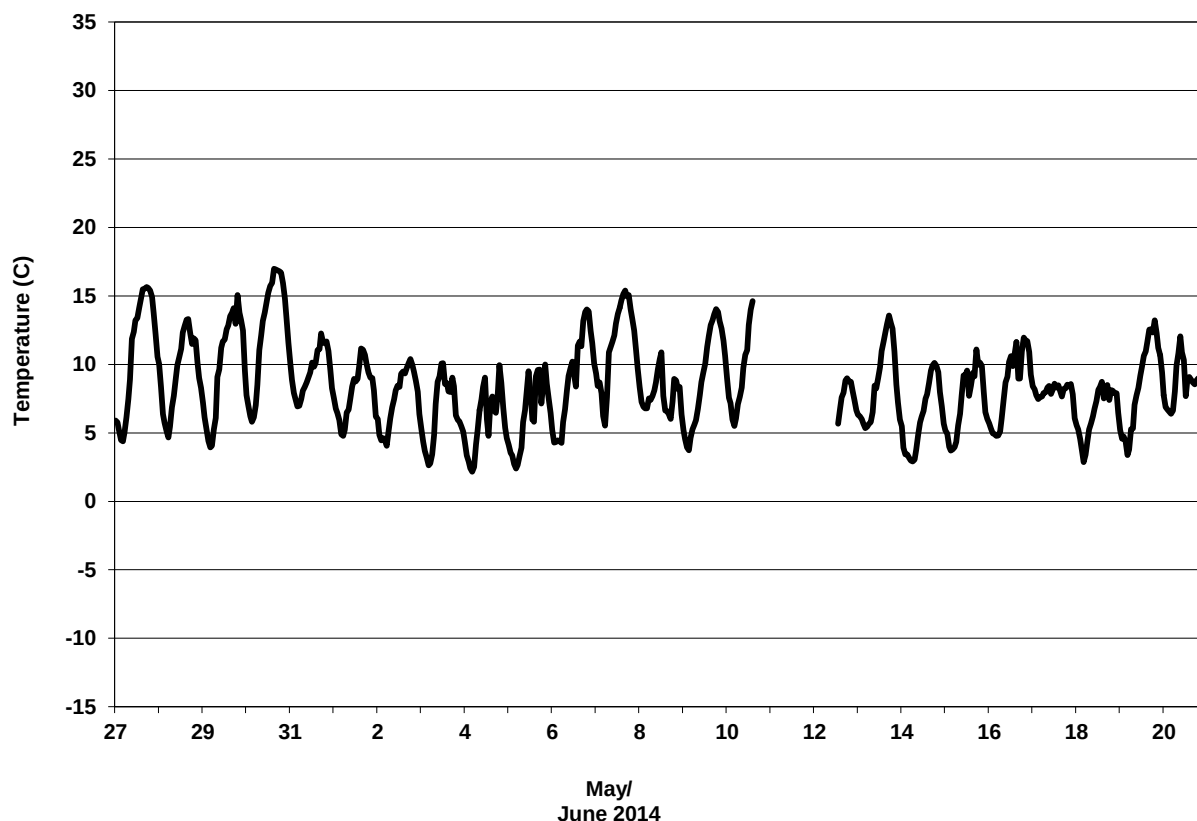


Figure 3. Hourly average temperatures (May 27, 2014 – June 20, 2014).

7.0 AIR QUALITY SAMPLING RESULTS

7.1 Laboratory Analysis

Analytical analyses was conducted for particulate matter and airborne trace metals. As outlined previously, sampling was conducted using the Airmetrics MiniVol sampler and the Gilian GilAir-3 personal sampler. Analytical analyses for samples collected using the MiniVol samplers were submitted to Maxxam Analytics in Mississauga, Ontario while samples collected using the GilAir-3 samplers were submitted to ALS Environmental in Edmonton, Alberta for analyses. Both laboratories are accredited by the Canadian Association for Laboratory Accreditation Inc. Detailed Certificate on Analysis reports are provided in Appendices C and D.

7.2 Particulate Matter

7.2.1 Total Suspended Particulate (TSP) 24-hour Average

There were no 24-hour average TSP concentrations exceeding the Government of Yukon Ambient Air Quality Standard of $120 \mu\text{g}/\text{m}^3$ measured at any of the monitoring locations. A maximum 24-hour average TSP concentration of $45.2 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the NCS sampling location. On that day winds were light to moderate with an average daily wind speed of 2.97 m/s and were blowing from no predominant direction. Analytical results for the 24-hour TSP sampling are summarized in Table 2.

7.2.2 Particulate Matter less than 10 Microns (PM_{10}) 24-hour Average

There were no 24-hour average PM_{10} concentrations exceeding the Government of Yukon Ambient Air Quality Standard of $50 \mu\text{g}/\text{m}^3$ measured at any of the monitoring locations. A maximum 24-hour average PM_{10} concentration of $22.5 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the GFT sampling location. On that day winds were light to moderate with an average daily wind speed of 2.97 m/s and were blowing from no predominant direction. Analytical results for the 24-hour PM_{10} sampling are summarized in Table 3.

7.2.3 Total Suspended Particulate (TSP) 8-hour Average

MiniVol Sampler

A maximum 8-hour average TSP concentration of $46.5 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the GFT sampling location. On that day winds were light to moderate with an average daily wind speed of 2.97 m/s and were blowing from no predominant direction. There are no relevant 8-hour standards for TSP. Analytical results for the 8-hour TSP sampling using the MiniVol sampler are summarized in Table 4.

GilAir-3 Sampler

All 8-hour average TSP concentrations collected using the GilAir-3 personal sampling pumps were less than the analytical detection limit with the exception on one sample. A TSP concentration of $260 \mu\text{g}/\text{m}^3$ was measured on May 27, 2014 at the ETA sampling location. It should be noted the sampling time period was not a complete 8 hours (3.83 hours) and this

sample would typically be considered invalid. Analytical results for the 8-hour TSP sampling using the GilAir-3 sampler are summarized in Table 5.

7.3 Trace Metals

7.3.1 24-hour Average Trace Metals

There were five (5) integrated 24-hour average lead concentrations exceeding the Ontario Ministry of the Environment Air Quality Standard of $0.5 \mu\text{g}/\text{m}^3$ measured during sampling period. The exceedances occurred on June 7, 10 and 20, 2014. Details are as follows.

- There was one 24-hour average lead concentration ($1.46 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 7, 2014 at the GFT sampling location. On that day winds were light to moderate with an average daily wind speed of 2.97 m/s and were blowing from no predominant direction.
- There was one 24-hour average lead concentration ($2.44 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 7, 2014 at the NCS sampling location. On that day winds were light to moderate with an average daily wind speed of 2.97 m/s and were blowing from no predominant direction. This measured concentration was the maximum 24-hour average lead concentration measured during the sampling period.
- There was one 24-hour average lead concentration ($0.580 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 10, 2014 at the GFT sampling location. Meteorological data for most of that day was missing, as such daily wind speed and wind direction data in not available.
- There was one 24-hour average lead concentration ($0.593 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 10, 2014 at the TPH sampling location. Meteorological data for most of that day was missing, as such daily wind speed and wind direction data in not available.
- There was one 24-hour average lead concentration ($0.886 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 20, 2014 at the TPH sampling location. On that day winds were light to moderate with an average daily wind speed of 3.29 m/s and were blowing from no predominant direction.

In addition to the above exceedances, detectable concentrations of barium, iron, manganese, sodium, sulphur, and zinc were observed during the sampling program. All other measured trace metal concentrations were less the laboratory detection limit.

Barium

- Detectable concentrations of barium were observed in air samples collected on June 7, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $10 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of barium were observed in air samples collected on June 10, 2014 at the NCS, GFT, and TPH sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $10 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of barium were observed in air samples collected on June 20, 2014 at the NCS, GFT, and TPH sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $10 \mu\text{g}/\text{m}^3$.
- A maximum 24-hour average barium concentration of $0.094 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the ETA sampling location using the TSP MiniVol sampler.

Iron

- Detectable concentrations of iron were observed in air samples collected on June 7, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $\mu\text{g}/\text{m}^3$.
- Detectable concentrations of iron were observed in air samples collected on June 10, 2014 at the NCS, and TPH sampling locations. All detectable concentrations were below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $4 \mu\text{g}/\text{m}^3$.
- A detectable concentration of iron was observed in an air sample collected on June 20, 2014 at the TPH sampling location. All detectable concentrations were below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $4 \mu\text{g}/\text{m}^3$.
- A maximum 24-hour average iron concentration of $2.26 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the NCS sampling location using the TSP MiniVol sampler.

Manganese

- Detectable concentrations of manganese were observed in air samples collected on June 7, 2014 at the NCS, GFT, and TPH sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $0.2 \mu\text{g}/\text{m}^3$ for PM_{10} .
- Detectable concentrations of manganese were observed in air samples collected on June 10, 2014 at the NCS, and TPH sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $0.2 \mu\text{g}/\text{m}^3$ for PM_{10} .
- A detectable concentration of manganese was observed in an air sample collected on June 20, 2014 at the TPH sampling location. All detectable concentrations were well

below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $0.2 \mu\text{g}/\text{m}^3$ for PM_{10} .

- A maximum 24-hour average manganese concentration of $0.045 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the TPH sampling location using the TSP MiniVol sampler.

Sodium

- Detectable concentrations of sodium were observed in air samples collected on June 4, 2014 at the NCS, GFT, and ETA sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of sodium were observed in air samples collected on June 7, 2014 at the NCS and TPH sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of sodium were observed in air samples collected on June 10, 2014 at the NCS, GFT, and TPH sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of sodium were observed in air samples collected on June 17, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of sodium were observed in air samples collected on June 20, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- A maximum 24-hour average sodium concentration of $6.0 \mu\text{g}/\text{m}^3$ was measured on June 17, 2014 at the NCS sampling location using the TSP MiniVol sampler.

Sulphur

- A detectable concentration of sulphur was observed in an air sample collected on June 4, 2014 at the TPH sampling location. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of sulphur were observed in air samples collected on June 7, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of sulphur were observed in air samples collected on June 10, 2014 at the NCS, GFT, and TPH sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of sulphur were observed in air samples collected on June 17, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable

concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.

- Detectable concentrations of sulphur were observed in air samples collected on June 20, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- A maximum 24-hour average sulphur concentration of $3.26 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the NCS sampling location using the TSP MiniVol sampler.

Tin

- Detectable concentrations of tin were observed in air samples collected on June 17, 2014 at ETA and GFT sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- A maximum 24-hour average tin concentration of $0.33 \mu\text{g}/\text{m}^3$ was measured on June 17, 2014 at the GFT sampling location using the TSP MiniVol sampler.

Zinc

- Detectable concentrations of zinc were observed in air samples collected on June 4, 2014 at the GFT, ETA, and TPH sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of zinc were observed in air samples collected on June 7, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of zinc were observed in air samples collected on June 10, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of zinc were observed in air samples collected on June 17, 2014 at the GFT and ETA sampling locations. All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of zinc were observed in air samples collected on June 20, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). All detectable concentrations were well below the Ontario Ministry of the Environment Ambient Air Quality Criteria 24-hour average concentration of $120 \mu\text{g}/\text{m}^3$.
- A maximum 24-hour average zinc concentration of $5.56 \mu\text{g}/\text{m}^3$ was measured on June 10, 2014 at the GFT sampling location using the PM_{10} MiniVol sampler.

Trace metal results using TSP and PM_{10} particle size separation have been included together for comparison purposes. Analytical results for the 24-hour trace metal parameters are summarized in Table 6.

7.3.2 8-hour Average Trace Metals

MiniVol Sampler

There were no 8 hour trace metal samples collected using the MiniVol sampler that exceeded the Yukon Occupational Health Regulations. The majority of trace metal concentrations were less than the laboratory detection limit. Detectable concentrations of lead, zinc, barium, copper, sodium, and sulphur were observed during the sampling program. The following comments pertain to the detectable trace metal concentrations measured:

Lead

- Detectable concentrations of lead were observed in air samples collected on June 4, 2014 at the NCS and TPH sampling locations. All detectable concentrations were well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $150 \mu\text{g}/\text{m}^3$ and the WorkSafe BC Occupational Health and Safety 8-hour time weighted average exposure limit of $50 \mu\text{g}/\text{m}^3$.
- A detectable concentration of lead was observed in an air sample collected on June 7, 2014 at the GFT sampling location. The detectable concentration was well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $150 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of lead were observed in air samples collected on June 20, 2014 at the NCS, GFT, and TPH sampling locations. All detectable concentrations were well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $150 \mu\text{g}/\text{m}^3$.
- A maximum 8-hour average lead concentration of $1.63 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the TPH sampling location using the TSP MiniVol sampler.

Zinc

- Detectable concentrations of zinc were observed in air samples collected on June 4, 2014 at the NCS and TPH sampling locations. There are no Yukon or BC Occupational Health 8-hour standards for zinc.
- A detectable concentration of zinc was observed in an air sample collected on June 7, 2014 at the GFT sampling location. There are no Yukon or BC Occupational Health 8-hour standards for zinc.
- A detectable concentration of zinc was observed in an air sample collected on June 13, 2014 at the NCS sampling location. There are no Yukon or BC Occupational Health 8-hour standards for zinc.
- Detectable concentrations of zinc were observed in air samples collected on June 20, 2014 at the NCS, GFT, and TPH sampling locations. There are no Yukon or BC Occupational Health 8-hour standards for zinc.
- A maximum 8-hour average zinc concentration of $2.19 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the TPH sampling location using the TSP MiniVol sampler.

Barium

- A detectable concentration of barium was observed in an air sample collected on June 7, 2014 at the GFT sampling location. The detectable concentration was well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of 500 µg/m³.
- Detectable concentrations of barium were observed in air samples collected on June 20, 2014 at the GFT, and TPH sampling locations. All concentrations were well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of 500 µg/m³.
- A maximum 8-hour average barium concentration of 0.118 µg/m³ was measured on June 20, 2014 at the TPH sampling location using the TSP MiniVol sampler.

Copper

- A detectable concentration of copper was observed in an air sample collected on June 13, 2014 at the NCS sampling location. The detectable concentration was well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of 1,000 µg/m³.
- Detectable concentrations of copper were observed in air samples collected on June 20, 2014 at the NCS, GFT, and TPH sampling locations. All concentrations were well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of 1,000 µg/m³.
- A maximum 8-hour average copper concentration of 2.45 µg/m³ was measured on June 13, 2014 at the NCS sampling location using the TSP MiniVol sampler.

Sodium

- Detectable concentrations of sodium were observed in air samples collected on June 17, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). There are no Yukon or BC Occupational Health 8-hour standards for sodium.
- Detectable concentrations of sodium were observed in air samples collected on June 20, 2014 at all four sampling locations (NCS, GFT, ETA, and TPH). There are no Yukon or BC Occupational Health 8-hour standards for sodium.
- A maximum 8-hour average sodium concentration of 10.7 µg/m³ was measured on June 17, 2014 at the NCS sampling location using the TSP MiniVol sampler.

Sulphur

- A detectable concentration of sulphur was observed in an air sample collected on June 7, 2014 at the GFT sampling location. There are no Yukon or BC Occupational Health 8-hour standards for sulphur.
- A detectable concentration of sulphur was observed in an air sample collected on June 17, 2014 at the NCS sampling location. There are no Yukon or BC Occupational Health 8-hour standards for sulphur.
- Detectable concentrations of sulphur were observed in air samples collected on June 20, 2014 at the NCS, GFT, and TPH sampling locations. There are no Yukon or BC Occupational Health 8-hour standards for sulphur.
- A maximum 8-hour average sulphur concentration of 3.20 µg/m³ was measured on June 7, 2014 at the GFT sampling location using the TSP MiniVol sampler.

Analytical results for the 24-hour trace metal parameters are summarized in Table 7.

GilAir-3 Sampler

There were no 8 hour samples collected using the GilAir-3 personal sampling pumps that exceeded the Yukon Occupational Health Regulations. Detectable concentrations of lead, manganese and antimony were observed during the sampling program. All other trace metal concentrations were less the laboratory detection limit.

The following comments pertain to the trace metal sampling results:

Lead

- A detectable concentration of lead was observed in an air sample collected on May 29, 2014 at the ETA sampling location. The detectable concentration was well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $150 \mu\text{g}/\text{m}^3$.
- Detectable concentrations of lead were observed in air samples collected on June 10, 2014 at the NCS, GFT, and TPH sampling locations. All detectable concentrations were well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $150 \mu\text{g}/\text{m}^3$.
- A maximum 8-hour average lead concentration of $0.65 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the Fuel Tank sampling location using the TSP GilAir-3 sampler.

Manganese

- Detectable concentrations of manganese were observed in air samples collected on May 27, 2014 at all four sampling locations (NCS, GFT, ETA and TPH). All concentrations were well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $5,000 \mu\text{g}/\text{m}^3$. It should be noted the sampling time period was not a complete 8 hours for any of the samples and would typically be considered invalid.
- Detectable concentrations of manganese were observed in air samples collected on May 28, 2014 at the NCS and ETA sampling locations. All detectable concentrations were well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $5,000 \mu\text{g}/\text{m}^3$.
- A detectable concentration of manganese was observed in an air sample collected on May 29, 2014 at the ETA sampling location. The detectable concentration was well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $5,000 \mu\text{g}/\text{m}^3$.
- A maximum 8-hour average manganese concentration of $2.19 \mu\text{g}/\text{m}^3$ was measured on May 28, 2014 at the Norcan Shop sampling location using the TSP GilAir-3 sampler.

Antimony

- A detectable concentration of antimony was observed in an air sample collected on May 29, 2014 at the GFT sampling location. The detectable concentration was well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $500 \mu\text{g}/\text{m}^3$. The maximum 8-hour average antimony concentration was measured on this day.

Analytical results for the GilAir-3 8-hour trace metal parameters are summarized in Table 8.

7.4 Quality Assurance and Quality Control

One field quality assurance/quality control (QA/QC) sample was collected during the program. Sample NSC-PM10-Blanks was submitted to the laboratory and analysed for PM₁₀. Results of the analyses indicated there to be no measurable PM₁₀ measured on the filter.

8.0 SUMMARY AND CONCLUSIONS

This section of the report provides a summary of the air quality monitoring program and any conclusions drawn from the. The conclusions are as follows:

SLR Training Program

SLR conducted an on-site training program for on-site personnel for the use of GOY owned Airmetrics MiniVol sampler. The program intent was to collect air quality data using the MiniVol samplers during construction activities of an interim water treatment plant. The training programs were well attended and trainees were proficient in the use of the MiniVol sampler. Additionally, the use of the Gilian GilAir-3 personal sampler pump was also discussed during the training program.

Wind Speed and Wind Direction

- Wind data for the sampling period indicated average hourly wind speeds over the sampling period was 2.6 m/s with the most frequent winds from the south, followed by south-southeast winds. Calm winds (<1 m/s) occurred approximately 10% of the time.

Temperature Data

- The mean ambient temperature during the sampling period was 8.5 °C. Hourly temperatures ranged from a low of 2.2 °C on June 4, 2014 to a high of 17.0 °C on May 30, 2014. Temperature data from 16:00 June 10 through 13:00 June 12 was missing due to on-site calibration activities being performed by the TEES contractor.

Total Suspended Particulate (TSP) 24-hour Average

- There were no 24-hour average TSP concentrations exceeding the Government of Yukon Ambient Air Quality Standard of 120 µg/m³ measured at any of the monitoring locations. A maximum 24-hour average TSP concentration of 45.2 µg/m³ was measured on June 7, 2014 at the NCS sampling location.

Particulate Matter less than 10 Microns (PM₁₀) 24-hour Average

- There were no 24-hour average PM₁₀ concentrations exceeding the Government of Yukon Ambient Air Quality Standard of 50 µg/m³ measured at any of the monitoring locations. A maximum 24-hour average PM₁₀ concentration of 22.5 µg/m³ was measured on June 7, 2014 at the GFT sampling location.

Total Suspended Particulate (TSP) 8-hour Average

- A maximum 8-hour average TSP concentration of $46.5 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the GFT sampling location using the MiniVol samplers. There are no relevant 8-hour standards for TSP.
- All 8-hour average TSP concentrations collected using the GilAir-3 personal sampling pumps were less than the analytical detection limit with the exception on one sample. A TSP concentration of $260 \mu\text{g}/\text{m}^3$ was measured on May 27, 2014 at the ETA sampling location. It should be noted the sampling time period was not a complete 8 hours (3.83 hours) and this sample would typically be considered invalid.

24-hour Average Trace Metals

- There were five (5) integrated 24-hour average lead concentrations exceeding the Ontario Ministry of the Environment Air Quality Standard of $0.5 \mu\text{g}/\text{m}^3$ measured during sampling period. The exceedances occurred on June 7, 10, and 20, 2014. Details are as follows.
 - There was one 24-hour average lead concentration ($1.46 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 7, 2014 at the GFT sampling location. On that day winds were light to moderate with an average daily wind speed of 2.97 m/s and were blowing from no predominant direction.
 - There was one 24-hour average lead concentration ($2.44 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 7, 2014 at the NCS sampling location. On that day winds were light to moderate with an average daily wind speed of 2.97 m/s and were blowing from no predominant direction. This measured concentration was the maximum 24-hour average lead concentration measured during the sampling period.
 - There was one 24-hour average lead concentration ($0.580 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 10, 2014 at the GFT sampling location. Meteorological data for most of that day was missing, as such daily wind speed and wind direction data is not available.
 - There was one 24-hour average lead concentration ($0.593 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 10, 2014 at the TPH sampling location. Meteorological data for most of that day was missing, as such daily wind speed and wind direction data is not available.
 - There was one 24-hour average lead concentration ($0.886 \mu\text{g}/\text{m}^3$) exceeding the Ontario Ministry of the Environment 24-hour weighted time average standard of $0.5 \mu\text{g}/\text{m}^3$ measured on June 20, 2014 at the TPH sampling location. On that day winds were light to moderate with an average daily wind speed of 3.29 m/s and were blowing from no predominant direction.

- Detectable concentrations of barium, iron, manganese, sodium, sulphur, tin, and zinc were observed during the sampling program. All detectable concentrations were well below applicable criteria. All other measured trace metal concentrations were less than the laboratory detection limit.
 - A maximum 24-hour average barium concentration of $0.094 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the ETA sampling location using the TSP MiniVol sampler.
 - A maximum 24-hour average iron concentration of $2.26 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the NCS sampling location using the TSP MiniVol sampler.
 - A maximum 24-hour average manganese concentration of $0.045 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the TPH sampling location using the TSP MiniVol sampler.
 - A maximum 24-hour average sodium concentration of $6.0 \mu\text{g}/\text{m}^3$ was measured on June 17, 2014 at the NCS sampling location using the TSP MiniVol sampler.
 - A maximum 24-hour average sulphur concentration of $3.26 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the NCS sampling location using the TSP MiniVol sampler.
 - A maximum 24-hour average tin concentration of $0.33 \mu\text{g}/\text{m}^3$ was measured on June 17, 2014 at the GFT sampling location using the TSP MiniVol sampler.
 - A maximum 24-hour average zinc concentration of $5.56 \mu\text{g}/\text{m}^3$ was measured on June 10, 2014 at the GFT sampling location using the PM_{10} MiniVol sampler.

8-hour Average Trace Metals

- There were no 8 hour trace metal samples collected using the MiniVol sampler that exceeded the Yukon Occupational Health Regulations or WorkSafe BC Occupational Health 8-hour standards.
- The majority of trace metal concentrations were less than the laboratory detection limit. Detectable concentrations of lead, zinc, barium, copper, sodium, and sulphur were observed during the sampling program but were all well below applicable available criteria.
 - A maximum 8-hour average lead concentration of $1.63 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the TPH sampling location using the TSP MiniVol sampler.
 - A maximum 8-hour average zinc concentration of $2.19 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the TPH sampling location using the TSP MiniVol sampler.
 - A maximum 8-hour average barium concentration of $0.118 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the TPH sampling location using the TSP MiniVol sampler.

- A maximum 8-hour average copper concentration of $2.45 \mu\text{g}/\text{m}^3$ was measured on June 13, 2014 at the NCS sampling location using the TSP MiniVol sampler.
- A maximum 8-hour average sodium concentration of $10.7 \mu\text{g}/\text{m}^3$ was measured on June 17, 2014 at the NCS sampling location using the TSP MiniVol sampler.
- A maximum 8-hour average sulphur concentration of $3.20 \mu\text{g}/\text{m}^3$ was measured on June 7, 2014 at the GFT sampling location using the TSP MiniVol sampler.
- There were no 8 hour samples collected using the GilAir-3 personal sampling pumps that exceeded the Yukon Occupational Health Regulations WorkSafe BC Occupational Health 8-hour standards. Detectable concentrations of lead, manganese and antimony were observed during the sampling program but were all well below applicable available criteria. All other trace metal concentrations were less the laboratory detection limit.
 - A maximum 8-hour average lead concentration of $0.65 \mu\text{g}/\text{m}^3$ was measured on June 20, 2014 at the Fuel Tank sampling location using the TSP GilAir-3 sampler.
 - A maximum 8-hour average manganese concentration of $2.19 \mu\text{g}/\text{m}^3$ was measured on May 28, 2014 at the Norcan Shop sampling location using the TSP GilAir-3 sampler.
 - A detectable concentration of antimony was observed in an air sample collected on May 29, 2014 at the GFT sampling location. The detectable concentration was well below the Yukon Occupational Health Regulations 8 hour Permissible Concentration of $500 \mu\text{g}/\text{m}^3$. The maximum 8-hour average antimony concentration was measured on this day.

The air monitoring program was initiated to measure particulate matter and trace metals that may become airborne in dust generated during activities associated with the construction of an interim water treatment plant. The area of construction of the water treatment plant was a location where soil historically impacted with lead and zinc was anticipated.

There were five (5) 24-hour average lead concentration samples collected that exceeded the "Ontario's Ambient Air Quality Criteria" at near field area sampling locations during the monitoring program. All other measured 24-hour average parameters (particulate matter and trace metals) were less than the laboratory detection limit and/or well below referenced criteria. There were no exceedances of 8-hour occupational standards for trace metals measured during the sampling program with most trace metal concentrations being less than the laboratory detection limit and/or well below available referenced criteria.

9.0 STATEMENT OF LIMITATIONS

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for the Government of Yukon (GOY). It is intended for the sole and exclusive use of GOY and its authorized agents for the purpose(s) set out in this report. Any use of, reliance on or decision made based on this report by any person other than GOY for any purpose, or by GOY for a purpose other than the purpose(s) set out in this report, is the sole responsibility of such other person or GOY. SLR makes no representation or warranty to any other person with regard to this report and the work referred to in this report and they accept no duty of care to any other person or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm that may be suffered or incurred by any other person as a result of the use of, reliance on, any decision made or any action taken based on this report or the work referred to in this report.

This report has been prepared for specific application to this site and is based on the interpretation of data collected from the ambient air quality monitoring network and the results of laboratory analyses, which were limited to the quantification in select samples of those substances specifically identified in the report. SLR expresses no warranty with respect to the accuracy of the laboratory analyses, methodologies used, or presentation of analytical results by the laboratory. Actual concentrations of the substances identified in the samples submitted may vary according to the sampling and testing procedures used.

Nothing in this report is intended to constitute or provide a legal opinion. SLR makes no representation as to the requirements of or compliance with environmental laws, rules, regulations or policies established by federal, provincial or local government bodies. Revisions to the regulatory standards referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary.

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ANALYTICAL RESULTS TABLES

Ambient Air Quality Training and Monitoring Program
Faro Mine Complex
Faro, Yukon
SLR Project No.: 208.04601.00000

Table 2
24-hour Average Particulate Matter (PM₁₀) – MiniVol Sampler

Lab ID	Sample Date	Sample ID	Sampler	Particle Size Range	Sample Time	Concentration (ug/m ³)	*Standard (ug/m ³)
WI9072	June 4, 2014	ETA-PM10-24-004	MiniVol	PM10	24.00	<4.7	50
WI9074	June 4, 2014	GFT-PM10-24-004	MiniVol	PM10	24.00	6.0	50
WI9076	June 4, 2014	NCS-PM10-24-004	MiniVol	PM10	24.00	6.3	50
WI9078	June 4, 2014	TPH-PM10-24-004	MiniVol	PM10	24.00	9.5	50
WI9080	June 7, 2014	ETA-PM10-24-005	MiniVol	PM10	24.00	10.8	50
WI9082	June 7, 2014	GFT-PM10-24-005	MiniVol	PM10	24.00	22.5	50
WI9084	June 7, 2014	NCS-PM10-BLANKS	MiniVol	PM10	24.00	<30	50
WI9086	June 7, 2014	TPH-PM10-24-005	MiniVol	PM10	24.00	11.6	50
WN5953	June 10, 2014	NCS-PM10-24-006	MiniVol	PM10	24.00	14.9	50
WN5955	June 10, 2014	TPH-PM10-24-006	MiniVol	PM10	24.00	16.8	50
WN5957	June 10, 2014	ETA-PM10-006	MiniVol	PM10	24.00	10.5	50
WN5959	June 10, 2014	GFT-PM10-24-006	MiniVol	PM10	24.00	15	50

Notes:

*As outlined in Yukon Environment "Yukon Ambient Air Quality Standards" dated April 2010, updated September 2014

< - less than the laboratory detection limit indicated

ug/m³ - micrograms per cubic metre

NG - No guideline

Bold, underline and highlighted indicates the sample concentration exceeds the referenced guideline concentration.

Testing was conducted by Maxxam Analytics of Mississauga, Ontario.

See laboratory report for detection limits, testing protocols and QA/QC procedures.

Table 3
24-hour Average Particulate Matter (TSP) – MiniVol Sampler

Lab ID	Sample Date	Sample ID	Sampler	Particle Size Range	Sample Time	Concentration (ug/m ³)	Standard* (ug/m ³)
WI9073	June 4, 2014	ETA-TSP-24-004	MiniVol	TSP	24.00	7.8	120
WI9075	June 4, 2014	GFT-TSP-24-004	MiniVol	TSP	24.00	6.0	120
WI9085	June 7, 2014	NCS-TSP-24-005	MiniVol	TSP	24.00	45.2	120
WI9087	June 7, 2014	TPH-TSP-24-005	MiniVol	TSP	24.00	42.0	120
WN5952	June 10, 2014	NCS-TSP-24-006	MiniVol	TSP	24.00	17.5	120
WN5954	June 10, 2014	TPH-TSP-24-006	MiniVol	TSP	24.00	26.9	120
WN5956	June 10, 2014	ETA-TSP-24-006	MiniVol	TSP	24.00	20.7	120
WN5958	June 10, 2014	GFT-TSP-24-006	MiniVol	TSP	24.00	18.7	120
WN5960	June 13, 2014	NCS-TSP-24-007	MiniVol	TSP	24.00	7.8	120
WN5963	June 13, 2014	TPH-TSP-24-007	MiniVol	TSP	24.00	<10	120
WN5964	June 13, 2014	ETA-TSP-24-007	MiniVol	TSP	24.00	8.9	120
WN5966	June 13, 2014	GFT-TSP-24-007	MiniVol	TSP	24.00	9.1	120
WN5794	June 17, 2014	NCS-TSP-24-008	MiniVol	TSP	24.00	<8.1	120
WN5796	June 17, 2014	TPH-TSP-24-008	MiniVol	TSP	24.00	<4.5	120
WN5798	June 17, 2014	ETA-TSP-24-008	MiniVol	TSP	24.00	5.9	120
WN5800	June 17, 2014	GFT-TSP-24-008	MiniVol	TSP	24.00	28.7	120
WN5802	June 20, 2014	NCS-TSP-24-009	MiniVol	TSP	24.00	9.8	120
WN5804	June 20, 2014	TPH-TSP-24-009	MiniVol	TSP	24.00	36.6	120
WN5806	June 20, 2014	ETA-TSP-24-009	MiniVol	TSP	24.00	13.1	120
WN5808	June 20, 2014	GFT-TSP-24-009	MiniVol	TSP	24.00	13.8	120

Notes:

*As outlined in Yukon Environment "Yukon Ambient Air Quality Standards" dated April 2010, updated September 2014

< - less than the laboratory detection limit indicated

ug/m³ - micrograms per cubic metre

NG - No guideline

Bold, underline and highlighted indicates the sample concentration exceeds the referenced guideline concentration.

Testing was conducted by Maxxam Analytics of Mississauga, Ontario.

See laboratory report for detection limits, testing protocols and QA/QC procedures.

*As outlined in Yukon Environment "Yukon Ambient Air Quality Standards" dated April 2010, updated September 2014

Table 4
8-hour Average Particulate Matter (TSP) – MiniVol Sampler

Lab ID	Sample Date	Sample ID	Sampler	Particle Size Range	Sample Time	Concentration (ug/m ³)	Permissible Concentration* (ug/m ³)
WI9077	June 4, 2014	NCS-TSP-08-004	MiniVol	TSP	8.00	37	NG
WI9079	June 4, 2014	TPH-TSP-8-004	MiniVol	TSP	8.00	19	NG
WI9083	June 7, 2014	GFT-TSP-08-005	MiniVol	TSP	8.00	46	NG
WN5961	June 13, 2014	NCS-TSP-08-007	MiniVol	TSP	8.00	<20	NG
WN5962	June 13, 2014	TPH-TSP-08-007	MiniVol	TSP	8.00	<13	NG
WN5967	June 13, 2014	GFT-TSP-08-007	MiniVol	TSP	8.00	18	NG
WN5795	June 17, 2014	NCS-TSP-08-008	MiniVol	TSP	8.00	<14	NG
WN5797	June 17, 2014	TPH-TSP-08-008	MiniVol	TSP	8.00	<13	NG
WN5799	June 17, 2014	ETA-TSP-08-008	MiniVol	TSP	8.00	<14	NG
WN5801	June 17, 2014	GFT-TSP-08-008	MiniVol	TSP	8.00	<20	NG
WN5803	June 20, 2014	NCS-TSP-08-009	MiniVol	TSP	8.00	38	NG
WN5805	June 20, 2014	TPH-TSP-08-009	MiniVol	TSP	8.00	75	NG
WN5807	June 20, 2014	ETA-TSP-08-009	MiniVol	TSP	8.00	27	NG
WN5809	June 20, 2014	GFT-TSP-08-009	MiniVol	TSP	8.00	30	NG

Notes:

*As outlined in Yukon Workers Compensation Health and Safety Board "Yukon Occupational Health Regulations"

< - less than the laboratory detection limit indicated

ug/m³ - micrograms per cubic metre

NG - No guideline

Bold, underline and highlighted indicates the sample concentration exceeds the referenced guideline concentration.

Testing was conducted by Maxxam Analytics of Mississauga, Ontario.

See laboratory report for detection limits, testing protocols and QA/QC procedures.

Table 5
8-hour Average Particulate Matter (TSP) – GilAir Sampler

Lab ID	Sample Date	Sample ID	Sampler	Particle Size Range	Sample Time	Concentration (ug/m ³)	Permissible Concentration* (ug/m ³)
L1465466-1	May 27, 2014	Norcan Shop	GilAir-3	TSP	3.32	<200	NG
L1465466-2	May 27, 2014	Fuel Tanks	GilAir-3	TSP	3.88	<180	NG
L1465466-3	May 27, 2014	ETA	GilAir-3	TSP	3.83	260	NG
L1465466-4	May 27, 2014	Tailings Pumphouse	GilAir-3	TSP	4.05	<160	NG
L1465466-5	May 28, 2014	Tailings Pumphouse	GilAir-3	TSP	8.38	<77	NG
L1465466-6	May 28, 2014	Fuel Tanks	GilAir-3	TSP	8.32	<83	NG
L1465466-7	May 28, 2014	Norcan Shop	GilAir-3	TSP	8.23	<83	NG
L1465466-8	May 28, 2014	ETA	GilAir-3	TSP	8.30	<83	NG
L1467002-1	May 29, 2014	ETA	GilAir-3	TSP	8.00	<83	NG
L1467002-2	May 29, 2014	Norcan Shop	GilAir-3	TSP	8.25	<83	NG
L1467002-3	May 29, 2014	Fuel Tanks	GilAir-3	TSP	7.88	<83	NG
L1467002-4	May 29, 2014	Tailings Pumphouse	GilAir-3	TSP	8.07	<83	NG
L1467002-5	June 04, 2014	Norcan Shop	GilAir-3	TSP	7.18	<91	NG
L1467002-6	June 04, 2014	ETA	GilAir-3	TSP	6.33	<110	NG
L1467002-7	June 04, 2014	Tailings Pumphouse	GilAir-3	TSP	6.32	<110	NG
L1467002-8	June 04, 2014	Fuel Tanks	GilAir-3	TSP	6.98	<100	NG
L14670639-1	June 10, 2014	Norcan Shop	GilAir-3	TSP	7.58	<91	NG
L14670639-2	June 10, 2014	Tailings Pumphouse	GilAir-3	TSP	7.93	<83	NG
L14670639-3	June 10, 2014	ETA	GilAir-3	TSP	7.93	<83	NG
L14670639-4	June 10, 2014	Fuel Tanks	GilAir-3	TSP	7.82	<83	NG

Notes:

*As outlined in Yukon Workers Compensation Health and Safety Board "Yukon Occupational Health Regulations"

< - less than the laboratory detection limit indicated

ug/m³ - micrograms per cubic metre

NG - No guideline

Bold, underline and highlighted indicates the sample concentration exceeds the referenced guideline concentration.

Testing was conducted by ASL Environmental of Edmonton, Alberta.

See laboratory report for detection limits, testing protocols and QA/QC procedures.

Parameter	Unit	Lab ID:	WI9072	WI9074	WI9076	WI9078	WI9073	WI9075	WI9081	WI9085	WI9087	WI9080	WI9082	WI9084	WI9086	WN5953	WN5955	WN5957	WN5959	WN5952	WN5954	WN5956	WN5958	WN5960	WN5963	WN5964	WN5966	WN5794	WN5796	WN5798	WN5800	WN5802	WN5804	WN5806	WN5808	*Criteria (ug/m³)	
		Sample ID:	WI9072-001_24039	WI9074-001_24041	WI9076-001_24043	WI9078-001_24045	WI9073-001_24047	WI9075-001_24049	WI9081-001_24051	WI9085-001_24053	WI9087-001_24055	WI9080-001_24057	WI9082-001_24059	WI9084-001_24061	WI9086-001_24063	WN5953-001_24065	WN5955-001_24067	WN5957-001_24069	WN5959-001_24071	WN5952-001_24073	WN5954-001_24075	WN5956-001_24077	WN5958-001_24079	WN5960-001_24081	WN5963-001_24083	WN5964-001_24085	WN5966-001_24087	WN5794-001_24089	WN5796-001_24091	WN5798-001_24093	WN5800-001_24095	WN5802-001_24097	WN5804-001_24099	WN5806-001_24101	WN5808-001_24103		
		Sample Date:	June 4, 2014	June 4, 2014	June 4, 2014	June 4, 2014	June 4, 2014	June 4, 2014	June 7, 2014	June 7, 2014	June 7, 2014	June 7, 2014	June 7, 2014	June 7, 2014	June 7, 2014	June 7, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014			
		Sample ID:	ETA-TSP-24-001_24049	GFT-TSP-24-001_24051	NCS-TSP-24-001_24053	TPH-TSP-24-001_24055	ETA-TSP-24-001_24057	GFT-TSP-24-001_24059	ETA-TSP-24-001_24061	NCS-TSP-24-001_24063	TPH-TSP-24-001_24065	ETA-TSP-24-001_24067	GFT-TSP-24-001_24069	NCS-TSP-24-001_24071	TPH-TSP-24-001_24073	ETA-TSP-24-001_24075	GFT-TSP-24-001_24077	NCS-TSP-24-001_24079	TPH-TSP-24-001_24081	ETA-TSP-24-001_24083	GFT-TSP-24-001_24085	NCS-TSP-24-001_24087	TPH-TSP-24-001_24089	ETA-TSP-24-001_24091	GFT-TSP-24-001_24093	NCS-TSP-24-001_24095	TPH-TSP-24-001_24097	ETA-TSP-24-001_24099	GFT-TSP-24-001_24101	NCS-TSP-24-001_24103	TPH-TSP-24-001_24105	ETA-TSP-24-001_24107	GFT-TSP-24-001_24109	NCS-TSP-24-001_24111	TPH-TSP-24-001_24113		
Sample length	hours	PM10	PM10	PM10	PM10	TSP	TSP	TSP	TSP	TSP	PM10	PM10	PM10	PM10	TSP	PM10	PM10	PM10	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP		
Aluminum (Al)	ug/m³	<0.78	<0.79	<0.79	<0.78	<0.79	<0.79	<0.79	<0.82	<0.81	<0.82	<0.79	<0.81	NA	<0.81	<0.76	<0.78	<0.78	<0.76	<0.78	<0.77	<0.78	<0.77	<0.78	<0.77	<0.78	<0.77	<0.78	<0.77	<0.78	<0.77	<0.78	<0.77	<0.78	NG		
Antimony (Sb)	ug/m³	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	NA	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	
Arsenic (As)	ug/m³	<0.094	<0.095	<0.095	<0.094	<0.095	<0.095	<0.095	<0.098	<0.097	<0.098	<0.095	<0.097	NA	<0.097	<0.091	<0.092	<0.094	<0.091	<0.094	<0.092	<0.094	<0.091	<0.094	<0.092	<0.094	<0.091	<0.094	<0.092	<0.094	<0.091	<0.094	<0.092	<0.094	<0.091	<0.094	0.3
Barium (Ba)	ug/m³	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	0.094	0.092	0.082	0.025	0.056	NA	0.031	0.028	0.037	<0.016	<0.033	0.031	0.049	<0.024	0.029	<0.014	<0.034	<0.015	<0.014	<0.027	<0.015	<0.014	<0.015	0.021	0.064	<0.014	0.0		

≤ - less than the laboratory detection limit indicated

ug/m³ - micrograms per cubic metre

Bold, underline and highlighted indicates the sample concentration exceeds the referenced guideline concentration.

1 - total water soluble

2 - for PM10

Testing was conducted by Maxxam Analytics of Mississauga, Ontario

See laboratory report for detection limits, testing protocols and QA/QC procedures.

Table 7
8-hour Average Trace Metals – MiniVol Sampler

Parameter	Unit	Lab ID:	WI9077	WI9079	WI9083	WN5961	WN5962	WN5967	WN5795	WN5797	WN5799	WN5801	WN5803	WN5805	WN5807	WN5809	Permissible Concentration* (ug/m³)
		Sample Date:	June 4, 2014	June 4, 2014	June 7, 2014	June 13, 2014	June 13, 2014	June 13, 2014	June 17, 2014	June 17, 2014	June 17, 2014	June 17, 2014	June 20, 2014	June 20, 2014	June 20, 2014	June 20, 2014	
		Sample ID:	NCS-TSP-08-004 / 34257	TPH-TSP-8-004 / 34256	GFT-TSP-08-005 / 16618	NCS-TSP-08-007	TPH-TSP-08-007	GFT-TSP-08-007	NCS-TSP-08-008	TPH-TSP-08-008	ETA-TSP-08-008	GFT-TSP-08-008	NCS-TSP-08-009	TPH-TSP-08-009	ETA-TSP-08-009	GFT-TSP-08-009	
			TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	
Sample length	hours		8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	
Aluminum (Al)	ug/m³		<3.1	<2.3	<2.2	<3.3	<2.2	<2.2	<2.3	<2.2	<2.3	<3.3	<2.9	<2.2	<3.1	<2.2	1000 ¹
Antimony (Sb)	ug/m³		<0.63	<0.45	<0.43	<0.67	<0.43	<0.43	<0.45	<0.43	<0.45	<0.67	<0.59	<0.43	<0.63	<0.43	500
Arsenic (As)	ug/m³		<0.38	<0.27	<0.26	<0.40	<0.26	<0.26	<0.27	<0.26	<0.27	<0.40	<0.35	<0.26	<0.38	<0.26	500
Barium (Ba)	ug/m³		<0.063	<0.045	0.087	<0.067	<0.043	<0.043	<0.045	<0.043	<0.045	<0.067	<0.059	0.118	<0.063	0.044	500
Beryllium (Be)	ug/m³		<0.063	<0.045	<0.043	<0.067	<0.043	<0.043	<0.045	<0.043	<0.045	<0.067	<0.059	<0.043	<0.063	<0.043	2
Bismuth (Bi)	ug/m³		<0.38	<0.27	<0.26	<0.40	<0.26	<0.26	<0.27	<0.26	<0.27	<0.40	<0.35	<0.26	<0.38	<0.26	NG
Boron (B)	ug/m³		<0.38	<0.27	<0.26	<0.40	<0.26	<0.26	<0.27	<0.26	<0.27	<0.40	<0.35	<0.26	<0.38	<0.26	NG
Cadmium (Cd)	ug/m³		<0.13	<0.091	<0.087	<0.13	<0.087	<0.087	<0.091	<0.087	<0.091	<0.13	<0.12	<0.087	<0.13	<0.087	50
Calcium (Ca)	ug/m³		<3.1	<2.3	<2.2	<3.3	<2.2	<2.2	<2.3	<2.2	<2.3	<3.3	<2.9	<2.2	<3.1	<2.2	NG
Chromium (Cr)	ug/m³		<0.31	<0.23	<0.22	<0.33	<0.22	<0.22	<0.23	<0.22	<0.23	<0.33	<0.29	<0.22	<0.31	<0.22	100
Cobalt (Co)	ug/m³		<0.13	<0.091	<0.087	<0.13	<0.087	<0.087	<0.091	<0.087	<0.091	<0.13	<0.12	<0.087	<0.13	<0.087	50
Copper (Cu)	ug/m³		<0.31	<0.23	<0.22	2.45	<0.22	<0.22	<0.23	<0.22	<0.23	<0.33	0.31	0.27	<0.31	0.25	1,000
Iron (Fe)	ug/m³		<3.1	<2.3	<2.2	<3.3	<2.2	<2.2	<2.3	<2.2	<2.3	<3.3	<2.9	3.7	<3.1	<2.2	NG
Lead (Pb)	ug/m³		0.26	0.19	1.45	<0.20	<0.13	<0.13	<0.14	<0.13	<0.14	<0.20	0.39	1.63	<0.19	1.10	150
Lithium (Li)	ug/m³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NG
Magnesium (Mg)	ug/m³		<3.1	<2.3	<2.2	<3.3	<2.2	<2.2	<2.3	<2.2	<2.3	<3.3	<2.9	<2.2	<3.1	<2.2	NG
Manganese (Mn)	ug/m³		<0.063	<0.045	<0.043	<0.067	<0.043	<0.043	<0.045	<0.043	<0.045	<0.067	<0.059	0.100	<0.063	<0.043	5,000
Mercury (Hg)	ug/m³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50
Molybdenum (Mo)	ug/m³		<0.19	<0.14	<0.13	<0.20	<0.13	<0.13	<0.14	<0.13	<0.14	<0.20	<0.18	<0.13	<0.19	<0.13	5,000
Nickel (Ni)	ug/m³		<0.19	<0.14	<0.13	<0.20	<0.13	<0.13	<0.14	<0.13	<0.14	<0.20	<0.18	<0.13	<0.19	<0.13	1,000
Phosphorus (P)	ug/m³		<1.6	<1.1	<1.1	<1.7	<1.1	<1.1	<1.1	<1.1	<1.1	<1.7	<1.5	<1.1	1.7	<1.1	100
Potassium (K)	ug/m³		<6.3	<4.5	<4.3	<6.7	<4.3	<4.3	<4.5	<4.3	<4.5	<6.7	<5.9	<4.3	<6.3	<4.3	NG
Selenium (Se)	ug/m³		<0.63	<0.45	<0.43	<0.67	<0.43	<0.43	<0.45	<0.43	<0.45	<0.67	<0.59	<0.43	<0.63	<0.43	200
Silicon (Si)	ug/m³		<0.63	<0.45	<0.43	<0.67	<0.43	<0.43	<0.45	<0.43	<0.45	<0.67	<0.59	0.45	<0.63	<0.43	10,000
Silver (Ag)	ug/m³		<0.31	<0.23	<0.22	<0.33	<0.22	<0.22	<0.23	<0.22	<0.23	<0.33	<0.29	<0.22	<0.31	<0.22	10
Sodium (Na)	ug/m³		<3.1	<2.3	<2.2	<3.3	<2.2	<2.2	10.7	6.7	6.2	8.4	7.3	4.6	6.6	4.0	NG
Strontium (Sr)	ug/m³		<0.063	<0.045	<0.043	<0.067	<0.043	<0.043	<0.045	<0.043	<0.045	<0.067	<0.059	<0.043	<0.063	<0.043	NG
Sulphur (S)	ug/m³		<1.6	<1.1	3.2	<1.7	<1.1	<1.1	1.8	<1.1	<1.1	<1.7	2.2	4.1	<1.6	2.2	NG
Thallium (Tl)	ug/m³		<0.63	<0.45	<0.43	<0.67	<0.43	<0.43	<0.45	<0.43	<0.45	<0.67	<0.59	<0.43	<0.63	<0.43	100
Tin (Sn)	ug/m³		<0.63	<0.45	<0.43	<0.67	<0.43	<0.43	<0.45	<0.43	<0.45	<0.67	<0.59	<0.43	<0.63	<0.43	2,000
Titanium (Ti)	ug/m³		<0.063	<0.045	<0.043	<0.067	<0.043	<0.043	<0.045	<0.043	<0.045	<0.067	<0.059	<0.043	<0.063	<0.043	NG
Tungsten (W)	ug/m³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,000
Uranium (U)	ug/m³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	200
Vanadium (V)	ug/m³		<0.31	<0.23	<0.22	<0.33	<0.22	<0.22	<0.23	<0.22	<0.23	<0.33	<0.29	<0.22	<0.31	<0.22	500
Zinc (Zn)	ug/m³		0.93	0.39	3.24	1.48	<0.22	<0.22	<0.23	<0.22	<0.23	<0.33	1.04	2.19	<0.31	1.70	NG
Zirconium (Zr)	ug/m³		<0.31	<0.23	<0.22	<0.33	<0.22	<0.22	<0.23	<0.22	<0.23	<0.33	<0.29	<0.22	<0.31	<0.22	5,000

Notes:
*As outlined in Yukon Workers Compensation Heath and Saftey Board "Yukon Occupational Health Regulations"
1 - WorkSafe BC OHS regulations "Table of Exposure Limits for Chemical and Biological Substances" updated February 1, 2015
< - less than the laboratory detection limit indicated
ug/m³ - micrograms per cubic metre
NA - not analyzed
NG - No guideline

Bold, underline and highlighted indicates the sample concentration exceeds the referenced guideline concentration.

Testing was conducted by Maxxam Analytics of Mississauga, Ontario.
See laboratory report for detection limits, testing protocols and QA/QC procedures.

Table 8
8-hour Average Trace Metals – GilAir Sampler

Parameter	Unit	Lab ID:	L1465466-1	L1465466-2	L1465466-3	L1465466-4	L1465466-7	L1465466-8	L1467002-2	L1467002-4	L1467002-1	L1467002-3	L1467002-5	L1467002-6	L1467002-7	L1467002-8	L14670639-1	L14670639-2	L14670639-3	L14670639-4	Permissible Concentration* (ug/m ³)
		Sample Date:	May 27, 2014	May 27, 2014	May 27, 2014	May 27, 2014	May 28, 2014	May 28, 2014	May 29, 2014	May 29, 2014	May 29, 2014	May 29, 2014	June 04, 2014	June 04, 2014	June 04, 2014	June 04, 2014	June 10, 2014	June 10, 2014	June 10, 2014	June 10, 2014	
		Sample ID:	Norcan Shop	Fuel Tanks	ETA	Tailings Pumphouse	Norcan Shop	ETA	Norcan Shop	Tailings Pumphouse	ETA	Fuel Tanks	Norcan Shop	ETA	Tailings Pumphouse	Fuel Tanks	Norcan Shop	Tailings Pumphouse	ETA	Fuel Tanks	
Sample length	hours		TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	TSP	
Aluminum (Al)	ug/m ³		3.32	3.88	3.83	4.05	8.23	8.30	8.25	8.07	8.00	7.88	7.18	6.33	6.32	6.98	7.58	7.93	7.93	7.82	
Antimony (Sb)	ug/m ³		<20	<18	<17	<16	<8.1	<8	<8.1	<8.3	<8.3	<8.5	<9.3	<11	<11	<9.5	<8.8	<8.4	<8.4	<8.5	1000 ¹
Arsenic (As)	ug/m ³		<0.1	<0.09	<0.087	<0.082	<0.04	<0.04	<0.04	<0.041	<0.042	0.042	<0.046	<0.053	<0.053	<0.048	<0.044	<0.042	<0.042	<0.043	500
Barium (Ba)	ug/m ³		<0.14	<0.13	<0.12	<0.12	<0.057	<0.056	<0.057	<0.058	<0.058	<0.059	<0.065	<0.074	<0.074	<0.067	<0.062	<0.059	<0.059	<0.06	500
Beryllium (Be)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	500
Bismuth (Bi)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	2
Boron (B)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	NG
Cadmium (Cd)	ug/m ³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NG
Cadmium (Cd)	ug/m ³		<0.1	<0.09	<0.087	<0.082	<0.04	<0.04	<0.040	<0.041	<0.042	<0.042	<0.046	<0.053	<0.053	<0.048	<0.044	<0.042	<0.042	<0.043	50
Calcium (Ca)	ug/m ³		<200	<180	<170	<160	<81	<80	<81	<83	<83	<85	<93	<111	<111	<95	<88	<84	<84	<85	NG
Chromium (Cr)	ug/m ³		<4	<3.6	<3.5	<3.3	<1.6	<1.6	<1.6	<1.7	<1.7	<1.7	<1.9	<2.1	<2.1	<1.9	<1.8	<1.7	<1.7	<1.7	100
Cobalt (Co)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	50
Copper (Cu)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	1,000
Iron (Fe)	ug/m ³		<40	<36	<35	<33	<16	<16	<16	<17	<17	<17	<19	<21	<21	<19	<18	<17	<17	<17	NG
Lead (Pb)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	0.28	<0.25	<0.28	<0.32	<0.32	<0.29	0.28	0.43	<0.25	0.65	150
Lithium (Li)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	NG
Magnesium (Mg)	ug/m ³		<40	<36	<35	<33	<16	<16	<16	<17	<17	<17	<19	<21	<21	<19	<18	<17	<17	<17	NG
Manganese (Mn)	ug/m ³		0.96	0.79	0.52	0.89	1.4	1.3	<0.24	<0.25	0.94	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	5,000
Mercury (Hg)	ug/m ³		<0.1	<0.09	<0.087	<0.082	<0.04	<0.04	<0.04	<0.041	<0.042	<0.042	<0.046	<0.053	<0.053	<0.048	<0.044	<0.042	<0.042	<0.043	50
Molybdenum (Mo)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	5,000
Nickel (Ni)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	1,000
Phosphorus (P)	ug/m ³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100
Potassium (K)	ug/m ³		<100	<90	<87	<82	<40	<40	<40	<41	<42	<42	<46	<53	<53	<48	<44	<42	<42	<43	NG
Selenium (Se)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	200
Silicon (Si)	ug/m ³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000
Silver (Ag)	ug/m ³		<0.06	<0.054	<0.052	<0.049	<0.024	<0.024	<0.024	<0.025	<0.025	<0.025	<0.028	<0.032	<0.032	<0.029	<0.026	<0.025	<0.025	<0.026	10
Sodium (Na)	ug/m ³		<40	<36	<35	<33	<16	<16	<16	<17	<17	<17	<19	<21	<21	<19	<18	<17	<17	<17	NG
Strontium (Sr)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	NG
Sulphur (S)	ug/m ³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NG
Thallium (Tl)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	100
Tin (Sn)	ug/m ³		<0.6	<0.54	<0.52	<0.49	<0.24	<0.24	<0.24	<0.25	<0.25	<0.25	<0.28	<0.32	<0.32	<0.29	<0.26	<0.25	<0.25	<0.26	2,000
Titanium (Ti)	ug/m ³		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NG
Tungsten (W)	ug/m ³		<1	<0.9	<0.87	<0.82	<0.4	<0.4	<0.4	<0.41	<0.42	<0.42	<0.46	<0.53	<0.53	<0.48	<0.44	<0.42	<0.42	<0.43	5,000
Uranium (U)	ug/m ³		<0.01	<0.009	<0.0087	<0.0082	<0.004	<0.004	<0.004	<0.0041	<0.0042	<0.0042	<0.0046	<0.0053	<0.0053	<0.0048	<0.0044	<0.0042	<0.0042	<0.0043	200
Vanadium (V)	ug/m ³		<4	<3.6	<3.5	<3.3	<1.6	<1.6	<1.6	<1.7	<1.7	<1.7	<1.9	<2.1	<2.1	<1.9	<1.8	<1.7	<1.7	<1.7	500
Zinc (Zn)	ug/m ³		<10	<9	<8.7	<8.2	<4	<4	<4	<4.1	<4.2	<4.2	<4.6	<5.3	<5.3	<4.8	<4.4	<4.2	<4.2	<4.3	NG
Zirconium (Zr)	ug/m ³		<10	<9	<8.7	<8.2	<4	<4	<4	<4.1	<4.2	<4.2	<4.6	<5.3	<5.3	<4.8	<4.4	<4.2	<4.2	<4.3	5,000

Notes:
*As outlined in Yukon Workers Compensation Heath and Saftey Board "Yukon Occupational Health Regulations"
1 - WorkSafe BC OHS regulations "Table of Exposure Limits for Chemical and Biological Substances" updated February 1, 2015
< - less than the laboratory detection limit indicated
ug/m³ - micrograms per cubic metre
NA - not analyzed
NG - No guideline

Bold, underline and highlighted indicates the sample concentration exceeds the referenced guideline concentration.

Testing was conducted by ASL Environmental of Edmonton, Alberta.
See laboratory report for detection limits, testing protocols and QA/QC procedures.

APPENDIX A
SLR ON-SITE TRAINING PRESENTATION

Ambient Air Quality Training and Monitoring Program
Faro Mine Complex
Faro, Yukon
SLR Project No.: 208.04601.00000



global environmental solutions

Air Quality Info Session and MiniVol Operations

Faro Mine, YT - Training Session

J.B. Dennison

5/14/2014

Overview

- Provide intro to air quality monitoring
- Discuss examples of AQ sampling equipment
- Provide operations training for the Airmetrics MiniVol - Tactical Air Sampler
- Discuss the planned Faro Mine AQ Program
- Complete hands-on calibration, setup and troubleshooting

Air Quality and Meteorological monitoring Basics

- Why monitor air quality?
 - Regulatory Requirement (pre-construction, post-construction permit requirements)
 - Protect Human Health and document exposure levels (workers and/or community)
 - Provide model inputs (for permit applications, wind farm siting etc).
 - Provide a full picture of transport pathways (air to water, air to soil, air to air).
 - Inform public
 - Source apportionment studies

Major Components of AQ Monitoring

- Ambient gas monitoring (CO, SO₂, NO_x, O₃, H₂S, air toxics)
- Ambient Particulate monitoring (mass, metals, carbon, asbestos)
- Meteorological
- Industrial hygiene
- Source testing



Air Pollution and Health Affects

Gasses

- Affects individuals differently depending on the constituent, concentration, exposure time
- Ozone – irritates the lungs, asthma etc.
- Many can be toxic/deadly (CO, H₂S)

Particulates

- Particulate below 10 µm in diameter can be inhaled into the lungs.
- Smaller PM_{2.5} particulate can be inhaled much more deeply into the lungs and is generally made of worse stuff (coagulated hydrocarbons – diesel soot, etc)

Air Pollution and Environmental Impacts

Gasses

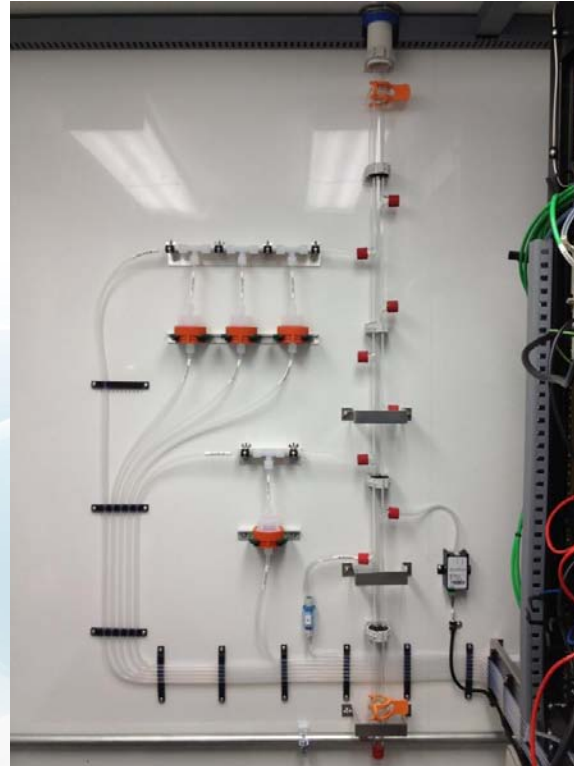
- Many are greenhouse gasses or are the precursors to greenhouse gasses (global warming)
- SO₂ causes acid rain which can damage plant and aquatic life.
- Stratospheric ozone depletion (CFC's)

Particulate

- Wind transport of toxic metals into pristine areas.
- Limiting clear vistas in parks and natural areas
- Coal dust can be blown off railcars during transport which could contaminate soil and ground water near tracks

Types of Monitors

- Gaseous monitors



Types of Monitors (continued)

Manual Particulate Monitors



Automated Particulate Monitors

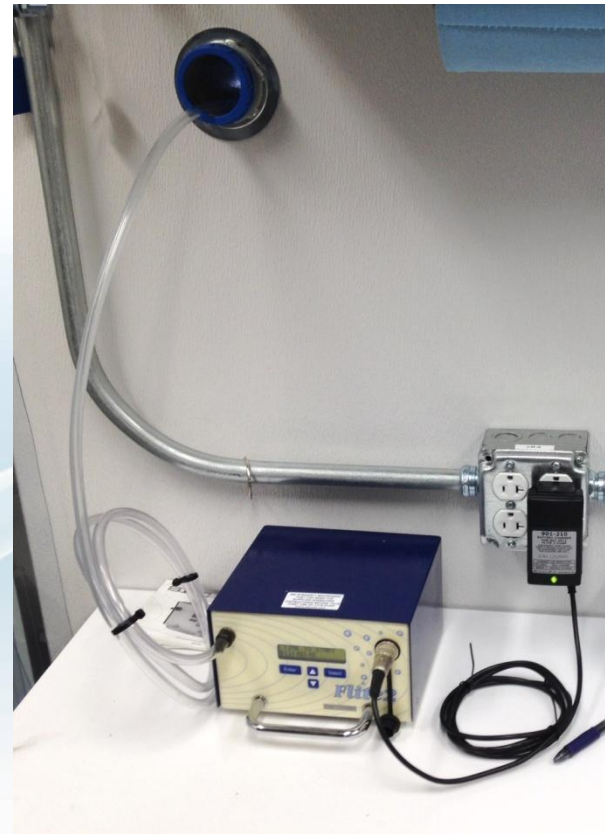


Types of Monitors (continued)

Particulate Hi-Vol



Asbestos



Data acquisition (digital and analog)



Telemetry



global environmental solutions



Giant Mine AQ Monitoring Program

- Giant Mine Overview
 - Abandoned gold mine being remediated by AANDC/PWGSC
 - 237,000 tonnes of arsenic trioxide dust and other metals
 - Asbestos containing surface structures
 - Surface tailings injected as paste into chambers (major earthwork being completed)
- AQ program initiated to protect workers health and the nearby community of Yellowknife

Giant Mine Program Details



Giant Mine Program Details (Continued)



Giant Mine Program Details (Continued)



Faro Mine AQ Program (in planning stage)

- Utilize MiniVol Sampler
- 4 sites around the water treatment plant with the possible addition of one downwind real-time sampler (TSI Dustrak or similar)
- TSP and PM10 at each site
- Sample on a once every 3 day schedule
- Visual alarms from real-time monitor is particulate levels exceed a predetermined concentration (levels to be determined)
- Samples sent to Maxxam lab in Whitehorse

MiniVol Maintenance

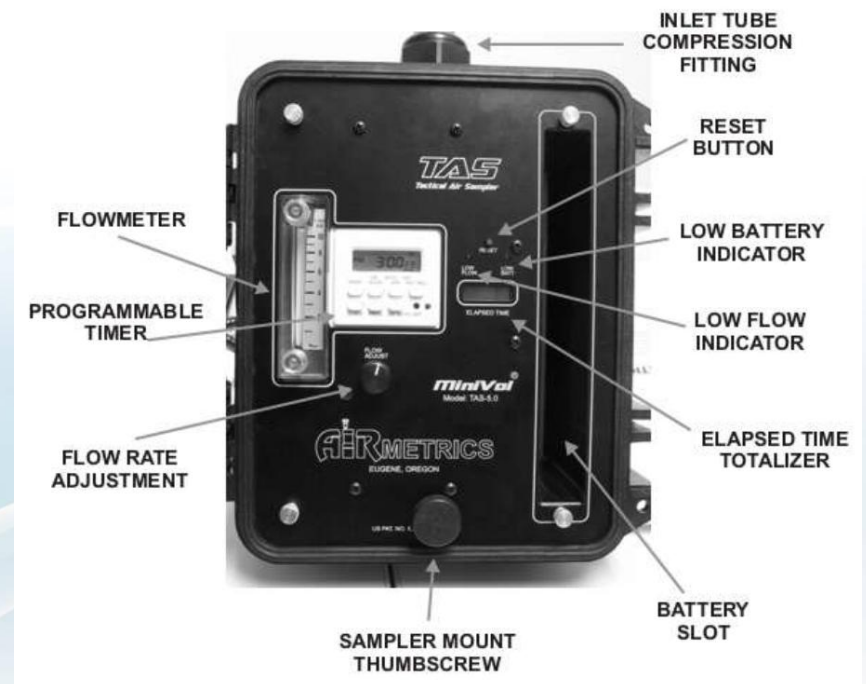
- Clean and grease PM10 impactor (every 5th sampling event)
- Clean heads (initially and as needed)
- Battery testing
- Hands-on Session



Figure 6.1 - EMT Removal

MiniVol Maintenance / Operation

- Sampler walk around
- Timer programming
- Flow meter adjustment
- Std Temp/Press correction based on site conditions



MiniVol Operations – Basic Deployment

- Sample prep (in lab)
- Rotometer setpoint calcs using MV software
- Deployment / filter setup (field sheet part 1)
- Collection (field sheet part 2)
- COC and sample packaging
- Shipment via courier to Maxxam (details pending)
- Reporting (SLR)

Field Log - Example

PM Sampling - Field Data Log

Project: _____

Sampling Date: _____ Page _____ of _____

Start - AtmPres[mmHg]: _____ End - AtmPres[mmHg]: _____

Start - AmbTemp[°C]: _____ End - AmbTemp[°C]: _____

For Data Entry Use:

Project ID _____
 Filter ID _____
 Logged _____
 File Name _____
 Verified _____

Site ID	Sampler Serial #	Filter No.	Start		End		Your Notes
			RotoFlow	ElapTime	RotoFlow	ElapTime	
	Filter Cmt: _____						
	Site Cmt: _____						
	Filter Cmt: _____						
	Site Cmt: _____						

Chain of Custody - Example



www.maxxamanalytics.com

Invoice To:	SLR Consulting (Canada) Ltd.		
Contact:	Tracey Forbister		
Address:	620-3530 Millar Ave Saskatoon		
	Prov: SK	PC: S7P 0B6	
Contact #s:	Ph: 306-374-6800		

Project ID:	208.04601.00000 - FMC AQMP		
Sampled By:			
SERVICE REQUESTED:	☐ RUSH (Contact lab to reserve)		
	☐ 2 DAY		
	☐ 1 DAY		
	☐ SAME DAY		
	Date Required: _____		
	☒ REGULAR (5 Days)		

All samples are held for 60 calendar days after sample receipt, unless specified otherwise.

	Sample ID	Date Sampled	Filter Number	Timer start (hours)	Timer end (hours)	Run Time (min)	Initial Flow Rate	Final Flow Rate	Average Flow (STD L/min)	Total Volume (SCM)	PM10	TSP	Metals by ICP - Axial	HOLD - Do not Analyze	# of Containers Submitted	Special instructions/Notes
1	FMC-PM10-001	May 17, 2014		0	24	1440				0	X				1	
2	FMC-PM10-002	May 17, 2014		0	24	1440				0	X				1	
3	FMC-PM10-003	May 17, 2014		0	24	1440				0	X				1	
4	FMC-PM10-004	May 17, 2014		0	24	1440				0	X				1	
5	FMC-PM10-005	May 17, 2014		0	24	1440				0	X				1	

CHAIN OF CUSTODY

Report To:	SLR Consulting (Canada) Ltd.		
Contact:	Tracey Forbister		
Address:	620-3530 Millar Ave Saskatoon		
	Prov: SK	PC: S7P 0B6	
Contact #s:	Ph: 306-374-6800		

Page:	of
Report Distribution (E-Mail):	
tforbister@slrconsulting.com	
jdennison@slrconsulting.com	

Items to resolve for Faro AQ Program

- How to transport filters from site to Whitehorse (Maxxam lab). – A1 Courier.
- Work plan to be finalized by SLR – New scope and costs being developed.
- Sample prep area – WQ Lab
- Battery testing – Began 5/14. Need to confirm when they stop running.



Questions?? Thank You!

J.B. Dennison

jdennison@slrconsulting.com

Sampling Calendar

May						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17 001
18	19	20 002	21	22	23 003	24
25	26 004	27	28	29 005	30	31

November						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

June						
S	M	T	W	T	F	S
1	2	3	4 006	5	6	7 007
8	9	10 008	11	12	13 009	14
15	16 010	17	18	19 011	20	21
22 012	23	24	25 013	26	27	28 014
29	30					

December						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			



TSP, PM10, Trace metals



TSP, PM10, Trace metals, equipment blank



TSP, PM10, Trace metals, equipment blank, trip blank

APPENDIX B METEOROLOGICAL DATA

Ambient Air Quality Training and Monitoring Program
Faro Mine Complex
Faro, Yukon
SLR Project No.: 208.04601.00000



Faro Meteorological Data May 1 - May 31, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Investigation being undertaken to discover why accumulative precipitation values were decreasing. Data missing at certain periods during the month due to battery issues. New battery installed May 1st. New program installed in June.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SoiRad	Albedo	SoiHF	SoiT1	SoiT2	SoiT3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
146	2014/05/26 16:00	1600	11.72	34.63	3.943	304.5	19.28	279.3	0.369	0.19	43.24	0	10.47	13.79	0.268	26.82	0	0	-1.354	419.6	81.3
146	2014/05/26 17:00	1700	11.56	35.32	4.136	291.4	14.88	206.9	0.289	0.194	13.35	0	11.14	13.37	0.27	26.87	0	0	-1.354	419.4	81.1
146	2014/05/26 18:00	1800	11.35	36.74	3.923	301.7	15.23	146.7	0.214	0.195	5.365	0	11.39	12.87	0.27	26.86	0	0	-1.356	419.4	81.1
146	2014/05/26 19:00	1900	11.63	35.48	2.652	290	22.55	147.4	0.221	0.193	12.73	0	11.43	12.54	0.269	26.83	0	0	-1.355	419.5	81.2
146	2014/05/26 20:00	2000	11.84	35.22	2.759	286.8	17.63	117.6	0.156	0.28	15.32	0	11.45	12.51	0.268	26.8	0	0	-1.356	419.5	81.2
146	2014/05/26 21:00	2100	11.25	37.72	2.167	309.4	17.54	20.69	0.083	0.203	-5.86	0	11.47	12	0.267	26.78	0	0	-1.355	419.5	81.2
146	2014/05/26 22:00	2200	10.53	41.38	1.843	338.3	12.02	-28.7	0.035	0.293	-20.46	0	11.3	11.01	0.265	26.73	0	0	-1.356	419.6	81.3
146	2014/05/26 23:00	2300	9.31	46.12	0.919	31.65	20.96	-57.75	0.009	0.666	-26.65	0	10.95	10	0.264	26.67	0	0	-1.355	419.6	81.3
146	2014/05/27 00:00	2400	7.26	53.69	1.58	39.15	26.26	-61.22	0	0.043	-34.52	0	10.5	8.94	0.262	26.6	0	0	-1.355	419.5	81.2
147	2014/05/27 01:00	100	5.892	57.41	1.842	36.87	27.38	-47.98	0	0	-38.89	0	9.96	7.87	0.259	26.54	0	0	-1.356	419.6	81.3
147	2014/05/27 02:00	200	5.769	59.74	1.356	19.7	11.24	-47.4	0	0	-32.22	0	9.42	7.16	0.257	26.45	0	0	-1.356	419.7	81.4
147	2014/05/27 03:00	300	5.143	61.69	1.625	5.588	10.21	-57.73	0	0	-35.94	0	8.93	6.515	0.255	26.4	0	0	-1.356	419.5	81.2
147	2014/05/27 04:00	400	4.479	65.29	1.293	6.626	22.25	-56.78	0	0	-34.8	0	8.46	5.888	0.254	26.35	0	0	-1.355	419.6	81.3
147	2014/05/27 05:00	500	4.373	66.43	0.783	11.28	15.16	-41.37	0.001	0.353	-31.56	0	8.01	5.376	0.252	26.29	0	0	-1.355	419.6	81.3
147	2014/05/27 06:00	600	5.044	65.26	0.67	35.23	23.18	-15.07	0.012	0.357	-21.41	0	7.61	5.153	0.25	26.24	0	0	-1.357	419.6	81.3
147	2014/05/27 07:00	700	6.146	60.71	0.583	5.02	29.66	12.43	0.042	0.217	-9.49	0	7.32	5.265	0.25	26.22	0	0	-1.355	419.6	81.3
147	2014/05/27 08:00	800	7.47	58.53	0.327	42.71	21.39	57.68	0.096	0.16	7.02	0	7.18	5.698	0.249	26.2	0	0	-1.357	419.6	81.3
147	2014/05/27 09:00	900	8.9	51.46	0.985	85.7	28.37	129.4	0.205	0.162	24.68	0	7.21	6.511	0.249	26.21	0	0	-1.359	419.7	81.4
147	2014/05/27 10:00	1000	11.86	39.77	0.996	65.08	32.72	250.8	0.357	0.172	58.93	0	7.44	7.8	0.25	26.24	0	0	-1.359	419.7	81.4
147	2014/05/27 11:00	1100	12.38	36.79	2.008	41.07	28.57	341.6	0.458	0.183	72.1	0	7.95	9.75	0.252	26.29	0	0	-1.354	419.5	81.2
147	2014/05/27 12:00	1200	13.23	30.47	3.087	182.7	23.23	399.3	0.521	0.199	81.9	0	8.62	11.65	0.254	26.37	0	0	-1.357	419.7	81.4
147	2014/05/27 13:00	1300	13.39	30.54	3.88	192.7	17.02	360.5	0.474	0.205	65.8	0	9.25	13.12	0.256	26.42	0	0	-1.357	419.6	81.3
147	2014/05/27 14:00	1400	14.16	27.84	3.988	188.6	26.95	489.7	0.615	0.214	67.17	0	9.91	14.01	0.258	26.49	0	0	-1.354	419.2	80.9
147	2014/05/27 15:00	1500	14.88	23.91	3.892	187.1	26.46	482	0.623	0.219	66.34	0	10.74	14.95	0.26	26.57	0	0	-1.351	419.4	81.1
147	2014/05/27 16:00	1600	15.48	17.17	3.963	201.1	25.97	429.9	0.587	0.225	70.3	0	11.67	16.33	0.263	26.65	0	0	-1.355	419.6	81.3
147	2014/05/27 17:00	1700	15.53	13.68	4.092	214.3	22.48	370.6	0.531	0.228	57.47	0	12.58	17.09	0.265	26.72	0	0	-1.355	419.1	80.8
147	2014/05/27 18:00	1800	15.66	13.37	3.727	189.2	25.46	288.2	0.446	0.229	47.96	0	13.31	17.48	0.267	26.78	0	0	-1.354	419.3	81
147	2014/05/27 19:00	1900	15.58	15.05	3.356	201.3	27.23	200.6	0.347	0.233	32.23	0	13.85	17.35	0.268	26.81	0	0	-1.356	419.3	81
147	2014/05/27 20:00	2000	15.39	17.46	3.065	228.8	18.18	105.9	0.155	0.456	17.81	0	14.14	16.68	0.268	26.81	0	0	-1.357	419.2	80.9
147	2014/05/27 21:00	2100	14.93	19.08	2.799	210.8	17.46	32.42	0.145	0.243	7.1	0	14.18	15.92	0.268	26.8	0	0	-1.356	419.4	81.1
147	2014/05/27 22:00	2200	13.76	20.99	2.788	215.8	11.19	-30.15	0.064	0.337	-11.97	0	13.97	14.78	0.266	26.74	0	0	-1.357	419.2	80.9
147	2014/05/27 23:00	2300	12.21	25.76	1.55	218.2	16.74	-63.78	0.018	0.616	-25.83	0	13.53	13.35	0.264	26.67	0	0	-1.356	419.4	81.1
147	2014/05/28 00:00	2400	10.56	34.73	1.117	22.02	40.26	-75.7	0	0.101	-38.5	0	12.94	11.86	0.261	26.59	0	0	-1.356	419.4	81.1
148	2014/05/28 01:00	100	10.05	38.83	1.522	229.4	23.86	-73.7	0	0	-39.64	0	12.27	10.58	0.258	26.49	0	0	-1.355	419.4	81.1
148	2014/05/28 02:00	200	8.33	48.4	0.926	108.1	67.92	-71	0	0	-39.97	0	11.6	9.55	0.255	26.4	0	0	-1.357	419.4	81.1
148	2014/05/28 03:00	300	6.373	55.96	1.375	33.62	18.86	-66.08	0	0	-42.53	0	10.96	8.61	0.253	26.31	0	0	-1.356	419.4	81.1
148	2014/05/28 04:00	400	5.733	59.59	1.228	43.01	21.02	-66.05	0	0	-41.74	0	10.35	7.77	0.25	26.24	0	0	-1.353	419.4	81.1
148	2014/05/28 05:00	500	5.15	61.81	1.136	36.7	31.97	-62.52	0.001	0.295	-40.86	0	9.78	7.06	0.248	26.17	0	0	-1.354	419.4	81.1
148	2014/05/28 06:00	600	4.656	63.29	1.98	30.11	6.152	-48.89	0.013	0.505	-38.53	0	9.26	6.447	0.246	26.1	0	0	-1.354	419.4	81.1
148	2014/05/28 07:00	700	5.456	60.72	1.279	49.59	10.87	-11.37	0.062	0.259	-23.48	0	8.79	6.139	0.245	26.05	0	0	-1.357	419.4	81.1
148	2014/05/28 08:00	800	6.852	54.95	1.543	101.9	12.03	48.11	0.137	0.2	-8.59	0	8.44	6.339	0.243	26	0	0	-1.357	419.6	81.3
148	2014/05/28 09:00	900	7.71	51.1	1.691	167.6	18.56	121.5	0.224	0.206	14.68	0	8.3	6.886	0.243	25.99	0	0	-1.356	419.5	81.2
148	2014/05/28 10:00	1000	8.95	46.67	1.531	187.3	28.05	209.7	0.324	0.207	45.98	0	8.43	8.12	0.243	26	0	0	-1.355	419.5	81.2
148	2014/05/28 11:00	1100	9.94	44.66	2.399	204.4	33.93	291.9	0.41	0.217	67.69	0	8.81	9.95	0.245	26.05	0	0	-1.354	419.3	81
148	2014/05/28 12:00	1200	10.53	43.69	2.949	221.1	19.85	310.6	0.429	0.225	63.6	0	9.37	11.49	0.246	26.11	0	0	-1.353	419.4	81.1
148	2014/05/28 13:00	1300	11.14	42.57	3.593	220.6	16.19	329.3	0.448	0.227	63.2	0	9.91	12.73	0.248	26.17	0	0	-1.356	419.2	80.9
148	2014/05/28 14:00	1400	12.33	38.72	2.922	229.6	25.05	462.8	0.601	0.23	86.7	0	10.56	14.22	0.25	26.24	0	0	-1.353	419.2	80.9
148	2014/05/28 15:00	1500	12.81	36.1	3.082	236.4	24.75	393	0.524	0.232	78.5	0	11.53	15.67	0.253	26.32	0	0	-1.35	419.1	80.8
148	2014/05/28 16:00	1600	13.26	35.11	3.285	247.9	31.73	395.7	0.518	0.231	82.2	0	12.6	16.93	0.256	26.43	0	0	-1.357	418.7	80.4
148	2014/05/28 17:00	1700	13.32	37.33	3.976	299	29.57	401.8	0.529	0.233	75.2	0	13.55	17.86	0.259	26.53	0	0	-1.351	419.1	80.8
148	2014/05/28 18:00	1800	12.3	44.49	4.369	0.298	24.13	231.7	0.346	0.231	36.43	0	14.37	18.09	0.261	26.6	0	0	-1.359	419.4	81.1
148	2014/05/28 19:00	1900	11.48	47.65	4.758	77.1	13.36	68.47	0.123	0.231	4.56	0	14.82	17.19	0.263	26.65	0	0	-1.353	419.3	81
148	2014/05/28 20:00	2000	11.91	44.08	2.975	89.4	18.3	120.7	0.164	0.274	2.728	0	14.77	15.84	0.262	26.63	0	0	-1.356	419.4	81.1
148	2014/05/28 21:00	2100	11.76	43.16	3.389	301.2	31.46	74.7	0.158	0.238	12.71	0	14.52	15.57	0.261	26.57	0	0	-1.354	419.1	80.8
148	2014/05/28 22:00	2200	10.1	50.11	2.663	47.25	42.74	-13.36	0.026	0.348	-18.41	0	14.31	14.58	0.259	26.53	0	0	-1.355	419.3	81



Faro Meteorological Data May 1 - May 31, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Investigation being undertaken to discover why accumulative precipitation values were decreasing. Data missing at certain periods during the month due to battery issues. New battery installed May 1st. New program installed in June.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SoiRad	Albedo	SoiHF	SoiT1	SoiT2	SoiT3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
148	2014/05/28 23:00	2300	9.02	55.45	2.86	43.11	14.31	-39.54	0.011	0.338	-29.18	0	13.91	13.23	0.258	26.48	0	0	-1.354	419.3	81
148	2014/05/29 00:00	2400	8.29	57.88	1.476	339.6	29.82	-55.15	0.001	0.315	-35.31	0	13.36	11.94	0.255	26.4	0	0	-1.355	419.2	80.9
149	2014/05/29 01:00	100	7.22	62.49	0.932	352.8	47.3	-69.1	0	0	-38.16	0	12.74	10.85	0.252	26.31	0	0	-1.355	419.3	81
149	2014/05/29 02:00	200	6.129	66.9	1.617	28.47	9.32	-68.16	0	0	-41.99	0	12.11	9.82	0.25	26.24	0	0	-1.355	419.3	81
149	2014/05/29 03:00	300	5.265	69.7	1.93	24.16	8.31	-66.64	0	0	-43.83	0	11.48	8.84	0.248	26.15	0	0	-1.355	419.4	81.1
149	2014/05/29 04:00	400	4.403	73.2	1.544	15.31	6.567	-66.6	0	0	-43.6	0	10.87	8.01	0.245	26.08	0	0	-1.355	419.3	81
149	2014/05/29 05:00	500	3.944	74.6	1.411	18.52	9.27	-56.65	0.002	0.32	-41.64	0	10.29	7.29	0.244	26.01	0	0	-1.355	419.3	81
149	2014/05/29 06:00	600	4.06	76.2	0.453	16.19	5.2	-20.53	0.019	0.383	-31.25	0	9.76	6.842	0.241	25.94	0	0	-1.355	419.3	81
149	2014/05/29 07:00	700	5.247	72.2	0.364	341.7	8.34	9.99	0.04	0.248	-14.72	0	9.35	6.935	0.24	25.9	0	0	-1.355	419.3	81
149	2014/05/29 08:00	800	6.082	69.46	0.343	351.7	14.97	26.86	0.081	0.197	-5.548	0	9.13	7.26	0.239	25.87	0	0	-1.356	419.3	81
149	2014/05/29 09:00	900	9.08	58.75	0.749	185.1	30.93	200.1	0.295	0.197	32.04	0	9.06	8.01	0.239	25.86	0	0	-1.352	419.5	81.2
149	2014/05/29 10:00	1000	9.65	54.13	2.439	292.3	13.77	252.1	0.38	0.216	58.37	0	9.3	9.75	0.24	25.89	0	0	-1.355	419.3	81
149	2014/05/29 11:00	1100	11.21	42.3	4.038	271.4	15.32	380.8	0.519	0.229	76.2	0	9.86	11.54	0.242	25.95	0	0	-1.351	419.2	80.9
149	2014/05/29 12:00	1200	11.67	38.19	3.638	274.7	17.86	304.9	0.418	0.226	78	0	10.52	13.37	0.244	26.03	0	0	-1.353	418.7	80.4
149	2014/05/29 13:00	1300	11.81	36.06	3.903	275.4	12.36	205.1	0.293	0.228	51.25	0	11.13	14.24	0.246	26.09	0	0	-1.353	419	80.7
149	2014/05/29 14:00	1400	12.57	32.26	3.617	290.7	19.91	343.5	0.46	0.229	53.79	0	11.67	14.6	0.248	26.15	0	0	-1.354	418.8	80.5
149	2014/05/29 15:00	1500	12.85	33	4.173	314.8	16.19	195.2	0.283	0.229	46.72	0	12.3	15.3	0.25	26.21	0	0	-1.354	419	80.7
149	2014/05/29 16:00	1600	13.53	29.54	3.956	295.9	18.15	311.1	0.415	0.232	42.37	0	12.9	15.11	0.252	26.28	0	0	-1.354	418.9	80.6
149	2014/05/29 17:00	1700	13.77	33.41	5.445	239.9	16.05	324	0.446	0.234	68.72	0	13.33	16.54	0.252	26.29	0	0	-1.352	419	80.7
149	2014/05/29 18:00	1800	14.1	31.35	4.78	261.6	15.65	225.8	0.354	0.231	61.49	0	13.98	17.34	0.254	26.37	0	0	-1.356	418.7	80.4
149	2014/05/29 19:00	1900	12.96	35	4.112	152.1	26.53	106.4	0.234	0.249	8.71	0	14.47	16.62	0.256	26.41	0	0	-1.361	418.5	80.2
149	2014/05/29 20:00	2000	15.07	30.17	2.293	243.8	49.56	117.9	0.138	0.533	38.11	0	14.52	16.49	0.255	26.41	0	0	-1.354	418.4	80.1
149	2014/05/29 21:00	2100	13.77	32.16	2.431	249.6	16.9	20.72	0.102	0.233	9.14	0	14.63	16.17	0.255	26.4	0	0	-1.356	418.7	80.4
149	2014/05/29 22:00	2200	13.25	33.71	2.299	249.6	10.89	-10.67	0.066	0.321	-3.385	0	14.53	15.17	0.255	26.4	0	0	-1.356	418.5	80.2
149	2014/05/29 23:00	2300	12.47	36.29	1.646	281.6	28.38	-57.99	0.022	0.548	-14.32	0	14.21	14.16	0.254	26.34	0	0	-1.355	418.7	80.4
149	2014/05/30 00:00	2400	9.52	46.71	1.61	35.69	14.5	-72.2	0	0.173	-35.16	0	13.74	12.79	0.252	26.29	0	0	-1.355	418.7	80.4
150	2014/05/30 01:00	100	7.76	51.65	2.47	27.02	7.05	-69.87	0	0	-42.76	0	13.15	11.37	0.249	26.21	0	0	-1.355	418.8	80.5
150	2014/05/30 02:00	200	6.963	54.44	2.089	18.2	5.992	-67.98	0	0	-42.95	0	12.5	10.22	0.247	26.13	0	0	-1.355	418.8	80.5
150	2014/05/30 03:00	300	6.197	57.9	1.877	15.95	5.416	-66.27	0	0	-42.5	0	11.85	9.28	0.244	26.04	0	0	-1.355	418.8	80.5
150	2014/05/30 04:00	400	5.818	60	1.654	11.99	23.07	-63.69	0	0	-41.13	0	11.25	8.49	0.242	25.97	0	0	-1.354	418.8	80.5
150	2014/05/30 05:00	500	6.139	59.36	1.122	49.67	21.28	-56.02	0.005	0.682	-37.67	0	10.69	7.84	0.24	25.91	0	0	-1.355	418.8	80.5
150	2014/05/30 06:00	600	7.02	56.01	1.17	57.2	29.44	-39.87	0.023	0.463	-30.46	0	10.2	7.44	0.238	25.84	0	0	-1.357	418.9	80.6
150	2014/05/30 07:00	700	8.53	51.9	0.861	68.4	47.49	19.33	0.107	0.24	-0.166	0	9.79	7.52	0.237	25.8	0	0	-1.357	418.9	80.6
150	2014/05/30 08:00	800	11.04	42.78	0.669	110	40.74	83.7	0.177	0.194	10.39	0	9.58	8.19	0.236	25.77	0	0	-1.358	418.9	80.6
150	2014/05/30 09:00	900	12.15	39.39	0.81	40.45	28.06	146.2	0.253	0.194	34.29	0	9.64	8.98	0.236	25.78	0	0	-1.359	418.9	80.6
150	2014/05/30 10:00	1000	13.17	37.47	1.12	43.14	45.43	247.1	0.373	0.207	63.39	0	9.99	10.42	0.238	25.81	0	0	-1.355	418.9	80.6
150	2014/05/30 11:00	1100	13.77	35.36	2.826	182.5	23.02	334	0.474	0.224	90	0	10.57	12.57	0.24	25.89	0	0	-1.354	418.7	80.4
150	2014/05/30 12:00	1200	14.57	32.15	3.586	175.9	22.37	411	0.561	0.231	102.5	0	11.27	14.76	0.242	25.96	0	0	-1.356	418.7	80.4
150	2014/05/30 13:00	1300	15.24	29.33	3.363	198.2	28.45	462.2	0.614	0.232	113.4	0	11.9	16.91	0.244	26.02	0	0	-1.352	418.5	80.2
150	2014/05/30 14:00	1400	15.72	28.01	3.749	182.6	31.22	365.6	0.494	0.228	93.3	0	12.79	18.75	0.247	26.13	0	0	-1.352	418.7	80.4
150	2014/05/30 15:00	1500	15.96	26.08	4.305	185	22	381.6	0.505	0.235	65.4	0	13.83	18.83	0.251	26.25	0	0	-1.355	418.7	80.4
150	2014/05/30 16:00	1600	16.98	23.73	4.441	206.2	30.08	499	0.663	0.239	115.5	0	14.69	20.66	0.253	26.33	0	0	-1.352	418.4	80.1
150	2014/05/30 17:00	1700	16.94	23.55	4.347	200.1	24.96	368.3	0.522	0.236	91.6	0	15.83	22.16	0.256	26.43	0	0	-1.354	418.5	80.2
150	2014/05/30 18:00	1800	16.86	22.08	4.23	194.7	22.65	266.8	0.422	0.237	70.3	0	16.79	22.66	0.259	26.53	0	0	-1.357	418.4	80.1
150	2014/05/30 19:00	1900	16.79	21.65	4.276	176.4	15.52	191	0.34	0.242	42.44	0	17.42	22.3	0.261	26.58	0	0	-1.355	418.5	80.2
150	2014/05/30 20:00	2000	16.71	21.59	4.383	178.6	17.12	140.2	0.165	0.79	26.06	0	17.69	21.4	0.262	26.61	0	0	-1.357	418.5	80.2
150	2014/05/30 21:00	2100	15.93	22.87	4.263	177.8	11.2	18	0.131	0.25	11.56	0	17.69	20.63	0.261	26.59	0	0	-1.356	418.4	80.1
150	2014/05/30 22:00	2200	14.8	26.85	3.365	181.6	9.88	-29.11	0.061	0.317	-14.45	0	17.44	19.04	0.26	26.54	0	0	-1.356	418.5	80.2
150	2014/05/30 23:00	2300	13.35	31.69	2.295	190.5	13.17	-64.37	0.019	0.658	-24.2	0	16.93	17.54	0.258	26.48	0	0	-1.355	418.6	80.3
150	2014/05/31 00:00	2400	11.57	36.16	1.333	211.4	23.21	-78.9	0.001	0.441	-39.27	0	16.31	15.92	0.255	26.4	0	0	-1.355	418.6	80.3
151	2014/05/31 01:00	100	10.05	47.06	1.865	268.6	26.31	-75.9	0	0	-43.65	0	15.61	14.42	0.252	26.3	0	0	-1.355	418.6	80.3
151	2014/05/31 02:00	200	8.87	53.13	1.155	258.8	45.96	-76.5	0	0	-44.74	0	14.89	13.17	0.25	26.21	0	0	-1.355	418.6	80.3
151	2014/05/31 03:00	300	7.91	57.09	2.462	245.1	15	-74.8	0	0	-46.25	0	14.19	12.05	0.247	26.13	0	0	-1.355	418.7	80.4
151	2014/05/31 04:00	400	7.37	59.82	0.83	223.9	61.21	-68.18	0	0	-44.36	0	13.52	11.09	0.245	26.05	0	0	-1.354	418.7	80.4
151	2014/05/31 05:00	500	6.933	61.21	1.364	248	42.44	-45.68	0.01	0.598	-39.75	0	12.89	10.34	0.242	25.97	0	0	-1.355	418.6	80.3



Faro Meteorological Data

May 1 - May 31, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Investigation being undertaken to discover why accumulative precipitation values were decreasing. Data missing at certain periods during the month due to battery issues. New battery installed May 1st. New program installed in June.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SoiRad	Albedo	SoiHF	SoiTF1	SoiTF2	SoiTF3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
151	2014/05/31 06:00	600	6.977	60.9	1.136	232.5	32.74	-6.643	0.052	0.298	-25.65	0	12.35	9.96	0.24	25.91	0	0	-1.355	418.7	80.4
151	2014/05/31 07:00	700	7.47	59.31	3.299	217.9	12.64	49.28	0.116	0.228	-4.951	0	11.96	10.08	0.239	25.85	0	0	-1.355	418.4	80.1
151	2014/05/31 08:00	800	8.08	55.1	3.831	220.3	13.17	80	0.148	0.221	4.984	0	11.75	10.53	0.238	25.84	0	0	-1.355	418.5	80.2
151	2014/05/31 09:00	900	8.35	54	3.546	205.7	19.22	139.4	0.213	0.225	17.56	0	11.74	10.98	0.238	25.84	0	0	-1.353	418.7	80.4
151	2014/05/31 10:00	1000	8.69	50.95	4.414	206.7	20.07	193.3	0.281	0.23	28.45	0	11.86	11.71	0.239	25.86	0	0	-1.352	418.8	80.5
151	2014/05/31 11:00	1100	9.09	46.31	5.487	216.6	19.58	232.2	0.328	0.234	38.98	0	12.1	12.56	0.239	25.88	0	0	-1.353	418.6	80.3
151	2014/05/31 12:00	1200	9.42	43.09	5.834	219.2	13.05	219.3	0.309	0.234	37.52	0	12.4	13.32	0.241	25.92	0	0	-1.353	418.4	80.1
151	2014/05/31 13:00	1300	10.14	42.28	5.179	219.4	16.66	289	0.38	0.234	42.3	0	12.71	13.89	0.242	25.96	0	0	-1.353	418.5	80.2
151	2014/05/31 14:00	1400	9.83	42.96	5.277	230.7	14.19	151.4	0.219	0.228	32.36	0	13.07	14.59	0.243	25.98	0	0	-1.355	418.4	80.1
151	2014/05/31 15:00	1500	10.11	42.15	4.383	232.7	17.9	125.7	0.187	0.229	19.66	0	13.4	14.38	0.244	26.03	0	0	-1.355	418.4	80.1
151	2014/05/31 16:00	1600	11.05	39.06	4.962	222.1	16.71	196.6	0.273	0.23	32.91	0	13.56	14.54	0.245	26.05	0	0	-1.355	418.4	80.1
151	2014/05/31 17:00	1700	11.12	38.84	4.554	227.2	14.03	128.3	0.192	0.231	15.65	0	13.76	14.61	0.245	26.06	0	0	-1.353	417.9	79.6
151	2014/05/31 18:00	1800	12.26	35.12	5.363	214.5	20.38	288.6	0.396	0.234	48.33	0	13.87	15.05	0.245	26.07	0	0	-1.354	418	79.7
151	2014/05/31 19:00	1900	11.64	36.96	5.012	201.8	16.1	104.9	0.188	0.234	27.47	0	14.17	15.8	0.246	26.09	0	0	-1.354	418.3	80
151	2014/05/31 20:00	2000	11.53	37.02	4.944	191.2	14.72	58.36	0.122	0.234	6.448	0	14.41	15.19	0.247	26.12	0	0	-1.356	418.5	80.2
151	2014/05/31 21:00	2100	11.68	33.24	5.131	224.8	15.43	45.77	0.112	0.25	-0.051	0	14.36	14.46	0.246	26.11	0	0	-1.355	417.9	79.6
151	2014/05/31 22:00	2200	10.97	27.63	7.37	255.9	12.42	-13.84	0.078	0.348	-7.45	0	14.17	13.93	0.246	26.09	0	0	-1.355	417.2	78.9
151	2014/05/31 23:00	2300	9.58	27.89	6.301	251.2	11.25	-59.4	0.021	0.481	-25.44	0	13.88	12.92	0.245	26.05	0	0	-1.356	417.9	79.6
151	2014/06/01 00:00	2400	8.27	30.24	3.958	261.6	16.83	-60.72	0.001	0.288	-37.47	0	13.44	11.63	0.243	25.99	0	0	-1.355	418.3	80
152	2014/06/01 01:00	100	7.54	43.31	1.115	275.3	40.1	-71.3	0	0	-37.23	0	12.89	10.68	0.241	25.93	0	0	-1.355	418.3	80
152	2014/06/01 02:00	200	6.771	42.71	1.057	174.5	57.54	-76.1	0	0	-43.33	0	12.35	9.73	0.239	25.87	0	0	-1.355	418.4	80.1
152	2014/06/01 03:00	300	6.43	37.53	2.257	288.8	23.93	-50.14	0	0	-41.05	0	11.8	8.87	0.237	25.8	0	0	-1.356	418.3	80
152	2014/06/01 04:00	400	5.919	38.76	1.994	267.4	27.56	-46.13	0	0	-33.71	0	11.28	8.41	0.235	25.74	0	0	-1.355	418.3	80
152	2014/06/01 05:00	500	4.886	47.17	1.392	299.7	41.06	-67.53	0.003	0.538	-39.78	0	10.85	7.89	0.234	25.69	0	0	-1.355	418.3	80
152	2014/06/01 06:00	600	4.773	47.03	2.286	281.7	27.29	-55.45	0.023	0.464	-38.77	0	10.43	7.26	0.233	25.65	0	0	-1.356	418.2	79.9
152	2014/06/01 07:00	700	5.227	42.51	1.188	278.7	33.73	-1.273	0.106	0.269	-11.23	0	10	7.08	0.231	25.59	0	0	-1.357	418.5	80.2
152	2014/06/01 08:00	800	6.48	39.4	1.109	4.961	30.63	77.1	0.196	0.211	-3.699	0	9.71	7.5	0.23	25.55	0	0	-1.355	418.5	80.2
152	2014/06/01 09:00	900	6.707	40.99	3.394	297.5	16.7	159.3	0.299	0.231	18.34	0	9.69	7.97	0.23	25.56	0	0	-1.356	418.2	79.9
152	2014/06/01 10:00	1000	7.45	34.98	3.491	291.6	15.65	245.2	0.397	0.236	44.97	0	9.97	9.16	0.231	25.59	0	0	-1.353	418.5	80.2
152	2014/06/01 11:00	1100	8.39	28.85	3.529	281.8	20.1	340.3	0.5	0.239	70.7	0	10.43	11.04	0.233	25.65	0	0	-1.356	418.2	79.9
152	2014/06/01 12:00	1200	8.93	26.93	3.484	288.4	20.1	322.9	0.449	0.237	78.1	0	11.01	13.2	0.234	25.7	0	0	-1.355	418.1	79.8
152	2014/06/01 13:00	1300	8.76	30.72	2.732	289.1	28.32	168.2	0.267	0.234	49.15	0	11.6	14.18	0.236	25.77	0	0	-1.35	418.1	79.8
152	2014/06/01 14:00	1400	8.94	29	2.31	300.8	35.7	166.9	0.274	0.235	31.76	0	12.13	14.17	0.238	25.84	0	0	-1.353	418.3	80
152	2014/06/01 15:00	1500	10.07	26.84	3.056	296.7	27.34	345.9	0.474	0.239	44.91	0	12.53	14.32	0.24	25.88	0	0	-1.354	418.1	79.8
152	2014/06/01 16:00	1600	11.17	25.19	4.434	280.6	17.46	480.8	0.647	0.242	94.5	0	13.06	16.56	0.24	25.91	0	0	-1.353	417.6	79.3
152	2014/06/01 17:00	1700	11.06	25.49	4.627	273.1	22.09	329.5	0.473	0.242	79.6	0	14.11	18.39	0.244	26.02	0	0	-1.352	418.1	79.8
152	2014/06/01 18:00	1800	10.69	25.86	4.077	273.4	23.4	181.8	0.289	0.243	31.83	0	15.07	18.22	0.247	26.14	0	0	-1.354	418	79.7
152	2014/06/01 19:00	1900	10.04	26.96	4.099	265.2	14.54	52.52	0.123	0.236	4.879	0	15.46	17.24	0.249	26.18	0	0	-1.357	418.1	79.8
152	2014/06/01 20:00	2000	9.41	28.6	3.534	313.5	13.73	17.66	0.073	0.227	-16.66	0	15.4	15.75	0.249	26.18	0	0	-1.354	418.1	79.8
152	2014/06/01 21:00	2100	9.03	29.72	2.248	288	26.45	9.63	0.063	0.243	-16.42	0	15.04	14.61	0.247	26.12	0	0	-1.354	417.9	79.6
152	2014/06/01 22:00	2200	9.01	30.62	2.195	272	19.22	-5.57	0.063	0.297	-15.09	0	14.62	13.81	0.245	26.06	0	0	-1.355	418.1	79.8
152	2014/06/01 23:00	2300	8.1	34.03	2.389	4.975	19.52	-58.2	0.017	0.512	-30.51	0	14.2	12.94	0.243	26	0	0	-1.356	418.1	79.8
152	2014/06/02 00:00	2400	6.188	40.82	1.113	75.2	35.72	-66.62	0.001	0.258	-44.02	0	13.7	11.6	0.242	25.95	0	0	-1.354	418.2	79.9
153	2014/06/02 01:00	100	6.008	42.45	0.928	54.42	25.94	-55.71	0	0	-39.04	0	13.1	10.58	0.24	25.88	0	0	-1.355	418.2	79.9
153	2014/06/02 02:00	200	4.843	47.84	1.739	28.33	8.43	-54.92	0	0	-42.98	0	12.52	9.73	0.237	25.8	0	0	-1.354	418.2	79.9
153	2014/06/02 03:00	300	4.457	48.31	1.54	343.8	33.83	-42.93	0	0	-39.34	0	11.97	8.99	0.235	25.74	0	0	-1.354	418.2	79.9
153	2014/06/02 04:00	400	4.614	48.72	1.534	76.2	23.92	-37.08	0	0	-35.45	0	11.47	8.46	0.233	25.68	0	0	-1.355	418.2	79.9
153	2014/06/02 05:00	500	4.469	49.54	1.042	46.6	33.37	-40	0.006	0.577	-33.12	0	11.04	8.06	0.232	25.64	0	0	-1.354	418.2	79.9
153	2014/06/02 06:00	600	4.057	50.98	0.985	2.943	43.47	-36.32	0.034	0.411	-31.21	0	10.65	7.69	0.231	25.59	0	0	-1.356	418.3	80
153	2014/06/02 07:00	700	5.165	46.56	0.331	333.9	32.69	8.33	0.112	0.255	-7.2	0	10.3	7.58	0.23	25.55	0	0	-1.356	418.4	80.1
153	2014/06/02 08:00	800	6.054	40.91	0.94	242.5	23.82	96.9	0.218	0.215	4.901	0	10.07	8.11	0.229	25.53	0	0	-1.355	418.4	80.1
153	2014/06/02 09:00	900	6.852	37.28	1.677	301.8	36.08	141.9	0.28	0.23	23.21	0	10.12	8.64	0.229	25.53	0	0	-1.351	418.3	80
153	2014/06/02 10:00	1000	7.45	31.58	2.578	346.2	31.3	236.4	0.388	0.236	42.72	0	10.43	9.72	0.23	25.56	0	0	-1.353	418.4	80.1
153	2014/06/02 11:00	1100	8.09	29.57	2.569	349.7	34.52	290.8	0.44	0.233	57.5	0	10.88	11.35	0.232	25.62	0	0	-1.355	418.3	80
153	2014/06/02 12:00	1200	8.45	28.59	3.58	1.937	26.1	278.3	0.412	0.234	53.91	0	11.41	12.81	0.233	25.68	0	0	-1.355	418.1	79.8



Hourly Faro Meteorological Data

June 1 - June 30, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Data missing between June 10th and 12th, due to station maintenance, calibration and new program installation. A new program was installed to resolve decreasing precipitation results and improve quality control.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SoiRad	Albedo	SoiHF	SoiT1	SoiT2	SoiT3	Soi W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
151	2014/06/01 00:00	2400	8.27	30.24	3.958	261.6	16.83	-60.72	0.001	0.288	-37.47	0	13.44	11.63	0.243	25.99	0	0	-1.355	418.3	80
152	2014/06/01 01:00	100	7.54	43.31	1.115	275.3	40.1	-71.3	0	0	-37.23	0	12.89	10.68	0.241	25.93	0	0	-1.355	418.3	80
152	2014/06/01 02:00	200	6.771	42.71	1.057	174.5	57.54	-76.1	0	0	-43.33	0	12.35	9.73	0.239	25.87	0	0	-1.355	418.4	80.1
152	2014/06/01 03:00	300	6.43	37.53	2.257	288.8	23.93	-50.14	0	0	-41.05	0	11.8	8.87	0.237	25.8	0	0	-1.356	418.3	80
152	2014/06/01 04:00	400	5.919	38.76	1.994	267.4	27.56	-46.13	0	0	-33.71	0	11.28	8.41	0.235	25.74	0	0	-1.355	418.3	80
152	2014/06/01 05:00	500	4.886	47.17	1.392	299.7	41.06	-67.53	0.003	0.538	-39.78	0	10.85	7.89	0.234	25.69	0	0	-1.355	418.3	80
152	2014/06/01 06:00	600	4.773	47.03	2.286	281.7	27.29	-55.45	0.023	0.464	-38.77	0	10.43	7.26	0.233	25.65	0	0	-1.356	418.2	79.9
152	2014/06/01 07:00	700	5.227	42.51	1.188	278.7	33.73	-1.273	0.106	0.269	-11.23	0	10	7.08	0.231	25.59	0	0	-1.357	418.5	80.2
152	2014/06/01 08:00	800	6.48	39.4	1.109	4.961	30.63	77.1	0.196	0.211	-3.699	0	9.71	7.5	0.23	25.55	0	0	-1.355	418.5	80.2
152	2014/06/01 09:00	900	6.707	40.99	3.394	297.5	16.7	159.3	0.299	0.231	18.34	0	9.69	7.97	0.23	25.56	0	0	-1.356	418.2	79.9
152	2014/06/01 10:00	1000	7.45	34.98	3.491	291.6	15.65	245.2	0.397	0.236	44.97	0	9.97	9.16	0.231	25.59	0	0	-1.353	418.5	80.2
152	2014/06/01 11:00	1100	8.39	28.85	3.529	281.8	20.1	340.3	0.5	0.239	70.7	0	10.43	11.04	0.233	25.65	0	0	-1.356	418.2	79.9
152	2014/06/01 12:00	1200	8.93	26.93	3.484	288.4	20.1	322.9	0.449	0.237	78.1	0	11.01	13.2	0.234	25.7	0	0	-1.355	418.1	79.8
152	2014/06/01 13:00	1300	8.76	30.72	2.732	289.1	28.32	168.2	0.267	0.234	49.15	0	11.6	14.18	0.236	25.77	0	0	-1.35	418.1	79.8
152	2014/06/01 14:00	1400	8.94	29	2.31	300.8	35.7	166.9	0.274	0.235	31.76	0	12.13	14.17	0.238	25.84	0	0	-1.353	418.3	80
152	2014/06/01 15:00	1500	10.07	26.84	3.056	296.7	27.34	345.9	0.474	0.239	44.91	0	12.53	14.32	0.24	25.88	0	0	-1.354	418.1	79.8
152	2014/06/01 16:00	1600	11.17	25.19	4.434	280.6	17.46	480.8	0.647	0.242	94.5	0	13.06	16.56	0.24	25.91	0	0	-1.353	417.6	79.3
152	2014/06/01 17:00	1700	11.06	25.49	4.627	273.1	22.09	329.5	0.473	0.242	79.6	0	14.11	18.39	0.244	26.02	0	0	-1.352	418.1	79.8
152	2014/06/01 18:00	1800	10.69	25.86	4.077	273.4	23.4	181.8	0.289	0.243	31.83	0	15.07	18.22	0.247	26.14	0	0	-1.354	418	79.7
152	2014/06/01 19:00	1900	10.04	26.96	4.099	265.2	14.54	52.52	0.123	0.236	4.879	0	15.46	17.24	0.249	26.18	0	0	-1.357	418.1	79.8
152	2014/06/01 20:00	2000	9.41	28.6	3.534	313.5	13.73	17.66	0.073	0.227	-16.66	0	15.4	15.75	0.249	26.18	0	0	-1.354	418.1	79.8
152	2014/06/01 21:00	2100	9.03	29.72	2.248	288	26.45	9.63	0.063	0.243	-16.42	0	15.04	14.61	0.247	26.12	0	0	-1.354	417.9	79.6
152	2014/06/01 22:00	2200	9.01	30.62	2.195	272	19.22	-5.57	0.063	0.297	-15.09	0	14.62	13.81	0.245	26.06	0	0	-1.355	418.1	79.8
152	2014/06/01 23:00	2300	8.1	34.03	2.389	4.975	19.52	-58.2	0.017	0.512	-30.51	0	14.2	12.94	0.243	26	0	0	-1.356	418.1	79.8
152	2014/06/02 00:00	2400	6.188	40.82	1.113	75.2	35.72	-66.62	0.001	0.258	-44.02	0	13.7	11.6	0.242	25.95	0	0	-1.354	418.2	79.9
153	2014/06/02 01:00	100	6.008	42.45	0.928	54.42	25.94	-55.71	0	0	-39.04	0	13.1	10.58	0.24	25.88	0	0	-1.355	418.2	79.9
153	2014/06/02 02:00	200	4.843	47.84	1.739	28.33	8.43	-54.92	0	0	-42.98	0	12.52	9.73	0.237	25.8	0	0	-1.354	418.2	79.9
153	2014/06/02 03:00	300	4.457	48.31	1.54	343.8	33.83	-42.93	0	0	-39.34	0	11.97	8.99	0.235	25.74	0	0	-1.354	418.2	79.9
153	2014/06/02 04:00	400	4.614	48.72	1.534	76.2	23.92	-37.08	0	0	-35.45	0	11.47	8.46	0.233	25.68	0	0	-1.355	418.2	79.9
153	2014/06/02 05:00	500	4.469	49.54	1.042	46.6	33.37	-40	0.006	0.577	-33.12	0	11.04	8.06	0.232	25.64	0	0	-1.354	418.2	79.9
153	2014/06/02 06:00	600	4.057	50.98	0.985	2.943	43.47	-36.32	0.034	0.411	-31.21	0	10.65	7.69	0.231	25.59	0	0	-1.356	418.3	80
153	2014/06/02 07:00	700	5.165	46.56	0.331	333.9	32.69	8.33	0.112	0.255	-7.2	0	10.3	7.58	0.23	25.55	0	0	-1.356	418.4	80.1
153	2014/06/02 08:00	800	6.054	40.91	0.94	242.5	23.82	96.9	0.218	0.215	4.901	0	10.07	8.11	0.229	25.53	0	0	-1.355	418.4	80.1
153	2014/06/02 09:00	900	6.852	37.28	1.677	301.8	36.08	141.9	0.28	0.23	23.21	0	10.12	8.64	0.229	25.53	0	0	-1.351	418.3	80
153	2014/06/02 10:00	1000	7.45	31.58	2.578	346.2	31.3	236.4	0.388	0.236	42.72	0	10.43	9.72	0.23	25.56	0	0	-1.353	418.4	80.1
153	2014/06/02 11:00	1100	8.09	29.57	2.569	349.7	34.52	290.8	0.44	0.233	57.5	0	10.88	11.35	0.232	25.62	0	0	-1.355	418.3	80
153	2014/06/02 12:00	1200	8.45	28.59	3.58	1.937	26.1	278.3	0.412	0.234	53.91	0	11.41	12.81	0.233	25.68	0	0	-1.355	418.1	79.8
153	2014/06/02 13:00	1300	8.35	28.62	3.266	331.8	29.12	143.1	0.251	0.238	34.22	0	11.85	13.61	0.235	25.72	0	0	-1.354	418	79.7
153	2014/06/02 14:00	1400	9.32	25.36	3.345	354.9	40.87	340.3	0.487	0.238	42.35	0	12.23	14.03	0.237	25.78	0	0	-1.355	418.1	79.8
153	2014/06/02 15:00	1500	9.48	24.81	3.184	341.6	29.45	180.2	0.295	0.239	33.46	0	12.8	14.64	0.238	25.82	0	0	-1.355	418.1	79.8
153	2014/06/02 16:00	1600	9.33	24.97	3.527	339.9	20.59	137.2	0.238	0.243	17.52	0	13.38	14.75	0.24	25.89	0	0	-1.355	418.2	79.9
153	2014/06/02 17:00	1700	9.76	25.5	3.916	353.6	17.97	218.5	0.333	0.24	29.38	0	13.67	14.87	0.241	25.93	0	0	-1.355	418.1	79.8
153	2014/06/02 18:00	1800	10.06	25.19	3.232	341.2	22.69	196.2	0.314	0.246	18.53	0	13.94	14.98	0.242	25.95	0	0	-1.349	417.9	79.6
153	2014/06/02 19:00	1900	10.39	24.15	4.382	308.5	45.09	166.5	0.273	0.248	37.3	0	14.17	15.59	0.242	25.97	0	0	-1.356	418.2	79.9
153	2014/06/02 20:00	2000	9.97	24.85	4.326	331.6	18	109.7	0.182	0.285	11.65	0	14.48	15.39	0.243	25.99	0	0	-1.354	418.1	79.8
153	2014/06/02 21:00	2100	9.49	26.57	4.096	320.9	14.73	44.83	0.13	0.253	-2.065	0	14.56	14.74	0.243	26	0	0	-1.355	418	79.7
153	2014/06/02 22:00	2200	8.81	30.54	4.78	7.9	10.37	-2.173	0.09	0.31	-18.51	0	14.41	13.83	0.243	25.99	0	0	-1.353	418.1	79.8
153	2014/06/02 23:00	2300	8.01	34.38	4.888	17.47	10.25	-51.44	0.034	0.503	-29.03	0	14.07	12.72	0.241	25.94	0	0	-1.354	418.2	79.9
153	2014/06/03 00:00	2400	6.364	42.15	2.578	48.41	34.88	-79.2	0.002	0.443	-44.76	0	13.55	11.35	0.24	25.88	0	0	-1.354	418.2	79.9
154	2014/06/03 01:00	100	5.326	46.66	2.278	34.88	15.4	-77.8	0	0	-48.35	0	12.92	10.07	0.237	25.8	0	0	-1.355	418.2	79.9
154	2014/06/03 02:00	200	4.339	50.89	1.894	19.44	17.34	-76.1	0	0	-49.21	0	12.26	9.01	0.235	25.73	0	0	-1.354	418.2	79.9
154	2014/06/03 03:00	300	3.674	53.36	1.756	38.23	16.83	-75.2	0	0	-49.33	0	11.62	8.11	0.233	25.66	0	0	-1.355	418.2	79.9
154	2014/06/03 04:00	400	3.199	55.36	1.388	22.31	47.8	-74.7	0	0	-48.86	0	11.01	7.33	0.231	25.58	0	0	-1.352	418.2	79.9
154	2014/06/03 05:00	500	2.633	57.89	0.695	7.13	38.77	-70.8	0.003	0.994	-47.56	0	10.44	6.65	0.229	25.52	0	0	-1.354	418.2	79.9
154	2014/06/03 06:00	600	2.772	56.74	0.817	329.7	61.7	-58.64	0.018	0.583	-43.42	0	9.92	6.109	0.227	25.46	0	0	-1.356	418.2	79.9



Hourly Faro Meteorological Data June 1 - June 30, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Data missing between June 10th and 12th, due to station maintenance, calibration and new program installation. A new program was installed to resolve decreasing precipitation results and improve quality control.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SolRad	Albedo	SoilHF	SoilT1	SoilT2	SoilT3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
154	2014/06/03 07:00	700	3.419	54.23	0.761	274.3	59.94	-0.909	0.105	0.278	-13.29	0	9.45	6.017	0.226	25.41	0	0	-1.355	418.3	80
154	2014/06/03 08:00	800	4.84	48.14	1.252	279.1	37.7	63.61	0.18	0.221	-6.837	0	9.14	6.517	0.224	25.37	0	0	-1.354	418.3	80
154	2014/06/03 09:00	900	7.11	41.03	1.397	169.4	40.86	164.1	0.298	0.23	23.44	0	9.12	7.12	0.224	25.37	0	0	-1.357	418.4	80.1
154	2014/06/03 10:00	1000	8.74	35.31	2	157.4	34.35	259.2	0.392	0.226	65.13	0	9.42	8.85	0.225	25.41	0	0	-1.357	418.3	80
154	2014/06/03 11:00	1100	9.12	32.33	3.401	62.22	19.28	138	0.224	0.232	46.6	0	10.04	10.82	0.227	25.47	0	0	-1.356	418.2	79.9
154	2014/06/03 12:00	1200	10.07	29.73	4.12	73.4	17	313.7	0.426	0.24	44.89	0	10.63	11.13	0.23	25.55	0	0	-1.352	418.3	80
154	2014/06/03 13:00	1300	10.09	28.74	2.905	76.5	27.38	215.1	0.315	0.237	60.93	0	11.09	12.91	0.231	25.6	0	0	-1.353	418.2	79.9
154	2014/06/03 14:00	1400	8.56	39.83	3.324	306.5	31.57	32.7	0.166	0.234	11.03	0	11.65	13.07	0.233	25.67	0	0	-1.353	418	79.7
154	2014/06/03 15:00	1500	8.63	46.11	2.914	207.6	27.58	147.6	0.267	0.227	21.22	0	11.95	12.6	0.235	25.71	0	0	-1.355	418.1	79.8
154	2014/06/03 16:00	1600	8.04	49.75	4.551	171.4	14.22	75.5	0.2	0.23	15.24	0	12.12	12.75	0.235	25.72	0	0	-1.354	418	79.7
154	2014/06/03 17:00	1700	7.98	55.35	5.23	163.6	14.21	320.2	0.429	0.23	25.26	0	12.23	12.5	0.235	25.73	0	0	-1.35	418.4	80.1
154	2014/06/03 18:00	1800	9.04	49.04	2.478	197.7	49.95	278.3	0.393	0.23	60.88	0	12.4	14.06	0.235	25.73	0	0	-1.353	418.1	79.8
154	2014/06/03 19:00	1900	8.4	53.77	3.994	157.9	21.46	31.06	0.148	0.564	21.28	0	12.95	14.87	0.236	25.78	0	0	-1.353	418.9	80.6
154	2014/06/03 20:00	2000	6.266	63.89	2.22	175	39.67	-49.99	0.047	0.292	-35.1	0	13.24	12.89	0.238	25.84	0.254	0	-1.351	418.9	80.6
154	2014/06/03 21:00	2100	5.959	68.21	1.905	300.7	25.8	-4.119	0.049	0.26	-30.3	0	12.89	11.51	0.237	25.79	0	0	-1.353	418.9	80.6
154	2014/06/03 22:00	2200	5.841	68.16	0.964	286.5	24.41	-12.87	0.039	0.299	-25.4	0	12.44	10.73	0.235	25.74	0	0	-1.352	418.9	80.6
154	2014/06/03 23:00	2300	5.485	72.7	1.055	283	11	-33.94	0.021	0.336	-29.32	0	12.03	10.07	0.234	25.68	0	0	-1.352	418.9	80.6
154	2014/06/04 00:00	2400	5.077	75.2	0.585	108.8	32.69	-48.18	0.008	0.524	-31.92	0	11.62	9.36	0.232	25.64	0	0	-1.352	419	80.7
155	2014/06/04 01:00	100	4.327	74.7	1.192	72.1	32.58	-58.33	0	0	-39.25	0	11.2	8.58	0.231	25.59	0	0	-1.353	418.9	80.6
155	2014/06/04 02:00	200	3.366	76.1	1.579	31.07	7.39	-67.97	0	0	-45.15	0	10.73	7.74	0.23	25.55	0	0	-1.352	418.9	80.6
155	2014/06/04 03:00	300	2.921	78.5	1.462	26.13	9.38	-65.55	0	0	-45.89	0	10.23	6.914	0.228	25.49	0	0	-1.353	419	80.7
155	2014/06/04 04:00	400	2.41	80.6	1.419	14.77	9.52	-61.48	0	0	-44.49	0	9.72	6.257	0.226	25.44	0	0	-1.353	418.9	80.6
155	2014/06/04 05:00	500	2.168	82.1	1.149	19.71	12.78	-49.52	0.006	0.698	-40.2	0	9.24	5.761	0.225	25.38	0	0	-1.353	418.9	80.6
155	2014/06/04 06:00	600	2.508	81.9	1.084	55.52	13.77	-27.84	0.035	0.355	-32.25	0	8.82	5.478	0.223	25.33	0	0	-1.353	419	80.7
155	2014/06/04 07:00	700	4.166	74.2	1.589	114.8	13.98	26.44	0.125	0.227	-1.978	0	8.49	5.707	0.222	25.3	0	0	-1.354	419	80.7
155	2014/06/04 08:00	800	5.208	70.7	1.478	156.6	15.52	95	0.206	0.185	-0.234	0	8.34	6.301	0.222	25.29	0	0	-1.356	419	80.7
155	2014/06/04 09:00	900	6.649	62.68	0.859	200.6	45.44	184	0.303	0.189	30.81	0	8.44	6.965	0.222	25.3	0	0	-1.357	419	80.7
155	2014/06/04 10:00	1000	7.45	57.6	1.033	256.2	50.99	156.7	0.261	0.183	53.62	0	8.86	8.62	0.224	25.34	0	0	-1.353	418.8	80.5
155	2014/06/04 11:00	1100	8.36	54.83	1.091	6.375	29.51	269.9	0.375	0.208	39	0	9.45	9.49	0.226	25.43	0	0	-1.358	419	80.7
155	2014/06/04 12:00	1200	9.03	52.35	1.833	55.44	45.6	136.2	0.254	0.192	66.42	0	9.91	11.43	0.227	25.47	0	0	-1.354	418.9	80.6
155	2014/06/04 13:00	1300	5.976	65.91	3.095	278.8	43.78	31.76	0.109	0.22	4.159	0	10.4	11.48	0.229	25.53	0	0	-1.351	418.5	80.2
155	2014/06/04 14:00	1400	4.769	76.8	2.919	249.8	44.99	67.69	0.178	0.18	-7.03	0	10.6	10.41	0.23	25.57	0	0	-1.355	419	80.7
155	2014/06/04 15:00	1500	7.24	62.74	1.758	168.1	30.78	317.5	0.46	0.214	38.87	0	10.59	10.8	0.23	25.56	0	0	-1.354	419	80.7
155	2014/06/04 16:00	1600	7.65	62.6	4.241	244.6	19.88	227.3	0.327	0.222	55.31	0	10.96	12.8	0.231	25.58	0	0	-1.352	418.6	80.3
155	2014/06/04 17:00	1700	6.659	61.75	3.033	256.7	24.65	93.9	0.16	0.215	10.41	0	11.6	12.58	0.233	25.66	0	0	-1.352	418.9	80.6
155	2014/06/04 18:00	1800	6.46	67.24	4.136	228.8	17.21	207.8	0.302	0.226	14.31	0	11.83	12.05	0.234	25.69	0	0	-1.355	418.5	80.2
155	2014/06/04 19:00	1900	7.91	57.34	2.646	240.7	25.36	200.3	0.318	0.229	34.64	0	11.94	12.54	0.234	25.69	0	0	-1.354	418.7	80.4
155	2014/06/04 20:00	2000	9.95	44.49	1.166	206.5	67.58	165.4	0.17	0.803	46.27	0	12.24	13.39	0.235	25.71	0	0	-1.352	418.6	80.3
155	2014/06/04 21:00	2100	8.67	51.48	3.545	223.3	15.33	32.28	0.134	0.264	23.13	0	12.69	13.91	0.236	25.77	0	0	-1.354	418.9	80.6
155	2014/06/04 22:00	2200	6.827	65.74	2.745	217.1	37.56	-15.46	0.031	0.306	-19.82	0	12.87	12.51	0.237	25.79	0	0	-1.355	419	80.7
155	2014/06/04 23:00	2300	5.369	72.4	2.693	191	24.21	-24.46	0.015	0.386	-25.95	0	12.59	11.21	0.236	25.77	0	0	-1.352	418.8	80.5
155	2014/06/05 00:00	2400	4.606	72.6	1.199	238.1	58.97	-42.87	0.002	0.46	-33.06	0	12.15	10.13	0.234	25.7	0	0	-1.353	418.9	80.6
156	2014/06/05 01:00	100	4.128	74.7	1.802	153.7	29.06	-58.97	0	0	-37.72	0	11.66	9.17	0.233	25.65	0	0	-1.353	418.8	80.5
156	2014/06/05 02:00	200	3.535	78.3	1.295	43.23	28.73	-51.59	0	0	-39.36	0	11.14	8.25	0.231	25.59	0	0	-1.352	418.9	80.6
156	2014/06/05 03:00	300	3.346	78.9	1.526	37	12.66	-65.13	0	0	-40.21	0	10.61	7.54	0.229	25.52	0	0	-1.354	418.9	80.6
156	2014/06/05 04:00	400	2.728	79.8	1.624	27.16	7.53	-67.36	0	0	-43.44	0	10.11	6.794	0.227	25.46	0	0	-1.353	418.9	80.6
156	2014/06/05 05:00	500	2.389	80.2	1.557	25.04	7.08	-54.81	0.003	0.436	-41.59	0	9.6	6.131	0.226	25.41	0	0	-1.352	418.9	80.6
156	2014/06/05 06:00	600	2.658	79.5	0.918	26.39	16.75	-20.59	0.013	0.349	-32.1	0	9.13	5.751	0.224	25.35	0	0	-1.353	418.9	80.6
156	2014/06/05 07:00	700	3.302	78.3	0.554	40.03	38.96	-1.735	0.039	0.282	-18.8	0	8.76	5.846	0.223	25.32	0	0	-1.353	418.9	80.6
156	2014/06/05 08:00	800	3.912	74.4	0.649	136.8	21.24	25.99	0.081	0.213	-11.06	0	8.55	6.045	0.222	25.29	0	0	-1.354	418.9	80.6
156	2014/06/05 09:00	900	5.787	64.99	0.657	164.4	20.83	141.7	0.212	0.189	23.95	0	8.47	6.78	0.222	25.28	0	0	-1.357	418.9	80.6
156	2014/06/05 10:00	1000	6.647	64.48	1.136	211.4	53.1	237.6	0.339	0.209	45.65	0	8.67	8.17	0.222	25.3	0	0	-1.355	419	80.7
156	2014/06/05 11:00	1100	8.2	57.15	1.76	165.2	39.9	343.1	0.484	0.219	88.7	0	9.14	10.43	0.224	25.36	0	0	-1.355	418.9	80.6
156	2014/06/05 12:00	1200	9.51	48.82	2.84	244.7	31.78	444.3	0.584	0.225	115.1	0	9.88	13.11	0.226	25.44	0	0	-1.351	418.6	80.3
156	2014/06/05 13:00	1300	8.07	55.67	4.211	296.6	32.75	61.95	0.178	0.444	34.62	0	10.6	14.68	0.229	25.52	0.508	0	-1.352	419.8	81.5



Hourly Faro Meteorological Data June 1 - June 30, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Data missing between June 10th and 12th, due to station maintenance, calibration and new program installation. A new program was installed to resolve decreasing precipitation results and improve quality control.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SoiRad	Albedo	SoiHF	SoiT1	SoiT2	SoiF3	Soi W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
156	2014/06/05 14:00	1400	5.96	70.9	4.982	270.7	11.95	44.67	0.219	0.185	-22.52	0	11.11	12.36	0.232	25.62	0.254	0	-1.351	419.3	81
156	2014/06/05 15:00	1500	5.805	76.6	1.923	188.1	44.79	382.4	0.528	0.177	26.82	0	11.08	11.8	0.231	25.61	0	0	-1.356	419.7	81.4
156	2014/06/05 16:00	1600	9.12	55.53	1.39	250.9	45.43	506.4	0.635	0.196	81	0	11.38	14.37	0.231	25.6	0	0	-1.355	419.7	81.4
156	2014/06/05 17:00	1700	9.6	48.4	5.748	347	26.8	399.8	0.511	0.215	44.98	0	12.4	16.33	0.235	25.71	0	0	-1.352	419.8	81.5
156	2014/06/05 18:00	1800	9.63	48.07	3.763	53.01	36.91	145.5	0.235	0.238	10.6	0	13.32	15.77	0.239	25.85	0	0	-1.357	419.8	81.5
156	2014/06/05 19:00	1900	7.13	66.77	4.787	345.8	19.11	45.49	0.136	0.219	-37.37	0	13.65	13.98	0.24	25.9	0	0	-1.355	420.2	81.9
156	2014/06/05 20:00	2000	8.58	60.52	2.91	71.6	20.8	143.1	0.175	0.477	-9.05	0	13.35	12.9	0.239	25.87	0	0	-1.359	420	81.7
156	2014/06/05 21:00	2100	9.99	53.08	0.726	148.3	44.42	69.7	0.176	0.198	19.28	0	13.1	13.43	0.238	25.82	0	0	-1.362	420	81.7
156	2014/06/05 22:00	2200	8.59	60.18	2.048	217.8	24.21	-8.61	0.066	0.29	-5.48	0	13.03	13.22	0.237	25.8	0	0	-1.355	420.1	81.8
156	2014/06/05 23:00	2300	7.49	64.35	1.735	211	30.47	-27.58	0.025	0.393	-23.96	0	12.83	12.02	0.237	25.8	0	0	-1.355	420.2	81.9
156	2014/06/06 00:00	2400	6.446	71.1	2.339	162.1	9.1	-61.79	0.003	0.502	-35.27	0	12.42	10.9	0.235	25.74	0	0	-1.355	420.2	81.9
157	2014/06/06 01:00	100	5.212	77.2	1.502	71	19.23	-72.4	0	0	-43.92	0	11.92	9.65	0.234	25.69	0	0	-1.355	420.4	82.1
157	2014/06/06 02:00	200	4.286	80.2	1.803	29.81	8.27	-54.01	0	0	-45.1	0	11.34	8.57	0.232	25.62	0	0	-1.355	420.2	81.9
157	2014/06/06 03:00	300	4.33	80.4	1.432	38.25	8.08	-53.31	0	0	-39.81	0	10.78	7.88	0.23	25.56	0	0	-1.355	420.2	81.9
157	2014/06/06 04:00	400	4.448	80.3	1.383	38.2	7.3	-35.95	0	0	-33.41	0	10.28	7.41	0.228	25.49	0	0	-1.355	420.2	81.9
157	2014/06/06 05:00	500	4.374	80.2	1.126	35.96	6.576	-41.91	0.006	0.575	-31.9	0	9.87	7.08	0.227	25.45	0	0	-1.355	420.2	81.9
157	2014/06/06 06:00	600	4.274	80.2	1.241	39.31	9.66	-33.8	0.026	0.428	-30.88	0	9.51	6.717	0.226	25.41	0	0	-1.356	420.2	81.9
157	2014/06/06 07:00	700	5.783	73.7	1.135	64.74	36.55	26.73	0.075	0.199	-8.6	0	9.19	6.763	0.225	25.37	0	0	-1.355	420.3	82
157	2014/06/06 08:00	800	6.732	67.09	1.129	178.7	28.37	40.71	0.093	0.177	3.098	0	9.03	7.31	0.224	25.35	0	0	-1.356	420.2	81.9
157	2014/06/06 09:00	900	8.12	62.73	1.168	146.3	53.45	190.3	0.278	0.192	29.45	0	9.05	8.06	0.224	25.37	0	0	-1.355	420.3	82
157	2014/06/06 10:00	1000	9.14	57.23	1.279	257.9	42.56	180.3	0.272	0.188	52.66	0	9.33	9.62	0.225	25.38	0	0	-1.356	420.2	81.9
157	2014/06/06 11:00	1100	9.72	54.14	1.826	264.5	43.75	193.8	0.278	0.202	45.19	0	9.85	10.84	0.227	25.46	0	0	-1.353	420.3	82
157	2014/06/06 12:00	1200	10.2	55.1	1.924	266.1	55.66	166.8	0.283	0.221	57.95	0	10.36	12.25	0.229	25.51	0	0	-1.354	420.4	82.1
157	2014/06/06 13:00	1300	9.16	61.33	2.924	89	17.38	56.35	0.179	0.192	6.696	0	10.73	11.97	0.23	25.58	0	0	-1.356	420.3	82
157	2014/06/06 14:00	1400	8.38	68.28	2.869	92.2	21.22	90.8	0.277	0.227	-11.51	0	10.87	11.2	0.231	25.58	1.016	0	-1.349	421.6	83.3
157	2014/06/06 15:00	1500	11.37	54.36	3.262	116.3	21.05	421.5	0.597	0.171	62.79	0	10.94	12.33	0.231	25.59	0	0	-1.35	421.7	83.4
157	2014/06/06 16:00	1600	11.67	51.79	4.12	130.9	24.7	342.3	0.424	0.171	47.44	0	11.64	14.38	0.233	25.64	0.254	0	-1.35	422	83.7
157	2014/06/06 17:00	1700	11.32	55.01	5.131	45.82	11.85	398.1	0.504	0.184	29.07	0	12.37	14.73	0.236	25.76	0	0	-1.349	421.7	83.4
157	2014/06/06 18:00	1800	13.17	46.26	2.622	44.76	27.46	381.5	0.507	0.191	55.3	0	12.92	15.6	0.238	25.82	0	0	-1.351	421.6	83.3
157	2014/06/06 19:00	1900	13.82	39.09	1.963	246.3	49.84	239.5	0.353	0.193	48.11	0	13.6	16.77	0.24	25.89	0	0	-1.351	421.6	83.3
157	2014/06/06 20:00	2000	14.02	32.48	2.178	159.2	21.53	186.4	0.188	0.554	41.65	0	14.2	16.96	0.242	25.96	0	0	-1.353	421.5	83.2
157	2014/06/06 21:00	2100	13.88	36.18	3.206	197.7	20.2	86.8	0.196	0.215	26.65	0	14.58	16.9	0.244	26.01	0	0	-1.351	421.6	83.3
157	2014/06/06 22:00	2200	12.45	43.37	3.419	171.8	9.65	-14.14	0.07	0.305	-5.945	0	14.67	15.86	0.244	26.03	0	0	-1.352	421.7	83.4
157	2014/06/06 23:00	2300	11.56	47.44	2.329	154.9	15.39	-28.2	0.035	0.415	-15.84	0	14.4	14.38	0.243	25.99	0	0	-1.349	421.7	83.4
157	2014/06/07 00:00	2400	10.07	53.98	2.448	38.56	18.2	-32.77	0.002	0.203	-28.08	0	13.92	13.11	0.241	25.94	0	0	-1.35	421.8	83.5
158	2014/06/07 01:00	100	9.33	56.09	1.508	51.32	32.8	-61.79	0	0	-34.05	0	13.41	11.96	0.239	25.87	0	0	-1.35	421.8	83.5
158	2014/06/07 02:00	200	8.43	59.03	1.499	18.48	15.62	-33.2	0	0	-32.29	0	12.87	10.97	0.237	25.8	0	0	-1.35	421.8	83.5
158	2014/06/07 03:00	300	8.69	57.61	0.771	126.9	57.46	-65.97	0	0	-32.83	0	12.35	10.29	0.235	25.74	0	0	-1.351	421.8	83.5
158	2014/06/07 04:00	400	7.88	57.53	0.356	252.9	30.21	-75.3	0	0	-38.73	0	11.86	9.46	0.233	25.67	0	0	-1.353	421.8	83.5
158	2014/06/07 05:00	500	6.219	63.4	0.67	49.49	14.81	-66.89	0.003	0.861	-41.21	0	11.35	8.61	0.232	25.62	0	0	-1.35	421.8	83.5
158	2014/06/07 06:00	600	5.531	58.55	1.916	31.64	10.61	-47.73	0.026	0.501	-39.62	0	10.83	7.91	0.23	25.57	0	0	-1.351	421.9	83.6
158	2014/06/07 07:00	700	7.6	49.26	1.333	51.38	11.35	11.39	0.117	0.226	-6.383	0	10.36	7.75	0.228	25.51	0	0	-1.353	421.9	83.6
158	2014/06/07 08:00	800	10.87	38.57	1.034	75.7	13.01	94.1	0.206	0.18	2.145	0	10.06	8.32	0.227	25.46	0	0	-1.355	422	83.7
158	2014/06/07 09:00	900	11.24	36	2.1	146.7	18.91	182.5	0.308	0.198	32.01	0	10.08	8.98	0.227	25.46	0	0	-1.352	421.9	83.6
158	2014/06/07 10:00	1000	11.65	30.68	3.968	157.8	14.81	265.3	0.412	0.215	57.56	0	10.43	10.43	0.228	25.51	0	0	-1.351	422.1	83.8
158	2014/06/07 11:00	1100	12.13	25.22	3.524	178.4	24.66	351.8	0.503	0.22	80.8	0	10.96	12.33	0.231	25.58	0	0	-1.351	421.9	83.6
158	2014/06/07 12:00	1200	12.98	18.9	3.561	161.8	20.32	414.4	0.579	0.224	96.2	0	11.57	14.47	0.232	25.64	0	0	-1.356	422	83.7
158	2014/06/07 13:00	1300	13.68	15.5	4.637	175.6	22.17	459	0.629	0.229	97.9	0	12.06	16.5	0.234	25.68	0	0	-1.346	421.5	83.2
158	2014/06/07 14:00	1400	14.16	17.14	4.439	193.7	29.21	476.5	0.649	0.231	90.6	0	12.79	18.2	0.236	25.77	0	0	-1.353	421.6	83.3
158	2014/06/07 15:00	1500	14.67	17.89	4.605	176.1	24.72	477.8	0.653	0.232	80.9	0	13.89	19.08	0.24	25.89	0	0	-1.345	421.5	83.2
158	2014/06/07 16:00	1600	15.14	16.86	4.931	186.1	21.2	442.3	0.622	0.233	89.3	0	15.04	20.59	0.243	26.01	0	0	-1.351	421.6	83.3
158	2014/06/07 17:00	1700	15.39	16.51	4.339	202	21.01	398.2	0.576	0.233	83.1	0	16.07	21.71	0.247	26.12	0	0	-1.351	421.2	82.9
158	2014/06/07 18:00	1800	14.97	16.29	4.859	189	20.86	213.8	0.364	0.235	54.9	0	16.92	22.26	0.249	26.21	0	0	-1.35	421.1	82.8
158	2014/06/07 19:00	1900	15.07	15.98	4.862	186.1	17.22	211.1	0.348	0.238	30.01	0	17.42	21.36	0.251	26.27	0	0	-1.35	421.1	82.8
158	2014/06/07 20:00	2000	14.01	19.18	5.474	189	14.16	103.8	0.151	0.361	8.6	0	17.53	20.42	0.251	26.26	0	0	-1.351	421.1	82.8



Hourly Faro Meteorological Data June 1 - June 30, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Data missing between June 10th and 12th, due to station maintenance, calibration and new program installation. A new program was installed to resolve decreasing precipitation results and improve quality control.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SoiRad	Albedo	SoiIHF	SoiT1	SoiT2	SoiT3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
158	2014/06/07 21:00	2100	13.33	21.69	4.084	183.7	16.6	29.46	0.113	0.238	-0.022	0	17.38	19.33	0.25	26.23	0	0	-1.351	421.5	83.2
158	2014/06/07 22:00	2200	12.48	30.65	3.478	217.2	16.73	-14.26	0.071	0.305	-12.07	0	17.04	18.09	0.249	26.18	0	0	-1.349	421.5	83.2
158	2014/06/07 23:00	2300	11	37.43	1.882	210.3	14.65	-53.39	0.02	0.514	-29.41	0	16.58	16.68	0.247	26.12	0	0	-1.35	421.4	83.1
158	2014/06/08 00:00	2400	9.69	44.68	1.347	178	17.7	-74	0.001	0.33	-39.62	0	16	15.22	0.245	26.05	0	0	-1.349	421.4	83.1
159	2014/06/08 01:00	100	8.35	52.01	1.345	99.3	27.07	-79	0	0	-46.19	0	15.35	13.83	0.242	25.96	0	0	-1.348	421.4	83.1
159	2014/06/08 02:00	200	7.25	56.86	1.598	53.96	24.31	-71.3	0	0	-48.12	0	14.66	12.58	0.239	25.88	0	0	-1.35	421.4	83.1
159	2014/06/08 03:00	300	6.909	58.83	1.32	49.4	28.27	-63.59	0	0	-44.8	0	13.98	11.58	0.237	25.8	0	0	-1.349	421.3	83
159	2014/06/08 04:00	400	6.786	60.75	1.065	56.75	23.94	-63.92	0	0	-43.39	0	13.36	10.76	0.235	25.73	0	0	-1.35	421.5	83.2
159	2014/06/08 05:00	500	6.798	61.53	1.057	356.7	65.57	-35.62	0.006	0.402	-35.94	0	12.8	10.15	0.233	25.66	0	0	-1.349	421.5	83.2
159	2014/06/08 06:00	600	7.52	61.8	1.16	92.9	36.8	-12.75	0.014	0.379	-23.95	0	12.33	9.94	0.231	25.61	0	0	-1.35	421.5	83.2
159	2014/06/08 07:00	700	7.39	66.37	1.973	110.9	13.72	2.13	0.038	0.277	-17.65	0	12	9.92	0.23	25.56	0	0	-1.35	421.5	83.2
159	2014/06/08 08:00	800	7.69	66.74	2.556	132.1	16.68	42.63	0.083	0.207	-6.323	0	11.78	10.06	0.23	25.55	0	0	-1.35	421.3	83
159	2014/06/08 09:00	900	8.1	65.44	4.222	156.2	13.72	83.3	0.133	0.206	3.44	0	11.69	10.45	0.229	25.54	0	0	-1.349	421.2	82.9
159	2014/06/08 10:00	1000	8.69	61.58	4.305	157.5	14.66	176	0.246	0.217	24.28	0	11.71	11.08	0.23	25.54	0	0	-1.348	421.4	83.1
159	2014/06/08 11:00	1100	9.64	56.64	4.177	161.2	18.59	328.3	0.435	0.223	56.46	0	11.91	12.37	0.23	25.56	0	0	-1.349	421.4	83.1
159	2014/06/08 12:00	1200	10.4	52.87	4.376	172.2	11.83	308.8	0.422	0.224	76.2	0	12.34	14.47	0.231	25.6	0	0	-1.351	421.3	83
159	2014/06/08 13:00	1300	10.89	51.01	3.59	164.9	20.67	245.2	0.346	0.221	61.23	0	12.88	15.62	0.233	25.66	0	0	-1.348	421.4	83.1
159	2014/06/08 14:00	1400	7.7	77.9	4.769	191.8	14.24	14.6	0.128	0.179	-6.671	0	13.4	15.29	0.235	25.74	0.508	0	-1.349	422.2	83.9
159	2014/06/08 15:00	1500	6.617	84.3	3.235	173	12.49	46.28	0.136	0.158	-17.46	0	13.47	13.56	0.236	25.77	0.254	0	-1.351	422.5	84.2
159	2014/06/08 16:00	1600	6.595	78.1	1.068	180.8	37.92	79.2	0.167	0.14	-2.718	0	13.22	12.97	0.235	25.73	0	0	-1.349	422.7	84.4
159	2014/06/08 17:00	1700	6.367	83	2.679	254.6	41.11	32.66	0.112	0.143	-5.883	0	13.08	12.95	0.234	25.71	0.762	0	-1.351	423	84.7
159	2014/06/08 18:00	1800	6.027	81.9	2.998	304.6	15.03	70	0.181	0.138	-16.13	0	12.98	12.16	0.234	25.7	0.254	0	-1.349	423.9	85.6
159	2014/06/08 19:00	1900	7.31	74.2	1.77	257.2	28.56	113.8	0.24	0.162	13.99	0	12.83	12.41	0.234	25.69	0	0	-1.349	423.8	85.5
159	2014/06/08 20:00	2000	8.94	67.78	0.97	75.7	63.59	141.9	0.199	0.205	19.06	0	12.93	13.12	0.234	25.71	0	0	-1.35	423.7	85.4
159	2014/06/08 21:00	2100	8.82	65.42	1.11	236.7	38.91	58.77	0.135	0.191	10.72	0	13.16	13.52	0.236	25.77	0	0	-1.35	423.8	85.5
159	2014/06/08 22:00	2200	8.19	69.49	1.595	204.2	43.31	-35.84	0.057	0.308	-15.51	0	13.28	12.92	0.237	25.81	0	0	-1.35	423.8	85.5
159	2014/06/08 23:00	2300	8.36	67.96	1	157.7	18.07	-63.6	0.033	0.513	-17.67	0	13.12	12.08	0.238	25.82	0	0	-1.349	423.8	85.5
159	2014/06/09 00:00	2400	6.353	75.2	1.733	46.65	16.48	-71.3	0.003	0.634	-40.97	0	12.77	10.99	0.237	25.8	0	0	-1.349	423.9	85.6
160	2014/06/09 01:00	100	5.204	78	1.362	11.22	35.24	-72.8	0	0	-49.4	0	12.29	9.67	0.236	25.77	0	0	-1.35	423.9	85.6
160	2014/06/09 02:00	200	4.55	81.1	1.72	35.63	10.22	-70.3	0	0	-48.52	0	11.72	8.69	0.234	25.71	0	0	-1.349	423.9	85.6
160	2014/06/09 03:00	300	3.943	82.9	1.012	30.55	27.16	-70.4	0	0	-46.89	0	11.16	7.91	0.233	25.67	0	0	-1.351	423.9	85.6
160	2014/06/09 04:00	400	3.719	83.9	1.178	56.02	26.68	-68.79	0	0	-45.4	0	10.64	7.28	0.232	25.61	0	0	-1.35	423.9	85.6
160	2014/06/09 05:00	500	4.618	72.9	1.45	242.4	48.89	-65.62	0.003	0.813	-42.99	0	10.15	6.743	0.23	25.57	0	0	-1.35	424.1	85.8
160	2014/06/09 06:00	600	5.24	63.86	1.598	257.5	36.53	-47.76	0.03	0.485	-37.32	0	9.71	6.327	0.229	25.54	0	0	-1.35	424	85.7
160	2014/06/09 07:00	700	5.59	62.19	1.445	275.6	56.18	4.127	0.1	0.198	-8.6	0	9.33	6.416	0.228	25.5	0	0	-1.349	424	85.7
160	2014/06/09 08:00	800	5.926	59.06	1.703	241.9	25.54	55.65	0.142	0.146	-8.65	0	9.11	6.794	0.227	25.47	0	0	-1.351	423.8	85.5
160	2014/06/09 09:00	900	6.753	57.6	2.771	257.1	16.12	201.9	0.307	0.158	16.72	0	9.09	7.3	0.228	25.48	0	0	-1.349	423.8	85.5
160	2014/06/09 10:00	1000	7.75	55.1	3.497	263.1	14.93	296.2	0.409	0.163	39.18	0	9.34	8.53	0.229	25.51	0	0	-1.35	423.9	85.6
160	2014/06/09 11:00	1100	8.71	50.14	3.652	272.1	14.92	357	0.472	0.17	54.14	0	9.79	10.25	0.23	25.56	0	0	-1.351	423.8	85.5
160	2014/06/09 12:00	1200	9.4	47.52	3.543	283.2	15.34	413.9	0.529	0.18	58.24	0	10.33	11.88	0.232	25.63	0	0	-1.35	423.7	85.4
160	2014/06/09 13:00	1300	10.07	41.08	3.182	282.8	19.18	387.7	0.503	0.191	55.43	0	10.77	13.31	0.234	25.69	0	0	-1.347	423.5	85.2
160	2014/06/09 14:00	1400	11.28	35.51	3.606	272.6	22.46	536.8	0.674	0.208	68.43	0	11.35	14.71	0.236	25.76	0	0	-1.35	423.6	85.3
160	2014/06/09 15:00	1500	12.04	31.51	3.248	271.2	24.8	445.2	0.587	0.21	69.32	0	12.34	16.01	0.239	25.86	0	0	-1.351	423.7	85.4
160	2014/06/09 16:00	1600	12.86	29.47	3.827	265.9	24.5	501	0.655	0.217	80.1	0	13.52	17.49	0.242	25.98	0	0	-1.352	423.6	85.3
160	2014/06/09 17:00	1700	13.25	27.94	4.136	263	18.21	352.3	0.492	0.216	71.2	0	14.63	18.94	0.246	26.1	0	0	-1.347	423.3	85
160	2014/06/09 18:00	1800	13.67	26.98	4.593	261.6	19.26	372.5	0.512	0.217	61.81	0	15.55	19.16	0.249	26.21	0	0	-1.349	423.1	84.8
160	2014/06/09 19:00	1900	14.04	25.81	4.434	262.2	17.5	328	0.463	0.222	65.28	0	16.17	19.88	0.251	26.25	0	0	-1.35	423.3	85
160	2014/06/09 20:00	2000	13.82	25.62	3.906	268.5	21.93	186.5	0.177	0.393	33.77	0	16.74	19.52	0.252	26.31	0	0	-1.351	423.4	85.1
160	2014/06/09 21:00	2100	13.14	26.6	3.695	255.9	15.95	34.7	0.112	0.223	8.95	0	16.95	18.88	0.253	26.32	0	0	-1.349	423.7	85.4
160	2014/06/09 22:00	2200	12.62	27.32	3.249	258.4	13.51	-16.44	0.064	0.276	-16.3	0	16.82	17.29	0.252	26.3	0	0	-1.35	423.6	85.3
160	2014/06/09 23:00	2300	11.73	30.13	2.237	291	11.4	-69.49	0.015	0.615	-32.45	0	16.36	15.79	0.25	26.24	0	0	-1.35	423.6	85.3
160	2014/06/10 00:00	2400	10.63	32.12	1.454	279.4	23.12	-80.8	0.002	0.729	-42.94	0	15.72	14.2	0.248	26.15	0	0	-1.35	423.6	85.3
161	2014/06/10 01:00	100	9.02	40.91	1.195	98	22.89	-75.6	0	0	-46.36	0	15	12.83	0.245	26.05	0	0	-1.349	423.7	85.4
161	2014/06/10 02:00	200	7.57	47.8	1.196	40.21	14.17	-56.2	0	0	-44.05	0	14.27	11.72	0.242	25.96	0	0	-1.348	423.6	85.3
161	2014/06/10 03:00	300	7.16	49.88	0.968	76.2	27.62	-72.6	0	0	-43.8	0	13.61	10.87	0.239	25.86	0	0	-1.348	423.6	85.3



Hourly Faro Meteorological Data June 1 - June 30, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Data missing between June 10th and 12th, due to station maintenance, calibration and new program installation. A new program was installed to resolve decreasing precipitation results and improve quality control.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SolRad	Albedo	SoilHF	SoilT1	SoilT2	SoilT3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
161	2014/06/10 04:00	400	5.983	53.69	1.444	36.31	11.15	-71.2	0	0	-48.45	0	13	9.96	0.237	25.79	0	0	-1.349	423.6	85.3
161	2014/06/10 05:00	500	5.5	55.63	1.453	35.34	10.97	-57.59	0.005	0.562	-46.97	0	12.39	9.11	0.235	25.72	0	0	-1.349	423.6	85.3
161	2014/06/10 06:00	600	6.045	55.01	1.164	53.77	15.4	-21.27	0.031	0.342	-33.93	0	11.83	8.64	0.233	25.66	0	0	-1.349	423.7	85.4
161	2014/06/10 07:00	700	7.1	52.41	0.673	41.54	21.88	2.278	0.071	0.245	-15.89	0	11.39	8.67	0.231	25.6	0	0	-1.351	423.7	85.4
161	2014/06/10 08:00	800	7.63	51.92	0.386	44.74	11.35	31.3	0.101	0.192	-7.2	0	11.11	8.99	0.23	25.56	0	0	-1.351	423.7	85.4
161	2014/06/10 09:00	900	8.31	44.71	0.563	293.3	27.25	75.4	0.146	0.193	7.1	0	10.99	9.48	0.23	25.56	0	0	-1.35	423.7	85.4
161	2014/06/10 10:00	1000	9.77	39.88	1.047	265.3	30.05	227.5	0.32	0.201	38.35	0	11.04	10.41	0.23	25.56	0	0	-1.349	423.7	85.4
161	2014/06/10 11:00	1100	10.69	40.77	3.118	181.8	23.32	178.1	0.264	0.207	55.69	0	11.34	12.28	0.23	25.57	0	0	-1.35	423.8	85.5
161	2014/06/10 12:00	1200	11.05	39.9	1.929	172.5	31.22	205.7	0.278	0.214	38.94	0	11.85	12.98	0.232	25.64	0	0	-1.353	423.7	85.4
161	2014/06/10 13:00	1300	12.9	33.38	1.804	235.7	31.3	379.4	0.497	0.216	81.8	0	12.34	14.41	0.234	25.68	0	0	-1.353	423.7	85.4
161	2014/06/10 14:00	1400	13.99	30.08	1.625	220.9	40.06	324.5	0.448	0.214	93.8	0	13.09	16.67	0.236	25.77	0	0	-1.353	423.5	85.2
161	2014/06/10 15:00	1500	14.62	29.52	2.668	246.1	34.94	391.6	0.519	0.219	94.6	0	14.11	18.23	0.239	25.87	0	0	-1.35	423.6	85.3
163	2014/06/12 13:59	1359	5.667		2.283	159.4	14.85	73	0.172	0	-0.414	6999	10.41	9.33	0.295	27.67	0.001		-0.014	11.84	85.3
163	2014/06/12 14:59	1459	6.734		1.349	248.8	27.46	190.1	0.413	0	40.71	6999	10.47	10.05	0.308	28.05	0		-0.016	11.84	85.3
163	2014/06/12 15:59	1559	7.59		2.757	261.2	25.28	306.3	0.512	0	47.08	6999	10.85	11.46	0.312	28.17	0		-0.013	11.8	85.26
163	2014/06/12 16:59	1659	7.94		2.956	278	18.55	320.5	0.485	0	47.7	6999	11.45	12.64	0.311	28.15	0		-0.01	11.84	85.3
163	2014/06/12 17:59	1759	8.82		3.301	285.8	16.22	324.2	0.495	0	46.93	6999	12.09	13.51	0.31	28.11	0		-0.012	11.73	85.19
163	2014/06/12 18:59	1859	8.98		3.087	266.7	17.91	225.5	0.38	0	17.08	6999	12.65	13.66	0.308	28.07	0		-0.011	11.69	85.15
163	2014/06/12 19:59	1959	8.76		2.686	266.3	16.64	153.9	0.263	0	17.04	6999	12.95	13.6	0.306	28	0		-0.011	11.76	85.22
163	2014/06/12 20:59	2059	8.73		0.919	209.6	48.94	57.73	0.14	0	2.097	6999	13.13	13.19	0.303	27.91	0		-0.009	11.75	85.21
163	2014/06/12 21:59	2159	8.11		2.16	173.1	14.88	11.44	0.08	0	-13.33	6999	13.11	12.56	0.301	27.83	0		-0.01	11.73	85.19
163	2014/06/12 22:59	2259	7.4		1.683	167.1	12.54	-21.87	0.02	0	-26.38	6999	12.89	11.58	0.298	27.75	0		-0.009	11.73	85.19
163	2014/06/12 23:59	2359	6.657		2.338	159.4	14.88	-38.06	0.002	0	-31.31	6999	12.52	10.71	0.295	27.65	0		-0.009	11.62	85.08
164	2014/06/13 00:59	59	6.323		1.227	153.8	19.66	-32	-0.001	0	-30.67	6999	12.08	9.93	0.291	27.54	0		-0.011	11.72	85.18
164	2014/06/13 01:59	159	6.213		0.95	133.3	30.54	-28.38	-0.001	0	-26.37	6999	11.66	9.45	0.289	27.46	0		-0.01	11.73	85.19
164	2014/06/13 02:59	259	6.007		0.842	114.2	23.62	-24.95	-0.001	0	-23.87	6999	11.3	9.11	0.286	27.39	0		-0.011	11.83	85.29
164	2014/06/13 03:59	359	5.676		0.728	147.1	13.96	-27.82	-0.001	0	-20.6	6999	11	8.88	0.285	27.34	0		-0.01	11.86	85.32
164	2014/06/13 04:59	459	5.336		0.898	148	31.66	-17.4	0.003	0	-19.5	6999	10.75	8.69	0.284	27.32	0.001		-0.012	12.17	85.63
164	2014/06/13 05:59	559	5.46		1.122	136.5	14.75	-15.28	0.014	0	-16.58	6999	10.53	8.54	0.285	27.36	0		-0.013	12.17	85.63
164	2014/06/13 06:59	659	5.65		1.418	144.5	13.35	-4.997	0.037	0	-12.35	6999	10.36	8.48	0.286	27.37	0		-0.013	12.17	85.63
164	2014/06/13 07:59	759	5.787		1.692	146	12.22	6.973	0.051	0	-8.83	6999	10.23	8.53	0.285	27.35	0		-0.014	12.16	85.62
164	2014/06/13 08:59	859	6.519		1.418	166.8	33.8	66.3	0.175	0	2.003	6999	10.16	8.7	0.284	27.33	0		-0.014	12.2	85.66
164	2014/06/13 09:59	959	8.45		0.86	142.4	42.96	269.2	0.479	0	60.89	6999	10.23	10.07	0.284	27.32	0		-0.013	14.15	87.61
164	2014/06/13 10:59	1059	8.23		0.697	158.7	32.22	77.1	0.17	0	37.15	6999	10.7	11.54	0.285	27.35	0		-0.011	12.16	85.62
164	2014/06/13 11:59	1159	8.99		0.9	152.1	41.11	142.3	0.241	0	24.86	6999	11.16	11.72	0.286	27.39	0		-0.012	12.13	85.59
164	2014/06/13 12:59	1259	9.8		1.489	138	43.21	198	0.3	0	30.52	6999	11.47	12.12	0.287	27.4	0		-0.01	12.09	85.55
164	2014/06/13 13:59	1359	10.98		3.273	151.7	27.84	412.5	0.593	0	54.93	6999	11.81	13.14	0.287	27.4	0		-0.011	12.15	85.61
164	2014/06/13 14:59	1459	11.65		2.89	156.9	25.61	464.3	0.667	0	62.12	6999	12.38	14.41	0.287	27.43	0		-0.009	12.16	85.62
164	2014/06/13 15:59	1559	12.38		3.672	158.4	21.59	519.9	0.746	0	60.89	6999	13.09	15.72	0.288	27.46	0		-0.01	12.1	85.56
164	2014/06/13 16:59	1659	12.95		3.262	167.1	32.07	316	0.498	0	50.83	6999	13.82	16.8	0.289	27.47	0		-0.011	12.07	85.53
164	2014/06/13 17:59	1759	13.57		3.639	141.9	24.44	291.6	0.466	0	27.46	6999	14.41	16.69	0.29	27.49	0		-0.008	12	85.46
164	2014/06/13 18:59	1859	13		4.618	163.4	15.11	126.7	0.232	0	-5.772	6999	14.69	16.09	0.288	27.46	0		-0.008	12.12	85.58
164	2014/06/13 19:59	1959	12.61		5.124	168.2	11.69	137	0.206	0	-9.86	6999	14.63	15.01	0.287	27.41	0		-0.008	12.02	85.48
164	2014/06/13 20:59	2059	10.93		4.21	218.8	19.89	35.96	0.103	0	-23.62	6999	14.37	14.09	0.284	27.32	0		-0.009	11.86	85.32
164	2014/06/13 21:59	2159	8.52		3.883	277.9	15.95	1.378	0.045	0	-34.71	6999	14	12.89	0.281	27.23	0		-0.009	11.78	85.24
164	2014/06/13 22:59	2259	7.22		1.85	228.8	45.61	-21.65	0.011	0	-31.73	6999	13.54	11.93	0.278	27.14	0		-0.009	11.92	85.38
164	2014/06/13 23:59	2359	5.977		1.539	265.9	16.64	-40.66	0.001	0	-32.5	6999	13.08	11.16	0.275	27.05	0		-0.008	12.03	85.49
165	2014/06/14 00:59	59	5.477		2.548	272.4	13.21	-47.8	-0.001	0	-34.29	6999	12.62	10.45	0.273	26.98	0		-0.011	12	85.46
165	2014/06/14 01:59	159	3.916		2.167	269.6	42.36	-37.74	-0.001	0	-38.83	6999	12.18	9.71	0.272	26.95	0.002		-0.01	12.68	86.14
165	2014/06/14 02:59	259	3.434		0.776	18.22	28.98	-31.36	-0.001	0	-38.01	6999	11.72	9	0.271	26.91	0.001		-0.013	13.55	87.01
165	2014/06/14 03:59	359	3.417		1.058	180.5	27.09	-29.71	0	0	-31.59	6999	11.29	8.62	0.272	26.95	0		-0.014	13.56	87.02
165	2014/06/14 04:59	459	3.162		1.484	254.5	12.75	-20	0.003	0	-30.47	6999	10.93	8.29	0.274	27.01	0		-0.012	13.72	87.18
165	2014/06/14 05:59	559	2.969		1.43	253.7	16.68	-19.52	0.016	0	-28.58	6999	10.61	7.97	0.275	27.03	0		-0.015	13.82	87.28
165	2014/06/14 06:59	659	2.91		1.539	272.3	15.99	-17.37	0.028	0	-26.64	6999	10.32	7.73	0.276	27.07	0		-0.015	13.99	87.45
165	2014/06/14 07:59	759	3.05		0.495	252.4	27.75	3.755	0.066	0	-17.96	6999	10.08	7.63	0.277	27.1	0		-0.015	14.07	87.53



Hourly Faro Meteorological Data June 1 - June 30, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Data missing between June 10th and 12th, due to station maintenance, calibration and new program installation. A new program was installed to resolve decreasing precipitation results and improve quality control.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SoiRad	Albedo	SoiHF	SoiT1	SoiT2	SoiT3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
165	2014/06/14 08:59	859	3.777		0.873	122.2	22.6	38.09	0.153	0	-6.691	6999	9.93	7.85	0.277	27.11	0		-0.012	14.09	87.55
165	2014/06/14 09:59	959	4.861		0.613	171	40.03	78.8	0.25	0	17.57	6999	9.92	8.57	0.278	27.12	0		-0.012	14.1	87.56
165	2014/06/14 10:59	1059	5.765		1.068	355.8	63.81	150.5	0.393	0	38.02	6999	10.14	9.77	0.278	27.15	0		-0.012	14.07	87.53
165	2014/06/14 11:59	1159	6.194		1.472	117	37.3	111.9	0.309	0	29.41	6999	10.58	10.9	0.28	27.19	0		-0.014	14.03	87.49
165	2014/06/14 12:59	1259	6.604		1.825	189.2	33.24	208.2	0.39	0	30.6	6999	11	11.4	0.281	27.22	0		-0.009	13.99	87.45
165	2014/06/14 13:59	1359	7.49		1.639	291.8	52.13	304.8	0.471	0	46.3	6999	11.39	12.31	0.282	27.25	0		-0.013	13.96	87.42
165	2014/06/14 14:59	1459	7.81		1.551	243.6	59.12	266.5	0.42	0	36.36	6999	11.94	13.03	0.283	27.29	0		-0.012	13.97	87.43
165	2014/06/14 15:59	1559	8.64		1.429	258.6	42.93	308.3	0.481	0	42.31	6999	12.44	13.68	0.283	27.3	0		-0.009	13.96	87.42
165	2014/06/14 16:59	1659	9.56		1.938	292.3	56.26	347.8	0.548	0	50.57	6999	12.97	14.79	0.284	27.32	0		-0.013	13.96	87.42
165	2014/06/14 17:59	1759	9.92		2.419	271.8	28.1	255.4	0.426	0	34.21	6999	13.6	15.43	0.285	27.35	0		-0.011	13.75	87.21
165	2014/06/14 18:59	1859	10.1		3.11	274.7	28.31	226	0.393	0	15.14	6999	14.06	15.27	0.286	27.37	0		-0.008	13.68	87.14
165	2014/06/14 19:59	1959	9.89		3.018	270.8	22.95	130.6	0.233	0	-4.955	6999	14.25	14.58	0.285	27.36	0		-0.008	13.82	87.28
165	2014/06/14 20:59	2059	9.43		2.422	10.79	31.71	38.88	0.102	0	-15.29	6999	14.19	13.82	0.283	27.3	0		-0.01	13.78	87.24
165	2014/06/14 21:59	2159	7.98		3.171	75.5	11.19	-21.35	0.03	0	-37.74	6999	13.94	12.61	0.281	27.24	0		-0.01	13.83	87.29
165	2014/06/14 22:59	2259	6.927		2.961	19.08	21.76	-71.7	0.006	0	-38.36	6999	13.49	11.46	0.279	27.15	0.001		-0.008	13.66	87.12
165	2014/06/14 23:59	2359	5.659		3.151	37.96	13.26	-59.65	0	0	-45.4	6999	12.94	10.41	0.276	27.07	0.002		-0.009	15.19	88.65
166	2014/06/15 00:59	59	5.178		2.259	37.63	18.07	-58.65	0.001	0	-40.76	6999	12.36	9.57	0.276	27.06	0		-0.011	15.28	88.74
166	2014/06/15 01:59	159	4.934		1.776	36	19.7	-68.09	-0.001	0	-41.03	6999	11.83	8.95	0.278	27.14	0		-0.01	15.27	88.73
166	2014/06/15 02:59	259	3.986		1.094	24.52	26.12	-72.6	-0.003	0	-44.94	6999	11.35	8.25	0.278	27.14	0		-0.011	15.27	88.73
166	2014/06/15 03:59	359	3.711		1.437	27.88	10.52	-55.63	-0.001	0	-44.07	6999	10.85	7.57	0.277	27.1	0		-0.013	15.27	88.73
166	2014/06/15 04:59	459	3.81		0.69	11.43	40.1	-37.77	0.005	0	-34.36	6999	10.38	7.19	0.276	27.06	0		-0.013	15.28	88.74
166	2014/06/15 05:59	559	3.951		0.553	3.085	27.69	-23.58	0.019	0	-27.74	6999	10	7.07	0.274	27.02	0		-0.013	15.28	88.74
166	2014/06/15 06:59	659	4.339		0.594	13.24	25.12	-5.271	0.072	0	-19.18	6999	9.73	7.08	0.273	26.98	0		-0.014	15.29	88.75
166	2014/06/15 07:59	759	5.557		0.395	71.1	25.76	68.11	0.168	0	-0.781	6999	9.56	7.38	0.273	26.97	0		-0.014	15.31	88.77
166	2014/06/15 08:59	859	6.404		0.649	57.82	45.68	84.7	0.17	0	11.21	6999	9.57	8.16	0.273	26.96	0		-0.011	15.3	88.76
166	2014/06/15 09:59	959	7.75		0.679	84	37.24	226.5	0.356	0	27.74	6999	9.76	9.01	0.273	26.97	0		-0.012	15.36	88.82
166	2014/06/15 10:59	1059	9.2		1.514	256	39.67	392.2	0.591	0	84.5	6999	10.14	11.01	0.274	27	0		-0.015	15.3	88.76
166	2014/06/15 11:59	1159	9.2		1.919	223.7	39.09	239.5	0.406	0	52	6999	10.85	12.72	0.276	27.06	0		-0.01	15.26	88.72
166	2014/06/15 12:59	1259	9.54		3.894	326.1	33.85	272.6	0.455	0	42.46	6999	11.43	13.56	0.278	27.12	0		-0.01	15.12	88.58
166	2014/06/15 13:59	1359	7.71		3.899	2.535	16.29	91.9	0.254	0	-5.236	6999	11.88	12.99	0.279	27.18	0		-0.009	15.24	88.7
166	2014/06/15 14:59	1459	8.45		2.726	34.77	12.27	191.1	0.399	0	2.141	6999	12.03	12.34	0.279	27.18	0		-0.007	15.27	88.73
166	2014/06/15 15:59	1559	9.38		2.788	13.42	32.56	111.7	0.238	0	17.16	6999	12.17	13.01	0.279	27.17	0.001		-0.01	15.65	89.11
166	2014/06/15 16:59	1659	9.12		1.368	72.7	19.39	143.2	0.364	0	4.321	6999	12.43	12.61	0.28	27.18	0		-0.012	16.15	89.61
166	2014/06/15 17:59	1759	11.08		2.358	338.2	30.99	315.4	0.566	0	63.93	6999	12.59	14.19	0.283	27.29	0		-0.013	15.97	89.43
166	2014/06/15 18:59	1859	9.98		2.977	324.7	12.05	121.9	0.234	0	3.634	6999	13.2	14.57	0.287	27.42	0		-0.01	16.04	89.5
166	2014/06/15 19:59	1959	10.14		2.294	321.5	10.94	119	0.225	0	0.48	6999	13.47	13.88	0.289	27.46	0		-0.011	16.07	89.53
166	2014/06/15 20:59	2059	9.9		1.906	249.5	23.96	26.43	0.087	0	-8.26	6999	13.48	13.37	0.287	27.43	0		-0.011	15.92	89.38
166	2014/06/15 21:59	2159	7.99		3.216	78.2	28	-33.45	0.014	0	-28.02	6999	13.34	12.45	0.286	27.39	0.001		-0.01	15.98	89.44
166	2014/06/15 22:59	2259	6.508		2.156	39.88	11.98	-45.15	0.001	0	-37.87	6999	12.97	11.24	0.284	27.31	0.006		1.296	19.06	92.52
166	2014/06/15 23:59	2359	6.015		1.633	51.22	20.54	-39.14	-0.001	0	-34.84	6999	12.46	10.33	0.286	27.38	0.007		0.04	24.17	97.63
167	2014/06/16 00:59	59	5.701		2.618	66.53	24.95	-40.22	0	0	-34.79	6999	11.93	9.64	0.337	28.91	0.001		-0.008	25.88	99.34
167	2014/06/16 01:59	159	5.344		0.653	271.8	26.92	-21.98	-0.001	0	-26.38	6999	11.47	9.2	0.37	29.86	0.002		-0.011	27	100.46
167	2014/06/16 02:59	259	4.968		1.779	118.7	8.25	-29.43	-0.001	0	-26.35	6999	11.09	8.92	0.38	30.15	0		-0.01	27.45	100.91
167	2014/06/16 03:59	359	4.891		1.317	85.1	19.01	-53.56	-0.001	0	-32.19	6999	10.75	8.48	0.384	30.25	0		-0.018	27.46	100.92
167	2014/06/16 04:59	459	4.775		1.134	65.81	23.25	-36.81	0.016	0	-33.02	6999	10.41	7.94	0.372	29.93	0		-0.045	27.46	100.92
167	2014/06/16 05:59	559	4.794		1.024	65.36	33.14	-18.29	0.035	0	-22.3	6999	10.09	7.74	0.355	29.44	0		-0.048	27.47	100.93
167	2014/06/16 06:59	659	5.078		0.963	315	20.26	17.58	0.126	0	-4.865	6999	9.87	7.83	0.344	29.13	0		-0.013	27.49	100.95
167	2014/06/16 07:59	759	6.064		1.05	105.1	29.84	36.91	0.157	0	1.792	6999	9.78	8.3	0.337	28.91	0		-0.015	27.49	100.95
167	2014/06/16 08:59	859	7.4		0.827	84.8	34.56	117.6	0.266	0	17.68	6999	9.84	8.84	0.331	28.75	0		-0.024	27.54	101
167	2014/06/16 09:59	959	8.68		1.003	102.6	35.92	153.1	0.321	0	41.02	6999	10.06	9.96	0.327	28.64	0		-0.014	27.52	100.98
167	2014/06/16 10:59	1059	9.1		1.581	166.5	26.72	285.9	0.452	0	52.4	6999	10.49	11.19	0.325	28.57	0		-0.011	27.38	100.84
167	2014/06/16 11:59	1159	10.18		2.864	188.3	21.02	338.4	0.52	0	61.83	6999	11	12.55	0.324	28.53	0		-0.008	29.31	102.77
167	2014/06/16 12:59	1259	10.6		4.15	175.2	18.02	382.4	0.697	0	70.5	6999	11.49	13.91	0.323	28.5	0		-0.011	27.45	100.91
167	2014/06/16 13:59	1359	9.87		3.941	169.6	10.35	180	0.324	0	21.19	6999	12.08	14.43	0.322	28.49	0		-0.012	27.3	100.76
167	2014/06/16 14:59	1459	10.69		3.991	172.1	12.1	285.5	0.457	0	18.68	6999	12.44	13.88	0.321	28.44	0		-0.009	27.37	100.83



Hourly Faro Meteorological Data June 1 - June 30, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column 'V', while raw instrument numbers are seen in column 'U'.

Note: Data missing between June 10th and 12th, due to station maintenance, calibration and new program installation. A new program was installed to resolve decreasing precipitation results and improve quality control.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SolRad	Albedo	SoilHF	SoilT1	SoilT2	SoilT3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
167	2014/06/16 15:59	1559	11.62		4.471	232.3	21.84	-373.3	0.562	0	-43.02	6999	12.68	14.52	0.318	28.36	0		-0.01	27.25	100.71
167	2014/06/16 16:59	1659	8.96		3.188	241.5	28.59	-98.8	0.034	0	-20.01	6999	13.09	14.19	0.316	28.31	0.001		-0.009	27.56	101.02
167	2014/06/16 17:59	1759	8.97		2.482	136.9	43.52	-46.76	0.111	0	-29.66	6999	13.06	12.49	0.317	28.33	0		-0.009	27.74	101.2
167	2014/06/16 18:59	1859	10.96		1.558	90.7	24.78	192.6	0.355	0	6.423	6999	12.73	12.19	0.318	28.36	0		-0.009	27.77	101.23
167	2014/06/16 19:59	1959	11.96		3.626	175.2	14.96	207.1	0.22	0	25.62	6999	12.68	13.13	0.316	28.3	0		-0.012	27.64	101.1
167	2014/06/16 20:59	2059	11.76		4.337	173.7	11.6	82.1	0.225	0	2.493	6999	12.91	13.3	0.315	28.26	0		-0.01	27.63	101.09
167	2014/06/16 21:59	2159	11.7		3.979	173.2	10.27	22.2	0.139	0	-9.23	6999	12.92	12.67	0.312	28.19	0		-0.011	27.68	101.14
167	2014/06/16 22:59	2259	10.9		2.99	160.6	11.16	-33.34	0.051	0	-18.86	6999	12.71	11.91	0.309	28.1	0		-0.011	27.65	101.11
167	2014/06/16 23:59	2359	9.24		2.271	140.2	11.95	-64.07	0.005	0	-35.8	6999	12.36	10.87	0.306	28	0		-0.01	27.74	101.2
168	2014/06/17 00:59	59	8.4		1.953	142.4	12.12	-68.93	-0.001	0	-40.26	6999	11.92	9.83	0.303	27.91	0		-0.009	27.73	101.19
168	2014/06/17 01:59	159	8.18		1.59	133.3	15.96	-67.38	-0.003	0	-40.51	6999	11.44	9.01	0.3	27.82	0		-0.009	27.73	101.19
168	2014/06/17 02:59	259	7.74		1.65	136.5	12.79	-65.18	-0.002	0	-39.53	6999	10.96	8.35	0.298	27.74	0		-0.008	27.73	101.19
168	2014/06/17 03:59	359	7.48		3.378	142.8	10.88	-60.6	0.002	0	-38.4	6999	10.51	7.8	0.295	27.66	0		-0.009	27.56	101.02
168	2014/06/17 04:59	459	7.61		4.201	156.1	10.03	-50.28	0.014	0	-34.66	6999	10.11	7.37	0.293	27.6	0		-0.009	27.51	100.97
168	2014/06/17 05:59	559	7.66		4.3	154.7	11.29	-15.39	0.057	0	-25.19	6999	9.75	7.16	0.291	27.53	0		-0.011	27.61	101.07
168	2014/06/17 06:59	659	7.91		5.18	159.8	13.02	14.9	0.079	0	-18.12	6999	9.5	7.24	0.289	27.49	0		-0.01	27.54	101
168	2014/06/17 07:59	759	7.97		5.592	163.5	11.81	79.2	0.158	0	-9.34	6999	9.35	7.4	0.288	27.44	0		-0.01	27.7	101.16
168	2014/06/17 08:59	859	8.32		5.728	164	11.84	109.1	0.199	0	-2.212	6999	9.31	7.78	0.287	27.41	0		-0.01	27.64	101.1
168	2014/06/17 09:59	959	8.42		6.445	162.5	12.22	167.1	0.259	0	5.041	6999	9.37	8.2	0.286	27.39	0		-0.01	27.76	101.22
168	2014/06/17 10:59	1059	7.85		6.245	142.1	13.31	142.5	0.244	0	0.158	6999	9.48	8.52	0.286	27.37	0		-0.01	27.84	101.3
168	2014/06/17 11:59	1159	8.19		4.868	157.6	13.23	68.03	0.225	0	5.456	6999	9.6	8.85	0.285	27.36	0		-0.009	27.88	101.34
168	2014/06/17 12:59	1259	8.58		5.857	156.4	13.38	188.3	0.309	0	14.09	6999	9.74	9.23	0.285	27.34	0		-0.009	27.83	101.29
168	2014/06/17 13:59	1359	8.32		5.514	139.7	13.93	25.3	0.164	0	0.052	6999	9.92	9.46	0.285	27.36	0		-0.01	27.88	101.34
168	2014/06/17 14:59	1459	8.47		5.168	172.3	14.08	6.251	0.142	0	-3.503	6999	10.01	9.25	0.285	27.35	0		-0.009	27.79	101.25
168	2014/06/17 15:59	1559	8.1		4.668	170.2	13.09	24.94	0.156	0	-0.338	6999	10.01	9.14	0.284	27.33	0		-0.009	28.02	101.48
168	2014/06/17 16:59	1659	7.65		5.169	163.8	12.96	72.7	0.277	0	6.453	6999	10.01	9.2	0.284	27.33	0.001		-0.008	28.75	102.21
168	2014/06/17 17:59	1759	8.21		6.295	159.5	13.2	90.3	0.167	0	3.328	6999	10.06	9.54	0.287	27.42	0		-0.011	28.65	102.11
168	2014/06/17 18:59	1859	8.25		5.735	159.6	11.16	84.8	0.144	0	-4.601	6999	10.12	9.33	0.289	27.49	0		-0.009	28.55	102.01
168	2014/06/17 19:59	1959	8.51		5.834	162.1	11.78	72.7	0.122	0	-5.01	6999	10.1	9.21	0.289	27.47	0		-0.009	28.58	102.04
168	2014/06/17 20:59	2059	8.37		5.645	171.6	10.91	35.59	0.105	0	-11.61	6999	10.05	8.94	0.288	27.44	0		-0.009	28.54	102
168	2014/06/17 21:59	2159	8.57		4.78	174	12.13	12.65	0.11	0	-9.94	6999	9.95	8.74	0.287	27.4	0		-0.01	28.69	102.15
168	2014/06/17 22:59	2259	7.81		6.336	171.7	10.72	-27.2	0.048	0	-20.39	6999	9.81	8.42	0.285	27.35	0		-0.011	28.54	102
168	2014/06/17 23:59	2359	6.074		5.218	166.9	9.64	-64.87	0.005	0	-38.69	6999	9.58	7.53	0.283	27.3	0		-0.01	28.6	102.06
169	2014/06/18 00:59	59	5.553		3.247	192.8	15.38	-58.57	-0.001	0	-39.77	6999	9.22	6.648	0.281	27.23	0		-0.009	28.72	102.18
169	2014/06/18 01:59	159	5.237		3.815	236.4	11.19	-67.45	-0.002	0	-40.07	6999	8.81	6.053	0.279	27.17	0		-0.011	28.64	102.1
169	2014/06/18 02:59	259	4.566		2.977	278.8	10.32	-71.4	-0.003	0	-43.15	6999	8.42	5.44	0.277	27.1	0		-0.01	28.74	102.2
169	2014/06/18 03:59	359	3.657		2.754	257.8	12.79	-71.4	-0.001	0	-45.01	6999	8.02	4.834	0.275	27.04	0		-0.01	28.73	102.19
169	2014/06/18 04:59	459	2.872		1.174	174.5	50.03	-65.91	0.007	0	-43.7	6999	7.62	4.291	0.273	26.98	0		-0.01	28.8	102.26
169	2014/06/18 05:59	559	3.399		1.043	171.3	49.63	-42.74	0.062	0	-32.1	6999	7.24	3.944	0.272	26.93	0		-0.01	28.83	102.29
169	2014/06/18 06:59	659	4.421		0.889	55.64	16.25	26.57	0.17	0	1.944	6999	6.93	4.301	0.27	26.88	0		-0.011	28.84	102.3
169	2014/06/18 07:59	759	5.256		1.714	142.7	16.15	125.6	0.289	0	3.481	6999	6.843	4.988	0.269	26.86	0		-0.012	28.77	102.23
169	2014/06/18 08:59	859	5.687		3.163	198.8	18.01	213.3	0.411	0	22.96	6999	7.03	5.653	0.27	26.88	0		-0.009	28.8	102.26
169	2014/06/18 09:59	959	6.203		4.169	226.4	23.35	356	0.585	0	45.61	6999	7.45	6.825	0.272	26.92	0		-0.01	28.69	102.15
169	2014/06/18 10:59	1059	6.763		4.205	220.4	22.24	315.4	0.513	0	55.95	6999	7.99	8.6	0.273	26.96	0		-0.008	28.8	102.26
169	2014/06/18 11:59	1159	7.32		4.651	217	21.1	476	0.722	0	47.82	6999	8.58	9.59	0.274	27.01	0		-0.009	28.54	102
169	2014/06/18 12:59	1259	8.14		4.653	198.9	22.57	488.3	0.742	0	64.17	6999	9	11.18	0.275	27.03	0		-0.011	28.59	102.05
169	2014/06/18 13:59	1359	8.35		4.187	211.2	20.74	279.1	0.445	0	32.02	6999	9.57	11.93	0.276	27.07	0		-0.008	28.55	102.01
169	2014/06/18 14:59	1459	8.73		4.555	206.9	20.21	267.4	0.422	0	22.14	6999	10.13	11.87	0.277	27.11	0		-0.011	28.58	102.04
169	2014/06/18 15:59	1559	7.52		4.065	248.9	24.09	99.5	0.239	0	-8.02	6999	10.53	11.37	0.278	27.12	0		-0.011	28.62	102.08
169	2014/06/18 16:59	1659	8.24		3.052	202.9	39.09	112.6	0.303	0	12.97	6999	10.63	10.89	0.277	27.09	0		-0.009	28.7	102.16
169	2014/06/18 17:59	1759	8.5		4.061	260.1	29.16	238.1	0.397	0	12.51	6999	10.7	11.06	0.276	27.08	0		-0.009	28.82	102.28
169	2014/06/18 18:59	1859	7.39		3.079	236.1	41.69	-41.31	0.118	0	-13.43	6999	10.86	10.98	0.276	27.07	0.001		-0.01	29.02	102.48
169	2014/06/18 19:59	1959	8.13		5.266	226.3	12.36	138.3	0.274	0	-3.422	6999	10.86	10.26	0.276	27.08	0		-0.009	29.22	102.68
169	2014/06/18 20:59	2059	8.07		2.733	206.6	14.42	31.52	0.099	0	-12.93	6999	10.74	10.02	0.276	27.08	0		-0.009	29.37	102.83
169	2014/06/18 21:59	2159	7.88		2.761	198.4	14.26	-9.04	0.058	0	-22.87	6999	10.59	9.35	0.276	27.07	0		-0.009	29.23	102.69



Hourly Faro Meteorological Data June 1 - June 30, 2014

Faro Climate Station

Note: Cumulative precipitation is calculated in column "V", while raw instrument numbers are seen in column "U".

Note: Data missing between June 10th and 12th, due to station maintenance, calibration and new program installation. A new program was installed to resolve decreasing precipitation results and improve quality control.

Julian Day	Date	Hr	Tair	RH	WindV	WindD	StdDev	NetRad	SoiRad	Albedo	SoiHF	SoiT1	SoiT2	SoiT3	Soil W	Ave	Rain	SWE	SnoD	Precip	Precip (rev)
169	2014/06/18 22:59	2259	7.88		3.008	210	12.54	-3.201	0.062	0	-17.02	6999	10.32	8.82	0.275	27.04	0		-0.01	29.34	102.8
169	2014/06/18 23:59	2359	6.458		2.125	216.2	15.14	-58.05	0.005	0	-33.25	6999	10.01	8.18	0.274	26.99	0		-0.01	29.36	102.82
170	2014/06/19 00:59	59	5.196		1.077	108.1	21.14	-59.15	-0.002	0	-38.26	6999	9.63	7.26	0.272	26.94	0		-0.01	29.37	102.83
170	2014/06/19 01:59	159	4.573		0.712	59.08	47.3	-70.9	-0.003	0	-39.86	6999	9.2	6.559	0.27	26.87	0		-0.008	29.37	102.83
170	2014/06/19 02:59	259	4.739		0.722	340.7	48.37	-70.2	-0.002	0	-40.99	6999	8.77	5.9	0.268	26.82	0		-0.008	29.37	102.83
170	2014/06/19 03:59	359	4.38		1.168	267.4	18.21	-68.64	-0.001	0	-40.83	6999	8.34	5.328	0.266	26.76	0		-0.01	29.36	102.82
170	2014/06/19 04:59	459	3.385		1.087	121.6	28.87	-63.84	0.006	0	-40.66	6999	7.92	4.813	0.265	26.72	0		-0.01	29.37	102.83
170	2014/06/19 05:59	559	3.774		1.062	98.5	44.62	-41.78	0.064	0	-29.42	6999	7.53	4.443	0.264	26.67	0		-0.009	29.41	102.87
170	2014/06/19 06:59	659	5.26		0.633	56.69	37.23	23.18	0.167	0	7.07	6999	7.22	4.831	0.262	26.63	0		-0.012	29.42	102.88
170	2014/06/19 07:59	759	5.317		1.079	304.4	29.97	115.6	0.282	0	4.54	6999	7.13	5.481	0.262	26.61	0		-0.011	29.43	102.89
170	2014/06/19 08:59	859	7.04		0.863	35.75	36.21	208.1	0.404	0	30.72	6999	7.32	6.185	0.262	26.63	0		-0.012	29.42	102.88
170	2014/06/19 09:59	959	7.72		1.874	133.8	30.41	300.7	0.529	0	58.43	6999	7.81	7.72	0.264	26.7	0		-0.012	29.41	102.87
170	2014/06/19 10:59	1059	8.29		3.423	186.3	21.19	376.3	0.625	0	69.82	6999	8.46	9.66	0.266	26.76	0		-0.011	29.3	102.76
170	2014/06/19 11:59	1159	9.17		3.618	177.1	28.28	404.6	0.658	0	64.07	6999	9.09	11.13	0.268	26.82	0		-0.011	29.36	102.82
170	2014/06/19 12:59	1259	9.8		3.008	168.5	33.6	315.8	0.526	0	56.43	6999	9.49	12.39	0.269	26.84	0		-0.01	29.36	102.82
170	2014/06/19 13:59	1359	10.63		2.875	164.6	28.47	359.9	0.582	0	49.62	6999	9.97	13.02	0.271	26.89	0		-0.008	29.35	102.81
170	2014/06/19 14:59	1459	10.96		3.466	169.4	18.5	321.8	0.523	0	30.59	6999	10.62	13.31	0.272	26.93	0		-0.009	29.2	102.66
170	2014/06/19 15:59	1559	11.65		3.699	177.3	18.42	377.5	0.602	0	42.7	6999	11.19	13.84	0.273	26.97	0		-0.009	29.22	102.68
170	2014/06/19 16:59	1659	12.55		3.077	149.5	33.23	386	0.609	0	55.5	6999	11.77	14.98	0.274	26.99	0		-0.009	29.27	102.73
170	2014/06/19 17:59	1759	12.57		3.836	148.7	28.3	261.5	0.448	0	26.25	6999	12.44	15.37	0.275	27.03	0		-0.009	29.33	102.79
170	2014/06/19 18:59	1859	12.32		4.443	153.4	17.32	175	0.345	0	9.24	6999	12.84	15.01	0.276	27.05	0		-0.008	29.2	102.66
170	2014/06/19 19:59	1959	13.23		3.539	141.1	21.85	207.7	0.268	0	16.14	6999	12.96	14.58	0.275	27.03	0		-0.012	29.19	102.65
170	2014/06/19 20:59	2059	12.29		3.909	131.6	16.18	41.14	0.152	0	-5.776	6999	13.03	14.41	0.274	27	0		-0.01	29.21	102.67
170	2014/06/19 21:59	2159	11.21		1.767	161.1	19.68	-4.815	0.056	0	-20.06	6999	12.91	13.13	0.273	26.96	0		-0.01	29.31	102.77
170	2014/06/19 22:59	2259	10.66		1.591	118.8	13.38	-40.57	0.026	0	-27.38	6999	12.57	12.08	0.27	26.89	0		-0.009	29.31	102.77
170	2014/06/19 23:59	2359	9.4		1.422	59.47	21.74	-57.53	0.005	0	-35.36	6999	12.15	11.01	0.268	26.8	0		-0.009	29.29	102.75
171	2014/06/20 00:59	59	7.75		2.105	18.36	8.29	-68.55	-0.002	0	-43.73	6999	11.66	9.93	0.265	26.73	0		-0.01	29.28	102.74
171	2014/06/20 01:59	159	6.88		2.444	20.6	10.01	-69.4	-0.003	0	-47	6999	11.13	8.89	0.263	26.65	0		-0.01	29.28	102.74
171	2014/06/20 02:59	259	6.705		3.113	17.81	10.32	-67.05	-0.002	0	-46.42	6999	10.57	8.01	0.261	26.57	0		-0.009	29.29	102.75
171	2014/06/20 03:59	359	6.563		1.937	355.9	26.6	-60.25	0.001	0	-42.63	6999	10.03	7.34	0.258	26.49	0		-0.01	29.3	102.76
171	2014/06/20 04:59	459	6.398		0.77	351.1	53.8	-42.63	0.018	0	-35.18	6999	9.55	6.902	0.256	26.43	0		-0.01	29.3	102.76
171	2014/06/20 05:59	559	6.632		0.833	181.1	51.67	-0.496	0.064	0	-21.52	6999	9.15	6.764	0.254	26.37	0		-0.011	29.31	102.77
171	2014/06/20 06:59	659	8.02		1.112	234	62.59	21.9	0.078	0	-6.76	6999	8.9	7.08	0.253	26.34	0		-0.008	29.31	102.77
171	2014/06/20 07:59	759	9.89		3.225	29.72	28.19	78.2	0.162	0	-1.539	6999	8.82	7.44	0.253	26.32	0		-0.007	29.26	102.72
171	2014/06/20 08:59	859	10.81		2.4	48.26	48.87	81.7	0.15	0	9.57	6999	8.88	8.07	0.253	26.33	0		-0.012	29.14	102.6
171	2014/06/20 09:59	959	12.04		4.469	64.39	14.9	115.6	0.208	0	12.74	6999	9.07	8.68	0.254	26.35	0		-0.01	29.23	102.69
171	2014/06/20 10:59	1059	10.88		4.992	135.3	18.07	145.4	0.241	0	14.2	6999	9.31	9.14	0.254	26.36	0		-0.01	29.34	102.8
171	2014/06/20 11:59	1159	10.33		6.884	136	12	62.6	0.148	0	14.56	6999	9.52	9.8	0.254	26.37	0		-0.009	29.06	102.52
171	2014/06/20 12:59	1259	7.69		6.017	65.87	14.1	-0.405	0.138	0	-6.12	6999	9.71	9.42	0.255	26.39	0		-0.009	29.34	102.8
171	2014/06/20 13:59	1359	8.88		6.055	81	11.16	31.68	0.12	0	-1.311	6999	9.72	9.21	0.255	26.38	0		-0.008	29.28	102.74
171	2014/06/20 14:59	1459	9.08		4.614	90.2	11.18	-27.48	0.116	0	1.542	6999	9.72	9.22	0.254	26.37	0		-0.008	29.37	102.83
171	2014/06/20 15:59	1559	8.86		5.357	79.6	11.54	-21.37	0.109	0	1.09	6999	9.72	9.25	0.254	26.37	0		-0.008	29.44	102.9
171	2014/06/20 16:59	1659	8.68		3.463	71.1	16.41	-14.81	0.082	0	-0.28	6999	9.73	9.18	0.255	26.38	0		-0.008	29.49	102.95
171	2014/06/20 17:59	1759	8.55		3.456	61.03	20.29	-17.63	0.067	0	0.718	6999	9.72	9.19	0.255	26.38	0.001		1.296	29.89	103.35
171	2014/06/20 18:59	1859	8.84		5.41	108.9	16.8	-51.32	0.056	0	-2.737	6999	9.71	9.11	0.255	26.39	0.002		1.34	30.77	104.23
171	2014/06/20 19:59	1959	8.99		3.553	106.6	14.8	-6.745	0.09	0	3.192	6999	9.68	9.07	0.256	26.42	0		0.036	31.19	104.65
171	2014/06/20 20:59	2059	8.37		1.573	107.9	29.23	-13.25	0.026	0	0.457	6999	9.67	9.17	0.257	26.47	0.001		-0.008	32.06	105.52
171	2014/06/20 21:59	2159	7.91		1.795	156.2	21.73	-7.11	0.028	0	-1.3	6999	9.67	9.06	0.259	26.53	0		-0.01	32.24	105.7
171	2014/06/20 22:59	2259	7.7		1.555	114.7	15.9	-33.57	0.007	0	-6.905	6999	9.63	8.88	0.263	26.64	0		-0.011	32.51	105.97
171	2014/06/20 23:59	2359	6.947		1.892	140.6	19.24	-28.19	0.001	0	-10.47	6999	9.55	8.58	0.267	26.77	0		-0.01	32.59	106.05
172	2014/06/21 00:59	59	6.594		1.571	154.9	20.41	-24.43	0	0	-12.02	6999	9.42	8.29	0.269	26.85	0		-0.012	32.59	106.05
172	2014/06/21 01:59	159	6.46		2.106	160.3	12.88	-34.35	0	0	-11.62	6999	9.27	8.07	0.271	26.9	0		-0.014	32.57	106.03
172	2014/06/21 02:59	259	5.223		3.051	278.5	22.39	-34.24	-0.001	0	-16.89	6999	9.13	7.8	0.271	26.92	0		-0.013	32.61	106.07
172	2014/06/21 03:59	359	4.855		1.87	267.5	38.98	-33.19	0	0	-20.41	6999	8.96	7.38	0.272	26.94	0.001		-0.012	33.3	106.76
172	2014/06/21 04:59	459	4.908		1.136	231.9	35.01	-43.66	0.006	0	-18.21	6999	8.76	7.1	0.274	27.01	0		-0.011	33.29	106.75

APPENDIX C
MINIVOL SAMPLER CERTIFICATES OF ANALYSIS

Ambient Air Quality Training and Monitoring Program
Faro Mine Complex
Faro, Yukon
SLR Project No.: 208.04601.00000

Your Project #: 208.04601.00000 FARO MINE
 Site Location: AIR MONITORING
 Your C.O.C. #: na

Attention:Tracey Forbister

SLR Consulting (Canada) Ltd.
 620-3530 Millar Ave.
 Saskatoon, SK
 CANADA S7P 0B6

Report Date: 2014/07/03

Report #: R3077671

Version: 2R

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B4A3663

Received: 2014/06/17, 10:40

Sample Matrix: Filter
 # Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Total Metals on Lo-Vol Filter (6010Cmod)	15	2014/07/03	2014/07/03		EPA 6010Cmod
Total Metals (6010Cmod)	16	2014/06/20	2014/06/23	CAM SOP-00408 / BRL SOP-00102	EPA 6010Cmod
Particulate Calculation PM 2.5 (IO-2mod)	16	N/A	2014/07/03	BRL SOP-00109	EPA IO-2mod
Total Particulate (PM2.5)	16	N/A	2014/06/20	BRL SOP-00109	EPA 2.12-PM2.5
Air Volume from LoVol Sampling	16	N/A	2014/06/20		

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marinela Sim,

Email: MSim@maxxam.ca

Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B4A3663
Report Date: 2014/07/03

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

RESULTS OF ANALYSES OF FILTER

Maxxam ID		WI9072		WI9073	WI9074		
Sampling Date		2014/06/04		2014/06/04	2014/06/04		
COC Number		na		na	na		
	Units	ETA-PM10-24-004 / 34249	RDL	ETA-TSP-24-004 / 15306	GFT-PM10-24-004 / 34251	RDL	QC Batch
PM 2.5 Particulate	ug/m3	<4.7	4.7	7.8	6.0	4.8	3662853
Particulate Weight on Filter	ug	<30	30	49	38	30	3648844
Volume	m3	6.400	N/A	6.300	6.300	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable							

Maxxam ID		WI9075	WI9076		WI9077		
Sampling Date		2014/06/04	2014/06/04		2014/06/04		
COC Number		na	na		na		
	Units	GFT-TSP-24-004 / 22091	NCS-PM10-24-004 / 34253	RDL	NCS-TSP-08-004 / 34257	RDL	QC Batch
PM 2.5 Particulate	ug/m3	6.0	6.3	4.8	37	19	3662853
Particulate Weight on Filter	ug	38	40	30	59	30	3648844
Volume	m3	6.300	6.300	N/A	1.600	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable							

Maxxam ID		WI9078		WI9079		WI9080		
Sampling Date		2014/06/04		2014/06/04		2014/06/07		
COC Number		na		na		na		
	Units	TPH-PM10-24-004 / 34248	RDL	TPH-TSP-8-004 / 34256	RDL	ETA-PM10-24-005 / 29594	RDL	QC Batch
PM 2.5 Particulate	ug/m3	9.5	4.7	19	14	10.8	4.8	3662853
Particulate Weight on Filter	ug	61	30	42	30	68	30	3648844
Volume	m3	6.400	N/A	2.200	N/A	6.300	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable								

Maxxam Job #: B4A3663
Report Date: 2014/07/03

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

RESULTS OF ANALYSES OF FILTER

Maxxam ID		WI9081		WI9082		WI9083		
Sampling Date		2014/06/07		2014/06/07		2014/06/07		
COC Number		na		na		na		
	Units	ETA-TSP-24-005 / 34255	RDL	GFT-PM10-24-005 / 12298	RDL	GFT-TSP-08-005 / 16618	RDL	QC Batch
PM 2.5 Particulate	ug/m3	22.8	4.9	22.5	4.8	46	13	3662853
Particulate Weight on Filter	ug	139	30	140	30	105	30	3648844
Volume	m3	6.100	N/A	6.200	N/A	2.300	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable								

Maxxam ID		WI9084		WI9085		WI9086		
Sampling Date		2014/06/07		2014/06/07		2014/06/07		
COC Number		na		na		na		
	Units	NCS-PM10-BLANKS / 34263	RDL	NCS-TSP-24-005 / 34254		TPH-PM10-24-005 / 10101	RDL	QC Batch
PM 2.5 Particulate	ug/m3	<30	30	45.2		11.6	4.8	3662853
Particulate Weight on Filter	ug	<30	30	281		72	30	3648844
Volume	m3	0	N/A	6.200		6.200	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable								

Maxxam ID		WI9087		
Sampling Date		2014/06/07		
COC Number		na		
	Units	TPH-TSP-24-005 / 34252	RDL	QC Batch
PM 2.5 Particulate	ug/m3	42.0	4.9	3662853
Particulate Weight on Filter	ug	256	30	3648844
Volume	m3	6.100	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable				

Maxxam Job #: B4A3663
Report Date: 2014/07/03

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WI9072		WI9073	WI9074		
Sampling Date		2014/06/04		2014/06/04	2014/06/04		
COC Number		na		na	na		
	Units	ETA-PM10-24-004 / 34249	RDL	ETA-TSP-24-004 / 15306	GFT-PM10-24-004 / 34251	RDL	QC Batch
Metals							
Total Aluminum (Al)	ug/m3	<0.78	0.78	<0.79	<0.79	0.79	3662032
Total Antimony (Sb)	ug/m3	<0.16	0.16	<0.16	<0.16	0.16	3662032
Total Arsenic (As)	ug/m3	<0.094	0.094	<0.095	<0.095	0.095	3662032
Total Barium (Ba)	ug/m3	<0.016	0.016	<0.016	<0.016	0.016	3662032
Total Beryllium (Be)	ug/m3	<0.016	0.016	<0.016	<0.016	0.016	3662032
Total Bismuth (Bi)	ug/m3	<0.094	0.094	<0.095	<0.095	0.095	3662032
Total Boron (B)	ug/m3	<0.094	0.094	<0.095	<0.095	0.095	3662032
Total Cadmium (Cd)	ug/m3	<0.031	0.031	<0.032	<0.032	0.032	3662032
Total Calcium (Ca)	ug/m3	<0.78	0.78	<0.79	<0.79	0.79	3662032
Total Chromium (Cr)	ug/m3	<0.078	0.078	<0.079	<0.079	0.079	3662032
Total Cobalt (Co)	ug/m3	<0.031	0.031	<0.032	<0.032	0.032	3662032
Total Copper (Cu)	ug/m3	<0.078	0.078	<0.079	<0.079	0.079	3662032
Total Iron (Fe)	ug/m3	<0.78	0.78	<0.79	<0.79	0.79	3662032
Total Lead (Pb)	ug/m3	<0.047	0.047	0.063	<0.048	0.048	3662032
Total Magnesium (Mg)	ug/m3	<0.78	0.78	<0.79	<0.79	0.79	3662032
Total Manganese (Mn)	ug/m3	<0.016	0.016	<0.016	<0.016	0.016	3662032
Total Molybdenum (Mo)	ug/m3	<0.047	0.047	<0.048	<0.048	0.048	3662032
Total Nickel (Ni)	ug/m3	<0.047	0.047	<0.048	<0.048	0.048	3662032
Total Phosphorus (P)	ug/m3	<0.39	0.39	<0.40	<0.40	0.40	3662032
Total Potassium (K)	ug/m3	<1.6	1.6	<1.6	<1.6	1.6	3662032
Total Selenium (Se)	ug/m3	<0.16	0.16	<0.16	<0.16	0.16	3662032
Total Silicon (Si)	ug/m3	<0.16	0.16	<0.16	<0.16	0.16	3662032
Total Silver (Ag)	ug/m3	<0.078	0.078	<0.079	<0.079	0.079	3662032
Total Sodium (Na)	ug/m3	0.90	0.78	0.90	1.08	0.79	3662032
Total Strontium (Sr)	ug/m3	<0.016	0.016	<0.016	<0.016	0.016	3662032
Total Sulphur (S)	ug/m3	<0.39	0.39	<0.40	<0.40	0.40	3662032
Total Thallium (Tl)	ug/m3	<0.16	0.16	<0.16	<0.16	0.16	3662032
Total Tin (Sn)	ug/m3	<0.16	0.16	<0.16	<0.16	0.16	3662032
Total Titanium (Ti)	ug/m3	<0.016	0.016	<0.016	<0.016	0.016	3662032
Total Vanadium (V)	ug/m3	<0.078	0.078	<0.079	<0.079	0.079	3662032
Total Zinc (Zn)	ug/m3	<0.078	0.078	0.170	<0.079	0.079	3662032
Total Zirconium (Zr)	ug/m3	<0.078	0.078	<0.079	<0.079	0.079	3662032
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							

Maxxam Job #: B4A3663
Report Date: 2014/07/03

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WI9075	WI9076		WI9077		
Sampling Date		2014/06/04	2014/06/04		2014/06/04		
COC Number		na	na		na		
	Units	GFT-TSP-24-004 / 22091	NCS-PM10-24-004 / 34253	RDL	NCS-TSP-08-004 / 34257	RDL	QC Batch
Metals							
Total Aluminum (Al)	ug/m3	<0.79	<0.79	0.79	<3.1	3.1	3662032
Total Antimony (Sb)	ug/m3	<0.16	<0.16	0.16	<0.63	0.63	3662032
Total Arsenic (As)	ug/m3	<0.095	<0.095	0.095	<0.38	0.38	3662032
Total Barium (Ba)	ug/m3	<0.016	<0.016	0.016	<0.063	0.063	3662032
Total Beryllium (Be)	ug/m3	<0.016	<0.016	0.016	<0.063	0.063	3662032
Total Bismuth (Bi)	ug/m3	<0.095	<0.095	0.095	<0.38	0.38	3662032
Total Boron (B)	ug/m3	<0.095	<0.095	0.095	<0.38	0.38	3662032
Total Cadmium (Cd)	ug/m3	<0.032	<0.032	0.032	<0.13	0.13	3662032
Total Calcium (Ca)	ug/m3	<0.79	<0.79	0.79	<3.1	3.1	3662032
Total Chromium (Cr)	ug/m3	<0.079	<0.079	0.079	<0.31	0.31	3662032
Total Cobalt (Co)	ug/m3	<0.032	<0.032	0.032	<0.13	0.13	3662032
Total Copper (Cu)	ug/m3	<0.079	<0.079	0.079	<0.31	0.31	3662032
Total Iron (Fe)	ug/m3	<0.79	<0.79	0.79	<3.1	3.1	3662032
Total Lead (Pb)	ug/m3	<0.048	<0.048	0.048	0.26	0.19	3662032
Total Magnesium (Mg)	ug/m3	<0.79	<0.79	0.79	<3.1	3.1	3662032
Total Manganese (Mn)	ug/m3	<0.016	<0.016	0.016	<0.063	0.063	3662032
Total Molybdenum (Mo)	ug/m3	<0.048	<0.048	0.048	<0.19	0.19	3662032
Total Nickel (Ni)	ug/m3	<0.048	<0.048	0.048	<0.19	0.19	3662032
Total Phosphorus (P)	ug/m3	<0.40	<0.40	0.40	<1.6	1.6	3662032
Total Potassium (K)	ug/m3	<1.6	<1.6	1.6	<6.3	6.3	3662032
Total Selenium (Se)	ug/m3	<0.16	<0.16	0.16	<0.63	0.63	3662032
Total Silicon (Si)	ug/m3	<0.16	<0.16	0.16	<0.63	0.63	3662032
Total Silver (Ag)	ug/m3	<0.079	<0.079	0.079	<0.31	0.31	3662032
Total Sodium (Na)	ug/m3	<0.79	0.87	0.79	<3.1	3.1	3662032
Total Strontium (Sr)	ug/m3	<0.016	<0.016	0.016	<0.063	0.063	3662032
Total Sulphur (S)	ug/m3	<0.40	<0.40	0.40	<1.6	1.6	3662032
Total Thallium (Tl)	ug/m3	<0.16	<0.16	0.16	<0.63	0.63	3662032
Total Tin (Sn)	ug/m3	<0.16	<0.16	0.16	<0.63	0.63	3662032
Total Titanium (Ti)	ug/m3	<0.016	<0.016	0.016	<0.063	0.063	3662032
Total Vanadium (V)	ug/m3	<0.079	<0.079	0.079	<0.31	0.31	3662032
Total Zinc (Zn)	ug/m3	0.083	<0.079	0.079	0.93	0.31	3662032
Total Zirconium (Zr)	ug/m3	<0.079	<0.079	0.079	<0.31	0.31	3662032
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							

Maxxam Job #: B4A3663
Report Date: 2014/07/03

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WI9078		WI9079		WI9080		
Sampling Date		2014/06/04		2014/06/04		2014/06/07		
COC Number		na		na		na		
	Units	TPH-PM10-24-004 / 34248	RDL	TPH-TSP-8-004 / 34256	RDL	ETA-PM10-24-005 / 29594	RDL	QC Batch
Metals								
Total Aluminum (Al)	ug/m3	<0.78	0.78	<2.3	2.3	<0.79	0.79	3662032
Total Antimony (Sb)	ug/m3	<0.16	0.16	<0.45	0.45	<0.16	0.16	3662032
Total Arsenic (As)	ug/m3	<0.094	0.094	<0.27	0.27	<0.095	0.095	3662032
Total Barium (Ba)	ug/m3	<0.016	0.016	<0.045	0.045	0.025	0.016	3662032
Total Beryllium (Be)	ug/m3	<0.016	0.016	<0.045	0.045	<0.016	0.016	3662032
Total Bismuth (Bi)	ug/m3	<0.094	0.094	<0.27	0.27	<0.095	0.095	3662032
Total Boron (B)	ug/m3	<0.094	0.094	<0.27	0.27	<0.095	0.095	3662032
Total Cadmium (Cd)	ug/m3	<0.031	0.031	<0.091	0.091	<0.032	0.032	3662032
Total Calcium (Ca)	ug/m3	<0.78	0.78	<2.3	2.3	<0.79	0.79	3662032
Total Chromium (Cr)	ug/m3	<0.078	0.078	<0.23	0.23	<0.079	0.079	3662032
Total Cobalt (Co)	ug/m3	<0.031	0.031	<0.091	0.091	<0.032	0.032	3662032
Total Copper (Cu)	ug/m3	<0.078	0.078	<0.23	0.23	<0.079	0.079	3662032
Total Iron (Fe)	ug/m3	<0.78	0.78	<2.3	2.3	<0.79	0.79	3662032
Total Lead (Pb)	ug/m3	0.158	0.047	0.19	0.14	0.064	0.048	3662032
Total Magnesium (Mg)	ug/m3	<0.78	0.78	<2.3	2.3	<0.79	0.79	3662032
Total Manganese (Mn)	ug/m3	<0.016	0.016	<0.045	0.045	<0.016	0.016	3662032
Total Molybdenum (Mo)	ug/m3	<0.047	0.047	<0.14	0.14	<0.048	0.048	3662032
Total Nickel (Ni)	ug/m3	<0.047	0.047	<0.14	0.14	<0.048	0.048	3662032
Total Phosphorus (P)	ug/m3	<0.39	0.39	<1.1	1.1	<0.40	0.40	3662032
Total Potassium (K)	ug/m3	<1.6	1.6	<4.5	4.5	<1.6	1.6	3662032
Total Selenium (Se)	ug/m3	<0.16	0.16	<0.45	0.45	<0.16	0.16	3662032
Total Silicon (Si)	ug/m3	<0.16	0.16	<0.45	0.45	<0.16	0.16	3662032
Total Silver (Ag)	ug/m3	<0.078	0.078	<0.23	0.23	<0.079	0.079	3662032
Total Sodium (Na)	ug/m3	<0.78	0.78	<2.3	2.3	<0.79	0.79	3662032
Total Strontium (Sr)	ug/m3	<0.016	0.016	<0.045	0.045	<0.016	0.016	3662032
Total Sulphur (S)	ug/m3	0.44	0.39	<1.1	1.1	0.42	0.40	3662032
Total Thallium (Tl)	ug/m3	<0.16	0.16	<0.45	0.45	<0.16	0.16	3662032
Total Tin (Sn)	ug/m3	<0.16	0.16	<0.45	0.45	<0.16	0.16	3662032
Total Titanium (Ti)	ug/m3	<0.016	0.016	<0.045	0.045	<0.016	0.016	3662032
Total Vanadium (V)	ug/m3	<0.078	0.078	<0.23	0.23	<0.079	0.079	3662032
Total Zinc (Zn)	ug/m3	0.193	0.078	0.39	0.23	0.158	0.079	3662032
Total Zirconium (Zr)	ug/m3	<0.078	0.078	<0.23	0.23	<0.079	0.079	3662032
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

Maxxam Job #: B4A3663
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SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
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CALCULATED ELEMENTS (FILTER)

Maxxam ID		WI9081		WI9082		WI9083		
Sampling Date		2014/06/07		2014/06/07		2014/06/07		
COC Number		na		na		na		
	Units	ETA-TSP-24-005 / 34255	RDL	GFT-PM10-24-005 / 12298	RDL	GFT-TSP-08-005 / 16618	RDL	QC Batch
Metals								
Total Aluminum (Al)	ug/m3	<0.82	0.82	<0.81	0.81	<2.2	2.2	3662032
Total Antimony (Sb)	ug/m3	<0.16	0.16	<0.16	0.16	<0.43	0.43	3662032
Total Arsenic (As)	ug/m3	<0.098	0.098	<0.097	0.097	<0.26	0.26	3662032
Total Barium (Ba)	ug/m3	0.094	0.016	0.056	0.016	0.087	0.043	3662032
Total Beryllium (Be)	ug/m3	<0.016	0.016	<0.016	0.016	<0.043	0.043	3662032
Total Bismuth (Bi)	ug/m3	<0.098	0.098	<0.097	0.097	<0.26	0.26	3662032
Total Boron (B)	ug/m3	<0.098	0.098	<0.097	0.097	<0.26	0.26	3662032
Total Cadmium (Cd)	ug/m3	<0.033	0.033	<0.032	0.032	<0.087	0.087	3662032
Total Calcium (Ca)	ug/m3	<0.82	0.82	<0.81	0.81	<2.2	2.2	3662032
Total Chromium (Cr)	ug/m3	<0.082	0.082	<0.081	0.081	<0.22	0.22	3662032
Total Cobalt (Co)	ug/m3	<0.033	0.033	<0.032	0.032	<0.087	0.087	3662032
Total Copper (Cu)	ug/m3	<0.082	0.082	<0.081	0.081	<0.22	0.22	3662032
Total Iron (Fe)	ug/m3	1.11	0.82	1.29	0.81	<2.2	2.2	3662032
Total Lead (Pb)	ug/m3	0.251	0.049	1.46	0.048	1.45	0.13	3662032
Total Magnesium (Mg)	ug/m3	<0.82	0.82	<0.81	0.81	<2.2	2.2	3662032
Total Manganese (Mn)	ug/m3	<0.016	0.016	0.022	0.016	<0.043	0.043	3662032
Total Molybdenum (Mo)	ug/m3	<0.049	0.049	<0.048	0.048	<0.13	0.13	3662032
Total Nickel (Ni)	ug/m3	<0.049	0.049	<0.048	0.048	<0.13	0.13	3662032
Total Phosphorus (P)	ug/m3	<0.41	0.41	<0.40	0.40	<1.1	1.1	3662032
Total Potassium (K)	ug/m3	<1.6	1.6	<1.6	1.6	<4.3	4.3	3662032
Total Selenium (Se)	ug/m3	<0.16	0.16	<0.16	0.16	<0.43	0.43	3662032
Total Silicon (Si)	ug/m3	<0.16	0.16	<0.16	0.16	<0.43	0.43	3662032
Total Silver (Ag)	ug/m3	<0.082	0.082	<0.081	0.081	<0.22	0.22	3662032
Total Sodium (Na)	ug/m3	0.83	0.82	<0.81	0.81	<2.2	2.2	3662032
Total Strontium (Sr)	ug/m3	<0.016	0.016	<0.016	0.016	<0.043	0.043	3662032
Total Sulphur (S)	ug/m3	1.31	0.41	1.88	0.40	3.2	1.1	3662032
Total Thallium (Tl)	ug/m3	<0.16	0.16	<0.16	0.16	<0.43	0.43	3662032
Total Tin (Sn)	ug/m3	<0.16	0.16	<0.16	0.16	<0.43	0.43	3662032
Total Titanium (Ti)	ug/m3	<0.016	0.016	<0.016	0.016	<0.043	0.043	3662032
Total Vanadium (V)	ug/m3	<0.082	0.082	<0.081	0.081	<0.22	0.22	3662032
Total Zinc (Zn)	ug/m3	0.574	0.082	2.18	0.081	3.24	0.22	3662032
Total Zirconium (Zr)	ug/m3	<0.082	0.082	<0.081	0.081	<0.22	0.22	3662032
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

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SLR Consulting (Canada) Ltd.
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CALCULATED ELEMENTS (FILTER)

Maxxam ID		WI9085	WI9086		WI9087		
Sampling Date		2014/06/07	2014/06/07		2014/06/07		
COC Number		na	na		na		
	Units	NCS-TSP-24-005 / 34254	TPH-PM10-24-005 / 10101	RDL	TPH-TSP-24-005 / 34252	RDL	QC Batch
Metals							
Total Aluminum (Al)	ug/m3	<0.81	<0.81	0.81	<0.82	0.82	3662032
Total Antimony (Sb)	ug/m3	<0.16	<0.16	0.16	<0.16	0.16	3662032
Total Arsenic (As)	ug/m3	<0.097	<0.097	0.097	<0.098	0.098	3662032
Total Barium (Ba)	ug/m3	0.092	0.031	0.016	0.082	0.016	3662032
Total Beryllium (Be)	ug/m3	<0.016	<0.016	0.016	<0.016	0.016	3662032
Total Bismuth (Bi)	ug/m3	<0.097	<0.097	0.097	<0.098	0.098	3662032
Total Boron (B)	ug/m3	<0.097	<0.097	0.097	<0.098	0.098	3662032
Total Cadmium (Cd)	ug/m3	<0.032	<0.032	0.032	<0.033	0.033	3662032
Total Calcium (Ca)	ug/m3	<0.81	<0.81	0.81	<0.82	0.82	3662032
Total Chromium (Cr)	ug/m3	<0.081	<0.081	0.081	<0.082	0.082	3662032
Total Cobalt (Co)	ug/m3	<0.032	<0.032	0.032	<0.033	0.033	3662032
Total Copper (Cu)	ug/m3	<0.081	<0.081	0.081	<0.082	0.082	3662032
Total Iron (Fe)	ug/m3	2.26	<0.81	0.81	1.44	0.82	3662032
Total Lead (Pb)	ug/m3	2.44	0.235	0.048	0.485	0.049	3662032
Total Magnesium (Mg)	ug/m3	<0.81	<0.81	0.81	<0.82	0.82	3662032
Total Manganese (Mn)	ug/m3	0.036	<0.016	0.016	0.028	0.016	3662032
Total Molybdenum (Mo)	ug/m3	<0.048	<0.048	0.048	<0.049	0.049	3662032
Total Nickel (Ni)	ug/m3	<0.048	<0.048	0.048	<0.049	0.049	3662032
Total Phosphorus (P)	ug/m3	<0.40	<0.40	0.40	<0.41	0.41	3662032
Total Potassium (K)	ug/m3	<1.6	<1.6	1.6	<1.6	1.6	3662032
Total Selenium (Se)	ug/m3	<0.16	<0.16	0.16	<0.16	0.16	3662032
Total Silicon (Si)	ug/m3	0.17	<0.16	0.16	<0.16	0.16	3662032
Total Silver (Ag)	ug/m3	<0.081	<0.081	0.081	<0.082	0.082	3662032
Total Sodium (Na)	ug/m3	0.86	<0.81	0.81	<0.82	0.82	3662032
Total Strontium (Sr)	ug/m3	<0.016	<0.016	0.016	<0.016	0.016	3662032
Total Sulphur (S)	ug/m3	3.26	0.60	0.40	1.65	0.41	3662032
Total Thallium (Tl)	ug/m3	<0.16	<0.16	0.16	<0.16	0.16	3662032
Total Tin (Sn)	ug/m3	<0.16	<0.16	0.16	<0.16	0.16	3662032
Total Titanium (Ti)	ug/m3	<0.016	<0.016	0.016	<0.016	0.016	3662032
Total Vanadium (V)	ug/m3	<0.081	<0.081	0.081	<0.082	0.082	3662032
Total Zinc (Zn)	ug/m3	4.10	0.328	0.081	0.884	0.082	3662032
Total Zirconium (Zr)	ug/m3	<0.081	<0.081	0.081	<0.082	0.082	3662032
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							

Maxxam Job #: B4A3663
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MISCELLANEOUS (FILTER)

Maxxam ID		WI9072	WI9073	WI9074		
Sampling Date		2014/06/04	2014/06/04	2014/06/04		
COC Number		na	na	na		
	Units	ETA-PM10-24-004 / 34249	ETA-TSP-24-004 / 15306	GFT-PM10-24-004 / 34251	RDL	QC Batch
Metals						
Aluminum (Al)	ug	<5.0	<5.0	<5.0	5.0	3649571
Antimony (Sb)	ug	<1.0	<1.0	<1.0	1.0	3649571
Arsenic (As)	ug	<0.60	<0.60	<0.60	0.60	3649571
Barium (Ba)	ug	<0.10	<0.10	<0.10	0.10	3649571
Beryllium (Be)	ug	<0.10	<0.10	<0.10	0.10	3649571
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	0.60	3649571
Boron (B)	ug	<0.60	<0.60	<0.60	0.60	3649571
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	0.20	3649571
Calcium (Ca)	ug	<5.0	<5.0	<5.0	5.0	3649571
Chromium (Cr)	ug	<0.50	<0.50	<0.50	0.50	3649571
Cobalt (Co)	ug	<0.20	<0.20	<0.20	0.20	3649571
Copper (Cu)	ug	<0.50	<0.50	<0.50	0.50	3649571
Iron (Fe)	ug	<5.0	<5.0	<5.0	5.0	3649571
Lead (Pb)	ug	<0.30	0.40	<0.30	0.30	3649571
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	5.0	3649571
Manganese (Mn)	ug	<0.10	<0.10	<0.10	0.10	3649571
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	0.30	3649571
Nickel (Ni)	ug	<0.30	<0.30	<0.30	0.30	3649571
Phosphorus (P)	ug	<2.5	<2.5	<2.5	2.5	3649571
Potassium (K)	ug	<10	<10	<10	10	3649571
Selenium (Se)	ug	<1.0	<1.0	<1.0	1.0	3649571
Silicon (Si)	ug	<1.0	<1.0	<1.0	1.0	3649571
Silver (Ag)	ug	<0.50	<0.50	<0.50	0.50	3649571
Sodium (Na)	ug	5.7	5.7	6.8	5.0	3649571
Strontium (Sr)	ug	<0.10	<0.10	<0.10	0.10	3649571
Sulphur (S)	ug	<2.5	<2.5	<2.5	2.5	3649571
Thallium (Tl)	ug	<1.0	<1.0	<1.0	1.0	3649571
Tin (Sn)	ug	<1.0	<1.0	<1.0	1.0	3649571
Titanium (Ti)	ug	<0.10	<0.10	<0.10	0.10	3649571
Vanadium (V)	ug	<0.50	<0.50	<0.50	0.50	3649571
Zinc (Zn)	ug	<0.50	1.07	<0.50	0.50	3649571
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	0.50	3649571
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						

Maxxam Job #: B4A3663
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MISCELLANEOUS (FILTER)

Maxxam ID		WI9075	WI9076	WI9077		
Sampling Date		2014/06/04	2014/06/04	2014/06/04		
COC Number		na	na	na		
	Units	GFT-TSP-24-004 / 22091	NCS-PM10-24-004 / 34253	NCS-TSP-08-004 / 34257	RDL	QC Batch
Metals						
Aluminum (Al)	ug	<5.0	<5.0	<5.0	5.0	3649571
Antimony (Sb)	ug	<1.0	<1.0	<1.0	1.0	3649571
Arsenic (As)	ug	<0.60	<0.60	<0.60	0.60	3649571
Barium (Ba)	ug	<0.10	<0.10	<0.10	0.10	3649571
Beryllium (Be)	ug	<0.10	<0.10	<0.10	0.10	3649571
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	0.60	3649571
Boron (B)	ug	<0.60	<0.60	<0.60	0.60	3649571
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	0.20	3649571
Calcium (Ca)	ug	<5.0	<5.0	<5.0	5.0	3649571
Chromium (Cr)	ug	<0.50	<0.50	<0.50	0.50	3649571
Cobalt (Co)	ug	<0.20	<0.20	<0.20	0.20	3649571
Copper (Cu)	ug	<0.50	<0.50	<0.50	0.50	3649571
Iron (Fe)	ug	<5.0	<5.0	<5.0	5.0	3649571
Lead (Pb)	ug	<0.30	<0.30	0.42	0.30	3649571
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	5.0	3649571
Manganese (Mn)	ug	<0.10	<0.10	<0.10	0.10	3649571
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	0.30	3649571
Nickel (Ni)	ug	<0.30	<0.30	<0.30	0.30	3649571
Phosphorus (P)	ug	<2.5	<2.5	<2.5	2.5	3649571
Potassium (K)	ug	<10	<10	<10	10	3649571
Selenium (Se)	ug	<1.0	<1.0	<1.0	1.0	3649571
Silicon (Si)	ug	<1.0	<1.0	<1.0	1.0	3649571
Silver (Ag)	ug	<0.50	<0.50	<0.50	0.50	3649571
Sodium (Na)	ug	<5.0	5.5	<5.0	5.0	3649571
Strontium (Sr)	ug	<0.10	<0.10	<0.10	0.10	3649571
Sulphur (S)	ug	<2.5	<2.5	<2.5	2.5	3649571
Thallium (Tl)	ug	<1.0	<1.0	<1.0	1.0	3649571
Tin (Sn)	ug	<1.0	<1.0	<1.0	1.0	3649571
Titanium (Ti)	ug	<0.10	<0.10	<0.10	0.10	3649571
Vanadium (V)	ug	<0.50	<0.50	<0.50	0.50	3649571
Zinc (Zn)	ug	0.53	<0.50	1.48	0.50	3649571
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	0.50	3649571
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						

Maxxam Job #: B4A3663
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MISCELLANEOUS (FILTER)

Maxxam ID		WI9078	WI9079	WI9080		
Sampling Date		2014/06/04	2014/06/04	2014/06/07		
COC Number		na	na	na		
	Units	TPH-PM10-24-004 / 34248	TPH-TSP-8-004 / 34256	ETA-PM10-24-005 / 29594	RDL	QC Batch
Metals						
Aluminum (Al)	ug	<5.0	<5.0	<5.0	5.0	3649571
Antimony (Sb)	ug	<1.0	<1.0	<1.0	1.0	3649571
Arsenic (As)	ug	<0.60	<0.60	<0.60	0.60	3649571
Barium (Ba)	ug	<0.10	<0.10	0.16	0.10	3649571
Beryllium (Be)	ug	<0.10	<0.10	<0.10	0.10	3649571
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	0.60	3649571
Boron (B)	ug	<0.60	<0.60	<0.60	0.60	3649571
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	0.20	3649571
Calcium (Ca)	ug	<5.0	<5.0	<5.0	5.0	3649571
Chromium (Cr)	ug	<0.50	<0.50	<0.50	0.50	3649571
Cobalt (Co)	ug	<0.20	<0.20	<0.20	0.20	3649571
Copper (Cu)	ug	<0.50	<0.50	<0.50	0.50	3649571
Iron (Fe)	ug	<5.0	<5.0	<5.0	5.0	3649571
Lead (Pb)	ug	1.01	0.42	0.41	0.30	3649571
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	5.0	3649571
Manganese (Mn)	ug	<0.10	<0.10	<0.10	0.10	3649571
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	0.30	3649571
Nickel (Ni)	ug	<0.30	<0.30	<0.30	0.30	3649571
Phosphorus (P)	ug	<2.5	<2.5	<2.5	2.5	3649571
Potassium (K)	ug	<10	<10	<10	10	3649571
Selenium (Se)	ug	<1.0	<1.0	<1.0	1.0	3649571
Silicon (Si)	ug	<1.0	<1.0	<1.0	1.0	3649571
Silver (Ag)	ug	<0.50	<0.50	<0.50	0.50	3649571
Sodium (Na)	ug	<5.0	<5.0	<5.0	5.0	3649571
Strontium (Sr)	ug	<0.10	<0.10	<0.10	0.10	3649571
Sulphur (S)	ug	2.8	<2.5	2.6	2.5	3649571
Thallium (Tl)	ug	<1.0	<1.0	<1.0	1.0	3649571
Tin (Sn)	ug	<1.0	<1.0	<1.0	1.0	3649571
Titanium (Ti)	ug	<0.10	<0.10	<0.10	0.10	3649571
Vanadium (V)	ug	<0.50	<0.50	<0.50	0.50	3649571
Zinc (Zn)	ug	1.23	0.86	0.99	0.50	3649571
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	0.50	3649571
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						

Maxxam Job #: B4A3663
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MISCELLANEOUS (FILTER)

Maxxam ID		WI9081	WI9082	WI9083	WI9084		
Sampling Date		2014/06/07	2014/06/07	2014/06/07	2014/06/07		
COC Number		na	na	na	na		
	Units	ETA-TSP-24-005 / 34255	GFT-PM10-24-005 / 12298	GFT-TSP-08-005 / 16618	NCS-PM10- BLANKS / 34263	RDL	QC Batch

Metals							
Aluminum (Al)	ug	<5.0	<5.0	<5.0	<5.0	5.0	3649571
Antimony (Sb)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3649571
Arsenic (As)	ug	<0.60	<0.60	<0.60	<0.60	0.60	3649571
Barium (Ba)	ug	0.57	0.35	0.20	<0.10	0.10	3649571
Beryllium (Be)	ug	<0.10	<0.10	<0.10	<0.10	0.10	3649571
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	<0.60	0.60	3649571
Boron (B)	ug	<0.60	<0.60	<0.60	<0.60	0.60	3649571
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	<0.20	0.20	3649571
Calcium (Ca)	ug	<5.0	<5.0	<5.0	<5.0	5.0	3649571
Chromium (Cr)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3649571
Cobalt (Co)	ug	<0.20	<0.20	<0.20	<0.20	0.20	3649571
Copper (Cu)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3649571
Iron (Fe)	ug	6.7	8.0	5.1	<5.0	5.0	3649571
Lead (Pb)	ug	1.53	9.06	3.33	<0.30	0.30	3649571
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	<5.0	5.0	3649571
Manganese (Mn)	ug	<0.10	0.14	<0.10	<0.10	0.10	3649571
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	<0.30	0.30	3649571
Nickel (Ni)	ug	<0.30	<0.30	<0.30	<0.30	0.30	3649571
Phosphorus (P)	ug	<2.5	<2.5	<2.5	<2.5	2.5	3649571
Potassium (K)	ug	<10	<10	<10	<10	10	3649571
Selenium (Se)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3649571
Silicon (Si)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3649571
Silver (Ag)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3649571
Sodium (Na)	ug	5.1	<5.0	<5.0	6.9	5.0	3649571
Strontium (Sr)	ug	<0.10	<0.10	<0.10	<0.10	0.10	3649571
Sulphur (S)	ug	8.0	11.6	7.3	3.4	2.5	3649571
Thallium (Tl)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3649571
Tin (Sn)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3649571
Titanium (Ti)	ug	<0.10	<0.10	<0.10	<0.10	0.10	3649571
Vanadium (V)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3649571
Zinc (Zn)	ug	3.50	13.5	7.45	<0.50	0.50	3649571
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3649571

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Maxxam Job #: B4A3663
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SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

MISCELLANEOUS (FILTER)

Maxxam ID		WI9085	WI9086	WI9087		
Sampling Date		2014/06/07	2014/06/07	2014/06/07		
COC Number		na	na	na		
	Units	NCS-TSP-24-005 / 34254	TPH-PM10-24-005 / 10101	TPH-TSP-24-005 / 34252	RDL	QC Batch
Metals						
Aluminum (Al)	ug	<5.0	<5.0	<5.0	5.0	3649571
Antimony (Sb)	ug	<1.0	<1.0	<1.0	1.0	3649571
Arsenic (As)	ug	<0.60	<0.60	<0.60	0.60	3649571
Barium (Ba)	ug	0.57	0.19	0.50	0.10	3649571
Beryllium (Be)	ug	<0.10	<0.10	<0.10	0.10	3649571
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	0.60	3649571
Boron (B)	ug	<0.60	<0.60	<0.60	0.60	3649571
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	0.20	3649571
Calcium (Ca)	ug	<5.0	<5.0	<5.0	5.0	3649571
Chromium (Cr)	ug	<0.50	<0.50	<0.50	0.50	3649571
Cobalt (Co)	ug	<0.20	<0.20	<0.20	0.20	3649571
Copper (Cu)	ug	<0.50	<0.50	<0.50	0.50	3649571
Iron (Fe)	ug	14.0	<5.0	8.8	5.0	3649571
Lead (Pb)	ug	15.1	1.46	2.96	0.30	3649571
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	5.0	3649571
Manganese (Mn)	ug	0.22	<0.10	0.17	0.10	3649571
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	0.30	3649571
Nickel (Ni)	ug	<0.30	<0.30	<0.30	0.30	3649571
Phosphorus (P)	ug	<2.5	<2.5	<2.5	2.5	3649571
Potassium (K)	ug	<10	<10	<10	10	3649571
Selenium (Se)	ug	<1.0	<1.0	<1.0	1.0	3649571
Silicon (Si)	ug	1.1	<1.0	<1.0	1.0	3649571
Silver (Ag)	ug	<0.50	<0.50	<0.50	0.50	3649571
Sodium (Na)	ug	5.4	<5.0	<5.0	5.0	3649571
Strontium (Sr)	ug	<0.10	<0.10	<0.10	0.10	3649571
Sulphur (S)	ug	20.2	3.7	10.1	2.5	3649571
Thallium (Tl)	ug	<1.0	<1.0	<1.0	1.0	3649571
Tin (Sn)	ug	<1.0	<1.0	<1.0	1.0	3649571
Titanium (Ti)	ug	<0.10	<0.10	<0.10	0.10	3649571
Vanadium (V)	ug	<0.50	<0.50	<0.50	0.50	3649571
Zinc (Zn)	ug	25.4	2.03	5.39	0.50	3649571
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	0.50	3649571
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						

Maxxam Job #: B4A3663
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SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

GENERAL COMMENTS

9 empty cassettes received.

RESULTS OF ANALYSES OF FILTER

Total Particulate (PM2.5): Cassette was not put back in the original petri dish according to the o-ring ID. Prewrite was based on the o-ring ID.

Samples WI9078-01R PM10 > WI9079-01R TSP

Samples WI9082-01R PM10 > WI9083-01R TSP

Results relate only to the items tested.

Maxxam Job #: B4A3663
Report Date: 2014/07/03

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3649571	APT	Spiked Blank	Aluminum (Al)	2014/06/23		97	%	85 - 115
			Barium (Ba)	2014/06/23		100	%	85 - 115
			Beryllium (Be)	2014/06/23		100	%	85 - 115
			Boron (B)	2014/06/23		99	%	85 - 115
			Cadmium (Cd)	2014/06/23		103	%	85 - 115
			Calcium (Ca)	2014/06/23		103	%	85 - 115
			Chromium (Cr)	2014/06/23		103	%	85 - 115
			Cobalt (Co)	2014/06/23		101	%	85 - 115
			Copper (Cu)	2014/06/23		100	%	85 - 115
			Iron (Fe)	2014/06/23		101	%	85 - 115
			Lead (Pb)	2014/06/23		100	%	85 - 115
			Magnesium (Mg)	2014/06/23		100	%	85 - 115
			Manganese (Mn)	2014/06/23		99	%	85 - 115
			Molybdenum (Mo)	2014/06/23		99	%	85 - 115
			Nickel (Ni)	2014/06/23		99	%	85 - 115
			Potassium (K)	2014/06/23		100	%	85 - 115
			Silver (Ag)	2014/06/23		102	%	85 - 115
			Sodium (Na)	2014/06/23		102	%	85 - 115
			Strontium (Sr)	2014/06/23		100	%	85 - 115
			Thallium (Tl)	2014/06/23		101	%	85 - 115
			Tin (Sn)	2014/06/23		99	%	85 - 115
			Titanium (Ti)	2014/06/23		99	%	85 - 115
			Vanadium (V)	2014/06/23		99	%	85 - 115
			Zinc (Zn)	2014/06/23		102	%	85 - 115
			Antimony (Sb)	2014/06/23		99	%	85 - 115
			Arsenic (As)	2014/06/23		101	%	85 - 115
			Bismuth (Bi)	2014/06/23		99	%	85 - 115
			Phosphorus (P)	2014/06/23		107	%	85 - 115
			Selenium (Se)	2014/06/23		103	%	85 - 115
			Silicon (Si)	2014/06/23		97	%	85 - 115
			Sulphur (S)	2014/06/23		104	%	85 - 115
			Zirconium (Zr)	2014/06/23		98	%	85 - 115
3649571	APT	RPD	Aluminum (Al)	2014/06/23	0.1		%	20
			Barium (Ba)	2014/06/23	0.7		%	20
			Beryllium (Be)	2014/06/23	0.1		%	20
			Boron (B)	2014/06/23	0.6		%	20
			Cadmium (Cd)	2014/06/23	1.1		%	20
			Calcium (Ca)	2014/06/23	0.7		%	20
			Chromium (Cr)	2014/06/23	0.3		%	20
			Cobalt (Co)	2014/06/23	0.2		%	20
			Copper (Cu)	2014/06/23	0.1		%	20
			Iron (Fe)	2014/06/23	0.2		%	20
			Lead (Pb)	2014/06/23	3.3		%	20
			Magnesium (Mg)	2014/06/23	0.1		%	20
			Manganese (Mn)	2014/06/23	0.2		%	20
			Molybdenum (Mo)	2014/06/23	0.9		%	20
			Nickel (Ni)	2014/06/23	0.2		%	20
			Potassium (K)	2014/06/23	0.2		%	20
			Silver (Ag)	2014/06/23	1.1		%	20
			Sodium (Na)	2014/06/23	0.4		%	20
			Strontium (Sr)	2014/06/23	0.4		%	20
			Thallium (Tl)	2014/06/23	0.3		%	20
			Tin (Sn)	2014/06/23	0.3		%	20

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SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3649571	APT	Method Blank		Titanium (Ti)	2014/06/23	0.4		%	20
				Vanadium (V)	2014/06/23	0.4		%	20
				Zinc (Zn)	2014/06/23	0.6		%	20
				Antimony (Sb)	2014/06/23	3.7		%	20
				Arsenic (As)	2014/06/23	1.5		%	20
				Bismuth (Bi)	2014/06/23	0.7		%	20
				Phosphorus (P)	2014/06/23	0.7		%	20
				Selenium (Se)	2014/06/23	2.9		%	20
				Silicon (Si)	2014/06/23	2.3		%	20
				Sulphur (S)	2014/06/23	1.3		%	20
				Zirconium (Zr)	2014/06/23	0.3		%	20
				Aluminum (Al)	2014/06/23	<5.0		ug	
				Barium (Ba)	2014/06/23	<0.10		ug	
				Beryllium (Be)	2014/06/23	<0.10		ug	
				Boron (B)	2014/06/23	<0.60		ug	
				Cadmium (Cd)	2014/06/23	<0.20		ug	
				Calcium (Ca)	2014/06/23	<5.0		ug	
				Chromium (Cr)	2014/06/23	<0.50		ug	
				Cobalt (Co)	2014/06/23	<0.20		ug	
				Copper (Cu)	2014/06/23	<0.50		ug	
				Iron (Fe)	2014/06/23	<5.0		ug	
				Lead (Pb)	2014/06/23	<0.30		ug	
				Magnesium (Mg)	2014/06/23	<5.0		ug	
				Manganese (Mn)	2014/06/23	<0.10		ug	
				Molybdenum (Mo)	2014/06/23	<0.30		ug	
				Nickel (Ni)	2014/06/23	<0.30		ug	
				Potassium (K)	2014/06/23	<10		ug	
				Silver (Ag)	2014/06/23	<0.50		ug	
				Sodium (Na)	2014/06/23	5.6 ,		ug	
						RDL=5.0			
				Strontium (Sr)	2014/06/23	<0.10		ug	
				Thallium (Tl)	2014/06/23	<1.0		ug	
				Tin (Sn)	2014/06/23	<1.0		ug	
				Titanium (Ti)	2014/06/23	<0.10		ug	
				Vanadium (V)	2014/06/23	<0.50		ug	
				Zinc (Zn)	2014/06/23	<0.50		ug	
				Antimony (Sb)	2014/06/23	<1.0		ug	
				Arsenic (As)	2014/06/23	<0.60		ug	
				Bismuth (Bi)	2014/06/23	<0.60		ug	
				Phosphorus (P)	2014/06/23	<2.5		ug	
				Selenium (Se)	2014/06/23	<1.0		ug	
				Silicon (Si)	2014/06/23	<1.0		ug	
				Sulphur (S)	2014/06/23	<2.5		ug	
				Zirconium (Zr)	2014/06/23	<0.50		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Maxxam Job #: B4A3663
Report Date: 2014/07/03

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000 FARO MINE
Site Location: AIR MONITORING

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Brenda Moore, Team Lead

A handwritten signature in black ink, appearing to read "Frank Mo", is written over a horizontal line.

Frank Mo, B.Sc., Inorganic Lab. Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

Attention:Tracey Forbister

SLR Consulting (Canada) Ltd.
620-3530 Millar Ave.
Saskatoon, SK
CANADA S7P 0B6

Report Date: 2014/07/11

Report #: R3086133

Version: 1

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B4B4656

Received: 2014/07/03, 09:45

Sample Matrix: Filter
Samples Received: 17

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Total Metals on Lo-Vol Filter (6010Cmod)	16	2014/07/10	2014/07/11		EPA 6010Cmod
Total Metals (6010Cmod)	17	2014/07/08	2014/07/09	CAM SOP-00408 / BRL SOP-00102	EPA 6010Cmod
Particulate Calculation PM 2.5 (IO-2mod)	16	N/A	2014/07/08	BRL SOP-00109	EPA IO-2mod
Total Particulate (PM2.5)	17	N/A	2014/07/07	BRL SOP-00109	EPA 2.12-PM2.5
Air Volume from LoVol Sampling	17	N/A	2014/07/07		

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marinela Sim,

Email: MSim@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

RESULTS OF ANALYSES OF FILTER

Maxxam ID		WN5794		WN5795		WN5796		WN5797		
Sampling Date		2014/06/17		2014/06/17		2014/06/17		2014/06/17		
	Units	NCS-TSP-24-008	RDL	NCS-TSP-08-008	RDL	TPH-TSP-24-008	RDL	TPH-TSP-08-008	RDL	QC Batch
PM 2.5 Particulate	ug/m3	<8.1	8.1	<14	14	<4.5	4.5	<13	13	3662853
Particulate Weight on Filter	ug	<30	30	<30	30	<30	30	<30	30	3666605
Volume	m3	3.700	N/A	2.200	N/A	6.600	N/A	2.300	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable										

Maxxam ID		WN5798		WN5799			WN5800		WN5801		
Sampling Date		2014/06/17		2014/06/17			2014/06/17		2014/06/17		
	Units	ETA-TSP-24-008	RDL	ETA-TSP-08-008	RDL	QC Batch	GFT-TSP-24-008	RDL	GFT-TSP-08-008	RDL	QC Batch
PM 2.5 Particulate	ug/m3	5.9	4.3	<14	14	3662853	28.7	4.4	<20	20	3663039
Particulate Weight on Filter	ug	41	30	<30	30	3666605	195	30	<30	30	3666605
Volume	m3	6.900	N/A	2.200	N/A	ONSITE	6.800	N/A	1.500	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable											

Maxxam ID		WN5802		WN5803		WN5804		WN5805		
Sampling Date		2014/06/20		2014/06/20		2014/06/20		2014/06/20		
	Units	NCS-TSP-24-009	RDL	NCS-TSP-08-009	RDL	TPH-TSP-24-009	RDL	TPH-TSP-08-009	RDL	QC Batch
PM 2.5 Particulate	ug/m3	9.8	4.5	38	18	36.6	4.3	75	13	3663039
Particulate Weight on Filter	ug	65	30	65	30	256	30	174	30	3666605
Volume	m3	6.600	N/A	1.700	N/A	7.000	N/A	2.300	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable										

Maxxam ID		WN5806		WN5807		WN5808		WN5809		
Sampling Date		2014/06/20		2014/06/20		2014/06/20		2014/06/20		
	Units	ETA-TSP-24-009	RDL	ETA-TSP-08-009	RDL	GFT-TSP-24-009	RDL	GFT-TSP-08-009	RDL	QC Batch
PM 2.5 Particulate	ug/m3	13.1	4.3	27	19	13.8	4.3	30	13	3663039
Particulate Weight on Filter	ug	91	30	44	30	96	30	69	30	3666605
Volume	m3	6.900	N/A	1.600	N/A	6.900	N/A	2.300	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable										

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

RESULTS OF ANALYSES OF FILTER

Maxxam ID		WN5810		
Sampling Date		2014/06/20		
	Units	EB-TSP-00-009	RDL	QC Batch
Particulate Weight on Filter	ug	<30	30	3666605
Volume	m3	0	N/A	ONSITE
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
N/A = Not Applicable				

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WN5794		WN5795		WN5796		WN5797		
Sampling Date		2014/06/17		2014/06/17		2014/06/17		2014/06/17		
	Units	NCS-TSP-24-008	RDL	NCS-TSP-08-008	RDL	TPH-TSP-24-008	RDL	TPH-TSP-08-008	RDL	QC Batch
Metals										
Total Aluminum (Al)	ug/m3	<1.4	1.4	<2.3	2.3	<0.76	0.76	<2.2	2.2	3671126
Total Antimony (Sb)	ug/m3	<0.27	0.27	<0.45	0.45	<0.15	0.15	<0.43	0.43	3671126
Total Arsenic (As)	ug/m3	<0.16	0.16	<0.27	0.27	<0.091	0.091	<0.26	0.26	3671126
Total Barium (Ba)	ug/m3	<0.027	0.027	<0.045	0.045	<0.015	0.015	<0.043	0.043	3671126
Total Beryllium (Be)	ug/m3	<0.027	0.027	<0.045	0.045	<0.015	0.015	<0.043	0.043	3671126
Total Bismuth (Bi)	ug/m3	<0.16	0.16	<0.27	0.27	<0.091	0.091	<0.26	0.26	3671126
Total Boron (B)	ug/m3	<0.16	0.16	<0.27	0.27	<0.091	0.091	<0.26	0.26	3671126
Total Cadmium (Cd)	ug/m3	<0.054	0.054	<0.091	0.091	<0.030	0.030	<0.087	0.087	3671126
Total Calcium (Ca)	ug/m3	<1.4	1.4	<2.3	2.3	<0.76	0.76	<2.2	2.2	3671126
Total Chromium (Cr)	ug/m3	<0.14	0.14	<0.23	0.23	<0.076	0.076	<0.22	0.22	3671126
Total Cobalt (Co)	ug/m3	<0.054	0.054	<0.091	0.091	<0.030	0.030	<0.087	0.087	3671126
Total Copper (Cu)	ug/m3	<0.14	0.14	<0.23	0.23	<0.076	0.076	<0.22	0.22	3671126
Total Iron (Fe)	ug/m3	<1.4	1.4	<2.3	2.3	<0.76	0.76	<2.2	2.2	3671126
Total Lead (Pb)	ug/m3	<0.081	0.081	<0.14	0.14	<0.045	0.045	<0.13	0.13	3671126
Total Magnesium (Mg)	ug/m3	<1.4	1.4	<2.3	2.3	<0.76	0.76	<2.2	2.2	3671126
Total Manganese (Mn)	ug/m3	<0.027	0.027	<0.045	0.045	<0.015	0.015	<0.043	0.043	3671126
Total Molybdenum (Mo)	ug/m3	<0.081	0.081	<0.14	0.14	<0.045	0.045	<0.13	0.13	3671126
Total Nickel (Ni)	ug/m3	<0.081	0.081	<0.14	0.14	<0.045	0.045	<0.13	0.13	3671126
Total Phosphorus (P)	ug/m3	<0.68	0.68	<1.1	1.1	<0.38	0.38	<1.1	1.1	3671126
Total Potassium (K)	ug/m3	<2.7	2.7	<4.5	4.5	<1.5	1.5	<4.3	4.3	3671126
Total Selenium (Se)	ug/m3	<0.27	0.27	<0.45	0.45	<0.15	0.15	<0.43	0.43	3671126
Total Silicon (Si)	ug/m3	<0.27	0.27	<0.45	0.45	<0.15	0.15	<0.43	0.43	3671126
Total Silver (Ag)	ug/m3	<0.14	0.14	<0.23	0.23	<0.076	0.076	<0.22	0.22	3671126
Total Sodium (Na)	ug/m3	6.0	1.4	10.7	2.3	2.59	0.76	6.7	2.2	3671126
Total Strontium (Sr)	ug/m3	<0.027	0.027	<0.045	0.045	<0.015	0.015	<0.043	0.043	3671126
Total Sulphur (S)	ug/m3	1.19	0.68	1.8	1.1	0.49	0.38	<1.1	1.1	3671126
Total Thallium (Tl)	ug/m3	<0.27	0.27	<0.45	0.45	<0.15	0.15	<0.43	0.43	3671126
Total Tin (Sn)	ug/m3	<0.27	0.27	<0.45	0.45	<0.15	0.15	<0.43	0.43	3671126
Total Titanium (Ti)	ug/m3	<0.027	0.027	<0.045	0.045	<0.015	0.015	<0.043	0.043	3671126
Total Vanadium (V)	ug/m3	<0.14	0.14	<0.23	0.23	<0.076	0.076	<0.22	0.22	3671126
Total Zinc (Zn)	ug/m3	<0.14	0.14	<0.23	0.23	<0.076	0.076	<0.22	0.22	3671126
Total Zirconium (Zr)	ug/m3	<0.14	0.14	<0.23	0.23	<0.076	0.076	<0.22	0.22	3671126
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WN5798		WN5799		WN5800		WN5801		
Sampling Date		2014/06/17		2014/06/17		2014/06/17		2014/06/17		
	Units	ETA-TSP-24-008	RDL	ETA-TSP-08-008	RDL	GFT-TSP-24-008	RDL	GFT-TSP-08-008	RDL	QC Batch
Metals										
Total Aluminum (Al)	ug/m3	<0.72	0.72	<2.3	2.3	<0.74	0.74	<3.3	3.3	3671126
Total Antimony (Sb)	ug/m3	<0.14	0.14	<0.45	0.45	<0.15	0.15	<0.67	0.67	3671126
Total Arsenic (As)	ug/m3	<0.087	0.087	<0.27	0.27	<0.088	0.088	<0.40	0.40	3671126
Total Barium (Ba)	ug/m3	<0.014	0.014	<0.045	0.045	<0.015	0.015	<0.067	0.067	3671126
Total Beryllium (Be)	ug/m3	<0.014	0.014	<0.045	0.045	<0.015	0.015	<0.067	0.067	3671126
Total Bismuth (Bi)	ug/m3	<0.087	0.087	<0.27	0.27	<0.088	0.088	<0.40	0.40	3671126
Total Boron (B)	ug/m3	<0.087	0.087	<0.27	0.27	<0.088	0.088	<0.40	0.40	3671126
Total Cadmium (Cd)	ug/m3	<0.029	0.029	<0.091	0.091	<0.029	0.029	<0.13	0.13	3671126
Total Calcium (Ca)	ug/m3	<0.72	0.72	<2.3	2.3	<0.74	0.74	<3.3	3.3	3671126
Total Chromium (Cr)	ug/m3	<0.072	0.072	<0.23	0.23	<0.074	0.074	<0.33	0.33	3671126
Total Cobalt (Co)	ug/m3	<0.029	0.029	<0.091	0.091	<0.029	0.029	<0.13	0.13	3671126
Total Copper (Cu)	ug/m3	<0.072	0.072	<0.23	0.23	<0.074	0.074	<0.33	0.33	3671126
Total Iron (Fe)	ug/m3	<0.72	0.72	<2.3	2.3	<0.74	0.74	<3.3	3.3	3671126
Total Lead (Pb)	ug/m3	<0.043	0.043	<0.14	0.14	0.060	0.044	<0.20	0.20	3671126
Total Magnesium (Mg)	ug/m3	<0.72	0.72	<2.3	2.3	<0.74	0.74	<3.3	3.3	3671126
Total Manganese (Mn)	ug/m3	<0.014	0.014	<0.045	0.045	<0.015	0.015	<0.067	0.067	3671126
Total Molybdenum (Mo)	ug/m3	<0.043	0.043	<0.14	0.14	<0.044	0.044	<0.20	0.20	3671126
Total Nickel (Ni)	ug/m3	<0.043	0.043	<0.14	0.14	<0.044	0.044	<0.20	0.20	3671126
Total Phosphorus (P)	ug/m3	<0.36	0.36	<1.1	1.1	<0.37	0.37	<1.7	1.7	3671126
Total Potassium (K)	ug/m3	<1.4	1.4	<4.5	4.5	<1.5	1.5	<6.7	6.7	3671126
Total Selenium (Se)	ug/m3	<0.14	0.14	<0.45	0.45	<0.15	0.15	<0.67	0.67	3671126
Total Silicon (Si)	ug/m3	<0.14	0.14	<0.45	0.45	<0.15	0.15	<0.67	0.67	3671126
Total Silver (Ag)	ug/m3	<0.072	0.072	<0.23	0.23	<0.074	0.074	<0.33	0.33	3671126
Total Sodium (Na)	ug/m3	2.13	0.72	6.2	2.3	2.09	0.74	8.4	3.3	3671126
Total Strontium (Sr)	ug/m3	<0.014	0.014	<0.045	0.045	<0.015	0.015	<0.067	0.067	3671126
Total Sulphur (S)	ug/m3	0.40	0.36	<1.1	1.1	0.58	0.37	<1.7	1.7	3671126
Total Thallium (Tl)	ug/m3	<0.14	0.14	<0.45	0.45	<0.15	0.15	<0.67	0.67	3671126
Total Tin (Sn)	ug/m3	0.26	0.14	<0.45	0.45	0.33	0.15	<0.67	0.67	3671126
Total Titanium (Ti)	ug/m3	<0.014	0.014	<0.045	0.045	<0.015	0.015	<0.067	0.067	3671126
Total Vanadium (V)	ug/m3	<0.072	0.072	<0.23	0.23	<0.074	0.074	<0.33	0.33	3671126
Total Zinc (Zn)	ug/m3	<0.072	0.072	<0.23	0.23	0.076	0.074	<0.33	0.33	3671126
Total Zirconium (Zr)	ug/m3	<0.072	0.072	<0.23	0.23	<0.074	0.074	<0.33	0.33	3671126
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WN5802		WN5803		WN5804		WN5805		
Sampling Date		2014/06/20		2014/06/20		2014/06/20		2014/06/20		
	Units	NCS-TSP-24-009	RDL	NCS-TSP-08-009	RDL	TPH-TSP-24-009	RDL	TPH-TSP-08-009	RDL	QC Batch
Metals										
Total Aluminum (Al)	ug/m3	<0.76	0.76	<2.9	2.9	<0.71	0.71	<2.2	2.2	3671126
Total Antimony (Sb)	ug/m3	<0.15	0.15	<0.59	0.59	<0.14	0.14	<0.43	0.43	3671126
Total Arsenic (As)	ug/m3	<0.091	0.091	<0.35	0.35	<0.086	0.086	<0.26	0.26	3671126
Total Barium (Ba)	ug/m3	0.021	0.015	<0.059	0.059	0.064	0.014	0.118	0.043	3671126
Total Beryllium (Be)	ug/m3	<0.015	0.015	<0.059	0.059	<0.014	0.014	<0.043	0.043	3671126
Total Bismuth (Bi)	ug/m3	<0.091	0.091	<0.35	0.35	<0.086	0.086	<0.26	0.26	3671126
Total Boron (B)	ug/m3	<0.091	0.091	<0.35	0.35	<0.086	0.086	<0.26	0.26	3671126
Total Cadmium (Cd)	ug/m3	<0.030	0.030	<0.12	0.12	<0.029	0.029	<0.087	0.087	3671126
Total Calcium (Ca)	ug/m3	<0.76	0.76	<2.9	2.9	<0.71	0.71	<2.2	2.2	3671126
Total Chromium (Cr)	ug/m3	<0.076	0.076	<0.29	0.29	<0.071	0.071	<0.22	0.22	3671126
Total Cobalt (Co)	ug/m3	<0.030	0.030	<0.12	0.12	<0.029	0.029	<0.087	0.087	3671126
Total Copper (Cu)	ug/m3	<0.076	0.076	0.31	0.29	0.110	0.071	0.27	0.22	3671126
Total Iron (Fe)	ug/m3	<0.76	0.76	<2.9	2.9	1.87	0.71	3.7	2.2	3671126
Total Lead (Pb)	ug/m3	0.177	0.045	0.39	0.18	0.886	0.043	1.63	0.13	3671126
Total Magnesium (Mg)	ug/m3	<0.76	0.76	<2.9	2.9	<0.71	0.71	<2.2	2.2	3671126
Total Manganese (Mn)	ug/m3	<0.015	0.015	<0.059	0.059	0.045	0.014	0.100	0.043	3671126
Total Molybdenum (Mo)	ug/m3	<0.045	0.045	<0.18	0.18	<0.043	0.043	<0.13	0.13	3671126
Total Nickel (Ni)	ug/m3	<0.045	0.045	<0.18	0.18	<0.043	0.043	<0.13	0.13	3671126
Total Phosphorus (P)	ug/m3	0.38	0.38	<1.5	1.5	<0.36	0.36	<1.1	1.1	3671126
Total Potassium (K)	ug/m3	<1.5	1.5	<5.9	5.9	<1.4	1.4	<4.3	4.3	3671126
Total Selenium (Se)	ug/m3	<0.15	0.15	<0.59	0.59	<0.14	0.14	<0.43	0.43	3671126
Total Silicon (Si)	ug/m3	<0.15	0.15	<0.59	0.59	<0.14	0.14	0.45	0.43	3671126
Total Silver (Ag)	ug/m3	<0.076	0.076	<0.29	0.29	<0.071	0.071	<0.22	0.22	3671126
Total Sodium (Na)	ug/m3	2.15	0.76	7.3	2.9	1.51	0.71	4.6	2.2	3671126
Total Strontium (Sr)	ug/m3	<0.015	0.015	<0.059	0.059	<0.014	0.014	<0.043	0.043	3671126
Total Sulphur (S)	ug/m3	0.81	0.38	2.2	1.5	1.98	0.36	4.1	1.1	3671126
Total Thallium (Tl)	ug/m3	<0.15	0.15	<0.59	0.59	<0.14	0.14	<0.43	0.43	3671126
Total Tin (Sn)	ug/m3	<0.15	0.15	<0.59	0.59	<0.14	0.14	<0.43	0.43	3671126
Total Titanium (Ti)	ug/m3	<0.015	0.015	<0.059	0.059	<0.014	0.014	<0.043	0.043	3671126
Total Vanadium (V)	ug/m3	<0.076	0.076	<0.29	0.29	<0.071	0.071	<0.22	0.22	3671126
Total Zinc (Zn)	ug/m3	0.303	0.076	1.04	0.29	1.11	0.071	2.19	0.22	3671126
Total Zirconium (Zr)	ug/m3	<0.076	0.076	<0.29	0.29	<0.071	0.071	<0.22	0.22	3671126
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WN5806		WN5807		WN5808		WN5809		
Sampling Date		2014/06/20		2014/06/20		2014/06/20		2014/06/20		
	Units	ETA-TSP-24-009	RDL	ETA-TSP-08-009	RDL	GFT-TSP-24-009	RDL	GFT-TSP-08-009	RDL	QC Batch
Metals										
Total Aluminum (Al)	ug/m3	<0.72	0.72	<3.1	3.1	<0.72	0.72	<2.2	2.2	3671126
Total Antimony (Sb)	ug/m3	<0.14	0.14	<0.63	0.63	<0.14	0.14	<0.43	0.43	3671126
Total Arsenic (As)	ug/m3	<0.087	0.087	<0.38	0.38	<0.087	0.087	<0.26	0.26	3671126
Total Barium (Ba)	ug/m3	<0.014	0.014	<0.063	0.063	0.015	0.014	0.044	0.043	3671126
Total Beryllium (Be)	ug/m3	<0.014	0.014	<0.063	0.063	<0.014	0.014	<0.043	0.043	3671126
Total Bismuth (Bi)	ug/m3	<0.087	0.087	<0.38	0.38	<0.087	0.087	<0.26	0.26	3671126
Total Boron (B)	ug/m3	<0.087	0.087	<0.38	0.38	<0.087	0.087	<0.26	0.26	3671126
Total Cadmium (Cd)	ug/m3	<0.029	0.029	<0.13	0.13	<0.029	0.029	<0.087	0.087	3671126
Total Calcium (Ca)	ug/m3	<0.72	0.72	<3.1	3.1	<0.72	0.72	<2.2	2.2	3671126
Total Chromium (Cr)	ug/m3	<0.072	0.072	<0.31	0.31	<0.072	0.072	<0.22	0.22	3671126
Total Cobalt (Co)	ug/m3	<0.029	0.029	<0.13	0.13	<0.029	0.029	<0.087	0.087	3671126
Total Copper (Cu)	ug/m3	0.087	0.072	<0.31	0.31	0.084	0.072	0.25	0.22	3671126
Total Iron (Fe)	ug/m3	<0.72	0.72	<3.1	3.1	<0.72	0.72	<2.2	2.2	3671126
Total Lead (Pb)	ug/m3	0.064	0.043	<0.19	0.19	0.354	0.043	1.10	0.13	3671126
Total Magnesium (Mg)	ug/m3	<0.72	0.72	<3.1	3.1	<0.72	0.72	<2.2	2.2	3671126
Total Manganese (Mn)	ug/m3	<0.014	0.014	<0.063	0.063	<0.014	0.014	<0.043	0.043	3671126
Total Molybdenum (Mo)	ug/m3	<0.043	0.043	<0.19	0.19	<0.043	0.043	<0.13	0.13	3671126
Total Nickel (Ni)	ug/m3	<0.043	0.043	<0.19	0.19	<0.043	0.043	<0.13	0.13	3671126
Total Phosphorus (P)	ug/m3	<0.36	0.36	1.7	1.6	<0.36	0.36	<1.1	1.1	3671126
Total Potassium (K)	ug/m3	<1.4	1.4	<6.3	6.3	<1.4	1.4	<4.3	4.3	3671126
Total Selenium (Se)	ug/m3	<0.14	0.14	<0.63	0.63	<0.14	0.14	<0.43	0.43	3671126
Total Silicon (Si)	ug/m3	<0.14	0.14	<0.63	0.63	<0.14	0.14	<0.43	0.43	3671126
Total Silver (Ag)	ug/m3	<0.072	0.072	<0.31	0.31	<0.072	0.072	<0.22	0.22	3671126
Total Sodium (Na)	ug/m3	1.38	0.72	6.6	3.1	1.37	0.72	4.0	2.2	3671126
Total Strontium (Sr)	ug/m3	<0.014	0.014	<0.063	0.063	<0.014	0.014	<0.043	0.043	3671126
Total Sulphur (S)	ug/m3	0.47	0.36	<1.6	1.6	0.77	0.36	2.2	1.1	3671126
Total Thallium (Tl)	ug/m3	<0.14	0.14	<0.63	0.63	<0.14	0.14	<0.43	0.43	3671126
Total Tin (Sn)	ug/m3	<0.14	0.14	<0.63	0.63	<0.14	0.14	<0.43	0.43	3671126
Total Titanium (Ti)	ug/m3	<0.014	0.014	<0.063	0.063	<0.014	0.014	<0.043	0.043	3671126
Total Vanadium (V)	ug/m3	<0.072	0.072	<0.31	0.31	<0.072	0.072	<0.22	0.22	3671126
Total Zinc (Zn)	ug/m3	0.097	0.072	<0.31	0.31	0.492	0.072	1.70	0.22	3671126
Total Zirconium (Zr)	ug/m3	<0.072	0.072	<0.31	0.31	<0.072	0.072	<0.22	0.22	3671126
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

MISCELLANEOUS (FILTER)

Maxxam ID		WN5794	WN5795	WN5796	WN5797	WN5798		
Sampling Date		2014/06/17	2014/06/17	2014/06/17	2014/06/17	2014/06/17		
	Units	NCS-TSP-24-008	NCS-TSP-08-008	TPH-TSP-24-008	TPH-TSP-08-008	ETA-TSP-24-008	RDL	QC Batch
Metals								
Aluminum (Al)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Antimony (Sb)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Arsenic (As)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Barium (Ba)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Beryllium (Be)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Boron (B)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667574
Calcium (Ca)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Chromium (Cr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Cobalt (Co)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667574
Copper (Cu)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Iron (Fe)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Lead (Pb)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667574
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Manganese (Mn)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667574
Nickel (Ni)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667574
Phosphorus (P)	ug	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	3667574
Potassium (K)	ug	<10	<10	<10	<10	<10	10	3667574
Selenium (Se)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Silicon (Si)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Silver (Ag)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Sodium (Na)	ug	22.1	23.5	17.1	15.5	14.7	5.0	3667574
Strontium (Sr)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Sulphur (S)	ug	4.4	4.1	3.2	<2.5	2.8	2.5	3667574
Thallium (Tl)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Tin (Sn)	ug	<1.0	<1.0	<1.0	<1.0	1.8	1.0	3667574
Titanium (Ti)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Vanadium (V)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Zinc (Zn)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

MISCELLANEOUS (FILTER)

Maxxam ID		WN5799	WN5800	WN5801	WN5802	WN5803		
Sampling Date		2014/06/17	2014/06/17	2014/06/17	2014/06/20	2014/06/20		
	Units	ETA-TSP-08-008	GFT-TSP-24-008	GFT-TSP-08-008	NCS-TSP-24-009	NCS-TSP-08-009	RDL	QC Batch
Metals								
Aluminum (Al)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Antimony (Sb)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Arsenic (As)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Barium (Ba)	ug	<0.10	<0.10	<0.10	0.14	<0.10	0.10	3667574
Beryllium (Be)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Boron (B)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667574
Calcium (Ca)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Chromium (Cr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Cobalt (Co)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667574
Copper (Cu)	ug	<0.50	<0.50	<0.50	<0.50	0.52	0.50	3667574
Iron (Fe)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Lead (Pb)	ug	<0.30	0.41	<0.30	1.17	0.67	0.30	3667574
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Manganese (Mn)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667574
Nickel (Ni)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667574
Phosphorus (P)	ug	<2.5	<2.5	<2.5	2.5	<2.5	2.5	3667574
Potassium (K)	ug	<10	<10	<10	<10	<10	10	3667574
Selenium (Se)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Silicon (Si)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Silver (Ag)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Sodium (Na)	ug	13.7	14.2	12.6	14.2	12.4	5.0	3667574
Strontium (Sr)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Sulphur (S)	ug	<2.5	3.9	<2.5	5.3	3.8	2.5	3667574
Thallium (Tl)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Tin (Sn)	ug	<1.0	2.3	<1.0	<1.0	<1.0	1.0	3667574
Titanium (Ti)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Vanadium (V)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Zinc (Zn)	ug	<0.50	0.52	<0.50	2.00	1.76	0.50	3667574
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

MISCELLANEOUS (FILTER)

Maxxam ID		WN5804	WN5805	WN5806	WN5807	WN5808		
Sampling Date		2014/06/20	2014/06/20	2014/06/20	2014/06/20	2014/06/20		
	Units	TPH-TSP-24-009	TPH-TSP-08-009	ETA-TSP-24-009	ETA-TSP-08-009	GFT-TSP-24-009	RDL	QC Batch
Metals								
Aluminum (Al)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Antimony (Sb)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Arsenic (As)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Barium (Ba)	ug	0.45	0.27	<0.10	<0.10	0.10	0.10	3667574
Beryllium (Be)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Boron (B)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667574
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667574
Calcium (Ca)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Chromium (Cr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Cobalt (Co)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667574
Copper (Cu)	ug	0.77	0.61	0.60	<0.50	0.58	0.50	3667574
Iron (Fe)	ug	13.1	8.5	<5.0	<5.0	<5.0	5.0	3667574
Lead (Pb)	ug	6.21	3.76	0.45	<0.30	2.45	0.30	3667574
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667574
Manganese (Mn)	ug	0.31	0.23	<0.10	<0.10	<0.10	0.10	3667574
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667574
Nickel (Ni)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667574
Phosphorus (P)	ug	<2.5	<2.5	<2.5	2.7	<2.5	2.5	3667574
Potassium (K)	ug	<10	<10	<10	<10	<10	10	3667574
Selenium (Se)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Silicon (Si)	ug	<1.0	1.0	<1.0	<1.0	<1.0	1.0	3667574
Silver (Ag)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Sodium (Na)	ug	10.6	10.6	9.5	10.5	9.5	5.0	3667574
Strontium (Sr)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Sulphur (S)	ug	13.9	9.4	3.3	<2.5	5.3	2.5	3667574
Thallium (Tl)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Tin (Sn)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667574
Titanium (Ti)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667574
Vanadium (V)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
Zinc (Zn)	ug	7.77	5.04	0.67	<0.50	3.39	0.50	3667574
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667574
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

MISCELLANEOUS (FILTER)

Maxxam ID		WN5809	WN5810		
Sampling Date		2014/06/20	2014/06/20		
	Units	GFT-TSP-08-009	EB-TSP-00-009	RDL	QC Batch
Metals					
Aluminum (Al)	ug	<5.0	<5.0	5.0	3667574
Antimony (Sb)	ug	<1.0	<1.0	1.0	3667574
Arsenic (As)	ug	<0.60	<0.60	0.60	3667574
Barium (Ba)	ug	0.10	<0.10	0.10	3667574
Beryllium (Be)	ug	<0.10	<0.10	0.10	3667574
Bismuth (Bi)	ug	<0.60	<0.60	0.60	3667574
Boron (B)	ug	<0.60	<0.60	0.60	3667574
Cadmium (Cd)	ug	<0.20	<0.20	0.20	3667574
Calcium (Ca)	ug	<5.0	<5.0	5.0	3667574
Chromium (Cr)	ug	<0.50	<0.50	0.50	3667574
Cobalt (Co)	ug	<0.20	<0.20	0.20	3667574
Copper (Cu)	ug	0.57	0.52	0.50	3667574
Iron (Fe)	ug	<5.0	<5.0	5.0	3667574
Lead (Pb)	ug	2.54	<0.30	0.30	3667574
Magnesium (Mg)	ug	<5.0	<5.0	5.0	3667574
Manganese (Mn)	ug	<0.10	<0.10	0.10	3667574
Molybdenum (Mo)	ug	<0.30	<0.30	0.30	3667574
Nickel (Ni)	ug	<0.30	<0.30	0.30	3667574
Phosphorus (P)	ug	<2.5	<2.5	2.5	3667574
Potassium (K)	ug	<10	<10	10	3667574
Selenium (Se)	ug	<1.0	<1.0	1.0	3667574
Silicon (Si)	ug	<1.0	<1.0	1.0	3667574
Silver (Ag)	ug	<0.50	0.50	0.50	3667574
Sodium (Na)	ug	9.2	9.2	5.0	3667574
Strontium (Sr)	ug	<0.10	<0.10	0.10	3667574
Sulphur (S)	ug	5.1	<2.5	2.5	3667574
Thallium (Tl)	ug	<1.0	<1.0	1.0	3667574
Tin (Sn)	ug	<1.0	<1.0	1.0	3667574
Titanium (Ti)	ug	<0.10	<0.10	0.10	3667574
Vanadium (V)	ug	<0.50	<0.50	0.50	3667574
Zinc (Zn)	ug	3.90	<0.50	0.50	3667574
Zirconium (Zr)	ug	<0.50	<0.50	0.50	3667574
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

GENERAL COMMENTS

RESULTS OF ANALYSES OF FILTER

Total Particulate (PM2.5): Cassette was not put back in the original petri dish according to the o-ring ID. Prewrite was based on the o-ring ID.

Results relate only to the items tested.

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

QUALITY ASSURANCE REPORT

QA/QC			Date		Value	Recovery	Units	QC Limits
Batch	Init	QC Type	Parameter	Analyzed				
3667574	APT	Spiked Blank	Aluminum (Al)	2014/07/09		95	%	85 - 115
			Barium (Ba)	2014/07/09		101	%	85 - 115
			Beryllium (Be)	2014/07/09		102	%	85 - 115
			Boron (B)	2014/07/09		101	%	85 - 115
			Cadmium (Cd)	2014/07/09		105	%	85 - 115
			Calcium (Ca)	2014/07/09		101	%	85 - 115
			Chromium (Cr)	2014/07/09		97	%	85 - 115
			Cobalt (Co)	2014/07/09		102	%	85 - 115
			Copper (Cu)	2014/07/09		104	%	85 - 115
			Iron (Fe)	2014/07/09		104	%	85 - 115
			Lead (Pb)	2014/07/09		101	%	85 - 115
			Magnesium (Mg)	2014/07/09		99	%	85 - 115
			Manganese (Mn)	2014/07/09		100	%	85 - 115
			Molybdenum (Mo)	2014/07/09		100	%	85 - 115
			Nickel (Ni)	2014/07/09		99	%	85 - 115
			Potassium (K)	2014/07/09		102	%	85 - 115
			Silver (Ag)	2014/07/09		102	%	85 - 115
			Sodium (Na)	2014/07/09		116 (1)	%	85 - 115
			Strontium (Sr)	2014/07/09		103	%	85 - 115
			Thallium (Tl)	2014/07/09		100	%	85 - 115
			Tin (Sn)	2014/07/09		100	%	85 - 115
			Titanium (Ti)	2014/07/09		100	%	85 - 115
			Vanadium (V)	2014/07/09		103	%	85 - 115
			Zinc (Zn)	2014/07/09		99	%	85 - 115
			Antimony (Sb)	2014/07/09		93	%	85 - 115
			Arsenic (As)	2014/07/09		102	%	85 - 115
			Bismuth (Bi)	2014/07/09		100	%	85 - 115
			Phosphorus (P)	2014/07/09		102	%	85 - 115
			Selenium (Se)	2014/07/09		104	%	85 - 115
			Silicon (Si)	2014/07/09		98	%	85 - 115
			Sulphur (S)	2014/07/09		116 (1)	%	85 - 115
			Zirconium (Zr)	2014/07/09		99	%	85 - 115
3667574	APT	RPD	Aluminum (Al)	2014/07/09	0.9		%	20
			Barium (Ba)	2014/07/09	1.7		%	20
			Beryllium (Be)	2014/07/09	1.7		%	20
			Boron (B)	2014/07/09	2.3		%	20
			Cadmium (Cd)	2014/07/09	2.4		%	20
			Calcium (Ca)	2014/07/09	2.1		%	20
			Chromium (Cr)	2014/07/09	2.3		%	20
			Cobalt (Co)	2014/07/09	2.1		%	20
			Copper (Cu)	2014/07/09	2.1		%	20
			Iron (Fe)	2014/07/09	2.1		%	20
			Lead (Pb)	2014/07/09	2.2		%	20
			Magnesium (Mg)	2014/07/09	2.0		%	20
			Manganese (Mn)	2014/07/09	2.1		%	20
			Molybdenum (Mo)	2014/07/09	1.9		%	20
			Nickel (Ni)	2014/07/09	2.0		%	20
			Potassium (K)	2014/07/09	1.8		%	20
			Silver (Ag)	2014/07/09	0.8		%	20
			Sodium (Na)	2014/07/09	3.3		%	20
			Strontium (Sr)	2014/07/09	1.8		%	20
			Thallium (Tl)	2014/07/09	2.6		%	20
			Tin (Sn)	2014/07/09	2.1		%	20

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3667574	APT	Method Blank		Titanium (Ti)	2014/07/09	1.8		%	20
				Vanadium (V)	2014/07/09	2.2		%	20
				Zinc (Zn)	2014/07/09	1.8		%	20
				Antimony (Sb)	2014/07/09	3.8		%	20
				Arsenic (As)	2014/07/09	2.3		%	20
				Bismuth (Bi)	2014/07/09	2.5		%	20
				Phosphorus (P)	2014/07/09	2.4		%	20
				Selenium (Se)	2014/07/09	2.9		%	20
				Silicon (Si)	2014/07/09	2.5		%	20
				Sulphur (S)	2014/07/09	3.9		%	20
				Zirconium (Zr)	2014/07/09	2.2		%	20
				Aluminum (Al)	2014/07/09	<5.0		ug	
				Barium (Ba)	2014/07/09	<0.10		ug	
				Beryllium (Be)	2014/07/09	<0.10		ug	
				Boron (B)	2014/07/09	<0.60		ug	
				Cadmium (Cd)	2014/07/09	<0.20		ug	
				Calcium (Ca)	2014/07/09	<5.0		ug	
				Chromium (Cr)	2014/07/09	<0.50		ug	
				Cobalt (Co)	2014/07/09	<0.20		ug	
				Copper (Cu)	2014/07/09	<0.50		ug	
				Iron (Fe)	2014/07/09	<5.0		ug	
				Lead (Pb)	2014/07/09	<0.30		ug	
				Magnesium (Mg)	2014/07/09	<5.0		ug	
				Manganese (Mn)	2014/07/09	<0.10		ug	
				Molybdenum (Mo)	2014/07/09	<0.30		ug	
				Nickel (Ni)	2014/07/09	<0.30		ug	
				Potassium (K)	2014/07/09	<10		ug	
				Silver (Ag)	2014/07/09	<0.50		ug	
				Sodium (Na)	2014/07/09	<5.0		ug	
				Strontium (Sr)	2014/07/09	<0.10		ug	
				Thallium (Tl)	2014/07/09	<1.0		ug	
				Tin (Sn)	2014/07/09	<1.0		ug	
				Titanium (Ti)	2014/07/09	0.14 , RDL=0.10		ug	
				Vanadium (V)	2014/07/09	<0.50		ug	
				Zinc (Zn)	2014/07/09	<0.50		ug	
				Antimony (Sb)	2014/07/09	<1.0		ug	
				Arsenic (As)	2014/07/09	<0.60		ug	
				Bismuth (Bi)	2014/07/09	<0.60		ug	
				Phosphorus (P)	2014/07/09	<2.5		ug	
				Selenium (Se)	2014/07/09	<1.0		ug	
				Silicon (Si)	2014/07/09	<1.0		ug	
				Sulphur (S)	2014/07/09	<2.5		ug	
				Zirconium (Zr)	2014/07/09	<0.50		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Job #: B4B4656
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM

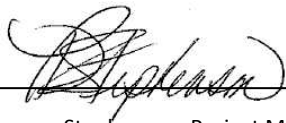
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Brenda Moore, Team Lead



Frank Mo, B.Sc., Inorganic Lab. Manager



Theresa Stephenson, Project Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: 208.04601.00000
 Site Location: FARO MINE AQ PROGRAM
 Your C.O.C. #: na

Attention:Tracey Forbister

SLR Consulting (Canada) Ltd.
 620-3530 Millar Ave.
 Saskatoon, SK
 CANADA S7P 0B6

Report Date: 2014/07/11

Report #: R3086061

Version: 1

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B4B4703

Received: 2014/07/03, 09:45

Sample Matrix: Filter
 # Samples Received: 18

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Total Metals on Lo-Vol Filter (6010Cmod)	15	2014/07/11	2014/07/11		EPA 6010Cmod
Total Metals (6010Cmod)	18	2014/07/08	2014/07/09	CAM SOP-00408 / BRL SOP-00102	EPA 6010Cmod
Particulate Calculation PM 2.5 (IO-2mod)	15	N/A	2014/07/08	BRL SOP-00109	EPA IO-2mod
Total Particulate (PM2.5)	18	N/A	2014/07/07	BRL SOP-00109	EPA 2.12-PM2.5
Air Volume from LoVol Sampling	18	N/A	2014/07/07		

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marinela Sim,

Email: MSim@maxxam.ca

Phone# (905) 817-5700

=====

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Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM
Sampler Initials: TP

RESULTS OF ANALYSES OF FILTER

Maxxam ID		WN5952	WN5953		WN5954		WN5955		
Sampling Date		2014/06/10	2014/06/10		2014/06/10		2014/06/10		
COC Number		na	na		na		na		
	Units	NCS-TSP-24-006	NCS-PM10-24-006	RDL	TPH-TSP-24-006	RDL	TPH-PM10-24-006	RDL	QC Batch
PM 2.5 Particulate	ug/m3	17.5	14.9	4.5	26.9	4.7	16.8	4.6	3662853
Particulate Weight on Filter	ug	116	99	30	172	30	109	30	3666617
Volume	m3	6.600	6.600	N/A	6.400	N/A	6.500	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable									

Maxxam ID		WN5956		WN5957	WN5958		WN5959		
Sampling Date		2014/06/10		2014/06/10	2014/06/10		2014/06/10		
COC Number		na		na	na		na		
	Units	ETA-TSP-24-006	RDL	ETA-PM10-006	GFT-TSP-24-006	RDL	GFT-PM10-24-006	RDL	QC Batch
PM 2.5 Particulate	ug/m3	20.7	7.1	10.5	18.7	4.7	15	10	3662853
Particulate Weight on Filter	ug	87	30	68	120	30	45	30	3666617
Volume	m3	4.200	N/A	6.400	6.400	N/A	3.000	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable									

Maxxam ID		WN5960		WN5961		WN5962		WN5963		
Sampling Date		2014/06/13		2014/06/13		2014/06/13		2014/06/13		
COC Number		na		na		na		na		
	Units	NCS-TSP-24-007	RDL	NCS-TSP-08-007	RDL	TPH-TSP-08-007	RDL	TPH-TSP-24-007	RDL	QC Batch
PM 2.5 Particulate	ug/m3	7.8	4.3	<20	20	<13	13	<10	10	3662853
Particulate Weight on Filter	ug	54	30	<30	30	<30	30	46	30	3666617
Volume	m3	6.900	N/A	1.500	N/A	2.300	N/A	2.900	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable										

Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM
Sampler Initials: TP

RESULTS OF ANALYSES OF FILTER

Maxxam ID		WN5964	WN5965		WN5966		WN5967	WN5968		
Sampling Date		2014/06/13	2014/06/13		2014/06/13		2014/06/13	2014/06/12		
COC Number		na	na		na		na	na		
	Units	ETA-TSP-24-007	ETA-TSP-08-007	RDL	GFT-TSP-24-007	RDL	GFT-TSP-08-007	TB-TSP-00-007	RDL	QC Batch
PM 2.5 Particulate	ug/m3	8.9		4.4	9.1	4.3	18		13	3662853
Particulate Weight on Filter	ug	61	<30	30	63	30	42	39	30	3666617
Volume	m3	6.800	0.0	N/A	6.900	N/A	2.300	0.0	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable										

Maxxam ID		WN5969		
Sampling Date		2014/06/12		
COC Number		na		
	Units	EB-TSP-00-007	RDL	QC Batch
Particulate Weight on Filter	ug	69	30	3666617
Volume	m3	0.0	N/A	ONSITE
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable				

Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
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Sampler Initials: TP

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WN5952	WN5953		WN5954		WN5955		
Sampling Date		2014/06/10	2014/06/10		2014/06/10		2014/06/10		
COC Number		na	na		na		na		
	Units	NCS-TSP-24-006	NCS-PM10-24-006	RDL	TPH-TSP-24-006	RDL	TPH-PM10-24-006	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/m3	<0.76	<0.76	0.76	<0.78	0.78	<0.77	0.77	3672627
Total Antimony (Sb)	ug/m3	<0.15	<0.15	0.15	<0.16	0.16	<0.15	0.15	3672627
Total Arsenic (As)	ug/m3	<0.091	<0.091	0.091	<0.094	0.094	<0.092	0.092	3672627
Total Barium (Ba)	ug/m3	0.031	0.028	0.015	0.049	0.016	0.037	0.015	3672627
Total Beryllium (Be)	ug/m3	<0.015	<0.015	0.015	<0.016	0.016	<0.015	0.015	3672627
Total Bismuth (Bi)	ug/m3	<0.091	<0.091	0.091	<0.094	0.094	<0.092	0.092	3672627
Total Boron (B)	ug/m3	<0.091	<0.091	0.091	<0.094	0.094	<0.092	0.092	3672627
Total Cadmium (Cd)	ug/m3	<0.030	<0.030	0.030	<0.031	0.031	<0.031	0.031	3672627
Total Calcium (Ca)	ug/m3	<0.76	<0.76	0.76	<0.78	0.78	<0.77	0.77	3672627
Total Chromium (Cr)	ug/m3	<0.076	<0.076	0.076	<0.078	0.078	<0.077	0.077	3672627
Total Cobalt (Co)	ug/m3	<0.030	<0.030	0.030	<0.031	0.031	<0.031	0.031	3672627
Total Copper (Cu)	ug/m3	0.098	0.089	0.076	0.090	0.078	<0.077	0.077	3672627
Total Iron (Fe)	ug/m3	1.05	0.92	0.76	1.31	0.78	0.83	0.77	3672627
Total Lead (Pb)	ug/m3	0.376	0.358	0.045	0.593	0.047	0.400	0.046	3672627
Total Magnesium (Mg)	ug/m3	<0.76	<0.76	0.76	<0.78	0.78	<0.77	0.77	3672627
Total Manganese (Mn)	ug/m3	0.020	0.020	0.015	0.031	0.016	0.019	0.015	3672627
Total Molybdenum (Mo)	ug/m3	<0.045	<0.045	0.045	<0.047	0.047	<0.046	0.046	3672627
Total Nickel (Ni)	ug/m3	<0.045	<0.045	0.045	<0.047	0.047	<0.046	0.046	3672627
Total Phosphorus (P)	ug/m3	<0.38	<0.38	0.38	<0.39	0.39	<0.38	0.38	3672627
Total Potassium (K)	ug/m3	<1.5	<1.5	1.5	<1.6	1.6	<1.5	1.5	3672627
Total Selenium (Se)	ug/m3	<0.15	<0.15	0.15	<0.16	0.16	<0.15	0.15	3672627
Total Silicon (Si)	ug/m3	<0.15	<0.15	0.15	<0.16	0.16	<0.15	0.15	3672627
Total Silver (Ag)	ug/m3	<0.076	<0.076	0.076	<0.078	0.078	<0.077	0.077	3672627
Total Sodium (Na)	ug/m3	1.35	1.27	0.76	1.40	0.78	<0.77	0.77	3672627
Total Strontium (Sr)	ug/m3	<0.015	<0.015	0.015	<0.016	0.016	<0.015	0.015	3672627
Total Sulphur (S)	ug/m3	0.60	0.54	0.38	1.07	0.39	0.68	0.38	3672627
Total Thallium (Tl)	ug/m3	<0.15	<0.15	0.15	<0.16	0.16	<0.15	0.15	3672627
Total Tin (Sn)	ug/m3	<0.15	<0.15	0.15	<0.16	0.16	<0.15	0.15	3672627
Total Titanium (Ti)	ug/m3	<0.015	<0.015	0.015	<0.016	0.016	<0.015	0.015	3672627
Total Vanadium (V)	ug/m3	<0.076	<0.076	0.076	<0.078	0.078	<0.077	0.077	3672627
Total Zinc (Zn)	ug/m3	0.515	0.475	0.076	0.702	0.078	0.432	0.077	3672627
Total Zirconium (Zr)	ug/m3	<0.076	<0.076	0.076	<0.078	0.078	<0.077	0.077	3672627
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									

Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
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Sampler Initials: TP

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WN5956		WN5957	WN5958		WN5959		
Sampling Date		2014/06/10		2014/06/10	2014/06/10		2014/06/10		
COC Number		na		na	na		na		
	Units	ETA-TSP-24-006	RDL	ETA-PM10-006	GFT-TSP-24-006	RDL	GFT-PM10-24-006	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/m3	<1.2	1.2	<0.78	<0.78	0.78	<1.7	1.7	3672627
Total Antimony (Sb)	ug/m3	<0.24	0.24	<0.16	<0.16	0.16	<0.33	0.33	3672627
Total Arsenic (As)	ug/m3	<0.14	0.14	<0.094	<0.094	0.094	<0.20	0.20	3672627
Total Barium (Ba)	ug/m3	<0.024	0.024	<0.016	0.029	0.016	<0.033	0.033	3672627
Total Beryllium (Be)	ug/m3	<0.024	0.024	<0.016	<0.016	0.016	<0.033	0.033	3672627
Total Bismuth (Bi)	ug/m3	<0.14	0.14	<0.094	<0.094	0.094	<0.20	0.20	3672627
Total Boron (B)	ug/m3	<0.14	0.14	<0.094	<0.094	0.094	<0.20	0.20	3672627
Total Cadmium (Cd)	ug/m3	<0.048	0.048	<0.031	<0.031	0.031	<0.067	0.067	3672627
Total Calcium (Ca)	ug/m3	<1.2	1.2	<0.78	<0.78	0.78	<1.7	1.7	3672627
Total Chromium (Cr)	ug/m3	<0.12	0.12	<0.078	<0.078	0.078	<0.17	0.17	3672627
Total Cobalt (Co)	ug/m3	<0.048	0.048	<0.031	<0.031	0.031	<0.067	0.067	3672627
Total Copper (Cu)	ug/m3	<0.12	0.12	<0.078	<0.078	0.078	9.35	0.17	3672627
Total Iron (Fe)	ug/m3	<1.2	1.2	<0.78	<0.78	0.78	<1.7	1.7	3672627
Total Lead (Pb)	ug/m3	0.237	0.071	0.225	0.464	0.047	0.58	0.10	3672627
Total Magnesium (Mg)	ug/m3	<1.2	1.2	<0.78	<0.78	0.78	<1.7	1.7	3672627
Total Manganese (Mn)	ug/m3	<0.024	0.024	<0.016	<0.016	0.016	<0.033	0.033	3672627
Total Molybdenum (Mo)	ug/m3	<0.071	0.071	<0.047	<0.047	0.047	<0.10	0.10	3672627
Total Nickel (Ni)	ug/m3	<0.071	0.071	<0.047	<0.047	0.047	<0.10	0.10	3672627
Total Phosphorus (P)	ug/m3	<0.60	0.60	<0.39	<0.39	0.39	<0.83	0.83	3672627
Total Potassium (K)	ug/m3	<2.4	2.4	<1.6	<1.6	1.6	<3.3	3.3	3672627
Total Selenium (Se)	ug/m3	<0.24	0.24	<0.16	<0.16	0.16	<0.33	0.33	3672627
Total Silicon (Si)	ug/m3	<0.24	0.24	<0.16	<0.16	0.16	<0.33	0.33	3672627
Total Silver (Ag)	ug/m3	<0.12	0.12	<0.078	<0.078	0.078	<0.17	0.17	3672627
Total Sodium (Na)	ug/m3	<1.2	1.2	<0.78	0.80	0.78	<1.7	1.7	3672627
Total Strontium (Sr)	ug/m3	<0.024	0.024	<0.016	<0.016	0.016	<0.033	0.033	3672627
Total Sulphur (S)	ug/m3	<0.60	0.60	<0.39	0.99	0.39	<0.83	0.83	3672627
Total Thallium (Tl)	ug/m3	<0.24	0.24	<0.16	<0.16	0.16	<0.33	0.33	3672627
Total Tin (Sn)	ug/m3	<0.24	0.24	<0.16	<0.16	0.16	<0.33	0.33	3672627
Total Titanium (Ti)	ug/m3	<0.024	0.024	<0.016	<0.016	0.016	<0.033	0.033	3672627
Total Vanadium (V)	ug/m3	<0.12	0.12	<0.078	<0.078	0.078	<0.17	0.17	3672627
Total Zinc (Zn)	ug/m3	0.33	0.12	0.277	0.581	0.078	5.56	0.17	3672627
Total Zirconium (Zr)	ug/m3	<0.12	0.12	<0.078	<0.078	0.078	<0.17	0.17	3672627
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									

Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM
Sampler Initials: TP

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WN5960		WN5961		WN5962		WN5963		
Sampling Date		2014/06/13		2014/06/13		2014/06/13		2014/06/13		
COC Number		na		na		na		na		
	Units	NCS-TSP-24-007	RDL	NCS-TSP-08-007	RDL	TPH-TSP-08-007	RDL	TPH-TSP-24-007	RDL	QC Batch
Metals										
Total Aluminum (Al)	ug/m3	<0.72	0.72	<3.3	3.3	<2.2	2.2	<1.7	1.7	3672627
Total Antimony (Sb)	ug/m3	<0.14	0.14	<0.67	0.67	<0.43	0.43	<0.34	0.34	3672627
Total Arsenic (As)	ug/m3	<0.087	0.087	<0.40	0.40	<0.26	0.26	<0.21	0.21	3672627
Total Barium (Ba)	ug/m3	<0.014	0.014	<0.067	0.067	<0.043	0.043	<0.034	0.034	3672627
Total Beryllium (Be)	ug/m3	<0.014	0.014	<0.067	0.067	<0.043	0.043	<0.034	0.034	3672627
Total Bismuth (Bi)	ug/m3	<0.087	0.087	<0.40	0.40	<0.26	0.26	<0.21	0.21	3672627
Total Boron (B)	ug/m3	<0.087	0.087	<0.40	0.40	<0.26	0.26	<0.21	0.21	3672627
Total Cadmium (Cd)	ug/m3	<0.029	0.029	<0.13	0.13	<0.087	0.087	<0.069	0.069	3672627
Total Calcium (Ca)	ug/m3	<0.72	0.72	<3.3	3.3	<2.2	2.2	<1.7	1.7	3672627
Total Chromium (Cr)	ug/m3	<0.072	0.072	<0.33	0.33	<0.22	0.22	<0.17	0.17	3672627
Total Cobalt (Co)	ug/m3	<0.029	0.029	<0.13	0.13	<0.087	0.087	<0.069	0.069	3672627
Total Copper (Cu)	ug/m3	<0.072	0.072	2.45	0.33	<0.22	0.22	<0.17	0.17	3672627
Total Iron (Fe)	ug/m3	<0.72	0.72	<3.3	3.3	<2.2	2.2	<1.7	1.7	3672627
Total Lead (Pb)	ug/m3	<0.043	0.043	<0.20	0.20	<0.13	0.13	<0.10	0.10	3672627
Total Magnesium (Mg)	ug/m3	<0.72	0.72	<3.3	3.3	<2.2	2.2	<1.7	1.7	3672627
Total Manganese (Mn)	ug/m3	<0.014	0.014	<0.067	0.067	<0.043	0.043	<0.034	0.034	3672627
Total Molybdenum (Mo)	ug/m3	<0.043	0.043	<0.20	0.20	<0.13	0.13	<0.10	0.10	3672627
Total Nickel (Ni)	ug/m3	<0.043	0.043	<0.20	0.20	<0.13	0.13	<0.10	0.10	3672627
Total Phosphorus (P)	ug/m3	<0.36	0.36	<1.7	1.7	<1.1	1.1	<0.86	0.86	3672627
Total Potassium (K)	ug/m3	<1.4	1.4	<6.7	6.7	<4.3	4.3	<3.4	3.4	3672627
Total Selenium (Se)	ug/m3	<0.14	0.14	<0.67	0.67	<0.43	0.43	<0.34	0.34	3672627
Total Silicon (Si)	ug/m3	<0.14	0.14	<0.67	0.67	<0.43	0.43	<0.34	0.34	3672627
Total Silver (Ag)	ug/m3	<0.072	0.072	<0.33	0.33	<0.22	0.22	<0.17	0.17	3672627
Total Sodium (Na)	ug/m3	<0.72	0.72	<3.3	3.3	<2.2	2.2	<1.7	1.7	3672627
Total Strontium (Sr)	ug/m3	<0.014	0.014	<0.067	0.067	<0.043	0.043	<0.034	0.034	3672627
Total Sulphur (S)	ug/m3	<0.36	0.36	<1.7	1.7	<1.1	1.1	<0.86	0.86	3672627
Total Thallium (Tl)	ug/m3	<0.14	0.14	<0.67	0.67	<0.43	0.43	<0.34	0.34	3672627
Total Tin (Sn)	ug/m3	<0.14	0.14	<0.67	0.67	<0.43	0.43	<0.34	0.34	3672627
Total Titanium (Ti)	ug/m3	<0.014	0.014	<0.067	0.067	<0.043	0.043	<0.034	0.034	3672627
Total Vanadium (V)	ug/m3	<0.072	0.072	<0.33	0.33	<0.22	0.22	<0.17	0.17	3672627
Total Zinc (Zn)	ug/m3	<0.072	0.072	1.48	0.33	<0.22	0.22	<0.17	0.17	3672627
Total Zirconium (Zr)	ug/m3	<0.072	0.072	<0.33	0.33	<0.22	0.22	<0.17	0.17	3672627
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										

Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM
Sampler Initials: TP

CALCULATED ELEMENTS (FILTER)

Maxxam ID		WN5964		WN5966		WN5967		
Sampling Date		2014/06/13		2014/06/13		2014/06/13		
COC Number		na		na		na		
	Units	ETA-TSP-24-007	RDL	GFT-TSP-24-007	RDL	GFT-TSP-08-007	RDL	QC Batch
Metals								
Total Aluminum (Al)	ug/m3	<0.74	0.74	<0.72	0.72	<2.2	2.2	3672627
Total Antimony (Sb)	ug/m3	<0.15	0.15	<0.14	0.14	<0.43	0.43	3672627
Total Arsenic (As)	ug/m3	<0.088	0.088	<0.087	0.087	<0.26	0.26	3672627
Total Barium (Ba)	ug/m3	<0.015	0.015	<0.014	0.014	<0.043	0.043	3672627
Total Beryllium (Be)	ug/m3	<0.015	0.015	<0.014	0.014	<0.043	0.043	3672627
Total Bismuth (Bi)	ug/m3	<0.088	0.088	<0.087	0.087	<0.26	0.26	3672627
Total Boron (B)	ug/m3	<0.088	0.088	<0.087	0.087	<0.26	0.26	3672627
Total Cadmium (Cd)	ug/m3	<0.029	0.029	<0.029	0.029	<0.087	0.087	3672627
Total Calcium (Ca)	ug/m3	<0.74	0.74	<0.72	0.72	<2.2	2.2	3672627
Total Chromium (Cr)	ug/m3	<0.074	0.074	<0.072	0.072	<0.22	0.22	3672627
Total Cobalt (Co)	ug/m3	<0.029	0.029	<0.029	0.029	<0.087	0.087	3672627
Total Copper (Cu)	ug/m3	<0.074	0.074	<0.072	0.072	<0.22	0.22	3672627
Total Iron (Fe)	ug/m3	<0.74	0.74	<0.72	0.72	<2.2	2.2	3672627
Total Lead (Pb)	ug/m3	0.048	0.044	<0.043	0.043	<0.13	0.13	3672627
Total Magnesium (Mg)	ug/m3	<0.74	0.74	<0.72	0.72	<2.2	2.2	3672627
Total Manganese (Mn)	ug/m3	<0.015	0.015	<0.014	0.014	<0.043	0.043	3672627
Total Molybdenum (Mo)	ug/m3	<0.044	0.044	<0.043	0.043	<0.13	0.13	3672627
Total Nickel (Ni)	ug/m3	<0.044	0.044	<0.043	0.043	<0.13	0.13	3672627
Total Phosphorus (P)	ug/m3	<0.37	0.37	<0.36	0.36	<1.1	1.1	3672627
Total Potassium (K)	ug/m3	<1.5	1.5	<1.4	1.4	<4.3	4.3	3672627
Total Selenium (Se)	ug/m3	<0.15	0.15	<0.14	0.14	<0.43	0.43	3672627
Total Silicon (Si)	ug/m3	<0.15	0.15	0.19	0.14	<0.43	0.43	3672627
Total Silver (Ag)	ug/m3	<0.074	0.074	<0.072	0.072	<0.22	0.22	3672627
Total Sodium (Na)	ug/m3	<0.74	0.74	<0.72	0.72	<2.2	2.2	3672627
Total Strontium (Sr)	ug/m3	<0.015	0.015	<0.014	0.014	<0.043	0.043	3672627
Total Sulphur (S)	ug/m3	<0.37	0.37	<0.36	0.36	<1.1	1.1	3672627
Total Thallium (Tl)	ug/m3	<0.15	0.15	<0.14	0.14	<0.43	0.43	3672627
Total Tin (Sn)	ug/m3	<0.15	0.15	<0.14	0.14	<0.43	0.43	3672627
Total Titanium (Ti)	ug/m3	<0.015	0.015	<0.014	0.014	<0.043	0.043	3672627
Total Vanadium (V)	ug/m3	<0.074	0.074	<0.072	0.072	<0.22	0.22	3672627
Total Zinc (Zn)	ug/m3	<0.074	0.074	<0.072	0.072	<0.22	0.22	3672627
Total Zirconium (Zr)	ug/m3	<0.074	0.074	<0.072	0.072	<0.22	0.22	3672627
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM
Sampler Initials: TP

MISCELLANEOUS (FILTER)

Maxxam ID		WN5952	WN5953	WN5954		WN5955		
Sampling Date		2014/06/10	2014/06/10	2014/06/10		2014/06/10		
COC Number		na	na	na		na		
	Units	NCS-TSP-24-006	NCS-PM10-24-006	TPH-TSP-24-006	QC Batch	TPH-PM10-24-006	RDL	QC Batch
Metals								
Aluminum (Al)	ug	<5.0	<5.0	<5.0	3667574	<5.0	5.0	3667575
Antimony (Sb)	ug	<1.0	<1.0	<1.0	3667574	<1.0	1.0	3667575
Arsenic (As)	ug	<0.60	<0.60	<0.60	3667574	<0.60	0.60	3667575
Barium (Ba)	ug	0.21	0.18	0.32	3667574	0.24	0.10	3667575
Beryllium (Be)	ug	<0.10	<0.10	<0.10	3667574	<0.10	0.10	3667575
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	3667574	<0.60	0.60	3667575
Boron (B)	ug	<0.60	<0.60	<0.60	3667574	<0.60	0.60	3667575
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	3667574	<0.20	0.20	3667575
Calcium (Ca)	ug	<5.0	<5.0	<5.0	3667574	<5.0	5.0	3667575
Chromium (Cr)	ug	<0.50	<0.50	<0.50	3667574	<0.50	0.50	3667575
Cobalt (Co)	ug	<0.20	<0.20	<0.20	3667574	<0.20	0.20	3667575
Copper (Cu)	ug	0.64	0.59	0.58	3667574	<0.50	0.50	3667575
Iron (Fe)	ug	6.9	6.1	8.4	3667574	5.4	5.0	3667575
Lead (Pb)	ug	2.48	2.37	3.80	3667574	2.60	0.30	3667575
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	3667574	<5.0	5.0	3667575
Manganese (Mn)	ug	0.13	0.13	0.20	3667574	0.12	0.10	3667575
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	3667574	<0.30	0.30	3667575
Nickel (Ni)	ug	<0.30	<0.30	<0.30	3667574	<0.30	0.30	3667575
Phosphorus (P)	ug	<2.5	<2.5	<2.5	3667574	<2.5	2.5	3667575
Potassium (K)	ug	<10	<10	<10	3667574	<10	10	3667575
Selenium (Se)	ug	<1.0	<1.0	<1.0	3667574	<1.0	1.0	3667575
Silicon (Si)	ug	<1.0	<1.0	1.0	3667574	<1.0	1.0	3667575
Silver (Ag)	ug	<0.50	<0.50	<0.50	3667574	<0.50	0.50	3667575
Sodium (Na)	ug	8.9	8.4	8.9	3667574	<5.0	5.0	3667575
Strontium (Sr)	ug	<0.10	<0.10	<0.10	3667574	<0.10	0.10	3667575
Sulphur (S)	ug	4.0	3.6	6.9	3667574	4.4	2.5	3667575
Thallium (Tl)	ug	<1.0	<1.0	<1.0	3667574	<1.0	1.0	3667575
Tin (Sn)	ug	<1.0	<1.0	<1.0	3667574	<1.0	1.0	3667575
Titanium (Ti)	ug	<0.10	<0.10	<0.10	3667574	<0.10	0.10	3667575
Vanadium (V)	ug	<0.50	<0.50	<0.50	3667574	<0.50	0.50	3667575
Zinc (Zn)	ug	3.40	3.13	4.49	3667574	2.81	0.50	3667575
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	3667574	<0.50	0.50	3667575
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

Maxxam Job #: B4B4703
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SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM
Sampler Initials: TP

MISCELLANEOUS (FILTER)

Maxxam ID		WN5956	WN5957	WN5958	WN5959	WN5960		
Sampling Date		2014/06/10	2014/06/10	2014/06/10	2014/06/10	2014/06/13		
COC Number		na	na	na	na	na		
	Units	ETA-TSP-24-006	ETA-PM10-006	GFT-TSP-24-006	GFT-PM10-24-006	NCS-TSP-24-007	RDL	QC Batch

Metals								
Aluminum (Al)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Antimony (Sb)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Arsenic (As)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Barium (Ba)	ug	<0.10	<0.10	0.18	<0.10	<0.10	0.10	3667575
Beryllium (Be)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Boron (B)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667575
Calcium (Ca)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Chromium (Cr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Cobalt (Co)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667575
Copper (Cu)	ug	<0.50	<0.50	<0.50	28.0	<0.50	0.50	3667575
Iron (Fe)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Lead (Pb)	ug	1.00	1.44	2.97	1.73	<0.30	0.30	3667575
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Manganese (Mn)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667575
Nickel (Ni)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667575
Phosphorus (P)	ug	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	3667575
Potassium (K)	ug	<10	<10	<10	<10	<10	10	3667575
Selenium (Se)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Silicon (Si)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Silver (Ag)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Sodium (Na)	ug	<5.0	<5.0	5.1	<5.0	<5.0	5.0	3667575
Strontium (Sr)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Sulphur (S)	ug	<2.5	<2.5	6.3	<2.5	<2.5	2.5	3667575
Thallium (Tl)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Tin (Sn)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Titanium (Ti)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Vanadium (V)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Zinc (Zn)	ug	1.38	1.77	3.72	16.7	<0.50	0.50	3667575
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667575

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

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Client Project #: 208.04601.00000
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MISCELLANEOUS (FILTER)

Maxxam ID		WN5961	WN5962	WN5963	WN5964	WN5965		
Sampling Date		2014/06/13	2014/06/13	2014/06/13	2014/06/13	2014/06/13		
COC Number		na	na	na	na	na		
	Units	NCS-TSP-08-007	TPH-TSP-08-007	TPH-TSP-24-007	ETA-TSP-24-007	ETA-TSP-08-007	RDL	QC Batch
Metals								
Aluminum (Al)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Antimony (Sb)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Arsenic (As)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Barium (Ba)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Beryllium (Be)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Boron (B)	ug	<0.60	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667575
Calcium (Ca)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Chromium (Cr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Cobalt (Co)	ug	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3667575
Copper (Cu)	ug	3.67	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Iron (Fe)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Lead (Pb)	ug	<0.30	<0.30	<0.30	0.33	<0.30	0.30	3667575
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Manganese (Mn)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667575
Nickel (Ni)	ug	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	3667575
Phosphorus (P)	ug	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	3667575
Potassium (K)	ug	<10	<10	<10	<10	<10	10	3667575
Selenium (Se)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Silicon (Si)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Silver (Ag)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Sodium (Na)	ug	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Strontium (Sr)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Sulphur (S)	ug	<2.5	<2.5	<2.5	<2.5	<2.5	2.5	3667575
Thallium (Tl)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Tin (Sn)	ug	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Titanium (Ti)	ug	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Vanadium (V)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Zinc (Zn)	ug	2.22	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3667575
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

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MISCELLANEOUS (FILTER)

Maxxam ID		WN5966	WN5967	WN5968	WN5969		
Sampling Date		2014/06/13	2014/06/13	2014/06/12	2014/06/12		
COC Number		na	na	na	na		
	Units	GFT-TSP-24-007	GFT-TSP-08-007	TB-TSP-00-007	EB-TSP-00-007	RDL	QC Batch
Metals							
Aluminum (Al)	ug	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Antimony (Sb)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Arsenic (As)	ug	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Barium (Ba)	ug	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Beryllium (Be)	ug	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Bismuth (Bi)	ug	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Boron (B)	ug	<0.60	<0.60	<0.60	<0.60	0.60	3667575
Cadmium (Cd)	ug	<0.20	<0.20	<0.20	<0.20	0.20	3667575
Calcium (Ca)	ug	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Chromium (Cr)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Cobalt (Co)	ug	<0.20	<0.20	<0.20	<0.20	0.20	3667575
Copper (Cu)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Iron (Fe)	ug	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Lead (Pb)	ug	<0.30	<0.30	<0.30	<0.30	0.30	3667575
Magnesium (Mg)	ug	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Manganese (Mn)	ug	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Molybdenum (Mo)	ug	<0.30	<0.30	<0.30	<0.30	0.30	3667575
Nickel (Ni)	ug	<0.30	<0.30	<0.30	<0.30	0.30	3667575
Phosphorus (P)	ug	<2.5	<2.5	<2.5	<2.5	2.5	3667575
Potassium (K)	ug	<10	<10	<10	<10	10	3667575
Selenium (Se)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Silicon (Si)	ug	1.3	<1.0	<1.0	<1.0	1.0	3667575
Silver (Ag)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Sodium (Na)	ug	<5.0	<5.0	<5.0	<5.0	5.0	3667575
Strontium (Sr)	ug	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Sulphur (S)	ug	<2.5	<2.5	<2.5	<2.5	2.5	3667575
Thallium (Tl)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Tin (Sn)	ug	<1.0	<1.0	<1.0	<1.0	1.0	3667575
Titanium (Ti)	ug	<0.10	<0.10	<0.10	<0.10	0.10	3667575
Vanadium (V)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Zinc (Zn)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3667575
Zirconium (Zr)	ug	<0.50	<0.50	<0.50	<0.50	0.50	3667575
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							

Maxxam Job #: B4B4703
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SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
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GENERAL COMMENTS

RESULTS OF ANALYSES OF FILTER

Total Particulate (PM2.5): Cassette was not put back in the original petri dish according to the o-ring ID. Preweight was based on the o-ring ID.

Results relate only to the items tested.

Maxxam Job #: B4B4703
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SLR Consulting (Canada) Ltd.
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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3667574	APT	Spiked Blank	Aluminum (Al)	2014/07/09		95	%	85 - 115
			Barium (Ba)	2014/07/09		101	%	85 - 115
			Beryllium (Be)	2014/07/09		102	%	85 - 115
			Boron (B)	2014/07/09		101	%	85 - 115
			Cadmium (Cd)	2014/07/09		105	%	85 - 115
			Calcium (Ca)	2014/07/09		101	%	85 - 115
			Chromium (Cr)	2014/07/09		97	%	85 - 115
			Cobalt (Co)	2014/07/09		102	%	85 - 115
			Copper (Cu)	2014/07/09		104	%	85 - 115
			Iron (Fe)	2014/07/09		104	%	85 - 115
			Lead (Pb)	2014/07/09		101	%	85 - 115
			Magnesium (Mg)	2014/07/09		99	%	85 - 115
			Manganese (Mn)	2014/07/09		100	%	85 - 115
			Molybdenum (Mo)	2014/07/09		100	%	85 - 115
			Nickel (Ni)	2014/07/09		99	%	85 - 115
			Potassium (K)	2014/07/09		102	%	85 - 115
			Silver (Ag)	2014/07/09		102	%	85 - 115
			Sodium (Na)	2014/07/09		116 (1)	%	85 - 115
			Strontium (Sr)	2014/07/09		103	%	85 - 115
			Thallium (Tl)	2014/07/09		100	%	85 - 115
			Tin (Sn)	2014/07/09		100	%	85 - 115
			Titanium (Ti)	2014/07/09		100	%	85 - 115
			Vanadium (V)	2014/07/09		103	%	85 - 115
			Zinc (Zn)	2014/07/09		99	%	85 - 115
			Antimony (Sb)	2014/07/09		93	%	85 - 115
			Arsenic (As)	2014/07/09		102	%	85 - 115
			Bismuth (Bi)	2014/07/09		100	%	85 - 115
			Phosphorus (P)	2014/07/09		102	%	85 - 115
			Selenium (Se)	2014/07/09		104	%	85 - 115
			Silicon (Si)	2014/07/09		98	%	85 - 115
			Sulphur (S)	2014/07/09		116 (1)	%	85 - 115
			Zirconium (Zr)	2014/07/09		99	%	85 - 115
3667574	APT	RPD	Aluminum (Al)	2014/07/09	0.9		%	20
			Barium (Ba)	2014/07/09	1.7		%	20
			Beryllium (Be)	2014/07/09	1.7		%	20
			Boron (B)	2014/07/09	2.3		%	20
			Cadmium (Cd)	2014/07/09	2.4		%	20
			Calcium (Ca)	2014/07/09	2.1		%	20
			Chromium (Cr)	2014/07/09	2.3		%	20
			Cobalt (Co)	2014/07/09	2.1		%	20
			Copper (Cu)	2014/07/09	2.1		%	20
			Iron (Fe)	2014/07/09	2.1		%	20
			Lead (Pb)	2014/07/09	2.2		%	20
			Magnesium (Mg)	2014/07/09	2.0		%	20
			Manganese (Mn)	2014/07/09	2.1		%	20
			Molybdenum (Mo)	2014/07/09	1.9		%	20
			Nickel (Ni)	2014/07/09	2.0		%	20
			Potassium (K)	2014/07/09	1.8		%	20
			Silver (Ag)	2014/07/09	0.8		%	20
			Sodium (Na)	2014/07/09	3.3		%	20
			Strontium (Sr)	2014/07/09	1.8		%	20
			Thallium (Tl)	2014/07/09	2.6		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3667574	APT	Method Blank	Tin (Sn)	2014/07/09	2.1		%	20
			Titanium (Ti)	2014/07/09	1.8		%	20
			Vanadium (V)	2014/07/09	2.2		%	20
			Zinc (Zn)	2014/07/09	1.8		%	20
			Antimony (Sb)	2014/07/09	3.8		%	20
			Arsenic (As)	2014/07/09	2.3		%	20
			Bismuth (Bi)	2014/07/09	2.5		%	20
			Phosphorus (P)	2014/07/09	2.4		%	20
			Selenium (Se)	2014/07/09	2.9		%	20
			Silicon (Si)	2014/07/09	2.5		%	20
			Sulphur (S)	2014/07/09	3.9		%	20
			Zirconium (Zr)	2014/07/09	2.2		%	20
			Aluminum (Al)	2014/07/09	<5.0		ug	
			Barium (Ba)	2014/07/09	<0.10		ug	
			Beryllium (Be)	2014/07/09	<0.10		ug	
			Boron (B)	2014/07/09	<0.60		ug	
			Cadmium (Cd)	2014/07/09	<0.20		ug	
			Calcium (Ca)	2014/07/09	<5.0		ug	
			Chromium (Cr)	2014/07/09	<0.50		ug	
			Cobalt (Co)	2014/07/09	<0.20		ug	
			Copper (Cu)	2014/07/09	<0.50		ug	
			Iron (Fe)	2014/07/09	<5.0		ug	
			Lead (Pb)	2014/07/09	<0.30		ug	
			Magnesium (Mg)	2014/07/09	<5.0		ug	
			Manganese (Mn)	2014/07/09	<0.10		ug	
			Molybdenum (Mo)	2014/07/09	<0.30		ug	
			Nickel (Ni)	2014/07/09	<0.30		ug	
			Potassium (K)	2014/07/09	<10		ug	
			Silver (Ag)	2014/07/09	<0.50		ug	
			Sodium (Na)	2014/07/09	<5.0		ug	
			Strontium (Sr)	2014/07/09	<0.10		ug	
			Thallium (Tl)	2014/07/09	<1.0		ug	
			Tin (Sn)	2014/07/09	<1.0		ug	
			Titanium (Ti)	2014/07/09	0.14 , RDL=0.10		ug	
			Vanadium (V)	2014/07/09	<0.50		ug	
			Zinc (Zn)	2014/07/09	<0.50		ug	
			Antimony (Sb)	2014/07/09	<1.0		ug	
			Arsenic (As)	2014/07/09	<0.60		ug	
			Bismuth (Bi)	2014/07/09	<0.60		ug	
			Phosphorus (P)	2014/07/09	<2.5		ug	
			Selenium (Se)	2014/07/09	<1.0		ug	
			Silicon (Si)	2014/07/09	<1.0		ug	
			Sulphur (S)	2014/07/09	<2.5		ug	
			Zirconium (Zr)	2014/07/09	<0.50		ug	
3667575	APT	Spiked Blank	Aluminum (Al)	2014/07/10		99	%	85 - 115
			Barium (Ba)	2014/07/10		99	%	85 - 115
			Beryllium (Be)	2014/07/10		100	%	85 - 115
			Boron (B)	2014/07/10		99	%	85 - 115
			Cadmium (Cd)	2014/07/10		102	%	85 - 115
			Calcium (Ca)	2014/07/10		99	%	85 - 115
			Chromium (Cr)	2014/07/10		100	%	85 - 115

Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM
Sampler Initials: TP

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
				Cobalt (Co)	2014/07/10		101	%	85 - 115
				Copper (Cu)	2014/07/10		98	%	85 - 115
				Iron (Fe)	2014/07/10		98	%	85 - 115
				Lead (Pb)	2014/07/10		100	%	85 - 115
				Magnesium (Mg)	2014/07/10		100	%	85 - 115
				Manganese (Mn)	2014/07/10		101	%	85 - 115
				Molybdenum (Mo)	2014/07/10		101	%	85 - 115
				Nickel (Ni)	2014/07/10		100	%	85 - 115
				Potassium (K)	2014/07/10		100	%	85 - 115
				Silver (Ag)	2014/07/10		99	%	85 - 115
				Sodium (Na)	2014/07/10		99	%	85 - 115
				Strontium (Sr)	2014/07/10		100	%	85 - 115
				Thallium (Tl)	2014/07/10		100	%	85 - 115
				Tin (Sn)	2014/07/10		100	%	85 - 115
				Titanium (Ti)	2014/07/10		100	%	85 - 115
				Vanadium (V)	2014/07/10		98	%	85 - 115
				Zinc (Zn)	2014/07/10		99	%	85 - 115
				Antimony (Sb)	2014/07/10		116 (1)	%	85 - 115
				Arsenic (As)	2014/07/10		101	%	85 - 115
				Bismuth (Bi)	2014/07/10		102	%	85 - 115
				Phosphorus (P)	2014/07/10		104	%	85 - 115
				Selenium (Se)	2014/07/10		104	%	85 - 115
				Silicon (Si)	2014/07/10		96	%	85 - 115
				Sulphur (S)	2014/07/10		104	%	85 - 115
				Zirconium (Zr)	2014/07/10		99	%	85 - 115
3667575	APT	RPD		Aluminum (Al)	2014/07/09	2.1		%	20
				Barium (Ba)	2014/07/09	1.1		%	20
				Beryllium (Be)	2014/07/09	0.7		%	20
				Boron (B)	2014/07/09	0.7		%	20
				Cadmium (Cd)	2014/07/09	2.1		%	20
				Calcium (Ca)	2014/07/09	0		%	20
				Chromium (Cr)	2014/07/09	0.3		%	20
				Cobalt (Co)	2014/07/09	1.7		%	20
				Copper (Cu)	2014/07/09	1.3		%	20
				Iron (Fe)	2014/07/09	0.5		%	20
				Lead (Pb)	2014/07/09	1.4		%	20
				Magnesium (Mg)	2014/07/09	0.7		%	20
				Manganese (Mn)	2014/07/09	0.6		%	20
				Molybdenum (Mo)	2014/07/09	1.3		%	20
				Nickel (Ni)	2014/07/09	1		%	20
				Potassium (K)	2014/07/09	1.2		%	20
				Silver (Ag)	2014/07/09	2.2		%	20
				Sodium (Na)	2014/07/09	1.3		%	20
				Strontium (Sr)	2014/07/09	0.2		%	20
				Thallium (Tl)	2014/07/09	2.7		%	20
				Tin (Sn)	2014/07/09	1.5		%	20
				Titanium (Ti)	2014/07/09	0.7		%	20
				Vanadium (V)	2014/07/09	0.2		%	20
				Zinc (Zn)	2014/07/09	0.6		%	20
				Antimony (Sb)	2014/07/09	16.4		%	20
				Arsenic (As)	2014/07/09	0.5		%	20
				Bismuth (Bi)	2014/07/09	1.9		%	20

Maxxam Job #: B4B4703
Report Date: 2014/07/11

SLR Consulting (Canada) Ltd.
Client Project #: 208.04601.00000
Site Location: FARO MINE AQ PROGRAM
Sampler Initials: TP

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3667575	APT	Method Blank	Phosphorus (P)	2014/07/09	1.1		%	20
			Selenium (Se)	2014/07/09	2.6		%	20
			Silicon (Si)	2014/07/09	2.1		%	20
			Sulphur (S)	2014/07/09	1.2		%	20
			Zirconium (Zr)	2014/07/09	0.2		%	20
			Aluminum (Al)	2014/07/09	<5.0		ug	
			Barium (Ba)	2014/07/09	<0.10		ug	
			Beryllium (Be)	2014/07/09	<0.10		ug	
			Boron (B)	2014/07/09	<0.60		ug	
			Cadmium (Cd)	2014/07/09	<0.20		ug	
			Calcium (Ca)	2014/07/09	<5.0		ug	
			Chromium (Cr)	2014/07/09	<0.50		ug	
			Cobalt (Co)	2014/07/09	<0.20		ug	
			Copper (Cu)	2014/07/09	<0.50		ug	
			Iron (Fe)	2014/07/09	<5.0		ug	
			Lead (Pb)	2014/07/09	<0.30		ug	
			Magnesium (Mg)	2014/07/09	<5.0		ug	
			Manganese (Mn)	2014/07/09	<0.10		ug	
			Molybdenum (Mo)	2014/07/09	<0.30		ug	
			Nickel (Ni)	2014/07/09	<0.30		ug	
			Potassium (K)	2014/07/09	<10		ug	
			Silver (Ag)	2014/07/09	<0.50		ug	
			Sodium (Na)	2014/07/09	<5.0		ug	
			Strontium (Sr)	2014/07/09	<0.10		ug	
			Thallium (Tl)	2014/07/09	<1.0		ug	
			Tin (Sn)	2014/07/09	<1.0		ug	
			Titanium (Ti)	2014/07/09	<0.10		ug	
			Vanadium (V)	2014/07/09	<0.50		ug	
			Zinc (Zn)	2014/07/09	<0.50		ug	
			Antimony (Sb)	2014/07/09	<1.0		ug	
			Arsenic (As)	2014/07/09	<0.60		ug	
			Bismuth (Bi)	2014/07/09	<0.60		ug	
			Phosphorus (P)	2014/07/09	<2.5		ug	
			Selenium (Se)	2014/07/09	<1.0		ug	
			Silicon (Si)	2014/07/09	<1.0		ug	
			Sulphur (S)	2014/07/09	<2.5		ug	
			Zirconium (Zr)	2014/07/09	<0.50		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Job #: B4B4703
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SLR Consulting (Canada) Ltd.
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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Brenda Moore, Team Lead

A handwritten signature in black ink, appearing to read "Frank Mo", is written over a horizontal line.

Frank Mo, B.Sc., Inorganic Lab. Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

APPENDIX D
GILAIR-3 SAMPLER CERTIFICATES OF ANALYSIS

Ambient Air Quality Training and Monitoring Program
Faro Mine Complex
Faro, Yukon
SLR Project No.: 208.04601.00000



GOVERNMENT OF YUKON - EMR

ATTN: Brett Hartshorne

Box 2703

K-419

Whitehorse YT Y1A 2C6

Date Received: 04-JUN-14

Report Date: 23-JUN-14 11:06 (MT)

Version: FINAL

Client Phone: 867-456-6179

Certificate of Analysis

Lab Work Order #: L1465466

Project P.O. #: C00024357

Job Reference: AAM-FARO IWTS 2A PERIMETER - 2014

C of C Numbers:

Legal Site Desc:

Dana Brown
Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311

ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1465466-1 AIR 27-MAY-14 15:19 77549 - MAY 27- NORCAN SHOP (199 MIN @2.5L/MIN)	L1465466-2 AIR 27-MAY-14 15:43 77586 - MAY 27- FUEL TANKS (233 MIN @2.5L/MIN)	L1465466-3 AIR 27-MAY-14 15:50 77552 - MAY 27- ETA (230MIN @2.5L/MIN)	L1465466-4 AIR 27-MAY-14 16:03 77584 - MAY 27- TAILINGS PUMPHOUSE (243 MIN @2.5L/MIN)	L1465466-5 AIR 28-MAY-14 08:23 77568 - MAY 28 - TAILINGS PUMPHOUSE (503 MIN @2.5L/MIN)
Grouping	Analyte					
FILTER						
Particulates	Particulates Analysis (mg)	<0.10	<0.10	0.15	<0.10	<0.10
	Particulates Analysis (mg/m3)	<0.20	<0.18	0.26	<0.16	<0.077
Metals	Aluminum (Al) (mg/m3)	<0.020	<0.018	<0.017	<0.016	<0.0080
	Aluminum (Al) (ug)	<10	<10	<10	<10	<10
	Antimony (Sb) (mg/m3)	<0.00010	<0.000090	<0.000087	<0.000082	<0.000040
	Antimony (Sb) (ug)	<0.050	<0.050	<0.050	<0.050	<0.050
	Arsenic (As) (mg/m3)	<0.00014	<0.00013	<0.00012	<0.00012	<0.000056
	Arsenic (As) (ug)	<0.070	<0.070	<0.070	<0.070	<0.070
	Barium (Ba) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Barium (Ba) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Beryllium (Be) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Beryllium (Be) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Bismuth (Bi) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Bismuth (Bi) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Cadmium (Cd) (mg/m3)	<0.00010	<0.000090	<0.000087	<0.000082	<0.000040
	Cadmium (Cd) (ug)	<0.050	<0.050	<0.050	<0.050	<0.050
	Calcium (Ca) (mg/m3)	<0.20	<0.18	<0.17	<0.16	<0.080
	Calcium (Ca) (ug)	<100	<100	<100	<100	<100
	Chromium (Cr) (mg/m3)	<0.0040	<0.0036	<0.0035	<0.0033	<0.0016
	Chromium (Cr) (ug)	<2.0	<2.0	<2.0	<2.0	<2.0
	Cobalt (Co) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Cobalt (Co) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Copper (Cu) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Copper (Cu) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Iron (Fe) (mg/m3)	<0.040	<0.036	<0.035	<0.033	<0.016
	Iron (Fe) (ug)	<20	<20	<20	<20	<20
	Lead (Pb) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Lead (Pb) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Lithium (Li) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Lithium (Li) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Magnesium (Mg) (mg/m3)	<0.040	<0.036	<0.035	<0.033	<0.016
	Magnesium (Mg) (ug)	<20	<20	<20	<20	<20
	Manganese (Mn) (mg/m3)	0.00096	0.00079	<0.00052	0.00089	<0.00024
	Manganese (Mn) (ug)	0.48	0.44	<0.30	0.54	<0.30
	Mercury (Hg) (mg/m3)	<0.00010	<0.000090	<0.000087	<0.000082	<0.000040
	Mercury (Hg) (ug)	<0.050	<0.050	<0.050	<0.050	<0.050
	Molybdenum (Mo) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1465466-6 AIR 28-MAY-14 08:19 77562 - MAY 28- FUEL TANKS (499MIN @2.5L/MIN)	L1465466-7 AIR 28-MAY-14 08:14 77598 - MAY 28- NORCAN SHOP (494MIN @2.5L/MIN)	L1465466-8 AIR 28-MAY-14 08:18 77578 - MAY 28- ETA (498MIN @2.5L/MIN)		
Grouping	Analyte					
FILTER						
Particulates	Particulates Analysis (mg)	<0.10	<0.10	<0.10		
	Particulates Analysis (mg/m3)	<0.083	<0.083	<0.083		
Metals	Aluminum (Al) (mg/m3)	<0.0080	<0.0081	<0.0080		
	Aluminum (Al) (ug)	<10	<10	<10		
	Antimony (Sb) (mg/m3)	<0.000040	<0.000040	<0.000040		
	Antimony (Sb) (ug)	<0.050	<0.050	<0.050		
	Arsenic (As) (mg/m3)	<0.000056	<0.000057	<0.000056		
	Arsenic (As) (ug)	<0.070	<0.070	<0.070		
	Barium (Ba) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Barium (Ba) (ug)	<0.30	<0.30	<0.30		
	Beryllium (Be) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Beryllium (Be) (ug)	<0.30	<0.30	<0.30		
	Bismuth (Bi) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Bismuth (Bi) (ug)	<0.30	<0.30	<0.30		
	Cadmium (Cd) (mg/m3)	<0.000040	<0.000040	<0.000040		
	Cadmium (Cd) (ug)	<0.050	<0.050	<0.050		
	Calcium (Ca) (mg/m3)	<0.080	<0.081	<0.080		
	Calcium (Ca) (ug)	<100	<100	<100		
	Chromium (Cr) (mg/m3)	<0.0016	<0.0016	<0.0016		
	Chromium (Cr) (ug)	<2.0	<2.0	<2.0		
	Cobalt (Co) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Cobalt (Co) (ug)	<0.30	<0.30	<0.30		
	Copper (Cu) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Copper (Cu) (ug)	<0.30	<0.30	<0.30		
	Iron (Fe) (mg/m3)	<0.016	<0.016	<0.016		
	Iron (Fe) (ug)	<20	<20	<20		
	Lead (Pb) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Lead (Pb) (ug)	<0.30	<0.30	<0.30		
	Lithium (Li) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Lithium (Li) (ug)	<0.30	<0.30	<0.30		
	Magnesium (Mg) (mg/m3)	<0.016	<0.016	<0.016		
	Magnesium (Mg) (ug)	<20	<20	<20		
	Manganese (Mn) (mg/m3)	<0.00024	0.0014	0.0013		
	Manganese (Mn) (ug)	<0.30	1.78	1.64		
	Mercury (Hg) (mg/m3)	<0.000040	<0.000040	<0.000040		
	Mercury (Hg) (ug)	<0.050	<0.050	<0.050		
	Molybdenum (Mo) (mg/m3)	<0.00024	<0.00024	<0.00024		

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1465466-1 AIR 27-MAY-14 15:19 77549 - MAY 27- NORCAN SHOP (199 MIN @2.5L/MIN)	L1465466-2 AIR 27-MAY-14 15:43 77586 - MAY 27- FUEL TANKS (233 MIN @2.5L/MIN)	L1465466-3 AIR 27-MAY-14 15:50 77552 - MAY 27- ETA (230MIN @2.5L/MIN)	L1465466-4 AIR 27-MAY-14 16:03 77584 - MAY 27- TAILINGS PUMPHOUSE (243 MIN @2.5L/MIN)	L1465466-5 AIR 28-MAY-14 08:23 77568 - MAY 28 - TAILINGS PUMPHOUSE (503 MIN @2.5L/MIN)
Grouping	Analyte					
FILTER						
Metals	Molybdenum (Mo) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Nickel (Ni) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Nickel (Ni) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K) (mg/m3)	<0.10	<0.090	<0.087	<0.082	<0.040
	Potassium (K) (ug)	<50	<50	<50	<50	<50
	Selenium (Se) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Selenium (Se) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Silver (Ag) (mg/m3)	<0.000060	<0.000054	<0.000052	<0.000049	<0.000024
	Silver (Ag) (ug)	<0.030	<0.030	<0.030	<0.030	<0.030
	Sodium (Na) (mg/m3)	<0.040	<0.036	<0.035	<0.033	<0.016
	Sodium (Na) (ug)	<20	<20	<20	<20	<20
	Strontium (Sr) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Strontium (Sr) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Thallium (Tl) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Thallium (Tl) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Tin (Sn) (mg/m3)	<0.00060	<0.00054	<0.00052	<0.00049	<0.00024
	Tin (Sn) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Tungsten (W) (mg/m3)	<0.0010	<0.00090	<0.00087	<0.00082	<0.00040
	Tungsten (W) (ug)	<0.50	<0.50	<0.50	<0.50	<0.50
	Uranium (U) (mg/m3)	<0.000010	<0.0000090	<0.0000087	<0.0000082	<0.0000040
	Uranium (U) (ug)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V) (mg/m3)	<0.0040	<0.0036	<0.0035	<0.0033	<0.0016
	Vanadium (V) (ug)	<2.0	<2.0	<2.0	<2.0	<2.0
	Zinc (Zn) (mg/m3)	<0.010	<0.0090	<0.0087	<0.0082	<0.0040
	Zinc (Zn) (ug)	<5.0	<5.0	<5.0	<5.0	<5.0
	Zirconium (Zr) (mg/m3)	<0.010	<0.0090	<0.0087	<0.0082	<0.0040
	Zirconium (Zr) (ug)	<5.0	<5.0	<5.0	<5.0	<5.0

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1465466-6 AIR 28-MAY-14 08:19 77562 - MAY 28- FUEL TANKS (499MIN @2.5L/MIN)	L1465466-7 AIR 28-MAY-14 08:14 77598 - MAY 28- NORCAN SHOP (494MIN @2.5L/MIN)	L1465466-8 AIR 28-MAY-14 08:18 77578 - MAY 28- ETA (498MIN @2.5L/MIN)		
Grouping	Analyte					
FILTER						
Metals	Molybdenum (Mo) (ug)	<0.30	<0.30	<0.30		
	Nickel (Ni) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Nickel (Ni) (ug)	<0.30	<0.30	<0.30		
	Potassium (K) (mg/m3)	<0.040	<0.040	<0.040		
	Potassium (K) (ug)	<50	<50	<50		
	Selenium (Se) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Selenium (Se) (ug)	<0.30	<0.30	<0.30		
	Silver (Ag) (mg/m3)	<0.000024	<0.000024	<0.000024		
	Silver (Ag) (ug)	<0.030	<0.030	<0.030		
	Sodium (Na) (mg/m3)	<0.016	<0.016	<0.016		
	Sodium (Na) (ug)	<20	<20	<20		
	Strontium (Sr) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Strontium (Sr) (ug)	<0.30	<0.30	<0.30		
	Thallium (Tl) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Thallium (Tl) (ug)	<0.30	<0.30	<0.30		
	Tin (Sn) (mg/m3)	<0.00024	<0.00024	<0.00024		
	Tin (Sn) (ug)	<0.30	<0.30	<0.30		
	Tungsten (W) (mg/m3)	<0.00040	<0.00040	<0.00040		
	Tungsten (W) (ug)	<0.50	<0.50	<0.50		
	Uranium (U) (mg/m3)	<0.0000040	<0.0000040	<0.0000040		
	Uranium (U) (ug)	<0.0050	<0.0050	<0.0050		
	Vanadium (V) (mg/m3)	<0.0016	<0.0016	<0.0016		
	Vanadium (V) (ug)	<2.0	<2.0	<2.0		
	Zinc (Zn) (mg/m3)	<0.0040	<0.0040	<0.0040		
	Zinc (Zn) (ug)	<5.0	<5.0	<5.0		
	Zirconium (Zr) (mg/m3)	<0.0040	<0.0040	<0.0040		
	Zirconium (Zr) (ug)	<5.0	<5.0	<5.0		

Sample ID Description Sampled Date Sampled Time Client ID		L1465466-1 AIR 27-MAY-14 15:19 77549 - MAY 27- NORCAN SHOP (199 MIN @2.5L/MIN)	L1465466-2 AIR 27-MAY-14 15:43 77586 - MAY 27- FUEL TANKS (233 MIN @2.5L/MIN)	L1465466-3 AIR 27-MAY-14 15:50 77552 - MAY 27- ETA (230MIN @2.5L/MIN)	L1465466-4 AIR 27-MAY-14 16:03 77584 - MAY 27- TAILINGS PUMPHOUSE (243 MIN @2.5L/MIN)	L1465466-5 AIR 28-MAY-14 08:23 77568 - MAY 28 - TAILINGS PUMPHOUSE(503 MIN @2.5L/MIN)
Grouping	Analyte					
MISC.						
Field Tests	Air volume (L)	497.5	557.5	575	607.5	1257.5

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1465466-6 AIR 28-MAY-14 08:19 77562 - MAY 28- FUEL TANKS (499MIN @2.5L/MIN)	L1465466-7 AIR 28-MAY-14 08:14 77598 - MAY 28- NORCAN SHOP (494MIN @2.5L/MIN)	L1465466-8 AIR 28-MAY-14 08:18 77578 - MAY 28- ETA (498MIN @2.5L/MIN)		
Grouping	Analyte						
MISC.							
Field Tests	Air volume (L)		1247.5	1235	1245		

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-ED	Misc.	Air volume (L)	HYGIENE METHOD
NOTE: When air concentrations of analytes are reported, they are based on air sampling information (air volume, sampling time, sampling flow rate) supplied by the client.			
HG-HB-UG-CVAA-ED	Filter	Mercury in Filters by CVAA	OSHA ID-145 modified
Samples are not field blank corrected.			
MET-HB-UG-MS-ED	Filter	Metals in Filters by ICP/MS	NIOSH 7303 MODIFIED
Samples are not field blank corrected.			
PARTICULATE-0.10-ED	Filter	Particulates Analysis	NIOSH 0500/0600 md-Gravimetric
Method: ED-TM-1140 (NIOSH 0500/0600 mod., gravimetric)			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



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COC Number: 14 -

Page / of

/ (Rush Turnaround Time (TAT) is not available for all tests)

www.alsglobal.com			Report Format / Distribution			(Rush Turnaround Time (TAT) is not available for all tests)																				
Report To			Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL)			R ☒ Regular (Standard TAT if received by 3 pm - business days)																				
Company: YUKON GOVERNMENT - ASSESS. AND ABAND. MINES			Quality Control (QC) Report with Report ☒ Yes ☐ No			P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT																				
Contact: BRETT HARTSHORNE			☐ Criteria on Report - provide details below if box checked			E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT																				
Address: K-419 BOX 2703 WHITEHORSE, YUKON Y1A 2C6			Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX			E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge																				
Phone: 867-393-7445 867-335-0263			Email 1 or Fax BRETT.HARTSHORNE@GOV.YK.CA			Specify Date Required for E2,E or P:																				
Invoice To Same as Report To ☒ Yes ☐ No			Invoice Distribution			Analysis Request																				
Copy of Invoice with Report ☒ Yes ☐ No			Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																				
Company: AAM.ADMIN@GOV.YK.CA			Email 1 or Fax BRETT.HARTSHORNE@GOV.YK.CA			Number of Containers																				
Contact: AAM.ADMIN@GOV.YK.CA			Email 2																							
Project Information			Oil and Gas Required Fields (client use)																							
ALS Quote #: Q45578			Approver ID: Cost Center:																							
Job #: AAM - FARO IWTS 2A PERIMETER - 2014			GL Account: Routing Code:																							
PO / AFE:			Activity Code:																							
LSD:			Location:																							
ALS Lab Work Order # (lab use only)			ALS Contact: DANA Sampler: TEES																							
ALS Sample # (lab use only)			Sample Identification and/or Coordinates (This description will appear on the report)															Date (dd-mmm-yy)			Time (hh:mm)			Sample Type		
77549 - MAY 27 - NORCAN SHOP (199 MIN. @ 2.5 L/MIN)			27 5 14															3:19			AIR					
77586 - MAY 27 - FUEL TANKS (223 MIN. @ 2.5 L/MIN)			27 5 14			3:43			AIR																	
77552 - MAY 27 - ETA (230 MIN. @ 2.5 L/MIN)			27 5 14			3:50			AIR																	
77584 - MAY 27 - TAILINGS PUMPHOUSE (243 MIN. @ 2.5 L/MIN)			27 5 14			4:03			AIR																	
77568 - MAY 28 - TAILINGS PUMPHOUSE (503 MIN. @ 2.5 L/MIN)			28 5 14			8:23			AIR																	
77562 - MAY 28 - FUEL TANKS (499 MIN. @ 2.5 L/MIN)			28 5 14			8:19			AIR																	
77598 - MAY 28 - NORCAN SHOP (494 MIN @ 2.5 L/MIN)			28 5 14			8:14			AIR																	
77578 - MAY 28 - ETA (498 MIN@2.5 L/MIN)			28 5 15			8:18			AIR																	
Drinking Water (DW) Samples ¹ (client use)			Special Instructions / Specify Criteria to add on report (client Use)			SAMPLE CONDITION AS RECEIVED (lab use only)																				
Are samples taken from a Regulated DW System? ☐ Yes ☐ No						Frozen ☐ SIF Observations Yes ☐ No ☐																				
Are samples for human drinking water use? ☐ Yes ☐ No						Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐																				
						Cooling Initiated ☐																				
						INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C																				
SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)																				
Released by:			Received by:			Received by:																				
Date:			Date:			Date:																				
Time:			Time:			Time:																				
			4-Jun-14 2:32																							

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

NA-E31-0326a v09 Filed 04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



GOVERNMENT OF YUKON - EMR

ATTN: Brett Hartshorne

Box 2703

K-419

Whitehorse YT Y1A 2C6

Date Received: 06-JUN-14

Report Date: 23-JUN-14 11:18 (MT)

Version: FINAL

Client Phone: 867-456-6179

Certificate of Analysis

Lab Work Order #: L1467002

Project P.O. #: C00024357

Job Reference: AAM - FARO IWTS 2A PERIMETER - 2014 ROUND
2

C of C Numbers: 1

Legal Site Desc:

Dana Brown
Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1467002-1 Air 29-MAY-14 08:00 77569 - MAY 29 ETA (480 MIN. @2.5L/MIN)	L1467002-2 Air 29-MAY-14 08:15 77564 - MAY 29 NORCAN SHOP (495 MIN. @2.5L/MIN)	L1467002-3 Air 29-MAY-14 07:53 77570 - MAY 29 FUEL TANKS (473 MIN. @2.5L/MIN)	L1467002-4 Air 29-MAY-14 08:04 77583 - MAY 29 TAILINGS PUMPHOUSE (484 MIN. @2.5L/MIN)	L1467002-5 Air 04-JUN-14 07:11 77550 - JUNE 4 NORCAN SHOP (431 MIN. @2.5L/MIN)
Grouping	Analyte					
FILTER						
Particulates	Particulates Analysis (mg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Particulates Analysis (mg/m3)	<0.083	<0.083	<0.083	<0.083	<0.091
Metals	Aluminum (Al) (mg/m3)	<0.0083	<0.0081	<0.0085	<0.0083	<0.0093
	Aluminum (Al) (ug)	<10	<10	<10	<10	<10
	Antimony (Sb) (mg/m3)	<0.000042	<0.000040	<0.000042	<0.000041	<0.000046
	Antimony (Sb) (ug)	<0.050	<0.050	<0.050	<0.050	<0.050
	Arsenic (As) (mg/m3)	<0.000058	<0.000057	<0.000059	<0.000058	<0.000065
	Arsenic (As) (ug)	<0.070	<0.070	<0.070	<0.070	<0.070
	Barium (Ba) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Barium (Ba) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Beryllium (Be) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Beryllium (Be) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Bismuth (Bi) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Bismuth (Bi) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Cadmium (Cd) (mg/m3)	<0.000042	<0.000040	<0.000042	<0.000041	<0.000046
	Cadmium (Cd) (ug)	<0.050	<0.050	<0.050	<0.050	<0.050
	Calcium (Ca) (mg/m3)	<0.083	<0.081	<0.085	<0.083	<0.093
	Calcium (Ca) (ug)	<100	<100	<100	<100	<100
	Chromium (Cr) (mg/m3)	<0.0017	<0.0016	<0.0017	<0.0017	<0.0019
	Chromium (Cr) (ug)	<2.0	<2.0	<2.0	<2.0	<2.0
	Cobalt (Co) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Cobalt (Co) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Copper (Cu) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Copper (Cu) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Iron (Fe) (mg/m3)	<0.017	<0.016	<0.017	<0.017	<0.019
	Iron (Fe) (ug)	<20	<20	<20	<20	<20
	Lead (Pb) (mg/m3)	0.00028	<0.00024	<0.00025	<0.00025	<0.00028
	Lead (Pb) (ug)	0.34	<0.30	<0.30	<0.30	<0.30
	Lithium (Li) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Lithium (Li) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Magnesium (Mg) (mg/m3)	<0.017	<0.016	<0.017	<0.017	<0.019
	Magnesium (Mg) (ug)	<20	<20	<20	<20	<20
	Manganese (Mn) (mg/m3)	0.00094	<0.00024	<0.00025	<0.00025	<0.00028
	Manganese (Mn) (ug)	1.13	<0.30	<0.30	<0.30	<0.30
	Mercury (Hg) (mg/m3)	<0.000042	<0.000040	<0.000042	<0.000041	<0.000046
	Mercury (Hg) (ug)	<0.050	<0.050	<0.050	<0.050	<0.050
	Molybdenum (Mo) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1467002-6 Air 04-JUN-14 06:20 77558 - JUNE 4 ETA (380 MIN. @2.5L/MIN)	L1467002-7 Air 04-JUN-14 06:19 77566 - JUNE 4 TAILINGS PUMPHOUSE (379 MIN. @2.5L/MIN)	L1467002-8 Air 04-JUN-14 06:59 77580 - JUNE 4 FUEL TANKS (419 MIN. @2.5L/MIN)		
Grouping	Analyte					
FILTER						
Particulates	Particulates Analysis (mg)	<0.10	<0.10	<0.10		
	Particulates Analysis (mg/m3)	<0.11	<0.11	<0.10		
Metals	Aluminum (Al) (mg/m3)	<0.011	<0.011	<0.0095		
	Aluminum (Al) (ug)	<10	<10	<10		
	Antimony (Sb) (mg/m3)	<0.000053	<0.000053	<0.000048		
	Antimony (Sb) (ug)	<0.050	<0.050	<0.050		
	Arsenic (As) (mg/m3)	<0.000074	<0.000074	<0.000067		
	Arsenic (As) (ug)	<0.070	<0.070	<0.070		
	Barium (Ba) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Barium (Ba) (ug)	<0.30	<0.30	<0.30		
	Beryllium (Be) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Beryllium (Be) (ug)	<0.30	<0.30	<0.30		
	Bismuth (Bi) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Bismuth (Bi) (ug)	<0.30	<0.30	<0.30		
	Cadmium (Cd) (mg/m3)	<0.000053	<0.000053	<0.000048		
	Cadmium (Cd) (ug)	<0.050	<0.050	<0.050		
	Calcium (Ca) (mg/m3)	<0.11	<0.11	<0.095		
	Calcium (Ca) (ug)	<100	<100	<100		
	Chromium (Cr) (mg/m3)	<0.0021	<0.0021	<0.0019		
	Chromium (Cr) (ug)	<2.0	<2.0	<2.0		
	Cobalt (Co) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Cobalt (Co) (ug)	<0.30	<0.30	<0.30		
	Copper (Cu) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Copper (Cu) (ug)	<0.30	<0.30	<0.30		
	Iron (Fe) (mg/m3)	<0.021	<0.021	<0.019		
	Iron (Fe) (ug)	<20	<20	<20		
	Lead (Pb) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Lead (Pb) (ug)	<0.30	<0.30	<0.30		
	Lithium (Li) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Lithium (Li) (ug)	<0.30	<0.30	<0.30		
	Magnesium (Mg) (mg/m3)	<0.021	<0.021	<0.019		
	Magnesium (Mg) (ug)	<20	<20	<20		
	Manganese (Mn) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Manganese (Mn) (ug)	<0.30	<0.30	<0.30		
	Mercury (Hg) (mg/m3)	<0.000053	<0.000053	<0.000048		
	Mercury (Hg) (ug)	<0.050	<0.050	<0.050		
	Molybdenum (Mo) (mg/m3)	<0.00032	<0.00032	<0.00029		

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1467002-1 Air 29-MAY-14 08:00 77569 - MAY 29 ETA (480 MIN. @2.5L/MIN)	L1467002-2 Air 29-MAY-14 08:15 77564 - MAY 29 NORCAN SHOP (495 MIN. @2.5L/MIN)	L1467002-3 Air 29-MAY-14 07:53 77570 - MAY 29 FUEL TANKS (473 MIN. @2.5L/MIN)	L1467002-4 Air 29-MAY-14 08:04 77583 - MAY 29 TAILINGS PUMPHOUSE (484 MIN. @2.5L/MIN)	L1467002-5 Air 04-JUN-14 07:11 77550 - JUNE 4 NORCAN SHOP (431 MIN. @2.5L/MIN)
Grouping	Analyte					
FILTER						
Metals	Molybdenum (Mo) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Nickel (Ni) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Nickel (Ni) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K) (mg/m3)	<0.042	<0.040	<0.042	<0.041	<0.046
	Potassium (K) (ug)	<50	<50	<50	<50	<50
	Selenium (Se) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Selenium (Se) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Silver (Ag) (mg/m3)	<0.000025	<0.000024	<0.000025	<0.000025	<0.000028
	Silver (Ag) (ug)	<0.030	<0.030	<0.030	<0.030	<0.030
	Sodium (Na) (mg/m3)	<0.017	<0.016	<0.017	<0.017	<0.019
	Sodium (Na) (ug)	<20	<20	<20	<20	<20
	Strontium (Sr) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Strontium (Sr) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Thallium (Tl) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Thallium (Tl) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Tin (Sn) (mg/m3)	<0.00025	<0.00024	<0.00025	<0.00025	<0.00028
	Tin (Sn) (ug)	<0.30	<0.30	<0.30	<0.30	<0.30
	Tungsten (W) (mg/m3)	<0.00042	<0.00040	<0.00042	<0.00041	<0.00046
	Tungsten (W) (ug)	<0.50	<0.50	<0.50	<0.50	<0.50
	Uranium (U) (mg/m3)	<0.0000042	<0.0000040	<0.0000042	<0.0000041	<0.0000046
	Uranium (U) (ug)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V) (mg/m3)	<0.0017	<0.0016	<0.0017	<0.0017	<0.0019
	Vanadium (V) (ug)	<2.0	<2.0	<2.0	<2.0	<2.0
	Zinc (Zn) (mg/m3)	<0.0042	<0.0040	<0.0042	<0.0041	<0.0046
	Zinc (Zn) (ug)	<5.0	<5.0	<5.0	<5.0	<5.0
	Zirconium (Zr) (mg/m3)	<0.0042	<0.0040	<0.0042	<0.0041	<0.0046
	Zirconium (Zr) (ug)	<5.0	<5.0	<5.0	<5.0	<5.0

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1467002-6 Air 04-JUN-14 06:20 77558 - JUNE 4 ETA (380 MIN. @2.5L/MIN)	L1467002-7 Air 04-JUN-14 06:19 77566 - JUNE 4 TAILINGS PUMPHOUSE (379 MIN. @2.5L/MIN)	L1467002-8 Air 04-JUN-14 06:59 77580 - JUNE 4 FUEL TANKS (419 MIN. @2.5L/MIN)		
Grouping	Analyte					
FILTER						
Metals	Molybdenum (Mo) (ug)	<0.30	<0.30	<0.30		
	Nickel (Ni) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Nickel (Ni) (ug)	<0.30	<0.30	<0.30		
	Potassium (K) (mg/m3)	<0.053	<0.053	<0.048		
	Potassium (K) (ug)	<50	<50	<50		
	Selenium (Se) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Selenium (Se) (ug)	<0.30	<0.30	<0.30		
	Silver (Ag) (mg/m3)	<0.000032	<0.000032	<0.000029		
	Silver (Ag) (ug)	<0.030	<0.030	<0.030		
	Sodium (Na) (mg/m3)	<0.021	<0.021	<0.019		
	Sodium (Na) (ug)	<20	<20	<20		
	Strontium (Sr) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Strontium (Sr) (ug)	<0.30	<0.30	<0.30		
	Thallium (Tl) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Thallium (Tl) (ug)	<0.30	<0.30	<0.30		
	Tin (Sn) (mg/m3)	<0.00032	<0.00032	<0.00029		
	Tin (Sn) (ug)	<0.30	<0.30	<0.30		
	Tungsten (W) (mg/m3)	<0.00053	<0.00053	<0.00048		
	Tungsten (W) (ug)	<0.50	<0.50	<0.50		
	Uranium (U) (mg/m3)	<0.0000053	<0.0000053	<0.0000048		
	Uranium (U) (ug)	<0.0050	<0.0050	<0.0050		
	Vanadium (V) (mg/m3)	<0.0021	<0.0021	<0.0019		
	Vanadium (V) (ug)	<2.0	<2.0	<2.0		
	Zinc (Zn) (mg/m3)	<0.0053	<0.0053	<0.0048		
	Zinc (Zn) (ug)	<5.0	<5.0	<5.0		
	Zirconium (Zr) (mg/m3)	<0.0053	<0.0053	<0.0048		
	Zirconium (Zr) (ug)	<5.0	<5.0	<5.0		

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1467002-1 Air 29-MAY-14 08:00 77569 - MAY 29 ETA (480 MIN. @2.5L/MIN)	L1467002-2 Air 29-MAY-14 08:15 77564 - MAY 29 NORCAN SHOP (495 MIN. @2.5L/MIN)	L1467002-3 Air 29-MAY-14 07:53 77570 - MAY 29 FUEL TANKS (473 MIN. @2.5L/MIN)	L1467002-4 Air 29-MAY-14 08:04 77583 - MAY 29 TAILINGS PUMPHOUSE (484 MIN. @2.5L/MIN)	L1467002-5 Air 04-JUN-14 07:11 77550 - JUNE 4 NORCAN SHOP (431 MIN. @2.5L/MIN)
Grouping	Analyte					
MISC.						
Field Tests	Air volume (L)	1200	1237.5	1182.5	1210	1077.5

		Sample ID Description Sampled Date Sampled Time Client ID	L1467002-6 Air 04-JUN-14 06:20 77558 - JUNE 4 ETA (380 MIN. @2.5L/MIN)	L1467002-7 Air 04-JUN-14 06:19 77566 - JUNE 4 TAILINGS PUMPHOUSE (379 MIN. @2.5L/MIN)	L1467002-8 Air 04-JUN-14 06:59 77580 - JUNE 4 FUEL TANKS (419 MIN. @2.5L/MIN)		
Grouping	Analyte						
MISC.							
Field Tests	Air volume (L)		950	947.5	1047.5		

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-ED	Misc.	Air volume (L)	HYGIENE METHOD
NOTE: When air concentrations of analytes are reported, they are based on air sampling information (air volume, sampling time, sampling flow rate) supplied by the client.			
HG-HB-UG-CVAA-ED	Filter	Mercury in Filters by CVAA	OSHA ID-145 modified
Samples are not field blank corrected.			
MET-HB-UG-MS-ED	Filter	Metals in Filters by ICP/MS	NIOSH 7303 MODIFIED
Samples are not field blank corrected.			
PARTICULATE-0.10-ED	Filter	Particulates Analysis	NIOSH 0500/0600 md-Gravimetric
Method: ED-TM-1140 (NIOSH 0500/0600 mod., gravimetric)			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

1

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Affix ALS barcode label here
(lab use only)

Page 1 of 1

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REFER TO BACK PAGE FOR ALL LOCATIONS AND SAMPLING INFORMATION

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NA-511-0326a v08 From:04 January 20

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



GOVERNMENT OF YUKON - EMR

ATTN: Brett Hartshorne

Box 2703

K-419

Whitehorse YT Y1A 2C6

Date Received: 13-JUN-14

Report Date: 02-JUL-14 16:34 (MT)

Version: FINAL

Client Phone: 867-456-6179

Certificate of Analysis

Lab Work Order #: L1470639

Project P.O. #: NOT SUBMITTED

Job Reference: AAM-FARO IWTS 2A PERIMETER-2014 ROUND 3

C of C Numbers: 1

Legal Site Desc:

Dana Brown
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1470639-1 Air 10-JUN-14 12:00 81239-JUNE 10- NORCAN SHOP (455 MIN. @ 2.5L/MIN)	L1470639-2 Air 10-JUN-14 12:00 81221-JUNE 10- TAILINGS PUMPHOUSE (476 MIN. @ 2.5L/MIN)	L1470639-3 Air 10-JUN-14 12:00 81206-JUNE 10- ETA (476 MIN. @ 2.5L/MIN)	L1470639-4 Air 10-JUN-14 12:00 81225-JUNE 10 FUEL TANKS (469 MIN. @ 2.5L/MIN)	
Grouping	Analyte					
FILTER						
Particulates	Particulates Analysis (mg)	<0.10	<0.10	<0.10	<0.10	
	Particulates Analysis (mg/m3)	<0.091	<0.083	<0.083	<0.083	
Metals	Aluminum (Al) (mg/m3)	<0.0088	<0.0084	<0.0084	<0.0085	
	Aluminum (Al) (ug)	<10	<10	<10	<10	
	Antimony (Sb) (mg/m3)	<0.000044	<0.000042	<0.000042	<0.000043	
	Antimony (Sb) (ug)	<0.050	<0.050	<0.050	<0.050	
	Arsenic (As) (mg/m3)	<0.000062	<0.000059	<0.000059	<0.000060	
	Arsenic (As) (ug)	<0.070	<0.070	<0.070	<0.070	
	Barium (Ba) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Barium (Ba) (ug)	<0.30	<0.30	<0.30	<0.30	
	Beryllium (Be) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Beryllium (Be) (ug)	<0.30	<0.30	<0.30	<0.30	
	Bismuth (Bi) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Bismuth (Bi) (ug)	<0.30	<0.30	<0.30	<0.30	
	Cadmium (Cd) (mg/m3)	<0.000044	<0.000042	<0.000042	<0.000043	
	Cadmium (Cd) (ug)	<0.050	<0.050	<0.050	<0.050	
	Calcium (Ca) (mg/m3)	<0.088	<0.084	<0.084	<0.085	
	Calcium (Ca) (ug)	<100	<100	<100	<100	
	Chromium (Cr) (mg/m3)	<0.0018	<0.0017	<0.0017	<0.0017	
	Chromium (Cr) (ug)	<2.0	<2.0	<2.0	<2.0	
	Cobalt (Co) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Cobalt (Co) (ug)	<0.30	<0.30	<0.30	<0.30	
	Copper (Cu) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Copper (Cu) (ug)	<0.30	<0.30	<0.30	<0.30	
	Iron (Fe) (mg/m3)	<0.018	<0.017	<0.017	<0.017	
	Iron (Fe) (ug)	<20	<20	<20	<20	
	Lead (Pb) (mg/m3)	0.00028	0.00043	<0.00025	0.00065	
	Lead (Pb) (ug)	0.32	0.51	<0.30	0.76	
	Lithium (Li) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Lithium (Li) (ug)	<0.30	<0.30	<0.30	<0.30	
	Magnesium (Mg) (mg/m3)	<0.018	<0.017	<0.017	<0.017	
	Magnesium (Mg) (ug)	<20	<20	<20	<20	
	Manganese (Mn) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Manganese (Mn) (ug)	<0.30	<0.30	<0.30	<0.30	
	Mercury (Hg) (mg/m3)	<0.000044	<0.000042	<0.000042	<0.000043	
	Mercury (Hg) (ug)	<0.050	<0.050	<0.050	<0.050	
	Molybdenum (Mo) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1470639-1 Air 10-JUN-14 12:00 81239-JUNE 10- NORCAN SHOP (455 MIN. @ 2.5L/MIN)	L1470639-2 Air 10-JUN-14 12:00 81221-JUNE 10- TAILINGS PUMPHOUSE (476 MIN. @ 2.5L/MIN)	L1470639-3 Air 10-JUN-14 12:00 81206-JUNE 10- ETA (476 MIN. @ 2.5L/MIN)	L1470639-4 Air 10-JUN-14 12:00 81225-JUNE 10 FUEL TANKS (469 MIN. @ 2.5L/MIN)	
Grouping	Analyte					
FILTER						
Metals	Molybdenum (Mo) (ug)	<0.30	<0.30	<0.30	<0.30	
	Nickel (Ni) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Nickel (Ni) (ug)	<0.30	<0.30	<0.30	<0.30	
	Potassium (K) (mg/m3)	<0.044	<0.042	<0.042	<0.043	
	Potassium (K) (ug)	<50	<50	<50	<50	
	Selenium (Se) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Selenium (Se) (ug)	<0.30	<0.30	<0.30	<0.30	
	Silver (Ag) (mg/m3)	<0.000026	<0.000025	<0.000025	<0.000026	
	Silver (Ag) (ug)	<0.030	<0.030	<0.030	<0.030	
	Sodium (Na) (mg/m3)	<0.018	<0.017	<0.017	<0.017	
	Sodium (Na) (ug)	<20	<20	<20	<20	
	Strontium (Sr) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Strontium (Sr) (ug)	<0.30	<0.30	<0.30	<0.30	
	Thallium (Tl) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Thallium (Tl) (ug)	<0.30	<0.30	<0.30	<0.30	
	Tin (Sn) (mg/m3)	<0.00026	<0.00025	<0.00025	<0.00026	
	Tin (Sn) (ug)	<0.30	<0.30	<0.30	<0.30	
	Tungsten (W) (mg/m3)	<0.00044	<0.00042	<0.00042	<0.00043	
	Tungsten (W) (ug)	<0.50	<0.50	<0.50	<0.50	
	Uranium (U) (mg/m3)	<0.0000044	<0.0000042	<0.0000042	<0.0000043	
	Uranium (U) (ug)	<0.0050	<0.0050	<0.0050	<0.0050	
	Vanadium (V) (mg/m3)	<0.0018	<0.0017	<0.0017	<0.0017	
	Vanadium (V) (ug)	<2.0	<2.0	<2.0	<2.0	
	Zinc (Zn) (mg/m3)	<0.0044	<0.0042	<0.0042	<0.0043	
	Zinc (Zn) (ug)	<5.0	<5.0	<5.0	<5.0	
	Zirconium (Zr) (mg/m3)	<0.0044	<0.0042	<0.0042	<0.0043	
	Zirconium (Zr) (ug)	<5.0	<5.0	<5.0	<5.0	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID				
		Description				
		Sampled Date				
		Sampled Time				
		Client ID				
Grouping	Analyte					
MISC.						
Field Tests	Air volume (L)	L1470639-1 Air 10-JUN-14 12:00 81239-JUNE 10- NORCAN SHOP (455 MIN. @ 2.5L/MIN)	L1470639-2 Air 10-JUN-14 12:00 81221-JUNE 10- TAILINGS PUMPHOUSE (476 MIN. @ 2.5L/MIN)	L1470639-3 Air 10-JUN-14 12:00 81206-JUNE 10- ETA (476 MIN. @ 2.5L/MIN)	L1470639-4 Air 10-JUN-14 12:00 81225-JUNE 10 FUEL TANKS (469 MIN. @ 2.5L/MIN)	
		1137.5	1190	1190	1172.5	

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-ED	Misc.	Air volume (L)	HYGIENE METHOD
NOTE: When air concentrations of analytes are reported, they are based on air sampling information (air volume, sampling time, sampling flow rate) supplied by the client.			
HG-HB-UG-CVAA-ED	Filter	Mercury in Filters by CVAA	OSHA ID-145 modified
Samples are not field blank corrected.			
MET-HB-UG-MS-ED	Filter	Metals in Filters by ICP/MS	NIOSH 7303 MODIFIED
Samples are not field blank corrected.			
PARTICULATE-0.10-ED	Filter	Particulates Analysis	NIOSH 0500/0600 md-Gravimetric
Method: ED-TM-1140 (NIOSH 0500/0600 mod., gravimetric)			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

1

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Canada Toll Free: 1 800 668 9878



L1470639-COFC

Page 1 of 1

NA-SM-00204 v03 Final DM January 2014

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.



global environmental solutions

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Canada

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Fax: (204) 475-1649

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Canada

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Yellowknife, NT

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Yellowknife, NT X1A 3R8
Canada

Tel: (867) 765-5695



Energy



Waste
Management



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Infrastructure