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Napoleon Mackenzie, Chair Environmental Monitoring Advisory Board PO Box 2577 Yellowknife, NT X1A 2P9 Canada

3 July 2018

Dear Mr. Mackenzie:

Subject: 2017 Environmental Air Quality Monitoring Report

Please find enclosed the Diavik Diamond Mines (2012) Inc. (DDMI) Environmental Air Quality Monitoring Report for 2017. This report summarizes air quality observations from the following programs conducted at DDMI throughout 2017:

- Total Suspended Particulate (TSP) Continuous Monitors;
- Dustfall Monitoring as part of the Aquatic Effects Monitoring Program (AEMP);
- Snow Core Program as part of the AEMP;
- Emission Monitoring and Reporting to the Environment and Climate Change Canada (ECCC) National Pollutant Release Inventory (NPRI); and
- Greenhouse Gas (GHG) Monitoring and Reporting to ECCC.

Please do not hesitate to contact the undersigned if you have any questions related to our response.

Yours sincerely,

Sean Sinclair

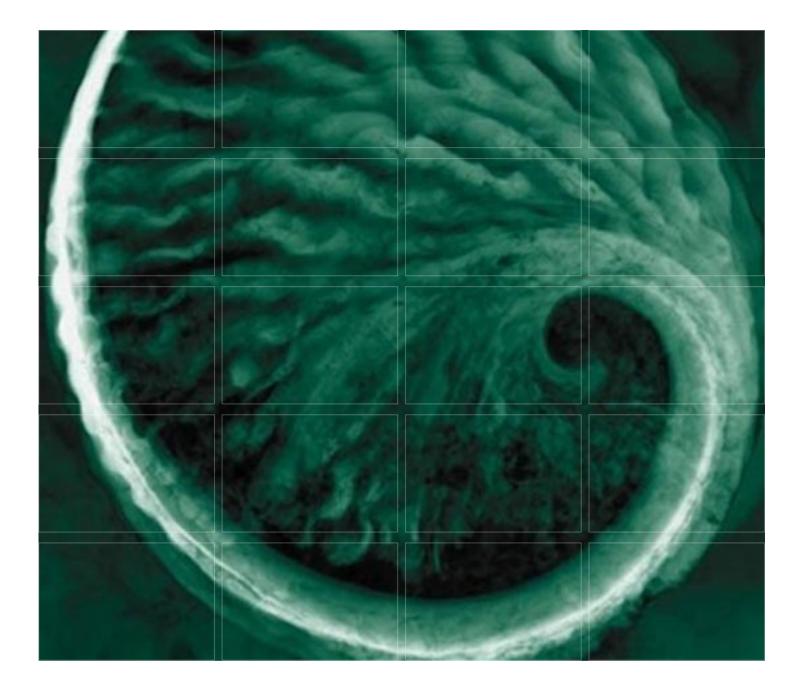
Superintendent, Environment

cc: John McCullum, EMAB Aileen Stevens, GNWT

Attachment 1: DDMI 2017 Environmental Air Quality Monitoring Report

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Prepared for:



DIAVIK DIAMOND MINE

2017 Environmental Air Quality Monitoring Report

July 2018



Diavik Diamond Mines (2012) Inc.

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2017 Environmental Air Quality Monitoring Report

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Project #0207514-0017

Citation

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EXECUTIVE SUMMARY

Diavik Diamond Mines (2012) Inc. has been collecting and reporting air quality related data since initial site construction in 2001. In June of 2013, Diavik Diamond Mines submitted an Environmental Air Quality Monitoring Plan to the Environmental Monitoring Advisory Board. The components of the Environmental Air Quality Monitoring Plan include total suspended particulate (TSP) monitoring, dust deposition (dustfall) monitoring (as part of the Aquatic Effects Monitoring Program (AEMP)), a snow core program (as part of the AEMP), reporting to the National Pollutant Release Inventory (NPRI), and reporting to the national greenhouse gas reporting program (GHGRP). This report presents an updated Environmental Air Quality Monitoring Report for the Diavik Diamond Mine for the calendar year 2017.

TSP was measured at two stations in 2017: the Communications Building (CB) and A154 Dike stations. The A154 Dike sampler was offsite for repair at the start of 2017 and was re-installed on January 23, 2017.

In 2017, there was one exceedance of the Government of the Northwest Territories (GNWT) 24 hour average TSP guideline (120 μ g/m³), measured at the A154 Dike station on August 13 (241.1 μ g/m³). Elevated TSP concentrations were measured by both stations from August 13 to 15 as forest fire smoke was observed at the Mine site on these dates. The annual mean TSP concentrations at both stations were similar (9.0 μ g/m³ at CB station and 9.9 μ g/m³ at A154 Dike station) and were well below the annual guideline value (60 μ g/m³).

TSP stations had valid daily data for 71% and 69% of days in 2017 for CB and A154 Dike stations, respectively.

In 2017, dustfall was monitored at 14 dustfall gauges and 27 snow survey stations located at varying distances around the mine. Two new dustfall gauge stations (Dust 11 and Dust 12) were added in October 2017, west of the Mine. Snow water chemistry was measured at 19 of the snow survey stations and compared to effluent quality criteria (EQC) set out in the Wek'èezhìi Land and Water Board (WLWB) Water Licence W2015L2-0001.

Annual dustfall estimated from each of the 14 dustfall gauges ranged from 34 to 480 mg/dm²/y in 2017. Annual dustfall rates estimated from the 2017 snow survey data ranged from 10 to 1,351 mg/dm²/y. Annualized dustfall rates measured at each dustfall gauge and snow survey station were less than the former BC dustfall objective for the mining industry (621–1,059 mg/dm²/y) for all stations except for SS1-1 (1,351 mg/dm²/y; 30 m north of the airstrip) and SS1-2 (771 mg/dm²/y; 115 m north of the airstrip). This former objective was used for comparison purposes only: there are currently no dustfall standards or objectives for the Northwest Territories. Annualized dustfall estimated from each station in 2017 were generally less than historical dustfall estimates.

Because the dustfall gauges continuously collect dust throughout the year, and the snow surveys are only representative of dustfall accumulated over the snow cover period, the reported annual dustfall results from the dustfall gauges are expected to provide a better estimate of annual dustfall compared

to snow survey results for similar geographic areas. However, results obtained from both methods showed similar spatial patterns, with dustfall generally decreasing with distance away from the Mine.

Snow water chemistry analysis of interest included those variables with effluent quality criteria (EQC; i.e., aluminum, ammonia, arsenic, cadmium, chromium, copper, lead, nickel, nitrite, and zinc). All 2017 sample concentrations were less than their associated reference levels except for sample SS3-4 (located 615 m southeast of the closest Mine infrastructure) that had exceedances of aluminum (3,950 μ g/L), chromium (86.9 μ g/L), nickel (226 μ g/L) and zinc (23.8 μ g/L).

The Mine reported criteria air contaminant (CAC) emissions as part of the annual NPRI submission and emissions were estimated using published emission factors. Compared to 2016, 2017 emissions of carbon monoxide (CO) increased slightly (675 tonnes; <10% change) and sulphur dioxide (SO₂) emissions increased significantly (17.7 tonnes; 1,866% increase). The increase of SO₂ emissions were due to a change in mine production levels and blasting due to A21 open pit mining. There were slight decreases (<10% change) of oxides of nitrogen (NO_x) and volatile organic compound (VOC) emissions, and moderate decreases (14 to 31% decrease) of total particulate matter (TPM), particulate matter \leq 10 μ m in diameter (PM₁₀) and particulate matter \leq 2.5 μ m in diameter (PM_{2.5}) emissions. Particulate matter emissions decreased primarily due to a decrease in road traffic.

The Mine reported greenhouse gas (GHG) emissions as part of the annual national GHGRP submission and CO₂e emissions were estimated using published emission factors and 100-year global warming potential (GWP) ratios. Starting for 2017 reporting, the GHGRP was changed to require all facilities to report that emit the equivalent of 10,000 tCO₂e or more per year, compared to the previous 50,000 tCO₂e per year threshold.

Mine GHG emissions of carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) totalled 194,968 t CO_2 e in 2017, a 2% decrease from 2016. GHG emissions at the Mine were primarily from stationary equipment fuel combustion (76.7%) and mobile equipment fuel combustion (23.1%). In 2017, the Mine's 9.2 megawatt wind farm helped to reduce the Mine's GHG footprint by generating 17.2 gigawatt-hours of electricity which saved 3.9 million litres of diesel fuel and thereby prevented the direct release of 10,500 t CO_2 e.

DIAVIK DIAMOND MINE

2017 Environmental Air Quality Monitoring Report

TABLE OF CONTENTS

| Exec | utive Su | ımmary | | i |
|------|----------|-------------|--|------|
| Tabl | e of Con | tents | | iii |
| | List | of Figure | es | iv |
| | List | of Tables | · | iv |
| | List | of Plates . | | iv |
| | List | of Appen | ndices | v |
| Glos | sary and | l Abbrev | viations | vii |
| 1. | Intro | duction . | | 1-1 |
| 2. | Cont | inuous T | Total Suspended Particulate Monitoring | 2-1 |
| | 2.1 | Backg | ground | 2-1 |
| | 2.2 | Metho | ods | 2-1 |
| | | 2.2.1 | Monitoring Locations | 2-3 |
| | | 2.2.2 | Monitor Maintenance | 2-3 |
| | | 2.2.3 | Quality Assurance and Quality Control | 2-3 |
| | | 2.2.4 | Analysis | 2-4 |
| | 2.3 | Resul | ts | 2-4 |
| 3. | Dust | fall Moni | itoring | 3-1 |
| | 3.1 | Dustfa | all Gauges | 3-1 |
| | 3.2 | Dustfa | all Snow Surveys | 3-7 |
| | 3.3 | Snow | Water Chemistry | 3-8 |
| | 3.4 | Resul | ts | 3-9 |
| | | 3.4.1 | Dustfall Gauges | 3-10 |
| | | 3.4.2 | Dustfall Snow Surveys | 3-10 |
| | | 3.4.3 | Snow Chemistry | 3-11 |
| 4. | Natio | onal Poll | utant Release Inventory | 4-1 |
| | 4.1 | Progr | am Overview | 4-1 |
| | 4.2 | Resul | ts | 4-1 |
| 5. | Gree | nhouse C | Gas Reporting | 5-1 |

| | 5.1 | Program Overview | 5-1 |
|-------|---------------------|--|--------------|
| | 5.2 | Results | 5-1 |
| 6. | Sum | mary | 6-1 |
| Refe | rences | | R - 1 |
| | | | |
| | | LIST OF FIGURES | |
| Figu | re 2.1-1. | TSP Monitoring Locations, 2017 | 2-2 |
| Figu | re 2.3-1. | 2017 Daily Mean TSP, CB and A154 Dike Stations | 2-5 |
| Figu | re 3.1 - 1. | Dustfall Gauge and Snow Survey Locations, Diavik Diamond Mine, 2017 | 3-5 |
| | | | |
| | | LIST OF TABLES | |
| Tabl | e 2.2-1. | DDMI TSP Stations UTM Coordinates | 2-3 |
| Tabl | e 2.3-1. | 2017 TSP Results, Diavik Diamond Mine | 2-4 |
| Tabl | | Dustfall and Snow Water Chemistry Sampling Locations, Diavik Diamond Mine, | |
| | 2017. | | 3-2 |
| Tabl | e 3.1 -2 . | Dustfall and Snow Water Chemistry Reference Values | 3-7 |
| Tabl | e 3.4-1. | Dustfall Results, Diavik Diamond Mine, 2017 | 3-9 |
| Tabl | e 3.4-2. | Snow Water Chemistry Results, Diavik Diamond Mine, 2017 | .3-11 |
| Tabl | e 4.2-1. | NPRI Results for CAC Emissions, Diavik Diamond Mine, 2016 and 2017 | 4-2 |
| Tabl | e 5.2-1. | GHG Equivalents for the Diavik Diamond Mine, 2016 and 2017 | 5-1 |
| | | | |
| | | LIST OF PLATES | |
| Plate | | Dustfall gauge during sample collection. The dustfall gauge consisted of a hollow scylinder (centre) housed inside a Nipher snow gauge (right) | 3-6 |
| Plate | e 3. 2- 1. S | Snow core sample being weighed, with dustfall gauge in background | 3-8 |
| Plate | e 5. 2- 1. | The Diavik 9.2 megawatt wind farm. The wind farm consists of four wind turbines | 5-2 |

LIST OF APPENDICES

Appendix A. Total Suspended Particulates (TSP) Monthly Data Memorandum (dated October 23, 2017; includes Jan. 1, 2017 to Oct. 10, 2017 data)

Appendix B. Total Suspended Particulates (TSP) Biannual Data Memorandum (dated June 6, 2018; includes Oct. 1, 2017 to May 15, 2018 data)

Appendix C. TSP Monitoring Station Calibration and Maintenance Records

Appendix D. Daily TSP Data, 2017

Appendix E. Diavik Diamond Mine: 2017 Dust Deposition Report (dated June 2018)

GLOSSARY AND ABBREVIATIONS

Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

AEMP Aquatic Effects Monitoring Program

BC British Columbia

BC ENV British Columbia Ministry of Environment and Climate Change

BC MOE British Columbia Ministry of Environment

CAC Criteria air contaminants

CB Communications Building

CEPA Canadian Environmental Protection Act

CH₄ Methane

cm Centimetre

CO Carbon monoxide

CO₂ Carbon dioxide

CO₂e Carbon dioxide equivalent

d Day

DDMI Diavik Diamond Mines (2012) Inc.

dm² Square decimetre

Dustfall Dust deposition

EA Environmental Agreement

EAQMP Environmental Air Quality Monitoring Plan

ECCC Environment and Climate Change Canada

EMAB Environmental Monitoring Advisory Board

EMS Environmental Management System

ENR Department of Environment and Natural Resources

EQC Effluent quality criteria

ERM ERM Consultants Canada Ltd.

GHG Greenhouse gas

GHGRP Greenhouse Gas Emissions Reporting Program

GNWT Government of the Northwest Territories

GWP Global warming potentials

L Litre

m Metre

Maxxam Analytics

mg Milligram

N₂O Nitrous oxide

NH₃ Ammonia

NO₂ Nitrogen dioxide

NO_x Oxides of nitrogen

NPRI National Pollutant Release Inventory

O₃ Ozone

 PM_{10} Particulate matter ≤ 10 μm in diameter

PM_{2.5} Particulate matter ≤ 2.5 μm in diameter

QA/QC Quality assurance and quality control

SO₂ Sulphur dioxide

SOP Standard operating procedure

SO_x Oxides of sulphur

tCO₂e Tonnes of carbon dioxide equivalent

the Mine Diavik Diamond Mine

TPM Total particulate matter (the same as TSP)

TSP Total suspended particulate (the same as TPM)

VOCs Volatile organic compounds

WLWB Wek'èezhìi Land and Water Board

μ**g** Microgram

y Year

1. INTRODUCTION

Diavik Diamond Mines (2012) Inc. (DDMI) has been collecting and reporting air quality related data since initial site construction in 2001. In June of 2013, DDMI submitted an Environmental Air Quality Monitoring Plan (EAQMP) to the Environmental Monitoring Advisory Board (EMAB). The EAQMP was developed to address Article 7.2 (a) of the Environmental Agreement (EA; DDMI 2000). The EAQMP and its results are not part of a Regulatory Instrument but are subject to review by EMAB and the Parties identified under EA Article 7.5.

The purpose of this report is to provide a summary of the 2017 air quality monitoring and emissions data in relation to the Diavik Diamond Mine's (hereafter referred to as the Mine) operational activities. This 2017 Environmental Air Quality Monitoring Report summarizes air quality observations from the following programs conducted at the Mine:

- Total Suspended Particulate (TSP) Continuous Monitors;
- Dustfall Monitoring as part of the Aquatic Effects Monitoring Program (AEMP);
- Snow Core Program as part of the AEMP;
- Emission Monitoring and Reporting to the Environment and Climate Change Canada (ECCC) National Pollutant Release Inventory (NPRI); and
- Greenhouse Gas (GHG) Monitoring and Reporting to ECCC.

In 2017, the primary sources of fugitive dust were associated with unpaved roads, airstrip usage and construction activities at A21 kimberlite pipe. The A21 kimberlite pipe is located just south of Diavik's existing mining operations. A21 development required rockfill dike construction to encircle the ore body located just offshore of existing mining operations at Lac de Gras (Rio Tinto 2014). To supress fugitive dust generation, roads were watered during the summer as needed and EK35 was applied to the airport apron (tarmac) and helipad during the spring months.

The Underground Mine production rate was steady throughout the year. Open pit mining of A21 and construction of the Waste Rock Storage Area - South Country Rock Pile commenced in December 2017. Fugitive dust generation is expected to be greatest during snow-free periods where and when there is site activity.

The 2017 predominant wind directions at the site were from the southeast, although this was not very pronounced and in fact in general the winds can be described as omni-directional. The expectation is that airborne material will be deposited in all directions around the mine with a slight northwest emphasis.

2. CONTINUOUS TOTAL SUSPENDED PARTICULATE MONITORING

2.1 BACKGROUND

Total suspended particulate (TSP) consists of small airborne particles such as dust, smoke, ash and pollen with aerodynamic diameters of typically less than 100 microns (µm). TSP is a concern for human health and welfare, as well as for animals and plants, due to effects on breathing and respiratory systems, damage to lung tissue, cancer and premature death. TSP that settles out of the air onto surfaces is called dust deposition or dustfall. Ambient TSP monitoring in strategic locations can provide monitoring information to assist in understanding, tracking and responding to potential dust deposition concerns.

In 2012 an updated air dispersion modelling assessment was undertaken for the entire the Mine (Golder 2012). The modelling results indicated that:

- Annual TSP concentrations are predicted to be lower than the Government of the Northwest Territories (GNWT) Guidelines for Ambient Air Quality (GNWT 2014) for receptors located in the vicinity of the Mine. For two days per year, 24 hour concentrations of TSP are predicted to exceed the air quality criteria; and
- Maximum TSP deposition rates (dustfall) are predicted to be higher on the Mine site (222.2 mg/dm²/y) than offsite (4.1 mg/dm²/y) and are generally greater than predicted in the earlier model. For example 100 mg/dm²/y was originally predicted adjacent to A154 pit (Cirrus Consultants 1998).

Two TSP monitors were installed at the Mine in April 2013. The locations of the monitors were selected based on proximity to the Mine boundary, with careful consideration of the TSP results from the updated air dispersion modelling assessment and in consideration of the availability of power (Figure 2.1-1; DDMI 2013).

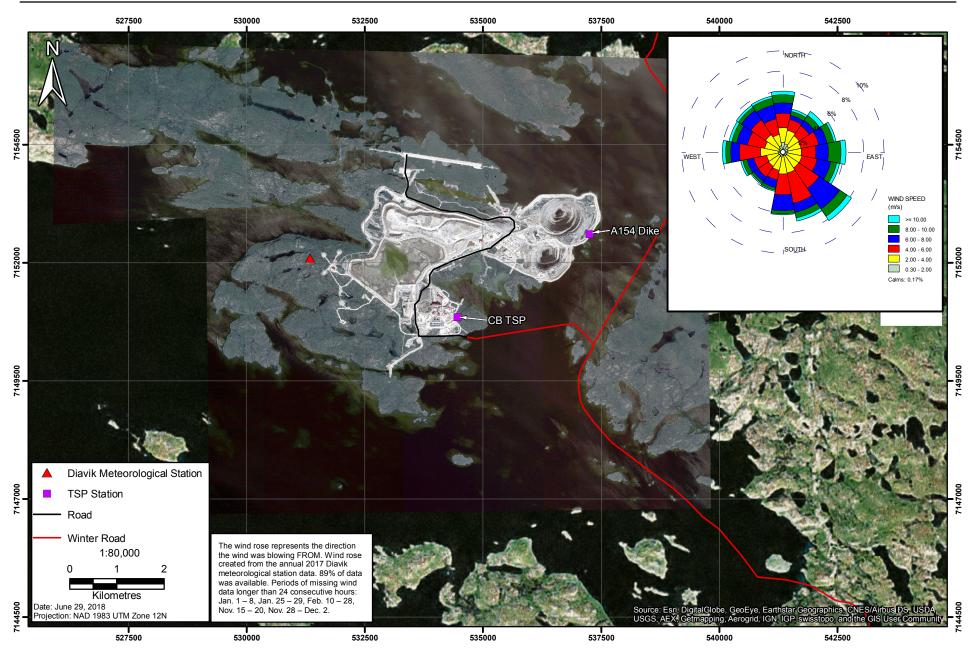
2.2 METHODS

TSP monitoring is undertaken using the Thermo SHARP 5014i monitor that uses beta attenuation monitoring technology. Ambient air is drawn through a subsonic orifice at a controlled flow rate; continuous mass measurements are conducted and hourly mass concentrations are calculated and stored in the iSeries platform data logging system. The sampling equipment is contained within a climate-controlled shelter to minimize data loss during extreme weather conditions, as recommended by the manufacturer.

The monitoring of TSP concentrations is continuous with hourly concentrations recorded over the course of 2017.

Figure 2.1-1 TSP Monitoring Locations, 2017





DIAVIK DIAMOND MINES (2012) INC. Proj # 0207514-0009 | GIS # DIA-12-019

2.2.1 Monitoring Locations

TSP monitoring is undertaken at two locations — one sampler is near the A154 Dike (along the southeast corner of the A154 pit) and the second sampler is within the Communications Building (CB) adjacent to the accommodations complex (Figure 2.1-1). The location of the A154 Dike monitor and the site near the CB was selected based on the proximity to the boundary of the Mine footprint and the results of the updated air dispersion modelling assessment and power requirements. The locations of the DDMI TSP stations are presented in Table 2.2-1 and Figure 2.1-1.

Table 2.2-1. DDMI TSP Stations UTM Coordinates¹

| Station | Zone | Metres East | Metres North |
|-----------|------|-------------|--------------|
| СВ | 12W | 534,460 | 7,150,847 |
| A154 Dike | 12W | 537,258 | 7,152,609 |

¹ World Geodetic System 1984 (WGS-84)

2.2.2 Monitor Maintenance

The A154 Dike sampler was offsite for repair at the start of 2017 and was re-installed on January 23, 2017.

The DDMI TSP Monitoring Standard Operating Procedure (SOP) ENVI-801-0613 R4 (DDMI 2016) was in place and includes information about monthly, quarterly and annual servicing requirements for the samplers. Additional information about historical maintenance activities are included in TSP data memorandums in Appendix A and B.

2017 sampler maintenance and calibration records provided by DDMI are included in Appendix C.

2.2.3 Quality Assurance and Quality Control

Quality assurance and quality control (QA/QC) procedures applied to TSP monitoring included the following:

- adherence to the revised DDMI TSP Monitoring SOP ENVI-801-0613 R4 (DDMI 2016);
- incorporation of the DDMI TSP into the DDMI Environmental Management System; and
- review of monitoring data and retention of calibration and maintenance records.

Where applicable, observations were adjusted by ERM using the methodology in the *Alberta Air Monitoring Directive Chapter 6: Ambient Data* (Alberta Environment and Parks 2016). This included:

- Hourly TSP concentrations between 0 and -3 μ g/m³ were set to 0 μ g/m³. This occurred 8% and 10% of the time in 2017 for the CB and A154 Dike stations, respectively.
- Hourly TSP concentrations below -3 μ g/m³ were flagged as invalid and removed from the dataset calculations. This occurred 13% and 10% of the time in 2017 for the CB and A154 Dike stations, respectively.

• For calculating valid daily TSP averages, if more than 25% (6 hours) of the hourly data in a day were invalid then the daily TSP average would also be flagged as invalid. This occurred 29% and 31% of the time in 2017 for the CB and A154 Dike stations, respectively.

Additional information about periodic ERM data review, TSP station operation and support recommendations are included in the TSP data memorandums in Appendix A and B. Descriptions for periods of missing or invalid data are included in Appendix C.

2.2.4 Analysis

Annual 24-hour TSP concentration plots were generated for each of the monitoring locations and the average annual TSP concentration were calculated from the valid hourly data. The 24-hour data were examined for trends and compared with predicted concentrations.

Periods of seasonal or event-driven elevated concentrations were compared with known site activities and natural smoke events (e.g., forest fires) to assist with identification of dominant sources or seasonal factors. The results of this analysis are presented in this report and will be used to update and modify the dust management SOPs incorporated in the Environmental Management System (EMS) if necessary.

2.3 RESULTS

TSP results were compared to the GNWT Department of Environment and Natural Resources (ENR) *Guideline for Ambient Air Quality Standards* in the Northwest Territories (GNWT 2014). ENR uses two guideline values for TSP:

24-hour average: 120 μg/m³; and

• annual arithmetic mean: 60 μg/m³.

Figure 2.3-1 shows the 2017 24-hour average TSP concentrations for the CB and A154 Dike monitoring stations compared to the 24 hour GNWT guideline. Table 2.3-1 summarizes the TSP results. Appendix C contains tabulated 24-hour average TSP concentrations along with descriptions for periods of missing or invalid data.

Table 2.3-1. 2017 TSP Results, Diavik Diamond Mine

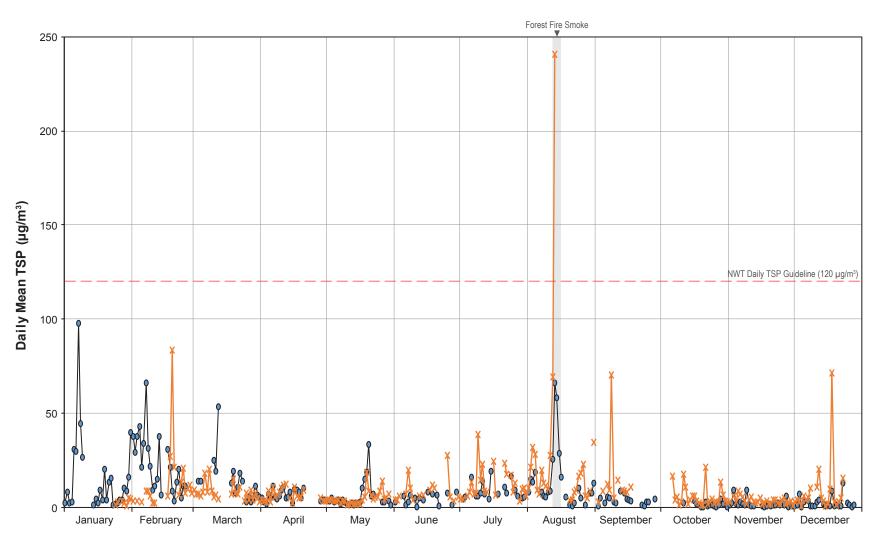
| | 2017 TS | SP Concentration (| μg/m³) | No. of Daily | No. of Days |
|-----------|-------------|--------------------|--------------------|---------------------------------|--------------------------------------|
| Station | Annual Mean | Max. Daily Mean | Min. Daily Mean | TSP Exceedances (>120 μg/m³) | with Valid Data Used ¹ |
| СВ | 9.0 | 97.9 | 0.5 | 0 | 260 |
| A154 Dike | 9.9 | 241.1 | 1.0 | 1 | 252 |

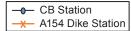
Notes:

¹ Number of days with at least 75% (18 hours) of valid hourly data availability, out of 365 days.

Figure 2.3-1 2017 Daily Mean TSP, CB and A154 Dike Stations







In 2017 there was one exceedance of the 24-hour average guideline ($120 \,\mu g/m^3$), measured at the A154 Dike station on August 13 ($241.1 \,\mu g/m^3$). Elevated TSP concentrations were measured by both stations from August 13 to 15 as forest fire smoke was observed at the Mine site on these dates (Figure 2.3-1).

The annual mean TSP concentrations at both stations were similar (9.0 μ g/m³ at CB station and 9.9 μ g/m³ at A154 Dike station) and were well below the annual guideline value (60 μ g/m³).

Additional data result discussions are included in the TSP data memorandums in Appendices A and B.

3. DUSTFALL MONITORING

Community interest in the possible effects of dust deposition (dustfall) on wildlife and aquatic environments are the basis for the focus of DDMI's EAQMP on TSP and dustfall. Dustfall is the deposition of airborne particulate matter on vegetation, snow and water, and it is monitored using dustfall collection gauges and snow cores.

In accordance with the EA and requirements associated with the Aquatic Effects Monitoring Program (AEMP), a dust monitoring program was initiated in 2001. The program was designed to achieve the following objectives:

- determine dustfall rates at various distances from the Mine footprint; and
- determine the chemical characteristics of dustfall that may be deposited onto, and subsequently into, Lac de Gras as a result of mining activities, in support of the AEMP.

In 2017, the dustfall monitoring program incorporated three monitoring components, with sampling conducted at varying distances from Mine infrastructure (25 to 4,852 m) along five transects:

- dustfall gauges (12 monitoring and 2 control stations);
- dustfall from snow surveys (24 monitoring and 3 control stations); and
- snow water chemistry from snow surveys (16 monitoring and 3 control stations).

Two new dustfall gauge stations were added west of the Mine in 2017, bringing the total to 14.

Additional information, data and figures can be found in the full *Diavik Diamond Mine*: 2017 *Dust Deposition Report* (Appendix E; ERM 2018).

3.1 DUSTFALL GAUGES

Dustfall gauges were placed at 14 stations (including two control stations) around the Mine at distances ranging from approximately 25 to 4,852 m from mining operations (Table 3.1-1 and Figure 3.1-1). Each gauge collected dustfall year-round with samples being collected for analysis approximately every three months, except for the two new stations (Dust 11 and Dust 12) that were first installed in early October 2017. The median total sampling period for the 12 existing stations was 367 days, and for the two new stations was 92 days.

Dustfall gauge stations consisted of a hollow brass cylinder (52 centimetres (cm) length, 12.5 cm inner diameter) housed in a Nipher snow gauge (Plate 3.1-1). The cylinder collected dustfall, while the Nipher snow gauge reduced air turbulence around the gauge to increase dustfall catch efficiency. At the end of each sampling period, the content of the cylinder was retrieved was processed in the DDMI environment laboratory to determine the mass of collected dustfall. This processing involved filtration, drying and weighing of samples as specified in the standard operating procedures (SOPs) ENVR-508-0112 and ENVI-303-0112 (see Appendix E). The cylinder was then exchanged with an empty, clean cylinder.

Table 3.1-1. Dustfall and Snow Water Chemistry Sampling Locations, Diavik Diamond Mine, 2017

| | | | Total Sample | UTM Co | oordinates² | Approx. Distance | | Snow Water |
|------------------|------------|--|---------------------------------------|----------------|-----------------|----------------------------|------------------------|-----------------------------------|
| Transect Line | Station ID | 2017 Sample Dates | Exposure Duration (days) ¹ | Easting (m) | Northing (m) | from Mining Operations (m) | Surface Description | Chemistry Sampled ³ |
| Dustfall G | | 2017 Sample Dates | Duration (days) | (111) | (111) | Operations (iii) | Description | Sampled |
| Dustrum G | Dust 1 | Jan 4 (start), Mar 25, Jul 2, Sep 30, Dec 24 | 354 | 533964 | 7154321 | 75 | Land | n/a |
| | Dust 2A | Jan 4 (start), Mar 25, Jul 2, Oct 6, Jan 6 (2018) | 367 | 535678 | 7151339 | 435 | Land | n/a |
| | Dust 3 | Jan 4 (start), Mar 25, Jul 2, Sep 30, Jan 10 (2018) | 371 | 535024 | 7151872 | 30 | Land | n/a |
| | Dust 4 | Jan 6 (start), Mar 25, Jul 2, Oct 7, Jan 10 (2018) | 369 | 531397 | 7152127 | 200 | Land | n/a |
| | Dust 5 | Jan 4 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 367 | 535696 | 7155138 | 1,195 | Land | n/a |
| | Dust 6 | Jan 3 (start), Mar 25, Jul 2, Sep 30, Dec 24 | 355 | 537502 | 7152934 | 25 | Land | n/a |
| | Dust 7 | Jan 6 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 365 | 536819 | 7150510 | 1,155 | Land | n/a |
| | Dust 8 | Jan 3 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 368 | 531401 | 7154146 | 1,220 | Land | n/a |
| | Dust 9 | Jan 4 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 367 | 541204 | 7152154 | 3,810 | Land | n/a |
| | Dust 10 | Jan 6 (start), Mar 25, Jul 2, Oct 6, Jan 16 (2018) | 273 | 532908 | 7148924 | 46 | Land | n/a |
| | Dust 11 | Oct 5 (start), Jan 6 (2018) | 93 | 531493 | 7150156 | 805 | Land | n/a |
| | Dust 12 | Oct 6 (start), Jan 6 (2018) | 92 | 529323 | 7151191 | 2,580 | Land | n/a |
| | Dust C1 | Jan 6 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 365 | 534979 | 7144270 | 4,700 | Land | n/a |
| | Dust C2 | Jan 4 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 367 | 528714 | 7153276 | 3,075 | Land | n/a |

(continued)

Table 3.1-1. Dustfall and Snow Water Chemistry Sampling Locations, Diavik Diamond Mine, 2017 (continued)

| | | | Total Sample | UTM Co | ordinates ² | Approx. Distance | | Snow Water |
|-----------|----------------------|-------------------|------------------------------|---------|------------------------|------------------|-------------|----------------------|
| Transect | | | Exposure | Easting | Northing | from Mining | Surface | Chemistry |
| Line | Station ID | 2017 Sample Dates | Duration (days) ¹ | (m) | (m) | Operations (m) | Description | Sampled ³ |
| Snow Surv | • | | | | | | | |
| 1 | SS1-1-4 ⁴ | Apr 7 | 191 | 533911 | 7154288 | 30 | Land | |
| | SS1-1-5 ⁴ | Apr 7 | 191 | 533924 | 7154367 | 30 | Land | |
| | SS1-2 | Apr 7 | 191 | 533924 | 7154367 | 115 | Land | |
| | SS1-3 | Apr 7 | 191 | 533966 | 7154517 | 275 | Land | |
| | SS1-4 | Apr 7 | 158 | 534485 | 7155094 | 920 | Ice | ✓ |
| | SS1-5 | Apr 7 | 158 | 535099 | 7156279 | 2,180 | Ice | ✓ |
| 2 | SS2-1 | Apr 8 | 159 | 537553 | 7153473 | 180 | Ice | ✓ |
| | SS2-2 | Apr 8 | 159 | 537829 | 7153476 | 445 | Ice | ✓ |
| | SS2-3 | Apr 8 | 159 | 538484 | 7153939 | 1,220 | Ice | ✓ |
| | SS2-4-4 ⁴ | Apr 8 | 159 | 539151 | 7154685 | 2,180 | Ice | ✓ |
| | SS2-4-5 ⁴ | Apr 8 | 159 | 539151 | 7154685 | 2,180 | Ice | ✓ |
| 3 | SS3-4 | Apr 3 | 154 | 536585 | 7151002 | 615 | Ice | ✓ |
| | SS3-5 | Apr 3 | 154 | 537638 | 7150824 | 1,325 | Ice | ✓ |
| | SS3-6 | Apr 3 | 154 | 536305 | 7151604 | 60 | Ice | ✓ |
| | SS3-6-regrab | Apr 30 | 181 | 536306 | 7151566 | 60 | Ice | ✓ |
| | SS3-7 | Apr 3 | 154 | 536343 | 7151368 | 250 | Ice | ✓ |
| | SS3-8 | Apr 3 | 154 | 536693 | 7150806 | 830 | Ice | ✓ |
| 4 | SS4-1 | Apr 7 | 191 | 531491 | 7152211 | 100 | Land | |
| | SS4-2 | Apr 7 | 191 | 531356 | 7152261 | 245 | Land | |
| | SS4-3 | Apr 7 | 191 | 531331 | 7152434 | 350 | Land | |
| | SS4-4 | Apr 7 | 158 | 531141 | 7153167 | 1,065 | Ice | ✓ |
| | SS4-5-4 ⁴ | Apr 7 | 158 | 531405 | 7154116 | 1,220 | Ice | ✓ |
| | SS4-5-5 ⁴ | Apr 7 | 158 | 531405 | 7154116 | 1,220 | Ice | ✓ |

(continued)

Table 3.1-1. Dustfall and Snow Water Chemistry Sampling Locations, Diavik Diamond Mine, 2017 (completed)

| | | | Total Sample | UTM Co | ordinates ² | Approx. Distance | | Snow Water |
|------------------|----------------------|-------------------|---------------------------------------|----------------|------------------------|-------------------------------|------------------------|-----------------------------------|
| Transect Line | Station ID | 2017 Sample Dates | Exposure Duration (days) ¹ | Easting (m) | Northing (m) | from Mining Operations (m) | Surface Description | Chemistry Sampled ³ |
| Snow Surv | veys (cont'd) | | | | | | | |
| 5 | SS5-1 | Apr 1 | 185 | 533150 | 7148925 | 45 | Land | |
| | SS5-2-4 ⁴ | Apr 1 | 185 | 533150 | 7148875 | 95 | Land | |
| | SS5-2-5 ⁴ | Apr 1 | 185 | 533150 | 7148875 | 95 | Land | |
| | SS5-3 | Apr 1 | 152 | 533142 | 7148691 | 270 | Ice | ✓ |
| | SS5-4 | Apr 1 | 152 | 533143 | 7147956 | 1,021 | Ice | ✓ |
| | SS5-5 | Apr 1 | 152 | 533146 | 7146950 | 2,020 | Ice | ✓ |
| | Control 1 | Apr 1 | 192 | 534983 | 7144271 | 4,852 | Land | √ 5 |
| | Control 2 | Apr 7 | 190 | 528714 | 7153281 | 3,075 | Land | √ 5 |
| | Control 3 | Apr 3 | 187 | 538650 | 7148750 | 3,570 | Land | √ 5 |

Notes:

¹ The exposure duration for snow surveys was calculated from the first snowfall for land stations (September 28, 2016) and ice freeze up for ice stations (October 31, 2016).

² UTM Zone 12W, NAD83

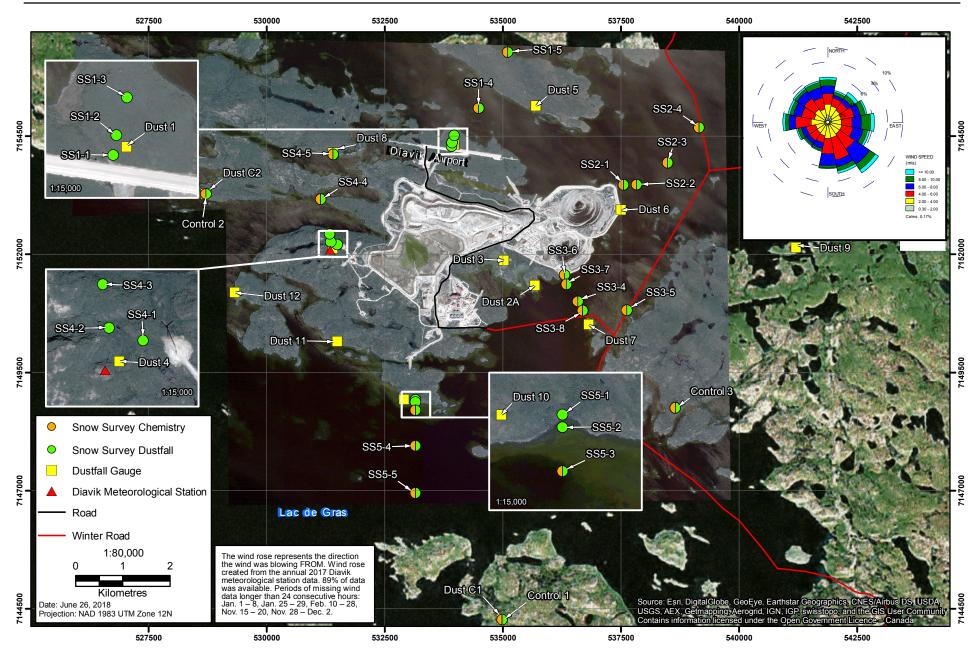
³ n/a = not applicable

⁴ Duplicate sample taken for snow water chemistry.

⁵ Snow water chemistry sampled over ice, adjacent to the on-land control station; see Section 3.3 for further details.

Figure 3.1-1
Dustfall Gauge and Snow Survey Locations, Diavik Diamond Mine, 2017





DIAVIK DIAMOND MINES (2012) INC. Proj # 0207514-0013 | GIS # DIA-12-018



Plate 3.1-1. Dustfall gauge during sample collection. The dustfall gauge consisted of a hollow brass cylinder (centre) housed inside a Nipher snow gauge (right).

Once the mass of collected dustfall at a station was measured, the mean daily dustfall rate over the collection period was calculated as:

$$D = \frac{M}{A*T}$$
 [Equation 1]

where:

 $D = \text{mean daily dustfall rate } (\text{mg/dm}^2/\text{d}) \text{ during time period } T$

M = mass of dustfall collected (mg) during time period T

A = surface area of dustfall gauge collection cylinder orifice (dm²; approximately 1.227 dm²)

T = number of days of dustfall collection (d)

The mean daily dustfall rate $(mg/dm^2/d)$ was then multiplied by 365 days to convert units to annual units $(mg/dm^2/y)$.

Estimated dustfall rates were compared to the former British Columbia Ministry of Environment (BC MOE) dustfall objectives for the mining, smelting and related industries (Table 3.1-2; BC MOE 2016). The dustfall objective and sampling methodology is no longer used in BC (BC ENV 2018); however, for the purposes of this report, dustfall will be compared to the former objective to be consistent with prior dust deposition reports. The dustfall objectives ranges from 1.7 to 2.9 milligram per square decimetre per day (mg/dm²/d), sampled and averaged over 30 days. The 1.7 mg/dm²/d objective is often considered to be applicable at sensitive locations, whereas the 2.9 mg/dm²/d objective is applicable to areas where it can be shown that unacceptably deleterious changes will not follow. Both values are presented throughout this report.

Table 3.1-2. Dustfall and Snow Water Chemistry Reference Values

| Parameter | Value | Unit | Comment | Source |
|----------------|------------------------|------------------------|---|--------------|
| Dustfall Rate | 1.7-2.9 (621-1,059) | mg/dm²/d (mg/dm²/y) | Former objective for the mining, smelting, and related industries | BC MOE 2016 |
| Aluminum-Total | 3,000 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Ammonia-N | 12,000 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Arsenic-Total | 100 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Cadmium-Total | 3 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Chromium-Total | 40 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Copper-Total | 40 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Lead-Total | 20 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Nickel-Total | 100 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Nitrite-N | 2,000 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Zinc-Total | 20 | μg/L | Max. grab sample concentration | W2015L2-0001 |

3.2 DUSTFALL SNOW SURVEYS

Dustfall was assessed as part of the snow surveys completed at 27 stations (including three control stations), along five transects around the Mine (Table 3.1-1; Figure 3.1-1). Across stations, the distance from mining operations ranged from approximately 30 to 4,852 m. The median exposure period was 159 days. The start dates used to calculate the exposure duration correspond to the first snowfall for land stations (September 28, 2016), and shortly after ice freeze up, once ice conditions were safe for work, for ice stations (October 31, 2016).

At each snow survey station, a snow corer was used to drill into the snow pack to retrieve a cylindrical snow core (6.1 cm inner diameter; Plate 3.2-1). Cores were extracted at each station and composited in the field to obtain a representative snow sample for the station. A minimum of three snow cores were collected at each (land and ice) snow sampling station, as outlined in the SOP ENVR-512-0213. Composited samples were bagged and brought to the DDMI environment laboratory for processing as specified in SOP ENVR-512-0213 and ENVI-303-0112. Processing of snow cores required filtration, drying and weighing. For QA/QC, duplicate samples were collected at the stations indicated in Table 3.1-1.

Mean daily dustfall rate (mg/dm 2 /d) was calculated for the collection period using Equation 1, with surface area (A) equal to the surface area of the snow corer tube orifice (0.2922 dm 2) multiplied by the number of snow cores used for the composited sample at the station. The mean annual dustfall rate (mg/dm 2 /y) was estimated by multiplying the mean daily dustfall rate by 365 days.

Dustfall rates were compared to the former BC dustfall objective for the mining, smelting and related industries (Table 3.1-2).



Plate 3.2-1. Snow core sample being weighed, with dustfall gauge in background.

3.3 SNOW WATER CHEMISTRY

Snow water chemistry analysis was performed on snow cores extracted from 19 of the 27 snow survey stations (including three control locations; Table 3.1-1; Figure 3.1-1). These locations included the 16 snow survey dustfall stations that were located on ice, as well as samples taken on ice adjacent to the three control stations. Across stations, the distance from mining operations ranged from approximately 60 to 4,852 m, and the median sampling exposure duration was 158 days. At each station located on ice, cores were collected for chemistry analysis immediately after the dustfall snow cores were extracted.

Snow water chemistry cores were extracted using a snow corer in accordance with the dustfall snow survey core extraction. A minimum of three cores at each site were extracted and composited to obtain the required 3 litres (L) of snow water for the laboratory chemical analysis. Snow cores were then processed and prepared for shipment to Maxxam Analytics (Maxxam) where the chemical analysis was performed. For QA/QC purposes, duplicate samples and blanks were collected at the stations indicated in Table 3.1-1. Snow water chemistry sampling methodology is detailed in Appendix E.

EQC, including "maximum average concentration" and "maximum concentration of any grab sample," are stipulated in DDMI's Water Licence (W2015L2-0001) for aluminium, ammonia, arsenic, cadmium, chromium, copper, lead, nickel, nitrite and zinc (Table 3.1-2). Snow water chemistry results for these variables were compared to the "maximum concentration of any grab sample." These results are also presented as part of DDMI's Aquatics Effects Monitoring Program (AEMP) report.

3.4 RESULTS

Dustfall and snow water chemistry results were grouped into zones based on their relative distance from the Mine footprint (Table 3.4-1). Although station groupings into zones were first established at the outset of the program, these groupings were re-established in 2013 using satellite imagery of the site.

Table 3.4-1. Dustfall Results, Diavik Diamond Mine, 2017

| | Number of | 2017 Dustfall (mg/dm²/y) from Dustfall Gauges and Dustfall Snow Surveys | | | | | | |
|---------------|------------------|---|------|---------|---------|--|--|--|
| Zone ID (m) | Stations in Zone | Median | Mean | Maximum | Minimum | | | |
| 0 - 100 | 9 | 286 | 341 | 1,351 | 64 | | | |
| 101 - 250 | 5 | 101 | 224 | 771 | 51 | | | |
| 251 - 1,000 | 9 | 137 | 139 | 318 | 19 | | | |
| 1,001 - 2,500 | 13 | 92 | 82 | 132 | 17 | | | |
| Control | 5 | 34 | 43 | 108 | 10 | | | |

In 2017, the primary sources of fugitive dust were associated with unpaved road and airstrip usage and construction activities at A21. The distances to mining operations are shown in Table 3.1-1. Major waste rock material transfers in 2017 occurred on haul roads (392,102 tonnes) and kimberlite ore to the crusher (2,189,799 tonnes). Another source of fugitive dust is truck traffic along the ice road to the Mine. However, the consistency in dust deposition rates near the ice road alignment between winter and summer indicated that the contributions of dust from the ice road were modest relative to other sources. There is no direct measurement of dustfall due to the use of the ice road; however, dustfall stations immediately downwind of the ice road such as Dust 7, Dust 6, and SS2-4 did not show elevated readings during winter months. To supress fugitive dust generation, roads, parking areas and laydown areas were watered during the summer as needed. Between May and September 2017, approximately 1,668 m³ of water was applied on the Mine site and 55,948 m³ of water was applied on haul roads. The exact impact of dust suppression could not be determined from the data collected in 2017; however, it is expected that road watering reduced the amount of dust generated at the Mine in 2017. The Underground Mine production rate was steady throughout the year. Open pit mining of A21 and construction of the Waste Rock Storage Area - South Country Rock Pile commenced in December 2017. Fugitive dust generation is expected to be greatest during snow-free periods where and when there is site activity. It was expected that the highest fugitive dust generation and resulting dustfall occurred in areas closest to the roads and the airstrip and mine footprint such as near A21 and the country rock pile between May and September. Dust 1 (adjacent to the airstrip) recorded the highest dustfall during the summer months (936 mg/dm²/y) compared to the winter months (230 mg/dm²/y).

The 2017 predominant wind directions at the site were from the southeast, although this was not very pronounced and in fact in general the winds can be described as omni-directional (see windrose in Figure 3.1-1). The expectation is that airborne material will be deposited in all directions around the mine with a slight northwest emphasis. The results show that the direction from the mine is not the strongest indicator of dust deposition, rather proximity to mine activities and roads and the airstrip show a stronger influence. This is supported by the fact that Dust 1 had the highest recorded dustfall in 2017 (adjacent to the airstrip) and Dust 10 had the second highest recorded dustfall in 2017 which is adjacent to and south of the Mine (see Figure 3.1-1).

Results from the dustfall gauges, dustfall snow surveys, and the snow water chemistry analysis are presented below.

3.4.1 Dustfall Gauges

Total dustfall collected from each dustfall gauge throughout the year is summarized by zone in Table 3.4-1. The following list describes tables or figures that are included in the *Diavik Diamond Mine*: 2017 *Dust Deposition Report* (Appendix E; ERM 2018):

- 2017 annual dustfall collected at each station, relative to the Mine;
- historical records of annual dustfall for each station from 2002 to 2017;
- a comparison of dustfall versus distance from the Mine footprint for 2017 and historical 2002 2017 datasets; and
- boxplots summarizing the dustfall magnitude distribution from all stations in each year 2002 2017.

In general, dustfall decreased with increasing distance from the Mine (Table 3.4-1). The greatest estimated dustfall rate measured using gauges occurred at Dust 1 (480 mg/dm²/y), 75 m north of the Mine's airstrip. The close snow survey station SS1-1 (30 m north of the airstrip) also experienced the highest dustfall of the snow survey stations (1,351 mg/dm²/y). It is likely that during 2017 dust generated by airstrip activity was the cause of elevated readings adjacent to the airstrip. The second highest estimated dustfall rate measured using gauges occurred at Dust 10 (318 mg/dm²/y) located 46 m from the Mine. The lowest dustfall rate was measured at the control station Dust C1 (34 mg/dm²/y; 4,700 m south of the Mine) and the other control station Dust C2 (37 mg/dm²/y; 3,075 m west of the Mine) recorded the second lowest measured dustfall.

The 2017 mean, median and interquartile range of all dustfall station rates were less than all historical dustfall rates, except 2013. The lower overall dustfall rates were likely influenced by the decrease in surface activity at the mine with no surface mining starting until December, 2017.

The annualized dustfall rates estimated from each dustfall gauge were less than the former BC objective for the mining industry (621 to 1,059 mg/dm²/y; Table 3.1-2). This former objective was used for comparison purposes only: there are currently no dustfall standards or objectives for the Northwest Territories. However, the BC objective was generally used as a reference for comparison at other mines in the region.

3.4.2 Dustfall Snow Surveys

Annual dustfall rates estimated from each snow survey station in 2017 are included in the combined dustfall gauge and snow survey results in Table 3.4-1. Historical records of annual dustfall rates for each station, the relationships between annual dustfall rates and distance from the Mine footprint, boxplots summarizing dustfall rates measured in each year, and QA/QC analysis are presented in the annual dust deposition report (Appendix E).

Annualized dustfall rates estimated from 2017 snow survey data ranged from 10 to 1,351 mg/dm²/y. Dustfall at SS1-1 was the highest recorded of the snow survey stations. SS1-1 is located 30 m north of the airstrip which is likely the reason for the higher levels of dustfall found here. In general, snow survey dustfall rates decreased with increasing distance from the Mine, with the lowest dustfall rate recorded at station Control 1. Mean dustfall rates estimated using both dustfall gauges and snow surveys within the 0-100, 101-250, 251-1,000, 1,001-2,500 and Control zones were 341, 224, 139, 82 and 43 mg/dm²/y, respectively (Table 3.4-1). Dustfall rates at stations SS1-1, SS1-2, Dust 2A, SS3-4, Dust 7, SS4-4, SS4-5, and Control 3 were greater than the upper limit of the 95% confidence interval for their respective zones in 2017. These high dustfall rates, compared to the overall distribution of dustfall rates within each zone, indicated that higher dustfall rates were observed in the vicinity of the airstrip and to the west and southeast of the Mine.

Annualized dustfall estimated from each snow survey station in 2017 were generally less than historical dustfall estimates (Figures 3.1-2 and 3.1-3). Comparisons of mean and maximum values suggest that dustfall rates were generally lower in 2017 than in 2016 and 2015.

Annualized dustfall rates measured at each station during the 2017 snow survey were less than the former BC objective for the mining industry (621-1,059 mg/dm²/y) for all stations other than SS1-1 $(1,351 \text{ mg/dm}^2/\text{y}; 30 \text{ m north of the airstrip})$ and SS1-2 $(771.2 \text{ mg/dm}^2/\text{y}; 115 \text{ m north of the airstrip})$. This former objective was used for comparison purposes only: there are currently no dustfall standards or objectives for the Northwest Territories.

3.4.3 **Snow Chemistry**

Maximum snow water chemistry results for 2017 are presented in Table 3.4-2. All analytical results for snow water chemistry and QA/QC analysis are included in the Diavik Diamond Mine: 2017 Dust Deposition Report (Appendix E; ERM 2018).

Table 3.4-2. Snow Water Chemistry Results, Diavik Diamond Mine, 2017

| | | 2017 Maximum Snow Water Chemistry Results (μg/L) | | | | | | | | | | |
|---------------|-------------------------------------|--|---------|---------|---------|----------|--------|------|--------|---------|------------|------|
| Zone ID (m) | Number of Samples in the Zone | Aluminum | Ammonia | Arsenic | Cadmium | Chromium | Copper | Lead | Nickel | Nitrite | Phosphorus | Zinc |
| 0 - 100 | 1 | 836 | - | 0.2 | 0.0 | 8.4 | 1.3 | 0.7 | 23.1 | 1.7 | 54.2 | 5.4 |
| 101 - 250 | 2 | 670 | 110 | 0.2 | 0.0 | 10.4 | 1.4 | 1.0 | 28.5 | 3.4 | 103 | 16.8 |
| 251 - 1,000 | 5 | 3,950 | 130 | 0.7 | 0.1 | 86.9 | 8.1 | 3.5 | 226 | 3.3 | 104 | 23.8 |
| 1,001 - 2,500 | 8 | 1,700 | 220 | 0.6 | 0.0 | 13.9 | 2.4 | 1.4 | 22.9 | 2.2 | 53.5 | 14.8 |
| Control | 3 | 530 | 83.0 | 0.1 | 0.0 | 6.4 | 0.7 | 0.5 | 12.5 | 2 | 26.6 | 4.6 |

In general, average concentrations of snow water chemistry variables of interest decreased with increasing distance from the Mine. However, high parameter concentrations were recorded at Station SS3-4, located in the 251-1,000 zone (615 m southeast of the closest Mine infrastructure). SS3-4 is

located to the southeast of the Mine (Figure 3.1-1) where higher measured dustfall was observed at the stations along the same transect compared to other transects.

All 2017 sample concentrations were less than their associated reference levels as specified by the "maximum concentration of any grab sample" specified in Water Licence W2015L2-0001 (Table 3.1-2), except for sample SS3-4 that had aluminum, chromium, nickel and zinc exceedances.

4. NATIONAL POLLUTANT RELEASE INVENTORY

4.1 Program Overview

According to ECCC, air issues such as smog and acid rain result from the presence of, and interactions between, a group of pollutants known as Criteria Air Contaminants (CAC) and some related pollutants. CAC, in particular, refer to a group of pollutants that include:

- Sulphur oxides (SO_x);
- Nitrogen oxides (NO_x);
- Particulate matter (PM);
- Volatile organic compounds (VOC);
- Carbon monoxide (CO); and
- Ammonia (NH₃).

In addition, ground-level ozone (O₃) and secondary particulate matter are often referred to among the CAC because both ground-level ozone and secondary particulate matter are by-products of chemical reactions between the CAC (ECCC 2017).

CAC are produced from a number of sources, including burning of fossil fuels and it is because of these shared sources that CAC are grouped together.

While there is no regulatory requirement or standard for these pollutant releases in the Northwest Territories, the National Pollutant Release Inventory (NPRI) is a legislated, publicly accessible inventory used to track the amount of pollutant releases (to air, water and land), disposals and transfers for recycling. The program is administered by ECCC and is a requirement of the *Canadian Environmental Protection Act* (CEPA; 1999) for owners or operators of facilities that meet the NPRI reporting requirements published in the Canada Gazette, Part I. Reporting requirements are normally revised every one or two years (ECCC 2018d), with accompanying revised guidance documents (ECCC 2016). NPRI reports containing emissions of CACs are to be submitted to ECCC before June 1 each year.

NPRI substance emissions were derived by DDMI using emission factor calculations provided by Environment Canada NPRI Toolbox (ECCC 2018f). Operational values such as fuel usage and mobile equipment hours were recorded at the Mine throughout the year and weather conditions from the Mine's (onsite) weather station were used to calculate NPRI values.

4.2 RESULTS

Table 4.2-1 compares the Mine's 2017 NPRI CAC emission submission results against the 2016 NPRI submission results. NPRI reports for previous years (2001 – 2016) are available on the NPRI website (ECCC 2018e). NPRI results for the previous year are typically released by ECCC in April, 22 months

following submission on June 1 of each year (e.g., 2017 data reported by June 1, 2018 is expected to be released by ECCC in April of 2019).

Table 4.2-1. NPRI Results for CAC Emissions, Diavik Diamond Mine, 2016 and 2017

| CAC Emissions | 2017 Reporting Threshold (tonnes) | 2016 (tonnes) | 2017 (tonnes) | Reasons for Changes from Previous Year |
|--|--|------------------|------------------|---|
| Carbon Monoxide (CO) | 20 | 620 | 675 | No significant change. |
| Sulphur Dioxide (SO ₂) | 20 | 0.9 | 17.7 | Change in 2017 production levels. Increased blasting due to A21 open pit mining. |
| Oxides of Nitrogen (NO _x ; expressed as NO ₂) | 20 | 2,336 | 2,275 | No significant change |
| Volatile Organic Compounds (VOCs) | 10 | 60 | 57.8 | No significant change |
| Total Particulate Matter (TPM) | 20 | 1,048 | 726 | Changes in 2017 production levels. A21 road construction near complete, decreased road traffic. Increased incineration, rock re-mine, and waste-oil combustion. |
| Particulate Matter $\leq 10 \mu m$ (PM ₁₀) | 0.5 | 328 | 238 | Changes in 2017 production levels. A21 road construction near complete, decreased road traffic. Increased incineration, rock re-mine, and waste-oil combustion. |
| Particulate Matter $\leq 2.5 \mu m$ (PM _{2.5}) | 0.3 | 65 | 56 | Changes in 2017 production levels. A21 road construction near complete, decreased road traffic. |

There was a slight increase (<10% change) of CO emissions and a significant increase of SO₂ emissions in 2017 compared to 2016. SO₂ emissions increased due to blasting during A21 open pit mining.

There were slight decreases (<10% change) of NO_x and VOCs emissions, and moderate decreases (14 to 31% decrease) of TPM, PM₁₀ and PM_{2.5} emissions. Particulate matter emissions decreased primarily due to a decrease in road traffic.

5. GREENHOUSE GAS REPORTING

5.1 PROGRAM OVERVIEW

While there is no territorial regulatory requirement or standard for GHG release in the Northwest Territories, the national Greenhouse Gas Emissions Reporting Program (GHGRP) is Canada's legislated, publicly accessible inventory of facility-reported GHG data and information. The program is administered by ECCC and is a requirement of the CEPA 1999 for owners or operators of facilities that emit GHGs above a certain threshold. Starting for 2017 reporting, the GHGRP was recently changed to require all facilities to report that emit the equivalent of 10,000 tonnes of carbon dioxide equivalent units (tCO₂e) or more, per year (ECCC 2018a). The previous threshold was 50,000 tCO₂e per year. GHG reports are to be submitted prior to June 1 each year.

GHG emissions were derived by DDMI using emission factor calculations in the *Guidance Manual for Estimating Greenhouse Gas Emissions* (Environment Canada 2004). Operational values such as fuel usage and mobile equipment hours were recorded at the Mine throughout the year.

5.2 RESULTS

Table 5.2-1 compares 2016 and 2017 GHG emissions results for the Mine. The 2017 GHG emission reporting information were filed with ECCC on May 15, 2018. GHG reports for previous years (2001 – 2016) are published by ECCC and available from the Open Government website (ECCC 2018b).

Table 5.2-1. GHG Equivalents for the Diavik Diamond Mine, 2016 and 2017

| Constituent | 2016 (tonnes) | 2017 (tonnes) |
|-------------------|------------------|------------------|
| CO ₂ e | 198,929 | 194,968 |

GHG emissions results for the previous year are typically released by ECCC in April, 22 months following submission on June 1 of each year (e.g., 2017 data reported by June 1, 2018 is expected to be released by ECCC in April of 2019).

Three GHG emissions are calculated for the Mine: CO_2 , methane (CH₄) and nitrous oxide (N₂O). To calculate CO_2 e, 100-year Global Warming Potentials (GWP) are used to convert CH₄ and N₂O from tonnes to tCO₂e. The CH₄ and N₂O GWP multipliers used were 25 and 298, respectively (ECCC 2018c).

CO₂e emissions decreased between from 2016 to 2017 at the Mine (Table 5.2-1). GHG emissions at the Mine are primarily derived from stationary equipment fuel combustion and mobile equipment fuel combustion (76.7% and 23.1% of GHG emissions, respectively). There was a decrease in diesel consumption in 2017 compared to 2016.

In 2017, the Mine's 9.2 megawatt wind farm (consisting of four turbines; Plate 5.2-1) generated 17.2 gigawatt-hours of electricity (9% energy penetration) and saved 3.9 million litres of diesel fuel needed for power, thereby reducing the Mine's CO₂e by 10.5 kilotonnes. Since start-up in October 2012,

the estimated diesel fuel savings has totalled 22.1 million litres and has prevented 61.3 kilotonnes of $CO_{2}e$ from being emitted to the atmosphere (DDMI 2018).



Plate 5.2-1. The Diavik 9.2 megawatt wind farm. The wind farm consists of four wind turbines.

6. SUMMARY

TSP was measured at two stations in 2017: the CB and A154 Dike stations. The A154 Dike sampler was offsite for repair at the start of 2017 and was re-installed on January 23, 2017.

In 2017, there was one exceedance of the GNWT 24 hour average TSP guideline (120 $\mu g/m^3$), measured at the A154 Dike station on August 13 (241.1 $\mu g/m^3$). Elevated TSP concentrations were measured by both stations from August 13 to 15 as forest fire smoke was observed at the Mine site on these dates. The annual mean TSP concentrations at both stations were similar (9.0 $\mu g/m^3$ at CB station and 9.9 $\mu g/m^3$ at A154 Dike station) and well below the annual guideline value (60 $\mu g/m^3$).

TSP stations had valid daily data for 71% and 69% of days in 2017 for CB and A154 Dike stations, respectively.

In 2017, dustfall was monitored at 14 dustfall gauges and 27 snow survey stations located at varying distances around the mine. Two new dustfall gauge stations (Dust 11 and Dust 12) were added in October 2017, west of the Mine. Snow water chemistry was measured at 19 of the snow survey stations and compared to EQC set out in the WLWB Water Licence W2015L2-0001.

Annual dustfall estimated from each of the 14 dustfall gauges ranged from 34 to 480 mg/dm²/y in 2017. Annual dustfall rates estimated from the 2017 snow survey data ranged from 10 to 1,351 mg/dm²/y. Annualized dustfall rates measured at each dustfall gauge and snow survey station were less than the former BC dustfall objective for the mining industry (621–1,059 mg/dm²/y) for all stations except for SS1-1 (1,351 mg/dm²/y; 30 m north of the airstrip) and SS1-2 (771 mg/dm²/y; 115 m north of the airstrip). This former objective was used for comparison purposes only: there are currently no dustfall standards or objectives for the Northwest Territories. Annualized dustfall estimated from each station in 2017 were generally less than historical dustfall estimates.

Because the dustfall gauges continuously collect dust throughout the year, and the snow surveys are only representative of dustfall accumulated over the snow cover period, the reported annual dustfall results from the dustfall gauges are expected to provide a better estimate of annual dustfall compared to snow survey results for similar geographic areas. However, results obtained from both methods showed similar spatial patterns, with dustfall generally decreasing with distance away from the Mine.

Snow water chemistry analysis of interest included those variables with effluent quality criteria (EQC; i.e., aluminum, ammonia, arsenic, cadmium, chromium, copper, lead, nickel, nitrite, and zinc). All 2017 sample concentrations were less than their associated reference levels as specified by the "maximum concentration of any grab sample" specified in Water Licence W2015L2-0001 other than sample SS3-4 (located 615 m southeast of the closest Mine infrastructure) for aluminum (3,950 μ g/L), chromium (86.9 μ g/L), nickel (226 μ g/L) and zinc (23.8 μ g/L).

The Mine reported CAC emissions as part of the annual NPRI submission and emissions were estimated using published emission factors. Compared to 2016, 2017 emissions of CO increased slightly (675 tonnes; <10% change) and SO₂ emissions increased significantly (17.7 tonnes; 1,866%).

increase). The increase of SO_2 emissions were due to a change in mine production levels and blasting due to A21 open pit mining. There were slight decreases (<10% change) of NO_x and VOC emissions, and moderate decreases (14 to 31% decrease) of TPM, PM_{10} and $PM_{2.5}$ emissions. Particulate matter emissions decreased primarily due to a decrease in road traffic.

The Mine reported GHG emissions as part of the annual national GHGRP submission and CO₂e emissions were estimated using published emission factors and 100-year GWP ratios. Starting for 2017 reporting, the GHGRP was changed to require all facilities to report that emit the equivalent of 10,000 tCO₂e or more per year, compared to the previous 50,000 tCO₂e per year threshold.

Mine GHG emissions of CO₂, CH₄ and N₂O totalled 194,968 tCO₂e in 2017, a 2% decrease from 2016. GHG emissions at the Mine were primarily from stationary equipment fuel combustion (76.7%) and mobile equipment fuel combustion (23.1%). In 2017, the Mine's 9.2 megawatt wind farm helped to reduce the Mine's GHG footprint by generating 17.2 gigawatt-hours of electricity which saved 3.9 million litres of diesel fuel and thereby prevented the direct release of 10,500 tCO₂e.

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Appendix A

Total Suspended Particulates (TSP) Monthly Data Memorandum (dated October 23, 2017; includes Jan. 1, 2017 to Oct. 10, 2017 data)

DIAVIK DIAMOND MINE

2017 Environmental Air Quality Monitoring Report

ERM

Memorandum

Refer to File: A.1_Diavik TSP Sampler Memo.docx

Date: October 23, 2017

To: David Wells, Superintendent - Environment - HSE

From: Jem Morrison, Atmospheric Scientist

Cc: Carol Adly, Project Manager

Marc Wen, Partner In Charge

Subject: Total Suspended Particulates (TSP) Monthly Data Memorandum

1. INTRODUCTION

Diavik Diamond Mine (2012) Inc. (DDMI) installed two continuous total suspended particulate (TSP) samplers at the Diavik Diamond Mine (Mine) in accordance with their Environmental Air Quality Monitoring Plan (EAQMP; DDMI 2013) in June 2013. The locations of the monitors were selected based on proximity to the Mine boundary, with careful consideration of the TSP results from the updated air dispersion modelling assessment, and in consideration of the availability of power (DDMI 2013).

In February 2016, DDMI requested that ERM initiate a trip to the Property to perform maintenance and troubleshoot operational issues on the two TSP samplers at the Mine. It was determined that the TSP sampler located near the A154 dike was in need of offsite repairs and was sent to the vendor (CD Nova). Remote downloads and historical data analysis showed that specific alarms and data anomalies have been frequent. The vendor of the TSP samplers, CD Nova, was contracted by DDMI to facilitate troubleshooting, calibrate the instruments, and train ERM and DDMI employees on the maintenance and calibration of the samplers. A summary of the completed work can be found in the *Total Suspended Particulates Sampler Support Memorandum* (ERM 2016).

DDMI received the repaired A154 dike sampler at the beginning of July 2016. After a period of two months of sampling, it was determined that there were continued operational issues with the sampler and it was returned to CD Nova for repair. The A154 dike sampler was received from CD Nova at the beginning of January and initiated sampling on January 23, 2017 and has been operating well. Data from both TSP samplers are included in this report.

This memorandum provides a summary of the data collected in 2017 from the Communications Building (CB) TSP sampler and the A154 dike sampler and recommendations for ongoing maintenance and servicing.

2. METHODS

2.1 MONITORING LOCATION

TSP monitoring is undertaken at two locations—one sampler is near the A154 Dike (along the southeast corner of the A154 pit) and the second sampler is within the Communications Building (CB) adjacent to the accommodations complex. The location of the A154 Dike monitor was selected based on the proximity to the boundary of the Mine footprint and the results of the updated air dispersion modelling assessment and power requirements. The site near the CB was selected based on power requirements, proximity to the boundary of the Mine footprint, and the results of the updated air dispersion modelling assessment. The approximate locations of the DDMI TSP stations are presented in Table 2.1-1.

Table 2.1-1. DDMI TSP Stations UTM Coordinates¹

| Station | Zone | Metres East | Metres North |
|-----------|------|-------------|--------------|
| СВ | 12W | 534,460 | 7,150,847 |
| A154 Dike | 12W | 537,258 | 7,152,609 |

¹ World Geodetic System 1984 (WGS-84)

2.2 MONITORING METHODS

The TSP monitors are Thermo Fisher Scientific 5014i instruments that measure TSP using beta attenuation. Ambient air is drawn through a subsonic orifice at a controlled flow rate; continuous mass measurements are conducted and hourly mass concentrations are calculated and stored in the iSeries platform data logging system. The sampling equipment is contained within a climate-controlled shelter to minimize data loss during extreme weather conditions, as recommended by the manufacturer.

The monitoring of TSP concentrations mass loadings as micrograms/cubic metre ($\mu g/m^3$) is continuous, and hourly average concentrations are recorded. TSP monitoring is conducted continuously throughout the year. The analyses of temporal and spatial TSP trends support comparison between the measured particulate concentrations at the CB and at the A154 Dike. The readings at the CB are expected to be higher than those at the A154 Dike due the communication building's proximity to many of the diesel combustion sources (i.e., boilers and power house), the processing plant, and the run of mine (ROM) ore stockpiles. There is the possibility that episodic events in the region (e.g., a dust storm transporting airborne particulates) could result in higher measured particulate concentrations at the A154 Dike.

Where applicable, observations were adjusted by ERM using the methodology in the *Alberta Air Monitoring Directive Chapter 6: Ambient Data Quality* (Alberta Environment and Sustainable Resource Development 2016). For example, hourly average TSP concentrations that were between 0 and $-3 \mu g/m^3$ were adjusted to zero.

3. RESULTS

TSP results were compared to the Government of the Northwest Territories Department of Environment and Natural Resources (ENR) Guideline for Ambient Air Quality Standards in the Northwest Territories (GNWT 2014). ENR uses two standards for TSP:

1. 24-hr Average: 120 μg/m³; and

2. Annual Arithmetic Mean: 60 μg/m³.

Figures 3-1 and 3-2 displays the 24-hour average TSP concentrations for the CB station since January 1, 2017, and the A154 dike station since January 23, 2017, compared to the GNWT 2014 Standards. Table 3-1 summarizes the TSP results for the CB station since January 1, 2017. Table 3-2 summarizes the TSP results for the A154 dike station since January 23, 2017.

Table 3-1. Communication Building (CB) TSP Results

| | | TSP Concentration (μg/m³) | | | | |
|----------------------------------|---------------------------------|---------------------------|-----------------------|-----------------------|---|--------------------------------------|
| Interval | Station | Mean | Max. Daily Mean | Min. Daily Mean | No. of Daily TSP Exceedances (>120 µg/m³) | Valid Days†/ Total No. of Days |
| January 1 to October 10, 2017 | Communications Building (CB) | 11.3 | 97.9 | 0.8 | 0 | 192/283 (68%) |

[†]Number of days with at least 18 (75%) hours of available hourly data (Alberta Environment and Sustainable Resource Development 2016).

Table 3-2. A154 Dike TSP Results

| | | TSP Concentration (μg/m³) | | | | |
|-----------------------------------|-----------|---------------------------|-----------------------|-----------------------|---|--------------------------------------|
| Interval | Station | Mean | Max. Daily Mean | Min. Daily Mean | No. of Daily TSP Exceedances (>120 µg/m³) | Valid Days†/ Total No. of Days |
| January 23 to October 10, 2017 | A154 Dike | 11.4 | 241.1 | 1.3 | 1 | 181/261 (69%) |

[†] Number of days with at least 18 (75%) hours of available hourly data (Alberta Environment and Sustainable Resource Development 2016).

The mean TSP concentrations of 11.3 and 11.4 $\mu g/m^3$ for the monitoring period(s) for the CB and A154 Dike respectively are relatively low compared to the annual mean standard (60 $\mu g/m^3$). During the monitoring period, the CB station did not exceed the 24-hour standard. The A154 Dike location did exceed the 24-hour standard, but the exceedance may be related to heavy smoke from nearby forest fires during the period in question (August 13 – 19).

Figure 3-1
Daily Mean TSP Readings - Communications Building,
January 1 to October 10, 2017



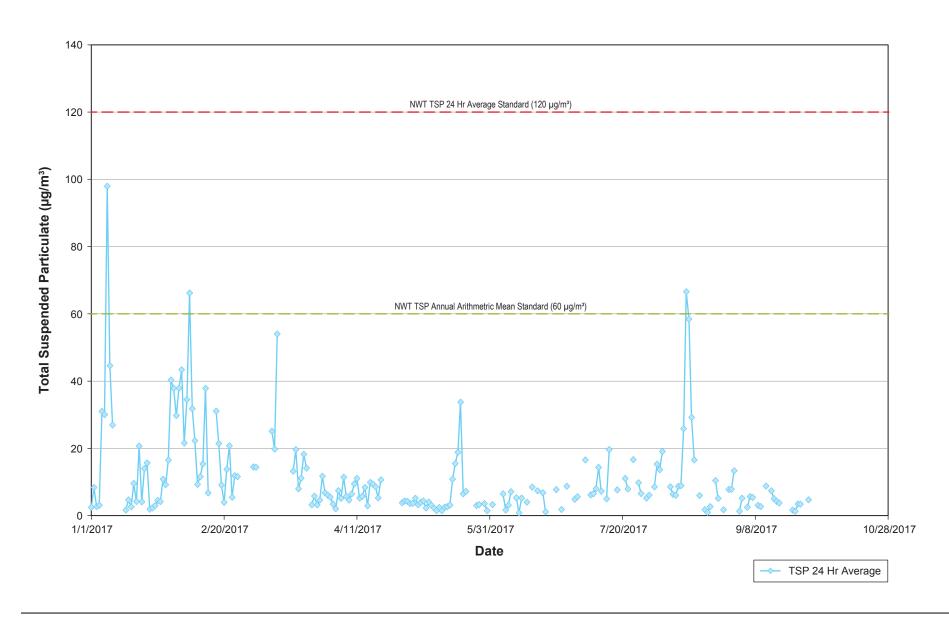
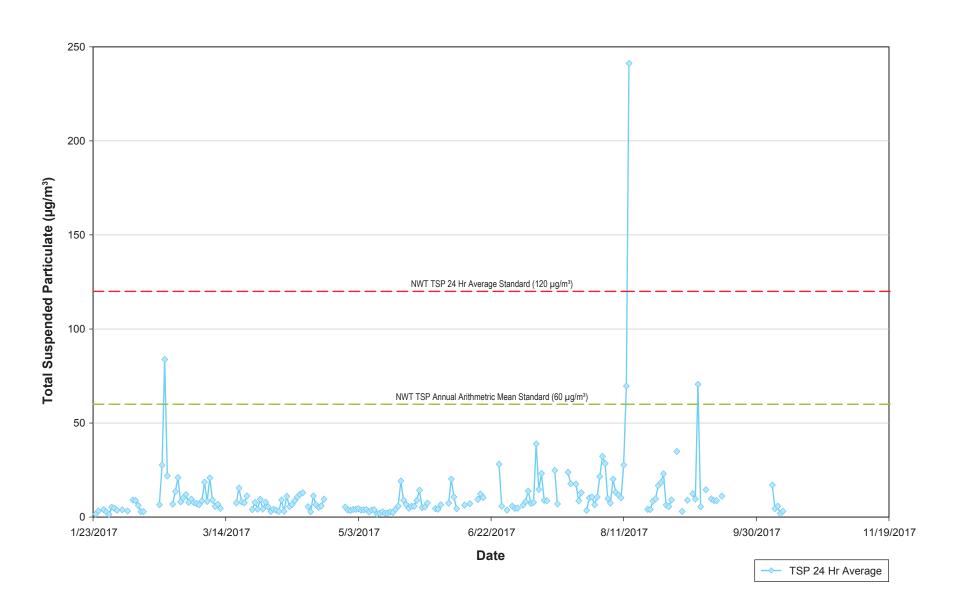


Figure 3-2 Daily Mean TSP Readings - A154 Dike, January 23 to October 10, 2017





Since the monitoring period(s) began, the CB Station had valid daily data approximately 68% (192 days) of the time and the A154 Dike had valid daily data approximately 69% (181 days) of the time. The valid data throughout the monitoring period have been decreasing which is indicative of malfunctioning monitors due to internal issues or maintenance and calibration being too infrequent or not being done correctly. The invalid data has been due to equipment malfunctions, missing or invalid data, accidental operator error and critical alarm status which stopped sampling due to extremely elevated levels of smoke in the air from the nearby forest fires. Data were also considered missing if less than 75% (i.e., 18 hourly measurements) of the observations within a day were valid due to sampler malfunctions or invalid data flag (Alberta Environment and Sustainable Resource Development 2016). Values on these days were not included in the arithmetic mean calculations.

The 5014i sampler manual states that the monitor's air temperature operating range is from -30°C to 50°C. Considering the valid hourly data, the sampled air was outside of the range (below -30°C) 12% of the time for the CB station and 19% of the time for the A154 Dike station. There is no obvious correlation between periods of missing data and periods of time below the -30°C threshold. The equipment is certified through the Environmental Protection Agency (EPA) and it is likely the equipment will operate satisfactorily outside of the sampled temperature range. However, the accuracy of the data is not guaranteed outside the range specified in the manual.

The Albert Air Monitoring Directive (AMD) has a data completeness goal of 90% on an annual basis. Both the CB and A154 Dike station are below this goal, and data completeness has been decreasing over the year. In particular, since May 22, 2017, there has been a significant increase in concentration values less than -3.0 μ g/m³ in both samplers. When reviewing hourly data, concentrations less than -3.0 μ g/m³ occurred 14% of the time between January 1 and October 10, 2017, at the CB analyzer and 12% of the time between January 23 and October 10, 2017, for the A154 dike analyzer. The manual states a possible cause as being a faulty inlet heater and beta counter. It is recommended to check the heater to ensure that it is operating, perform an auto detector calibration, and speak to a CD Nova or Thermo Scientific technician further about the issues.

An additional cause of the low data completeness for the CB unit might be the periods of time (~7% based on hourly data) when there was a filter tape change alarm. Specifically over 11 days in February and March 2017 and 8 days in October 2017, which occurred in conjunction with a possible faulty pump. A major cause of approximately 19 days of missing data from the A154 station was due to the inlet tube having been left disconnected from the sampler. There are additional days of unexplained missing data that could be from power outages.

Analyzer alarms were recorded in the raw data, at both the A154 Dike and CB station, since the start of the reporting period and include:

- Alarm code "e000 and c000", which indicates a vacuum/flow/flow pressure alarm. These
 alarms occur consistently during the first hour of the day when the filter tape change
 occurs and the vacuum is lost. This is indicative of normal operation of the analyzer.
- Alarm code "2", which indicates an alpha detection alarm/filter tape change alarm. This alarm code has been very infrequent in the A154 Dike sampler, but was evident over a

number of days in February, March and October in the CB sampler, and was the cause of a number of days of missing data.

- Alarm code "802", which indicates a barometric pressure alarm. This alarm code has been very infrequent and does not indicate a continuing issue with the analyzer at this time.
- Alarm code "200", which indicates a relative humidity (RH) alarm. Since the beginning of the reporting period(s), this alarm has become more frequent in both analyzers, with multiple days of data recording 100% humidity. This issue has been communicated to the vendor CD Nova. CD Nova has provided some suggestions which were listed in the previous memorandum and are reiterated here, including:
 - Reseat the cable at the back of the instrument;
 - Cycle the power on the instrument;
 - Update/reload the firmware;
 - Recalibrate the ambient RH sensor; and
 - Replace the sensor from the other instrument to see if the readings change.

The relative humidity value is used to control the heated inlet tube and the temperature of the sample coming into the measurement chamber, and could be related to the increase in negative values observed in the data. The RH sensor issue should be addressed as soon as possible as it may remedy the number of negative TSP concentration values observed.

- Alarm code "8000", which indicates a flow alarm. These are seen frequently when the filter tape exchange occurs.
- Alarm code "202 and 802", which indicates an ambient RH and barometric pressure alarm respectively. These are seen infrequently in both analyzers.

From the calibration records provided by site personnel, it has been observed that equipment checks and audits are occurring more frequently than in the past. If critical alarms are observed during the audits, then immediate action should be taken to remedy the issue to reduce downtime as much as possible. Due to the decrease in data completeness, continued negative values, and equipment malfunctions (tape change alarm, possible pump failures, etc.) it is recommended that site personnel increase the frequency of equipment verification audits relative to the current regime. This is an excellent practice to ensure high data quality and data completeness.

After observing the frequency of negative values in the data, possible pump issues and the decreasing data completeness, it is recommended to perform a complete maintenance and calibration regime to the entire system of the CB and A154 sampler by a certified technician.

ERM has been in contact with Thermo Scientific technical support. They have suggested a number of actions and some setting changes to the samplers that may reduce the number of negative values observed, and increase the percentage of data validity. See section 4 for their recommendations.

4. **RECOMMENDATIONS**

Based on the ERM QA/QC of DDMI TSP data, ERM recommends the following:

- Continue to follow recommendations provided in the *Total Suspended Particulates Sampler Support Memorandum* (ERM 2016) and use the sampler manual as a reference for more detailed information.
- Continue to use the updated DDMI TSP Sampler Standard Operating Procedures (SOP; DDMI 2016) for verification intervals, which include:
 - Monthly audit for ambient temperature, ambient RH, ambient pressure, flow check, leak check, and integrity of filter spot. If any items are out of the manufacturers specification for audit/verification, then a complete calibration of the equipment should be performed;
 - Annual calibration for ambient temperature, ambient RH, ambient pressure, vacuum flow, vacuum pressure, and flow check; and
 - Quarterly calibration of the auto detector calibration, and mass calibration.
- Perform preventative maintenance on the samplers based on the manufacturer's instructions as outlined in the DDMI TSP Sampler SOP (ERM 2016) and the sampler manual, which include:
 - Monthly cleaning inlet and sample tube assembly; and
 - Annual pump rebuilds.
- Confirm the inlet heater is operational and perform a detector calibration and contact CD
 Nova or Thermo Scientific about possible reasons behind the high amount of negative
 values observed in the data.
- Maintain all audit, calibration and maintenance records at the Mine.
- Complete calibration and maintenance log sheets.
- Increase the frequency of the audits and verification from quarterly to monthly to achieve a higher data completeness percentage and to ensure sampler and the ambient monitoring parameters (temp/RH) are operating within their operating ranges.
- Perform a complete maintenance regime and a full calibration of the CB and A154 sampler. It is recommended that this be performed by a qualified technician.
- Record if any power outages are indicated by the sampler.
- Check data from the monitors on a more frequent basis to identify instrumental malfunctions and alarms in a more timely manner.

It should be noted that if the sampler is out of any of the specified ranges during an audit, a calibration of the sampler will be required.

Table 4-1 summarizes the audits, calibrations, and frequency to perform the specific tasks and maintenance. This is recommended to continue to ensure the samplers are fully operational and to achieve the minimum of 90% data completeness goal of the AMD.

Table 4-1. DDMI TSP Sampler Audit and Calibration Schedule

| TSP Sampler Parameter/Component | Audit Frequency | Calibration / Maintenance Frequency |
|--|-----------------|-------------------------------------|
| Replace Filter Tape | N/A | Upon 10% Remaining Alarm |
| Clean Air Inlet System | N/A | Monthly |
| Rebuild Vacuum Pump | N/A | Every 12 to 18 Months |
| Clean Ambient Temperature/Relative Humidity Shield and Assembly | N/A | Annually |
| Ambient Temperature | Monthly | Annually |
| Ambient Pressure | Monthly | Annually |
| Flow | Monthly | Annually |
| Leak Check | Monthly | N/A |
| Auto Mass coefficient | N/A | Quarterly |
| Auto Detector | N/A | Quarterly |
| Streamline Pro | N/A | Annually |

It should be noted that the audit and calibration frequency has increased. Unfortunately, these actions have not had a positive influence on the data. Thermo Scientific has suggested a few actions that could alleviate the data completeness, and include:

- A complete calibration including the mass foil and detector calibration, and complete maintenance regime completed on each sampler; and
- Increase the frequency of audits and leak checks beyond the manufacturer recommendations.

Also, in order to troubleshoot what might be causing some of the issues, they recommend making the following changes to one of the samplers:

- Change the volumetric conditions (temperature and pressure) that the sampler is compensating for, to standard conditions (25°C and 1 atmosphere or 760 mmHg) from actual. This can be done by going into: Instrument Controls>Volumetric Conditions> Compensation, and then change to Std from Actual, which should be 25°C and 760 mmHg.
- Check what the settings under data treatment are, and if data treatment is averaged then
 it should be changed to current. Under Instrument Controls>Datalogger Settings> SREC
 or LREC (whichever record you download)>Configure Datalogger>Data
 Treatment>Change from Avg to Cur (current):
 - The Data Treatment screen is used to select the data type for the selected record type: whether the data should be averaged over the interval, the minimum or maximum measured during the interval, or the current value (last value measured). Data treatment does not apply to all data, just to the concentration measurement. All other data points log the current value at the end of the interval.
 - Note this feature is found in all iSeries instruments, but it is recommended that the
 data type be set to ONLY the current value (cur), as the datalogging averaging is
 done in addition to the normal concentration averaging.

5. CONCLUSION

ERM performed the following work, which is the basis for this memo:

- Reviewed and conducted QA/QC of the available data to identify possible sources of sampler error;
- Provided recommendations to improve data completeness and ensure proper maintenance and calibrations are conducted; and
- Record if there are any power outages recorded by the CB analyzer.

For the current reporting period(s), there was one instance where the TSP mean daily average was greater than the 24-hr mean standard ($120~\mu g/m^3$) at either the CB station. This exceedance was observed during very high levels of particulate from forest fires near to the Mine and is most likely related to that, and not an instance of increased particulates due to mine operations. The running mean for the period of reporting for the CB and A154 stations are 11.3 and 11.4 $\mu g/m^3$, respectively. Both analyzers are showing data completeness of less than 90% and a complete calibration and maintenance regime of the samplers by a qualified technician is recommended along with an increase in the verification audits and calibrations of the analyzers until the data completeness is shown to be consistently over 90%.

The primary recommendations from this review are:

- Complete maintenance and calibration of both samplers;
- An increase in the verification/audit, leak check and calibration regime; and
- Make the recommended troubleshooting changes to the samplers as recommended by Thermo Scientific.

| Prepared by: | | |
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| Atmospheric Scientist | | |
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| Andres Soux, M.Sc. | | |
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- Government of the Northwest Territories. 2014. *Guideline for Ambient Air Quality Standards in the Northwest Territories*. http://www.enr.gov.nt.ca/sites/enr/files/guidelines/air_quality_standards_guideline.pdf.

Appendix B

Total Suspended Particulates (TSP) Biannual Data Memorandum (dated June 6, 2018; includes Oct. 1, 2017 to May 15, 2018 data)

DIAVIK DIAMOND MINE

2017 Environmental Air Quality Monitoring Report



Memorandum

Refer to File: 0.1_Diavik TSP Sampler Memo.docx

Date: June 6, 2018

To: Sean Sinclair, Superintendent - Environment - HSE

From: Trevor Newton, Atmospheric Scientist

Cc: Carol Adly, Project Manager

Marc Wen, Partner In Charge

Subject: Total Suspended Particulates (TSP) Biannual Data Memorandum

1. INTRODUCTION

Diavik Diamond Mine (2012) Inc. (DDMI) installed two continuous total suspended particulate (TSP) samplers at the Diavik Diamond Mine (Mine) in accordance with their Environmental Air Quality Monitoring Plan (EAQMP; DDMI 2013) in June 2013. The locations of the monitors were selected based on proximity to the Mine boundary, with careful consideration of the TSP results from the updated air dispersion modelling assessment, and in consideration of the availability of power (DDMI 2013).

In February 2016, DDMI requested that ERM initiate a trip to the Property to perform maintenance and troubleshoot operational issues on the two TSP samplers at the Mine. It was determined that the TSP sampler located near the A154 dike was in need of offsite repairs and was sent to the vendor (CD Nova). Remote downloads and historical data analysis showed that specific alarms and data anomalies have been frequent. The vendor of the TSP samplers, CD Nova, was contracted by DDMI to facilitate troubleshooting, calibrate the instruments, and train ERM and DDMI employees on the maintenance and calibration of the samplers. A summary of the completed work can be found in the *Total Suspended Particulates Sampler Support Memorandum* (ERM 2016).

DDMI received the repaired A154 dike sampler at the beginning of July 2016. After a period of two months of sampling, it was determined that there were continued operational issues with the sampler and it was returned to CD Nova for repair. The A154 dike sampler was received from CD Nova at the beginning of January 2017 and initiated sampling on January 23, 2017 and operated well until December 29, 2017. No data have been collected from the A154 dike sampler after December 29, 2017.

This memorandum provides a summary of the data collected from October 1, 2017 through May 15, 2018 from the Communications Building (CB) TSP sampler and recommendations for ongoing maintenance and servicing.

2. METHODS

2.1 MONITORING LOCATION

TSP monitoring in 2018 is undertaken at one location: within the Communications Building (CB) adjacent to the accommodations complex. The site was selected based on power requirements, proximity to the boundary of the Mine footprint, and the results of the updated air dispersion modelling assessment. The approximate location of the DDMI TSP station is presented in Table 2.1-1.

Table 2.1-1. DDMI TSP Stations UTM Coordinates¹

| Station | Zone | Metres East | Metres North |
|---------|------|-------------|--------------|
| СВ | 12W | 534,460 | 7,150,847 |

¹ World Geodetic System 1984 (WGS-84)

2.2 MONITORING METHODS

The TSP monitor is a Thermo Fisher Scientific 5014i instrument that measures TSP using beta attenuation. Ambient air is drawn through a subsonic orifice at a controlled flow rate; continuous mass measurements are conducted and hourly mass concentrations are calculated and stored in the iSeries platform data logging system. The sampling equipment is contained within a climate-controlled shelter to minimize data loss during extreme weather conditions, as recommended by the manufacturer.

The monitoring of TSP concentrations mass loadings as micrograms/cubic metre ($\mu g/m^3$) is continuous, and hourly average concentrations are recorded. TSP monitoring is conducted continuously throughout the year.

Where applicable, observations were adjusted by ERM using the methodology in the *Alberta Air Monitoring Directive Chapter 6: Ambient Data Quality* (Alberta Environment and Sustainable Resource Development 2016). For example, hourly average TSP concentrations that were between 0 and $-3 \,\mu\text{g/m}^3$ were adjusted to zero.

3. RESULTS

TSP results were compared to the Government of the Northwest Territories Department of Environment and Natural Resources (ENR) Guideline for Ambient Air Quality Standards in the Northwest Territories (GNWT 2014). ENR uses two standards for TSP:

1. 24-hr Average: $120 \,\mu g/m^3$; and

2. Annual Arithmetic Mean: 60 µg/m³.

Figure 3-1 displays the 24-hour average TSP concentrations for the CB station since October 1, 2017, compared to the GNWT 2014 Standards. Table 3-1 summarizes the TSP results for the CB station since October 1, 2017.

Table 3-1. Communication Building (CB) TSP Results

| | | TSP Concentration (μg/m³) | | | | |
|------------------------------------|---------------------------------|---------------------------|-----------------------|-----------------------|---|--------------------------------------|
| Interval | Station | Mean | Max. Daily Mean | Min. Daily Mean | No. of Daily TSP Exceedances (>120 µg/m³) | Valid Days†/ Total No. of Days |
| October 1, 2017 to May 15, 2018 | Communications Building (CB) | 2.6 | 13.1 | 0.3 | 0 | 192/227 (85%) |

†Number of days with at least 18 (75%) hours of available hourly data (Alberta Environment and Sustainable Resource Development 2016).

The mean TSP concentration of 2.6 μ g/m³ for the monitoring period is relatively low compared to the annual mean standard (60 μ g/m³). During the monitoring period, the CB station did not exceed the 24-hour standard.

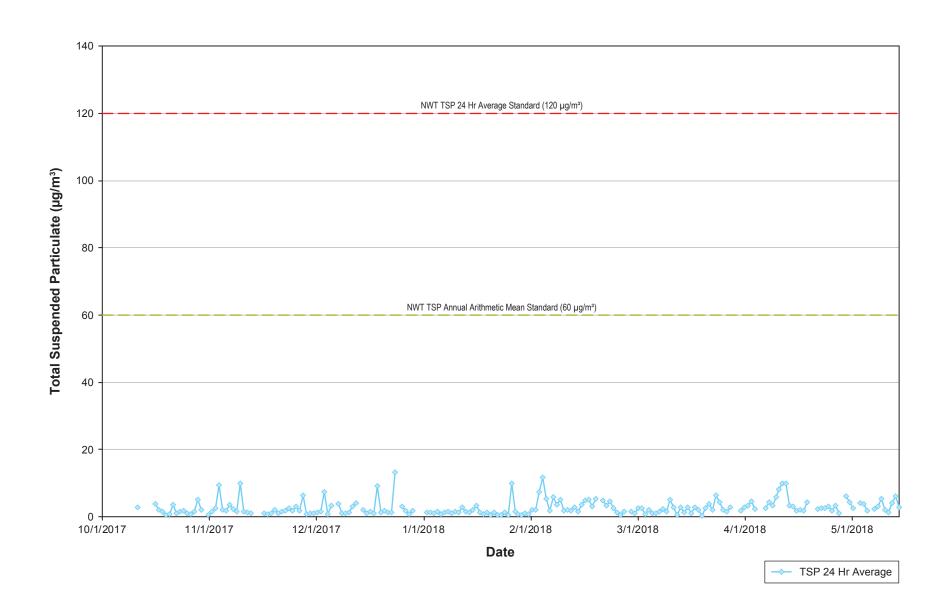
During the current monitoring period (Oct. 1, 2017 – May 15, 2018), the CB Station had valid daily data approximately 85% (192 days) of the time. ERM's previous memo, dated October 23, 2017, noted that the valid data throughout the monitoring period showed a decreasing trend, which was deemed indicative of malfunctioning monitors due to internal issues or maintenance and calibration being too infrequent or not being done correctly. However, that decreasing trend is not apparent during the current monitoring period. As before, the invalid data have been due to equipment malfunctions, missing or out-of-range values, and accidental operator error. Daily average data were also considered missing if less than 75% (i.e., 18 hourly measurements) of the observations within a day were valid due to sampler malfunctions or invalid data flags (Alberta Environment and Sustainable Resource Development 2016). Values on these days were not included in the arithmetic mean calculations.

The 5014i sampler manual states that the monitor's air temperature operating range is from -30°C to 50°C. Considering the valid hourly data, the sampled air was outside of the range (below -30°C) 13% of the time. There is no obvious correlation between periods of missing data and periods of time below the -30°C threshold. The equipment is certified through the Environmental Protection Agency (EPA) and it is likely the equipment will operate satisfactorily outside of the recommended temperature range. However, the accuracy of the data is not guaranteed outside the range specified in the manual.

The Alberta Air Monitoring Directive (AMD) has a data completeness goal of 90% on an annual basis. The CB station is below this goal, although data completeness overall has increased since the October 2017 memo. However, in recent months, there has been a trend of increasing frequency of observed hourly concentrations less than -3.0 μ g/m³. When reviewing hourly data, concentrations less than -3.0 μ g/m³ occurred 8% of the time between October 1 and December 31, 2017, 7% of the time between January 1 and February 28, 2018, and 13% of the time between March 1 and May 15, 2018. The manual states a possible cause as being a faulty inlet heater and beta counter. It is recommended to check the

Figure 3-1
Daily Mean TSP Readings - Communications Building October 1, 2017 to May 15, 2018





heater to ensure that it is operating, perform an auto detector calibration, and speak to a CD Nova or Thermo Scientific technician further about the issues.

Analyzer alarms were recorded in the raw data since the start of the reporting period and include:

- Alarm code "e000 and c000", which indicates a vacuum/flow/flow pressure alarm. These
 alarms occur consistently during the first hour of the day when the filter tape change occurs
 and the vacuum is lost. This is indicative of normal operation of the analyzer.
- Alarm code "2", which indicates an alpha detection alarm/filter tape change alarm. This
 alarm code was evident over a number of days in October in the CB sampler, and was the
 cause of a number of days of missing data.
- Alarm code "802", which indicates a barometric pressure alarm. This alarm code has been very infrequent and does not indicate a continuing issue with the analyzer at this time.
- Alarm code "200", which indicates a relative humidity (RH) alarm. Since the beginning of
 the reporting period(s), this alarm has become more frequent, with multiple days of data
 recording 100% humidity. This issue has been communicated to the vendor CD Nova. CD
 Nova has provided some suggestions which were listed in the previous memorandum and
 are reiterated here, including:
 - Reseat the cable at the back of the instrument;
 - Cycle the power on the instrument;
 - Update/reload the firmware;
 - Recalibrate the ambient RH sensor; and
 - Replace the RH sensor with the RH sensor from the other instrument to see if the readings change.

The relative humidity value is used to control the heated inlet tube and the temperature of the sample coming into the measurement chamber, and could be related to the increase in negative values observed in the data. The RH sensor issue should be addressed as soon as possible as it may reduce the number of negative TSP concentration values observed.

- Alarm code "8000", which indicates a flow alarm. These are seen frequently when the filter tape exchange occurs.
- Alarm code "202 and 802", which indicates an ambient RH and barometric pressure alarm respectively. These are seen infrequently.

From the calibration records provided by site personnel, it has been observed that equipment checks and audits are occurring more frequently than in the past. If critical alarms are observed during the audits, then immediate action should be taken to remedy the issue to reduce downtime as much as possible. Due to the decrease in data completeness, continued negative values, and equipment malfunctions (tape change alarm, possible pump failures, etc.) it is recommended that site personnel increase the frequency of equipment verification audits relative to the current regime. This is an excellent practice to ensure high data quality and data completeness.

After observing the frequency of negative values in the data and possible pump issues, it is recommended to perform a complete maintenance and calibration regime to the entire system of the CB sampler by a certified technician.

ERM has been in contact with Thermo Scientific technical support. They have suggested a number of actions and some setting changes to the sampler that may reduce the number of negative values observed, and increase the percentage of data validity. See section 4 for their recommendations.

4. **RECOMMENDATIONS**

Based on the ERM QA/QC of DDMI TSP data, ERM recommends the following:

- Continue to follow recommendations provided in the Total Suspended Particulates Sampler Support Memorandum (ERM 2016) and use the sampler manual as a reference for more detailed information.
- Continue to use the updated DDMI TSP Sampler Standard Operating Procedures (SOP; DDMI 2016) for verification intervals, which include:
 - Monthly audit for ambient temperature, ambient RH, ambient pressure, flow check, leak check, and integrity of filter spot. If any items are out of the manufacturer's specification for audit/verification, then a complete calibration of the equipment should be performed;
 - Annual calibration for ambient temperature, ambient RH, ambient pressure, vacuum flow, vacuum pressure, and flow check; and
 - Quarterly calibration of the auto detector calibration, and mass calibration.
- Perform preventative maintenance on the sampler based on the manufacturer's instructions as outlined in the DDMI TSP Sampler SOP (ERM 2016) and the sampler manual, which include:
 - Monthly cleaning inlet and sample tube assembly; and
 - Annual pump rebuilds.
- Confirm the inlet heater is operational and perform a detector calibration and contact CD
 Nova or Thermo Scientific about possible reasons behind the high amount of negative
 values observed in the data.
- Maintain all audit, calibration and maintenance records at the Mine.
- Complete calibration and maintenance log sheets.
- Increase the frequency of the audits and verification from quarterly to monthly to achieve a higher data completeness percentage and to ensure that the sampler and the ambient monitoring parameters (temperature/RH) are operating within their operating ranges.
- Perform a complete maintenance regime and a full calibration of the CB sampler. It is recommended that this be performed by a qualified technician.
- Record if any power outages are indicated by the sampler.

• Check data from the monitor on a more frequent basis to identify instrument malfunctions and alarms more quickly.

It should be noted that if the sampler is out of any of the specified ranges during an audit, a calibration of the sampler will be required.

Table 4-1 summarizes the audits, calibrations, and frequency to perform the specific tasks and maintenance. This is recommended to continue to ensure that the sampler is fully operational and to achieve the minimum of 90% data completeness goal of the AMD.

Table 4-1. DDMI TSP Sampler Audit and Calibration Schedule

| TSP Sampler Parameter/Component | Audit Frequency | Calibration / Maintenance Frequency |
|--|-----------------|-------------------------------------|
| Replace Filter Tape | N/A | Upon 10% Remaining Alarm |
| Clean Air Inlet System | N/A | Monthly |
| Rebuild Vacuum Pump | N/A | Every 12 to 18 Months |
| Clean Ambient Temperature/Relative Humidity Shield and Assembly | N/A | Annually |
| Ambient Temperature | Monthly | Annually |
| Ambient Pressure | Monthly | Annually |
| Flow | Monthly | Annually |
| Leak Check | Monthly | N/A |
| Auto Mass coefficient | N/A | Quarterly |
| Auto Detector | N/A | Quarterly |
| Streamline Pro | N/A | Annually |

It should be noted that the audit and calibration frequency has increased. Unfortunately, these actions have not had a positive influence on data completeness. Thermo Scientific has suggested a few actions that could improve data completeness, and include:

- A complete calibration including the mass foil and detector calibration, and complete maintenance regime completed on the sampler; and
- Increase the frequency of audits and leak checks beyond the manufacturer's recommendations.

Also, in order to troubleshoot what might be causing some of the issues, they recommend making the following changes to the sampler:

- Change the volumetric conditions (temperature and pressure) that the sampler is compensating for, to standard conditions (25°C and 1 atmosphere or 760 mmHg) from actual. This can be done by going into: Instrument Controls>Volumetric Conditions> Compensation, and then change to Std from Actual, which should be 25°C and 760 mmHg.
- Check what the settings under data treatment are, and if data treatment is averaged then it should be changed to current. Under Instrument Controls>Datalogger Settings> SREC or LREC (whichever record you download)>Configure Datalogger>Data Treatment>Change from Avg to Cur (current):

- The Data Treatment screen is used to select the data type for the selected record type: whether the data should be averaged over the interval, the minimum or maximum measured during the interval, or the current value (last value measured). Data treatment does not apply to all data, just to the concentration measurement. All other data points log the current value at the end of the interval.
- Note this feature is found in all iSeries instruments, but it is recommended that the data type be set to ONLY the current value (cur), as the datalogging averaging is done in addition to the normal concentration averaging.

5. CONCLUSION

ERM performed the following work, which is the basis for this memo:

- Reviewed and conducted QA/QC of the available data to identify possible sources of sampler error;
- Provided recommendations to improve data completeness and ensure proper maintenance and calibrations are conducted; and
- Record if there are any power outages recorded by the CB analyzer.

The mean TSP concentration for the current monitoring period for the CB station is $2.6~\mu g/m^3$. The analyzer shows data completeness of less than 90% and a complete calibration and maintenance regime of the sampler by a qualified technician is recommended along with an increase in the verification audits and calibrations of the analyzer until the data completeness is shown to be consistently over 90%.

The primary recommendations from this review are:

- Complete maintenance and calibration of the sampler;
- An increase in the verification/audit, leak check and calibration regime; and
- Make the recommended troubleshooting changes to the samplers as recommended by Thermo Scientific.

| Pre | pared | by: |
|-----|-------|-----|
| Pre | parea | by: |

signature removed

Trevor Newton, M.Sc. Atmospheric Scientist

Reviewed by:

signature removed

Andres Soux, M.Sc. Principal Consultant

REFERENCES

- Alberta Environment and Sustainable Resource Development. 2016. *Air Monitoring Directive Chapter 6: Ambient Data Quality*. http://aep.alberta.ca/air/legislation/air-monitoring-directive/default.aspx.
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Appendix C TSP Monitoring Station Calibration and Maintenance Records DIAVIK DIAMOND MINE 2017 Environmental Air Quality Monitoring Report

SERVICE REPORT

Thermo Fisher Scientific

27 Forge Parkway Franklin, MA. 02038

| Phone: 866-282-043 |
|--------------------|
| Fax: 508-520-2800 |

| RA# | DATE COMPLETED |
|----------------------------|--------------------|
| RA00065153 RG2-MA-16956 | 12/17/2016 5:02 AM |
| CUSTOMER | CONTACT PHONE |
| CD Nova Head OfficeCD Nova | (604) 430-5612 |
| CONTACT | CONTACT EMAIL |
| Dan Molloy | dmolloy@cdnova.com |
| MODEL | SERIAL NUMBER |
| 5014I | 5014I203141210 |

REPORT SUBMITTED BY

Contact: Chuck Costa

Email: chuck.costa@thermofisher.com

PRIORITY: Standard **SUBJECT:** repair and calibration **REPAIR TYPE:** Time and Material

DESCRIPTION OF SERVICE REQUIRED: unit leaks and has been creating metal filings while advancing the tape. please consult with Chris Wilson on the repair and provide an estimate before proceeding with repairs and calibration

CONTAMINATED/HAZARDOUS: No DECONTAMINATION METHOD: N/A

ACCESSORIES RECEIVED: Pump / Picnic Cooler

PHYSICAL INSPECTION (inspected for damage, missing items, pm required, cleanliness, and accuracy)

✓ Compare unit to RA detail ✓ Labeling ✓ Hardware

INSTRUMENT AS FOUND: Unit received in fair condition- ready to power up and begin NIST testing.

REPAIR NOTES: Unit received and staged. The sample path leak was confirmed due to binding of mechanism during filter changes and a faulty lower chamber O-ring. Customer complained of metal filings.

Removed and cleaned the sample chamber. Corrected leak by replacing the O-ring seal within the lower portion of the sample chamber. The chamber was binding a bit due to misalignment. This was corrected during servicing and the function of the chamber during filter changes is now smoothe and a proper seal results. Ran multiple filter changes and encountered no issues and the leak has been eliminated upon re-alignment of the chamber. Leak checks are passed with no problems. (With leak check adapter in place the flow is 16.67 LPM with vac reading of 113.6mm Hg, and with 2 adapters the flow is 16.46 LPM with vac reading of 159.1 mmHg).

Audited/calibrated the temp, pressure and RH sensors and performed flow calibration. Unit functions normally with no problems. Instrumet is running with no unresolved errors or status conditions.

INSTRUMENT AS LEFT: Instrument is functioning normally with no unresolved errors or status conditions

TEST EQUIPMENT AND SOURCES USED: Delta Cal Volumetric Air Flow Calibrator, Panametrics MC Series Hygrometer, Druck DP 705 Digital Pressure Indicator, Fluke 532 digital thermometer, Tektronix DMM916 True RMS Meter, Dwyer Series 473 Digital Manometer.

All measurement standards are calibrated at scheduled intervals by the National Institute of Standards and Technology (NIST), or against certified standards, which are traceable to the National Institute of Standards and Technology, formally the National Bureau of Standards (NBS). Calibration of customer equipment is performed with appropriate environmental controls, as required.

PRE-BUTTON UP INSPECTION

- Instrument interior clean and free of debris.
- All hardware is secured. (Ex. Screws, connectors, tubing, etc.)
- Cables secured and Tie wrapped where applicable
- No remaining loose hardware within the instrument closure.

FINAL QC CHECKLIST

- Instrument exterior clean.
- Serial Number/Voltage Labels intact and legible.

ThermoFisher SCIENTIFIC

- All received customer accessories accounted for and clearly identified.

- ✓ All received customer accessories accounted for and crearly the
 ✓ Instrument turns on.
 ✓ Calibration labels/Report with instrument where applicable.
 ✓ Billing and Shipping information properly indicated on Order.
 ✓ Quantities correct and complete on Order.



| | | Q Unit Calibration Sheet | | | |
|-----------------|---------------------|--------------------------|---------------|----|---|
| | | No: | ENVI-622-1031 | | |
| Area: | 8000 | Revision: | 0 | | |
| Effective Date: | 2016-October 25 | By: | D. Dul | | |
| Task: | AQ Unit Calibration | | | | |
| | | Page: | 1 | of | 1 |

Customer Name DMAVIK
Instrument Location Communication Shack
Instrument Serial Number 501400919211
Date 29-Dec-2016 JG

| | Description | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to | Comments |
|-----------|------------------------------|-----------|----------|----------------------|-----------------------|------------------|-------------|-------------------|-----------------------|--------------------------|--|
| 1 Point | Ambient Air Temperature | | | 0.00 | +/- 0.2°C | | | 0.00 | | | |
| 1 Point | Ambient Relative Humidity | | | #DIV/0! | | | | #DIV/0! | | | |
| 1 Point | Flow Temperature | | | | +/- 0.2°C | | | 0.00 | | | |
| 1 Point | Barometer Pressure | | | | +/- 10 mmHg | | | 0.00 | | | |
| 1 Point | Volumetric Flow Rate | | | #DIV/0! | +/- 2% | | | #DIV/0! | | | |
| | | | | | | | | | | | |
| Calibrate | Vacuum Pressure Span | | | #DIV/0! | 50-70 mmHg | | | #DIV/0! | | | |
| Calibrate | Flow Pressure Span | | | #DIV/0! | 20-30 mmHg | | | #DIV/0! | | | |
| Calibrate | Auto Flow Calibration | 16.69 | 17.54 | 4.85% | +/- 2% | Fail | 17.54 | 0.00% | 16.67 | 17.54 | After adjusting to 17.54 the set point stabalized to 16.67 again after a couple minutes. Stream Pro has not been calibrated. I only realized this after doing the calibration. |
| | | | | | | | | | | | |
| | Auto Detector Calibration | | | | | | | | | | |
| | Initial High Voltage | | | | | nal High Voltage | | | | | |
| | Initial Beta Count | | | | | inal Beta Count | | | | | |
| | Final Beta | | | | | 8000-13000 | | | | | |
| | | | | | | | | | | | |
| | Leak Test | | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | | |
| | Start Value FLOW (AQ Unit) | | LPM | | | | | | | | |
| | Start Value FLOW (SLR Pro) | | LPM | | | | | | | | |
| | Leak Check Adapter VAC | | mmHg | | | | | | | | |
| | Check Adapter FLOW (AQ Unit) | | LPM | | | | | | | | |
| Leak | Check Adapter FLOW (SLR Pro) | | LPM | | | | | | | | |
| | Flow Variance | #DIV/0! | LPM | | +/-2.5% | | | | | | |
| | | | | | | | | | | | |
| Auto N | lass Coefficient Calibration | Completed | | | | | | | | | |

| tandards Used | Description | S/N | Calibration Date | Quarterly | |
|-------------------------|--------------------------------|--------------------|------------------|-----------|---|
| Flow | Stream Line Pro | HL130101 | 24-Jan-13 | | 1 |
| Temperature | Stream Line Pro | T130101 | 24-Jan-13 | | L |
| Pressure | Stream Line Pro | HL130101 | 24-Jan-13 | | L |
| Temperature | Reed Thermo-Hygrometer | 130403443 | 17-Apr-15 | | ſ |
| Relative Humidity | Reed Thermo-Hygrometer | 130403443 | 17-Apr-15 | | |
| Manometer | | | | | ſ |
| | | | | | ı |
| Technical Data | Thermo Manual P/N 106428-00 da | | | | L |
| | Thermo Fisher Procedure Number | 106430-00 revision | 1A | | |
| | | | | | |
| Firmware updated to: | | | | | |
| Calibration Complete By | JG | | | | |
| Calibration Complete by | 33 | | | | L |
| Signature: | | | | | |
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| | | AQ Unit Calibration Sheet | | | | |
|-----------------|---------------------|---------------------------|-----------|---------------|----|---|
| | | | No: | ENVI-622-1031 | | |
| Area: | 8000 | | Revision: | 0 | | |
| Effective Date: | 2016-October 25 | | By: | D. Dul | | |
| Task: | AQ Unit Calibration | | | | | |
| | | | Page: | 1 | of | 1 |
| | | | | | | |

Customer Name
Instrument Location
Instrument Serial Number
Date

| | Description | As Found | Standard | As Found | Allowable | Outcome | Adjusted to | Final | Set Point as | Set Point |
|-----------|--------------------------------|-----------|----------|----------|-------------|------------------|-------------|----------|--------------|-------------|
| | | | | Variance | Variance | | • | Variance | Found | Adjusted to |
| 1 Point | Ambient Air Temperature | 7.4 | 7.5 | | +/- 0.2°C | Pass | 7.5 | 0.00 | -0.02 | -0.03 |
| 1 Point | Ambient Relative Humidity | 91 | 93 | | +/- 2% | Pass | 93 | 0.00% | -0.05 | -2.2 |
| 1 Point | Flow Temperature | 19.6 | 19.8 | | +/- 0.2°C | Pass | 19.7 | -0.10 | 0.8 | 0.6 |
| 1 Point | Barometer Pressure | 762.6 | 755.6 | | +/- 10 mmHg | Pass | 755.6 | 0.00 | 0 | 0 |
| 1 Point | Volumetric Flow Rate | 24.4 | 24.1 | 1.24% | +/- 2% | Pass | 24.1 | 0.00% | -2.3 | -2.3 |
| | | | | | | | | | | |
| Calibrate | Vacuum Pressure Span | 58.9 | 59.2 | 0.01 | 50-70 mmHg | Pass | 59.2 | 0.00% | | |
| Calibrate | Flow Pressure Span | 24.4 | 24.1 | | 20-30 mmHg | Pass | 24.1 | 0.00% | | |
| Calibrate | Auto Flow Calibration | 24.4 | 24.1 | | +/- 2% | PdSS | 24.1 | #DIV/0! | - | |
| Calibrate | Auto Flow Calibration | | | #DIV/U: | T/- 270 | | | #DIV/0: | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | | | | Fi | nal High Voltage | | | | |
| | Initial Beta Count | | | | | Final Beta Count | | | | |
| | Final Beta | | | | | 8000-13000 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | 69.6 | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.67 | LPM | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.63 | LPM | | | | | | | |
| | Leak Check Adapter VAC | 121.4 | mmHg | | | | | | | |
| Lea | k Check Adapter FLOW (AQ Unit) | 16.65 | LPM | | | | | | | |
| Lea | k Check Adapter FLOW (SLR Pro) | 16.65 | LPM | | | | | | | |
| | Flow Variance | 0.12% | LPM | | +/-2.5% | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Auto | Mass Coefficient Calibration | Completed | Yes | | | | | | | |

| ndards Used | Description | S/N | Calibration Date | Quarterly | Annually | |
|------------------------|---------------------------------|--------------------|------------------|-----------|------------|--|
| N | Stream Line Pro | HL130101 | 24-Jan-13 | | Yes | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Rate |
| perature | Stream Line Pro | T130101 | 24-Jan-13 | | Yes | Auto Detector Calibration |
| ssure | Stream Line Pro | HL130101 | 24-Jan-13 | | Yes | Leak Check |
| mperature | Reed Thermo-Hygrometer | 130403443 | 17-Apr-15 | | | Clean Inlet Assemblies & Sample Tubels |
| ative Humidity | Reed Thermo-Hygrometer | 130403443 | 17-Apr-15 | | | Check Cam (grease as needed) |
| nometer | | | | | Yes | Calibrate AmTemp |
| | | | | | Yes | Calibrate RH |
| chnical Data | Thermo Manual P/N 106428-00 da | ated 2 April 2014 | | | Yes | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number | r 106430-00 revisi | on A | | Yes | Calibrate Baro Pressure |
| | | | | | Yes | Auto Flow Calibration |
| rmware updated to: | | | | | Yes | Calibrate Vacuum Pressure Span |
| alibration Complete By | Justin Grandjambe and Kyla Gray | | | | Yes Yes | Calibrate Flow Pressure Span Auto Mass Calibration |
| | | | | | | |
| gnature: | | | | | | |
| | | cc | OMMENTS | | | |
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Calibrate Calibrate Calibrate

| | AQ Un | t Calibration Sheet | | | |
|-----------------|---------------------|---------------------|---------------|------|---|
| | | No: | ENVI-622-1031 | | |
| Area: | 8000 | Revision: | 0 | | |
| Effective Date: | 2016-October 25 | Ву: | D. Dul | | |
| Task: | AQ Unit Calibration | <u> </u> | | | |
| | | Page: | 1 | of _ | 1 |
| | | • | | | |

 Customer Name
 DIAVIK

 Instrument Location
 Communication Shack

 Instrument Serial Number
 5014(203191211

 Date
 119-Jul-2017

| Description | As Found | Standard | As Found Variance | Allowable Varian | ce Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to | Comments |
|-----------------------------------|-----------|----------|----------------------|------------------|--------------------|-------------|-------------------|-----------------------|--------------------------|---|
| Ambient Air Temperature | 13.9 | 13.7 | | +/- 0.2°C | Pass | | 13.70 | | | |
| Ambient Relative Humidity | 43.6 | 39.86 | | +/- 2% | Fail | 41.2 | 3.36% | -2.2 | -0.4 | The unit has an offset point. I'm assuming it is the same as set point |
| Flow Temperature | 18.8 | 18 | | +/- 0.2°C | Pass | | -18.00 | | | |
| Barometer Pressure | 758.4 | 757.6 | | +/- 10 mmHg | Pass | | -757.60 | | | |
| Volumetric Flow Rate | 16.66 | 16.99 | 1.94% | +/- 2% | Pass | | -100.00% | | | |
| | | | | | | | | | | |
| Vacuum Pressure Span | 62.1 | 62.5 | 0.01 | 50-70 mmHg | Pass | | -100.00% | 62.3 | 62.5 | |
| Flow Pressure Span | 26.4 | 26.7 | 0.01 | 20-30 mmHg | Pass | | -100.00% | 26.2 | 26.7 | |
| Auto Flow Calibration | 16.66 | 16.99 | 1.94% | +/- 2% | Pass | | -100.00% | 16.63 | 16.99 | |
| | | | | | | | | | | |
| Auto Detector Calibration | | | | | | | | | | |
| Initial High Voltage | 1410 | | | | Final High Voltage | 1320 | | | | |
| Initial Beta Count | 8303 | | | | Final Beta Count | 7791 | | | | |
| Final Beta | 7791 | | | | 8000-13000 | | Fail | | | Assuming Cell H37 is the same value as C38. Also assuming this is a fail. |
| | | | | | | | | | | |
| Leak Test | | | | | | | | | | |
| Start Value VAC | 71.2 | mmHg | | | | | | | | |
| Start Value FLOW (AQ Unit) | 16.67 | | | | | | | | | |
| Start Value FLOW (SLR Pro) | 16.67 | | | | | | | | | |
| Leak Check Adapter VAC | 125.9 | | | | | | | | | |
| Leak Check Adapter FLOW (AQ Unit) | 16.68 | | | | | | | | | |
| Leak Check Adapter FLOW (SLR Pro) | 16.59 | LPM | | | | | | | | |
| Flow Variance | -0.06% | LPM | | +/-2.5% | | | Pass | | | |
| | | | | | | | | | | |
| Auto Mass Coefficient Calibration | Completed | NA | | | | | | | | |
| Auto wass Coefficient Calibration | Completed | NA | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Quarterly | Annually | |
|---------------------------|-----------------------------------|-----------------|------------------|-----------|-----------|----------|---|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | | | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Rate) |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | | Leak Check |
| Temperature | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure/V | 160885583 | 31-Oct-18 | 31-Oct-18 | | | Calibrate AmTemp |
| | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 dated | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 10 | 6430-00 revisio | n A | | | | Calibrate Baro Pressure |
| | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | Justin Grandjambe and Gord Cummir | ng | | | | | Auto Mass Calibration |
| | | | | | | | |
| Signature: | | | | | | | |
| | | | | | | | |

COMMENTS

The Barometric pressure on the unit was reading 758.4. The Streamline Pro was reading 718.3. The airport Baro was 757.6 and Wunderground website was 757.5. We decided not to use the Streamline Pro as it seems to be incorrect.

| | | | | | | | | | No: | ENVI-622-1031 |
|-----------------------------------|--------------------------------------|-----------------|------------------|--------------------|--------------------------------|-------------|-------------------|--------------|-------------|--|
| | Area: | | 8000 | | | | | | Revision | a: 0 |
| | Effective Date: | | 2016-Octo | | | | | | Ву: | D. Dul |
| | Task: | | AQ Unit C | alibration | | | | | Page: | 1 of1 |
| | | | | | | | | | | |
| Customer Name | | DIAVIK | | | | | | | | |
| Instrument Location | | A154 Dike | | | | | | | | |
| Instrument Serial Number | | 5014/20314121 | 10 | | | | | | | |
| Date | | 20-Jul-2017 | | | | | | | | |
| Julie . | | 20002011 | | | | | | | | |
| Description | As Found | Standard | As Found | Allowable Variance | Outcome | Adjusted to | Final | Set Point as | Set Point | Comments |
| Ambient Air Temperature | 14.8 | 15 | Variance 0.20 | +/- 0.2°C | Pass | Aujusteu to | Variance 15.00 | Found | Adjusted to | |
| Ambient Relative Humidity | 27.4 | 24.43 | -10.84% | | Fail | 26.25 | 7.45% | | 5.3 | 7. Did two calibrations to try to set within a 2% variance. One of the issues is, the manual says to out the hyerometer next to the AO unit sensor, but it is on the roof and we can not re- |
| Flow Temperature | 18.5 | 19.1 | -0.60 | +/- 0.2*C | Pass | | -19.10 | | | |
| Barometer Pressure | 721.6 | | | +/- 10 mmHg | Fail | 757.9 | | | 757.5 | 9 Reading after calibration: 758.1 |
| Volumetric Flow Rate | 16.63 | 16.68 | 0.30% | +/- 2% | Pass | | -100.00% | | | |
| Vacuum Pressure Span | 58.8 | 59.1 | 0.01 | 50-70 mmHg | Pass | | -100.00% | | 58.9 | 31 |
| Flow Pressure Span | 20 | 19.7 | -0.02 | 20-30 mmHg | Pass | | -100.00% | 20 | 19.1 | .8 |
| Auto Flow Calibration | 16.68 | 16.42 | 1.58% | +/- 2% | Pass | | -100.00% | 16.74 | 16.4 | 15 |
| Auto Detector Calibration | | | | | | | | | | |
| Initial High Voltage | 1410 | | | | nal High Voltage | 1480 | | | | |
| Initial Beta Count Final Beta | 13477 14147 | | | | Final Beta Count 8000-13000 | 14147 | Fail | | | Assuming Cell C38 is the same value as what I out in H37 |
| Filial beta | 14147 | | | | 8000-13000 | | Fall | | | Assuming Cen Cso is the same value as what I put in no? |
| | | | | | | | | | | |
| Leak Test Start Value VAC | 70.5 | mmHg | | | | | | | | |
| Start Value FLOW (AQ Unit) | 16.66 | | | | | | | | | |
| Start Value FLOW (SLR Pro) | 16.67 | | | | | | | | | |
| Leak Check Adapter VAC | 125.9 | mmHe | | | | | | | | |
| Leak Check Adapter FLOW (AQ Unit) | 16.67 | LPM | | | | | | | | |
| Leak Check Adapter FLOW (SLR Pro) | | | | | | | | | | |
| Flow Variance | -0.06% | LPM | | +/-2.5% | | | Pass | | | |
| | | | | | | | | | | |
| Auto Mass Coefficient Calibration | Completed | NA | | | | | | | | |
| | | | | | | | | | | |
| | Description | | S/N | Calibration Date | | | | Quarterly | Annually | |
| | Stream Line Pro | | HL130101 | | 2-Feb-18 | | | | | 1 Pt. Varification (Am Temp, Ret, Flow Temp, Baro Pressure & Vol. Flow Rate) |
| | Stream Line Pro | | | 26-Jan-17 | 26-Jan-18 | | | | | Auto Detector Calibration |
| | Stream Line Pro Traceable Hygrome | | HL130101 | | 26-Jan-18 29-Aug-18 | | | | | Leak Check Clean Inlet Assemblies & Sample Tubes |
| | Traceable Hygrome | | | | 29-Aug-18 | | | | | Clear time, Assemblines at Sample (Dies Check Cam (greate as needed) |
| | Traceable Monome | | | | 31-Oct-18 | | | | | Calibrate AmTemp Calibrate RH |
| | Thermo Manual P/N 1 | | | | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Proce | aure Number 106 | 6430-00 revisio | on A | | | | | | Calibrate Baro Pressure Auto Flow Calibration |
| | | | | | | | | | | Calibrate Vacuum Pressure Span Calibrate Flow Pressure Span |
| Firmware updated to: | | | | | | | | | | |
| | Justin Grandjambe ar | nd Gordon Cumm | ning | | | | | | | Auto Mass Calibration |
| | Justin Grandjambe ar | nd Gordon Cumm | ning | | | | | | | Auto Mass Calibration |

AO Unit Calibration Sheet

1 Point 1 Point 1 Point 1 Point 1 Point

Calibrate Calibrate Calibrate

 Customer Name
 DIAVIK

 Instrument Location
 A154 Dike

 Instrument Serial Number
 5014/2031/41/210

 Date
 18-Sep-2017

 Verification and Calibration Type
 Monthly

| | | | | As Faund | | | | Final | Set Point as | Set Point |
|---|--|---------------|-----------|----------------------|------------------------------|-------------------|-------------|-----------------|-----------------------|-------------|
| - | Description | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Variance | Set Point as Found | Adjusted to |
| | Ambient Air Temperature | 13.6 | 13.8 | | +/- 0.2°C | Pass | | 13.80 | | - |
| | Ambient Relative Humidity | 44.7 | 43.5 | | +/- 2% | Pass | | -100.00% | | |
| | Flow Temperature Barometer Pressure | 21.6 756 | 20 757 | |) +/- 0.2°C) +/- 10 mmHg | Fail Pass | 20.8 | 0.80 -757.00 | 1.1 | |
| | Volumetric Flow Rate | 16.65 | 16.5 | | +/- 10 mmHg 5 +/- 2% | Pass | | -100.00% | | Span |
| | voidmetrie How hate | 10.03 | 10.5 | 0.517 | 1, 2% | 1033 | | 100.0070 | | |
| | | | | | | | | | | |
| | Vacuum Pressure Span | | | #DIV/0! | 50-70 mmHg | | | #DIV/0! | | |
| | Flow Pressure Span | | | #DIV/0! | 20-30 mmHg | | | #DIV/0! | | |
| | Auto Flow Calibration | | | #DIV/0! | +/- 2% | | | #DIV/0! | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | 1480 | | | | inal High Voltage | | | | |
| | Initial Beta Count | 12202 | | | | Final Beta Count | | | | |
| | Final Beta | | | | | 8000-13000 | | | | |
| | | | | | | | | | | |
| | _eak Test | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | | LPM | | | | | | | |
| | Start Value FLOW (SLR Pro) Leak Check Adapter VAC | 16.5 127.8 | | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | | LPM | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.36 | | | | | | | | |
| | Flow Variance | #DIV/0! | LPM | | +/-2.5% | | | | | |
| | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | Completed | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | |
|--|--|----------------------|------------------|-----------|---------|-----------|----------|---|
| low | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | | | | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressu |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | | | Leak Check |
| emperature | Traceable Hygrometer Thermo | met 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Clean Inlet Assemblies & Sample Tubes |
| elative Humidity | Traceable Hygrometer Thermo | met 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressur | re/Va160885583 | 31-Oct-18 | 31-Oct-18 | | | | Calibrate AmTemp |
| | | | | | | | | Calibrate RH |
| echnical Data | Thermo Manual P/N 106428-00 da | ated 2 April 2014 | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number | r 106430-00 revision | n A | | | | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| irmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | JG MPP | | | | | | | Auto Mass Calibration |
| Signature: | | | | | | | | |
| | | | COMMENTS | | | | | |
| The streamline Pro barometric pressure w | as reading 719.3 so we referenced Weat | her Underground w | hich was 757.0 | | | | | |
| | | | | | | | 1 | |
| | | | | | | | | |

AQ Unit Verification and Calibration Sheet No: <u>ENVI-622-1031</u> Revision: 0 Area: Effective Date: Task: 8000 2016-October 25 AQ Unit Calibration By: D. Dul

Customer Name DIAVIK Instrument Location Communication Shack Instrument Serial Number 5014i203191211 Date 18-Sep-2017 Verification and Calibration Type Quarterly

| | Description | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to |
|--------------------|--|----------------|------------|----------------------|---------------------|-----------------|-------------|-------------------|-----------------------|--------------------------|
| 1 Point | Ambient Air Temperature | 14.9 | 13.23 | | +/- 0.2°C | Fail | 14.1 | -0.87 | -0.3 | 0.5 |
| 1 Point 1 Point | Ambient Relative Humidity Flow Temperature | 42.2 19.2 | 42 19.6 | | +/- 2% +/- 0.2°C | Pass Fail | 19.5 | -100.00% -0.10 | 0.6 | 0.4 |
| 1 Point | Barometer Pressure | 757.7 | 756.9 | | +/- 10 mmHg | Pass | 19.5 | -756.90 | | Span U.4 |
| 1 Point | Volumetric Flow Rate | 16.66 | 16.54 | | +/- 2% | Pass | | -100.00% | | |
| | | | | | | | | | | |
| Calibrate | | | | | 50-70 mmHg | | | #DIV/0! | | |
| Calibrate | | | | | 20-30 mmHg | | | #DIV/0! | | |
| Calibrate | Auto Flow Calibration | | | #DIV/0! | +/- 2% | | | #DIV/0! | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | 1320 | | | | al High Voltage | 1350 | | | |
| | Initial Beta Count | 7851 | | | F | inal Beta Count | 7851 | | | |
| | Final Beta | 7851 | | | | 8000-13000 | | Fail | | |
| | | | | | | | | | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.67 | | | | | | | | |
| | Start Value FLOW (SLR Pro) Leak Check Adapter VAC | 16.72 135.1 | | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 16.66 | | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.61 | | | | | | | | |
| | Flow Variance | 0.06% | | | +/-2.5% | | | | | |
| | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | Completed | | | | | | | | |

| Flow Temperature Pressure Temperature Relative Humidity Manometer/Pressure/Vacuum Technical Data | Description S/N Stream Line Pro H.113010 Stream Line Pro T130101 Steam Line Pro H.13010 Traceable Hygrometer Thermome 1607185 Traceable Hygrometer Thermome 1607185 Traceable Mygrometer Thermome 1607185 Traceable Mygrometer Thermome 1607185 | 26-Jan-17 26-Jan-17 9 29-Aug-16 9 29-Aug-16 | Due Date 2-Feb-18 26-Jan-18 26-Jan-18 29-Aug-18 29-Aug-18 | Monthly | Quarterly | | Auto Detector Calibration Leak Check Clean Inlet Assemblies & Sample Tubes |
|--|---|--|--|---------|-----------|---|--|
| Temperature Pressure Temperature Relative Humidity Manometer/Pressure/Vacuum Technical Data | Stream Line Pro T130101 Stream Line Pro HL13010 Traceable Hygrometer Thermome 1607185 Traceable Hygrometer Thermome 1607185 | 26-Jan-17 26-Jan-17 9 29-Aug-16 9 29-Aug-16 | 26-Jan-18 26-Jan-18 29-Aug-18 29-Aug-18 | | | | Leak Check Clean Inlet Assemblies & Sample Tubes |
| Pressure Temperature Relative Humidity Manometer/Pressure/Vacuum Technical Data | Stream Line Pro HL13010 Traceable Hygrometer Thermome 1607185 Traceable Hygrometer Thermome 1607185 | 26-Jan-17 9 29-Aug-16 9 29-Aug-16 | 26-Jan-18 29-Aug-18 29-Aug-18 | | | | Leak Check Clean Inlet Assemblies & Sample Tubes |
| Temperature Relative Humidity Manometer/Pressure/Vacuum Technical Data | Traceable Hygrometer Thermome 1607185 Traceable Hygrometer Thermome 1607185 | 9 29-Aug-16 9 29-Aug-16 | 29-Aug-18 29-Aug-18 | | | | Clean Inlet Assemblies & Sample Tubes |
| telative Humidity Manometer/Pressure/Vacuum echnical Data | Traceable Hygrometer Thermome 1607185 | 9 29-Aug-16 | 29-Aug-18 | | | | |
| flanometer/Pressure/Vacuum | | | | | | | |
| echnical Data | Traceable Monometer/Pressure/V1608855 | 3 31-Oct-18 | | | | | Check Cam (grease as needed) |
| | | | 31-Oct-18 | | | | Calibrate AmTemp |
| | | | | | | | Calibrate RH |
| | Thermo Manual P/N 106428-00 dated 2 April 20 | 4 | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 106430-00 re | vision A | | | | | Calibrate Baro Pressure |
| | | | | | | | Auto Flow Calibration |
| irmware updated to: | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | JG MPP | | | | | | Auto Mass Calibration |
| Signature: | | | | | | | |
| | | COMMENTS | | | | _ | |

Comments

 Customer Name
 DMAVIK

 Instrument Location
 Communication Shack

 Instrument Serial Number
 5014/2039191211

 Date
 18-Sep-2017

 Verification and Calibration Type
 Monthly

Auto Mass Coefficient Calibration Completed

| Des | cription | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to |
|-------------------------------------|---|---|------------------------------|-------------------------------|------------------------------------|--|-------------|-------------------------------|-----------------------|--------------------------|
| 1 Point | Ambient Air Temperature | 14.9 | 13.23 | | +/- 0.2°C | Fail | 14.1 | -0.87 | -0.3 | 0.5 |
| 1 Point | Ambient Relative Humidity | 42.2 | 42 | | +/- 2% | Pass | | -100.00% | | |
| 1 Point | Flow Temperature | 19.2 | 19.6 | | +/- 0.2°C | Fail | 19.5 | -0.10 | 0.6 | 0.4 |
| 1 Point | Barometer Pressure | 757.7 | 756.9 | | +/- 10 mmHg | Pass | | -756.90 | | pan |
| 1 Point | Volumetric Flow Rate | 16.66 | 16.54 | 0.73% | +/- 2% | Pass | | -100.00% | | |
| Calibrate Calibrate Calibrate | Vacuum Pressure Span Flow Pressure Span Auto Flow Calibration | | | #DIV/0! #DIV/0! #DIV/0! | 50-70 mmHg 20-30 mmHg +/- 2% | | | #DIV/0! #DIV/0! #DIV/0! | | |
| | Auto Detector Calibration Initial High Voltage Initial Beta Count Final Beta | 1320 6451 | | | | nal High Voltage Final Beta Count 8000-13000 | | | | |
| Lea | k Tost Start Value FLOW (AQ Unit) Start Value FLOW (SLR Pro) Start Value FLOW (SLR Pro) Leak Check Adapter VAC Leak Check Adapter FLOW (AQ Unit) Leak Check Adapter FLOW (SLR Pro) Flow Variance | 80.2 r 16.67 l 16.72 l 135.1 r 16.66 l 16.61 l | PM PM nmHg PM PM | | +/-2.5% | | | | | |

| | a 1.0 | | | | | | | |
|---------------------------|-------------------------------------|----------------|------------------|-----------|---------|-----------|----------|--|
| Standards Used | | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | The state of the s |
| Flow | | HL130101 | 2-Feb-17 | 2-Feb-18 | | | | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Rate |
| Temperature | | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Auto Detector Calibration |
| Pressure | | HL130101 | 26-Jan-17 | 26-Jan-18 | | | | Leak Check |
| Temperature | Traceable Hygrometer Thermomet | | 29-Aug-16 | 29-Aug-18 | | | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermomet | | 29-Aug-16 | 29-Aug-18 | | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure/Va | 160885583 | 31-Oct-18 | 31-Oct-18 | | | | Calibrate AmTemp |
| | | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 dated 2 | | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 1064 | 30-00 revision | ı A | | | | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | JG MPP | | | | | | | Auto Mass Calibration |
| Signature: | | | | | | | | |
| | | | COMMENTS | | | | _ | |
| | | | | | | | | |
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| 1 | | | | | | | | |
| | | | | | | | | |

AQ Unit Verification and Calibration Sheet No: <u>ENVI-622-1031</u> Revision: 0 Area: Effective Date: Task: 8000 2016-October 25 AQ Unit Calibration By: D. Dul

Customer Name DIAVIK Instrument Location Communication Shack Instrument Serial Number 5014i203191211 Date 18-Sep-2017 Verification and Calibration Type Quarterly

| | Description | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to | |
|-----------|-----------------------------------|-----------|----------|----------------------|--------------------|-----------------|-------------|-------------------|-----------------------|--------------------------|-----|
| 1 Point | Ambient Air Temperature | 14.9 | 13.23 | | +/- 0.2°C | Fail | 14.1 | -0.87 | -0.3 | | 0.5 |
| 1 Point | Ambient Relative Humidity | 42.2 | 42 | | +/- 2% | Pass | | -100.00% | | | |
| 1 Point | Flow Temperature | 19.2 | 19.6 | | +/- 0.2°C | Fail | 19.5 | -0.10 | 0.6 | | 0.4 |
| 1 Point | Barometer Pressure | 757.7 | 756.9 | | +/- 10 mmHg | Pass | | -756.90 | | Span | |
| 1 Point | Volumetric Flow Rate | 16.66 | 16.54 | 0.73% | +/- 2% | Pass | | -100.00% | | | |
| | | | | | | | | | | | |
| Calibrate | Vacuum Pressure Span | | | #DIV/0! | 50-70 mmHg | | | #DIV/0! | | | |
| Calibrate | Flow Pressure Span | | | #DIV/0! | 20-30 mmHg | | | #DIV/0! | | | |
| Calibrate | Auto Flow Calibration | | | #DIV/0! | +/- 2% | | | #DIV/0! | | | |
| | Auto Detector Calibration | | | | | | | | | | |
| | Initial High Voltage | 1350 | | | Fin | al High Voltage | 1350 | | | | |
| | Initial Beta Count | 8145 | | | F | inal Beta Count | 8066 | | | | |
| | Final Beta | 8066 | | | | 8000-13000 | | Pass | | | |
| | | | | | | | | | | | |
| | Leak Test | | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.67 | | | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.72 | | | | | | | | | |
| | Leak Check Adapter VAC | 135.1 | | | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 16.66 | | | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.61 | | | +/-2.5% | | | | | | |
| | Flow Variance | 0.06% | LPIVI | | +/-2.5% | | | | | | |
| | Auto Mass Coefficient Calibration | Completed | | | | | | | | | |
| | Auto mass coefficient Calibration | Completed | | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | A | |
|--|--|---------------------------|------------------------|------------------------|---------|-----------|----------|---|
| Standards Used Flow | Description Stream Line Pro | 5/N HL130101 | 2-Feb-17 | 2-Feb-18 | Montnly | Quarterly | Annually | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 2-reb-18 26-Jan-18 | | 4 | | Auto Detector Calibration |
| | Stream Line Pro | HL130101 | 26-Jan-17 26-Jan-17 | 26-Jan-18 26-Jan-18 | | 4 | - | Leak Check |
| Pressure | | | | | | 4 | - | Clean Inlet Assemblies & Sample Tubes |
| emperature | Traceable Hygrometer Thern | | 29-Aug-16 | 29-Aug-18 | | | | |
| telative Humidity | Traceable Hygrometer Thern | | | 29-Aug-18 | | | 1 | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Press | sure/V160885583 | 31-Oct-18 | 31-Oct-18 | | | | Calibrate AmTemp |
| | | | | | | | | Calibrate RH |
| echnical Data | Thermo Manual P/N 106428-00 | | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Numb | ber 106430-00 revisi | on A | | | | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | JG MPP | | | | | | | Auto Mass Calibration |
| Signature: | | | | | | | | |
| Foil calibration completed on 2017-09-28 | | | COMMENTS | | | | - | |
| oii calibration completed on 2017-09-26 | and auto detector calibration complete | 90 011 20 17 - 09 - 30 53 | 12 | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | 1 | |

| | AQ Unit Verification | on and Calibration Sheet |
|-----------------|----------------------|--------------------------|
| | | No:ENVI-622-1031 |
| Area: | 8000 | Revision: 0 |
| Effective Date: | 2016-October 25 | By: D. Dul |
| Task: | AQ Unit Calibration | i T |
| _ | | Page:1 of1 |
| | | - |

Customer Name
Instrument Location
Instrument Serial Number
Date
Verification and Calibration Type

DIAVIK

DIAVIK
A154 Dike
5014203141210
5042037
Monthly

| | Description | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to |
|-------------------------------------|---|----------|----------|----------------------|------------------------------------|------------------|-------------|-------------------|-----------------------|--------------------------|
| 1 Point | Ambient Air Temperature | -3.8 | -3.6 | 0.20 | +/- 0.2°C | Pass | | - | | |
| 1 Point | Ambient Relative Humidity | 81.5 | 79 | -0.03 | +/- 2% | Pass | | - | | |
| 1 Point | Flow Temperature | 17.7 | 11.9 | -5.80 | +/- 0.2°C | Fail | 14 | -2.10 | 1.5 | 3.5 |
| 1 Point | Barometer Pressure | 758.2 | 759 | 0.80 | +/- 10 mmHg | Pass | | - | | Span |
| 1 Point | Volumetric Flow Rate | 16.7 | 16.62 | 0.00 | +/- 2% | Pass | | - | | |
| Calibrate Calibrate Calibrate | Vacuum Pressure Span Flow Pressure Span Auto Flow Calibration | | | - | 50-70 mmHg 20-30 mmHg +/- 2% | | | | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | | | | | nal High Voltage | | | | |
| | Initial Beta Count | | | | F | Final Beta Count | | | | |
| | Final Beta | | | | | 8000-13000 | | | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | 71 | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.67 | LPM | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.68 | LPM | | | | | | | |
| | Leak Check Adapter VAC | 128.5 | mmHg | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 16.67 | LPM | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.58 | LPM | | | | | | | |
| | Flow Variance | 0.00% | LPM | | +/-2.5% | | | Pass | | |
| | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | |
|---------------------------|-----------------------------------|------------------|------------------|-----------|---------|-----------|----------|---|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | | | | 1 Pt. Varification (Am Temp, RH, Flow Temp, E |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | | | Leak Check |
| Temperature | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure/V | 160885583 | 31-Oct-18 | 31-Oct-18 | | | | Calibrate AmTemp |
| | | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 dated | d 2 April 2014 | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 10 | 06430-00 revisio | on A | | | | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | Justin Grandjambe | | | | | | | Auto Mass Calibration |
| | | | | | | | | |
| | | | | | | | | |
| 01 | | | | | | | | |
| Signature: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | COMMENTS | | | | | |

When doing the inspection I found the inlet tube disconnected from the AQ unit. This may have have been left like this from when the Quarterfy inspection was done on 2017-09-18. The streamline Pro barometric pressure was reading 719.3 so I referenced Weather Underground which was 759.0

| | AQ Unit Verificatio | n and Calibration Sheet |
|-----------------|---------------------|-------------------------|
| | | No: ENVI-622-1031 |
| Area: | 8000 | Revision: 0 |
| Effective Date: | 2016-October 25 | By: D. Dul |
| Task: | AQ Unit Calibration | , |
| | | Page:1 of1 |
| | | • |

Customer Name
Instrument Location
Instrument Serial Number
Date
Verification and Calibration Type

DIAVIK

Communication Shack
5014820319211

10-Oct-2017

Monthly

| | | | | As Found | | | | Final | Set Point as | Set Point |
|-----------|-----------------------------------|----------|----------|----------|--------------------|-----------------|-------------|----------|--------------|-------------|
| | Description | As Found | Standard | Variance | Allowable Variance | Outcome | Adjusted to | Variance | Found | Adjusted to |
| 1 Point | Ambient Air Temperature | -5.8 | -5.7 | 0.10 | +/- 0.2°C | Pass | | - | | |
| 1 Point | Ambient Relative Humidity | 80.1 | 76 | -5.12 | +/- 2% | Fail | | - | | |
| 1 Point | Flow Temperature | 18.4 | 18.6 | 0.20 | +/- 0.2°C | Pass | | - | | |
| 1 Point | Barometer Pressure | 761.9 | 760.8 | -1.10 | +/- 10 mmHg | Pass | | - | | Span |
| 1 Point | Volumetric Flow Rate | 16.66 | 17.7 | 5.88 | +/- 2% | Fail | 17.76 | 0.00 | 16.63 | 17.76 |
| Calibrate | Vacuum Pressure Span | | | _ | 50-70 mmHg | | | | | |
| Calibrate | Flow Pressure Span | | | - | 20-30 mmHg | | | - | | |
| Calibrate | Auto Flow Calibration | | | | +/- 2% | | | _ | | |
| | | | | | , | | | | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | | | | Fin | al High Voltage | | | | |
| | Initial Beta Count | | | | F | inal Beta Count | | | | |
| | Final Beta | | | | | 8000-13000 | | | | |
| | | | | | | | | | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.67 | | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.68 | | | | | | | | |
| | Leak Check Adapter VAC | | mmHg | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 16.66 | | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.65 | | | | | | | | |
| | Flow Variance | 0.06% | LPM | | +/-2.5% | | | Pass | | |
| | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | |
|---------------------------|-----------------------------------|-----------------|------------------|-----------|---------|-----------|----------|---|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | | | 1 | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Rate) |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | 1 | | Leak Check |
| Temperature | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | 1 | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure/V | 160885583 | 31-Oct-18 | 31-Oct-18 | | | | Calibrate AmTemp |
| | | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 dated | 12 April 2014 | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 10 | 6430-00 revisio | on A | | | | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | Justin Grandjambe | | | | | | | Auto Mass Calibration |
| | | | | | | | | |
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| 01 | | | | | | | | |
| Signature: | | | | | | | | |
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I did an inspection on 2017-10-05 and found that there were 3 alarms. 1) Filter tape change fail 2) Pressure/Vacuum - Low flow 3) Flow - Low. The unit had been left in Service mode. The pump we not running and there was no flow. I scrolled through the settings and the pump was turned to the on position and IPM set to 16.57. Flow pressure was reading-0.0 mm/Hg, I was unable to trouble stood at the time and did not return unit the 10th. When rotube shooting on the 10th I tred turning is be unit on and off. That did noting I cledded to isolate the pump to see if it was even working a all, so I unplugged it from the AD unit and plugged it find a wall socket. It started running, so I left going for a lew imituales. After that I plugged it back into AQ unit, and a couple minutes later it kecked in and the unit started sampling again. I did the data download and everything seems fine now. According to the data the pump stopped vorking on Oct 1st.

| | AQ Unit Verification and | Calibration Sheet |
|-----------------|--------------------------|-------------------|
| | | No: ENVI-622-1031 |
| Area: | 8000 | Revision: 0 |
| Effective Date: | 2016-October 25 | By: D. Dul |
| Task: | AQ Unit Calibration | , |
| | | Page:1 of1 |
| | | - |

Customer Name DIAVIK
Instrument Location A154 Dike
Instrument Serial Number 5014203141210
Date 3-Nov-2017
Verification and Calibration Type Monthly

| | Description | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to |
|-----------|-----------------------------------|-----------|----------|----------------------|--------------------|-----------------|-------------|-------------------|-----------------------|--------------------------|
| 1 Point | Ambient Air Temperature | -11.7 | -10 | 1.70 | +/- 0.2°C | Fail | -10.8 | 0.80 | 1.7 | 0.8 |
| 1 Point | Ambient Relative Humidity | 83.4 | 82 | -1.68 | +/- 2% | Pass | 10.0 | - | 1.7 | 0.0 |
| 1 Point | Flow Temperature | 15 | 16.5 | 1.50 | +/- 0.2°C | Fail | 15.8 | 0.70 | 3.5 | 2.6 |
| 1 Point | Barometer Pressure | 754.6 | 754.8 | 0.20 | +/- 10 mmHg | Pass | | - | | Span |
| 1 Point | Volumetric Flow Rate | 16.68 | 17.55 | 4.96 | +/- 2% | Fail | 17.57 | 0.00 | 16.64 | 17.57 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Calibrate | Vacuum Pressure Span | | | - | 50-70 mmHg | | | - | | |
| Calibrate | Flow Pressure Span | | | - | 20-30 mmHg | | | - | | |
| Calibrate | Auto Flow Calibration | | | - | +/- 2% | | | - | | |
| | | | | | | | | | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | | | | Fin | al High Voltage | | | | |
| | Initial Beta Count | | | | Fi | nal Beta Count | | | | |
| | Final Beta | | | | | 8000-13000 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.67 | | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.69 | | | | | | | | |
| | Leak Check Adapter VAC | 127.6 | | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 16.67 | | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.54 | | | | | | | | |
| | Flow Variance | 0.00% | LPM | | +/-2.5% | | | Pass | | |
| | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | 0 | | | | | | | | |
| | Auto wass coefficient Calibration | Completed | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | |
|---|---|----------------|------------------|-----------|---------|-----------|----------|---|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | monany | quarterly | 7 | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Rat |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | | | Leak Check |
| Temperature | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermome | | 29-Aug-16 | 29-Aug-18 | | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure/V | | | 31-Oct-18 | | | | Calibrate AmTemp |
| , | , | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 dated | 1 2 April 2014 | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 10 | | on A | | | | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | Justin Grandjambe | | | | | | | Auto Mass Calibration |
| | | | | | | | | Pump Reuild |
| | | | | | | | | - |
| | | | | | | | | |
| Signature: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | COMMENTS | | | | | |

Standard Barometric pressure taken from Wunderground

| | AQ Unit Verificatio | n and Calibration Sheet |
|-----------------|---------------------|-------------------------|
| | | No: ENVI-622-1031 |
| Area: | 8000 | Revision: 0 |
| Effective Date: | 2016-October 25 | By: D. Dul |
| Task: | AQ Unit Calibration | , · |
| | | Page:1 of1 |
| | | - |

Customer Name
Instrument Location
Instrument Serial Number
Date
Verification and Calibration Type

DIAVIK

Communication Shack
3-Nov-2017

Monthly

Monthly

| | Description | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to |
|-----------|-----------------------------------|-----------|----------|----------------------|--------------------|-----------------|-------------|-------------------|-----------------------|--------------------------|
| 1 Point | Ambient Air Temperature | -10.7 | -9.7 | 1.00 | +/- 0.2°C | Fail | -10.1 | 0.40 | 0.5 | 0.1 |
| 1 Point | Ambient Relative Humidity | 90.2 | 89.9 | -0.33 | +/- 2% | Pass | | - | | |
| 1 Point | Flow Temperature | 18.4 | 19.2 | 0.80 | +/- 0.2°C | Fail | 19 | 0.20 | 0.4 | 0 |
| 1 Point | Barometer Pressure | 757.6 | 756.9 | -0.70 | +/- 10 mmHg | Pass | | - | | Span |
| 1 Point | Volumetric Flow Rate | 16.65 | 16.88 | 1.36 | +/- 2% | Pass | | - | | |
| | | | | | | | | | | |
| Calibrate | Vacuum Pressure Span | | | - | 50-70 mmHg | | | - | | |
| Calibrate | Flow Pressure Span | | | - | 20-30 mmHg | | | - | | |
| Calibrate | Auto Flow Calibration | | | - | +/- 2% | | | - | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | | | | Fin | al High Voltage | | | | |
| | Initial Beta Count | | | | | inal Beta Count | | | | |
| | Final Beta | | | | | 8000-13000 | | | | |
| | | | | | | | | | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | 66 | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.66 | LPM | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.82 | LPM | | | | | | | |
| | Leak Check Adapter VAC | 121.2 | | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 16.69 | | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.71 | | | | | | | | |
| | Flow Variance | -0.18% | LPM | | +/-2.5% | | | Pass | | |
| | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | Completed | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | | Monthly | Quarterly | Annually | |
|---------------------------|----------------------------------|-----------------|------------------|-----------|---|---------|-----------|----------|--|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | Ī | | | 1 | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Ri |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | ſ | | | | Leak Check |
| Temperature | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | ſ | | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure/ | v 160885583 | 31-Oct-18 | 31-Oct-18 | | | | | Calibrate AmTemp |
| | | | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 date | d 2 April 2014 | | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 1 | 06430-00 revisi | on A | | | | | | Calibrate Baro Pressure |
| | | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | Justin Grandjambe | | | | | | | | Auto Mass Calibration |
| | | | | | | | | | Pump Reuild |
| | | | | | | | | | |
| | | | | | | | | | |
| Signature: | | | | | | | | | |
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| | | | COMMENTS | | | | | | |

Standard Barometric pressure taken from Wunderground

| | AQ Unit Verification | on and Calibration Sheet | | | |
|-----------------|----------------------|--------------------------|---------------|----|---|
| | | No: | ENVI-622-1031 | | |
| Area: | 8000 | Revision: | 0 | | |
| Effective Date: | 2016-October 25 | By: | D. Dul | | |
| Task: | AQ Unit Calibration | - | | | |
| | | Page: | 1 | of | 1 |
| | | | | | |

Customer Name Instrument Location Instrument Serial Number Date Verification and Calibration Type DIAVIK
A154 Dike
5014i203141210
27-Nov-2017
Monthly

| | Description | As Found | Standard | As Found Variance | Allowable Variance | Outcome | Adjusted to | Final Variance | Set Point as Found | Set Point Adjusted to |
|-----------|-----------------------------------|-----------|----------|----------------------|--------------------|-----------------|-------------|-------------------|-----------------------|--------------------------|
| 1 Point | Ambient Air Temperature | -20.1 | -18.21 | 1.89 | +/- 0.2°C | Fail | -18.2 | -0.01 | 0.6 | -1.2 |
| 1 Point | Ambient Relative Humidity | 83.8 | 84.1 | 0.36 | +/- 2% | Pass | 10.2 | 0.01 | 0.0 | 1.2 |
| 1 Point | Flow Temperature | 11.2 | 14.8 | 3.60 | +/- 0.2°C | Fail | 14.8 | 0.00 | 2.7 | -0.8 |
| 1 Point | Barometer Pressure | 750.5 | 750.57 | 0.07 | +/- 10 mmHg | Pass | | - | | Span |
| 1 Point | Volumetric Flow Rate | 16.67 | 16.78 | 0.66 | +/- 2% | Pass | | - | | • |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Calibrate | Vacuum Pressure Span | | | - | 50-70 mmHg | | | - | | |
| Calibrate | Flow Pressure Span | | | - | 20-30 mmHg | | | - | | |
| Calibrate | Auto Flow Calibration | | | - | +/- 2% | | | - | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | | | | Fin | al High Voltage | | | | |
| | Initial Beta Count | | | | | inal Beta Count | | | | |
| | Final Beta | | | | | 8000-13000 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 67.67 | | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.77 | | | | | | | | |
| | Leak Check Adapter VAC | | mmHg | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 67.66 | | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.79 | | | | | | | | |
| | Flow Variance | 0.01% | LPM | | +/-2.5% | | | | | |
| | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | Completed | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | |
|---------------------------|--------------------------------|------------------|------------------|-----------|---------|-----------|----------|---|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | | | | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Rate) |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | | | Leak Check |
| Temperature | Traceable Hygrometer Thermor | ne 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermor | ne 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure | /V 160885583 | 31-Oct-18 | 31-Oct-18 | | | | Calibrate AmTemp |
| | | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 da | ed 2 April 2014 | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number | 106430-00 revisi | on A | | | | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | SS2 | | | | | | | Auto Mass Calibration |
| | | | | | | | | Pump Reuild |
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| Signature: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | COMMENTS | | | | | |

| | AQ Unit Verificat | ion and Calibration Sheet | | | |
|-----------------|---------------------|---------------------------|---------------|----|---|
| | | No: | ENVI-622-1031 | | |
| Area: | 8000 | Revision: | 0 | | |
| Effective Date: | 2016-October 25 | By: | D. Dul | | |
| Task: | AQ Unit Calibration | - | | | |
| · | | Page: | 1 | of | 1 |
| | | • | | | |

Customer Name DIAVIK
Instrument Location Communication Shack
Instrument Serial Number 5014203191211
Date 27-Nov-2017
Verification and Calibration Type Monthly

| | | | | As Found | | | | Final | Set Point as | Set Point | |
|-----------|-----------------------------------|-----------|----------|----------|--------------------|------------------|-------------|----------|-----------------------|-------------|-----|
| | Description | As Found | Standard | Variance | Allowable Variance | Outcome | Adjusted to | Variance | Set Point as Found | Adjusted to | |
| 1 Point | Ambient Air Temperature | -19.8 | -19 | 0.80 | +/- 0.2°C | Fail | -19 | 0.00 | 0 | | -1 |
| 1 Point | Ambient Relative Humidity | 83.2 | 82.49 | -0.85 | +/- 2% | Pass | | - | | | |
| 1 Point | Flow Temperature | 16.9 | 16.7 | -0.20 | +/- 0.2°C | Fail | 16.1 | 0.60 | -0.4 | C | 0.6 |
| 1 Point | Barometer Pressure | 751.5 | 750.316 | -1.18 | +/- 10 mmHg | Pass | | - | | Span | |
| 1 Point | Volumetric Flow Rate | 16.7 | 17.18 | 2.79 | +/- 2% | Marginal | | - | | | |
| | | | | | | | | | | | |
| Calibrate | Vacuum Pressure Span | | | - | 50-70 mmHg | | | | | | |
| Calibrate | Flow Pressure Span | | | - | 20-30 mmHg | | | - | | | |
| Calibrate | Auto Flow Calibration | | | - | +/- 2% | | | - | | | |
| | Auto Detector Calibration | | | | | | | | | | |
| | Initial High Voltage | | | | | nal High Voltage | | | | | |
| | Initial Figit Voltage | | | | | Final Beta Count | | | | | |
| | Final Beta | | | | | 8000-13000 | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | Leak Test | | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.63 | | | | | | | | | |
| | Start Value FLOW (SLR Pro) | 17.31 | | | | | | | | | |
| | Leak Check Adapter VAC | | mmHg | | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 16.69 | | | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 17.3 | | | . / 2 50/ | | | | | | |
| | Flow Variance | -0.36% | LPM | | +/-2.5% | | | | | | |
| | | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | Completed | | | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | |
|---------------------------|----------------------------------|-----------------|------------------|-----------|---------|-----------|----------|---|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | | | | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Rate) |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | | | Leak Check |
| Temperature | Traceable Hygrometer Thermom | e 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermom | e 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure/ | V160885583 | 31-Oct-18 | 31-Oct-18 | | | | Calibrate AmTemp |
| | | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 date | d 2 April 2014 | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 1 | 06430-00 revisi | on A | | | | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | SS2 | | | | | | | Auto Mass Calibration |
| | | | | | | | | Pump Reuild |
| | | | | | | | | |
| | | | | | | | | |
| Signature: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | COMMENTS | | | | | |

| COMMENTS |
|-----------------------------------|
| Barometric pressure from airport. |
| |
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| |
| |

| | AQ Unit Verificati | on and Calibration Sheet |
|-----------------|---------------------|--------------------------|
| | | No:ENVI-622-1031 |
| Area: | 8000 | Revision: 0 |
| Effective Date: | 2016-October 25 | By: D. Dul |
| Task: | AQ Unit Calibration | • - |
| | | Page:1 of1 |
| | | - |

Customer Name
Instrument Location
Instrument Serial Number
Date
Verification and Calibration Type

DIAVIK
Communication Shack
5014i203191211
4-Dec-2017
Annual

| | Description | As Found | Standard | As Found | Allowable Variance | Outcome | Adjusted to | Final | Set Point as | Set Point |
|--------------------|-----------------------------------|-----------|----------|----------|--------------------|------------------|-------------|----------|--------------|-------------|
| 45 | | | | Variance | | | | Variance | Found | Adjusted to |
| 1 Point | Ambient Air Temperature | -23.5 | | 1.50 | +/- 0.2°C | Fail | -22.7 | 0.70 | 0 | -0.8 |
| 1 Point 1 Point | Ambient Relative Humidity | 80.8 | | -5.94 | +/- 2% | Fail | 78.4 | 0.03 | 3.1 | 5.5 |
| | Flow Temperature | 17.1 | | 1.50 | +/- 0.2°C | Fail | 17.8 | 0.80 | 0.6 | -0.2 |
| 1 Point | Barometer Pressure | 759.7 | | -2.00 | +/- 10 mmHg | Pass | 757.6 | 0.10 | 1.054 | 1.0512 |
| 1 Point | Volumetric Flow Rate | 16.66 | 15.88 | 4.91 | +/- 2% | Fail | 15.88 | 0.00 | 17.56 | 15.88 |
| | | | | | | | | | | |
| Calibrate | Vacuum Pressure Span | 54.6 | 54.6 | 0 | 50-70 mmHg | Pass | 54.6 | | 54.6 | 54.6 |
| Calibrate | Flow Pressure Span | 24.3 | | 0 | 20-30 mmHg | Pass | 24.3 | 0.00% | 24.4 | 24.3 |
| Calibrate | Auto Flow Calibration | | | - | +/- 2% | | | - | | |
| | | | | | | | | | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | 1350 | | | Fi | nal High Voltage | 1360 | | | |
| | Initial Beta Count | 7596 | | | | Final Beta Count | 7946 | | | |
| | Final Beta | 7946 | | | | 8000-13000 | 7946 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 16.65 | | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.39 | | | | | | | | |
| | Leak Check Adapter VAC | | mmHg | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 16.67 | | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.29 | | | | | | | | |
| | Flow Variance | -0.12% | LPM | | +/-2.5% | | | Pass | | |
| | | | | | | | | | | |
| | Auto Mass Coefficient Calibration | Completed | No | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | M | onthly | Quarterly | Annually | |
|---------------------------|-----------------------------------|----------------|------------------|-----------|---|--------|-----------|----------|---|
| low | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | | | | Yes | 1 Pt. Varification (Am Temp, RH, Flow Temp, Bar |
| emperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Yes | Auto Detector Calibration |
| ressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | | | Yes | Leak Check |
| emperature | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Yes | Clean Inlet Assemblies & Sample Tubes |
| elative Humidity | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Yes | Check Cam (grease as needed) |
| lanometer/Pressure/Vacuum | Traceable Monometer/Pressure/V | 160885583 | 31-Oct-18 | 31-Oct-18 | | | | Yes | Calibrate AmTemp |
| | | | | | | | | Yes | Calibrate RH |
| echnical Data | Thermo Manual P/N 106428-00 dated | 2 April 2014 | | | | | | Yes | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 10 | 6430-00 revisi | on A | | | | | Yes | Calibrate Baro Pressure |
| | | | | | | | | Yes | Auto Flow Calibration |
| rmware updated to: | | | | | | | | Yes | Calibrate Vacuum Pressure Span |
| | | | | | | | | Yes | Calibrate Flow Pressure Span |
| alibration Complete By | Justin Grandjambe | | | | | | | No | Auto Mass Calibration |
| | | | | | | | | Yes | Pump Reuild |
| | | | | | | | | | |
| | | | | | | | | | |
| gnature: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

COMMENTS

The Volumetric Flow calibration was done brice to get a better result. The Pump was rebuilt on Oct 10th. Removed and cleaned the heater/ sample tube following the procedure in the manual. We cannot clean in the intel asembly, as we do not have access to the roof of the building. Unable to do the Auto mass calibration as there is an issue with the bench sticking. Tried to resolve the issue with recommendations from Dan at CD Nove, but it did not work. Removed the fan filter and cleaned it.

| | AQ Unit Verification | n and Calibration Sheet |
|-----------------|----------------------|-------------------------|
| | | No:ENVI-622-1031 |
| Area: | 8000 | Revision: 0 |
| Effective Date: | 2016-October 25 | By: D. Dul |
| Task: | AQ Unit Calibration | • |
| | | Page:1 of1 |
| | | · · |

Customer Name
Instrument Location
Instrument Serial Number
Date
Verification and Calibration Type

DANIK

DAMIK
A154 Dike
5014(203141210
9-Dec-2017
Annual

Auto Mass Coefficient Calibration Completed Yes

| Description | | | | | | | | | | |
|--|----------------------------|----------------------------|-------------|--------------------|------------------|-------------|-------|-------|-------|---|
| Auto Detector Calibration Initial High Voltage Initial Beta Count I 13888 Leak Test Leak Test Auto Detector Calibration Initial High Voltage Initial Beta Count I 13888 Leak Test Leak Test Leak Test Leak Test Leak Test Auto Detector Calibration Start Value VAC Table 1 2.4 2.7 2.0 4.4 2.7 5.8 5.0 0.0 5.1 6.4 1.4 77 1.00 -0.1 1.1 1.4 7 1.00 -0.1 1.1 1.5 2.00 4/- 0.2°C Fail 14.7 1.00 -0.1 1.1 1.6 4 7 1.00 -0.1 1.1 1.7 56.4 0.00 756.7 756.4 1.0 0.00 756.7 756.4 1.0 0.00 16.64 17.03 1.0 0.00 16.64 17.03 1.0 0.00 16.64 17.03 1.0 0.00 16.64 17.03 1.0 0.00 16.64 17.03 1.0 0.00 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 2.0 0.00% 70.5 72 3.0 0.00% 70.5 72 4.0 0.00% 70 | Description | As Found St | | Allowable Variance | Outcome | Adjusted to | | | | Comments |
| Flow Temperature 13.7 15.7 2.00 4/- 0.2°C Fail 14.7 1.00 -0.1 -1.1 | Ambient Air Temperature | Air Temperature -16.2 | -16.6 -0.40 | +/- 0.2°C | Fail | -16.6 | 0.00 | -1.1 | -0.7 | |
| Barometer Pressure 756.8 756.4 0.40 4/-10 mmHg Pass 756.4 0.00 756.7 756.4 Volumetric Flow Rate 16.64 17.05 2.40 4/-2% Fail 17.03 0.00 16.64 17.03 Bide Vacuum Pressure Span 70.5 72 1.5 50.70 mmHg Pass 22.6 0.00% 22.4 22.6 Bide Flow Pressure Span 22.3 22.6 0.3 20.30 mmHg Pass 22.6 0.00% 22.4 22.6 Bide Vacuum Pressure Span 70.5 72 0.3 20.30 mmHg Pass 22.6 0.00% 22.4 22.6 Bide Vacuum Pressure Span 70.5 72 0.30 0.30 0.30 0.30 Bide Vacuum Pressure Span 70.5 72 0.30 0.30 0.30 0.30 Calibration is the same as Vol. Flow Rate 1.470 Final High Voltage 1.490 Final Beta Count 13242 Final Beta Count 13888 Final Beta Count 13888 8000-13000 13888 Leak Test Start Value VAC 71.3 mmHg 71.3 mmHg 71.3 Calibration 71.3 mmHg 71.3 mmHg 71.3 mmHg 71.3 Calibration 71.3 mmHg | Ambient Relative Humidity | Relative Humidity 82.4 | 78.8 -4.37 | +/- 2% | Fail | 78.8 | 0.00 | 5.1 | 6.4 | |
| Volumetric Flow Rate 16.64 17.05 2.40 4/- 2% Fail 17.03 0.00 16.64 17.03 | Flow Temperature | ow Temperature 13.7 | 15.7 2.00 | +/- 0.2°C | Fail | 14.7 | 1.00 | -0.1 | -1.1 | |
| tide Vacuum Pressure Span 70.5 72 1.5 50-70 mmHg Fail 72 0.00% 70.5 72 After stabilizing the value is reading with in 50 tide Flow Pressure Span 22.3 22.6 0.3 20.30 mmHg Pass 22.6 0.00% 22.4 22.6 Calibration is the same as Vol. Flow Rate Auto Detector Calibration Initial High Voltage Initial Beta Count 13242 Final Beta Count 13888 Final Beta 13888 8000-13000 13888 Leak Test Start Value VAC 71.3 mmHg | Barometer Pressure | rometer Pressure 756.8 | | | Pass | | | | | |
| He Flow Pressure Span 2.3 2.6 0.3 20.30 mmHg Pass 2.6 0.00% 22.4 22.6 Calibration is the same as Vol. Flow Rate Auto Detector Calibration Initial High Voltage 1470 Final High Voltage Initial Beta Count 13242 Final Beta Count 13888 Final Beta 13888 8000-13000 13888 Leak Test Start Value VAC 71.3 mmHg | Volumetric Flow Rate | metric Flow Rate 16.64 | 17.05 2.40 | +/- 2% | Fail | 17.03 | 0.00 | 16.64 | 17.03 | |
| He Flow Pressure Span 2.3 2.6 0.3 20.30 mmHg Pass 2.6 0.00% 22.4 22.6 Calibration is the same as Vol. Flow Rate Auto Detector Calibration Initial High Voltage 1470 Final High Voltage Initial Beta Count 13242 Final Beta Count 13888 Final Beta 13888 8000-13000 13888 Leak Test Start Value VAC 71.3 mmHg | | | | | | | | | | |
| Auto Detector Calibration +/- 2% - Calibration is the same as Vol. Flow Rate Auto Detector Calibration Initial High Voltage 1470 Final High Voltage 1490 Initial High Voltage 13842 Final Beta Count 13888 Final Beta 13888 8000-13000 13888 Leak Test Start Value VAC 71.3 mmHg | | | | | | | | | | |
| Auto Detector Calibration Initial High Voltage 1470 Final High Voltage 1490 Initial Beta Count 13242 Final Beta Count 13888 Final Beta 13888 8000-13900 13888 Leak Test Start Value VAC 71.3 mmHg | | | | | Pass | 22.6 | 0.00% | 22.4 | 22.6 | |
| Initial High Voltage 1490 Initial Beta Count 13242 Final Beta Count 13888 Final Beta 13888 8000-13900 13888 Leak Test Start Value VAC 71.3 mmHg | Auto Flow Calibration | Flow Calibration | - | +/- 2% | | | - | | | Calibration is the same as Vol. Flow Rate |
| Initial Beta Count 13242 Final Beta Count 13888 Final Beta 13888 8000-13000 13888 Leak Test Start Value VAC 71.3 mmHg | Auto Detector Calibration | libration | | | | | | | | |
| Final Beta 13888 8000-13000 13888 Leak Test Start Value VAC 71.3 mmHg | Initial High Voltage | itial High Voltage 1470 | | Fin | nal High Voltage | 1490 | | | | |
| Leak Test Start Value VAC 71.3 mmHg | Initial Beta Count | Initial Beta Count 13242 | | F | inal Beta Count | 13888 | | | | |
| Start Value VAC 71.3 mmHg | Final Beta | Final Beta 13888 | | | 8000-13000 | 13888 | | | | |
| | Leak Test | | | | | | | | | |
| Start Value FLOW (AQ Unit) 16.67 LPM | Start Value VAC | Start Value VAC 71.3 mm | nmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | FLOW (AQ Unit) 16.67 LPN | PM | | | | | | | |
| Start Value FLOW (SLR Pro) 16.63 LPM | Start Value FLOW (SLR Pro) | e FLOW (SLR Pro) 16.63 LPN | PM | | | | | | | |
| Leak Check Adapter VAC 128.8 mmHg | Leak Check Adapter VAC | eck Adapter VAC 128.8 mm | nmHg | | | | | | | |
| Leak Check Adapter FLOW (AQ Unit) 16.65 LPM | | | | | | | | | | |
| Leak Check Adapter FLOW (SLR Pro) 16.57 LPM | | | | | | | | | | |
| Flow Variance 0.12% LPM +/-2.5% Pass | Flow Variance | Flow Variance 0.12% LPM | PM | +/-2.5% | | | Pass | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | |
|---------------------------|-----------------------------------|----------------|------------------|-----------|---------|-----------|----------|---|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | | | Yes | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressu |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | Yes | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | | | Yes | Leak Check |
| Temperature | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | Yes | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermome | 160718539 | 29-Aug-16 | 29-Aug-18 | | | Yes | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure/V | 160885583 | 31-Oct-18 | 31-Oct-18 | | | Yes | Calibrate AmTemp |
| | | | | | | | Yes | Calibrate RH |
| Fechnical Data | Thermo Manual P/N 106428-00 dated | 2 April 2014 | | | | | Yes | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number 10 | 6430-00 revisi | on A | | | | Yes | Calibrate Baro Pressure |
| | | | | | | | Yes | Auto Flow Calibration |
| irmware updated to: | | | | | | | Yes | Calibrate Vacuum Pressure Span |
| | | | | | | | Yes | Calibrate Flow Pressure Span |
| Calibration Complete By | Justin Grandjambe | | | | | | Yes | Auto Mass Calibration |
| | | | | | | | Yes | Pump Reuild |

Rebuilt the pump, but did not take apart the top as we do not have replacement gaskets. Replaced the fan filter and fan guard. Did not clean the inlet assembly as we do not have access to the ro Oblivor oclean the heart rube as we have it spray formed the celling, to prevent water from seeping in. Removed and cleaned the sample tube following instructions from the manual. The first auto dectector calibration failed. There was an error message which I mistakingly did not record. The second calibration passed.

| | AQ Unit Verification ar | nd Calibration Sheet | | | |
|-----------------|-------------------------|----------------------|---------------|----|---|
| | | No: | ENVI-622-1031 | | |
| Area: | 8000 | Revision: | 0 | | |
| Effective Date: | 2016-October 25 | By: | D. Dul | | |
| Task: | AQ Unit Calibration | · — | | | |
| | | Page: | 1 | of | 1 |
| | | | | | |

Customer Name Instrument Location Instrument Serial Number Date Verification and Calibration Type DIAVIK
Communication Shack
5014i203191211
23-Dec-2017
Monthly

| | | | | As Found | | | | Final | Set Point as | Set Point |
|-------------------------------------|---|---------------|----------|----------|------------------------------------|-----------------|-------------|----------|--------------|-------------|
| | Description | As Found | Standard | Variance | Allowable Variance | Outcome | Adjusted to | Variance | Found | Adjusted to |
| 1 Point | Ambient Air Temperature | -31.8 | -30 | 1.80 | +/- 0.2°C | Fail | -30.2 | 0.20 | -0.8 | -2.2 |
| 1 Point | Ambient Relative Humidity | 71.4 | 71.29 | -0.15 | +/- 2% | Pass | | - | | |
| 1 Point | Flow Temperature | 17.3 | 17.2 | -0.10 | +/- 0.2°C | Pass | | - | | |
| 1 Point | Barometer Pressure | 768.5 | 730.3 | -38.20 | +/- 10 mmHg | Fail | 729 | 1.30 | 1.0512 | 0.9982 |
| 1 Point | Volumetric Flow Rate | 16.73 | 16.7 | 0.18 | +/- 2% | Pass | | | | |
| Calibrate Calibrate Calibrate | Vacuum Pressure Span Flow Pressure Span Auto Flow Calibration | | | - | 50-70 mmHg 20-30 mmHg +/- 2% | | | - | | |
| | | | | | | | | | | |
| | Auto Detector Calibration | | | | | | | | | |
| | Initial High Voltage | 1360 | | | Fir | al High Voltage | 1360 | | | |
| | Initial Beta Count | 7407 | | | F | inal Beta Count | 7309 | | | |
| | Final Beta | 7309 | | | | 8000-13000 | | Fail | | |
| | Leak Test | | | | | | | | | |
| | Start Value VAC | 124.5 | mmHg | | | | | | | |
| | Start Value FLOW (AQ Unit) | 30.1 | LPM | | | | | | | |
| | Start Value FLOW (SLR Pro) | 16.4 | LPM | | | | | | | |
| | Leak Check Adapter VAC | 125.1 | mmHg | | | | | | | |
| | Leak Check Adapter FLOW (AQ Unit) | 29.8 | LPM | | | | | | | |
| | Leak Check Adapter FLOW (SLR Pro) | 16.45 | LPM | | | | | | | |
| | Flow Variance | 1.01% | LPM | | +/-2.5% | | | Pass | | |
| | Auto Mass Coefficient Calibration | Not Completed | NA | | | | | | | |

| Standards Used | Description | S/N | Calibration Date | Due Date | Monthly | Quarterly | Annually | |
|--|--|------------------|------------------|-----------|---------|-----------|----------|---|
| Flow | Stream Line Pro | HL130101 | 2-Feb-17 | 2-Feb-18 | Yes | Yes | | 1 Pt. Varification (Am Temp, RH, Flow Temp, Baro Pressure & Vol. Flow Rate) |
| Temperature | Stream Line Pro | T130101 | 26-Jan-17 | 26-Jan-18 | | | | Auto Detector Calibration |
| Pressure | Stream Line Pro | HL130101 | 26-Jan-17 | 26-Jan-18 | Yes | Yes | | Leak Check |
| Temperature | Traceable Hygrometer Thermon | ne 160718539 | 29-Aug-16 | 29-Aug-18 | | | | Clean Inlet Assemblies & Sample Tubes |
| Relative Humidity | Traceable Hygrometer Thermon | ne 160718539 | 29-Aug-16 | 29-Aug-18 | Yes | Yes | | Check Cam (grease as needed) |
| Manometer/Pressure/Vacuum | Traceable Monometer/Pressure | /V 160885583 | 31-Oct-18 | 31-Oct-18 | | Yes | | Calibrate AmTemp |
| | | | | | | | | Calibrate RH |
| Technical Data | Thermo Manual P/N 106428-00 dat | ed 2 April 2014 | | | | | | Calibrate Flow Temp |
| | Thermo Fisher Procedure Number | 106430-00 revisi | on A | | | Yes | | Calibrate Baro Pressure |
| | | | | | | | | Auto Flow Calibration |
| Firmware updated to: | | | | | | | | Calibrate Vacuum Pressure Span |
| | | | | | | | | Calibrate Flow Pressure Span |
| Calibration Complete By | SS2 | | | | | | | Auto Mass Calibration |
| | | | | | | | | Pump Reuild |
| | | | | | | | | |
| Signature: | | | | | | | | |
| Signature. | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | COMMENTS | | | | | | | |
| Barometric pressure from airport: 30.31 inHg | . Temperature, Baro Pressure re-calibr | ated. | | | | | | |
| | | | | | | | 1 | |

Appendix D

Daily TSP Data, 2017

DIAVIK DIAMOND MINE

2017 Environmental Air Quality Monitoring Report

Appendix D. Daily TSP Data, 2017

| | CB Station | | | A154 Dike Station |
|-----------|-------------------|--------------------------|-------------------|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment |
| 1-Jan-17 | 2.5 | | - | Station removed for servicing. |
| 2-Jan-17 | 8.3 | | - | Station removed for servicing. |
| 3-Jan-17 | 2.7 | | - | Station removed for servicing. |
| 4-Jan-17 | 3.1 | | - | Station removed for servicing. |
| 5-Jan-17 | 31.0 | | - | Station removed for servicing. |
| 6-Jan-17 | 30.0 | | - | Station removed for servicing. |
| 7-Jan-17 | 97.9 | | - | Station removed for servicing. |
| 8-Jan-17 | 44.6 | | - | Station removed for servicing. |
| 9-Jan-17 | 26.9 | | - | Station removed for servicing. |
| 10-Jan-17 | - | Too many missing values. | - | Station removed for servicing. |
| 11-Jan-17 | - | Too many missing values. | - | Station removed for servicing. |
| 12-Jan-17 | - | Too many missing values. | - | Station removed for servicing. |
| 13-Jan-17 | - | Too many missing values. | - | Station removed for servicing. |
| 14-Jan-17 | 1.6 | | - | Station removed for servicing. |
| 15-Jan-17 | 4.7 | | - | Station removed for servicing. |
| 16-Jan-17 | 2.6 | | - | Station removed for servicing. |
| 17-Jan-17 | 9.5 | | - | Station removed for servicing. |
| 18-Jan-17 | 4.2 | | - | Station removed for servicing. |
| 19-Jan-17 | 20.6 | | - | Station removed for servicing. |
| 20-Jan-17 | 4.1 | | - | Station removed for servicing. |
| 21-Jan-17 | 14.0 | | - | Station removed for servicing. |
| 22-Jan-17 | 15.6 | | - | Station removed for servicing. |
| 23-Jan-17 | 1.9 | | - | Station re-installed. Too many missing values. |
| 24-Jan-17 | 2.2 | | 1.6 | |
| 25-Jan-17 | 2.9 | | 3.2 | |
| 26-Jan-17 | 4.5 | | - | Too many missing values. |
| 27-Jan-17 | 4.2 | | 3.9 | , , |
| 28-Jan-17 | 10.8 | | 2.6 | |
| 29-Jan-17 | 9.2 | | 1.3 | |
| 30-Jan-17 | 16.5 | | 5.2 | |
| 31-Jan-17 | 40.3 | | 4.7 | |
| 1-Feb-17 | 37.8 | | 3.6 | |
| 2-Feb-17 | 29.7 | | - | Too many negative values. |
| 3-Feb-17 | 37.9 | | 3.9 | |

Appendix D. Daily TSP Data, 2017

| | | CB Station | | A154 Dike Station | | |
|----------------------|-------------------|---------------------------|-------------------|---------------------------------------|--|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment | | |
| 4-Feb-17 | 43.3 | | - | Too many negative values. | | |
| 5-Feb-17 | 21.6 | | 3.2 | | | |
| 6-Feb-17 | 34.5 | | - | Too many negative values. | | |
| 7-Feb-17 | 66.2 | | 9.0 | | | |
| 8-Feb-17 | 31.8 | | 8.8 | | | |
| 9-Feb-17 | 22.3 | | 6.2 | | | |
| 10-Feb-17 | 9.3 | | 2.9 | | | |
| 11-Feb-17 | 11.6 | | 2.9 | | | |
| 12-Feb-17 | 15.4 | | - | Too many negative values. | | |
| 13-Feb-17 | 37.8 | | - | Low flow and too many missing values. | | |
| 14-Feb-17 | 6.8 | | - | Too many missing values. | | |
| 15-Feb-17 | - | Too many negative values. | - | Too many missing and negative values. | | |
| 16-Feb-17 | - | Too many negative values. | - | Too many negative values. | | |
| 7-Feb-17 | 31.1 | | 6.5 | | | |
| 8-Feb-17 | 21.4 | | 27.6 | | | |
| 19-Feb-17 | 9.1 | | 83.8 | | | |
| 20-Feb-17 | 3.9 | | 21.9 | | | |
| 21-Feb-17 | 13.8 | | - | Too many negative values. | | |
| 22-Feb-17 | 20.7 | | 6.8 | | | |
| 23-Feb-17 | 5.4 | | 13.6 | | | |
| 24-Feb-17 | 11.9 | | 21.0 | | | |
| 25-Feb-17 | 11.6 | | 8.1 | | | |
| 26-Feb-17 | - | Low flow. | 10.1 | | | |
| 27-Feb-17 | - | Low flow. | 12.0 | | | |
| 28-Feb-17 | - | Low flow. | 7.8 | | | |
| l-Mar-17 | - | Low flow. | 9.5 | | | |
| 2-Mar-17 | - | Low flow. | 7.7 | | | |
| 3-Mar-17 | 14.5 | | 7.2 | | | |
| l-Mar-17 | 14.4 | | 6.6 | | | |
| 5-Mar-17 | - | Low flow. | 8.6 | | | |
| 6-Mar-17 | - | Low flow. | 18.6 | | | |
| ⁷ -Mar-17 | - | Low flow. | 8.3 | | | |
| 3-Mar-17 | - | Low flow. | 20.8 | | | |
| 9-Mar-17 | _ | Low flow. | 9.1 | | | |

Appendix D. Daily TSP Data, 2017

| | | CB Station | | A154 Dike Station |
|-----------|-------------------|---------------------------|-------------------|---------------------------------------|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment |
| 10-Mar-17 | 25.1 | | 5.6 | |
| 11-Mar-17 | 19.8 | | 6.7 | |
| 12-Mar-17 | 54.0 | | 4.6 | |
| 13-Mar-17 | - | Too many negative values. | - | Too many missing values. |
| 14-Mar-17 | - | Too many negative values. | - | Too many missing values. |
| 15-Mar-17 | - | Too many negative values. | - | Too many missing values. |
| 16-Mar-17 | - | Too many missing values. | - | Too many missing values. |
| 17-Mar-17 | - | Too many missing values. | - | Too many missing and negative values. |
| 18-Mar-17 | 13.2 | | 7.5 | , , , |
| 19-Mar-17 | 19.6 | | 15.5 | |
| 20-Mar-17 | 7.9 | | 8.1 | |
| 21-Mar-17 | 11.1 | | 7.6 | |
| 22-Mar-17 | 18.2 | | 11.2 | |
| 23-Mar-17 | 14.1 | | - | Too many missing and negative values. |
| 24-Mar-17 | - | Too many negative values. | 4.0 | , , , |
| 25-Mar-17 | 3.2 | , , | 7.7 | |
| 26-Mar-17 | 5.8 | | 4.2 | |
| 27-Mar-17 | 3.2 | | 9.4 | |
| 28-Mar-17 | 4.6 | | 4.3 | |
| 29-Mar-17 | 11.7 | | 7.9 | |
| 30-Mar-17 | 6.7 | | 5.4 | |
| 31-Mar-17 | 6.1 | | 3.0 | |
| 1-Apr-17 | 5.5 | | 4.1 | |
| 2-Apr-17 | 3.4 | | 3.6 | |
| 3-Apr-17 | 2.0 | | 3.0 | |
| 4-Apr-17 | 7.4 | | 9.0 | |
| 5-Apr-17 | 5.1 | | 3.1 | |
| 6-Apr-17 | 11.4 | | 11.1 | |
| 7-Apr-17 | 5.7 | | 5.6 | |
| 8-Apr-17 | 4.6 | | 6.7 | |
| 9-Apr-17 | 6.4 | | 8.7 | |
| 10-Apr-17 | 9.5 | | 10.7 | |
| 11-Apr-17 | 11.0 | | 12.1 | |
| 12-Apr-17 | 5.2 | | 12.9 | |

Appendix D. Daily TSP Data, 2017

| | | CB Station | | A154 Dike Station | | |
|-----------|-------------------|--------------------------|-------------------|---------------------------|--|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment | | |
| 13-Apr-17 | 5.7 | | - | Too many negative values. | | |
| 14-Apr-17 | 8.4 | | 5.5 | • 0 | | |
| 15-Apr-17 | 2.9 | | 2.9 | | | |
| 16-Apr-17 | 9.9 | | 11.2 | | | |
| 17-Apr-17 | 9.3 | | 6.6 | | | |
| 18-Apr-17 | 8.6 | | 5.2 | | | |
| 19-Apr-17 | 5.3 | | 5.9 | | | |
| 20-Apr-17 | 10.6 | | 9.6 | | | |
| 21-Apr-17 | - | Too many missing values. | - | Instrument malfunction. | | |
| 22-Apr-17 | - | Too many missing values. | - | Instrument malfunction. | | |
| 23-Apr-17 | - | Too many missing values. | - | Instrument malfunction. | | |
| 24-Apr-17 | - | Too many missing values. | - | Instrument malfunction. | | |
| 25-Apr-17 | - | Too many missing values. | - | Instrument malfunction. | | |
| 26-Apr-17 | - | Too many missing values. | - | Instrument malfunction. | | |
| 27-Apr-17 | - | Too many missing values. | - | Instrument malfunction. | | |
| 28-Apr-17 | 3.8 | · | 5.3 | | | |
| 29-Apr-17 | 4.3 | | 3.7 | | | |
| 30-Apr-17 | 4.2 | | 3.5 | | | |
| 1-May-17 | 3.6 | | 4.0 | | | |
| 2-May-17 | 3.6 | | 4.1 | | | |
| 3-May-17 | 5.2 | | 4.5 | | | |
| 4-May-17 | 3.2 | | 3.7 | | | |
| 5-May-17 | 3.9 | | 3.9 | | | |
| 6-May-17 | 4.3 | | 4.0 | | | |
| 7-May-17 | 2.3 | | 2.7 | | | |
| 8-May-17 | 4.0 | | 3.7 | | | |
| 9-May-17 | 3.1 | | 3.9 | | | |
| 10-May-17 | 2.2 | | 1.6 | | | |
| 11-May-17 | 1.4 | | 1.9 | | | |
| 12-May-17 | 2.4 | | 2.9 | | | |
| 13-May-17 | 1.5 | | 2.0 | | | |
| 14-May-17 | 2.5 | | 2.2 | | | |
| 15-May-17 | 2.7 | | 2.6 | | | |
| 16-May-17 | 3.1 | | 2.4 | | | |

Appendix D. Daily TSP Data, 2017

| | | CB Station | | A154 Dike Station | | |
|-----------|-------------------|---------------------------|-------------------|---------------------------|--|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment | | |
| 17-May-17 | 10.8 | | 4.2 | | | |
| 18-May-17 | 15.5 | | 5.8 | | | |
| 19-May-17 | 18.8 | | 19.1 | | | |
| 20-May-17 | 33.7 | | 9.0 | | | |
| 21-May-17 | 6.5 | | 6.8 | | | |
| 22-May-17 | 7.2 | | 4.7 | | | |
| 23-May-17 | - | Too many missing values. | 5.7 | | | |
| 24-May-17 | - | Too many missing values. | 5.7 | | | |
| 25-May-17 | - | Too many missing values. | 8.9 | | | |
| 26-May-17 | 3.0 | , 0 | 14.2 | | | |
| 27-May-17 | 3.2 | | 5.0 | | | |
| 28-May-17 | _ | Too many negative values. | 5.4 | | | |
| 29-May-17 | 3.6 | , 0 | 7.4 | | | |
| 30-May-17 | 1.4 | | - | Too many negative values. | | |
| 31-May-17 | - | Too many missing values. | - | Too many missing values. | | |
| 1-Jun-17 | 3.3 | | 4.4 | , , | | |
| 2-Jun-17 | - | Too many negative values. | 4.2 | | | |
| 3-Jun-17 | - | Too many negative values. | 6.5 | | | |
| 4-Jun-17 | - | Too many negative values. | - | Too many negative values. | | |
| 5-Jun-17 | 6.5 | | - | Too many negative values. | | |
| 6-Jun-17 | 1.6 | | 7.4 | | | |
| 7-Jun-17 | 3.1 | | 20.2 | | | |
| 8-Jun-17 | 7.1 | | 10.7 | | | |
| 9-Jun-17 | - | Too many negative values. | 4.5 | | | |
| 10-Jun-17 | 5.3 | | - | Too many negative values. | | |
| 11-Jun-17 | 0.8 | | - | Too many negative values. | | |
| 12-Jun-17 | 5.2 | | 6.4 | | | |
| 13-Jun-17 | - | Too many negative values. | - | Too many negative values. | | |
| 14-Jun-17 | 4.0 | · - | 7.1 | | | |
| 15-Jun-17 | - | Too many negative values. | - | Too many negative values. | | |
| 16-Jun-17 | 8.5 | | - | Too many negative values. | | |
| 17-Jun-17 | - | Too many negative values. | 9.3 | | | |
| 18-Jun-17 | 7.4 | - | 12.3 | | | |
| 19-Jun-17 | _ | Too many negative values. | 10.4 | | | |

Appendix D. Daily TSP Data, 2017

| | | CB Station | A154 Dike Station | | |
|-----------|-------------------|---------------------------------------|-------------------|---------------------------|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment | |
| 20-Jun-17 | 6.8 | | - | Too many negative values. | |
| 21-Jun-17 | 1.1 | | - | Too many negative values. | |
| 22-Jun-17 | - | Too many missing values. | - | Too many missing values. | |
| 23-Jun-17 | - | Too many missing values. | - | Too many missing values. | |
| 24-Jun-17 | - | Too many missing values. | - | Too many missing values. | |
| 25-Jun-17 | 7.7 | | 28.1 | | |
| 26-Jun-17 | - | Too many negative values. | 5.7 | | |
| 27-Jun-17 | 1.8 | | - | Too many negative values. | |
| 28-Jun-17 | - | Too many negative values. | 3.7 | , , | |
| 29-Jun-17 | 8.7 | , 0 | - | Too many negative values. | |
| 30-Jun-17 | - | Too many negative values. | 5.8 | , 0 | |
| 1-Jul-17 | - | Too many negative values. | 4.6 | | |
| 2-Jul-17 | 4.8 | , 0 | 4.8 | | |
| 3-Jul-17 | 5.6 | | - | Too many negative values. | |
| 4-Jul-17 | - | Too many negative values. | 6.3 | , 0 | |
| 5-Jul-17 | - | Too many negative values. | 8.3 | | |
| 6-Jul-17 | 16.5 | , 0 | 13.8 | | |
| 7-Jul-17 | _ | Too many negative values. | 7.3 | | |
| 8-Jul-17 | 6.1 | , 0 | 7.7 | | |
| 9-Jul-17 | 6.5 | | 38.9 | | |
| 10-Jul-17 | 8.0 | | 14.7 | | |
| 11-Jul-17 | 14.3 | | 23.2 | | |
| 12-Jul-17 | 7.2 | | 8.9 | | |
| 13-Jul-17 | _ | Too many negative values. | 8.6 | | |
| 14-Jul-17 | 5.0 | , 0 | _ | Too many missing values. | |
| 15-Jul-17 | 19.6 | | _ | Too many missing values. | |
| 16-Jul-17 | _ | Too many negative values. | 24.7 | 3 0 | |
| 17-Jul-17 | _ | Too many negative values. | 6.9 | | |
| 18-Jul-17 | 7.6 | , 0 | _ | Too many negative values. | |
| 19-Jul-17 | _ | Too many missing and negative values. | _ | Too many missing values. | |
| 20-Jul-17 | _ | Too many missing values. | _ | Too many missing values. | |
| 21-Jul-17 | 11.0 | , 0 | 23.8 | 3 0 | |
| 22-Jul-17 | 7.9 | | 17.8 | | |
| 23-Jul-17 | _ | Too many negative values. | - | Too many negative values. | |

Appendix D. Daily TSP Data, 2017

| | | CB Station | | A154 Dike Station | | |
|-----------|-------------------|---------------------------|-------------------|-------------------------------|--|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment | | |
| 24-Jul-17 | 16.7 | | 17.6 | | | |
| 25-Jul-17 | - | Too many negative values. | 8.6 | | | |
| 26-Jul-17 | 9.7 | | 13.0 | | | |
| 27-Jul-17 | 6.6 | | - | Too many negative values. | | |
| 28-Jul-17 | - | Too many negative values. | 3.6 | | | |
| 29-Jul-17 | 5.2 | | 10.1 | | | |
| 30-Jul-17 | 6.1 | | 10.6 | | | |
| 31-Jul-17 | - | Too many negative values. | 6.5 | | | |
| 1-Aug-17 | 8.6 | , , | 10.7 | | | |
| 2-Aug-17 | 15.3 | | 21.6 | | | |
| 3-Aug-17 | 13.7 | | 32.3 | | | |
| 4-Aug-17 | 19.1 | | 28.5 | | | |
| 5-Aug-17 | - | Too many negative values. | 9.8 | | | |
| 6-Aug-17 | - | Too many negative values. | 7.4 | | | |
| 7-Aug-17 | 8.5 | , G | 20.1 | | | |
| 8-Aug-17 | 6.3 | | 13.1 | | | |
| 9-Aug-17 | 6.0 | | 11.8 | | | |
| 10-Aug-17 | 8.7 | | 10.2 | | | |
| 11-Aug-17 | 8.9 | | 27.7 | | | |
| 12-Aug-17 | 25.9 | | 69.6 | | | |
| 13-Aug-17 | 66.5 | Smoke from forest fires. | 241.1 | Smoke from forest fires. | | |
| 14-Aug-17 | 58.5 | Smoke from forest fires. | - | Instrument jammed from smoke. | | |
| 15-Aug-17 | 29.2 | Smoke from forest fires. | - | Instrument jammed from smoke | | |
| 16-Aug-17 | 16.5 | | - | Instrument jammed from smoke | | |
| 17-Aug-17 | - | Too many negative values. | - | Instrument jammed from smoke | | |
| 18-Aug-17 | 6.0 | . 0 | - | Instrument jammed from smoke | | |
| 19-Aug-17 | - | Too many negative values. | - | Instrument jammed from smoke | | |
| 20-Aug-17 | 1.7 | | 4.1 | • | | |
| 21-Aug-17 | 1.0 | | 4.0 | | | |
| 22-Aug-17 | 2.7 | | 8.4 | | | |
| 23-Aug-17 | - | Too many negative values. | 9.7 | | | |
| 24-Aug-17 | 10.4 | | 16.7 | | | |
| 25-Aug-17 | 5.1 | | 18.3 | | | |
| 26-Aug-17 | - | Too many negative values. | 23.0 | | | |

Appendix D. Daily TSP Data, 2017

| | | CB Station | A154 Dike Station | | |
|-----------|-------------------|---------------------------------------|-------------------|--|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (µg/m³) | Comment | |
| 27-Aug-17 | 1.7 | | 6.4 | | |
| 28-Aug-17 | - | Too many negative values. | 5.5 | | |
| 29-Aug-17 | 7.8 | | 9.1 | | |
| 30-Aug-17 | 7.8 | | - | Too many negative values. | |
| 31-Aug-17 | 13.3 | | 34.9 | | |
| 1-Sep-17 | - | Too many negative values. | - | Too many negative values. | |
| 2-Sep-17 | 1.3 | , , | 3.0 | , , | |
| 3-Sep-17 | 5.2 | | - | Too many negative values. | |
| 4-Sep-17 | - | Too many negative values. | 9.0 | , 0 | |
| 5-Sep-17 | 2.5 | , 0 | _ | Too many negative values. | |
| 6-Sep-17 | 5.6 | | 12.4 | , 0 | |
| 7-Sep-17 | 5.4 | | 9.6 | | |
| 8-Sep-17 | - | Too many negative values. | 70.6 | | |
| 9-Sep-17 | 3.0 | , 0 | 5.5 | | |
| 10-Sep-17 | 2.7 | | _ | Too many negative values. | |
| 11-Sep-17 | - | Too many negative values. | 14.5 | , 0 | |
| 12-Sep-17 | 8.8 | , 0 | _ | Too many negative values. | |
| 13-Sep-17 | - | Too many negative values. | 9.7 | , 0 | |
| 14-Sep-17 | 7.9 | , 0 | 8.8 | | |
| 15-Sep-17 | 5.0 | | 8.7 | | |
| 16-Sep-17 | 4.2 | | _ | Too many negative values. | |
| 17-Sep-17 | 3.8 | | 11.2 | , 0 | |
| 18-Sep-17 | - | Too many missing values. | _ | Inlet tube not installed. Not enough valid hourly data | |
| 19-Sep-17 | _ | Too many missing values. | _ | Inlet tube not installed. Not enough valid hourly data | |
| 20-Sep-17 | - | Too many missing and negative values. | _ | Inlet tube not installed. Not enough valid hourly data | |
| 21-Sep-17 | - | Too many negative values. | _ | Inlet tube not installed. Not enough valid hourly data | |
| 22-Sep-17 | 1.6 | , 0 | _ | Inlet tube not installed. Not enough valid hourly data | |
| 23-Sep-17 | 1.3 | | _ | Inlet tube not installed. Not enough valid hourly data | |
| 24-Sep-17 | 3.4 | | _ | Inlet tube not installed. Not enough valid hourly data | |
| 25-Sep-17 | 3.4 | | _ | Inlet tube not installed. Not enough valid hourly data | |
| 26-Sep-17 | _ | Too many negative values. | _ | Inlet tube not installed. Not enough valid hourly data | |
| 27-Sep-17 | _ | Too many negative values. | _ | Inlet tube not installed. Not enough valid hourly data | |
| 28-Sep-17 | 4.7 | , 0 | _ | Inlet tube not installed. Not enough valid hourly data | |
| 29-Sep-17 | _ | Too many missing values. | _ | Inlet tube not installed. Not enough valid hourly data | |

Appendix D. Daily TSP Data, 2017

| | | CB Station | | A154 Dike Station |
|-----------|-------------------|---------------------------------------|-------------------|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment |
| 30-Sep-17 | - | Too many missing values. | - | Inlet tube not installed. Not enough valid hourly data |
| 1-Oct-17 | - | Too many missing values and low flow. | - | Inlet tube not installed. Not enough valid hourly data |
| 2-Oct-17 | - | Low flow. | - | Inlet tube not installed. Not enough valid hourly data |
| 3-Oct-17 | - | Low flow. | - | Inlet tube not installed. Not enough valid hourly data |
| 4-Oct-17 | - | Low flow. | - | Inlet tube not installed. Not enough valid hourly data |
| 5-Oct-17 | - | Low flow. | - | Inlet tube not installed. Not enough valid hourly data |
| 6-Oct-17 | - | Low flow. | 17.1 | |
| 7-Oct-17 | - | Low flow. | 4.4 | |
| 8-Oct-17 | - | Low flow. | 5.8 | |
| 9-Oct-17 | - | Low flow. | 1.8 | |
| 10-Oct-17 | - | Low flow. | 3.1 | |
| 11-Oct-17 | 2.7 | | 18.0 | |
| 12-Oct-17 | - | Low flow. | 11.0 | |
| 13-Oct-17 | - | Low flow. | 2.2 | |
| 14-Oct-17 | - | Station offline for pump repair. | 4.0 | |
| 15-Oct-17 | - | Station offline for pump repair. | 6.5 | |
| 16-Oct-17 | 3.8 | | 6.5 | |
| 17-Oct-17 | 2.0 | | 3.9 | |
| 18-Oct-17 | 1.4 | | 2.5 | |
| 19-Oct-17 | 0.5 | | 1.8 | |
| 20-Oct-17 | 0.7 | | 1.8 | |
| 21-Oct-17 | 3.4 | | 21.7 | |
| 22-Oct-17 | 1.0 | | 2.2 | |
| 23-Oct-17 | 1.5 | | 3.5 | |
| 24-Oct-17 | 1.6 | | 4.9 | |
| 25-Oct-17 | 0.9 | | 2.7 | |
| 26-Oct-17 | 0.6 | | 3.0 | |
| 27-Oct-17 | 1.6 | | 3.2 | |
| 28-Oct-17 | 5.0 | | 13.8 | |
| 29-Oct-17 | 1.9 | | 6.7 | |
| 30-Oct-17 | _ | Too many negative values. | 4.0 | |
| 31-Oct-17 | 0.5 | , 0 | 3.4 | |
| 1-Nov-17 | 1.4 | | 3.0 | |
| 2-Nov-17 | 2.5 | | - | Too many negative values. |

Appendix D. Daily TSP Data, 2017

| | | CB Station | A154 Dike Station | | |
|-----------|-------------------|---------------------------------------|-------------------|---------|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment | |
| 3-Nov-17 | 9.3 | | 6.5 | | |
| 4-Nov-17 | 1.9 | | 3.1 | | |
| 5-Nov-17 | 1.6 | | 9.1 | | |
| 6-Nov-17 | 3.4 | | 7.6 | | |
| 7-Nov-17 | 2.3 | | 5.9 | | |
| 8-Nov-17 | 1.4 | | 3.8 | | |
| 9-Nov-17 | 9.8 | | 2.2 | | |
| 10-Nov-17 | 1.4 | | 4.4 | | |
| 11-Nov-17 | 1.2 | | 5.6 | | |
| 12-Nov-17 | 1.0 | | 3.4 | | |
| 13-Nov-17 | _ | Low flow. | 2.5 | | |
| 14-Nov-17 | _ | Low flow. | 3.3 | | |
| 15-Nov-17 | - | Low flow. | 5.1 | | |
| 16-Nov-17 | 1.1 | | 2.0 | | |
| 17-Nov-17 | 0.7 | | 2.6 | | |
| 18-Nov-17 | 0.9 | | 3.8 | | |
| 19-Nov-17 | 2.0 | | 2.2 | | |
| 20-Nov-17 | 1.1 | | 2.3 | | |
| 21-Nov-17 | 1.4 | | 4.3 | | |
| 22-Nov-17 | 1.6 | | 4.3 | | |
| 23-Nov-17 | 2.6 | | 2.5 | | |
| 24-Nov-17 | 1.7 | | 2.1 | | |
| 25-Nov-17 | 2.9 | | 4.3 | | |
| 26-Nov-17 | 1.7 | | 5.4 | | |
| 27-Nov-17 | 6.3 | | 1.9 | | |
| 28-Nov-17 | 0.8 | | 2.8 | | |
| 29-Nov-17 | 1.0 | | 3.8 | | |
| 30-Nov-17 | 0.9 | | 1.3 | | |
| 1-Dec-17 | 1.3 | | 3.3 | | |
| 2-Dec-17 | 1.5 | | 4.1 | | |
| 3-Dec-17 | 7.4 | | 3.6 | | |
| 4-Dec-17 | 0.7 | | 1.0 | | |
| 5-Dec-17 | 3.2 | | 6.1 | | |
| 6-Dec-17 | _ | Too many missing and negative values. | 4.4 | | |

Appendix D. Daily TSP Data, 2017

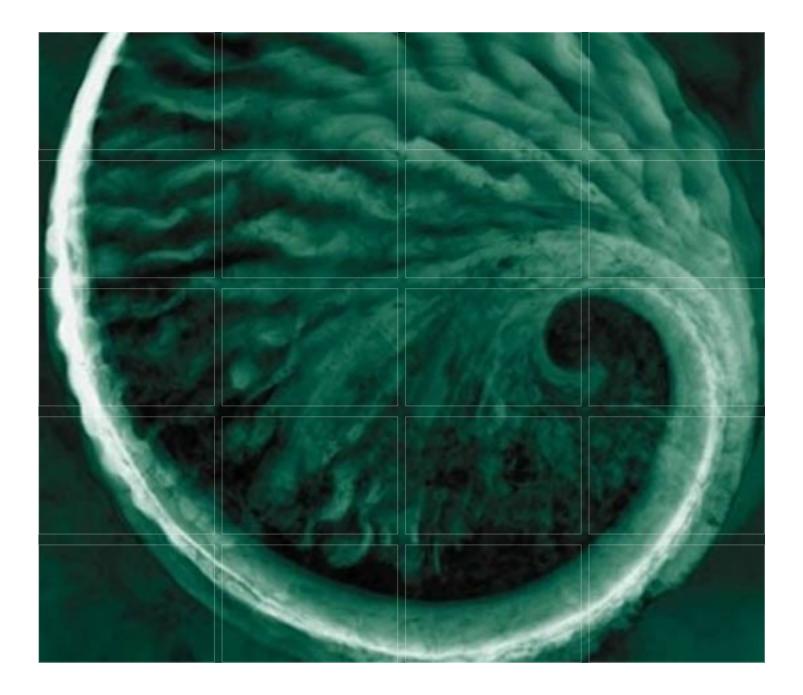
| | | CB Station | | A154 Dike Station |
|-----------|-------------------|---------------------------|-------------------|--|
| Date | Daily TSP (μg/m³) | Comment | Daily TSP (μg/m³) | Comment |
| 7-Dec-17 | 3.7 | | 5.4 | |
| 8-Dec-17 | 1.0 | | 10.6 | |
| 9-Dec-17 | 1.0 | | - | Too many missing values. |
| 10-Dec-17 | 1.3 | | - | Too many missing values. |
| 11-Dec-17 | 3.0 | | 11.0 | |
| 12-Dec-17 | 4.0 | | 20.8 | |
| 13-Dec-17 | - | Too many negative values. | 5.3 | |
| 14-Dec-17 | 2.1 | | 3.5 | |
| 15-Dec-17 | 1.1 | | 1.1 | |
| 16-Dec-17 | 1.5 | | 2.0 | |
| 17-Dec-17 | 0.9 | | 9.9 | |
| 18-Dec-17 | 9.0 | | 71.5 | |
| 19-Dec-17 | 1.2 | | 3.3 | |
| 20-Dec-17 | 1.8 | | 1.7 | |
| 21-Dec-17 | 1.2 | | 3.4 | |
| 22-Dec-17 | 1.2 | | 5.5 | |
| 23-Dec-17 | 13.1 | | 15.8 | |
| 24-Dec-17 | - | Too many missing values. | - | Low flow. |
| 25-Dec-17 | 2.9 | | - | Low flow. |
| 26-Dec-17 | 1.8 | | - | Low flow. |
| 27-Dec-17 | 0.6 | | - | Low flow. |
| 28-Dec-17 | 1.6 | | - | Low flow. |
| 29-Dec-17 | - | Too many missing values. | - | Tape motor broke. Station removed for servicing. |
| 30-Dec-17 | - | Too many missing values. | - | Tape motor broke. Station removed for servicing. |
| 31-Dec-17 | - | Too many missing values. | - | Tape motor broke. Station removed for servicing. |

Appendix E

Diavik Diamond Mine: 2017 Dust Deposition Report (dated June 2018)

DIAVIK DIAMOND MINE

2017 Environmental Air Quality Monitoring Report



Prepared for:



DIAVIK DIAMOND MINE

2017 Dust Deposition Report

June 2018



Diavik Diamond Mines (2012) Inc.

DIAVIK DIAMOND MINE

2017 Dust Deposition Report

June 2018

Project #0207514-0013

Citation:

ERM. 2018. *Diavik Diamond Mine: 2017 Dust Deposition Report*. Prepared for Diavik Diamond Mines (2012) Inc. by ERM Consultants Canada Ltd.: Vancouver, British Columbia.

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ERM prepared this report for the sole and exclusive benefit of, and use by, Diavik Diamond Mines (2012) Inc. Notwithstanding delivery of this report by ERM or Diavik Diamond Mines (2012) Inc. to any third party, any copy of this report provided to a third party is provided for informational purposes only, without the right to rely upon the report.

EXECUTIVE SUMMARY

Potential air and water quality concerns associated with airborne fugitive dust, which may result from Diavik Diamond Mine (the "Project") mining activities, were identified in the Diavik Diamond Mine Environmental Assessment (DDMI 1998). In accordance with the Environmental Assessment and requirements associated with the Aquatic Effects Monitoring Program (AEMP), a dust monitoring program was initiated in 2001. The program was designed to achieve the following objectives:

- determine dust deposition (dustfall) rates at various distances from the mine project footprint;
 and
- determine the chemical characteristics of dustfall that may be deposited onto, and subsequently into, Lac de Gras as a result of mining activities, in support of the AEMP.

In 2017, dustfall monitoring included three components, with sampling conducted at varying distances around the mine from 25 to 4,852 metres (m) away from infrastructure:

- 1. Dustfall gauges (12 monitoring and 2 control locations);
- 2. Dustfall from snow surveys (24 monitoring and 3 control locations); and
- 3. Snow water chemistry from snow surveys (16 monitoring and 3 control locations).

A general reduction in dust levels was observed in 2017 relative to prior years with 2017 having the second lowest median dustfall level over the measurement record. Overall, as expected, dustfall rates generally decreased with distance from the Project and airstrip. As there was no strongly dominant wind direction there was no direct correlation between direction from the mine and dustfall levels. Of the dustfall gauges, Dust 1 had the highest recorded dustfall in 2017 (adjacent to the airstrip) and Dust 10 (south of the Mine) had the second highest recorded dustfall in 2017. Fugitive dust generation also was the greatest during snow-free periods where and when there is site activity. Dust 1 (adjacent to the airstrip) recorded the highest dustfall during the summer months (936 mg/dm²/y) compared to the winter months (230 mg/dm²/y).

Annual dustfall estimated from each of the 14 dustfall gauges ranged from 34 to 480 mg/dm²/y. The annualized dustfall rates estimated from the 2017 snow survey data ranged from 10 to 1,351 mg/dm²/y. Although there are no dustfall standards for the Northwest Territories, all but one station's (SS1-1) 2017 dustfall rates were less than the non-residential 2.9 mg/dm²/d (1,059 mg/dm²/y) documented in British Columbia (BC) Ministry of Environment former dustfall objective for the mining, smelting, and related industries (Diavik 2016). This objective used in the 2015 Dust Deposition Report is no longer used in BC.

Snow water chemistry analytes of interest included those variables with effluent quality criteria (EQC; i.e., aluminum, ammonia, arsenic, cadmium, chromium, copper, lead, nickel, nitrite, and zinc) or a load limit (i.e., phosphorous) specified in the Type "A" Water Licence (W2015L2-0001, formerly W2007L2-0003). All 2017 sample concentrations other than sample SS3-4 (aluminum, chromium, nickel and zinc) were less than their associated reference levels as specified by the "maximum

i

concentration of any grab sample" specified in Water Licence W2015L2-0001. Concentrations of aluminum, chromium, and nickel have generally increased in recent years, while concentrations of most other analytes have generally had no strong trend in recent years. Typically, concentrations decreased with distance from the Project. High concentrations of certain variables of interest were recorded at Station SS3-4, located in the 251-1,000 m zone.

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DIAVIK DIAMOND MINE

2017 Dust Deposition Report

TABLE OF CONTENTS

| Exec | cutive Su | mmary | | i | | | |
|------|-----------|-----------------------|-------------------------|------|--|--|--|
| Ackı | nowledge | ements | | iii | | | |
| Tabl | e of Cont | tents | | v | | | |
| | List o | f Figures | | vi | | | |
| | List o | ist of Tables | | | | | |
| | List o | of Plates | | vi | | | |
| | List o | of Append | lices | vii | | | |
| Glos | sary and | Abbrevi | ations | ix | | | |
| 1. | Intro | duction | | 1-1 | | | |
| 2. | Meth | odology. | | 2-1 | | | |
| | 2.1 | 0, | ll Gauges | | | | |
| | 2.2 | Dustfall Snow Surveys | | | | | |
| | 2.3 | Snow | Water Chemistry | 2-8 | | | |
| 3. | Resul | lts | | 3-1 | | | |
| | 3.1 | Dustfa | 3-2 | | | | |
| | 3.2 | Dustfa | ll Snow Surveys | 3-2 | | | |
| | 3.3 | Snow | Water Chemistry | 3-12 | | | |
| | | 3.3.1 | Aluminum | 3-17 | | | |
| | | 3.3.2 | Ammonia | 3-17 | | | |
| | | 3.3.3 | Arsenic | 3-17 | | | |
| | | 3.3.4 | Cadmium | 3-17 | | | |
| | | 3.3.5 | Chromium | 3-17 | | | |
| | | 3.3.6 | Copper | 3-18 | | | |
| | | 3.3.7 | Lead | 3-18 | | | |
| | | 3.3.8 | Nickel | 3-18 | | | |
| | | 3.3.9 | Nitrite | 3-18 | | | |
| | | 3.3.10 | Phosphorous | 3-18 | | | |
| | | 3.3.11 | Zinc | 3-19 | | | |
| | 3.4 | Qualit | y Assurance and Control | 3-19 | | | |

| 4. | Summary | 4-1 |
|----------|--|-------|
| Referen | nces | R-1 |
| | LIST OF FIGURES | |
| Figure | 2-1. Dustfall Gauge and Snow Survey Locations, Diavik Diamond Mine, 2017 | 2-5 |
| Figure | 3.1-1. Dustfall Results, Diavik Diamond Mine, 2017 | 3-7 |
| Figure | 3.1-2. Calculated Annual Dust Deposition Rates at Dustfall Gauges and Snow Survey Locations up to 1,000 m from the Project Footprint, Diavik Diamond Mine, 2002 to 2017 | 3-8 |
| Figure | 3.1-3. Calculated Annual Dust Deposition Rates at Dustfall Gauges and Snow Survey Locations greater than 1,000 m from the Project Footprint, Diavik Diamond Mine, 2002 to 2017 | 3-9 |
| Figure | 3.1-4. Dust Deposition Versus Distance from Project Footprint, Diavik Diamond Mine, 2017 | .3-10 |
| Figure | 3.1-5. Dust Deposition Box Plot, Diavik Diamond Mine, 2002 to 2017 | .3-11 |
| Figure | 3.3-1. Snow Water Chemistry Results: Aluminum, Ammonia and Arsenic, 2001 to 2017 | .3-13 |
| Figure | 3.3-2. Snow Water Chemistry Results: Cadmium, Chromium and Copper, 2001 to 2017 | .3-14 |
| Figure | 3.3-3. Snow Water Chemistry Results: Lead, Nickel and Nitrite, 2001 to 2017 | .3-15 |
| Figure | 3.3-4. Snow Water Chemistry Results: Phosphorus and Zinc, 2001 to 2017 | .3-16 |
| | LIST OF TABLES | |
| Table 2 | 2-1. Dustfall and Snow Water Chemistry Sampling Locations, Diavik Diamond Mine, 2017 | 2-2 |
| Table 2 | 2.1-1. Dustfall and Snow Water Chemistry Reference Values | 2-6 |
| Table 3 | 3.1-1. Dustfall and Snow Water Chemistry Results, Diavik Diamond Mine, 2017 | 3-3 |
| Table 3 | 3.4-1. Sample Duplicates and Blanks | .3-19 |
| Table 3 | 3.4-2. Analytical Blanks for QA/QC Program | .3-20 |
| | LIST OF PLATES | |
| Plate 2. | .1-1. Dustfall gauge during sample collection. The dustfall gauge consisted of a hollow brass cylinder (centre) housed inside a Nipher snow gauge (right) | 2-6 |
| Plate 2. | .2-1. Snow core sample being weighed, with dustfall gauge in background | 2-7 |

LIST OF APPENDICES

Appendix A. Annual Changes to Dustfall Program

Appendix B. Dustfall Gauge Analytical Results

Appendix C. Dustfall Snow Survey Field Sheets and Analytical Results

Appendix D. Snow Water Chemistry Analytical Results

Appendix E. Dust Gauge Collection Standard Operating Procedure (ENVR-508-0112)

Appendix F. Snow Core Survey Standard Operating Procedure (ENVR-512-0213)

Appendix G. Quality Assurance/Quality Control Standard Operating Procedure (ENVR-303-0112)

GLOSSARY AND ABBREVIATIONS

Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

AEMP Aquatic effects monitoring program

BC British Columbia

BC MOE British Columbia Ministry of Environment

cm Centimetre

d Day

DDMI Diavik Diamond Mines (2012) Inc.

DL Detection limits

dm² Square decimetre

Dustfall Dust deposition

EQC Effluent quality criteria

ERM Consultants Canada Ltd.

L Litre

m Metre

mg Milligram

QA/QC Quality assurance and quality control

the Project Diavik Diamond Mine

RPD Relative percent difference

SOP Standard operating procedure

WLWB Wek'èezhìi Land and Water Board

y Year

μ**g** Microgram

1. INTRODUCTION

Potential air and water quality concerns associated with airborne fugitive dust, which may result from Diavik Diamond Mine (the "Project") mining activities, were identified in the Diavik Diamond Mine Environmental Assessment (DDMI 1998). In accordance with the Environmental Assessment and requirements associated with the Aquatic Effects Monitoring Program (AEMP), a dust monitoring program was initiated in 2001. The program was designed to achieve the following objectives:

- determine dust deposition (dustfall) rates at various distances from the mine project footprint;
 and
- determine the chemical characteristics of dustfall that may be deposited onto, and subsequently into, Lac de Gras as a result of mining activities, in support of the AEMP.

Since 2001, the dustfall monitoring program has gone through various changes, including an increase in the number of sampling locations, the relocation of some sampling stations, and improvements to the dustfall sampling methodology. A description of annual changes is provided in Appendix A. This report includes a comparison between the 2017 observations of dustfall to all site-specific data collected between 2002 and 2017. Appendix A of the Dust Deposition Report summarizes the amendments and additions to the dust fall monitoring program since 2001. Historical dustfall monitoring results have been presented each year in the *Diavik Diamond Mine Dust Deposition* reports from 2001 to 2016 (DDMI 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017). The historical data presented is not considered baseline because construction of the mine began in 2001.

2. METHODOLOGY

The 2017 dustfall monitoring program incorporated three monitoring components, with sampling completed at varying distances around the mine along five transects, including three control locations (Table 2-1, Figure 2-1):

- 1. Dustfall gauges (12 monitoring and 2 control locations);
- 2. Dustfall from snow surveys (24 monitoring and 3 control locations); and
- 3. Snow water chemistry from snow surveys (16 monitoring and 3 control locations).

2.1 DUSTFALL GAUGES

Dustfall gauges were placed at 14 stations (including two control stations) around the Project at distances ranging from approximately 25 to 4,852 metres (m) from mining operations (Table 2-1). Of the 12 stations (plus two control stations), 10 collected dustfall year-round, with samples collected every three months. The average total sampling period for the 12 year-round locations was 357 days. Two new stations were installed in October 2017 (Dust 11 and Dust 12) and they sampled for 93 and 92 days, respectively.

Dustfall gauges consisted of a hollow brass cylinder (52 centimetres (cm) length, 12.5 cm inner diameter) housed in a Nipher snow gauge (Plate 2.1-1). The cylinder collected dustfall, while the Nipher snow gauge reduced air turbulence around the gauge to increase dustfall catch efficiency. The cylinder was exchanged with an empty, clean cylinder at the end of each sampling period, and the content of the cylinder that was retrieved was processed in the Diavik Diamond Mines (2012) Inc. (DDMI) environment lab to determine the mass of collected dustfall. This processing involved filtration, drying in a high heat oven, and weighing of samples as specified in the Dust Gauge Collection Standard Operating Procedure (SOP; ENVR-508-0112; Appendix E) and the Quality Assurance/Quality Control SOP (ENVR-303-0112; Appendix G).

Once the mass of collected dustfall at a station was measured, the mean daily dustfall rate over the collection period was calculated as:

$$D = \frac{M}{A*T}$$
 [Equation 1]

where:

 $D = \text{mean daily dustfall rate (mg/dm}^2/\text{d)}$ during time period T

M = mass of dustfall collected (mg) during time period T

 $A = \text{surface area of dustfall gauge collection cylinder orifice (dm²; approximately 1.227 dm²)$

T = number of days of dustfall collection (d)

The mean daily dustfall rate $(mg/dm^2/d)$ was then multiplied by 365 days to estimate the mean annual dustfall rate $(mg/dm^2/y)$.

Table 2-1. Dustfall and Snow Water Chemistry Sampling Locations, Diavik Diamond Mine, 2017

| | | | Total Sample | UTM Coordinates ¹ | | Approx. Distance | | Snow Water |
|------------------|------------|--|-----------------------------|------------------------------|-----------------|-------------------------------|------------------------|-----------------------------------|
| Transect Line | Station ID | 2017 Sampling Dates | Exposure Duration (days) | Easting (m) | Northing (m) | from Mining Operations (m) | Surface Description | Chemistry Sampled ² |
| Dustfall G | Gauges | | | | | | | |
| | Dust 1 | Jan 4 (start), Mar 25, Jul 2, Sep 30, Dec 24 | 354 | 533964 | 7154321 | 75 | Land | n/a |
| | Dust 2A | Jan 4 (start), Mar 25, Jul 2, Oct 6, Jan 6 (2018) | 367 | 535678 | 7151339 | 435 | Land | n/a |
| | Dust 3 | Jan 4 (start), Mar 25, Jul 2, Sep 30, Jan 10 (2018) | 371 | 535024 | 7151872 | 30 | Land | n/a |
| | Dust 4 | Jan 6 (start), Mar 25, Jul 2, Oct 7, Jan 10 (2018) | 369 | 531397 | 7152127 | 200 | Land | n/a |
| | Dust 5 | Jan 4 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 367 | 535696 | 7155138 | 1,195 | Land | n/a |
| | Dust 6 | Jan 3 (start), Mar 25, Jul 2, Sep 30, Dec 24 | 355 | 537502 | 7152934 | 25 | Land | n/a |
| | Dust 7 | Jan 6 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 365 | 536819 | 7150510 | 1,155 | Land | n/a |
| | Dust 8 | Jan 3 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 368 | 531401 | 7154146 | 1,220 | Land | n/a |
| | Dust 9 | Jan 4 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 367 | 541204 | 7152154 | 3,810 | Land | n/a |
| | Dust 10 | Jan 6 (start), Mar 25, Jul 2, Oct 6, Jan 16 (2018) | 273 | 532908 | 7148924 | 46 | Land | n/a |
| | Dust 11 | Oct 5 (start), Jan 6 (2018) | 93 | 531493 | 7150156 | 805 | Land | n/a |
| | Dust 12 | Oct 6 (start), Jan 6 (2018) | 92 | 529323 | 7151191 | 2,580 | Land | n/a |
| | Dust C1 | Jan 6 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 371 | 534979 | 7144270 | 4,700 | Land | n/a |
| | Dust C2 | Jan 4 (start), Mar 25, Jul 6, Oct 6, Jan 6 (2018) | 369 | 528714 | 7153276 | 3,075 | Land | n/a |

(continued)

Table 2-1. Dustfall and Snow Water Chemistry Sampling Locations, Diavik Diamond Mine, 2017 (continued)

| | Station ID | 2017 Sampling Dates | Total Sample Exposure Duration (days) | UTM Coordinates1 | | Approx. Distance | | Snow Water |
|------------------|----------------------|---------------------|---|------------------|-----------------|----------------------------|------------------------|--------------------------------|
| Transect Line | | | | Easting (m) | Northing (m) | from Mining Operations (m) | Surface Description | Chemistry Sampled ² |
| Snow Surv | veys | | | | | | | |
| 1 | SS1-1-4 ³ | Apr 7 | 191 | 533911 | 7154288 | 30 | Land | |
| | SS1-1-5 ³ | Apr 7 | 191 | 533924 | 7154367 | 30 | Land | |
| | SS1-2 | Apr 7 | 191 | 533924 | 7154367 | 115 | Land | |
| | SS1-3 | Apr 7 | 191 | 533966 | 7154517 | 275 | Land | |
| | SS1-4 | Apr 7 | 158 | 534485 | 7155094 | 920 | Ice | ✓ |
| | SS1-5 | Apr 7 | 158 | 535099 | 7156279 | 2,180 | Ice | ✓ |
| 2 | SS2-1 | Apr 8 | 159 | 537553 | 7153473 | 180 | Ice | ✓ |
| | SS2-2 | Apr 8 | 159 | 537829 | 7153476 | 445 | Ice | ✓ |
| | SS2-3 | Apr 8 | 159 | 538484 | 7153939 | 1,220 | Ice | ✓ |
| | SS2-4-4 ³ | Apr 8 | 159 | 539151 | 7154685 | 2,180 | Ice | ✓ |
| | SS2-4-5 ³ | Apr 8 | 159 | 539151 | 7154685 | 2,180 | Ice | ✓ |
| 3 | SS3-4 | Apr 3 | 154 | 536585 | 7151002 | 615 | Ice | ✓ |
| | SS3-5 | Apr 3 | 154 | 537638 | 7150824 | 1,325 | Ice | ✓ |
| | SS3-6 | Apr 3 | 154 | 536305 | 7151604 | 60 | Ice | ✓ |
| | SS3-6-regrab | Apr 30 | 181 | 536306 | 7151566 | 60 | Ice | ✓ |
| | SS3-7 | Apr 3 | 154 | 536343 | 7151368 | 250 | Ice | ✓ |
| | SS3-8 | Apr 3 | 154 | 536693 | 7150806 | 830 | Ice | ✓ |
| 4 | SS4-1 | Apr 7 | 191 | 531491 | 7152211 | 100 | Land | |
| | SS4-2 | Apr 7 | 191 | 531356 | 7152261 | 245 | Land | |
| | SS4-3 | Apr 7 | 191 | 531331 | 7152434 | 350 | Land | |
| | SS4-4 | Apr 7 | 158 | 531141 | 7153167 | 1,065 | Ice | ✓ |
| | SS4-5-4 ³ | Apr 7 | 158 | 531405 | 7154116 | 1,220 | Ice | ✓ |
| | SS4-5-5 ³ | Apr 7 | 158 | 531405 | 7154116 | 1,220 | Ice | ✓ |

(continued)

Table 2-1. Dustfall and Snow Water Chemistry Sampling Locations, Diavik Diamond Mine, 2017 (completed)

| | | | Total Sample | UTM Coordinates ¹ | | Approx. Distance | | Snow Water |
|------------------|----------------------|---------------------|--------------------------|------------------------------|-----------------|-------------------------------|------------------------|-----------------------------------|
| Transect Line | Station ID | 2017 Sampling Dates | Exposure Duration (days) | Easting (m) | Northing (m) | from Mining Operations (m) | Surface Description | Chemistry Sampled ² |
| Snow Sur | veys (cont'd) | | | | | | | |
| 5 | SS5-1 | Apr 1 | 185 | 533150 | 7148925 | 45 | Land | |
| | SS5-2-4 ³ | Apr 1 | 185 | 533150 | 7148875 | 95 | Land | |
| | SS5-2-5 ³ | Apr 1 | 185 | 533150 | 7148875 | 95 | Land | |
| | SS5-3 | Apr 1 | 152 | 533142 | 7148691 | 270 | Ice | ✓ |
| | SS5-4 | Apr 1 | 152 | 533143 | 7147956 | 1,021 | Ice | ✓ |
| | SS5-5 | Apr 1 | 152 | 533146 | 7146950 | 2,020 | Ice | ✓ |
| | Control 1 | Apr 1 | 192 | 534983 | 7144271 | 4,852 | Land | √ 4 |
| | Control 2 | Apr 7 | 190 | 528714 | 7153281 | 3,075 | Land | √ 4 |
| | Control 3 | Apr 3 | 187 | 538650 | 7148750 | 3,570 | Land | √ 4 |

Notes:

¹ UTM Zone 12W, NAD83

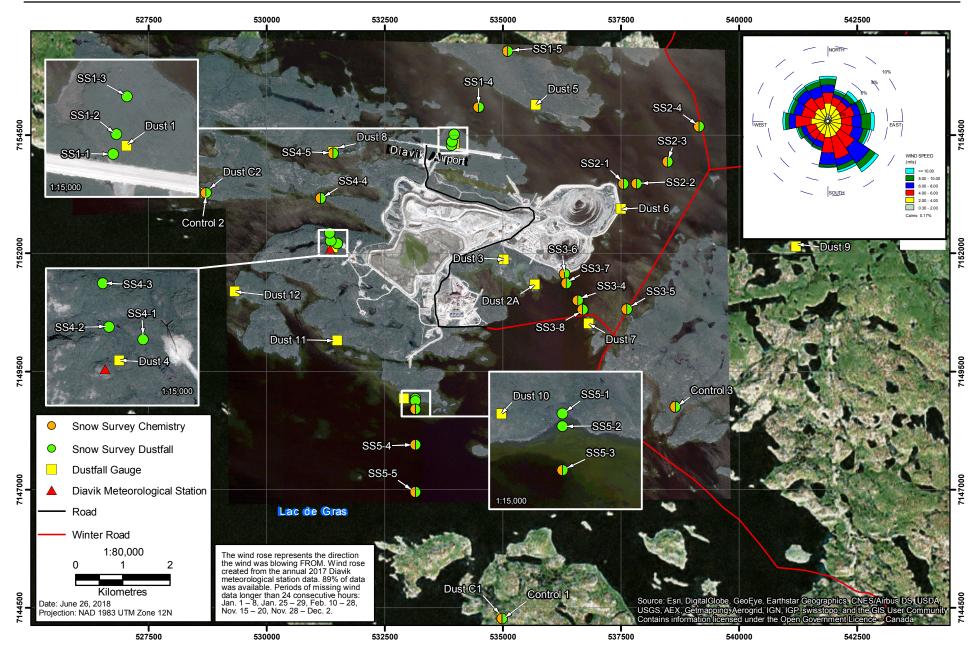
 $^{^{2}}$ n/a = not applicable

³ Duplicate sample taken for snow water chemistry.

⁴ Snow water chemistry sampled over ice, adjacent to the on-land control station; see Section 2.3 for further details.

Figure 2-1
Dustfall Gauge and Snow Survey Locations, Diavik Diamond Mine, 2017





DIAVIK DIAMOND MINES (2012) INC. Proj # 0207514-0013 | GIS # DIA-12-017



Plate 2.1-1. Dustfall gauge during sample collection. The dustfall gauge consisted of a hollow brass cylinder (centre) housed inside a Nipher snow gauge (right).

Estimated dustfall rates were compared to the former British Columbia Ministry of Environment (BC MOE) dustfall objectives for the mining, smelting and related industries (Table 2.1-1; Diavik 2016). The dustfall objective is no longer used in BC; however, for the purposes of this report, dustfall will be compared to the former objective to be consistent with prior dust deposition reports. The dustfall objectives ranged from 1.7 to 2.9 milligram per square decimetre per day (mg/dm²/d), averaged over 30 days. The 1.7 mg/dm²/d objective was often considered to be applicable at sensitive locations whereas the 2.9 mg/dm²/d objective was applicable to areas where it can be shown that unacceptably deleterious changes will not follow. Both values are presented throughout this report. Snow water chemistry data were compared to effluent quality criteria (EQC) set out in Wek'èezhùi Land and Water Board (WLWB) Water Licence W2015L2-0001 (formerly W2007L2-0003).

Table 2.1-1. Dustfall and Snow Water Chemistry Reference Values

| Parameter | Value | Unit | Comment | Source |
|----------------|------------------------|------------------------|---|--------------|
| Dustfall Rate | 1.7-2.9 (621-1,059) | mg/dm²/d (mg/dm²/y) | Former objective for the mining, smelting, and related industries | Diavik 2016 |
| Aluminum-Total | 3,000 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Ammonia-N | 12,000 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Arsenic-Total | 100 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Cadmium-Total | 3 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Chromium-Total | 40 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Copper-Total | 40 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Lead-Total | 20 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Nickel-Total | 100 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Nitrite-N | 2,000 | μg/L | Max. grab sample concentration | W2015L2-0001 |
| Zinc-Total | 20 | μg/L | Max. grab sample concentration | W2015L2-0001 |

2.2 DUSTFALL SNOW SURVEYS

Dustfall snow surveys were performed at 27 stations (including three control stations), along five transects around the Project (Table 2-1 and Figure 2-1). Across stations, the distance from mining operations ranged from approximately 30 to 4,852 m and the average total sampling period in 2017 was 172 days. The start dates correspond to the first snowfall for land stations (September 28, 2016), and shortly after ice freeze up for ice stations (October 31, 2016).

At each snow survey station, a snow corer was used to drill into the snow pack to retrieve a cylindrical snow core (6.1 cm inner diameter; Plate 2.2-1). Cores were extracted at each station and composited in the field to ensure a representative snow sample was obtained for the station. A minimum of three snow cores were collected at each (land and ice) of the snow sampling stations, as outlined in the Snow Core Survey SOP (ENVR-512-0213; Appendix F). Composited samples were bagged and brought to the DDMI environment lab for processing as specified in the Snow Core Survey SOP (ENVR-512-0213; Appendix F) and the Quality Assurance/Quality Control SOP (ENVR-303-0112; Appendix G). Processing of snow cores involved filtration, drying in a high heat oven and weighing. For quality assurance and control, duplicate samples were collected at stations SS1-1, SS2-4, SS4-5, and SS5-2.



Plate 2.2-1. Snow core sample being weighed, with dustfall gauge in background.

Mean daily dustfall rate (mg/dm 2 /d) was then calculated over the collection period using Equation 1, with surface area (A) equal to the surface area of the snow corer tube orifice (0.2922 dm 2) multiplied by the number of snow cores used for the composited sample at the station. The mean annual dustfall rate (mg/dm 2 /y) was estimated by multiplying the mean daily dustfall rate by 365 days.

Dustfall rates were compared to the former BC dustfall objective for the mining, smelting and related industries (Table 2.1-1), for comparison purposes only.

2.3 SNOW WATER CHEMISTRY

Snow water chemistry analysis was performed on snow cores extracted from 19 locations (including three control locations; Table 2-1 and Figure 2-1). These locations included the 16 dustfall snow survey stations that were located on ice, as well as samples taken on ice adjacent to the three control stations. Across stations, the distance from mining operations ranged from approximately 60 m to 4,852 m and the average total sampling period in 2017 was 159 days. At each station located over water, cores were collected for chemistry analysis immediately after the dustfall snow cores were extracted.

Snow water chemistry cores were extracted using a snow corer in accordance with the dustfall snow survey core extraction. A minimum of three cores at each site were extracted and composited to obtain the necessary 3 litres (L) of snow water required for the laboratory chemical analysis as required (see Appendix F). Snow cores were then processed and prepared for shipment to Maxxam where the chemical analysis was performed. For quality assurance and control purposes, duplicate samples were collected at stations SS3-5and SS5-5, and an equipment blank sample was collected at station SS3-6. Snow water chemistry sampling methodology is detailed in SOP ENVR-512-0213 (see Appendix F).

EQC, including "maximum average concentration" and "maximum concentration of any grab sample," are stipulated in DDMI's Water Licence (W2015L2-0001) for aluminium, ammonia, arsenic, cadmium, chromium, copper, lead, nickel, nitrite, and zinc (Table 2.1-1). Snow water chemistry results for these variables were compared to the "maximum concentration of any grab sample." These results are also presented as part of DDMI's Aquatic Effects Monitoring Program (AEMP) report.

DDMI measures the chemistry of snow samples as this assists with characterizing the chemical content of the particulate material deposited over time. This is measured as the total metals and nutrients concentrations of the melted snow sample and makes direct comparison to maximum grab sample concentrations for EQCs difficult. It is important to note that the dust monitoring program is not designed to assess effects in the context used for most other AEMP water quality components.

DDMI compares the measured total metals levels for dust with EQC only because this is a recognizable concentration that provides a comparative reference. Similarly, DDMI contrasts measured dustfall rates with British Columbia Ministry of Environment (BC MOE) dustfall objectives for the mining, smelting and related industries. There is no intention or requirement that snow samples must meet the EQC or BC MOE objective.

While EQC are stated for convenience as 'total metals', the value represents both the dissolved and particulate concentration. The value of the EQC assumes that all of the metal is in the dissolved and therefore biologically available form. By comparison, the snow sample is demonstrated to contain significant particulate material that is not biologically available.

3. RESULTS

Dustfall and snow water chemistry results were grouped into zones based on their relative distance from the mine footprint (see Table 3.1-1). Although station groupings into zones were first established at the outset of the program, these groupings were re-established in 2013 using satellite imagery of the site.

In 2017, the primary sources of fugitive dust were associated with unpaved road and airstrip usage and construction activities at A21. The distances to mining operations are shown in Table 2-1. Major waste rock material transfers in 2017 occurred on haul roads (392,102 tonnes) and kimberlite ore to the crusher (2,189,799 tonnes). Another source of fugitive dust is truck traffic along the ice road to the Project. However, the consistency in dust deposition rates near the ice road alignment between winter and summer indicated that the contributions of dust from the ice road were modest relative to other sources. There is no direct measurement of dustfall due to the use of the ice road; however, dustfall stations immediately downwind of the ice road such as Dust 7, Dust 6, and SS2-4 did not show elevated readings during winter months. To supress dust generation, roads, parking areas and laydown areas were watered during the summer as needed. Between May and September 2017, approximately 1,668 m³ of water was applied on the Project site and 55,948 m³ of water was applied on haul roads. The exact impact of dust suppression could not be determined from the data collected in 2017; however, it is very likely that road watering reduced the amount of dust generated at the Mine in 2017. The Underground Mine production rate was steady throughout the year. Open pit mining of A21 and construction of the Waste Rock Storage Area - South Country Rock Pile commenced in December 2017. Fugitive dust generation is expected to be greatest during snow-free periods where and when there is site activity. It was expected that the highest fugitive dust generation and resulting dustfall occurred in areas closest to the roads and the airstrip and mine footprint such as near A21 and the country rock pile between May and September. Of the dustfall gauges, Dust 1 (adjacent to the airstrip) recorded the highest dustfall during the summer months (936 mg/dm²/y) compared to the winter months $(230 \text{ mg/dm}^2/\text{y})$.

The 2017 predominant wind directions at the site were from the southeast, although this was not very pronounced and in fact in general the winds can be described as omni-directional. The expectation is that airborne material will be deposited in all directions around the mine with a slight northwest emphasis. The results show the direction from the mine is not the strongest indicator of dust deposition, rather proximity to mine activities and roads and the airstrip show a stronger influence. This is supported by the fact that Dust 1 had the highest recorded dustfall of the dustfall gauges in 2017 (adjacent to the airstrip) and Dust 10 had the second highest recorded dustfall in 2017 which is adjacent to and south of the Mine (see Figure 3.1-1).

Results from the dustfall gauges, dustfall snow surveys, and the snow water chemistry analysis are presented below.

3.1 DUSTFALL GAUGES

Total dustfall collected from each dustfall gauge throughout the year is summarized in Table 3.1-1; annual 2017 dustfall for each station at its location relative to the Project is presented in Figure 3.1-1; the historical records of annual dustfall for each station are presented in Figures 3.1-2 and 3.1-3. A comparison of 2017 dustfall versus distance from the mine footprint is presented in Figure 3.1-4. Boxplots summarizing the dustfall magnitude distribution measured in each year are presented in Figure 3.1-5. Detailed information on 2017 measurements and calculations for each station are included in Appendix B.

In general, dustfall decreased with increasing distance from the Project (Table 3.1-1 and Figures 3.1-1 to 3.1-4); however, the greatest estimated dustfall rate measured using gauges occurred at Dust 1, 75 m from the Project. Dust 1 measured dustfall in 2017 was 480 mg/dm 2 /y. Dust 1 is north of the Project airstrip and the snow survey near Dust 1 (SS1-1) also showed higher dustfall values (SS1-1 dustfall was 1,351 mg/dm 2 /y in 2017). It is likely that during 2017 dust generated by airstrip activity was the cause of elevated readings adjacent to the airstrip. The second highest estimated dustfall rate measured using gauges occurred at Dust 10 (318 mg/dm 2 /y) which recorded the highest dustfall in 2016 and is located 46 m from the Project. The lowest dustfall rate was measured at the Dust C1 (control station; 4,700 m south; 34 mg/dm 2 /y) while the other control station, Dust C2 (3,075 m west), recorded the second lowest measured dustfall (37 mg/dm 2 /y; Table 3.1-1; Figures 3.1-3 and 3.1-4).

Dustfall rates estimated from dustfall gauges in 2017 were less than all historical dustfall rate estimates (Figures 3.1-2 to 3.1-4) except 2013. Comparisons of mean and maximum dustfall values suggest that dustfall rates decreased at the Project in 2017 and are close to lowest dustfall rates recorded for the Project (Figures 3.1-4 and 3.1-5). The lower overall dustfall rates were likely influenced by the decrease in surface activity at the mine with no surface mining starting until December, 2017

The annualized dustfall rates estimated from gauges at each station were less than the former BC objective for the mining industry (621 to 1,059 mg/dm²/y; Figures 3.1-2 to 3.1-4). This former objective was used for comparison purposes only: there are currently no standards or objectives for the Northwest Territories. However, the BC objective was generally used as a standard for comparison at other mines in the region.

3.2 DUSTFALL SNOW SURVEYS

Annual dustfall rates estimated from each snow survey station in 2017 are summarized in Table 3.1-1. Historical records of annual snow survey dustfall rates for each station are presented in Figures 3.1-2 and 3.1-3. The relationships between annual snow survey dustfall rates and distance from the mine footprint are shown in Figures 3.1-1 and 3.1-4. Boxplots summarizing dustfall rates measured in each year are presented in Figure 3.1-5. 2017 snow survey field datasheets and laboratory results are included in Appendix B. Duplicate samples were collected at stations SS1-1, SS2-4, SS4-5, and SS5-2 for QA/QC purposes and are discussed in Section 3.4.

Table 3.1-1. Dustfall and Snow Water Chemistry Results, Diavik Diamond Mine, 2017

| | | Approx. Distance | Dustfall | | | | | Snow V | Water Chemistry | (μg/L) | | | | |
|----------------|------------------|------------------|------------|----------|----------|---------|---------|----------|-----------------|--------|--------|---------|-------------|-------|
| Zone | Station | from Mining (m) | (mg/dm²/y) | Aluminum | Ammonia | Arsenic | Cadmium | Chromium | Copper | Lead | Nickel | Nitrite | Phosphorous | Zinc |
| 0-100 m | Dust 1 | 75 | 479.6 | - | - | - | - | - | - | - | - | - | - | - |
| | Dust 3 | 30 | 285.5 | - | - | - | - | - | - | - | - | - | - | - |
| | Dust 6 | 25 | 119.8 | - | - | - | - | - | - | - | - | - | - | - |
| | Dust 10 | 46 | 317.5 | - | - | - | - | - | - | - | - | - | - | - |
| | SS1-1 | 30 | 1,351.3 | - | - | - | - | - | - | - | - | - | - | - |
| | SS3-6 | 60 | 288.9 | 836.0 | - | 0.2 | 0.01 | 8.4 | 1.3 | 0.7 | 23.1 | 1.7 | 54.2 | 5.4 |
| | SS4-1 | 100 | 68.5 | - | - | - | - | - | - | - | - | - | - | - |
| | SS5-1 | 45 | 93.0 | - | - | - | - | - | - | - | - | - | - | - |
| | SS5-2 | 95 | 63.7 | - | - | - | - | - | - | - | - | - | - | - |
| Mean | | | 341 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Median | | | 286 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Standard Devia | | | 404 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | ce Interval (Mea | - / | 311 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| = = | f 95% Confidence | | 652 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | f 95% Confidence | | 30 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 101-250 m | Dust 4 | 200 | 85.0 | - | - | - | - | - | - | - | - | - | - | - |
| | SS1-2 | 115 | 771.2 | - | - | - | - | - | - | - | - | - | - | - |
| | SS2-1 | 180 | 51.1 | 230.0 | 110.0 | 0.1 | 0.01 | 1.5 | 0.6 | 0.2 | 2.8 | 2.0 | 22.6 | 16.8 |
| | SS3-7 | 250 | 109.2 | 670.0 | 110.0 | 0.2 | 0.01 | 10.4 | 1.4 | 1.0 | 28.5 | 3.4 | 103.0 | 5.1 |
| | SS4-2 | 245 | 101.2 | - | - | - | - | - | - | - | - | - | - | - |
| Mean | | | 224 | 450.00 | 110.00 | 0.10 | 0.01 | 5.94 | 1.00 | 0.60 | 15.64 | 2.70 | 62.80 | 10.96 |
| Median | | | 101 | 450.00 | 110.00 | 0.10 | 0.01 | 5.94 | 1.00 | 0.60 | 15.64 | 2.70 | 62.80 | 10.96 |
| Standard Devia | | | 307 | 311.13 | 0.00 | 0.069 | 0.00 | 6.31 | 0.54 | 0.51 | 18.19 | 0.99 | 56.85 | 8.26 |
| | ce Interval (Mea | - / | 381 | 2,795.37 | n/a | 0.62 | 0.02 | 56.67 | 4.83 | 4.59 | 163.40 | 8.89 | 510.79 | 74.20 |
| | f 95% Confidence | | 605 | 3,245.37 | n/a | 0.72 | 0.03 | 62.61 | 5.83 | 5.19 | 179.04 | 11.59 | 573.59 | 85.16 |
| | f 95% Confidence | | 0 | 0.00 | n/a | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 251-1,000 m | Dust 2A | 435 | 311.0 | - | - | - | - | - | - | - | - | - | - | - |
| | Dust 11 | 805 | 84.8 | - | - | - | - | - | - | - | - | - | - | - |
| | SS1-3 | 275 | 142.3 | - | - | - | - | - | - | - | - | - | - | - |
| | SS1-4 | 920 | 40.8 | 170.0 | 130.0 | 0.0 | 0.01 | 0.9 | 0.3 | 0.2 | 1.4 | 2.0 | 14.1 | 2.0 |
| | SS2-2 | 445 | 18.6 | 130.0 | 130.0 | 0.1 | 0.01 | 0.8 | 0.2 | 0.3 | 1.6 | 2.0 | 12.6 | 2.4 |
| | SS3-4 | 615 | 317.9 | 3,950.0 | 100.0 | 0.7 | 0.07 | 86.9 | 8.1 | 3.5 | 226.0 | 3.3 | 104.0 | 23.8 |
| | SS3-8 | 830 | 136.7 | 1,420.0 | 110.0 | 0.3 | 0.03 | 31.2 | 3.7 | 1.3 | 79.8 | 2.1 | 44.5 | 12.6 |
| | SS4-3 | 350 | 138.6 | - | - | - | - | - | - | - | - | - | - | - |
| | SS5-3 | 270 | 57.5 | 1,360.0 | 61.0 | 0.2 | 0.02 | 17.2 | 2.4 | 1.4 | 28.9 | 2.0 | 31.0 | 9.6 |
| Mean | | | 139 | 1,406.00 | 1,406.00 | 106.20 | 0.26 | 0.03 | 27.41 | 2.94 | 1.34 | 67.54 | 2.28 | 41.24 |
| Median | | | 137 | 1,360.00 | 1,360.00 | 110.00 | 0.21 | 0.02 | 17.20 | 2.41 | 1.26 | 28.90 | 2.00 | 31.00 |

(continued)

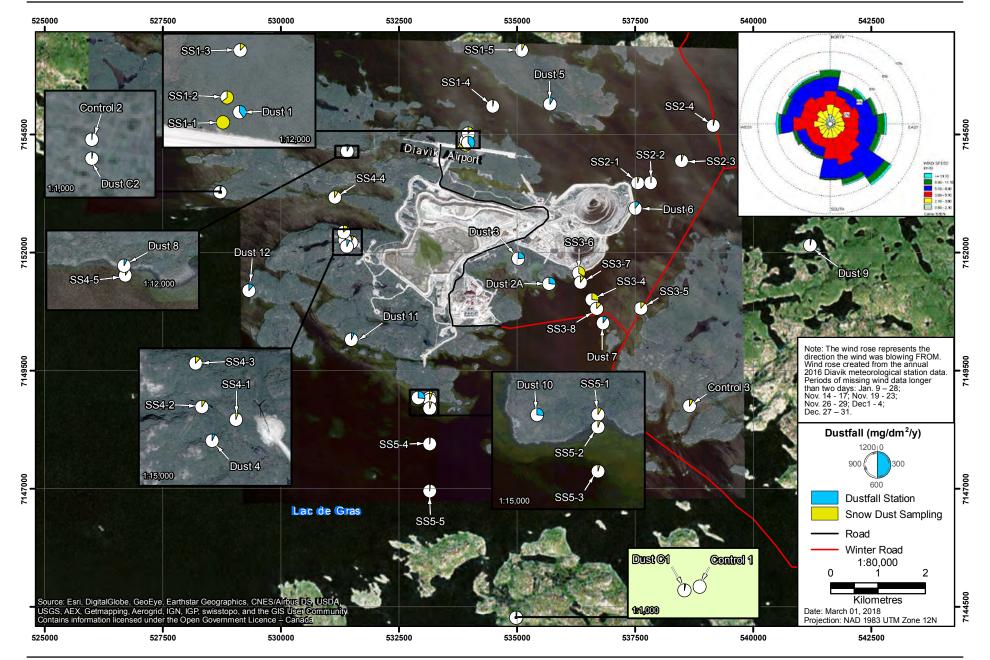
Table 3.1-1. Dustfall and Snow Water Chemistry Results, Diavik Diamond Mine, 2017 (completed)

| | | Approx. Distance | Dustfall | | | | | Snow V | Vater Chemistry | (μg/L) | | | | |
|-----------------|--------------------|------------------|-------------|----------|----------|---------|---------|----------|-----------------|--------|--------|---------|-------------|-------|
| Zone | Station | from Mining (m) | (mg/dm²/y) | Aluminum | Ammonia | Arsenic | Cadmium | Chromium | Copper | Lead | Nickel | Nitrite | Phosphorous | Zinc |
| 251-1,000 m (ca | ont'd) | | | ĺ | | | | | | | | | | |
| Standard Devi | iation | | 109 | 1,551.62 | 1,551.62 | 28.41 | 0.28 | 0.03 | 35.59 | 3.23 | 1.32 | 94.18 | 0.57 | 37.45 |
| 95% Confiden | ice Interval (Mear | ı +/-) | 84 | 1,926.59 | 1,926.59 | 35.28 | 0.34 | 0.03 | 44.19 | 4.02 | 1.64 | 116.94 | 0.71 | 46.50 |
| Upper Limit o | of 95% Confidence | e Interval | 223 | 3,332.59 | 3,332.59 | 141.48 | 0.60 | 0.058 | 71.60 | 6.96 | 2.98 | 184.47 | 2.99 | 87.74 |
| Lower Limit o | of 95% Confidence | e Interval | 55 | 0.00 | 0.00 | 70.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.57 | 0.00 |
| 1,001-2,500 m | Dust 5 | 1,195 | 102.2 | - | - | - | - | - | - | - | - | - | - | - |
| | Dust 7 | 1,155 | 128.1 | - | - | - | - | - | - | - | - | - | - | - |
| | Dust 8 | 1,220 | 92.0 | - | - | - | - | - | - | - | - | - | - | - |
| | SS1-5 | 2,180 | 84.8 | 420.0 | 54.0 | 0.1 | 0.00 | 2.7 | 0.5 | 0.3 | 3.7 | 2.0 | 19.2 | 3.1 |
| | SS2-3 | 1,220 | 51.8 | 160.0 | 120.0 | 0.1 | 0.01 | 0.9 | 0.3 | 0.3 | 1.8 | 2.0 | 19.5 | 2.1 |
| | SS2-4 | 2,180 | 51.3 | 450.0 | 84.0 | 0.1 | 0.00 | 2.8 | 0.4 | 0.3 | 3.6 | 2.0 | 15.9 | 3.3 |
| | SS3-5 | 1,325 | 131.9 | 330.0 | 220.0 | 0.1 | 0.01 | 3.9 | 0.6 | 0.8 | 10.7 | 2.0 | 53.5 | 2.6 |
| | SS4-4 | 1,065 | 106.7 | 360.0 | 110.0 | 0.1 | 0.01 | 3.9 | 0.7 | 0.4 | 8.9 | 2.2 | 30.7 | 3.7 |
| | SS4-5 | 1,220 | 107.0 | 1,700.0 | 140.0 | 0.6 | 0.03 | 13.9 | 2.4 | 1.4 | 22.9 | 2.0 | 30.7 | 14.8 |
| | SS5-4 | 1,021 | 23.3 | 100.0 | 55.0 | 0.0 | 0.00 | 1.8 | 0.3 | 0.1 | 2.9 | 2.0 | 10.1 | 1.5 |
| | SS5-5 | 2,020 | 17.3 | 160.0 | 47.0 | 0.1 | 0.00 | 6.5 | 0.5 | 0.2 | 3.2 | 2.0 | 12.2 | 1.8 |
| +2,500 m | Dust 9 | 3,810 | 37.3 | _ | - | - | - | - | - | - | - | - | - | - |
| | Dust 12 | 2,580 | 126.1 | _ | - | - | - | - | - | - | - | - | - | - |
| Mean | | | 82 | 460.00 | 103.75 | 0.14 | 0.0075 | 4.55 | 0.70 | 0.47 | 7.22 | 2.03 | 23.98 | 4.09 |
| Median | | | 92 | 345.00 | 97.00 | 0.08 | 0.0040 | 3.33 | 0.50 | 0.31 | 3.66 | 2.00 | 19.35 | 2.83 |
| Standard Devi | iation | | 41 | 517.66 | 58.06 | 0.17 | 0.0081 | 4.12 | 0.68 | 0.41 | 7.07 | 0.07 | 14.15 | 4.39 |
| 95% Confiden | ice Interval (Mear | ı +/-) | 25 | 432.77 | 48.54 | 0.15 | 0.0068 | 3.45 | 0.57 | 0.34 | 5.91 | 0.06 | 11.83 | 3.67 |
| Upper Limit o | of 95% Confidence | e Interval | 106 | 892.77 | 152.29 | 0.28 | 0.0143 | 8.00 | 1.27 | 0.81 | 13.13 | 2.08 | 35.80 | 7.76 |
| Lower Limit o | of 95% Confidence | e Interval | 57 | 27.23 | 55.21 | 0.00 | 0.0007 | 1.10 | 0.130 | 0.128 | 1.31 | 1.97 | 12.15 | 0.42 |
| Control | Dust C1 | 4,700 | 34.0 | - | - | - | - | - | - | - | - | - | - | - |
| | Dust C2 | 3,075 | 36.7 | _ | - | - | - | - | - | - | - | - | - | - |
| | CONTROL 1 | 4,852 | 10.4 | 50.0 | 74.0 | 0.0 | 0.00 | 1.3 | 0.1 | 0.1 | 1.2 | 2.0 | 5.7 | 1.5 |
| | CONTROL 2 | 3,075 | 24.4 | 530.0 | 83.0 | 0.1 | 0.01 | 6.4 | 0.7 | 0.5 | 8.7 | 2.0 | 12.1 | 4.6 |
| | CONTROL 3 | 3,570 | 108.4 | 410.0 | 65.0 | 0.1 | 0.01 | 6.1 | 0.6 | 0.3 | 12.5 | 2.0 | 26.6 | 3.3 |
| Mean | | | 43 | 330.00 | 74.00 | 0.073 | 0.01 | 4.59 | 0.48 | 0.30 | 7.44 | 2.00 | 14.80 | 3.11 |
| Median | | | 34 | 410.00 | 74.00 | 0.076 | 0.01 | 6.06 | 0.56 | 0.30 | 8.65 | 2.00 | 12.10 | 3.25 |
| Standard Dev | iation | | 38 | 249.80 | 9.00 | 0.049 | 0.00 | 2.83 | 0.31 | 0.22 | 5.76 | 0.00 | 10.71 | 1.56 |
| 95% Confiden | ice Interval (Mear | ı +/-) | 47 | 620.54 | 22.36 | 0.12 | 0.01 | 7.04 | 0.77 | 0.54 | 14.31 | #NUM! | 26.60 | 3.89 |
| Upper Limit o | of 95% Confidence | e Interval | 90 | 950.54 | 96.36 | 0.19 | 0.01 | 11.63 | 1.25 | 0.83 | 21.75 | #NUM! | 41.40 | 7.00 |
| Lower Limit o | of 95% Confidence | e Interval | 0 | 0.00 | 51.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | #NUM! | 0.00 | 0.00 |
| Reference Lev | relsa | | 621 - 1,059 | 3,000 | 12,000 | 100 | 3.0 | 40 | 40.0 | 20.0 | 100 | 2,000.0 | n/a | 20.0 |

Dash (-) = not available (snow water chemistry not sampled) n/a = not applicable

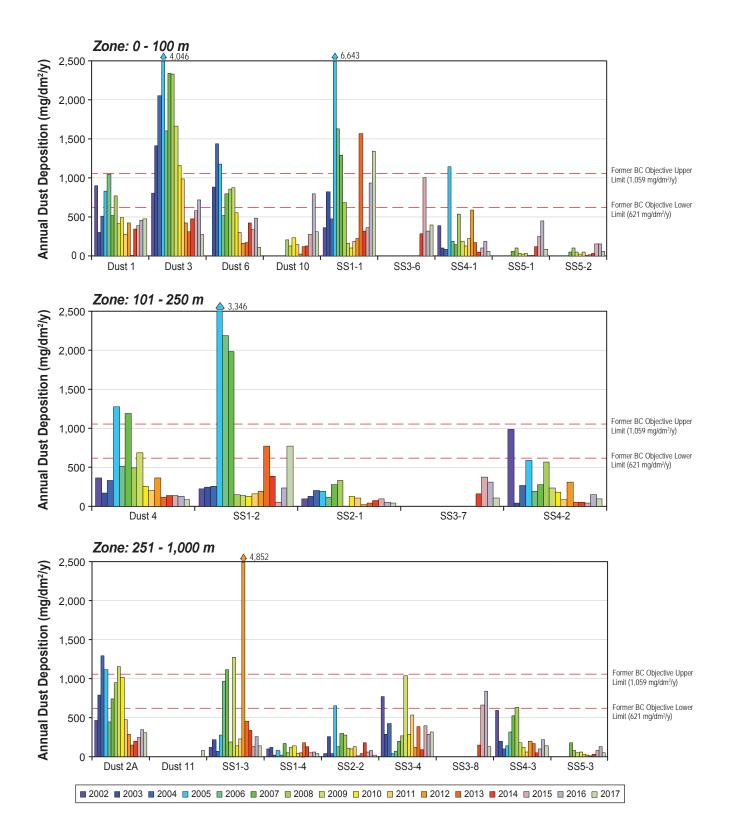
Figure 3.1-1
Dustfall Results, Diavik Diamond Mine, 2017





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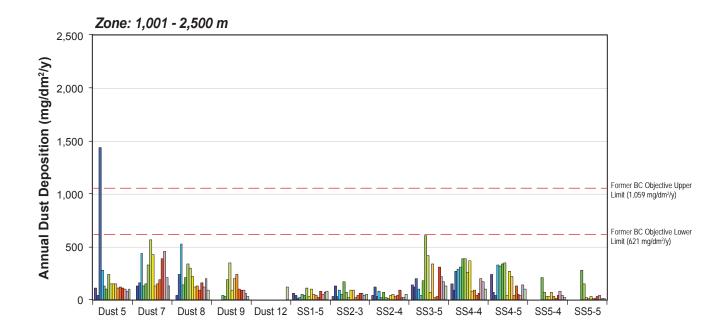
Notes: Former BC Objective (Diavik 2016).

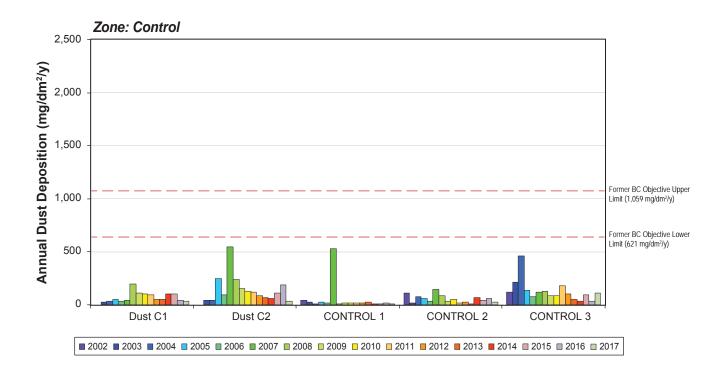
Annual deposition was calculated using the methodology described in Section 2.

See Table 2-1 for actual 2017 sample exposure times.

Station locations have been grouped into zones based on their distance from the 2017 Project footprint. Some stations have historically been grouped in different zones based on their distance from the Project footprint when they were first established (see Section 3 for further details).







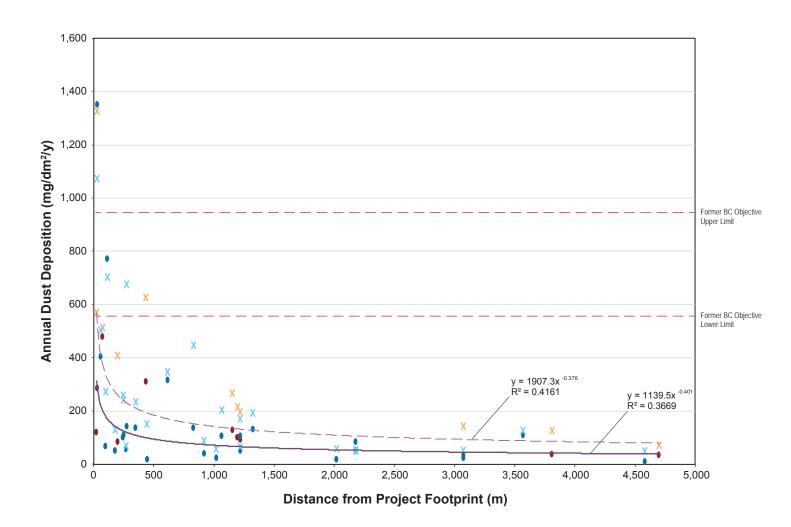
Notes: Former BC Objective (Diavik 2016).

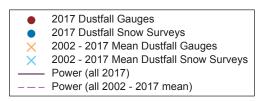
Annual deposition was calculated using the methodology described in Section 2.

See Table 2-1 for actual 2017 sample exposure times.

Station locations have been grouped into zones based on their distance from the 2017 Project footprint. Some stations have historically been grouped in different zones based on their distance from the Project footprint when they were first established (see Section 3 for further details).





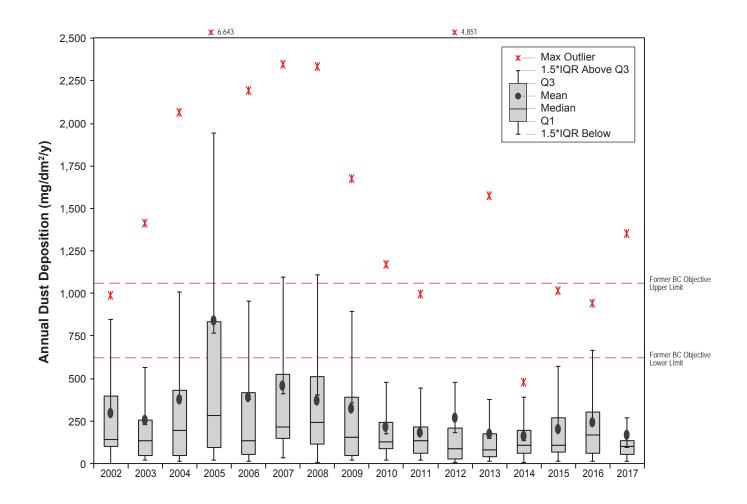


Notes: Former BC Objective (Diavik 2016).

Annual deposition is calculated using the methodology described in Section 2.

See Table 2-1 for actual 2017 sample exposure times.





Notes: Former BC Objective (Diavik 2016).

Annual deposition is calculated using the methodology described in Section 2.

See Table 2-1 for actual 2017 sample exposure times.

Annualized dustfall rates estimated from 2017 snow survey data ranged from 10 to 1,351 mg/dm²/y (Table 3.1-1; Figures 3.1-2 and 3.1-3). Dustfall at SS1-1 was the highest recorded, followed by dustfall at SS1-2 (Figure 3.1-3). Location SS1-1 and SS1-2 are located due north of the airstrip which could have resulted in the higher levels of dustfall found here. In general, snow survey dustfall rates decreased with increasing distance from the Project, with the lowest dustfall rate recorded at station Control 1 (Table 3.1-1; Figure 3.1-4). Mean dustfall rates estimated using both dustfall gauges and snow surveys within the 0–100, 101-250, 251–1,000, 1,001–2,500 and Control zones were 341, 224, 139, 82, and 43 mg/dm²/y, respectively (Table 3.1-1). Dustfall rates at stations SS1-1, SS1-2, Dust 2A, SS3-4, Dust 7, SS4-4, SS4-5, and Control 3 were greater than the upper limit of the 95% confidence interval for their respective zones in 2017. These high dustfall rates, compared to the overall distribution of dustfall rates within each zone, indicated that higher dustfall rates were observed in the vicinity of the airstrip and to the west and southeast of the Project (Table 3.1-1).

Annualized dustfall estimated from each snow survey station in 2017 were generally less than historical dustfall estimates (Figures 3.1-2 and 3.1-3). Comparisons of mean and maximum values suggest that dustfall rates were generally lower in 2017 than in 2016 and 2015 (Figures 3.1-4 and 3.1-5).

Annualized dustfall rates measured at each station during the 2017 snow survey were less than the former BC objective for the mining industry (621–1,059 mg/dm²/y) for all stations other than SS1-1 and SS1-2. This former objective was used for comparison purposes only: there are currently no standards or objectives for the Northwest Territories.

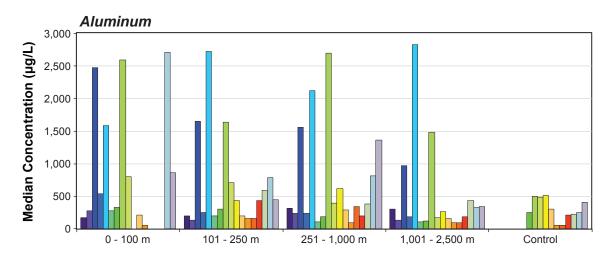
3.3 SNOW WATER CHEMISTRY

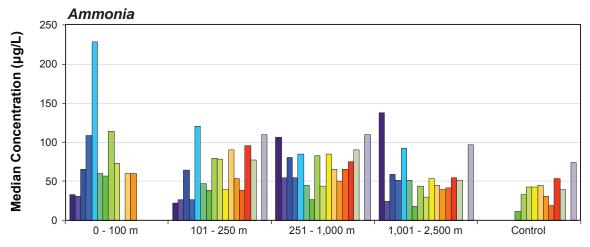
A summary of the snow water chemistry results for each variable of interest (i.e., variables with EQC and phosphorous) is provided below. The full suite of analytical results for snow water chemistry is included in Appendix D. For QA/QC purposes, duplicate samples were collected at stations SS2-4 and SS4-5, and an equipment blank sample was collected at station Control 1. Results of QA/QC samples are discussed in Section 3.4.

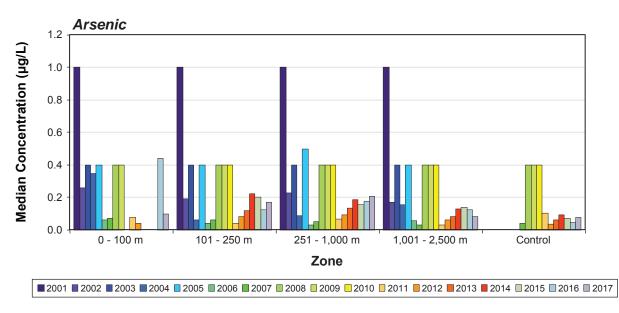
All 2017 sample concentrations were less than their associated reference levels other than sample SS3-4 (aluminum, chromium, nickel and zinc) as specified by the "maximum concentration of any grab sample" specified in Water Licence W2015L2-0001.

In general, average concentrations of snow water chemistry variables of interest decreased with increasing distance from the Project (Figures 3.3-1 to 3.3-4). However, high parameter concentrations were recorded at Station SS3-4, located in the 251-1,000 zone (615 m from the project). SS3-4 is located to the southeast of the Project (Figure 2-1) where higher measured dustfall was observed in 2017. It should be noted that the 0-100 zone has only one (1) sampling location; therefore, no median was reported or included in Figures 3.3-1 to 3.3-4.



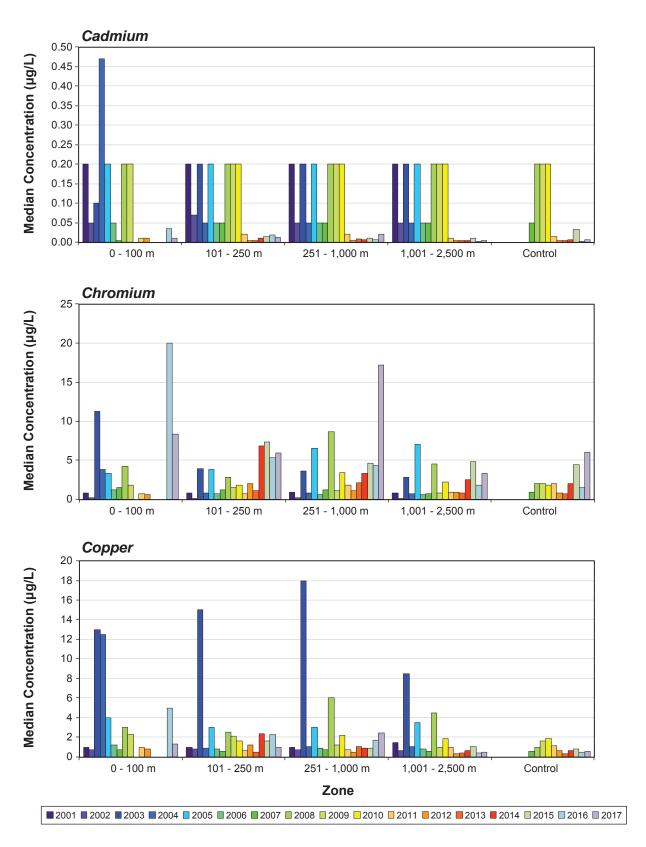






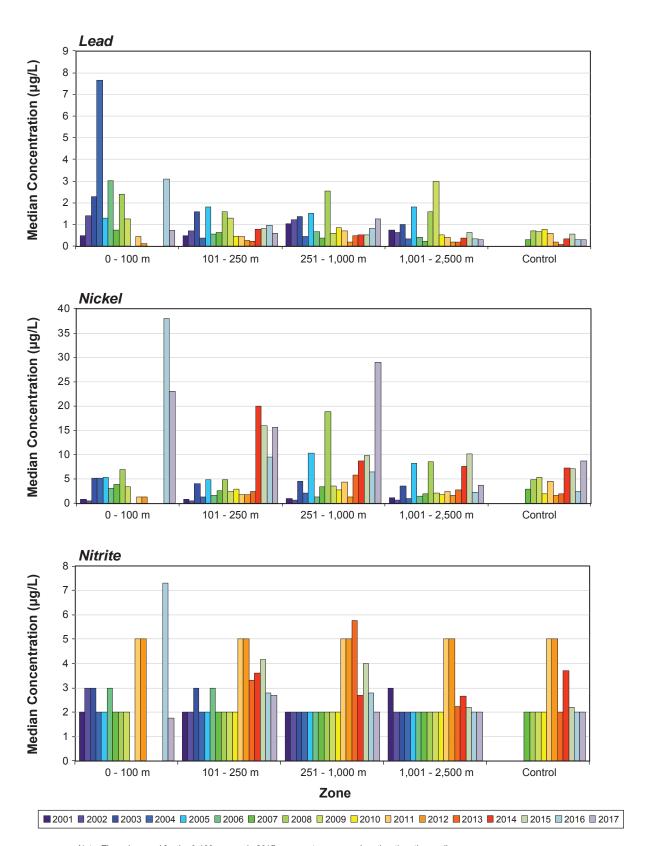
 $Note: The \textit{ value used for the 0-100 m zone in 2017 represents one sample rather than the \textit{ median}.}$





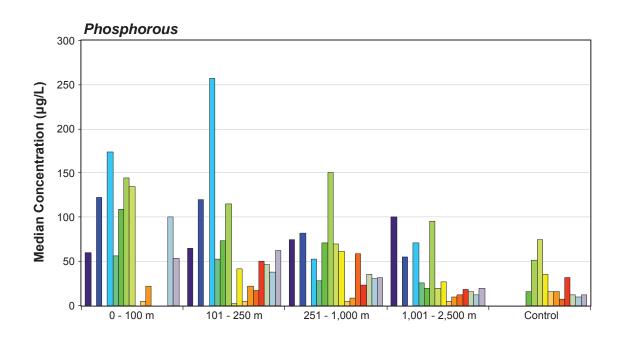
Note: The value used for the 0-100 m zone in 2017 represents one sample rather than the median.

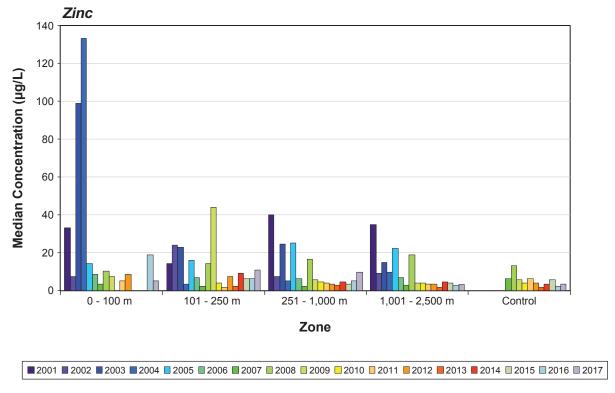




Note: The value used for the 0-100 m zone in 2017 represents one sample rather than the median.







Note: The value used for the 0-100 m zone in 2017 represents one sample rather than the median.

3.3.1 Aluminum

Aluminum concentrations measured in 2017 ranged from $50 \,\mu\text{g/L}$ at station Control 1 in the Control zone to 3,950 $\,\mu\text{g/L}$ at station SS3-4 in the 251-1,000 m zone (Table 3.1-1). Median 2017 aluminum concentrations were greatest in the 251-1,000 m zone (Figure 3.3-1). Compared to previous years, the 2017 median concentration in each zone was relatively high and there was one location with a concentration greater than the reference value of 3,000 $\,\mu\text{g/L}$ EQC specified in the Water Licence at SS3-4 (Table 3.1-1; Figure 3.3-1). There were similar concentrations of aluminum observed in snow water chemistry samples in 2017 compared to 2016 and 2015.

3.3.2 Ammonia

Ammonia concentrations measured in 2017 ranged from 47 μ g/L at station SS5-5 in the 1,001-2,500 m zone to 220 μ g/L at station SS3-5 in the 1,001-2,500 m zone (Table 3.1-1). All ammonia measurements were below the reference value of 12,000 μ g/L specified in the Water Licence. Historical ammonia concentrations have been well below the reference value specified in the Water Licence for grab sample concentrations.

3.3.3 Arsenic

Arsenic concentrations measured in 2017 ranged from $0.02~\mu g/L$ at Control 1 station (4,852 m from Project) to $0.7~\mu g/L$ at station SS3-4 in the 251-1,000 m zone (Table 3.1-1). Median 2017 arsenic concentrations were greatest in the 251-1,000 m zone and were similar for all distance ranges (Figure 3.3-1). The 2017 median concentration in each zone was similar to 2016 median concentrations (Figure 3.3-1). All measurements were well less than the value of $100~\mu g/L$ specified in the Water Licence for grab sample concentrations.

3.3.4 Cadmium

Cadmium concentrations measured in 2016 ranged from less than the analytical detection limit (0.0025 $\mu g/L$) at multiple stations in all zones to 0.07 $\mu g/L$ at station SS3-4 in the 251-1,000 m zone (Table 3.1-1). Median 2017 cadmium concentrations were near or below analytical detection limits and were similar for all distance ranges (Figure 3.3-2). Cadmium concentrations in 2017 were similar to 2016 and 2015 concentrations. The 2017 median concentration in each zone was similar to 2016 median concentrations (Figure 3.3-2). All measurements were less than the value of 3 $\mu g/L$ specified in the Water Licence for grab sample concentrations.

3.3.5 Chromium

Chromium concentrations measured in 2017 ranged from less than the analytical detection limit $(0.5 \,\mu\text{g/L})$ at multiple stations to $90 \,\mu\text{g/L}$ at station SS3-4 in the 251-1,000 m zone (Table 3.1-1). Median 2016 chromium concentrations were greatest in the 251-1,000 m zone (Figure 3.3-2) and decreased with increasing distance from the Project. The 2017 median concentration in each zone was generally greater than 2016 and 2015 median concentrations (Figure 3.3-2). One measurement was greater than the value of $40 \,\mu\text{g/L}$ specified in the Water Licence for grab sample concentrations.

3.3.6 Copper

Copper concentrations measured in 2017 ranged from $0.1~\mu g/L$ at Control 1 station (4,852 m from Project) to $8.1~\mu g/L$ at station SS3-4 in the 251–1,000 m zone (Table 3.1-1). Median 2017 copper concentrations were greatest in the 251-1,000 m zone (Figure 3.3-2) and in general decreased with increasing distance from the Project. Modest inter-annual variations in copper concentrations were observed from 2014 to 2017 (Figure 3.3-2). All measurements were less than the value of $40~\mu g/L$ specified in the Water Licence for grab sample concentrations.

3.3.7 Lead

Lead concentrations measured in 2017 ranged from 0.1 μ g/L at Control 1 station (4,852 m from Project) to 3.5 μ g/L at station SS3-4 in the 251-1,000 m zone (Table 3.1-1). Median 2017 lead concentrations were greatest in the 251-1,000 m zone (Figure 3.3-3) but in general decreased with increasing distance from the Project. The 2017 median concentration in each zone was similar to 2016 and 2015 median concentrations (Figure 3.3-3). All measurements were less than the value of 20 μ g/L specified in the Water Licence for grab sample concentrations.

3.3.8 Nickel

Nickel concentrations measured in 2016 ranged from $1.2 \,\mu\text{g/L}$ at Control 1 station (4,852 m from Project) to 226 $\,\mu\text{g/L}$ at station SS3-4 in the 251-1,000 m zone (Table 3.1-1). Median 2017 nickel concentrations were greatest in the 251-1,000 m zone (Figure 3.3-3) but in general decreased with increasing distance from the Project. The 2017 median concentrations in each zone were higher or approximately equal to those measured in 2016 and 2015 (Figure 3.3-3). One measurement was greater than the value of $100 \,\mu\text{g/L}$ specified in the Water Licence for grab sample concentrations (station SS3-4).

3.3.9 Nitrite

Nitrite concentrations measured in 2017 ranged from less than the analytical detection limit (2.0 $\mu g/L$) at multiple stations in each zone to 3.4 $\mu g/L$ at station SS3-7 in the 101-250 m zone (Table 3.1-1). Median 2017 nitrite concentrations were greatest (2.7 $\mu g/L$) in the 101-250 m zone and decreased with increasing distance down to the detection limit (Figure 3.3-3). The 2017 median concentrations in each zone were less than or equal to those measured in 2016 and 2015 (Figure 3.3-3). All measurements were much less than the value of 2,000 $\mu g/L$ specified in the Water Licence for grab sample concentrations.

3.3.10 Phosphorous

Phosphorous concentrations measured in 2017 ranged from $5.7~\mu g/L$ at Control 1 station (4,852 m from Project) to $104~\mu g/L$ at station SS3-4 in the 251-100 m zone (Table 3.1-1). Median 2017 phosphorus concentrations were greatest (62.8 $\mu g/L$) in the 101-250 m zone and decreased with increasing distance from the Project (Figure 3.3-4). The 2017 median concentrations in each zone were very similar to those measured in 2016 and 2015 (Figure 3.3-4). Although the Water Licence has a load limit for phosphorous, there is no EQC specified in the licence.

3.3.11 Zinc

Zinc concentrations measured in 2017 ranged from 1.5 μ g/L at Control 1 station (4,852 m from Project) to 23.8 μ g/L at station SS3-4 in the 251-1,000 m zone (Table 3.1-1). Median 2017 zinc concentrations were greatest (11 μ g/L) in the 101-250 m zone and decreased with increasing distance from the Project (Figure 3.3-4). The 2017 median concentrations in each zone were slightly greater than those measured in 2016 and approximately equal to those measured in 2015 (Figure 3.3-4). One measurement (station SS3-4) was greater than the value of 20 μ g/L specified in the Water Licence for grab sample concentrations.

3.4 QUALITY ASSURANCE AND CONTROL

Dustfall gauge, dustfall snow survey and snow water chemistry sampling and analysis were conducted by experienced technicians following SOPs ENVR-508-0112 R3, ENVR-512-0213 R3, and ENVI-303-0112 R2 to ensure proper field sampling and laboratory analysis. As part of SOP ENVR-512-0213, duplicate and blank samples were taken for some snow survey and snow water chemistry sample sites (Table 2-1). The results from these samples are summarized in Tables 3.4-1 and 3.4-2.

Table 3.4-1. Sample Duplicates and Blanks

| | | | | ytical Results mg/dm²/y; μg/I | L) | R | elative P | ercent D (%) | ifference | a |
|-------------|----------|--------|-------|----------------------------------|--------------|-------|-----------|-----------------|-----------|-------|
| Parameter | SS1-1 | SS4-5 | SS5-2 | SS2-4 | SS4-5 | SS1-1 | SS4-5 | SS5-2 | SS2-4 | SS4-5 |
| Dustfall | 1662/118 | 94/120 | 76/47 | n/a | n/a | 39% | 25% | 47% | n/a | n/a |
| Aluminum | n/a | n/a | n/a | 450/110 | 1,700/1,310 | n/a | n/a | n/a | 121% | 26% |
| Ammonia | n/a | n/a | n/a | 84/97 | 140/140 | n/a | n/a | n/a | 14% | 0% |
| Arsenic | n/a | n/a | n/a | 0.11/0.05 | 0.56/0.71 | n/a | n/a | n/a | 77% | 23% |
| Cadmium | n/a | n/a | n/a | 0.0025/0.0056 | 0.0026/0.015 | n/a | n/a | n/a | 77% | 54% |
| Chromium | n/a | n/a | n/a | 2.8/0.6 | 13.9/10.6 | n/a | n/a | n/a | 129% | 27% |
| Copper | n/a | n/a | n/a | 0.43/0.26 | 2.4/2.1 | n/a | n/a | n/a | 48% | 14% |
| Lead | n/a | n/a | n/a | 0.33/0.15 | 1.4/1.2 | n/a | n/a | n/a | 77% | 10% |
| Nickel | n/a | n/a | n/a | 3.6/1.4 | 23.5/15.0 | n/a | n/a | n/a | 91% | 42% |
| Nitrite | n/a | n/a | n/a | 2.0/2.0 | 2.0/2.0 | n/a | n/a | n/a | 0% | 0% |
| Phosphorous | n/a | n/a | n/a | 15.9/40.8 | 30.7/38.9 | n/a | n/a | n/a | 88% | 24% |
| Zinc | n/a | n/a | n/a | 3.3/4.5 | 14.8/9.5 | n/a | n/a | n/a | 32% | 44% |

Notes:

n/a = not applicable

For measurements that were less than the detection limit, the detection limit was used for calculations and are italicized.

The relative percent difference (RPD) of duplicate samples from a site represents the amount of variation between duplicates. According to the Project AEMP, the data quality objective for duplicate water quality samples is a RPD of 20% when concentrations are ≥ 5 times the detection limit (DL; AEMP 2014). It is important to note that all RPD values were calculated regardless of if the concentrations were ≥ 5 times the DL. Of the calculated RPD values, almost all exceed 20%.

^a Relative difference between duplicates, with respect to their mean: $RPD = 100 \times |rep1 - rep2| / [(rep1 + rep2)/2]$.

Table 3.4-2. Analytical Blanks for QA/QC Program

| Parameter | Control 1 Blank Sample (µg/L) | Percent below Non-blank ^a Control 1 Sample | Detection Limit (μg/L) |
|-------------|-------------------------------------|---|---------------------------|
| Dustfall | n/a | n/a | n/a |
| Aluminum | 0.67 | 99% | 0.2 |
| Ammonia | 27.0 | 64% | 5.0 |
| Arsenic | 0.01 | 55% | 0.02 |
| Cadmium | 0.003 | 0% | 0.005 |
| Chromium | 0.03 | 98% | 0.05 |
| Copper | 0.03 | 82% | 0.05 |
| Lead | 0.003 | 97% | 0.005 |
| Nickel | 0.04 | 96% | 0.02 |
| Nitrite | 2.00 | 0% | 2.0 |
| Phosphorous | 2.00 | 65% | 2.0 |
| Zinc | 0.05 | 97% | 0.1 |

Notes:

n/a = not applicable

For measurements that were less than the detection limit, half the detection limit was used for calculations and are italicized.

The results of the QA/QC duplicates indicate that snow chemistry is spatially variable on the scale of metres within which the duplicates are collected. The data quality objective from the AEMP (i.e., RPD less than 20%) is designed for surface *liquid* water samples. Surface water in a stream or lake will mix more readily than snow, particularly once snow has settled and has been compacted by wind. Sit-specific differences between snow core sampling replicates may not be visible to the sampling team, but may result in differences in the chemical composition of the snow. The SS4-5 has smaller RPD than SS2-4. The differences between the SS4-5 and SS2-4 demonstrate the sensitivity of the RPD analysis to the scale of the analytical measurements. The absolute differences between observations were similar in magnitude for both duplicates from both locations, but the substantially lower concentrations observed at SS2-4 resulted in an emphasis of this variation in the RPD analysis. The similarly in the magnitude of the variability is consistent with small-scale spatial variation, rather than data quality issues. The results of the sampling network of 19 sites has been demonstrated to detect and quantify Project effects on snow water chemistry (Section 3.3), and these results are concluded to be reliable even with consideration of the small-scale variation identified in the QA/QC program.

Dustfall RPD at SS1-1 was 39%, SS4-5 was 25%, and SS5-2 was 47% which shows that small scale variation for dustfall measures was moderate. The concentrations of all parameters in the blank processed at station Control 1 were much less than those from the non-blank sample (except for cadmium and Nitrite where both samples were at the detection limit), suggesting the data were of good quality.

^a The non-blank sample is the result from the sample collected from Control 1 (column Control 1 results).

4. SUMMARY

In 2017, dustfall was monitored at 14 dustfall gauges and 27 snow survey stations located at varying distances around the mine. Snow water chemistry was also measured at 19 of the snow survey stations and compared to EQC set out in the WLWB Water Licence W2015L2-0001 (formerly W2007L2-0003).

Median dustfall estimated in 2017 was the second lowest on record and also decreased with distance from the Project. Annual dustfall estimated from each of the 14 dustfall gauges ranged from 34 to 480 mg/dm²/y. The annualized dustfall rates estimated from the 2017 snow survey data ranged from 10 to 1,351 mg/dm²/y. Because dustfall gauges continuously collect dust throughout the year, and the snow surveys are only representative of dustfall accumulated over the snow cover period, the reported annual dustfall results from the dustfall gauges are expected to provide a better estimate of annual dustfall compared to snow survey results for similar geographic areas. However, results obtained from both methods showed similar patterns.

Dustfall levels were generally lower in 2017 than in 2016; however, they are within the range of historical data collected for the Project. Annualized dustfall estimated from each snow survey station in 2017 was less than some historical dustfall estimates. Comparisons of mean and maximum values suggest that dustfall rates were generally lower in 2017 than in 2016 and 2015 but that the range of values was higher than in previous years. Overall, as expected, dustfall rates generally decreased with distance from the Project with the lowest dustfall rate recorded at station Control 1 (4,852 m from the Project), and areas that were closer to the Project or airstrip received more dustfall than other areas. Mean dustfall rates estimated using both dustfall gauges and snow surveys within the 0–100, 101-250, 251–1,000, 1,001–2,500 and Control zones were 341, 224, 139, 82, and 43 mg/dm²/y, respectively. Although there are no dustfall standards for the Northwest Territories, 2017 dustfall rates were less than non-residential 2.9 mg/dm²/d (1,059 mg/dm²/y) BC MOE former dustfall objective for the mining, smelting, and related industries (Diavik 2016) other than for station SS1-1 (1,351 mg/dm²/y). This objective, used in the 2015 Dust Deposition Report, is no longer used in BC.

Snow water chemistry analytes of interest included those variables with EQC (i.e., aluminum, ammonia, arsenic, cadmium, chromium, copper, lead, nickel, nitrite, and zinc) or a load limit (i.e., phosphorous) specified in the Type "A" Water Licence (W2015L2-0001, formerly W2007L2-0003). All 2017 sample concentrations were less than their associated reference levels as specified by the "maximum concentration of any grab sample" specified in Water Licence W2015L2-0001 other than sample SS3-4 (aluminum, chromium, nickel and zinc). Concentrations of aluminum, arsenic, chromium, and nickel have generally increased in recent years, while concentrations of copper, lead, phosphorus and zinc have generally decreased in recent years. Typically, concentrations decreased with distance from the Project. High concentrations of certain variables of interest (3,950 μ g/L aluminum, 86.9 μ g/L chromium, 226 μ g/L nickel and 23.8 μ g/L zinc) were recorded at Station SS3-4, located in the 251-1,000 m zone.

REFERENCES

Definitions of the acronyms and abbreviations used in this reference list can be found in the Glossary and Abbreviations section.

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Appendix A

Annual Changes to Dustfall Program

DIAVIK DIAMOND MINE

2017 Dust Deposition Report

APPENDIX A. ANNUAL CHANGES TO DUSTFALL PROGRAM

2001

The 2001 dust monitoring program was based entirely upon snow survey samples collected along four radial transects emanating from the project footprint outward to a distance of approximately 1,000 metres. All sample locations were analyzed for dust deposition, while only those locations on Lac de Gras were analyzed for snow water chemistry.

2002

DDMI amended the dust monitoring program, in response to recommendations made by the Mackenzie Valley Land and Water Board, to include two snow survey control locations. In addition, five dust gauges (passive dust collectors) were deployed, one along each of the snow survey transects and one at a control location, in efforts to enhance the monitoring program.

2003

In response to further recommendations, the dust monitoring program was modified. All four snow survey transects were extended in length to a distance of approximately 2,000 metres from the project footprint. An additional five dust gauges, including a second control, were deployed.

2004

Increased construction activity necessitated further changes to the dust monitoring program. One dust gauge (Dust 02) was removed from its location to accommodate project footprint expansion, and subsequently relocated and redeployed (Dust 2A).

2005

Dust deposition monitoring was carried out with no modifications to either the snow survey or the dust gauge portion of the program.

2006

An additional dust gauge was deployed bringing the total to eleven (including two controls). Testing of Mini-Vol portable air samplers were conducted to determine feasibility of incorporation into the dust monitoring program. Preliminary findings proved the inclusion of the Mini-Vol samplers would be impractical.

2007

The snow survey portion of the program was amended with an additional snow survey transect being incorporated bringing the total number of transects to five. As well, snow water chemistry samples were collected adjacent to the pre-existing control locations as background references.

Two additional dust gauges (temporary) were deployed adjacent to two pre-existing dust gauges. The intent of the temporary gauges was to compare results from the same location when sample collection frequency is altered.

DDMI initiated contact with Environment Canada and Golder Associates with regards to remodeling dust deposition with the intent of revising predictions made in the 1998 environmental effects report.

In light of dust deposition monitoring results from previous years, several control measures were adopted to reduce dust generation on site, including the utilization of EK-35 (suppressant) on the airport apron, taxiway and helipad, and fitting a second 830E haul truck with tank for haul road watering.

2008

All of the dust gauges were modified to accommodate the replacement of the polyacrylic dust gauge inserts with brass Nipher gauge inserts, to minimize loss associated with damage during the collection and handling of the dust gauges.

An additional dust gauge was added to the program bringing the total to twelve permanently deployed (including two control), and two temporary (reference) dust gauges.

Three snow survey sample points were not sampled as they had become overtaken by construction activity and expansion of the project footprint.

Additional preparations for dust deposition modelling were completed including data collection, identification of point source inputs, selection of a modelling program and inputs (with regulator input) and discussion of cumulative effects.

2009

The two temporary dust gauges deployed in 2007 were decommissioned. All twelve permanent gauges were collected quarterly. An error in collection/deployment resulted in "No Data" being collected for Dust 03 between July 11 and September.

Snow survey sampling was conducted in April. An error in collection/analysis resulted in the Dust Deposition sample for SS2-1 being compromised; as such "No Dust Deposition Data" was available for this location.

2010

All twelve permanent dust gauges were collected quarterly during 2010. Overall, there was a reduction of observed dustfall deposition from 2009 to 2010, with the exception of Dust 1 and Dust 10.

Snow survey sampling was conducted throughout the month of April. An error in collection/processing resulted in two missing stations for the water quality analysis. SS2-1 field results were collected; however, the sample was compromised during processing in the lab. An error also resulted with the collection of SS5-2; data collection for water quality analysis was missed in the field. No data for these two stations resulted in Zone 1 having no data for the various water chemistry results and SS5-2 was not represented in Zone 3 data for 2010.

2011

All twelve permanent dust gauges were collected quarterly during 2011. During collection and repair to Station Dust 5 in September, the sample was compromised and therefore not processed, which resulted in data loss.

Snow survey sampling was conducted throughout the month of April. Due to an internal error shipping samples, water quality samples for stations SS1-4, SS1-5, SS2-1, SS2-2, SS2-3, SS2-4, and SSC-3 arrived at the Maxxam laboratory past the recommended holding time.

2012

All twelve permanent dust gauges were collected quarterly during 2012. During collection in June, repairs were conducted on Station Dust 9 as it was found on its side, the sample was compromised, which resulted in data loss. Overall in 2012, 8 of the 12 dust gauges reported lower deposition rates compared to 2011.

Snow survey sampling was conducted on April 30, and on May 4 and 5.

2013

All twelve permanent dust gauges were collected quarterly during 2013. Station Dust 5 was dismantled upon arrival in September and the sample was compromised, which resulted in data loss for that quarter.

Snow survey sampling was conducted at 24 locations from April 26 to 28.

2014

All twelve permanent dust gauges were collected quarterly during 2014.

Snow survey sampling was conducted at 24 locations from April 7 to May 12. Three additional sites, SS3-6, SS3-7, SS3-8, were installed.

2015

No changes were made to the dustfall program in 2015.

All twelve permanent dust gauges were collected quarterly during 2015.

Snow survey sampling was conducted at 24 locations from March 31 to April 10.

2016

Due to construction activities at A21, the distance to mining operations decreased for dustfall stations Dust 10, SS5-1, SS5-2, SS5-3, SS5-4, SS5-5, Dust C1 and Control 1. The new distances to mining operations are shown in Table 2-1. Dust 10 station was 670 m from mining operations and now is 46 metres from mining operations.

All twelve permanent dust gauges were collected quarterly during 2016.

Snow survey sampling was conducted at 27 locations from March 3 to April 7.

2017

All twelve permanent dust gauges were collected quarterly during 2017.

During collection of Stations Dust 3 Dust 4, Dust 8 and Dust 10 in July were compromised and an indeterminate amount of sample was lost.

Two new permanent dust gauges (Dust 11 and Dust 12) were deployed on 2017-Oct-05

Dust 11 and 12 are 0.805 km and 2.58 km respectively from mining operations.

Snow survey sampling was conducted at 27 locations from April 1 to April 10.

Appendix B

Dustfall Gauge Analytical Results

DIAVIK DIAMOND MINE

2017 Dust Deposition Report

Appendix B. Dustfall Gauge Analytical Results

| Sample Date | Dust Gauge ID | Filter # | Weight of Filter (mg) | Filter + Residue (mg) | Weight of Residue (mg) | Cumulative (filters, mg) | Dust Deposition (mg/dm²) | Days Deployed | Dust Deposition (mg/dm²/d) | Dust Deposition (mg/dm²/y) |
|----------------|------------------|-------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------------|------------------|----------------------------------|----------------------------------|
| 4-Jan-17 | Initial Deploym | nent Date | | | | | | | | |
| 25-Mar-17 | Dust 1 | 1 | 114.5 | 197.9 | 83.4 | 83.4 | 67.99 | 80 | | |
| 2-Jul-17 | Dust 1 | 1 | 115.2 | 427.3 | 312.1 | 312.1 | 254.45 | 99 | | |
| 30-Sep-17 | Dust 1 | 1 | 113.5 | 148.4 | 34.9 | | | | | |
| 30-Sep-17 | Dust 1 | 2 | 123.5 | 263.6 | 140.1 | 175 | 142.68 | 90 | | |
| 24-Dec-17 | Dust 1 | 1 | 118.8 | 136 | 17.2 | | | | | |
| 24-Dec-17 | Dust 1 | 2 | 119 | 146.4 | 27.4 | 44.6 | 36.36 | 85 | | |
| | | | | | TOTALS | 570.5 | 465.12 | 354 | 1.31 | 479.6 |
| 4-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 2A | 1 | 116.6 | 187.7 | 71.1 | 71.1 | 57.97 | 80 | | |
| 2-Jul-17 | Dust 2A | 1 | 116.3 | 148.6 | 32.3 | 32.3 | 26.33 | 99 | | |
| 6-Oct-17 | Dust 2A | 1 | 116.1 | 166.6 | 50.5 | 50.5 | 41.17 | 96 | | |
| 6-Jan-18 | Dust 2A | 1 | 114.7 | 126.3 | 11.6 | | | | | |
| 6-Jan-18 | Dust 2A | 2 | 115 | 137.3 | 22.3 | 229.7 | 187.27 | 92 | | |
| | | | | | TOTALS | 383.6 | 312.74 | 367 | 0.85 | 311.0 |
| 4-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 3 | 1 | 117.6 | 218 | 100.4 | 100.4 | 81.85 | 80 | | |
| 2-Jul-17 | Dust 3 | 1 | 116.3 | 167.7 | 51.4 | | | | | |
| 2-Jul-17 | Dust 3 | 2 | 116.7 | 153 | 36.3 | 87.7 | 71.50 | 99 | | |
| 30-Sep-17 | Dust 3 | 1 | 111.1 | 176.5 | 65.4 | | | | | |
| 30-Sep-17 | Dust 3 | 2 | 123.5 | 199.7 | 76.2 | | | | | |
| 30-Sep-17 | Dust 3 | 3 | 111 | 137.3 | 26.3 | 167.9 | 136.89 | 90 | | |
| 10-Jan-18 | Dust 3 | 1 | 113.7 | 141.5 | 27.8 | | | | | |
| 10-Jan-18 | Dust 3 | 2 | 115.6 | 155.9 | 40.3 | | | | | |
| 10-Jan-18 | Dust 3 | 3 | 117.1 | 140.1 | 23 | 346.4 | 282.42 | 102 | | |
| | | | | | TOTALS | 356 | 290.24 | 371 | 0.78 | 285.5 |

Appendix B. Dustfall Gauge Analytical Results

| Sample Date | Dust Gauge ID | Filter # | Weight of Filter (mg) | Filter + Residue (mg) | Weight of Residue (mg) | Cumulative (filters, mg) | Dust Deposition (mg/dm²) | Days Deployed | Dust Deposition (mg/dm²/d) | Dust Deposition (mg/dm²/y) |
|----------------|------------------|-------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------------|------------------|----------------------------------|----------------------------------|
| 6-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 4 | 1 | 116.8 | 148.8 | 32 | 32 | 26.09 | 78 | | |
| 2-Jul-17 | Dust 4 | 1 | 117.7 | 158.9 | 41.2 | 41.2 | 33.59 | 99 | | |
| 7-Oct-17 | Dust 4 | 1 | 116.6 | 135.9 | 19.3 | 19.3 | 15.74 | 97 | | |
| 10-Jan-18 | Dust 4 | 1 | 118 | 130.88 | 12.88 | 12.88 | 10.50 | 95 | | |
| | | | | | TOTALS | 105.38 | 85.91 | 369 | 0.23 | 85.0 |
| 4-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 5 | 1 | 115.6 | 141.3 | 25.7 | 25.7 | 20.95 | 80 | | |
| 6-Jul-17 | Dust 5 | 1 | 115.4 | 135.5 | 20.1 | | | | | |
| 6-Jul-17 | Dust 5 | 2 | 114.9 | 126.3 | 11.4 | | | | | |
| 6-Jul-17 | Dust 5 | 3 | 115.1 | 155.6 | 40.5 | 72 | 58.70 | 103 | | |
| 6-Oct-17 | Dust 5 | 1 | 113 | 132.9 | 19.9 | 19.9 | 16.22 | 92 | | |
| 6-Jan-18 | Dust 5 | 1 | 118.3 | 126.8 | 8.5 | 8.5 | 6.93 | 92 | | |
| | | | | | TOTALS | 126.1 | 102.81 | 367 | 0.28 | 102.2 |
| 3-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 6 | 1 | 114.4 | 164.6 | 50.2 | 50.2 | 40.93 | 81 | | |
| 2-Jul-17 | Dust 6 | 1 | 116.9 | 124.4 | 7.5 | | | | | |
| 2-Jul-17 | Dust 6 | 2 | 118.9 | 143.6 | 24.7 | 32.2 | 26.25 | 99 | | |
| 30-Sep-17 | Dust 6 | 1 | 116.3 | 126.4 | 10.1 | | | | | |
| 30-Sep-17 | Dust 6 | 2 | 116.8 | 122.1 | 5.3 | | | | | |
| 30-Sep-17 | Dust 6 | 3 | 120 | 130.7 | 10.7 | | | | | |
| 30-Sep-17 | Dust 6 | 4 | 112.1 | 125.7 | 13.6 | 39.7 | 32.37 | 90 | | |
| 24-Dec-17 | Dust 6 | 1 | 117.9 | 122.2 | 4.3 | | | | | |
| 24-Dec-17 | Dust 6 | 2 | 122.4 | 138.9 | 16.5 | 20.8 | 16.96 | 85 | | |
| | | | | | TOTALS | 142.9 | 116.50 | 355 | 0.33 | 119.8 |

Appendix B. Dustfall Gauge Analytical Results

| Sample Date | Dust Gauge ID | Filter # | Weight of Filter (mg) | Filter + Residue (mg) | Weight of Residue (mg) | Cumulative (filters, mg) | Dust Deposition (mg/dm²) | Days Deployed | Dust Deposition (mg/dm²/d) | Dust Deposition (mg/dm²/y) |
|----------------|------------------|-------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------------|------------------|----------------------------------|----------------------------------|
| 6-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 7 | 1 | 117.7 | 203.8 | 86.1 | 86.1 | 70.20 | 78 | | |
| 6-Jul-17 | Dust 7 | 1 | 115.6 | 143.7 | 28.1 | 28.1 | 22.91 | 103 | | |
| 6-Oct-17 | Dust 7 | 1 | 116.8 | 159.7 | 42.9 | 42.9 | 34.98 | 92 | | |
| 6-Jan-18 | Dust 7 | 1 | 113.9 | 133.8 | 19.9 | | | | | |
| 6-Jan-18 | Dust 7 | 2 | 114.6 | 128.1 | 13.5 | | | | | |
| 6-Jan-18 | Dust 7 | 3 | 116.1 | 125.9 | 9.8 | 43.2 | 35.22 | 92 | | |
| | | | | | TOTALS | 157.1 | 128.08 | 365 | 0.35 | 128.1 |
| 3-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 8 | 1 | 116.3 | 143.1 | 26.8 | 26.8 | 21.85 | 81 | | |
| 6-Jul-17 | Dust 8 | 1 | 115.3 | 138.6 | 23.3 | 23.3 | 19.00 | | | |
| 6-Jul-17 | Dust 8 | 2 | 116.2 | 159.2 | 43 | 43 | 35.06 | | | |
| 6-Jul-17 | Dust 8 | 3 | 116.1 | 116.8 | 0.7 | 0.7 | 0.57 | 103 | | |
| 6-Oct-17 | Dust 8 | 1 | 112.1 | 114.1 | 2 | | | | | |
| 6-Oct-17 | Dust 8 | 2 | 112.2 | 115 | 2.8 | | | | | |
| 6-Oct-17 | Dust 8 | 3 | 114.7 | 129.9 | 15.2 | 20 | 16.31 | 92 | | |
| 6-Jan-18 | Dust 8 | 1 | 117.1 | 125 | 7.9 | | | | | |
| 6-Jan-18 | Dust 8 | 2 | 114.7 | 121.1 | 6.4 | 14.3 | 11.66 | 92 | | |
| | | | | | TOTALS | 113.8 | 92.78 | 368 | 0.25 | 92.0 |
| 4-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 9 | 1 | 115.9 | 125.5 | 9.6 | 9.6 | 7.83 | 80 | | |
| 6-Jul-17 | Dust 9 | 1 | 115 | 127.3 | 12.3 | | | | | |
| 6-Jul-17 | Dust 9 | 2 | 115.9 | 122.4 | 6.5 | 18.8 | 15.33 | 103 | | |
| 6-Oct-17 | Dust 9 | 1 | 114.4 | 125.8 | 11.4 | 11.4 | 9.29 | 92 | | |
| 6-Jan-18 | Dust 9 | 1 | 114.2 | 120.4 | 6.2 | 6.2 | 5.05 | 92 | | |
| | | | | | TOTALS | 46 | 37.50 | 367 | 0.10 | 37.3 |

Appendix B. Dustfall Gauge Analytical Results

| Sample Date | Dust Gauge ID | Filter # | Weight of Filter (mg) | Filter + Residue (mg) | Weight of Residue (mg) | Cumulative (filters, mg) | Dust Deposition (mg/dm²) | Days Deployed | Dust Deposition (mg/dm²/d) | Dust Deposition (mg/dm²/y) |
|----------------|------------------|-------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------------|------------------|----------------------------------|----------------------------------|
| 6-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust 10 | 1 | 116.9 | 147.5 | 30.6 | 30.6 | 24.95 | 78 | | |
| 2-Jul-17 | Dust 10 | 1 | 115.1 | 211.4 | 96.3 | 96.3 | 78.51 | 99 | | |
| 6-Oct-17 | Dust 10 | 1 | 115.1 | 116.4 | 1.3 | | | | | |
| 6-Oct-17 | Dust 10 | 2 | 114.2 | 122.7 | 8.5 | | | | | |
| 6-Oct-17 | Dust 10 | 3 | 112.5 | 143.9 | 31.4 | | | | | |
| 6-Oct-17 | Dust 10 | 4 | 114.4 | 117.3 | 2.9 | 44.1 | 35.95 | 96 | | |
| 16-Jan-18 | Dust 10 | 1 | 114.7 | 150.9 | 36.2 | | | | | |
| 16-Jan-18 | Dust 10 | 2 | 115.9 | 200 | 84.1 | 120.3 | 98.08 | 102 | | |
| | | | | | TOTALS | 291.3 | 237.49 | 273 | 0.87 | 317.5 |
| 5-Oct-17 | Initial de | ployment | date | | | | | | | |
| 6-Jan-18 | Dust 11 | 1 | 118.2 | 144.7 | 26.5 | | | | | |
| 6-Jan-18 | Dust 11 | 2 | 118.6 | 118.6 | 0 | 26.5 | 21.61 | 93 | | |
| | | | | | TOTALS | 26.5 | 21.61 | 93 | 0.23 | 84.8 |
| 6-Oct-17 | Initial deploym | ent date | | | | | | | | |
| 6-Jan-18 | Dust 12 | 1 | 116.2 | 147.7 | 31.5 | | | | | |
| 6-Jan-18 | Dust 12 | 2 | 114 | 121.5 | 7.5 | 39 | 31.80 | 92 | | |
| | | | | | TOTALS | 39 | 31.80 | 92 | 0.35 | 126.1 |
| 6-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust C1 | 1 | 118.3 | 124 | 5.7 | 5.7 | 4.65 | 78 | | |
| 6-Jul-17 | Dust C1 | 1 | 116.7 | 127.7 | 11 | 11 | 8.97 | 103 | | |
| 6-Oct-17 | Dust C1 | 1 | 116.4 | 129.4 | 13 | 13 | 10.60 | 92 | | |
| 6-Jan-18 | Dust C1 | 1 | 118.2 | 130.2 | 12 | 12 | 9.78 | 92 | | |
| | | | | | TOTALS | 41.7 | 34.00 | 365 | 0.09 | 34.0 |

Appendix B. Dustfall Gauge Analytical Results

| Sample Date | Dust Gauge ID | Filter # | Weight of Filter (mg) | Filter + Residue (mg) | Weight of Residue (mg) | Cumulative (filters, mg) | Dust Deposition (mg/dm²) | Days Deployed | Dust Deposition (mg/dm²/d) | Dust Deposition (mg/dm²/y) |
|----------------|------------------|-------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|--------------------------------|------------------|----------------------------------|----------------------------------|
| 4-Jan-17 | Initial deploym | ent date | | | | | | | | |
| 25-Mar-17 | Dust C2 | 1 | 117.8 | 127.6 | 9.8 | 9.8 | 7.99 | 80 | | |
| 6-Jul-17 | Dust C2 | 1 | 119.3 | 135 | 15.7 | 15.7 | 12.80 | 103 | | |
| 6-Oct-17 | Dust C2 | 1 | 117.5 | 128 | 10.5 | 10.5 | 8.56 | 92 | | |
| 6-Jan-18 | DustC2 | 1 | 120.9 | 130.2 | 9.3 | 9.3 | 7.58 | 92 | | |
| | | | | | TOTALS | 45.3 | 36.93 | 367 | 0.10 | 36.7 |

Appendix C Dustfall Snow Sun

Dustfall Snow Survey Field Sheets and Analytical Results

DIAVIK DIAMOND MINE

2017 Dust Deposition Report

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| | | No: | ENVI-178-0 | 312 |
|--|---|---------------------------------|------------------------|-------|
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection | Field Sheet | | |
| | | Page: | | 2 |
| Landing | | | | |
| GENERAL | Man of the second | 44 1 1 1 1 1 1 | | |
| LOCATION NAME: | | nm-yyyy): <u>75-MAR-70</u> /7 | ΓΙΜΕ (24:00): <u>/</u> | 706 |
| SAMPLED BY: | 0.10 | | Other | |
| GPS COORDINATES (| UTM): 533964 E | 715 17321 N (Zone) | 17 | |
| DESCRIPTION: | Enounterly dust and | lection | | |
| | 0.0 | | | |
| CLIMATE CONDITION | S (if sampling outside) | | | |
| Air Temp: <u>-24</u> °C | Wind Direction: Next | Wind Speed (knots): | | |
| Precipitation: rain / mi | | Cloud Cover: 0% 10%, 2 | | , 100 |
| | | | | |
| | , 25%, 50%, 75%, 100% | Dust in area: Visible, Not | VISIDJE | |
| | , 25%, 50%, 75%, 100% | Dust in area: Visible, Not | Visible | |
| Snow Cover: 0%, 10% | , 25%, 50%, 75%, 100% ENTS: (i.e. damage to station, bug | | | |
| Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | ENTS: (i.e. damage to station, bug | s - twigs in sample, hole in ve | | |
| Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | ENTS: (i.e. damage to station, bug | s - twigs in sample, hole in ve | | |
| Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | ENTS: (i.e. damage to station, bug | s - twigs in sample, hole in ve | | |
| Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | ENTS: (i.e. damage to station, bug | s - twigs in sample, hole in ve | | |
| Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | ENTS: (i.e. damage to station, bug | s - twigs in sample, hole in ve | | |
| Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | ENTS: (i.e. damage to station, bug | s - twigs in sample, hole in ve | | |

| Total Volume of Water After Melting:(mL | Total Volume of | Water | After | Melting :_ | 280 | (mL) |
|---|-----------------|-------|-------|------------|-----|------|
|---|-----------------|-------|-------|------------|-----|------|

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 114.5 | 197,9 | 83.4 | |
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| | Dust Gauge Col | lection Field Sheet | | |
|-----------------|---|---|----------------|-----|
| | | No: | ENVI-178-0 | 312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection | Field Sheet | | |
| | | Page: | 1 of | 2 |
| SAMPLED BY: | UTM): 535678 E Quarterly dust S (if sampling outside) Wind Direction: Vey st / snow / NA 25%, 50%, 75%, 100% | Wind Speed (knots): Cloud Cover: 0% 10%, 2 Dust in area: Visible, Not | Other | |
| | NTS: (i.e. damage to station, bug as Deployed_ 7617-61-64 | s - twigs in sample, hole in ve | stibule, etc.) | |
| Lots of | dank dust. Removed | 3 bugs | | |

Total Volume of Water After Melting: 350 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|---|-------------------|----------|
| 1 | 116.6 | 187.7 | 71.1 | |
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| | | No: | ENVI-178-0 | 312 |
|--|---|-------------------------------|----------------|-----|
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection F | ield Sheet | | |
| | | Page: | 1 of | 2 |
| GENERAL LOCATION NAME: DESCRIPTION: CLIMATE CONDITIONS Air Temp: DU C Precipitation: rain / mis Snow Cover: 0%, 10%, | TRE TYPE OF SAN JTM): 535 633 E Quarterly dust C (if sampling outside) Wind Direction: West | 7151877 N (Zone) | Other | |
| | NTS: (i.e. damage to station, bugs | - twigs in sample, hole in ve | stibule, etc.) | |
| | f duk dut | | | |

Total Volume of Water After Melting : 400 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1. | 117.6 | 218.0 | 100.4 | |
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| | | ection Field Sheet No: | ENI\/I 179 (| 1212 | |
|---|---|---|-----------------------------|---------------|--|
| Area: | 8000 | 77777 | ENVI-178-0312 R0 Dianne Dul | | |
| Effective Date: | 26-Mar-2012 | Revision: | | | |
| Task: | Dust Gauge Collection F | By: | | | |
| I dSN. | Dust Gauge Collection F | Page: | 1 of | 2 | |
| | | raye. | | | |
| | | | | | |
| GENERAL | | | | 100 | |
| LOCATION NAME: | DUST 4 DATE (dd-mm | m-yyyy): <u>25-MAK-20</u> 7 | TIME (24:00): | 1640 | |
| SAMPLED BY: 16 | TB TYPE OF SAM | PLE: Dust | Other | | |
| GPS COORDINATES | | 7157127 N (Zone) | 12 | | |
| | 0 1 1 1 | 1 1 | | | |
| DESCRIPTION: | Quarterly dust c | ollurion | | | |
| OLIMATE CONDITION | | | | | |
| | | | | | |
| CLIMATE CONDITION: | S (if sampling outside) | 6 | | | |
| Air Temp: | Wind Direction: | Wind Speed (knots): | | | |
| | Wind Direction: Went | Wind Speed (knots): | | 6, 100 | |
| Air Temp:°C Precipitation: rain / mis | Wind Direction: Went | | 25%, 50%, 75% | 6, 100 | |
| Air Temp:°C Precipitation: rain / mis | Wind Direction: | Cloud Cover: 0% 10%, | 25%, 50%, 75% | 6, 100 | |
| Air Temp:°C Precipitation: rain / mis Snow Cover: 0%, 10% | Wind Direction: | Cloud Cover: 0% 10%, : Dust in area: Visible, Not | 25%, 50%, 75% Visible | 6, 100 | |
| Air Temp:°C Precipitation: rain / mis Snow Cover: 0%, 10% COLLECTION COMME | Wind Direction: White states with the state of the state | Cloud Cover: 0% 10%, : Dust in area: Visible, Not | 25%, 50%, 75% Visible | 6, 100 | |
| Air Temp:C Precipitation: rain / mis Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | Wind Direction: Why st / snow NA , 25%, 50%, 75%, 00% ENTS: (i.e. damage to station, bugs vas Deployed 20/7-()(-D6 | Cloud Cover: 0% 10%, : Dust in area: Visible, Not | 25%, 50%, 75% Visible | 6, 100 | |
| Air Temp:C Precipitation: rain / mis Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | Wind Direction: Why st / snow NA , 25%, 50%, 75%, 00% ENTS: (i.e. damage to station, bugs vas Deployed 20/7-()(-D6 | Cloud Cover: 0% 10%, : Dust in area: Visible, Not | 25%, 50%, 75% Visible | 6, 100 | |
| Air Temp:C Precipitation: rain / mis Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | Wind Direction: White states with the state of the state | Cloud Cover: 0% 10%, : Dust in area: Visible, Not | 25%, 50%, 75% Visible | 6, 100 | |
| Air Temp:C Precipitation: rain / mis Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | Wind Direction: Why st / snow NA , 25%, 50%, 75%, 00% ENTS: (i.e. damage to station, bugs vas Deployed 20/7-()(-D6 | Cloud Cover: 0% 10%, : Dust in area: Visible, Not | 25%, 50%, 75% Visible | 6, 100 | |
| Air Temp:C Precipitation: rain / mis Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | Wind Direction: Why st / snow NA , 25%, 50%, 75%, 00% ENTS: (i.e. damage to station, bugs vas Deployed 20/7-()(-D6 | Cloud Cover: 0% 10%, : Dust in area: Visible, Not | 25%, 50%, 75% Visible | 6, 100 | |
| Air Temp:C Precipitation: rain / mis Snow Cover: 0%, 10% COLLECTION COMME Date Sample Collected w | Wind Direction: Why st / snow NA , 25%, 50%, 75%, 00% ENTS: (i.e. damage to station, bugs vas Deployed 20/7-()(-D6 | Cloud Cover: 0% 10%, : Dust in area: Visible, Not | 25%, 50%, 75% Visible | 6, 100 | |

Total Volume of Water After Melting: 520 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116.3 | 148.8 | 32 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
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| - | | No: | ENVI-17 | 8-0312 |
|--------------------------|--|----------------------------|----------------|----------|
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne D | Dul |
| Task: | Dust Gauge Collection Field Sheet | | | |
| | | Page: | _1 of | 2 |
| Land A | | | | |
| GENERAL | Carlo Maria | | | |
| LOCATION NAME: D | DATE (dd-mmm-y | (VVV): 25-1MAR-2017 | TIME (24:00): | 0915 |
| SAMPLED BY: | | | Other | |
| GPS COORDINATES (| UTM): <u>\$35695</u> E 713 | 5) 13 X N (Zone) | 12 | |
| DESCRIPTION: | Quarterly dust collecti | , sn | | |
| | 1 | | | |
| CLIMATE CONDITION | S (if sampling outside) | | | |
| Air Temp:C | Wind Direction: Was W | /ind Speed (knots): | | |
| Precipitation: rain / mi | | loud Cover: 6%, 10%, | 25%, 50%, | 75%, 100 |
| Snow Cover: 0%, 10% | | Oust in area: Visible, Not | | |
| P | | | 2 | |
| COLLECTION COMME | ENTS: (i.e. damage to station, bugs - tw | igs in sample, hole in ve | stibule, etc.) | |
| | ras Deployed 3017-01-04 | | | |
| Date Sample Collected w | | | | |
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| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 115.6 | 141.3 | 25.7 | |
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| | | tion Field Sheet | | | |
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| | | No: | ENV | /1-178-0 | 312 |
| Area: 8000 | | Revision: | R0 | | |
| Effective Date: | 26-Mar-2012 | r-2012 By: Dianne I | | ne Dul | |
| Task: | Dust Gauge Collection Fie | ld Sheet | | | |
| | | Page: | _1_ | of | 2 |
| | TB TYPE OF SAMPL JTM): 537562 E 7 Outputed dust colle 6 (if sampling outside) Wind Direction: West t/snow/N/2 | Wind Speed (knots): Cloud Cover: 0%, 10%, 2 Dust in area: Visible Not | Other | 2 0%, 75% | |
| | as Deployed <u>2017-01-03</u> rk V141 ble dust in wate | x | | | |

Total Volume of Water After Melting: 275 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 114.4 | 164.6 | 50.2 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
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| | Dust Gauge Coll | ection Field Sheet | | |
|---------------------------|------------------------------------|-------------------------------|-----------------|-------|
| | 63/0 | No: | ENVI-178-0 | 312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection F | ield Sheet | | |
| | | Page: | 1 of | 2 |
| GENERAL | | | | |
| LOCATION NAME: | DATE (dd-mm | m-yyyy): 25-MAR-2017 | TIME (24:00): / | 005 |
| SAMPLED BY: | | | Other | |
| GPS COORDINATES (L | | 7150510 N (Zone) | | |
| | | 1/ 1 | | |
| DESCRIPTION: | Quarterly dust | collection | | |
| 01 II 1 1 T | | | | |
| CLIMATE CONDITIONS | | 0 | | |
| Air Temp: <u>- H</u> °C | Wind Direction: V44 | Wind Speed (knots): 👋 | _ | |
| Precipitation: rain / mis | t/snow(NA) | Cloud Cover 078, 10%, | 25%, 50%, 75%, | , 100 |
| Snow Cover: 0%, 10%, | 25%, 50%, 75%, 100% | Dust in area: Visible, Not | Visible | |
| | | | | |
| | NTS: (i.e. damage to station, bugs | - twigs in sample, hole in ve | stibule, etc.) | |
| Date Sample Collected wa | as Deployed 9017-01-06 | | | |
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Total Volume of Water After Melting: 546 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 117.7 | 203.8 | 86,1 | |
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| 3 | | | | |
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| | | No: | ENVI-178-0 | 312 | | |
|--|--|----------------------------|-----------------|-------|--|--|
| Area: | 8000 | Revision: | R0 | - | | |
| Effective Date: | | | Dianne Dul | 2.23 | | |
| Task: | Dust Gauge Collection Field | d Sheet | | | | |
| | | Page: | 1 of | 2 | | |
| GENERAL | | | | | | |
| Act to the second secon | DATE (dd-mmm-y | 1441: 25-MAR-2017. | TIME (24:00): 1 | 65D | | |
| | TB TYPE OF SAMPLE | | Other | | | |
| • | UTM): 531406 E 719 | | | | | |
| | Quarterly dust collect | | | | | |
| | - Care 1/14/1 Ecop 1/2/13 | 21100 | | | | |
| CLIMATE CONDITION: | | | | | | |
| Air Temp: <u>- 74</u> °C | Wind Direction: West v | Wind Speed (knots): | | | | |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, | | , 100 | | |
| Snow Cover: 0%, 10% | | Dust in area: Visible, Not | | | | |
| | | | <i></i> | | | |
| | NTS: (i.e. damage to station, bugs - tw | vigs in sample, hole in ve | stibule, etc.) | | | |
| Date Sample Collected w | as Deployed <u>2017-01-03</u> | | | | | |
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Total Volume of Water After Melting: 600 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116.3 | 143.1 | 26.8 | |
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| | | No: | ENVI-178-0 | 312 |
|---------------------------|--|-----------------------------|----------------|-------|
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection Field | Sheet | | |
| | | Page: | 1 of | 2 |
| | | | | |
| GENERAL N | | 00 1110 2 | | |
| LOCATION NAME: | | 14): 25-11/AR-2017 | | 940 |
| SAMPLED BY: | TYPE OF SAMPLE: | Dust | Other | |
| GPS COORDINATES (| UTM): 541264 E 713 | N (Zone) | 12 | |
| DESCRIPTION: | | lection | | |
| | | | | |
| CLIMATE CONDITION | | | | |
| Air Temp:C | Wind Direction: With Wi | nd Speed (knots): | <u></u> | |
| Precipitation: rain / mis | st / snow /(N/A CI | oud Cover 0%, 10%, | 25%, 50%, 75% | , 100 |
| Snow Cover: 0%, 10% | , 25%, 50%, 75%, 100% Du | ıst in area: Visible, Not | Visible | |
| | | | | |
| | ALTO MANAGEMENT OF THE PARTY OF | se in cample hole in ve | otibula otal | |
| COLLECTION COMME | NTS: (i.e. damage to station, bugs - twi | js in sample, note in ve | Stibule, etc.) | |
| COLLECTION COMME | | ys in sample, note in ve | stibule, etc.) | |
| Date Sample Collected w | as Deployed | gs in sample, note in ve | stibule, etc.) | |
| Date Sample Collected w | | gs III sainpie, noie iii ve | stibule, etc.) | |
| Date Sample Collected w | as Deployed | gs III sainpie, noie iii ve | Stibule, etc.) | |
| Date Sample Collected w | as Deployed | gs III sample, note ili ve | Stibule, etc.) | |
| Date Sample Collected w | as Deployed | js III sainpie, noie iii ve | Stibule, etc.) | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 115.9 | 125.5 | 9.5 | |
| 2 | | 1000 | | |
| 3 | | | | |
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| 5 | 1 | | | |
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| 7 | | | | |
| 8 | | | | |
| 9 | 74 | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | | | | |

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| F | 4 |
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| | | No: | ENVI-178-0 | 312 |
|--|--------------------------------------|--|-----------------|--------|
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection Fi | eld Sheet | | |
| | | Page: | | 2 |
| | | | | |
| GENERAL | Leaving Co. L. | | | |
| LOCATION NAME: 🎝 | 75 DATE (dd-mmm | n-yyyy): 25-14AR-2017 | TIME (24:00): | 600 |
| | | PLE: Dust | Other | |
| GPS COORDINATES (| UTM): <u>532908</u> E 7 | 148924 N (Zone) | 12 | |
| DESCRIPTION: | Quarterly dust call | ection | | |
| CLIMATE CONDITIONS Air Temp:°C Precipitation: rain / mis Snow Cover: 0%, 10%, | Wind Direction: West | Wind Speed (knots): 8 Cloud Cover: 0%, 19%, 2 Dust in area: Visible, Not | 25%, 50%, 75% | 6, 100 |
| COLLECTION COMME | NTS: (i.e. damage to station, bugs - | - twigs in sample, hole in ve | estibule, etc.) | |
| | as Deployed 9017 -01-06 | ange in campie, note in te | olivaroj otoly | |
| Sample u | penter cloudy | | | |

| # | weight of Filter | Filter + Residue | Weight | Comments |
|---|------------------|------------------|--------|----------|
| 1 | 116.9 | 147.5 | 30.6 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |

Residue

Filter

10 11 **Totals**

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| C |) |
| - | -) |
| | 1. |
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| C | 5 |

| | | tion Field Sheet | | |
|-----------------|--|--|----------------|------|
| | | No: | ENVI-178-0 | 0312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection Field | d Sheet | | |
| | | Page: | 1 of | 2 |
| SAMPLED BY: | UTM): 524979 E 7 Dug fer y dust coll S (if sampling outside) Wind Direction: Vlsf 1 st / snow / (N/A) , 25%, 50%, 75%, (00%) | E: (Dust) N (Zone) Letton Wind Speed (knots): 8 Cloud Cover: 0% 10%, 2 Dust in area: Visible, Not | Other | |
| | :NTS: (i.e. damage to station, bugs - tw ras Deployed <u> るいオーロー</u> | wigs in sample, hole in ve | stibule, etc.) | |
| | ple water Kind of cl | ondy | | |

Total Volume of Water After Melting: 360 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 118.3 | 124.0 | 5.7 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | | | | |

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| | Dust Gauge Collect | tion Field Sheet | | |
|--|---|----------------------------|----------------|------|
| | | No: | ENVI-178-0 | 312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection Fiel | d Sheet | | |
| | | Page: | 1 of | 2 |
| LOCATION NAME: D SAMPLED BY: T GPS COORDINATES (I DESCRIPTION: CLIMATE CONDITIONS Air Temp: C Precipitation: rain / mis Snow Cover: 0%, 10% | TB TYPE OF SAMPLI UTM): 528713 E 719 Quarter 1 dust collect S (if sampling outside) Wind Direction: 19 St / snow N/A | Wind Speed (knots): | Other | |
| COLLECTION COMME | NTS: (i.e. damage to station, bugs - tv | wigs in sample, hole in ve | stibule, etc.) | |
| | as Deployed <u>2017-01-04</u> | | | |
| Lots of o | lark dust. Remoned a sm | wall twig und some | e bits of li | chen |

Total Volume of Water After Melting: 460 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 117.8 | 127.6 | 9.8 | 1- |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | | | | |



| | | No: | ENVI- | -178-03 | 12 |
|------------------------------|---|----------------------------|------------|---------|-----|
| Area: | 8000 | Revision: | R0 | | |
| Effective Date: | 26-Mar-2012 | By: | Diann | e Dul | |
| Task: | Dust Gauge Collection Field | Sheet | | | |
| | | Page: | 1_ | of _ | 2 |
| GENERAL | | | | | |
| LOCATION NAME: | DATE (dd-mmm-v | yyy): <u>02-JUL-201</u> 7- | TIME (24: | 00): 17 | :36 |
| SAMPLED BY: _AH | | | Other | | |
| GPS COORDINATES (| | <u>4321</u> N (Zone) | 12 | | |
| DESCRIPTION: | | Gauge Collection | | | |
| | , | | | | |
| CLIMATE CONDITIONS | S (if sampling outside) | | | | |
| Air Temp: 19 °C | Wind Direction: V | Vind Speed (knots): | | | |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%) | | %, 75%, | 100 |
| Snow Cover: 0%, 10% | | Dust in area: Visible, Not | | | |
| | | | | | |
| | NTS: (i.e. damage to station, bugs - tw | rigs in sample, hole in ve | stibule, e | tc.) | |
| Date Sample Collected w | as Deployed_ <u>2017-03-25</u> | | | | |
| flies in sample visible dust | | | | | |
| | | | | | |
| visible dust | | | | | |
| visible dust | | | | | |
| visible dust | | | | | |
| visible dust | | | | | |

Total Volume of Water After Melting : 100.0 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 115.2 | 427.3 | 312.1 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 115 2 | 4273 | 312 1 | |



| Area: 8000 Revision: R0 Effective Date: 26-Mar-2012 By: Dianne Dul Task: Dust Gauge Collection Field Sheet Page: 1 of GENERAL LOCATION NAME: 2057 2A DATE (dd-mmm-yyyy): 02-7111-2017 TIME (24:00): 16 SAMPLED BY: AH 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 53 56 73 E 715 1339 N (Zone) 12 DESCRIPTION: Questerly Punt Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 18 °C Wind Direction: SE Wind Speed (knots): 13 Precipitation: rain / mist / snow / (V/A) Cloud Cover: 0%, (0%) 25%, 50%, 75%, 75%, 75%, 75% onw Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017 - 03 - 25 | | | ection Field Sheet No: | ENIV | 178.03 | 312 |
|---|----------------------|-------------------------|---------------------------------|-----------|----------|-------|
| Effective Date: 26-Mar-2012 By: Dianne Dul Task: Dust Gauge Collection Field Sheet Page: 1 of GENERAL LOCATION NAME: PUST 2A DATE (dd-mmm-yyyy): 02-TIL-2017 TIME (24:00): 16 SAMPLED BY: AH + 352 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 535673 E 7151339 N (Zone) DESCRIPTION: Queckely Pust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 18 °C Wind Direction: SE Wind Speed (knots): 13 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, (0%, 25%, 50%, 75%, 75%, 75%) Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017 03-25 | 1000 | 2000 | 7.33 | | 1-170-00 |) 1 2 |
| Task: Dust Gauge Collection Field Sheet Page: 1 of GENERAL LOCATION NAME: PUST 2A DATE (dd-mmm-yyyy): 02-JUL-2017 TIME (24:00): 16 SAMPLED BY: AH 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 535673 E 7151339 N (Zone) 12 DESCRIPTION: Quarterly Pust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 18 °C Wind Direction: SE Wind Speed (knots): 13 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017 03-25 | | | | 2000 | n.i | |
| Page: 1 of GENERAL LOCATION NAME: PUST 2A DATE (dd-mmm-yyyy): 02-511-2017 TIME (24:00): 16 SAMPLED BY: AH 352 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 535673 E 7151339 N (Zone) 12 DESCRIPTION: Quarterly Past Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 10 °C Wind Direction: SE Wind Speed (knots): 13 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017 - 03 - 25 | Effective Date: | | | Dian | ne Dui | |
| GENERAL LOCATION NAME: | ask: | Dust Gauge Collection F | | | | |
| DATE (dd-mmm-yyyy): 02-511-2017 TIME (24:00): SAMPLED BY: AH 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 535673 E 7151339 N (Zone) DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 18 °C Wind Direction: 5E Wind Speed (knots): 13 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 50w Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017 - 03 - 25 | | | Page: | 1_ | of _ | 2 |
| SAMPLED BY: AH 4 552 TYPE OF SAMPLE: Dust Other | SENERAL | | | | | r 11. |
| SAMPLED BY: AH | OCATION NAME: | UST 2A DATE (dd-mm | m-yyyy): <u>02-JUL-201</u> 7 | TIME (24 | :00):/ | 6:48 |
| CLIMATE CONDITIONS (if sampling outside) Air Temp:C | SAMPLED BY: AH | 552 TYPE OF SAM | PLE: Dust | Other | | |
| CLIMATE CONDITIONS (if sampling outside) Air Temp:C | | | 7/5/1339 N (Zone) | 12 | | |
| CLIMATE CONDITIONS (if sampling outside) Air Temp: | | | | | | |
| Air Temp:C Wind Direction: Wind Speed (knots): Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed | DESCRIPTION: | wing was charge | DHECHEZI | | | |
| Air Temp:C Wind Direction: Wind Speed (knots): Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed | NATE CONDITIONS | (if sampling outside) | | | | |
| Precipitation: rain / mist / snow / N/A Snow Cover: 0% 10%, 25%, 50%, 75%, 100% COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017 - 03 - 25 | | | Wind Cuard (Imata): | 3 | | |
| Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017 - 03 - 25 | | | | | 760/ | 100 |
| COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017 - 03 - 25 | | | | | | 100 |
| Date Sample Collected was Deployed 2017 - 03 - 25 | Snow Cover: 0%, 10%, | 25%, 50%, 75%, 100% | Dust in area: Visible, No | Visible | , | |
| Date Sample Collected was Deployed 2017 - 03 - 25 | | | folio to consula hala la ur | atibula | oto \ | |
| | | | s - twigs in sample, note in ve | estibule, | etc.) | |
| flies | ** | as Deployed 2017-03-25 | | | | |
| | flies | | | | | |
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| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116.3 | 148.6 | 32.3 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 116.3 | 148.6 | 32.3 | |

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| | Dust Gauge Co | lection Field Sheet | | |
|---------------------------|-----------------------------------|----------------------------------|-----------------|--------|
| | | No: | ENVI-178-0 | 312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection | Field Sheet | | |
| | | Page: | _1_ of | 2 |
| GENERAL | | | | |
| LOCATION NAME: | UST 3 DATE (dd-m) | mm-yyyy): <u>02-J11-201</u> 7 | TIME (24:00): | 6:25 |
| SAMPLED BY: AH | | | Other | |
| | | 715 1872 N (Zone) | 12 | |
| | | | | |
| DESCRIPTION: | arterly Dust Gauge | Collection | | |
| CLIMATE CONDITIONS | S (if sampling outside) | | | |
| Air Temp: 18 °C | Wind Direction: 5E | Wind Speed (knots): | 3 | |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, | | 100 |
| | 25%, 50%, 75%, 100% | Dust in area: Visible, Not | | 5, 100 |
| Show Cover 0%, 10% | 25%, 50%, 75%, 100% | Dust in area. Visible, Not | . VISIDIE | |
| COLLECTION COMME | NTS: (i.e. damage to station, bug | ıs - twigs in sample, hole in ve | estibule, etc.) | |
| | as Deployed <u>2017/03/25</u> | , | | |
| 2 1 1 10 | ed while driving and som | e weleshawas lost | | |
| Ducket Topp | ed while ariving and sur | Will System 1 | | |
| flies, visit | ole dust | | | |
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| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116.3 | 167.7 | 51.4 | |
| 2 | 116.7 | 153.0 | 36.3 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 233 | 320.7 | 87.7 | |

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| | | No: | ENVI-178-0312 |
|---------------------------|---|--|---------------------|
| Area: | 8000 | Revision: | R0 |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul |
| Task: | Dust Gauge Collection | Field Sheet | |
| 3.77 | | Page: | 1 of 2 |
| GENERAL LOCATION NAME: | OUST 4 DATE (dd-mr | nm-yyyy): <u>02 - JUL - 20</u> 17 | TIME (24:00): 15:45 |
| SAMPLED BY: _AH | | | Other |
| | | 7/52127 N (Zone) | 12 |
| GPS COORDINATES (| te de la constant de | The second secon | |
| DESCRIPTION: | narterly Dust Gauge | Collection | |
| CLIMATE CONDITION | S (if sampling outside) | | |
| | Wind Direction: 5E | Wind Speed (knots): | 5 |
| Precipitation: rain / mi | | Cloud Cover: 0%, 10%, | |
| | 5, 25%, 50%, 75%, 100% | Dust in area: Visible, No | t Visible |
| | | to the state of the state of | 7.54 . 52 . 154 . T |
| COLLECTION COMMI | ENTS: (i.e. damage to station, bug | js - twigs in sample, hole in v | estibule, etc.) |
| | vas Deployed_2017-03-25 | | |
| Bucket tip | ped while driving and so | me water/dust was los | t |
| | dust | | |
| Clies vie ble | CO CO | | |
| flies, visible | | | |
| flies, visible | | | ÷ |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 117.7 | 158.9 | 41.2 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | V . | |
| 5 | | | | |
| 6 | | | | |
| 7 | 10 | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 117.7 | 158.9 | 41.2 | |



| 2 | | | No: | EN | /1-178-03 | 312 |
|------------------------------|-------------------------------|---------------------|------------------|---------|-----------|------|
| Area: | 8000 | | Revision: | R0 | | |
| Effective Date: | 26-Mar-2012 | | By: | Diar | nne Dul | |
| Task: | Dust Gauge Collection | n Field Sheet | | | | |
| | | | Page: | 1 | of _ | 2 |
| GENERAL | | | | | | |
| LOCATION NAME: DL | | -mmm-yyyy): _0@ | 2-JUL-2017 | TIME (2 | 4:00):/ | 7:14 |
| SAMPLED BY: AH+ | 552 TYPE OF | SAMPLE: Dust | | Other_ | | |
| GPS COORDINATES (UT | M): 537502 E | 7152934 | N (Zone) | 12 | | |
| DESCRIPTION: Quar | 1 1 0 | Collection | | | | |
| 2150 1860 10810 F | 1 | | | | | |
| CLIMATE CONDITIONS (i | sampling outside) | | | | | |
| Air Temp: 19 °C | Wind Direction:5 | Wind Spee | d (knots): | | | |
| Precipitation: rain / mist / | | | er: 0%, 10%, | | 50%, 75%, | 100 |
| | 25%, 50%, 75%, 100% | | ea: Visible Not | 7 | | |
| COLLECTION COMMENT | S: (i.e. damage to station, b | ougs - twigs in sar | nple, hole in ve | stibule | , etc.) | |
| COLLEGITOR COMMENT | Deployed 2017/08/2 | 25 2017/03 | 1105 | | | |

Dust Gauge Collection Field Sheet

Total Volume of Water After Melting: 275, 0 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116.9 | 124.4 | 7.5 | |
| 2 | H89 118.9 | 143.6 | 24.7 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 235.8 | 268 | 32.2 | |

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| t | |
| F | 3 |
| 7 | 7 |

| | Dust Gauge Collection | on Field Sheet | | |
|--|--|---------------------------|-----------------|-------|
| | | No: | ENVI-178-0 | 312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Гask: | Dust Gauge Collection Field | Sheet | | |
| | | Page: | 1 of _ | 2 |
| GENERAL LOCATION NAME: SAMPLED BY:AH | | yy): <u>02-JU-201</u> 7 | TIME (24:00): | |
| | JTM): 532903 E 7/5 | | | |
| | | | | |
| DESCRIPTION: | nartely Dust Gauge Co. | (ICC.1167) | | |
| CLIMATE CONDITIONS | G (if sampling outside) | | | |
| Air Temp: 16 °C | Wind Direction: 5E W | ind Speed (knots): | <u> </u> | |
| Precipitation: rain / mis | | loud Cover: 0%, 10%, | 25%, 50%, 75% | , 100 |
| Snow Cover: 0%, 10%, | 25%, 50%, 75%, 100% D | ust in area: Visible, Not | Visible | |
| | | | | |
| | NTS: (i.e. damage to station, bugs - twi | | estibule, etc.) | |
| Date Sample Collected w | as Deployed 2017-03-25 JG+J | В | | |
| Bucket tipp visible dust. | ed while driving and some flies | water/dust was | lost | |

Total Volume of Water After Melting: 350 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 115.1 | 211.4 | 96.3 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 115.1 | 211.4 | 96.3 | |

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| CLIMATE CONDITIONS (if sampling outside) Air Temp: 12.7 °C Wind Direction: 5U Wind Speed (knots): 6 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) | | Dust Gauge Collection Fi | ela Sneet | |
|---|--------------------------|---|--------------------|--------------------|
| Effective Date: Dust Gauge Collection Field Sheet | 44.5. | 40.0 | | ENVI-178-0312 |
| Task: Dust Gauge Collection Field Sheet Page: 1 of 2 GENERAL LOCATION NAME: DUST 5 DATE (dd-mmm-yyyy): DOTATO TIME (24:00): 0825 SAMPLED BY: 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 535696 E 7/55/138 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 12.7 °C Wind Direction: 5W Wind Speed (knots): Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017/03/25 36/36 | | | Revision: | R0 |
| Page: 1 of 2 GENERAL LOCATION NAME: DUST 5 DATE (dd-mmm-yyyy): 2017/06 TIME (24:00): 0825 SAMPLED BY: 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 535696 E 7/55/38 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 12.7 °C Wind Direction: 5W Wind Speed (knots): 6 Precipitation: rain / mist / snow (N/A) Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Binow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) | | | | Dianne Dul |
| GENERAL LOCATION NAME: DUST 5 DATE (dd-mmm-yyyy): 2017/07/06 TIME (24:00): 0825 SAMPLED BY: 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 535696 E 7/55/38 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 12.7 °C Wind Direction: 5W Wind Speed (knots): 6 Precipitation: rain / mist / snow N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Bonow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) | Task: | Dust Gauge Collection Field Shee | | |
| DATE (dd-mmm-yyyy): 2017/07/06 TIME (24:00): 0825 SAMPLED BY: 52 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 535696 E 7/55/38 N (Zone) DESCRIPTION: 04464 Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 12.7 °C Wind Direction: 5W Wind Speed (knots): 6 Precipitation: rain / mist / snow N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) | | | Page: | 1 of 2 |
| SAMPLED BY: | GENERAL | | 06-JUL-201 | 7 |
| SAMPLED BY: | LOCATION NAME: | DATE (dd-mmm-yyyy): | 2017/07/06 | TIME (24:00): 0825 |
| CLIMATE CONDITIONS (if sampling outside) Air Temp: 12.7 °C Wind Direction: 5W Wind Speed (knots): 6 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017/03/25 36/36 | | TYPE OF SAMPLE: Dust | | Other |
| CLIMATE CONDITIONS (if sampling outside) Air Temp: 12.7 °C Wind Direction: 5W Wind Speed (knots): Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017/03/25 36/36 | GPS COORDINATES (L | JTM): 535696 E 7155138 | N (Zone) | 12 |
| CLIMATE CONDITIONS (if sampling outside) Air Temp: 12.7 °C Wind Direction: 50 Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017/03/25 | | | | |
| Air Temp: 12.7 °C Wind Direction: 50 Wind Speed (knots): Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) | | a to 19 20151 Contage Concerve | 26.1 | |
| Air Temp: 12.7 °C Wind Direction: 5W Wind Speed (knots): Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) | CLIMATE CONDITIONS | (if sampling outside) | | |
| Precipitation: rain / mist / snow N/A Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Collection Comments: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017/03/25 | Air Temp: 12.7 °C | Wind Direction: 56/ Wind Sp | and (knots): 6 | |
| Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017/03/25 | | | | |
| COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017/03/25 36/36 | | | 7 | |
| Date Sample Collected was Deployed 2017/03/25 JG/JB | | 22.04, 20.04, 10.04, 100.04 Buot in t | rea. Visible, (vot | VISIDIO |
| Date Sample Collected was Deployed 2017/03/25 JG/JB | COLLECTION COMME | NTS: (i.e. damage to station, bugs - twigs in s | ample, hole in ve | stibule, etc.) |
| green colour, flies, visible dust Just gauge stand tilted & in stand | Date Sample Collected wa | as Deployed 2017/03/25 JG/JB | | 20000001 |
| dust gauge stand tilted tin stand | areen colour. | flies, visible dust | | |
| Just gaine stand tilted 4 in stand | gica | 11.11 1 1 1 1 | | |
| | dust game - | shand tilted trin stand | | |
| | 4. | | | |
| | | | | |
| | | | | |
| | | | | |

| TOTAL VOI | unie or water Aite | meiting(mil) |
|-----------|--------------------|---------------------|
| Filter | Weight of Filt | er Filter + Residue |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 115.4 | 135.5 | 20.1 | |
| 2 | 114.9 | 126.3 | 11.4 | |
| 3 | 115.1 | 155.6 | 40.5 | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | - |
| Totals | 345, 4 | 417.4 | 70.72.0 | |

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|---|----------|
| | = 0 |
| |) |
| - | |
| - | = 6 |
| | 3 |
| - | + |
| C |) |

| | Dust Gauge Coll | ection Field Sheet | | |
|--|------------------------------------|--------------------------------|-----------------|--------|
| | | No: | ENVI-178-0 | 0312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: Dust Ga | Dust Gauge Collection I | Field Sheet | | |
| | | Page: | 1 of | 2 |
| <u>GENERAL</u> | | | | |
| LOCATION NAME: | UST 7 DATE (dd-mm | nm-yyyy): <u>06-JUL-20</u> 17- | TIME (24:00): C | 1846 |
| SAMPLED BY: | | | Other_ | |
| | JTM): <u>536.819</u> e | | | |
| | stely Dust Gange Col | | 100 | |
| DESCRIPTION: | sterly vist singe col | (CCTIDY) | | |
| CLIMATE CONDITIONS | 6 (if sampling outside) | | | |
| A STATE OF THE PARTY OF THE PAR | Wind Direction: | Wind Speed (knots): | | |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, (2 | | 6 100 |
| | 25%, 50%, 75%, 100% | Dust in area: Visible, Not | | 0, 100 |
| | | - 10111 110110 110110 | VIOLETO | |
| COLLECTION COMME | NTS: (i.e. damage to station, bugs | - twigs in sample, hole in ve | stibule, etc.) | |
| Date Sample Collected wa | as Deployed March 25, 2 | 017 | | |
| | 0.010 | 011 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Total Volume of Water After Melting: 390 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 115.6 | 143.7 | 28.1 | |
| 2 | 117.3 | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 115.6 | 143.7 | 29.1 | |

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| = | |
| 0 | |

| | Dust Gauge Co | llection Field Sheet | | |
|---------------------------|--|----------------------------------|----------------|-------|
| | | No: | ENVI-178-0 | 312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection | Field Sheet | | |
| | | Page: | 1 of | 2 |
| <u>GENERAL</u> | | | | |
| LOCATION NAME: D | UST 8 DATE (dd-m) | mm-yyyy): <u>06 JUL-2017</u> | TIME (24:00): | 9:27 |
| SAMPLED BY: 55 | | | Other | |
| GPS COORDINATES (| | 7154146 N (Zone) | 12 | |
| | crtesly Dust Gauge | | | |
| DECORA TION | it ig that days. | Collection | | |
| CLIMATE CONDITIONS | 6 (if sampling outside) | | | |
| Air Temp: 14 °C | Wind Direction: | Wind Speed (knots):8 | | |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, (2 | | 100 |
| | 25%, 50%, 75%, 100% | Dust in area: Visible, Not | | , 100 |
| | 2070, 0070, 1070, 10070 | Daot III area. Visible, Not | VISIDIC | |
| COLLECTION COMME | NTS: (i.e. damage to station, bug | ıs - twigs in sample, hole in ve | stibule, etc.) | |
| Date Sample Collected wa | as Deployed 2017-03-25 JG o beaker, some water lost | JB | , | |
| whentransfering & | obeaker somewater lost | (120mL) | | |
| light Green in colour | , lots of water present, lo | ts of bugs present | | |
| bust present as w | ell as green particles | 0 | | |
| D 25 (C) 10 (C) 10 (C) | | | | |
| | | | | |
| | | | | |
| | | | | |

Total Volume of Water After Melting: 700 400 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 115.3 | 138.6 | 23.3 | |
| 2 | 116.2 | 159.2 | 43.0 | |
| 3 | 116. 1 | 116.8 | 0.7 | |
| 4 | | ,,,,,, | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 347.6 | 414.6 | 67.0 | |

| 1 | |
|---|----|
| F | Ţ, |
| C |) |
| E | |
| E | 3 |
| E | 1 |
| C |) |

| | | Ilection Field Sheet | =10000000000000000000000000000000000000 |
|---------------------------|-----------------------------------|--|---|
| | 20.60 | No: | ENVI-178-0312 |
| Area: | 8000 | Revision: | R0 |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul |
| Task: | Dust Gauge Collection | Field Sheet | |
| | | Page: | 1 of2 |
| <u>GENERAL</u> | | 06-JUL-2017 | 0.0 |
| LOCATION NAME: | 2U5T 9 DATE (dd-m | mm-yyyy): 2017 JUL | TIME (24:00) 08:36 |
| SAMPLED BY: | | MPLE: Dust | Other |
| | UTM): <u>541204</u> E | | - 191-9 |
| | | The state of the s | |
| DESCRIPTION: | urterly Dust Gauge | Collection | |
| CLIMATE CONDITION: | S (if sampling outside) | | |
| Air Temp: 12.7 °C | Wind Direction: | Wind Speed (knots); | 6 |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, | 25%. 50%. 75%. 100 |
| 10. | , 25%, 50%, 75%, 100% | Dust in area: Visible, No | |
| | | | |
| COLLECTION COMME | NTS: (i.e. damage to station, but | gs - twigs in sample, hole in ve | estibule, etc.) |
| Date Sample Collected w | as Deployed March 25, 20 | לוס | |
| | ylinder was tilted in st | 1 1211 | t washt |
| Dust game a | Junior Mars Current in Ste | and, used I racks to keep | 2 Le coprigno |
| Dust gange a | | | |
| Dust gange a | | | |
| Dust game co | | | |
| Dust gange of | | | |

Total Volume of Water After Melting: _______(mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 115.0 | 127.3 | 12.3 | |
| 2 | 115.9 | 122.4 | 6.5 | |
| 3 | 45-6 | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 230.9 | 249.7 | 188 | |



| | Dust Gauge Co | llection Field Sheet | |
|---|--|---|--------------------|
| | | No: | ENVI-178-0312 |
| Area: | 8000 | Revision: | R0 |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul |
| Task: | Dust Gauge Collection | Field Sheet | |
| | | Page: | 1 of 2 |
| <u>GENERAL</u> | | | |
| LOCATION NAME: | DUST CI DATE (dd-m | mm-yyyy): <u>(X6-JUL-201</u> 7 1 | TIME (24:00): 08:5 |
| SAMPLED BY: 5 | 52 TYPE OF SA | MPLE: Dust | Other |
| GPS COORDINATES (| UTM): 534979 E | 7144270 N (Zone) | 12 |
| | arterly Dust Gauge | | |
| DECORIT FIGHT. | tortony 120st Orage | Collection | |
| CLIMATE CONDITIONS | S (if sampling outside) | | |
| | | / | |
| Air Temp: 12 7 °C | Wind Direction: 5W | Wind Speed (knots) | 7 |
| | | | 25% 50% 75% 100 |
| Precipitation: rain / mis | st / snow (N/A) | Cloud Cover: 0%, 10%, (2 | |
| Precipitation: rain / mis | | | |
| | st / snow (N/A) | Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not | Visible |
| Precipitation: rain / mis Snow Cover: 0%, 10%, COLLECTION COMME | st / snow (N/A) , 25%, 50%, 75%, 100% | Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not gs - twigs in sample, hole in ve | Visible |
| Precipitation: rain / mis Snow Cover: 0%, 10%, | st / snow (N/A), 25%, 50%, 75%, 100% ENTS: (i.e. damage to station, bug | Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not gs - twigs in sample, hole in ve | Visible |
| Precipitation: rain / mis Snow Cover: 0%, 10%, | st / snow (N/A), 25%, 50%, 75%, 100% ENTS: (i.e. damage to station, bug | Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not gs - twigs in sample, hole in ve | Visible |
| Precipitation: rain / mis Snow Cover: 0%, 10%, | st / snow (N/A), 25%, 50%, 75%, 100% ENTS: (i.e. damage to station, bug | Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not gs - twigs in sample, hole in ve | Visible |
| Precipitation: rain / mis Snow Cover: 0%, 10%, COLLECTION COMME | st / snow (N/A), 25%, 50%, 75%, 100% ENTS: (i.e. damage to station, bug | Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not gs - twigs in sample, hole in ve | Visible |
| Precipitation: rain / mis Snow Cover: 0%, 10%, COLLECTION COMME | st / snow (N/A), 25%, 50%, 75%, 100% ENTS: (i.e. damage to station, bug | Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not gs - twigs in sample, hole in ve | Visible |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116.7 | 127.7 | 11.0 | |
| 2 | 115.6 | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 116.7 | 127.7 | 11.0 | |



| GENERAL LOCATION NAME: | Area: 8000 Revision: R0 Effective Date: 26-Mar-2012 By: Dianne Dul Task: Dust Gauge Collection Field Sheet Page: 1 of 2 GENERAL LOCATION NAME: Dust C2 DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09:// SAMPLED BY: 52 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 5287/U E 7/53276 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 14 °C Wind Direction: W Wind Speed (knots): 8 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible) COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) | | Dust Gauge Collec | tion Field Sheet | | | |
|--|--|--|--------------------------------------|--|------------|---------|-----|
| Effective Date: 26-Mar-2012 By: Dianne Dul Task: Dust Gauge Collection Field Sheet Page: 1 of GENERAL LOCATION NAME: Dust C2 DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09-17 SAMPLED BY: 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 528714 E 7153276 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 4 °C Wind Direction: Wind Speed (knots): 8 Precipitation: rain / mist / snow /N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 J.6, J.6 | Effective Date: 26-Mar-2012 By: Dianne Dul Task: Dust Gauge Collection Field Sheet Page: 1 of 2 GENERAL LOCATION NAME: Dust C2 DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09/// SAMPLED BY: 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 5287/4 E 7/53276 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 4 °C Wind Direction: W Wind Speed (knots): 8 Precipitation: rain / mist / snow / (N/A) Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 JG, JB | | | No: | ENVI | -178-03 | 312 |
| Task: Dust Gauge Collection Field Sheet Page: 1 of GENERAL LOCATION NAME: Dust C2 DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09-1/2 SAMPLED BY: 582 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 528714 E 7/53276 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 4 °C Wind Direction: W Wind Speed (knots): 8 Precipitation: rain / mist / snow / (N/A) Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 J6, J8 | Task: Dust Gauge Collection Field Sheet Page: 1 of 2 GENERAL LOCATION NAME: Dust C2 DATE (dd-mmm-yyyy): SAMPLED BY: SAMPLED BY: GPS COORDINATES (UTM): DESCRIPTION: Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: Air Temp: Air Temp: Air Temp: COUNTY C Wind Direction: Cloud Cover: Cloud Cover: Cov | Area: | 8000 | Revision: | R0 | | |
| Page: 1 of SENERAL LOCATION NAME: Dust C2 DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09:11 SAMPLED BY: 582 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 528714 E 7153276 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 4 °C Wind Direction: W Wind Speed (knots): 8 Precipitation: rain / mist / snow (N/A) Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 16, 18 | Page: 1 of 2 GENERAL LOCATION NAME: Dust C2 DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09:// SAMPLED BY: 562 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 528714 E 7/53276 N (Zone) 12 DESCRIPTION: Quarterly Pust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 14 °C Wind Direction: W Wind Speed (knots): 8 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 JG, JB | Effective Date: | | the state of the s | Diani | ne Dul | |
| GENERAL LOCATION NAME: DATE (dd-mmm-yyyy): | GENERAL LOCATION NAME: Dust C2 DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09:// SAMPLED BY: 52 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 528714 E 7/53276 N (Zone) 12 DESCRIPTION: Ouarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 4 °C Wind Direction: W Wind Speed (knots): 8 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 JG, JB | Task: | Dust Gauge Collection Fie | ld Sheet | | | |
| DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09 11 SAMPLED BY: 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 528714 E 7153276 N (Zone) 12 DESCRIPTION: Quarterly Dust Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 4 °C Wind Direction: Wind Speed (knots): 8 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 16, 18 | DATE (dd-mmm-yyyy): 06-JUL-2017 TIME (24:00): 09:11 SAMPLED BY: 552 TYPE OF SAMPLE: Dust Other GPS COORDINATES (UTM): 528714 E 7153276 N (Zone) 12 DESCRIPTION: 04 arterly 24 Gauge Collection CLIMATE CONDITIONS (if sampling outside) Air Temp: 4 C Wind Direction: Wind Speed (knots): 8 Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 JG, JB | | | Page: | 1_ | of _ | 2 |
| Air Temp:C Wind Direction: Wind Speed (knots): Precipitation: rain / mist / snow / N/A Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed | Air Temp:C Wind Direction: Wind Speed (knots): | LOCATION NAME: SAMPLED BY: GPS COORDINATES (| TYPE OF SAMPL UTM): <u>528714</u> | .E: Dust 53276 N (Zone) | Other | | |
| Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 16, 18 | Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 Coult Cover: 0%, 10%, 25%, 50%, 75%, 100% Coult in area: Visible, Not Visible Coult Cover: 0%, 10%, 25%, 50%, 75%, 100% Coult Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible Coult Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible Coult Cover: 0%, 10%, 25%, 50%, 75%, 100% Coult Cover: 0%, 10%, 10%, 10%, 100% Coult Cover: 0%, 10%, 10%, 10%, 10%, 100% Coult Cover: 0%, 10%, 10%, 10%, 10%, 10%, 10%, 10%, | CLIMATE CONDITIONS | S (if sampling outside) | | | | |
| Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 16, 18 | Snow Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Not Visible COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 JG, JB | Air Temp:°C | Wind Direction: | Wind Speed (knots): | | | |
| COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 16, 18 | COLLECTION COMMENTS: (i.e. damage to station, bugs - twigs in sample, hole in vestibule, etc.) Date Sample Collected was Deployed 2017-03-25 JG, JB | | | The state of the s | | %, 75%, | 100 |
| Date Sample Collected was Deployed 2017-03-25 16, 18 | Date Sample Collected was Deployed 2017-03-25 JG, JB | Snow Cover: 0%, 10% | 25%, 50%, 75%, 100% | Dust in area: Visible, Not | Visible | | |
| Date Sample Collected was Deployed 2017-03-25 16, 18 | Date Sample Collected was Deployed 2017-03-25 JG, JB | | | | 1007 6 | 12.00 | |
| | | Date Sample Collected w | as Deployed 2017-03-25 JG | | stibule, e | etc.) | |
| | | | | | | | |
| | | | | | | | |

Total Volume of Water After Melting: 675 300 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 119.3 | 1350 | 15.7 | |
| 2 | | | | |
| 3 | | | | |
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| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 119.3 | 135.0 | 15.7 | |

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| | | Ilection Field Sheet No: | ENVI-178-0 | 312 |
|--|--|----------------------------------|-----------------|-------|
| Area: | 8000 | Revision: | R0 | 012 |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection | | | |
| | | Page: | 1 of _ | 2 |
| GENERAL | | 30-Sep-2017 | | |
| | DATE (dd-m | 30-369-3013 | TIME (24:00): | 6:00 |
| CAMPLED BY: | DATE (dd-m | MDI E. Quet | Other | 0.00 |
| | TYPE OF SA | | | |
| | (UTM): <u>533964</u> E_ | | 12 | |
| DESCRIPTION: () | lartedy Dust gauge C | ollection | | |
| CLIMATE CONDITION | | | | |
| Air Temp: 2.14 °C | Wind Direction: | _ Wind Speed (knots): 18 | 3 | |
| Precipitation: rain / mi | st / snow / N/A | Cloud Cover: 0%, 10%, | 25%, 50%, 75% | , 100 |
| Snow Cover: 0%, 10% | 5, 25%, 50%, 75%, 100% | Dust in area: Visible, Not | Visible | |
| | | | | |
| | | | | |
| COLLECTION COMMI | ENTS: (i.e. damage to station, bu | gs - twigs in sample, hole in ve | estibule, etc.) | |
| COLLECTION COMMI | ENTS: (i.e. damage to station, buy vas Deployed <u>2017-07-02</u> | gs - twigs in sample, hole in ve | estibule, etc.) | |
| COLLECTION COMMID Date Sample Collected v ERT training | ENTS: (i.e. damage to station, but vas Deployed 2017-07-02 eccuring on Runway with | gs - twigs in sample, hole in ve | estibule, etc.) | |
| COLLECTION COMMIDate Sample Collected v ERT training of the sample of the sample collected v V. Little worter | ents: (i.e. damage to station, but vas Deployed 2017-07-02 excuring on Runway who present | gs - twigs in sample, hole in ve | place | |
| COLLECTION COMMIDate Sample Collected v ERT training of the worker of t | ENTS: (i.e. damage to station, but vas Deployed 2017-07-02 excurring on Runway who present | gs - twigs in sample, hole in ve | estibule, etc.) | |
| Date Sample Collected v ERT training of the worder of the | ENTS: (i.e. damage to station, but vas Deployed 2017-07-02 occurring on Runway who | gs - twigs in sample, hole in ve | place | |

Total Volume of Water After Melting : 25 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 113.5 | 148,4 | 34.9 | |
| 2 | 123.5. | 263.6 | 140.1 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 237.0 | 412.0 | 曲, 175.0 | |

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| wicion. | EN | /I-178-0 | 0312 |
| V121011: | R0 | | |
| / : | Diar | nne Dul | |
| | | | |
| ige: | _1_ | of | 2 |
| p-2017 | | | |
| 9-2017 | TIME (2 | 4:00): | 5:00 |
| - | | | |
| N (Zone | 1 17 | 2 | |
| 14 (20110 | 7 | | |
| | | | |
| nots): <u>/</u> 0%, 10%, Visible, N | 25%, 5 | 50%, 75° | %, 100 |
| e, hole in v | restibule | , etc.) | |
| | 44 | C . 14 | |
| ATT COLU | , there | tere 38 | rocks |
| Labered | | | |
| Property | | | |
| Hohmy | | | |
| Property | | | |
| | F1 - 1 | F-1-73 | properly, therefore 4 |

Total Volume of Water After Melting: 225 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 111.Ф | 174.5 | 65.4 | |
| 2 | 123.5. | 199.7 | 76.2 | |
| 3 | 111.0 | (37.3 | 26.3 | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 345.6 | 513.5 | 167,9 | |

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| Area: | Ja Va | NICO. | |
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| | and a later and an | No: | ENVI-178-0312 |
| | 8000 | Revision: | R0 |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul |
| Task: | Dust Gauge Collection | Field Sheet | |
| | | Page: | _1 of _2 |
| | | | |
| <u>GENERAL</u> | 9 | 30-Sep-2017 | Constitution of the second |
| LOCATION NAME: | St G DATE (dd-m | mm-yyyy): 30-09-2017 | TIME (24:00): 15:30 |
| | TYPE OF SA | | Other |
| GPS COORDINATES (UT | M): S37502 E | 7152934 N (Zone |) |
| | | | |
| Precipitation: rain / mist / Snow Cover: 0%, 10%, | 25%, 50%, 75%, 100% | Cloud Cover: 0%, 10%, Dust in area: Visible, No | 25%, 50%, 75%, 100 t Visible |
| | TS: (i.e. damage to station, bu Deployed <u>2017-07-02</u> | gs - twigs in sample, hole in v | estibule, etc.) |
| | Deployed 2017 0 1-02 | | |
| - y. little water | | | |
| - MARIA DICENCENT | | | |
| -bugs present -murky brown in | | | |

Total Volume of Water After Melting: 100 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | ille,3 | 126.4 | 10.1 | |
| 2 | 116.8 | 122.1 | 5.3 | |
| 3 | 120.0 | 130.7 | 10.7 | |
| 4 | 112.1 | 125.7 | 13.6. | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | 465.2 | 504.9 | 39.7 | |
| Totals | | | | |

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| | Dust Gauge Coll | ection Field Sheet | | |
|--|--|--|-----------------------------------|--|
| Area: Effective Date: Task: | 8000 26-Mar-2012 Dust Gauge Collection F | No: Revision: By: | ENVI-178-0312 R0 Dianne Dul | |
| | | Page: | 1 of 2 | |
| GENERAL LOCATION NAME: SAMPLED BY: GPS COORDINATES (LOCATION: | DUST CZ DATE (dd-mm) UPP TYPE OF SAM UTM): 578714E | m-yyyy): <u>C6 - Cc1 - 7</u> 017 - 7 PLE: Dust (Zone) | TIME (24:00): 【てこひ Other 【て | |
| | | | | |
| Precipitation: rain / mist Snow Cover: 0%, 10%, | Wind Direction: Frow / N/A 25%, 50%, 75% 100% | Wind Speed (knots): 20 Cloud Cover: 0%, 10%, 2 Dust in area: Visible Not | 5%, 50%, 75%, 100 Visible | |
| OLLECTION COMMEN | NTS: (i.e. damage to station, bugs | - twigs in sample, hole in ves | tibule, etc.) | |
| | the water | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 117.5 | 178.0 | 10.5 | |
| 2 | | 1000 | 10.00 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| otals | 117.5 | 128.0 | 10.5 | |

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| |
| 0 |
| |

| | Dust Gauge C | Collection Field Sheet | | |
|--|--|---|------------------------------------|--|
| Area: Effective Date: Task: | 8000 26-Mar-2012 Dust Gauge Collectio | No: Revision: By: n Field Sheet | ENVI-178-0312 R0 Dianne Dul | |
| | | Page: | 1 of 2 | |
| GENERAL LOCATION NAME: SAMPLED BY: GPS COORDINATES (I DESCRIPTION: | <u>USF C1</u> DATE (dd UPP TYPE OF: JTM): 534979 E | -mmm-yyyy): <u>06- c4 - 70</u> 17 | TIME (24:00): <u>1350</u> Other | |
| Precipitation: rain / mis | Wind Direction:WE | Wind Speed (knots): Z© Cloud Cover: 0%, 10%, 2 Dust in area: Visible, N | 5%, 50%, 75%, (00) | |
| COLLECTION COMME | NTS: (i.e. damage to station, b | ougs - twigs in sample, hole in ves | stibule, etc.) | |
| | s Deployed 2017-07-06 | and visible dust | | |

Total Volume of Water After Melting: 700 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116.4 | 129.4 | 13.0 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 116-4 | 179.4 | 13.0 | |

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| 0 | |
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| | Dust Gauge Collect | ion Field Sheet | | |
|--------------------------|--|--|----------------------------|----------|
| | | No: | ENVI-178-0 | 312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | Ву: | Dianne Dul | |
| Task: | Dust Gauge Collection Field | d Sheet | | |
| | | Page: | 1 of | 2 |
| GPS COORDINATES (| DATE (dd-mmm-y P TYPE OF SAMPLI UTM): 532908 Ε 7 | /yyy): <u>06 - (X+ - (A</u> + E: Dust <u> 4897 </u> | TIME (24:00): Other | 7-01 |
| DESCRIPTION: | | | | |
| CLIMATE CONDITION | S (if sampling outside) | | | |
| | | Wind Speed (knots): <u>て</u> | 2 | |
| Precipitation: rain / mi | st / snow N/A | Cloud Cover: 0%, 10%, | 25%, 50%, 75% | 6, (100) |
| Snow Cover: 0%, 10% | | Dust in area: Visible, No | t Visible | |
| | | | - 01 - 1 - 1 - 1 - 1 | |
| | ENTS: (i.e. damage to station, bugs - to | wigs in sample, note in ve | estibule, etc.) | |
| Date Sample Collected v | vas Deployed 7017 - 07 - 07 | | | |
| -lots of | bugs in the wat | en | | |
| | | | | |
| | | | | |
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| Total Volume of | Water | After | Melting: | 350 | (mL) |
|--------------------|-------|-------|----------|-----|------|
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| Filter # | Weight of Filter | Filter + Residue | Residue Weight (ਮ੦) | Comments |
|-------------|------------------|------------------|------------------------|----------|
| 1_ | 115.1 | 116.4 | 1.3 | 1/4 |
| 2 | 114.2 | 122.7 | 8.5 | 2/4 |
| 3 | 117.5 | 143.9 | 31.4 | 3/4 |
| 4 | 114.4 | 117.3 | 7.9 | 4/4 |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 458.2 | 500.3 | 44 01 | |

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| 7 | - |
| - | 3 |
| F | |
| | 5 |
| 7 | 5 |

| | | Dust Gauge Collec | ction Field Sheet | | | |
|----------------------------|--|--|--|-----------------------------------|--------|-------|
| Area: Effectiv Task: | we Date: 8000 26-Mar-2012 Dust Gauge Collection Field Sh | | No: Revision: By: | ENVI-178-0312 R0 Dianne Dul | | 312 |
| | | | Page: | 1 | of | 2 |
| | N NAME: Dust DBY: NAME | DATE (dd-mmm | | | | |
| GPS COO | PRDINATES (UTM): | 541204 E | 7152159 N (Zone) | 12 | | |
| DESCRIP | TION: | | | | | |
| Snow Cov | |) / N/A , 50%, (75%) 100% i.e. damage to station, bugs - | Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not twigs in sample, hole in ve | Visible | | (100) |
| Date Samp | | oyed <u>7017 - 07 - 06</u> | | | | |
| Total Volu | ıme of Water After | Melting: <u>25</u> (mL) | 7. | | | |
| Filter # | Weight of Filte | r Filter + Residue | Residue Weight | Co | mments | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 114.4 | 125.8 | 11.4 | |
| 2 | | 7 5 5 5 5 5 | , | |
| 3 | | | | |
| 4 | | | | |
| 5 | | 1 | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 114.4 | 125.8 | 11.4 | |

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| C | |
| | |
| - | 10 |
| E | 3 |
| F | + |
| C | |

| | | No: | ENVI-178-0312 | | 312 |
|--------------------------|-------------------------------------|--|---------------|------------|---------|
| Area: | 8000 | Revision: | R0 | | |
| Effective Date: | 26-Mar-2012 | By: | 1 11 | nne Dul | |
| Task: | Dust Gauge Collection Fi | | | | |
| ruon. | Duot Caago Concentri I | Page: | 1 | of _ | 2 |
| GENERAL | DATE (dd-mmr | n-14444). 06 - 0ct - 2d7 | TIME (2 | 24:00): \ | 2:37 |
| SAMPLED BY: | AADD TYPE OF SAMI | PLE: Dust | Other | | |
| CDC COODDINATES | UTM): 53/40/ E | 7/9/1/46 N/7000) | 17 | | |
| | | / 19190 N (2011e) | _ () | | |
| DESCRIPTION: | | | | | |
| CLIMATE CONDITION | C (if compling outside) | | | | |
| CLIMATE CONDITION | | | 2 | | |
| | Wind Direction: | | | E00/ 7E0/ | 600 |
| Precipitation: rain / mi | | Cloud Cover: 0%, 10%, Dust in area: Visible, No | | | , (100) |
| Snow Cover: 0%, 10% | , 25%, 50%, (75%), 100% | Dust in area: Visible, (No | VISIDIE | 9 | |
| COLLECTION COMMI | ENTS: (i.e. damage to station, bugs | - twice in sample hole in ve | estibule | e. etc.) | |
| | vas Deployed_2017-07-06_ | - twigs in sample, note in ve | Journal | ,, 5.10.1, | |
| | | | | | |
| Lots of b | ugs in the water | | | | |
| | 3, | | | | |
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Total Volume of Water After Melting: 300 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 1.511 | 114.1 | 7.0 | 1/3 |
| 2 | 1/2.2 | 115.0 | 7.8 | 3/3 |
| 3 | 114.7 | 129.9 | 15.2 | 2/3 |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 339.0 | 359.0 | 20.0 | |

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| 6 | , |

| | Dust Gauge Collect | ion Field Sheet | | | |
|-----------------------------------|--|--|---|--|--|
| Area: Effective Date: Task: | 8000 26-Mar-2012 Dust Gauge Collection Field | No: Revision: By: | ENVI-178-0312 R0 Dianne Dul | | |
| | Daot Caage Conceilor Ties | Page: | 1 of 2 | | |
| GENERAL | | | | | |
| LOCATION NAME: D | DATE (dd-mmm-y | | ГІМЕ (24:00): <u> 3 : 50</u> Other_ | | |
| GPS COORDINATES (| UTM): 536819 E 7 | | | | |
| DESCRIPTION: | | | | | |
| Precipitation: rain / mis | et / snow / N/A | Wind Speed (knots): 20 Cloud Cover: 0%, 10%, 2 Dust in area: Visible Not | 25%, 50%, 75%, 100 | | |
| COLLECTION COMME | NTS: (i.e. damage to station, bugs - tv | vigs in sample, hole in ve | stibule, etc.) | | |
| | as Deployed 7.017 - 07 -06 | | , | | |
| | buys in the water | | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 16.8 | 159.7 | 42.9 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 116.8 | 159.7 | 42.9 | |

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| 6 | 5 |
| - | |
| | 3 |
| 7 | 3 |

| Area: | 8000 | No: | ENVI-178-0 | 312 |
|--|-----------------------------------|----------------------------------|-----------------|-------|
| Effective Date: | | Revision: | R0 | |
| | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection | Field Sheet | | |
| | | Page: | of | 2 |
| GENERAL | | | | |
| The state of the s | ella | 30-54-2017 | | |
| LOCATION NAME: 🔔 | | mm-yyyy): 30-09-2017 | TIME (24:00):/5 | 5:30 |
| SAMPLED BY: A | | MPLE: Dust | Other | |
| GPS COORDINATES (| JTM):S37502E | 7152934 N (Zone) | 12 | |
| DESCRIPTION: | | | | |
| | | | | |
| CLIMATE CONDITIONS | (if sampling outside) | | | |
| Air Temp: <u>2,5</u> °C | Wind Direction: | Wind Speed (knots): | | |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, 2 | | (100) |
| | 25%, 50%, 75%, 100% | Dust in area: Visible, Not | | , 100 |
| | | Dust in area. Visible, Not | VISIDIE | |
| COLLECTION COMME | NTS: (i.e. damage to station, bug | ıs - twigs in sample, hole in ve | stibule, etc.) | |

Dust Gauge Collection Field Sheet

Total Volume of Water After Melting : 100 (mL)

Date Sample Collected was Deployed 2017 - 07-02

- v. little water

- bugs present -murky brown in colour

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | ille,3 | 126.4 | 10.1 | |
| 2 | 116.8 | 122.1 | 5.3 | |
| 3 | 120.0 | 130.7 | 10,7 | |
| 4 | 112.1 | 125.7 | 13.6. | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | 465.2 | 504.9 | 39.7 | |
| Totals | | | | |

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| Dust Gauge Collection Field Sheet | | | |
|-----------------------------------|-----------------------------------|----------------------------------|---------------------|
| | | No: | ENVI-178-0312 |
| Area: | 8000 | Revision: | R0 |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul |
| Task: | Dust Gauge Collection | Field Sheet | |
| | | Page: | 1 of 2 |
| <u>GENERAL</u> | | | |
| LOCATION NAME: | DATE (dd-mi | mm-yyyy): 06-0ct-2017 | TIME (24:00): 13:07 |
| SAMPLED BY: M | IPP TYPE OF SA | MPLE: Dust | Other |
| GPS COORDINATES (| UTM): 535696 E | 7155138 N/Zone) | 12 |
| DESCRIPTION: | - L | it (Zone) | -32 |
| | | | |
| CLIMATE CONDITIONS | S (if sampling outside) | | |
| | Wind Direction: NE | Wind Speed (knots): 20 | 5 |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, | |
| | , 25%, 50%, (75%) 100% | Dust in area: Visible, (Not | |
| 011011 00101. 070, 1070 | 2370, 3070, (1370) 10070 | Dust III area. Visible, (100 | VISIDIO |
| COLLECTION COMME | NTS: (i.e. damage to station, bug | ıs - twigs in sample, hole in ve | estibule, etc.) |
| | as Deployed 7017-07-06 | , a | |
| | | | |
| - Garge w | as tilted in the ba | 66- | |
| , | the sample wat | | |
| - Buys in | the sample wat | er | |
| | | | |
| | | | |
| | | | |
| Total Volume of Wate | r After Melting 50 | mL) | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 14.4 | 125.8 | 11.4 | Dust 9. |
| 2 | 113.0 | 132.9 | 19.9 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | 1 | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 113.0 | 132.9 | 19.9 | |

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| |
| 0 |
| |
| 5 |
| 7 |
| 0 |

| | <u>Dust Gauge Colle</u> | ction Field Sheet | |
|---|---|---|-----------------------------------|
| Area: Effective Date: Task: | 8000 26-Mar-2012 Dust Gauge Collection Fie | No: Revision: By: | ENVI-178-0312 R0 Dianne Dul |
| raon | Bust Gauge Collection 1 in | Page: | 1 of2 |
| SAMPLED BY: | Dust 4 DATE (dd-mmm TYPE OF SAMP UTM): 53/397 E | LE: Dust | Other |
| DESCRIPTION: | UTIM):E | 7() C(C) N (Zone) | 12 |
| Precipitation: rain / mis Snow Cover: 0%, 10%, | Wind Direction: | Wind Speed (knots): 18 Cloud Cover: 0%, 10%, 2 Dust in area: Visible, Not | Visible |
| Date Sample Collected wa | as Deployed 7617 - 07 - 07 | twigs in sample, note in ve | stibule, etc.) |
| -some b | ugs in the wester c | and visible du | st. |
| | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116-6 | 135.9 | 19.3 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 16.6 | 135.9 | 19.3 | |

| | Dust Gauge Co | ollection Field Sh | neet | | | |
|-----------------------------------|---------------------------------|------------------------|------------|------------|----------|--------|
| Area: | 8000 | No: Rev | ision: | ENV R0 | /I-178-0 | 312 |
| Effective Date: | 26-Mar-2012 | By: | | Diar | ne Dul | |
| Task: | Dust Gauge Collection | Field Sheet | | | | |
| | | Paç | je: | 1 | of | 2 |
| <u>GENERAL</u> | | 30-566 | -2017 | | | |
| LOCATION NAME: D | UST 3 DATE (dd-r | nmm-yyyy): 30 69 | -2017 | TIME (2 | 4:00): | 5:00 |
| SAMPLED BY: AH | | AMPLE: Dust | | | | |
| GPS COORDINATES (| UTM): 535024 E | | | 12 | 2 | |
| | arterly Dust Gauge C | | 1 | | | |
| DEGORII HON | cit for 7 bots forwards | 0.40(107) | | | | |
| CLIMATE CONDITIONS | 3 (if sampling outside) | | | | | |
| | Wind Direction: | Wind Speed (kn | ots): 15 | | | |
| Precipitation: rain / mis | | Cloud Cover: 0 | | 25%, 5 | 0%, 75% | 6, 100 |
| | , 25%, 50%, 75%, 100% | | | | | |
| 0. | STOREST STORES | | | | | |
| COLLECTION COMME | NTS: (i.e. damage to station, b | ıgs - twigs in sample, | hole in ve | stibule | , etc.) | |
| Date Sample Collected w | as Deployed 2017-07-02 | | | | C . 14 | L - Wh |
| Tube deployed 2 | 017-09-30 would not | fit in holder f | properly, | there | ture Bi | rocks |
| were lised TO 10 | to Tuscin place. | | | | | |
| -few bugs prere blu-green in a | of in tube. | | | | | |
| - Www - green in c | rolour | | | | | |
| 1 | | | | | | |

Total Volume of Water After Melting: 225 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 111.4 | 176.5 | 65.4 | |
| 2 | 123.5. | 199.7 | 76.2 | |
| 3 | 111.0 | (37.3 | 26.3 | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | 3 . | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 345.6 | 513.5 | 167.9 | |

| - | |
|---|----------|
| F | 10 |
| C |) |
| - | |
| F | 7 |
| F | = |
| 0 | |

| | 8000 Revision: | | R0 | | |
|----------------------------------|---|--|----------------------|-------|----|
| Area: Effective Date: | 26-Mar-2012 | By: | Diann | e Dul | |
| Task: | Dust Gauge Collection Field Sheet | | | | |
| ruon. | 200.000 | Page: | 1_ | of _ | 2 |
| SAMPLED BY: GPS COORDINATES (| UST 7A DATE (dd-mmm-yyy PP TYPE OF SAMPLE: UTM): 535678 E 7 | Dust | Other | | |
| DESCRIPTION: | | | | | |
| Precipitation: rain / mi | Wind Direction: Wind St / \$\infty \text{N/A} Clost / \$\infty \text{25%, 50%, 75% 100%} Du | nd Speed (knots): Co oud Cover: 0%, 10%, ust in area: Visible No | 25%, 50 t Visible | | 00 |
| | | ge in eamnle hole in V | estibule. | e(C.) | |
| COLLECTION COMM | ENTS: (i.e. damage to station, bugs - twi was Deployed <u> </u> | gs in sample, hole in v | estibule, e | etc.) | |

Dust Gauge Collection Field Sheet

No:

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|--------------------------|
| 1 | [16-[| 66.6 | 50.5 | Residual bug Cercesses ? |
| 2 | | V | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 116.1 | 166-6 | 50-5 | |

ENVI-178-0312

| 8000 26-Mar-2012 | No: Revision: | ENVI-178-0312 R0 |
|---|--|---|
| | Revision: | R0 |
| | | |
| 20-IVId1-2012 | By: | Dianne Dul |
| Dust Gauge Collection F | ield Sheet | |
| | Page: | 1 of <u>2</u> |
| | 30-Sep-2017 | |
| DATE (dd-mm) | m-vvvv): 30 69-2017 | TIME (24:00): 16:00 |
| TYPE OF SAM | PLE: Dust | Other |
| TRO. 533964 E 3 | | |
| | | |
| arterly Dust gauge col | lection | |
| (if sampling outside) Wind Direction: t / snow (N/A) 25%, 50%, 75%, 100% | Cloud Cover: 0%, 10%, | 25%, 50%, 75%, 100 |
| | s - twigs in sample, hole in v | estibule, etc.) |
| es Deployed 2017-07-02 ccuring on Runway whi | le collection takin | g place |
| | DATE (dd-mm: TYPE OF SAM TM): 533964 E 3 Extractly Dust gauge (of (if sampling outside) Wind Direction: E If snow (N/A) 25%, 50%, 75%, 100% NTS: (i.e. damage to station, bugs as Deployed 2017-07-02 | Page: 30-Scp-2017 30-Scp-2017 TYPE OF SAMPLE: Dust TM): 533964 E 7154321 N (Zone) Wind Direction: Wind Speed (knots): 18 1/ snow (N/A) Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100% Dust in area: Visible, Notes of the content of |

Total Volume of Water After Melting: 25 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 113.5 | 148.4 | 34.9 | |
| 2 | 123.5. | 263.6 | 140.1 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 237.0 | 412.0 | 曲. 175.0 | |

| | Dust Gauge Collection Fie | <u>ld Sheet</u> | | | | | |
|--|---|-------------------|----------------------------------|------------------|------|--|--|
| , , , , , , , , , , , , , , , , , , , | | No: | ENV | ′I-178-03 | 312 | | |
| Area: | 8000 | Revision: | R0 | | | | |
| Effective Date: | 26-Mar-2012 | By: | Dian | ne Dul | | | |
| Task: | Dust Gauge Collection Field Sheet | - | | | | | |
| | | Page: _ | 1 | of _ | 2 | | |
| GENERAL | | | | | | | |
| LOCATION NAME: | <u> UST 01</u> DATE (dd-mmm-yyyy): <u>2</u> ^{<i>l</i>} | 1-Dec-2017 | IME (24 | 4:00): <i>[C</i> | 1:30 | | |
| SAMPLED BY: 552 | | | Other | , | | | |
| GPS COORDINATES (UT | гм): <u>533964 в 7154321</u> | N (Zone) | 12 | | | | |
| ^- | terly Dust Gauge | (= 33-) | , | | | | |
| | | | | | | | |
| CLIMATE CONDITIONS | (if sampling outside) | | | | | | |
| Air Temp: <u>28</u> °C | Wind Direction: Wind Spee | ed (knots): 19 | | | | | |
| Precipitation: rain / mist / snow /(N/A) Cloud Cover: 0%, 10%, 25%, 50%, 75%, 100 | | | | | | | |
| Snow Cover: 0%, 10%, 25%, 50%, 75%, (100%) Dust in area: Visible, Not Visible | | | | | | | |
| | | | Andread and adjusted to the same | | | | |
| | TS: (i.e. damage to station, bugs - twigs in sa | mple, hole in ves | stibule, | etc.) | | | |
| | Deployed <u>2017 / 09 / 30</u> | | | | | | |
| Visible dust | | | | | | | |
| | | V | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Total Volume of Water | After Melting: 400 (mL) | | | | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|--|------------------|-------------------|----------|
| 1 | 118.8 | 136.0 | 17.2 | |
| 2 | 119.6 | 146.4 | 27.4 | |
| 3 | The state of the s | | | |
| 4 | - | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | *************************************** | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 237.8 | 288.4 | 44.6 | |

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| **** | | lection Field Sheet | END 470 C | |
|---------------------------|---|---------------------------------------|-------------------|---|
| A | 0000 | No: | ENVI-178-0 | J312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection I | | | |
| | | Page: | 1 of | 2 |
| | | | | |
| GENERAL | .a. 4 | Out D at ac | | |
| LOCATION NAME: 1 | DATE (dd-mn | nm-yyyy): 📈 🗀 🗀 🗀 💮 | TIME (24:00):/ | 2:55 |
| | MPA TYPE OF SAM | | Other | *************************************** |
| GPS COORDINATES (I | JTM): <u>535 679 </u> e <u> </u> | 7151339N (Zone |) 12 | |
| DESCRIPTION: Q^{t} | 1 | | | |
| | • | · · · · · · · · · · · · · · · · · · · | | |
| CLIMATE CONDITIONS | (if sampling outside) | | | |
| | Wind Direction: NA | Wind Speed (knots): | | |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, | | 6 (00) |
| | 25%, 50%, 75%, 100%) | Dust in area: Visible, No | | 0, (100) |
| | , ==== (3) | | | |
| | | | aetibula atal | |
| COLLECTION COMME | NTS: (i.e. damage to station, bugs | s - twigs in sample, hole in v | 69 HD (116, 610.) | |
| | NTS: (i.e. damage to station, bugs as Deployed <u>2017 //0/0/6</u> | s - twigs in sample, hole in v | estibule, etc.) | |
| | NTS: (i.e. damage to station, bug: as Deployed <u> ②ので 川の)の</u> | s - twigs in sample, hole in v | estibale, etc.) | |
| | | s - twigs in sample, hole in v | estibule, etc.) | |
| | | s - twigs in sample, hole in v | estibule, etc.) | |
| | | s - twigs in sample, hole in v | estibule, etc.) | |
| | | s - twigs in sample, hole in v | estibule, etc.) | |
| | | s - twigs in sample, hole in v | estibule, etc.) | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 114.7 | 126.43 | 11.6 | |
| 2 | 115.0 | 137.3 | 22.3 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | - | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 229.7 | 263.6 | 33.9 | |

| | <u>Dust Gauge Collection</u> | on Field Sheet | |
|----------------------------------|---|------------------------------------|--------------------|
| Area: | 8000 | No: | ENVI-178-0312 |
| Effective Date: | 26-Mar-2012 | Revision: | R0 |
| Task: | Dust Gauge Collection Field | By: Sheet | Dianne Dul |
| Tusk. | Dast Gauge Collection Tield | Page: | 1 of 2 |
| | | raye. | 1 UI <u>&</u> |
| GENERAL | | | 15 30 |
| LOCATION NAME: DU | 15 <u>13</u> DATE (dd-mmm-yy | 19): <u>10 - Jan -201</u> 87 | TIME (24:00): 4430 |
| SAMPLED BY: 55 5 | | | Other |
| GPS COORDINATES (UT | гм): <u>535024</u> в <u>715</u> | <i>187</i> 2 N (Zone) | 12 |
| DESCRIPTION: | - | | |
| | | | |
| CLIMATE CONDITIONS | (if sampling outside) | | |
| Air Temp : <u>- 32</u> °C | Wind Direction:\)[_) Wi | nd Speed (knots):_ 🦪 | |
| Precipitation: rain / mist. | / snow /(N/A) CI | oud Cover: (0%), 10%, 2 | 25%, 50%, 75%, 100 |
| Snow Cover: 0%, 10%, | 25%, 50%, 75%, 100% D i | u st in area : Visible, Not | Visible |
| | | | |
| | TS: (i.e. damage to station, bugs - twi | gs in sample, hole in ve | stibule, etc.) |
| | Deployed 2017/09/30 | | |
| -visible dust i | n sample | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | EFA | | |

Total Volume of Water After Melting : 550 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 113.7 | 141.45 | 27.8 | |
| 2 | 115.6 | 155.9 | 40.13 | |
| 3 | 117.1 | 140.01 | 23.0 | |
| 4 | | , | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 346.4 | 437,5 | 9 , | |

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| 0 |

| | <u>Dust Gauge Coll</u> | ection Field | d Sheet | | | |
|---|---|---|--------------------------|--------------------|----------------|------|
| | | | No: | ENVI | -178-03 | 12 |
| Area: | 8000 | | Revision: | R0 | | |
| Effective Date: | 26-Mar-2012 | | By: | Dianr | ne Dul | |
| Task: | Dust Gauge Collection F | Field Sheet | | | | |
| | | | Page: | _1_ | of _ | 2 |
| GENERAL LOCATION NAME: SAMPLED BY: SS | 152 DATE (dd-mm) 152 TYPE OF SAM | im-yyyy): <u>23</u> IPLE: Dust 715010 | 9-01-10 | 「IME (24: Other | :00): <u>/</u> | : 00 |
| DESCRIPTION: 04 | m): <u>531347</u> e | 110012 | _/N (Zone) | 10 | <u> </u> | |
| | *************************************** | | | | | |
| CLIMATE CONDITIONS (| | | 7-77 | 5.0 | | |
| Air Temp: <u>~ 3 3 °</u> C | Wind Direction: | Wind Speed | d (knots): <u>*/*/</u> / | | | |
| Precipitation: rain / mist | | | er: (%) 10%, 2 | | %, 75%, | 100 |
| Snow Cover: 0%, 10%, | 25%, 50%, 75%, 100% | Dust in are | a: Visible, Not | Visible) | | |
| COLLECTION COMMEN | TS: (i.e. damage to station, bugs | s - twigs in sam | nple, hole in ve | stibule, e | etc.) | |
| | Deployed 2017-10-07 | _ | | | • | |
| -hair in sample | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Total Volume of Water | After Melting: 650 (m | nL) | | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 118.0 | 130.8 | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 118.0 | 130.8 | | |

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| 0 |

| | | No: | ENVI-178-0 | 1312 |
|--|---|-----------------------------|------------------------|---------|
| Area: | 8000 | Revision: | R0 | 70 12 |
| Effective Date: | 26-Mar-2012 | Revision: By: | Dianne Dul | |
| Task: | Dust Gauge Collection Fig | | Diamile Dui | |
| Iask. | Dust Gauge Collection The | Page: | 1 of | 2 |
| | | raye. | <u> </u> | |
| | | | | |
| GENERAL | and a summer of the summer of | DAID ALDI | | مرسس ۱۱ |
| LOCATION NAME: L | DATE (dd-mmm | 1-yyyy): <u> </u> | ГIME (24:00): <u>/</u> | 7150 |
| SAMPLED BY: | TYPE OF SAMP | LE: Dust | Other | |
| GPS COORDINATES (| UTM): <u>535696 </u> E <u> </u> | //55/38 N (Zone) | 12 | |
| DESCRIPTION:()\ | | | | |
| | , | | | |
| CLIMATE CONDITIONS | 6 (if sampling outside) | | | |
| Air Temp: <u> (</u> | Wind Direction: WA | Wind Speed (knots):/ | | |
| Precipitation: rain / mis | st/snow/M/A | Cloud Cover: 0%, 10%, 2 | | 6, 1ØO) |
| Snow Cover: 0%, 10%, | 25%, 50%, 75%, 100% | Dust in area: Visible, Not | | 4 |
| | | 16 | | |
| | NTS: (i.e. damage to station, bugs - | twigs in sample, hole in ve | stibule, etc.) | |
| | as Deployed <u>2017/10/06</u> | | | |
| Date Sample Collected w | | | | |
| Date Sample Collected w | , , | | | |
| Date Sample Collected w | , , | | | |
| Date Sample Collected w | , , | | | |
| Date Sample Collected w | , , | | | |
| Date Sample Collected w | , , | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 119.3 | 126.8 | | |
| 2 | | | | , |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 118.3 | 126.8 | | |

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| | Dust Gauge Colle | ction Field Shee | t | | | |
|------------------------|--|---|--------------------|------------|--------|--------|
| | The state of the s | No: | | ENVI- | 178-0 | 312 |
| Area: | 8000 | Revisi | on: | R0 | | |
| Effective Date: | 26-Mar-2012 | By: | | Diann | e Dul | |
| Task: | Dust Gauge Collection F | eld Sheet | | | | |
| | | Page: | | 1 | of _ | 2 |
| <u>GENERAL</u> | | | | | | |
| • | UST6 DATE (dd-mmi | n-vvv): 24-Dec - 2 | <i>(01</i> 7 т | IME (24:0 | 101: L | 1:40 |
| SAMPLED BY: AH | 552 TYPE OF SAM | PLE: (Dust) | | | | |
| | гм): <u>537502</u> е <u>7</u> | | | | | |
| | Lerly Dust Gauge | | | | | |
| Snow Cover: 0% (10%) | Wind Direction:/ / snow /(N/A) 25%, 50%, 75%, 100% | Wind Speed (knots) Cloud Cover: 0%,(1 Dust in area: Visible | 0%,) 2 e,(Not ' | Visible | | o, 100 |
| | TS: (i.e. damage to station, bugs peployed 2017/09/30 | - twigs in sample, hole | n ves | stibule, e | tc.) | |
| Visible dust | s Deployed <u>ACT 11011 50</u> | | | | | |
| filter "rusty" looking | 5. | | | | | |
| Title 1 "Sig | r | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Total Volume of Water | After Melting: <u>325 (</u> ml | _) | | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------------|-------------------|----------|
| 1 | 117.9 | 122.2 | . 4.3 | |
| 2 | 122.4 | 138.8 138.9 | 16.5 | |
| 3 | - | | | : |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | a do | | | |
| 9 | | | | |
| 10 | 1 | | | |
| 11 | | | | |
| Totals | 240.3 | 261.1 | 20.8 | |

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| | Dust Gauge Coll | ection Field Sheet | | | |
|--|---|--|-------------|-----------|------|
| | 0000 | No: | | -178-03 | 312 |
| Area: | 8000 | Revision: | R0 | | |
| Effective Date: | 26-Mar-2012 | By: | Dianr | ne Dul | |
| Task: | Dust Gauge Collection F | | | | |
| | | Page: | 1 | of _ | 2 |
| GPS COORDINATES (UT DESCRIPTION: | (if sampling outside) Wind Direction:NA | 7/5 0 5 / O N (Zone Wind Speed (knots): |) <u>10</u> | | |
| | 25%, 50%, 75%, 100% | Cloud Cover: 0%, 10%, Dust in area: Visible, No | | 70, 7570, | (00) |
| COLLECTION COMMEN | TS: (i.e. damage to station, bugs | - twigs in sample, hole in v | estibule, e | etc.) | |
| Date Sample Collected was - visible dust 1 d - pird feces on | Deployed <u>2017/10/06</u> ebris | | | | |
| 1-WOLF 4-CARIBOU | | | | | |
| 4- CARIBOU | | | | | |

Total Volume of Water After Melting : 550 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 113.9 | 133.8 | 19.9 | |
| 2 | 114.6 | 128.1 | 13.5 | |
| 3 | 116.1 | 125.9 | 9.8 | |
| 4 | | | | |
| 5 | | | | |
| `6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | - | |
| 11 | | | | |
| Totals | 344.6 | 387.868 | 43.2 | |

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| | | No: | ENVI-178-0 | 212 |
|---------------------------|--|--|------------------------|-----------|
| Area: | 8000 | Revision: | R0 | 312 |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Task: | Dust Gauge Collection Fi | | Diarine Dui | |
| | Dage Caage Concount 11 | Page: | 1 of | 2 |
| | | ı aye. | | |
| <u>GENERAL</u> | | | | |
| LOCATION NAME: N | A comment of the second | 2019-01-06 | | 1000 |
| EAMOLED BY: | DATE (dd-mmn) MP TYPE OF SAMF | 1-yyyy): <u>0-4/0 07 00</u> | TIME (24:00): <u> </u> | 1 5 .3 C. |
| SAIVIPLED BY: | TYPE OF SAME | LE: Qust | Other | **** |
| _ | UTM): <u>531401 </u> | <u>154146</u> N (Zone) | 12 | ******* |
| DESCRIPTION: Q | 4 | | | |
| Precipitation: rain / mis | Wind Direction: | Wind Speed (knots): Cloud Cover: 0%, 10%, Dust in area: Visible, Not | | . 100 |
| O11044 004e1, 076, 1076, | | | atibula ata l | |
| | NTS: (i.e. damage to station, bugs - | twigs in sample, hole in ve | Subuie, etc.) | |
| COLLECTION COMME | NTS: (i.e. damage to station, bugs - as Deployed_2017/10/06 | twigs iп sample, hole in ve | stibule, etc.) | |
| COLLECTION COMME | | twigs in sample, hole in ve | stibule, etc.) | |
| COLLECTION COMME | | twigs in sample, hole in ve | subule, etc.) | |
| COLLECTION COMME | | twigs in sample, hole in ve | Stibule, etc.) | |
| COLLECTION COMME | | twigs in sample, hole in ve | Stibule, etc.) | |
| COLLECTION COMME | | twigs in sample, hole in ve | Stibule, etc.) | |

Total Volume of Water After Melting: 550 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 117, 1 | 125.0 | 7.9 | |
| 2 | 114.7 | 121.1 | 6.4 | |
| 3 | | - | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 131,8 | 246.1 | 14.3 | |

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| | | B.I. | END A 450 | 0040 |
|--|---------------------------------------|-----------------------------|----------------|--|
| ۸ | 0000 | No: | ENVI-178- | 0312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Du | <u> </u> |
| Гask: | Dust Gauge Collection Fig | | | |
| | | Page: | of | 2 |
| SAMPLED BY:SS SPS COORDINATES (UDESCRIPTION:QUESCRIPTION:QUESCRIPTIONS CLIMATE CONDITIONS Air Temp:(8°C Precipitation: rain / mist | (if sampling outside) Wind Direction: | LE: Drist | Other | |
| COLLECTION COMMEN | ITS: (i.e. damage to station, bugs - | twigs in sample, hole in ve | stibule, etc.) | |
| Date Sample Collected wa | s Deployed <u>2017/10/<i>06</i></u> | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 114.2 | 120.4 | 6.2 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 114.2 | 120.4 | 6.2 | |

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| |

| | Dust Gauge Collect | ion Field S | <u>heet</u> | | | |
|----------------------------|--|---|--------------|------------|------------------|-------|
| | | No | 1 | ENVI | -178-0 | 312 |
| Area: | 8000 | Re | vision: | R0 | | |
| Effective Date: | 26-Mar-2012 | By: | * * | Dianr | ne Dul | |
| Task: | Dust Gauge Collection Fiel | d Sheet | | | | |
| | | Paç | ge: | 1 | of _ | 2 |
| GENERAL | | 16-Ja | 1-2018 | | | |
| LOCATION NAME: | | /yyy): <u>//</u> | | ΓIME (24 | :00):_ <i>]C</i> | 00 |
| SAMPLED BY: 55 | 552 TYPE OF SAMPLI | E: Dust | ı | Other | | |
| GPS COORDINATES (UT | гм): <u>532908 </u> | 8924 | _N (Zone) | 12 | | |
| DESCRIPTION: QU | | | _ ` ′ | | | |
| Precipitation: rain / mist | Wind Direction: | Wind Speed (kn Cloud Cover: 0 Dust in area: \ | 0%, (0%) _3 | 25%50 | %, 75% | , 100 |
| COLLECTION COMMEN | TS: (i.e. damage to station, bugs - tv | vigs in sample, | , hole in ve | stibule, e | etc.) | |
| Date Sample Collected was | Deployed 2017 / 40/ 06 | | | | | |
| -visible dust | | | | | | |
| Total Volume of Water | After Melting: 600 (mL) | | | | | |

| | | , , | | | | |
|-------------|------------------|------------------|-------------------|-------|---------------------|--|
| Filter # | Weight of Filter | Filter + Residue | Residue Weight | | Comments | |
| 1 | 114.7 | 150.9 | 36.2 | -10st | st 50 ml due to cla | |
| 2 | 115.9 | 199. 200.0 | 84.1 | | | |
| 3 | | | | | | |
| 4 | | | | | · | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |

120.3

350.9

Document #: ENVI-178-0312 R0 Effective Date: 26-March-2012

Totals

| 0 |
|----------|
| |
| |
| |
| |
| 0 |

| | Dust Gauge Collec | | | |
|---------------------------|--------------------------------------|-----------------------------|------------------------|--------------|
| | | No: | ENVI-178-0 | 0312 |
| \rea: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Du | |
| Гask: | Dust Gauge Collection Fie | ld Sheet | | |
| | | Page: | 1 of | 2 |
| SENERAL | | | | |
| OCATION NAME O | DATE (dd-mmm | . 2019-01-06. | | era i zerten |
| OCATION NAME: D | 35/ // DATE (dd-mmm | -yyyy): 🔗 🤊 (| TIME (24:00): <u> </u> | 317/ |
| SAMPLED BY: | TYPE OF SAMP | LE: Dúst | Other | |
| SPS COORDINATES (1 | UTM): <u>53円43</u> E <u>7/</u> | <u>50156</u> N (Zone) | 12 | |
| DESCRIPTION: Q4 | | | | |
| | | | | |
| CLIMATE CONDITIONS | | | | |
| Air Temp: -/8 °C | Wind Direction: | Wind Speed (knots): | | |
| Precipitation: rain / mis | | Cloud Cover: 0%, 10%, | | % (10g) |
| | 25%, 50%, 75%, 100% | Dust in area: Visible, Not | | 70, (198 |
| 20001 207011 0701 1070, | 20%, 00%, 10%, 00% | Dust in area: Visible, 14d | Visio | |
| COLLECTION COMME | NTS: (i.e. damage to station, bugs - | twigs in sample, hole in ve | estibule, etc.) | |
| | as Deployed_2017/10/05 | | 2112212, 2001, | ••• |
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Total Volume of Water After Melting: 740 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 118.2 | 144.87 | 26.5 | |
| 2 | 118.6 | 118.6 - advelly | 0 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 136.8 | 263.3 | 26.5 | |

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| | Dust Gauge Cone | ection Field Sheet | | |
|---------------------------------|--|---|--------------|---------------|
| | | No: | ENVI | -178-0312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Diann | ne Dul |
| Task: | Dust Gauge Collection F | ield Sheet | | |
| | | Page: | 1 | of2 |
| GPS COORDINATES (I DESCRIPTION: | DATE (dd-mmi M! TYPE OF SAM JTM): 529823 E (d) (if sampling outside) Wind Direction: WA | m-yyyy): <u>20/8 - 0/- 0 6</u> PLE: Dust 7/5 /19 /N (Zone) Wind Speed (knots): Cloud Cover: 0%, 10%, | <u>12</u> | |
| | 25%, 50%, 75%, 100% | Dust in area: Visible, No | | 70, 7070, 100 |
| | NTS: (i.e. damage to station, bugs | - twigs in sample, hole in ve | estibule, e | tc.) |
| -appears to be | as Deployed 2017/10/06 copper flakes floating be deployed st appecred black where | on surface of water as the other sam | , ples ul | hbuere a n |

Total Volume of Water After Melting : 700 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 116.2 | 147.7 | 31.5 | |
| 2 | 114.0 | 121.5 | 31.5 7.5 | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 130.2 | 269.2 | 39.0 | |

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| 0 |

| | Dust Gauge Colle | ction Field Sheet | | |
|--|---|-----------------------------|-----------------|--------------------|
| | | No: | ENVI-178 | 3-0312 |
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | <u>Dianne D</u> | ul |
| Task: | Dust Gauge Collection Fi | | | |
| | | Page: | of | 2 |
| | | | | |
| <u>GENERAL</u> | | 10 10 Al - #/ | | مستعدي واسترو |
| LOCATION NAME: | DATE (dd-mmn | 1-yyyy): <u> </u> | TIME (24:00):_ | 15:05 |
| SAMPLED BY: | TYPE OF SAME | PLE: ØUst | Other | |
| | tm): <u>534979 </u> | <u>144270</u> N (Zone) | 12 | , |
| DESCRIPTION: $\underline{\hspace{0.4cm}\mathcal{Q}}$ | U ··· | | | |
| | | | | • |
| CLIMATE CONDITIONS | | | | |
| Air Temp: <u> </u> | Wind Direction: | Wind Speed (knots): | | |
| Precipitation: rain / mist | | Cloud Cover: 0%, 10%, | | ′5%. <i>1</i> (00) |
| | 25%, 50%, 75%, 100% | Dust in area: Visible, No | | . () |
| | | | | |
| COLLECTION COMMEN | ITS: (i.e. damage to station, bugs - | twigs in sample, hole in ve | estibule, etc.) | |
| Date Sample Collected was | s Deployed <u>2017 /40/ 06</u> | | | |
| 116 | · | | | |
| 1 - Wolf | on base of tube (outs | | | |
| - dump of dirt | on base of tabe (outs | side). | | |
| | • | | | |
| Lots or UR | BOU TRACKS IN AR | EA | | |
| | After Melting: 550 (ml | | | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | 118.2 | 130.2 | 12.0 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7. | | **** | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| Totals | 118.2 | 130.2 | 12.0 | |

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| | | No: | ENVI-178-0 | 312 |
|---------------------------------------|--|-------------------------------|------------------------|-------------|
| Area: | 8000 | Revision: | R0 | |
| Effective Date: | 26-Mar-2012 | By: | Dianne Dul | |
| Гask: | Dust Gauge Collection Fi | | | |
| | | Page: | | 2 |
| | | | | |
| <u>SENERAL</u> | _ | 0.10 61 01 | | |
| OCATION NAME: <u>[]</u> | DATE (dd-mmn | n-yyyy): <u>/0 8-01-0b</u> - | ГІМЕ (24:00): <u>/</u> | :20 |
| SAMPLED BY: | TYPE OF SAME | PLE: Dust | Other | |
| SPS COORDINATES (| UTM): <u>5287/4 </u> | 1 <u>53276</u> N (Zone) | | |
| DESCRIPTION: | Ц | | | |
| CLIMATE CONDITIONS Air Temp: —/ 9 °C | S (if sampling outside) Wind Direction: NA | Wind Speed (knots): | | |
| recipitation: rain / mis | | Cloud Cover: 0%, 10%, | 25%, 50%, 75% | , 100) |
| inow Cover: 0%, 10% | , 25%, 50%, 75%, 100% | Dust in area: Visible, Not | Visible | \ C |
| | | (man | | |
| COLLECTION CONTRA | NTO- 6 - down and 4 - 4 G | | 40. 1. 4. 5. | |
| | ENTS: (i.e. damage to station, bugs | - twigs in sample, hole in ve | stibule, etc.) | |
| | ENTS: (i.e. damage to station, bugs as Deployed 2017/10/06 | - twigs in sample, hole in ve | stibule, etc.) | |
| | | - twigs in sample, hole in ve | stibule, etc.) | |
| | | - twigs in sample, hole in ve | stibule, etc.) | |
| | | - twigs in sample, hole in ve | stibule, etc.) | |
| | | - twigs in sample, hole in ve | stibule, etc.) | |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|-------------|------------------|------------------|-------------------|----------|
| 1 | -H2.120.9 | 130.2 | 9,3 | |
| 2 | | | | |
| 3 | | | | 1,000 |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | · |
| 10 | | | | |
| 11 | | | | |
| Totals | 120.9 | 130.2 | 9.3 | |

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| | | | Sı | now Sampl | ling Field S | heet | | |
|------------------------------|--|-------------|-----------------|-----------------------------------|------------------------|---------------|---|--------------------------------------|
| Ar | rea: ffective Date: | | 000 | | | No: | _ | NVI-177-0312 |
| | | | 6-MAR-201 | 2 | | _Revisior | -0. | |
| | sk: | _ | Snow Sampli | | neet | _By: | <u>D.</u> | Dul |
| | | | | ing i loid of | 1001 | Page: | _1 | _ of _ 2 |
| GEI | NERAL | | | | | | | |
| LOC | CATION NAM | TG 60 | 1-4 | DATE (yyyy-n | nm-dd): 2017 | -04-07 | TIME | (24:00): 16:20 QAQC: 4 |
| GPS | COORDINA | TES (UTM) | 53 3 907 | F | 7154290 | | and) | QAQC: 4 NAD 83 |
| DES | CRIPTION: | Distance to | Diavik | km | & Direction | | n: land | MAD 83 W &/or Lake |
| | | | sampling outsid | | | | | SIOI LANG |
| | | | | | 25. 450 | | 1 | |
| | | | Wind Direction | | | d (knots): | | |
| Dus | t in area: Vis | | Not Visible | 9 | Snow Cond | er: 0% (10%) | 6 / 25% / | 50% / 75% / 100% Packed ☑ Wet □ D |
| | | | | | Onow Conc | ilion. Crysta | allizeu 🖭 | Packed D Wet D |
| | Cove | ore of Snow | Length of | Tube Empty | Weight of | Water | | D |
| | | | | | Empty Tube (SWE) | Content | | Dust Present |
| Dust | | (cm) | onow our (citi) | & Core (SWE) | | (SWE) | | 0 |
| | | | | | | | | |
| st C | 1 | | 49 | | (CVVL) | | Yes/No Y N | Comments |
| st Core | 1 2 | 55 | 49 | 55 | (GWL) | 15 | | Comments |
| Dust Cores | | | 49 29 28 | 55 50 | (GVVL) | 15 | YN | Comments |
| st Cores | 2 | 55 35 | 29 | 55 | (OWL) | 15 | Y (Z) Y (Z) | Comments |
| st Cores | 2 | 55 35 | 29 | 55 50 | | 15 10 | Y (N) Y (N) Y (N) Y (N) | Comments |
| st Cores | 2 3 4 | 55 35 | 29 | 55 50 50 | | 15 10 | Y (N) Y (N) Y (N) Y (N) | Comments |
| st Cores | 3 4 | 55 35 | 29 | 55 50 50 | | 15 10 | Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) | Comments |
| st Cores | 2 3 4 | 55 35 | 29 | 55 50 50 | | 15 10 | Y (N) | Comments |
| | 2 3 4 1 2 3 4 | 55 35 | 29 | 55 50 50 | | 15 10 | Y N Y N Y N Y N 25) Y N | Comments |
| | 2 3 4 1 2 3 4 5 | 55 35 | 29 | 55 50 50 | | 15 10 | Y N Y N Y N Y N Y N Y N Y N | Comments |
| | 2 3 4 1 2 3 4 5 6 | 55 35 | 29 | 55 50 50 | | 15 10 | Y N Y N Y N Y N Y N Y N Y N Y N | Comments |
| | 2 3 4 1 2 3 4 5 | 55 35 | 29 | 55 50 50 | | 15 10 | Y N Y N Y N Y N Y N Y N | Comments |
| | 2 3 4 1 2 3 4 5 6 | 55 35 | 29 | 55 50 50 | | 15 10 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Comments |
| | 2 3 4 1 2 3 4 5 6 7 | 55 35 | 29 | 55 50 50 | | 15 10 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Comments |
| st Cores Water Ouglity Cores | 2 3 4 1 2 3 4 5 6 7 8 | 55 35 | 29 | 55 50 50 of 3 cores – To | | 15 10 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Comments |
| | 2 3 4 1 2 3 4 5 6 7 8 9 | 55 35 | 29 | 55 50 50 of 3 cores – To | | 15 10 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Comments |

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| | Snow Sampling Fiel | d Sheet | | | |
|--------------------------|---------------------------|------------------|---------------|----|---|
| | - Anna | No: | ENVI-177-0312 | | |
| Area: Effective Date: | 8000 26-MAR-2012 | Revision: By: | R6 D. Dul | | |
| Task: | Snow Sampling Field Sheet | | | | 0 |
| | | Page: | | of | 2 |

| | | 11 | 25 000 | |
|------------------------|-------|-----|--------|----|
| Total Volume of Melted | Snow: | -11 | 22,000 | mL |

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments | |
|---------|------------------|------------------|----------------|-----------------------------|------------|
| 1 | 115.5 mg | 286.7 mg | 171.2 mg | twigs in sample | |
| 2 | 114.7 my | 706.1 mg | 591.4 mg | when removing from scale so | me dust le |
| 3 | | | | | |
| 4 | | | | | |
| Totals | 230,2 ~~ | 992.8 | 762.6 mg | 34/45 080 | |

Water Quality Bottles

Total Volume of Melted Snow: 545,000 (mL) Bug 2= 1545,000

| Filling Order | Analysis | Bottle Type | Triple Rinse | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when added) | Sample Comments <u>DI Batch # for QAQC</u> , Location preserved if not in field, label changes |
|------------------|------------------|-------------------------|-----------------|----------|--|------------------|------------------|--|---|
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | 6 | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | | | 1mL- H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
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|-----------------------|--|---------------------------|--------------------------------|-----------------------------------|----------------------------|--|---|-------------------------|--------------------|
| Ar | ea: | 8 | 3000 | | | Revision | | VI-177-0 | 0312 |
| Effective Da Task: | | | 26-MAR-201 | 2 | | _Revision _By: | - | Dul | |
| | | 5 | Snow Sampli | ing Field Sh | eet | | | | |
| | | | | | | Page: | _1_ | _ of | 2 |
| GEI | NERAL | 5.51 | | | | | | | |
| SAN | ATION NAM | JG 60 | -1-5 | DATE (yyyy-n | nm-dd): 201 | 7 - 04 - 07 | TIME (| 24:00): <u> </u> | :05 |
| GPS | COORDINA | TES (UTM |): 53390 |)7 E | 7154190 | N /7 | one) | wac | NAD 83 |
| | | | Diavik | | | | | | |
| | | | sampling outsid | | u 511000011 | | II. Land L | V 0/01 L | ake |
| Pred | ipitation: Ra | ain / Mist / S sible 🔟 | Wind Directio | | Cloud Cove Snow Cond | ed (knots): er: 0% /10% dition: Crysta | گ/ 25% / 5 | 50% / 75% . Packed ☑ | / 100% Wet □ Dr |
| Du | Core Number | Depth of Snow | Length of Snow Core (cm) | Tube & Core | Weight of Empty Tube | Water Content (SWE) | | Dust Pr | |
| ust | | (cm) | 2. | (SWE) | (SWE) | *** | Yes / No | Comr | nents |
| 35 | 1 | 135 | -12 | | | 2 | 1 /10 | | |
| st Core | 2 | 35 | 23 | 45 | | 5 | YW | | |
| Dust Cores | | 35 | 22 | 45 | | 5 | | | |
| st Cores | 2 | | - | | | | YW | | |
| st Cores | 2 | 35 35 | 22 24 38 | 45 | tal Water Con | 5 | Y (N) Y (N) Y (N) | | |
| st Cores | 2 | 35 35 | 22 24 38 | 45 45 49 of 3 cores – To | tal Water Con | 5 | Y (N) Y (N) Y (N) | | |
| st Cores | 2 3 4 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 | tal Water Con | 5 9 tent SWE =/2 | Y (N) Y (N) Y (N) > 25) | | |
| st Cores | 2 3 4 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Con | 5 9 tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 2 3 4 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Cont | 5 9 tent SWE =/2 | Y N Y N Y N Y N Y N | | |
| W | 2 3 4 1 2 3 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Con | 5 9 tent SWE =/2 | Y N Y N Y N Y N Y N | | |
| W | 2 3 4 1 2 3 4 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Con | 5 9 tent SWE =/2 | Y N Y N Y N Y N Y N Y N | | |
| W | 2 3 4 1 2 3 4 5 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Cont | 5 9 tent SWE =/2 | Y (N) | | |
| W | 2 3 4 1 2 3 4 5 6 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Con | 5 9 tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 2 3 4 1 2 3 4 5 6 7 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Cont | 5 9 tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| M | 2 3 4 1 2 3 4 5 6 7 8 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Con | 5 9 tent SWE =/2 | Y (N) | | |
| W | 2 3 4 1 2 3 4 5 6 7 8 9 | 35 35 43 | 24 24 38 Dust (Min. c | 45 45 49 of 3 cores – To | tal Water Con | 5 9 tent SWE =/2 | Y (N) | | |

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| Snow Sampling Fiel | d Sheet | | | |
|---------------------------|---------------------|--|--|--|
| | No: | EΝ\ | /1-177-03 | 312 |
| 8000 | Revision: | R6 | | |
| 26-MAR-2012 | By: | D. D | Oul | |
| Snow Sampling Field Sheet | | | | |
| | Page: | 2 | of _ | 2 |
| | 8000 26-MAR-2012 | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet | 8000 Revision: R6 26-MAR-2012 By: D. | 8000 Revision: R6 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet |

Total Volume of Melted Snow : 1050 000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|-----------------------------|
| 1 | 115.4 | 209.0 | 93.6 | grass in sample, some water |
| 2 | 114.9 | 705.3 | 590.4 | Lost due to clamp not being |
| 3 | | | | tight |
| 4 | V | | | |
| Totals | 230.3 | 914.3 | 684.0 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 2295000 (mL)

| Filling A | Analysis | Bottle | Triple | | | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|-----------|------------------|-------------------------|--------|---|-------|------------------|------------------|--|--|
| | raidiyolo | Туре | Rinse | | DUPW2 | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | mL- HCL | |
| 3 | Nutrients | 120 mL plastic | Υ | Y | Ø | | | 1mL- H ₂ SO ₂ | |
| 4 | Routine | 1000 mL plastic | Υ | N | | | | N/A | 1 |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
|---------------------|--|
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| | | | Sr | now Sampl | ing Field S | heet | | | | |
|----------------------|--------------------------------------|-------------------------------|--|--------------------------------------|-------------------------------------|--|--|---------------------------|---------------------|--|
| ۸ | | 0 | 1000 | | | No: | _ | VI-177-0 | 312 | |
| | ea: fective Da | _ | 8 <u>000</u> 26-MAR-2012 | 2 | | _Revision | - Carrie | | | |
| | sk: | _ | Snow Sampli | | eet | _By: | <u>D.</u> | Dul | | |
| | | - | | | | Page: | 1 | of | 2 | |
| GEI LOC | NERAL CATION NAM | IE: 551- | - <u>1</u> 0:533 9 | DATE (yyyy-n | nm-dd): <u>2017</u> | -04-07 | TIME | (24:00) <u>: 16</u> | :40 | |
| GPS | S COORDINA | TES (LITM) | 5339 | ll = | 715 436 | ☑vvater Qua | iity 📙 | QAQC: | | |
| DES | CRIPTION | Distance to | Diavik | Loren | 0 Diam'r | /N (Z | one) | 17 | _NAD 83 | |
| Air T | Temp: <u>~ Ə (</u> cipitation: Ra | <u>)</u> °C ain / Mist / S | Wind Direction Snow / Ice / None Not Visible | n: | Cloud Cov | d (knots): er: 0% / 10% dition: Crysta | 125% | 50% / 75% / Packed ☑ \ | ′ 100% Wet □ Dry | |
| Dust Cores | Core Number | Depth of Snow (cm) | Length of Snow Core (cm) | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | Water Content (SWE) | Yes / No. | Dust Pre | | |
| n n | 1 | 55 | 45 | 51 | (OVIL) | 11 | Y (N) | Comm | icitis | |
| ores | 2 | 50 | 39 | 90 | | lo | YN | | | |
| | 3 | 45 | 37 | 51 | | · lı | YŃ | | | |
| | 4 | | | | | | YN | | | |
| | **** | | Dust (Min. c | f 3 cores - To | tal Water Cont | tent SWE =/> | 25) | | | |
| | | | | | | | YN | | | |
| | 1 | | | | | | | | | |
| | 1 2 | | | | | | YN | | | |
| | | | | | | | Y N Y N | | | |
| W | 2 | | | | | | | | | |
| Water | 2 | | | | | | YN | ~ | | |
| Water Out | 2 3 4 | | | | | | Y N Y N | <i>y</i> | | |
| Water Orgality | 2 3 4 5 | | | | | | Y N Y N Y N | | | |
| Water Ouality Co. | 2 3 4 5 6 | | | | | | Y N Y N Y N Y N | | | |
| Water Orgality Cores | 2 3 4 5 6 7 | | | | | | Y N Y N Y N Y N Y N | | | |
| Water Quality Cores | 2 3 4 5 6 7 8 | | | | | | Y N Y N Y N Y N Y N Y N | | | |
| Water Orgality Corps | 2 3 4 5 6 7 8 | | | | | | Y N Y N Y N Y N Y N Y N Y N Y N | | | |

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| | Snow Sampling Fiel | u Sileet | | | |
|-----------------|---------------------------|-----------|---------------|----|---|
| | | No: | ENVI-177-0312 | | |
| Area: | 8000 | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. Dul | | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of | 2 |

| - | ^ | 1 | | |
|------|------|-----|-----|------|
| Dust | Sami | pie | FII | ters |

| Total Volume of Melted Snow :_ | 1060,000 (mL) |
|--------------------------------|---------------|
| | |

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 115.8 | 469.6 | 353.8 | flies |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 115.8 | 469.6 | 353.8 mg | |

Water Quality Bottles

| Total | Volume of Melted Snow : | (mL) |
|-------|-------------------------|------|
| lotai | Volume of Mercea offow | |

| Filling Analy Order | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|------------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| | raidiyolo | Туре | Rinse | | | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Υ | Υ | | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | | | | | |
|---------------------|--|--|--|--|--|
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|-----------------|----------------------------|---------------|---------------------------------|-----------------|----------------|----------------|---------------------------------|---------------------|-----------|--|
| Ar | ea: | 8 | 8000 | | | Revision | - | ENVI-177-0312 R6 | | |
| Effective Date: | | | 6-MAR-201 | 2 | | By: | | Dul | | |
| Ta | sk: | S | now Sampl | ing Field Sh | eet | | | | | |
| | | | | | | Page: | _1 | _ of | 2 | |
| SEN | NERAL | | | | | | | | | |
| .00 | CATION NAM | E: 551- | 3 | DATE (yyyy-n | nm-dd): 201 | 7-04-07 | TIME | (24:00): | 6:55 | |
| AA | IPLED BY: | 56,6 | 3 | TYPE OF SAM | IPLE: Dust | Water Qua | lity 🔲 | QAQC: | | |
| SPS | COORDINA | TES (UTM) | : 53396 | 8E | 7154518 | N (Z | one) | 12 | NAD 83 | |
| ES | CRIPTION: I | Distance to | Diavik | km | & Direction | 0 | n: Land | | ake 🗍 | |
| | | | ampling outsi | | | | | | .u.to | |
| | | | | | | | , | | | |
| | | | Wind Directio | | | d (knots): | - | | | |
| rec | cipitation: Ra | in / Mist / S | now / Ice / None Not Visible | 9 | Cloud Cove | er: 0% / 10% | 6 /25% / | 50% / 75% | / 100% | |
| ,us | tili area. Vi | sible 🖂 | Not visible | | Snow Cond | lition: Crysta | allized L | Packed 🛂 | Wet ☐ Dry | |
| | | Depth | Length of | Weight of | Weight of | Water | | Val. | | |
| | Core | of | Snow | Tube | Empty | Content | 20. | Dust P | resent | |
| 7 | Number | Snow | Core (cm) | & Core | Tube | (SWE) | | | | |
| | 1 | (cm) | 21 | (SWE) | (SWE) | *** | Yes / No | Com | ments | |
| Dunt Count | 2 | 46 | 74 | 48 | | 18 | YN | | | |
| 3 | | 44 | 34 | 48 | | 18 | Y (N) | | | |
| | 3 | 39 | 26 | 46.9 | | 16.5 | YN | | | |
| | 4 | | | | | | YN | | | |
| | | | Dust (Min. c | of 3 cores - To | tal Water Cont | ent SWE =/> | 25) | | | |
| - | 1 | | | | | | YN | | | |
| | 2 | | | | | | YN | | | |
| | | | | | | | YN | | | |
| | 3 | | | | | | | | | |
| | 3 4 | | | | | | YN | | | |
| | | | | | | | Y N Y N | | | |
| | 4 | | | | | | 0.0 | | | |
| | 4 5 | | | | | | YN | | | |
|) | 4 5 6 | | | | | | Y N Y N Y N | | | |
|) | 4 5 6 7 | | | | | | Y N Y N Y N Y N | | | |
|) | 4 5 6 7 8 9 | | | | | | Y N Y N Y N Y N Y N | | | |
| | 4 5 6 7 8 9 | | | | | | Y N Y N Y N Y N Y N Y N Y N Y N | | | |
| | 4 5 6 7 8 9 | | | | | | Y N Y N Y N Y N Y N | | | |

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| Area: Effective Date: | | 8000 26-MA | R-201 | 2 | | | No: _Revis By: | ion: | R6 | VI-177- | 0312 |
|--------------------------|---|--|-----------------------------|--------------------|------------------|------------------|----------------------|--|------|--|---|
| Task: | ive Date. | | | ing Field | Sheet | | Page: | _ | 2 | of | 2 |
| Dust | Sample | Filters | | | | Total Vo | olume of | Melted | Snov | w: <u>78</u> | 5.000 |
| Filter | r# Weigh | t of Filter | Filte | er + Resid | due F | Residue | Weigh | t. | (| Comme | nts |
| 1 | 111 | 1.3 | 1 | 79.6 | | 65.3 | | | | | |
| 2 | | | | | | | | | | | |
| 3 | 1012 | | | | | | | | | | |
| 4 Tota | le 1111 | 2 | 1 | 79.6 | | 15 | 3 mg | | | | |
| 1010 | ls my | .) | 1- 1 | 11.6 | | 60. | J My | | | | |
| Wate | r Quality | Bottles | 3 | | | Total Vo | olume of | Melted | Sno | w : | |
| | | | | | | 2.7.7.22 | | 444242 | | | |
| Filling Order | Analysis | Bottle Type | Triple Rinse | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when | ed | Sample Di Batch Location | Comments # for QAQO |
| Filling | | Bottle | Triple | Preserve N | Sample | Sample | Sample | Preserve (circle when | ed | Sample Di Batch Location | Comments # for QAQO |
| Filling Order | Analysis Metals | Bottle Type 60 mL Falcon | Triple Rinse | | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when added | ed) | Sample Di Batch Location | Comments # for QAQO |
| Filling Order | Analysis Metals Total | Bottle Type 60 mL Falcon Tube 40 mL clear | Triple Rinse | N | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when added | ed (| Sample Di Batch Location | Comments # for QAQO |
| Filling Order | Analysis Metals Total Total Mercury | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL | Triple Rinse Y | N | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL HCL | ed (| Sample Di Batch Location | Comments # for QAQO |
| Filling Order | Analysis Metals Total Total Mercury Nutrients | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL | Triple Rinse Y Y | N Y Y | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ | ed (| Sample Di Batch Location | e Comments # for QAQC preserved if abel change |
| Filling Order 1 2 3 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample <u>Di Batch</u> Location pin field, l | # for QAQC preserved if abel change |
| Filling Order 1 2 3 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N W, DUPW1 | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample <u>Di Batch</u> Location pin field, l | # for QAQC preserved if abel change |
| Filling Order 1 2 3 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N W, DUPW1 | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample <u>Di Batch</u> Location pin field, l | # for QAQC preserved if abel change |

| | | | Sr | now Sampl | ing Field S | heet | | | |
|---------------------------------|---|----------------------------------|--|---|----------------------------------|--------------------------------------|---|-----------|-------------------------|
| | | | | | | No: | EN | VI-177 | -0312 |
| Are | | | 000 | | | _Revision | ı: R6 | | |
| | ective Da | | 6-MAR-2012 | | | _By: | D. | Dul | |
| Task: Snow Sampling Field Sheet | | | | | | B Calair | | | |
| | | | | | | Page: | _1_ | _ of | 2 |
| GEN | IERAL | | | | | | | | |
| LOC | ATION NAM | E: 55 | 1-4 | DATE (yyyy-n | nm-dd): 2017 | -04-07 | TIME (| 24:00): / | 1715 |
| SAN | IPLED BY: | _J& (| C | TYPE OF SAN | /IPLE: Dust [| Water Qua | lity 🔽 | QAQC:_ | |
| GPS | COORDINA | TES (UTM) | : 053441 | 77 E. | 7155091 | N (Z | one) | 12 | NAD 83 |
| | | | Diavik | | | | | | |
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| | | | ampling outsid | | | | _ | | |
| | | | Wind Direction | | | d (knots): | | | e a a statule. |
| | | | now / Ice / None Not Visible | 9 | | er: 0% / 10% | | | % / 100% ☑ Wet □ Dry |
| | | | 1 | | | | | I donca _ | J Wet E Diy |
| | Core | Depth | | Weight of | Weight of | Water | | Dust F | Present |
| _ | Number | of Snow | Snow Core (cm) | Tube & Core | Empty Tube | Content (SWE) | | Duoti | resent |
| SuC | | (cm) | oore (om) | (SWE) | (SWE) | *** | Yes / No | Con | nments |
| st C | 1 | 52 | 50 | 55 | UN | 15 | YN | | |
| Q | | 00 | 10 | // | 1 () | 01 | - | | |
| Cores | 2 | 53 | 51 | 55 | 40 | 15 | YØ | | |
| Cores | 2 3 | 53 54 | | 55 55 | 40 | 15 | - 25 | | |
| Cores | | 53 | 51 | | 40 | 15 | YØ | | |
| Cores | 3 | 53 | 51 | 35 | 40 40 otal Water Con | 15 | Y (N) Y (N) Y N | | |
| Cores | 3 4 | 53 | 51 | 35 | 40 | 15 | Y (N) Y (N) Y N | | |
| Cores | 3 4 | 53 54 | 51 53 Dust (Min. c | of 3 cores – To | otal Water Con | 15 tent SWE =/> | Y N Y N Y N > 25) | | |
| Cores | 3 4 | 53 54 54 | 51 53 Dust (Min. c | 55 of 3 cores – To | otal Water Con | 15 tent SWE =/> | Y (N) Y N Y N 25) | | |
| | 3 4 1 2 | 53 54 54 54 | 51 53 Dust (Min. o | 55 of 3 cores – To | otal Water Con | 15 tent SWE =/> | Y (N) | 1052 | |
| W | 3 4 1 2 3 | 53 54 54 54 | 51 53 Dust (Min. c | 55 of 3 cores – To | tal Water Con 40 40 40 | 15 tent SWE =/> | Y (N) | 1062 | |
| W | 3 4 1 2 3 4 | 53 54 54 54 54 57 | 51 53 Dust (Min. o | 55 of 3 cores – To 55 54 55 56 | HO HO HO | 15 tent SWE =12 15 14 15 | Y (N) | 1062 | |
| W ₄ | 3 4 1 2 3 4 5 | 53 54 54 54 54 57 | 51 53 Dust (Min. o | 55 of 3 cores – To | 40 40 40 40 40 40 | 15 tent SWE =/> | Y (N) | 1062 | |
| W | 3 4 1 2 3 4 5 6 | 53 54 54 54 54 57 | 51 53 Dust (Min. o 50 54 54 54 54 | 55 of 3 cores – To 55 54 55 56 | HO HO HO | 15 tent SWE =12 15 14 15 | Y (N) | 1062 | |
| Dust Cores Water Quality Cores | 3 4 1 2 3 4 5 6 7 | 53 54 54 54 54 57 | 51 53 Dust (Min. o | 55 of 3 cores – To 55 54 55 56 | 40 40 40 40 40 40 | 15 tent SWE =12 15 14 15 | Y (N) | 1062 | |
| W | 3 4 1 2 3 4 5 6 7 8 | 53 54 54 54 54 57 | 51 53 Dust (Min. o | 55 of 3 cores – To 55 54 55 56 | 40 40 40 40 40 40 | 15 tent SWE =12 15 14 15 | Y (N) | 1062 | |
| W | 3 4 1 2 3 4 5 6 7 8 9 | 53 54 54 54 54 57 | 51 53 Dust (Min. o | 55 of 3 cores – To 55 54 55 56 | 40 40 40 40 40 40 | 15 tent SWE =12 | Y (N) | 1062 | |

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| | Snow Sampling Fiel | d Sheet | | | |
|-----------------|---------------------------|-----------|--------|-----------|-----|
| | * | No: | EN | /I-177-03 | 312 |
| Area: | 8000 | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. Dul | | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of | 2 |

| Dust Sample Filters |
|----------------------------|
|----------------------------|

Total Volume of Melted Snow : 1400,000 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments | |
|----------|------------------|------------------|----------------|---------------------------------|--------|
| 1 | 117, 4 mg | 132.9 mg | 15.5 mg | leak in original buy, caught by | doubte |
| 2 | | | / | | |
| 3 | | | 0. | | |
| 4 | | | | | |
| Totals | 117.4 mg | 132.9 mg | 15.5 mg | | |

Water Quality Bottles

Total Volume of Melted Snow : 3465.000(mL)

1920,000

| Eilling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|--------------------------|--|
| Filling Order | Aldryolo | Туре | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | | 1mL H ₂ SO | |
| 4 | Routine | 1000 mL plastic | Υ | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| | Additional | Comments | |
|--|------------|----------|--|
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| | | | Si | now Sampl | ling Field S | Sheet | | 11 | |
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| | | | 2232 | | | No: | | /I-177- | 0312 |
| | ea: | | 8000 | | | _Revision | 100 | | |
| | ופכנועפ Da sk: | ective Date: 26-MAR-2012 She: Snow Sampling Field Sheet | | 2.6 | _By: | D. [| Dul | | |
| ıa | on. | | Show Sampl | ing Fleid Sr | ieet | Dones | | | |
| | | | | | | Page: | _1_ | of | 2 |
| GEN | NERAL | -1 | | | | | | | |
| _00 | CATION NAM | E: 55 | 1-5 F GC | DATE (voov-n | nm-dd): 24% | 7-14-12 | TIME (2 | 4.000 15 | 800 |
| SAN | MPLED BY: | | GC. | TYPE OF SAM | IPLE: Dust I | Water Qua | ality 🗔 G | 4:00): <u>[[</u> | 100 |
| GPS | S COORDINA | TES (UTI | M): 0535 | 095 E | 7156 | 280 N/Z | one) / | 2 | NAD 83 |
| | | | o Diavik | | | | | | |
| | | | | | . D.: 000011 | | n. Lanu _ | _ | ake |
| | | | f sampling outsi | | | | , | | |
| | Temp: | | Wind Direction | | | ed (knots): | | 7 | |
| Dus | t in area: Vi | sible 🔲 | Not Visible | | Cloud Cov Snow Con | er: 0% / 10% dition: Crysta | % / 25% /∕50 allized □ P | 2% / 75% acked [7] | / 100% Wet □ Day! |
| | | | | Face of the set | | | | acrea ita | vvei 🗀 Diy i |
| | Core | Depth of | Length of Snow | Weight of Tube | Weight of Empty | Water Content | | Dust Pr | esent |
| 0 | Number | Snow | 100000000000000000000000000000000000000 | & Core | Tube | (SWE) | | 2,000 | 72700 |
| Dust Cores | | (cm) | | (SWE) | (SWE) | *** | Yes / No | Com | nents |
| 3 | 1 | 68 | 67 | 64 | 40 | 74 | YN | | |
| ros | 2 | 68 | 67 | 63 | 46 | 23 | YO | | |
| | 3 | 68 | 67 | 65 | 40 | 25 | YO | | |
| | 4 | | | | | - | YN | | |
| | | | Dust (Min. | of 3 cores - To | tal Water Con | tent SWE =/ | > 25) | | |
| | | | - doc frame. | | 110 | 1000 | | | |
| | 1 | 68 | | 135 | 4() | 1111 | Y/N | | |
| | 1 2 | 68 | 65 | 63.5 | 40 | 23.5 | | | |
| | | | | 63.5 | 40 40 | 23.5 | | | |
| | 2 | 68 | 63 63 | 63.5 | 40 40 40 | 35 | YN | | |
| Water | 2 | 68 | | 63.5 | 40 | \$3 | Y N Y N | | |
| | 2 3 4 5 | 68 | 63 63 | 63.5 63 63 | | 115 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 2 3 4 5 6 | 68 | 63 63 | | 40 | \$3 | Y N Y N Y N Y N | | |
| | 2 3 4 5 6 7 | 68 | 63 63 | | 40 | \$3 | Y N Y N Y N | | |
| | 2 3 4 5 6 7 8 | 68 | 63 63 | | 40 | \$3 | Y N Y N Y N Y N | | |
| | 2 3 4 5 6 7 8 | 68 | 63 63 | | 40 | \$3 | Y N Y N Y N Y N | | |
| | 2 3 4 5 6 7 8 9 | 68 | 63 63 | | 40 | \$3 | Y N Y N Y N Y N Y N Y N | | |
| Water Ouglity Occas | 2 3 4 5 6 7 8 | 68 | 63 63 | | 40 | \$3 | Y N Y N Y N Y N | | |

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| Snow Sampling Fiel | d Sheet | | | |
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| | No: | EN\ | /1-177-03 | 312 |
| 8000 | Revision: | R6 | | |
| 26-MAR-2012 | By: | D. Dul | | |
| Snow Sampling Field Sheet | | | | |
| / | Page: | 2 | of | 2 |
| | 8000 26-MAR-2012 | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet | 8000 Revision: R6 26-MAR-2012 By: D. I | 8000 Revision: ENVI-177-03 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet |

Total Volume of Melted Snow : 2250000 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|------------------------------|
| 1 | 117.7 mg | 149.9 mg | 32.2 mg | buy leaked, double boy caugh |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 117.7 mn | 149 mg | 32.2 mg | |

Water Quality Bottles

Total Volume of Melted Snow: 3640,000 (mL)

1410 000

| riii | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments <u>DI Batch # for QAQC</u> , Location preserved if not |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|------------------------------|---|
| Filling Order | Allarysis | Туре | Rinse | | GW | | | added) | in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | ☑ | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | 1 mL HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | | | | 1mL - H ₂ SO | |
| 4 | Routine | 1000 mL plastic | Y | N | ₫ | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| | Additional Comments | |
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| | | | | | | No: | EN | VI-177 | -0312 | |
| Area: Effective Date: Task: | | | 3000 | | | Revision | : R6 | | | |
| | | | 26-MAR-201 | | | _By: | D. [| Dul | | |
| las | sk: | 3 | Snow Sampl | ing Field Sh | neet | | | | | |
| | | | | | | Page: | _1_ | of | 2 | |
| LOC | ERAL | 1E:_ 552 | ~} | DATE (yyyy-n | nm-dd): 2017 | -04-08 | TIME (2 | 24:00): | 12:20 | |
| 200 | COOPDING | TES /LITM | 1): 537 554 | F | 715 347 | _vvater Qua | inty 🔲 . | JAQC:_ | 1,000 00 | |
|)FC | COURDINA | Distance to | Diavik | E | 11))+1 | N (Z | one) | 4 | NAD 83 | |
| ir 7 | emp: _ ipitation: Ra | /_°C ain / Mist / S | Wind Direction Snow / Ice / Non- | e NW | Cloud Cov | d (knots): er: 0% /10% | /25%/5 | 0% / 759 | <i>6 J</i> 100% | |
| Jus | t in area: Visible Dept | | Length of | Weight of | Weight of | Water | allized L. F | ized ☐ Packed ☑ Wet ☐ Dry Dust Present | | |
| ס | 100000000000000000000000000000000000000 | of | Snow | Tube | Empty | Content | V . | Dusti | resent | |
| D | Number | Snow (cm) | Core (cm) | & Core | Tube (SWE) | (SWE) | Voc / No | Con | nmente | |
| Direct | Number 1 | (cm) | Core (cm) | (SWE) | (SWE) | *** | Yes/No Y (N) | Con | nments | |
| Dust Core | | (cm) | 46 | (SWE) 53 | (SWE) | 13 | Y (N) | Con | nments | |
| Dust Cores | 1 | (cm) 46 | 46 | (SWE) 53 | (SWE) | 13 | Y (N) | Con | nments | |
| Dust Cores | 1 2 | (cm) | 46 | (SWE) 53 | (SWE) | 13 | Y N Y N | Con | nments | |
| Duet Caree | 1 2 3 | (cm) 46 | 46 | (SWE) 53 53 53 | (SWE) | 13 | Y (N) Y (N) Y (N) Y (N) | Con | nments | |
| Dust Cores | 1 2 3 4 | (cm) 46 46 46 | 46 46 46 Dust (Min. o | (SWE) 53 53 53 of 3 cores – To | (SWE) | 13 | Y (N) Y (N) Y (N) Y N | Con | nments | |
| Dust Cores | 1 2 3 4 | (cm) 46 46 46 | 46 46 46 Dust (Min. o | (SWE) 53 53 53 of 3 cores – To | (SWE) | 13 13 13 13 tent SWE =12 | Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) | Con | nments | |
| Dust Cores | 1 2 3 4 1 2 2 | (cm) 46 46 46 45 | 46 46 45 Dust (Min. o | (SWE) 53 53 53 of 3 cores – To | (SWE) Wo tal Water Con Wo Yo | *** 13 13 13 17 tent SWE =/2 | Y (N) | Con | nments | |
| Dust Cores | 1 2 3 4 | (cm) 41 41 41 41 45 45 | 46 46 46 Dust (Min. o | (SWE) 53 53 53 of 3 cores – To 53 53 | (SWE) | *** 13 13 13 17 tent SWE = 12 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Con | nments | |
| Cores | 1 2 3 4 1 2 3 4 | (cm) 46 46 46 45 | 46 46 45 Dust (Min. o | (SWE) 53 53 53 of 3 cores – To | (SWE) Wo tal Water Con Wo Yo | *** 13 13 13 17 tent SWE =/2 | Y (N) | Con | | |
| Cores | 1 2 3 4 | (cm) 41 41 41 41 45 45 | 46 46 46 Dust (Min. o | (SWE) 53 53 53 of 3 cores – To 53 53 | (SWE) HO HO Atal Water Conf | *** 13 13 13 17 tent SWE = 12 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | |
| Corps | 1 2 3 4 1 2 3 4 | (cm) 41 41 41 41 45 45 | 46 46 46 Dust (Min. of 45 45 45 | (SWE) 53 53 53 53 53 53 53 53 | (SWE) HO HO Atal Water Conf | *** 13 13 13 13 13 13 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | |
| Cores | 1 2 3 4 5 5 | (cm) 46 46 46 45 45 45 45 46 46 46 47 47 47 47 47 47 47 47 47 47 47 47 47 | 46 46 45 Dust (Min. of 45 45 45 45 45, 5 | (SWE) 53 53 53 53 53 53 53 53 53 53 | (SWE) HO HO Atal Water Conf | *** 13 13 13 13 13 13 13 13 13 13 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | |
| Cores | 1 2 3 4 5 6 | (cm) 46 46 45 45 45 45 46 46 46 | 46 46 46 45 Dust (Min. of 45 45 45 45 45,5 46 46,5 | (SWE) 53 53 53 53 53 53 53 53 53 5 | (SWE) Wortal Water Con Worta | *** 13 13 13 13 13 13 13 13 13 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | |
| Cores | 1 2 3 4 5 6 7 | (cm) 46 46 46 45 45 45 45 46 46 46 47 47 47 47 47 47 47 47 47 47 47 47 47 | 46 46 45 Dust (Min. of 45 45 45 45 45, 5 | (SWE) 53 53 53 53 53 53 53 53 53 53 | (SWE) HO HO Atal Water Conf | *** 13 13 13 13 13 13 13 13 13 13 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | |
| Cores | 1 2 3 4 5 6 7 8 | (cm) 46 46 45 45 45 45 46 46 46 | 46 46 46 45 Dust (Min. of 45 45 45 45 45,5 46 46,5 | (SWE) 53 53 53 53 53 53 53 53 53 5 | (SWE) Wortal Water Con Worta | *** 13 13 13 13 13 13 13 13 13 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | |
| Dust Cores Water Ouglity Core | 1 2 3 4 1 2 3 4 5 6 7 8 | (cm) 46 46 45 45 45 45 46 46 46 | 46 46 46 45 Dust (Min. of 45 45 45 45 45,5 46 46,5 | (SWE) 53 53 53 53 53 53 53 53 53 5 | (SWE) Wortal Water Con Worta | *** 13 13 13 13 13 13 13 13 13 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | |

Water Quality (Min. of 3 cores - Total Water Content SWE =/> 100)

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| Snow Sampling Fie | ld Sheet | | | |
|---------------------------|---------------------|--|---|---|
| | No: | EN | /1-177-03 | 312 |
| 8000 | Revision: | R6 D. Dul | | |
| 26-MAR-2012 | By: | | | |
| Snow Sampling Field Sheet | | | | |
| | Page: | 2 | of | 2 |
| | 8000 26-MAR-2012 | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet | 8000 Revision: ENV 26-MAR-2012 By: D. | 8000 Revision: ENVI-177-03 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet |

Total Volume of Melted Snow : 1255_000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 114.8 my | 134.3 mg | 19.5 mg | |
| 2 | | 2 | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 114 9 me | 134.3 mg | 19.5 mg | |

Water Quality Bottles

Total Volume of Melted Snow : $\underline{3305,000}$ (mL)

1650000

| Filling | Analysis | Bottle | | | | | | | | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments <u>DI Batch # for QAQC</u> , Location preserved if not |
|---------|------------------|-------------------------|-------|---|----|--|--|---|-------------------------|--------|----------|------------------|------------------|------------------|------------------------------|---|
| Order | | Туре | Rinse | | GW | | | added) | in field, label changes | | | | | | | |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | | | | | | | | |
| 2 | Total Mercury | 40 mL clear glass | Y | Υ | Ø | | | 1 mL - HCL | | | | | | | | |
| 3 | Nutrients | 120 mL plastic | Υ | Y | Ø | | | TmL - H ₂ SO ₄ | | | | | | | | |
| 4 | Routine | 1000 mL plastic | Y | N | Ø | | | N/A | | | | | | | | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | | | | N/A | | | | | | | | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
|----------------------------|--|
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| | Snow Sampling Fie | ld Sheet | | | |
|-----------------------------------|--|-------------------------|------------|------------------|-----|
| Area: Effective Date: Task: | 8000 26-MAR-2012 Snow Sampling Field Sheet | No: Revision: By: | R6 D. I | VI-177-0: Dul | 312 |
| | | Page: | 1 | of | 2 |

| GENERAL | | |
|--|------------------------------------|----------------------|
| LOCATION NAME: SS3-2 | DATE (yyyy-mm-dd): 2017-04-08 | TIME (24:00):_ 11:45 |
| SAMPLED BY: GC.TG. WL | TYPE OF SAMPLE: Dust Water Quality | |
| GPS COORDINATES (UTM): 53782 | E 715 3475 N (Zone | e) 12 NAD 83 |
| DESCRIPTION: Distance to Diavik | km & DirectionOn: I | Land 🥌 &/or Lake |
| CLIMATE CONDITIONS (if sampling outside | <u> </u> | |
| Air Temp:\7°C Wind Directio | |) |
| Precipitation: Rain / Mist / Snow / Ice / Mone Dust in area: Visible Not Visible | | 25% / 50% |

| Dust | Core Number | Depth of Snow (cm) | Length of Snow Core (cm) | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | Water Content (SWE) | Yes / No. | Dust Present |
|---------------------|----------------|-----------------------------|--------------------------------|--------------------------------------|-------------------------------------|---------------------------|-----------|--------------|
| C | 1 | 36 | 36 | 48 | 40 | 8 | Y (N) | |
| Cores | 2 | 37 | 36 | 48 | 40 | 8 | Y (N) | |
| 0, | 3 | 38 | 37 | 49 | 40 | 9 | YN | |
| | 4 | | 4.7 | | | | YN | |
| | | | Dust (Min. | of 3 cores - To | otal Water Con | tent SWE =/ | > 25) | |
| | 1 | 37 | 37 | 48,9 | 40 | 8,5 | Y (N) | |
| | 2 | 37 | 37 | 48 | 40 | 8 | Y | |
| | 3 | 37 | 36 | 48 | 40 | 8 | YN | |
| 8 | 4 | 38 | 36 | 48 | 40 | 8 | YN | |
| ater | 5 | 38 | 36 | 48.5 | 48 | 8,5 | YÑ | |
| Water Quality Cores | 6 | 38 | 36 | 48 | 40 | 8 | YN | lofa |
| ality | 7 | 376 | 36 | 48,5 | 40 | 8.5 | YN | 101 0 |
| 8 | 8 | 37 | 36 | 49 | 40 | 9 | YN | |
| es | 9 | 37 | 37. | 48.5 | 40 | 8.5 | Y N | |
| | 10 | 37 | 36 | 48 | 40 | 8 | YN | |
| | 11 | 36 | 35 | 48 | 40 | 8 | YN | |
| | 12 | 35 | 35 | 48 | 40 | 9 | Y(N) | 2012 |

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| | Snow Sampling Field | d Sheet | | | |
|-----------------|---------------------------|-----------|------|-----------|-----|
| | | No: | EN | VI-177-03 | 312 |
| Area: | 8000 | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. E | Dul | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of | 2 |
| | | | | | |

| | 015000 |
|--------------------------------|-----------|
| Total Volume of Melted Snow :_ | 01000 (mL |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|----------|
| 1 | 116.6 mg | 123.7mg | 7.1 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 116.6 my | 123.7m | 7.1 my | |

Water Quality Bottles

Total Volume of Melted Snow : 3225,000(mL)

1610 000

| Filling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|---------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| Order | | Туре | Rinse | | | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Υ | Υ | | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Υ | N | | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
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|--------------------------|--------------------------------------|----------------------------------|--|--|----------------------------------|--|---|--------------|--------|
| A = | 00: | | 9000 | | | No: | - | NVI-177 | 7-0312 |
| Area: Effective Date: | | | | | | _Revisior | 200 | | |
| | sk: | | Snow Sampl | | heet | _By: | <u>D</u> | . Dul | |
| | | - | | | | Page: | _ 1 | _ of | 2 |
| | NERAL | | | | | | | | |
| -00 | CATION NAM | ле: <u>55 д</u> | -3 | DATE (yyyy-i | mm-dd): <u>2017</u> | -04-08 | TIME | (24:00):_ | 11:15 |
| SAI | WPLED BY: | _66,5 | 6.WL 530 1602 | TYPE OF SAI | MPLE: Dust [| ☑Water Qua | lity 🗹 | QAQC:_ | |
| | | | n): 538 483 | | | | | | |
| ES | CRIPTION: | Distance to | Diavik | km | & Direction | o | n: Land | &/or | Lake |
| rec | cipitation: R | ain / Mist / | Wind Direction Snow / Ice / None Not Visible ☑ | | Cloud Cov | ed (knots):\ er: 0% / 10% dition: Crysta | 6 / 25% / | | |
| | Core o | | Depth Length of | | Weight of Tube Empty & Core Tube | Water Content (SWE) | | Dust Present | |
| | | (cm) | | (SWE) | (SWE) | (2AAE) | Yes / No | Cor | nments |
| Dust Cores | 1 | 49 | 48 | 52 | 40 | 12 | YN | | |
| FOS | 2 | 48 | 47 | 51 | 40 | 12 | YN | | |
| Š | 3 | 48 | 46 | 52 | 40 | 12 | Y (N) | | |
| | | | | | | | YN | | |
| 7 | 4 | | | | | | | - | |
| | 4 | | Dust (Min. o | of 3 cores - To | otal Water Con | tent SWE =/ | > 25) | | |
| | 1 | 47 | Dust (Min. o | of 3 cores – To | otal Water Con | tent SWE =/> | 25) Y (N | 1 1 | |
| | | 47 | | 5 2.5 53 | Hy Hy | tent SWE =/2 | - |) | |
| | 1 | 47 47 45 | 46 | 5 2.5 53 53 | HO HO | 12.5 | YN | 1 | |
| | 1 2 | - | 46 | 52.5 53 52 | 40 | 13.5 | YN | 1057 | |
| | 1 2 3 | 45 | 46 47 44 | 52.5 53 | 40 | 13.5 | YNYN | 1085 | |
| Water Out | 1 2 3 4 | 45 | 46 47 44 46 | 52.5 53 53 | 40 | 13.5 | Y (N) Y (N) Y (N) | 1082 | |
| | 1 2 3 4 5 | 45 47 | 46 47 44 46 46 | 52.5 53 53 54 | 40 40 40 40 40 | 13.5 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | 1082 | |
| | 1 2 3 4 5 6 | 45 47 47 45 | 46 47 44 46 46 45 | 52.5 53 52 53 54 | 40 | 12.5 13 12 13 14 14 | Y N Y N Y N Y N Y N | 1082 | |
| Water Quality Cores | 1 2 3 4 5 6 7 | 45 47 47 45 45 | 46 47 44 46 46 45 45 | 52.5 53 52 53 54 52 52 | 40 40 40 40 40 | 13.5 13 14 14 14 14 | Y | | |
| | 1 2 3 4 5 6 7 8 | 45 47 47 45 45 44 | 46 47 46 46 45 45 45 | 52.5 53 54 52 52 52 53 54 51,5 | 40 40 40 40 40 40 | 12.5 13 12 13 14 14 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 1 2 3 4 5 6 7 8 | 45 47 47 45 45 44 | 46 47 46 46 45 45 45 | 52.5 53 54 52 52 52 53 54 51,5 | 40 40 40 40 40 40 | 13.5 13 14 14 14 14 | Y N Y N Y N Y N Y N Y N Y N N Y N N Y N N Y N | | |

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| | Snow Sampling Fiel | d Sheet | | | |
|-----------------|---------------------------|------------------|-----------|----------|-----|
| Area: | 8000 | No: Revision: | EN\ R6 | /I-177-0 | 312 |
| Effective Date: | 26-MAR-2012 | By: | D. E | Dul | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of | 2 |
| | | | _ | | |

Total Volume of Melted Snow : 1205,000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 116.1 mg | 135.9 mg | 19.8 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 116.1 mg. | 135.9 mg | 19.8 ma | |

Water Quality Bottles

Total Volume of Melted Snow: 3425,000 (mL)

1850 600

| Filling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|---------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|----------------------|--|
| Order | Palatyolo | Туре | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | A | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Υ | | | | TmL - H₂SO₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| | Additional | Comments | |
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| | | | 15.00 ft | | | No: | EN | IVI-177-0 | 312 |
| | ea: | A | 000 | | | Revision | : R6 | | |
| | ective Da | | 6-MAR-201 | | | By: | D. | Dul | |
| Ta | sk: | S | now Sampl | ing Field Sh | neet | | | | |
| Lo | | | | | | Page: | _1 | _ of | 2 |
| GPS DES | IPLED BY: COORDINA | TES (UTM) | Y-Y EC W ^L :- 05391 Diavik | TYPE OF SAN | 71546 | Water Qual | ity 🗔 | QAQC: Du | NAD 83 |
| Air T | Гетр: <u> </u> | °C ain / Mist / S | Wind Direction Not Visible | n: SW | Cloud Cove | d (knots): <u>3</u> er: 0% / 10% dition: Crysta | 125% / 5 | 50% <i> 1</i> 75%) | 100% Vet □ □ |
| Air T Prec Dus | Гетр: <u>- चे के</u> cipitation: Ra | °C ain / Mist / S | Wind Direction | n: SW | Cloud Cove | d (knots): <u>3</u> er: 0% / 10% | 125% / 5 | 50% <i>(1</i> 75%) (| vet 🗌 🗅 sent |
| Air T Prec Dus | Temp: | °C in / Mist / S sible □ Depth of Snow | Wind Directionow / Ice / None Not Visible LLL Length of Snow | Weight of Tube & Core | Cloud Cove Snow Cond Weight of Empty Tube (SWE) | d (knots): 3 er: 0% / 10% dition: Crysta Water Content (SWE) | / 25% / 5 Ilized ☑ I | 50% / (5%) / Packed V Dust Pre | Vet 🗌 D |
| Air T Prec Dus | Core Number | °C in / Mist / S sible □ Depth of Snow (cm) | Wind Directionow / Ice / None Not Visible LLL Length of Snow | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | d (knots): 3 er: 0% / 10% dition: Crysta Water Content (SWE) | / 25% / 5 Ilized 🗹 I | 50% / (5%) / Packed V Dust Pre | Vet 🗌 D |
| Air T Prec Dus | Core Number | Depth of Snow (cm) | Wind Directionow / Ice / None Not Visible LL Length of Snow Core (cm) | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | d (knots): 3 er: 0% / 10% dition: Crysta Water Content (SWE) | / 25% / 5 Illized | 50% / (5%) / Packed V Dust Pre | Vet 🗌 D |
| Air T Pred Dus | Core Number | _°C sin / Mist / S sible □ Depth of Snow (cm) 40 | Wind Directionow / Ice / None Not Visible LL Length of Snow Core (cm) | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | d (knots): 3 er: 0% / 10% dition: Crysta Water Content (SWE) | / 25% / 5 Illized | 50% / (5%) / Packed V Dust Pre | Vet 🗌 D |
| Air T Prec Dus | Core Number 1 2 3 | _°C sin / Mist / S sible □ Depth of Snow (cm) 40 | Wind Direction Now / Ice / None Not Visible | Weight of Tube & Core (SWE) 50 50 | Weight of Empty Tube (SWE) | d (knots): 3 er: 0% / 10% dition: Crysta Water Content (SWE) *** / 0 / 0 | Yes/No Y N Y N Y N | 50% / (5%) / Packed V Dust Pre | Vet 🗌 D |
| Air T | Core Number 1 2 3 | _°C sin / Mist / S sible □ Depth of Snow (cm) 40 | Wind Direction Now / Ice / None Not Visible | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | d (knots): 3 er: 0% / 10% dition: Crysta Water Content (SWE) *** / 0 / 0 | / 25% / 5 Illized | 50% / (5%) / Packed V Dust Pre | Vet 🗌 D |
| Air T Pred Dus | Core Number 1 2 3 4 | _°C sin / Mist / S sible □ Depth of Snow (cm) 40 | Wind Direction Now / Ice / None Not Visible | Weight of Tube & Core (SWE) 50 50 | Weight of Empty Tube (SWE) | d (knots): 3 er: 0% / 10% dition: Crysta Water Content (SWE) *** / 0 / 0 | Yes/No Y N Y N Y N | 50% / (5%) / Packed V Dust Pre | Vet 🗌 D |

| | | | Duot (Min. | 01 0 00163 - 10 | tal water con | itent SWE = | 1> 25) | |
|---------------|----|----|----------------|--------------------|---------------|--|---------------------------|---|
| | 1 | 41 | 40 | 51.5 | 40 | 11.5 | YN | |
| | 2 | 41 | 40 | 51 | 40 | 11 | YM | |
| | 3 | 41 | 41 | 51.5 | 40 | 11.5 | Y 10 | |
| 8 | 4 | 42 | 41 | 52 | 40 | 12 | YN | |
| Water Quality | 5 | 39 | 38 | 50.5 | 40 | 1.0.5 | Y M | |
| Qu | 6 | 40 | 34 | 49 | 40 | q | YO | |
| ality | 7 | 40 | 36 | 495 | Un | 9.5 | Y (0) | |
| Cores | 8 | 40 | 38 | 50 | 40 | 110 | YA | |
| res | 9 | 41 | 37 | 56 | 40 | 10 | YO | |
| | 10 | | | 00 | | 10 | YN | |
| 1 | 11 | 1 | | | | | YN | |
| | 12 | | | | | | YN | - |
| | | Wa | ter Quality (N | /lin. of 3 cores - | Total Water (| Content SW | E =/> 100) | |
| | | | | | | The second of the second of the second | ALL DISCUSSION CONTRACTOR | |

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| | Snow Sampling Fiel | d Sheet | | | |
|--------------------------|---------------------------|------------------|-----------|-----------|-----|
| | 2000 | No: Revision: | EN\ R6 | /I-177-03 | 312 |
| Area: Effective Date: | 8000 26-MAR-2012 | By: | D. Dul | | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of _ | 2 |

| Total Volume | of Melted | Snow: | 9 | 70. | 000 | (mL |
|---------------|------------|-------|---|-----|-----|-----|
| I Otal Volume | OI INCILOR | | _ | | | -1 |

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|-----------------|
| 1 | 115.2 may | 1290 mg | 19.6 mg | leaves 1 lichen |
| 2 | 1 | / | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 115.2 mg | 129.0 mg | 19.6 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 2960,000(mL)

1525000

| | Analysis | Bottle Type | Triple Rinse | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when added) | Sample Comments <u>DI Batch # for QAQC</u> , Location preserved if not in field, label changes |
|------------------|------------------|-------------------------|-----------------|----------|------------------|------------------|------------------|--|---|
| Filling Order | Allarysis | | | | | | | | |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | ¥ | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | 1 mL HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | | 1mL - H₂SO₂ | |
| 4 | Routine | 1000 mL plastic | Y | N | | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
|---------------------|--|
| | |
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| Area: 8000 Revision: R6 Effective Date: 26-MAR-2012 By: D. Dul Task: Snow Sampling Field Sheet Page: 1 of 2 GENERAL LOCATION NAME: 551-4-5 DATE (yyyy-mm-dd): 2017-01-68 TIME (24:00): 1035 SAMPLED BY: TC GC W TYPE OF SAMPLE: Dust CWater Quality TO QAOC: 2007-1 | | Snov | / Sampling Field Sheet | | | | |
|---|-----------------------|--|------------------------|---------|------------|--------|--|
| ## Date: 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet Page: 1 of 2 GENERAL LOCATION NAME: 552-4-5 DATE (yyyy-mm-dd): 2017-04-68 TIME (24:00): 1035 | Area: | 8000 | | _ | R6 | | |
| Snow Sampling Field Sheet Page: _1 of _2 GENERAL LOCATION NAME: 592-4-5 DATE (yyyy-mm-dd): _9017-04-68 TIME (24:00): 1035 | | | | 1 | | | |
| GENERAL LOCATION NAME: 552-4-5 DATE (yyyy-mm-dd): 2017-04-68 TIME (24:00): 1035 | | Color of the second second second second | | D. Dui | | | |
| LOCATION NAME: 552-4-5 DATE (yyyy-mm-dd): 2017-01-68 TIME (24:00): 1035 | | | Page: | _1_ | of | 2 | |
| TIPE OF SAMPLE: Dust Dyvater Quality QAQC: DWG | LOCATION NAME: | - DA | | TIME (2 | 24:00): | 035 | |
| | DESCRIPTION: Distance | e to Diavik | km & Direction On: | Land [| 7 &/or Lal | La Tal | |

| Dust | Core Number | Depth of Snow (cm) | Length of Snow Core (cm) | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | Water Content (SWE) | Yes / No 🥎 | Dust Present Comments |
|---------------------|----------------|-----------------------------|--------------------------------|--------------------------------------|-------------------------------------|---------------------------|------------|------------------------|
| C | 1 | 38 | 37 | 50 | 40 | 10 | YN | |
| Cores | 2 | 38 | 37 | 51 | 40 | 11 | YN | |
| | 3 | 38 | 37 | 50 | 40 | 10 | Y | |
| | 4 | | | 0. | | 10 | YN | |
| | | | Dust (Min. c | of 3 cores - To | tal Water Cont | tent SWE =/ | > 25) | 1 |
| | 1 | 38 | 37 | 50.5 | 40 | 10,5 | YN | |
| | 2 | 39 | 38 | 50 | 40 | 10 | Y (N7 | |
| | 3 | 40 | 38 | 50 | UD | 10 | YN | |
| 8 | 4 | 3.8 | 37 | 50.5 | 46 | 10.5 | YN | |
| ater | 5 | 38 | 35 | 50 | 40 | 10 | YN | 10+2 |
| Qua | 6 | 40 | 39 | 50 | 40 | 10 | YN | 101 0 |
| ality | 7 | 40 | 38 | 50.5 | 40 | 10.5 | YN | |
| Water Quality Cores | 8 | 40 | 39 | 50 | 40 | 10 | Y (N) | |
| res | 9 | 46 | 38 | 50.5 | Un | 10.5 | YM | |
| | 10 | 40 | 35 | 49.5 | 46 | 95 | YA | |
| | 11 | | 0.5 | 51. | To | 11.) | YN | |
| - 1 | 12 | 1 7 | | | | | YN | |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} - Wt. of Empty Tube _{SWE} ***

CLIMATE CONDITIONS (if sampling outside)

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| | | | | | | | No: | | ENVI-177-0312 : R6 | | |
| rea: | | 8000 | | | | | Revis | ion: | | | |
| Effective | Date: | 26-MA | R-201 | R-2012 | | | Ву: | | D. Dul | | |
| Task: | | Snow | Sampl | Sampling Field Sheet | | | | | | | |
| | | | | | | | Page: | | 2 | of _ | 2 |
| Filter# | | Filters t of Filter | Filte | er + Resid | due F | Residue | Weigh | it. | C | omment | is |
| 1 | 17.0 mg | | h | | | | | 12+ | st buy leaked, caught by i | | ght by 2 |
| 2 | 7.7. | | | | | | | | , | | |
| 3 | | - | | | | | | | | | |
| 4 | 3 | \ | | - | | | - | | | | |
| Totals | | | | | | | | | | | |
| Nater C | uality | Bottles | 5 | | Sample | Total Vo | olume of | f Melted Preserve | | Sample C | |
| | nalysis | Bottle Type | Triple Rinse | Preserve | Type * | Type * | Type * | (circle when | 30 | | served if not |
| Order | | | | | DUPUA | | | added |) | in field, lab | ei changes |
| 1 | Metals Total | 60 mL Falcon Tube | Y | N | Ø | | | NA | | | |
| | | | | | | | | | | | |

| Filling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments DI Batch # for QAQC, Location preserved if not |
|---------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| Order | raidiyolo | Туре | Rinse | | DUPUZ | | 0.40 | added) | in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Y | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | d | | | 1 mL - HCL | 3. |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Υ | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | | | | N/A | =_, |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
|---------------------|---------------------|
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| | |
| | Additional Comments |

| | | | <u>Sr</u> | now Sampl | ing Field S | heet | | | | |
|-------------------------------|--|---|---|-----------------------|---|--|--|--|----------------|--|
| Δre | Area: | | 000 | | | No: Revision | | ENVI-177-0312 | | |
| 2000 | ective Dat | | 6-MAR-201 | 2 | | By: | D. [| Out. | | |
| Tas | | | now Sampli | | eet | _by. | <u>D. L</u> | Jui | _ | |
| | | | | | | Page: | _1 | of _ | 2 | |
| 3FN | IERAL | | | | | | | | | |
| | | - 567 | -4 | | 0019 | NI 22 | | 1/- | 211 | |
| | | = 27) | -4 | DATE (yyyy-n | nm-dd): <u>8017</u> | -04-03 | TIME (2 | 24:00): 16 | | |
| | IPLED BY: | | SS GC | TYPE OF SAN | IPLE: Dust E | ☑Water Qua | lity 🔲 🤇 | QAQC: | | |
| GPS | COORDINAT | TES /IITM | 7 16 7 7 | | 715 1 10 10 | 1 | 1 |) | | |
| | | LS (UTIVI) | 20026 |)E | 11) ((()) | ^N (Z | one)\ | d N | IAD 83 | |
| | CRIPTION: D | | | | 715 100 | | | | | |
| DES | CRIPTION: D | istance to I | Diavik | km | & Direction_ | | | | | |
| DES! | CRIPTION: D | istance to I | | km | | | | | | |
| DES! | CRIPTION: D | istance to I | Diavik | de) | & Direction | | n: Land | | | |
| OES CLIN Air T Prec | CRIPTION: D MATE CONDITION: Comp: (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) | Distance to I TIONS (if s _*C n / Mist / S | Diavik | km de) n:N | & Direction | Or d (knots): er: 0% / 10% | n: Land 6 6 / 25% / 5 | &/or Lake | 00% | |
| OES CLIN Air T Prec | CRIPTION: D MATE CONDITION: Temp: Temp: T | Distance to I TIONS (if s _*C n / Mist / S | Diavik | km de) n:N | & Direction | Or d (knots): er: 0% / 10% | n: Land 6 6 / 25% / 5 | &/or Lake | 00% | |
| OES CLIN Air T Prec | CRIPTION: D MATE CONDITION: Comp: (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) | Distance to I TIONS (if s _*C n / Mist / S | Diavik | km de) n:N | & Direction | Or d (knots): er: 0% / 10% | n: Land 6 6 / 25% / 5 | &/or Lake 0% / 75% / 1 Packed □ We | 00% et Dr | |
| OES CLIN Air T Prec | CRIPTION: D MATE CONDITION: Temp: -\frac{5}{5} ipitation: Rait in area: Vis | Distance to I TIONS (if s _*C n / Mist / S sible □ | ampling outsing Wind Direction Not Visible Length of Snow | weight of Tube | & Direction Wind Spee Cloud Cove Snow Cond | d (knots):_ er: 0% / 10% dition: Crysta | n: Land 6 6 / 25% / 5 | &/or Lake | 00% et Dr | |
| CLIN Air T Prec Dust | CRIPTION: D MATE CONDITION: Temp: -\^5 inpitation: Rai t in area: Vis | Distance to I FIONS (if s "C n / Mist / S sible Depth of Snow | ampling outsion Wind Direction Not Visible Length of | weight of Tube & Core | & Direction | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) | n: Land 6 6 / 25% / 5 | &/or Lake 0% / 75% / 1 Packed □ We | 00% et Dr | |
| CLIN Air T Prec Dust | CRIPTION: D MATE CONDITION: Temp: -\frac{1}{2} cipitation: Rait in area: Vis Core Number | Distance to I FIONS (if s "C n / Mist / S iible Depth of | ampling outsing Wind Direction Not Visible Length of Snow | weight of Tube | & Direction Wind Spee Cloud Cove Snow Cond Weight of Empty | d (knots):er: 0% / 10% dition: Crysta Water Content | n: Land 6 / 25% / 5 allized F | &/or Lake 0% / 75% / 1 Packed □ We | 00% on Dr | |
| CLIN Air T Prec Dust | CRIPTION: D MATE CONDITION: Temp: -\frac{5}{5} cipitation: Rai t in area: Vis Core Number | Distance to I FIONS (if s "C n / Mist / S sible Depth of Snow | ampling outsing Wind Direction Not Visible Length of Snow | weight of Tube & Core | & Direction Wind Spee Cloud Cove Snow Cond Weight of Empty Tube | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) | n: Land ☐ | 0% / 75% / 10 Packed ☑ We | 00% on Dr | |
| OES CLIN Air T Prec | CRIPTION: D MATE CONDITION: Temp: -\frac{1}{2} cipitation: Rait in area: Vis Core Number | Distance to I FIONS (if s "C n / Mist / S sible Depth of Snow | ampling outsing Wind Direction Not Visible Length of Snow | weight of Tube & Core | Wind Spee Cloud Cove Snow Cond Weight of Empty Tube (SWE) | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) *** | n: Land 6 / 25% / 5 allized F | 0% / 75% / 10 Packed ☑ We | 00% on Dr | |
| CLIN Air T Prec Dust | CRIPTION: D MATE CONDITION: Temp: -\frac{5}{5} cipitation: Rai t in area: Vis Core Number | Distance to I FIONS (if s "C n / Mist / S sible Depth of Snow | ampling outsing Wind Direction Not Visible Length of Snow | weight of Tube & Core | & Direction Wind Spee Cloud Cove Snow Cond Weight of Empty Tube (SWE) | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) *** | h: Land 6 / 25% / 5 6 / 25% / 5 Allized F Yes / No Y (N) | 0% / 75% / 10 Packed ☑ We | 00% et Di | |

| S | | 27 | 071) | 7 + | 40 | 10 | () | | |
|---------------------|----|----|------------|----------------|---------------|-------------|--------|--------|---|
| | 3 | 37 | 34 | 51 | 40 | 111 | YN | | |
| | 4 | | | | | | YN | | |
| | | | Dust (Min. | of 3 cores - T | otal Water Co | ntent SWE = | /> 25) | | |
| | 1 | 38 | 36 | 52.5 | 40 | 12.5 | Y (N) | | |
| | 2 | 39 | 36,5 | 52 | 40 | 12 | YN | | |
| | 3 | 39 | 35.5 | 51.5 | 40 | 1-1.5 | YN | | |
| 8 | 4 | 39 | 35 | 51.5 | 40 | 11.5 | Y (N) | 10 f 2 | |
| Water Quality Cores | 5 | 40 | 36 | 53 | UD | 13 | Y (N) | 1010 | |
| Qua | 6 | 40 | 37 | 53 | 41) | 13 | YM | | |
| ality | 7 | 40 | 38 | 57.5 | 40 | 13.5 | Y (N) | | |
| Co | 8 | Un | 38 | 57.5 | 40 | 13.5 | Y(N | | |
| es | 9 | 10 | - 0 | 7.1 | 10 | ().) | YN | | |
| | 10 | | | | | | YN | | - |
| | 11 | | | | | | YN | | - |
| | 12 | | | | | | YN | | |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} – Wt. of Empty Tube _{SWE} ***

Water Quality (Min. of 3 cores - Total Water Content SWE =/> 100)

| 2 | | 1 |
|---|---|---|
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| 1 | | ļ |
| | 3 | |
| ć | 5 | |

| | Snow Sampling Fie | ld Sheet | | | |
|-----------------|---------------------------|------------------|-------------------------------|------|---|
| Area: | 8000 | No: Revision: | ENVI-177-0312 R6 D. Dul | | |
| Effective Date: | 26-MAR-2012 | By: | | | |
| Task: | Snow Sampling Field Sheet | | - | | |
| | | Page: | 2 | of _ | 2 |

Total Volume of Melted Snow : 1130,000 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|----------|
| 1 | 115.6 mg | 233.2 mg | 117.6 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 115.6 mg | 233.2 mg | 117.6 mg | |

Water Quality Bottles

Total Volume of Melted Snow: 3175,000(mL)

1645,000

| Filling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|---------|-------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| Order | | Туре | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals > Total | 60 mL Falcon Tube | Υ | N | | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Υ | Υ | Ø | | | 1 mL - | |
| 3 | Nutrients | 120 mL plastic | Y | Υ | Ø | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Υ | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Υ | N | Ø | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | | | | |
|---------------------|--|--|--|--|
| | | | | |
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| | | Sı | now Sampl | ing Field S | heet | | | |
|--|---|--|----------------------------------|---|---|---|-----------------------------|-----------------|
| | | | | | No: | EN | VI-177-03 | 312 |
| Area: | _ | 000 | | | Revision | n: R6 | | |
| Effective D | _ | 6-MAR-201 | | | _Ву: | D. | Dul | |
| Task: | <u>S</u> | now Sampl | ing Field Sh | eet | | - | | |
| | | | | | Page: | _ 1 | _ of | 2 |
| SPS COORDIN | ATES (UTM) Distance to | 5-5 6 6 C : 5376 Diavik | 38 E. | 71508a | 24N(Z | one) | 12W | NAD 83 |
| Air Temp: | DITIONS (if s Cain / Mist / S | ampling outsion Wind Directio now / Ice / Mono Not Visible 図 | to the A de) on: <u>N</u> | ₩ * Wind Spee | d (knots):_ er: 0% / 10% dition: Crysta | <u>6</u> | 50% / 75% / | 100% |
| Air Temp: Precipitation: Foust in area: Core | DITIONS (if s | wind Direction | Weight of Tube & Core | Wind Spee Cloud Cove Snow Cone Weight of Empty Tube | d (knots): er: 0% / 10% | <u>6</u> | 00% / 75% / Packed ⊠ W | 100% Vet 🔲 D |
| Air Temp: Precipitation: Foust in area: Core | DITIONS (if s | Wind Direction Not Visible Length of Snow Core (cm) | Weight of Tube & Core (SWE) | Wind Spee Cloud Cove Snow Cone Weight of Empty Tube (SWE) | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) | 6 / 25% / 5 allized Yes/No | 50% / 75% / * Packed ⊠ W | 100% Vet 🔲 D |
| Air Temp: Precipitation: Foust in area: Core | DITIONS (if s | Wind Directionow / Ice / Mony Not Visible Manuel Core (cm) | Weight of Tube & Core (SWE) | Wind Spee Cloud Cove Snow Cond Weight of Empty Tube (SWE) | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) *** | /6 / (25% / 5 allized Yes/No Y (N) | 00% / 75% / Packed ⊠ W | 100% Vet 🔲 D |
| Precipitation: Foust in area: Core Number | DITIONS (if s Cain / Mist / S //sible Depth of Snow (cm) 43 | Wind Direction Not Visible Length of Snow Core (cm) | Weight of Tube & Core (SWE) 53,5 | Wind Spee Cloud Cove Snow Cond Weight of Empty Tube (SWE) | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) *** 13.5 | 6 /25% / 5 allized Yes / No Y (1) Y (1) | 00% / 75% / Packed ⊠ W | 100% Vet 🔲 D |
| Air Temp: Precipitation: Foust in area: Core Number | DITIONS (if s | Wind Directionow / Ice / Mony Not Visible Manuel Core (cm) | Weight of Tube & Core (SWE) | Wind Spee Cloud Cove Snow Cond Weight of Empty Tube (SWE) | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) *** | Yes/No Y (1) Y (1) Y (1) | 00% / 75% / Packed ⊠ W | 100% Vet 🔲 D |
| Core Number 1 2 3 | DITIONS (if s Cain / Mist / S //sible Depth of Snow (cm) 43 | Wind Direction Not Visible \(\overline{\mathbb{M}}\) Length of Snow Core (cm) | Weight of Tube & Core (SWE) 53.5 | Wind Spee Cloud Cove Snow Cond Weight of Empty Tube (SWE) 40 40 | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) *** 13.5 | Yes/No Y (N) Y (N) Y (N) Y (N) Y (N) | 00% / 75% / Packed ⊠ W | 100% Vet 🔲 D |
| Core Number 1 2 3 4 | DITIONS (if s | Wind Direction now / Ice / Mony Not Visible \(\text{Nony} \) Length of Snow Core (cm) 39 43 Dust (Min. of the control of t | Weight of Tube & Core (SWE) 53,5 | Wind Spee Cloud Cove Snow Cond Weight of Empty Tube (SWE) 40 40 | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) *** 13.5 | Yes/No Y (1) Y (25) | 00% / 75% / Packed ⊠ W | 100% Vet 🔲 D |
| Core Number 1 2 3 | DITIONS (if s Cain / Mist / S //sible Depth of Snow (cm) 43 | Wind Direction Not Visible \(\overline{\mathbb{M}}\) Length of Snow Core (cm) | Weight of Tube & Core (SWE) 53.5 | Wind Spee Cloud Cove Snow Cond Weight of Empty Tube (SWE) 40 40 | d (knots):er: 0% / 10% dition: Crysta Water Content (SWE) *** 13.5 | Yes/No Y (N) Y (N) Y (N) Y (N) Y (N) | 00% / 75% / Packed ⊠ W | 100% Vet □ [|

3 46 44 55 M 40 15 53.5 4 43 40 40 B 13.5 Y **Water Quality Cores** 43 5 55 15 Y Ø 48 48 6 58 Υ D 40 18 7 45 49 56 16 Y 40 8 YN 9 YN 10 YN 11 YN 12 YN Water Quality (Min. of 3 cores - Total Water Content SWE =/> 100)

*** Water Content SWE = Wt. of Tube & Core SWE - Wt. of Empty Tube SWE ***

Document #: ENVI-177-0312 R6 Effective Date: 26-March-2012

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| | Snow Sampling Fiel | d Sheet | | | |
|-----------------|---------------------------|-----------|------|-----------|-----|
| | | No: | EN | /I-177-03 | 312 |
| Area: | 8000 | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. E | Oul | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of | 2 |

Total Volume of Melted Snow : 1295,000 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|----------|
| 1 | 115.6 mg | 164.4 mg | 48.8 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | 39 | | | |
| Totals | 115.6 mg | 164.4 mg | 48.8 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 32 65.000(mL)

1760,000

| | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| Filling Order | Allalysis | Type | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Q | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | A | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Q | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
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| knots): |) | | |
| 00/ /400/ / | 25% / 5 | 50% / 75% / | 100% |
| kr | nots): | nots): | nots): 6 00/1/25%/50%/75%/ |

| Dust | Core Number | Depth of Snow (cm) | Length of Snow Core (cm) | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | Water Content (SWE) | Dust Present Yes / No Comments |
|---------------------|----------------|-----------------------------|--------------------------------|--------------------------------------|-------------------------------------|---------------------------|---------------------------------|
| C | 1 | 63 | 51 | 55 | НО | 15 | Y (1) Little bits of ice stud |
| Cores | 2 | 63 | 51 | 54.5 | 40 | 14.5 | YO |
| 0. | 3 | 63 | 55.5 | 55 | 46 | 15 | Y (N) |
| | 4 | 1// | | | | 10 | YN |
| | | | Dust (Min. o | of 3 cores - To | tal Water Cont | tent SWE =/ | > 25) |
| | 1 | 64 | 52 | 54 | 40 | 14 | Y (9) |
| | 2 | 63 | 51 | 54 | 40 | 14 | YN |
| | 3 | 64 | 56 | 55 | 40 | 15 | Y (9) |
| 8 | 4 | 64 | 53 | 54 | 40 | 14 | Y N 10f2 |
| Water Quality Cores | 5 | 65 | 63 | 58 | 40 | 18 | YN |
| S I | 6 | 65 | 53 | 545 | 40 | 14.5 | Y (N) |
| ality | 7 | 64 | 52 | 54.5 | 40 | 145 | Y (0) |
| co | 8 | | | | 10 | | YN |
| res | 9 | | | | | | YN |
| | 10 | | | | | | YN |
| | 11 | | | | | | YN |
| | 12 | | V- | | | | Y N |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} - Wt. of Empty Tube _{SWE} ***

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| | | No: | EN | /1-177-03 | 312 |
|-----------------|---------------------------|-----------|--------|-------------------------------|-----|
| Area: | 8000 | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. Dul | | |
| Task: | Snow Sampling Field Sheet | | | /I-177-03 Dul of | |
| | | Page: | 2 | of | 2 |

Total Volume of Melted Snow: 1370,000 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|----------|
| 1 | 115.9 mg | 265. 4 my | 149.5 mg | |
| 2 | | / | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 115.9 mu | 265 4 mg | 149.5 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 3245,000(mL)

1800.000

| Filling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|---------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|----------------------|--|
| Order | rulalyolo | Туре | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | d | | | 1 mL- HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Υ | d | | | 1mL - H₂SO4 | |
| 4 | Routine | 1000 mL plastic | Y | N | V | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| | Additional | Comments | | | |
|--|------------|----------|-----|---|--|
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| | | | Si | now Sampl | ing Field S | heet | | | |
|-----------------------------------|---|------------------|--|---|---------------------------------------|--|--|-----------------|-----------------------------|
| | | | | | | No: | El | VVI-177-03 | 312 |
| Area: Effective Date: Task: | | | 8000 | | | Revision | | | |
| | | A. 2000 | 26-MAR-201 | | | _By: | <u>D.</u> | Dul | |
| Id | SK. | 2 | Snow Sampli | ing Field Sh | neet | Danes | - 4 | | |
| | | | | | | Page: | _1 | _ of _ | 2 |
| GEI | NERAL | | | | | | | | |
| LOC | CATION NAM | E: SS | 3-7 | DATE (yyyy-n | nm-dd): 2017 | -04-03 | TIME | (24:00): 17 | :05 |
| SAI | MPLED BY: | 22 7 | 6 60 | TYPE OF SAM | MPLE: Dust [| □Water Qua | lity [| QAQC: | |
| GPS | COORDINA | TES (UTIV | n): 5363 | 43 E | 715136 | 8_N(z | one) | 12W | NAD 83 |
| ES | CRIPTION: [| Distance to | Diavik | km | & Direction | o | n: Land | X &/or Lak | ke 🔽 |
| CLI | MATE CONDI | TIONS (if | sampling outsid | do) | | | | | 1,000 |
| | | | | - | 122.72 | 2 20 000 | r | | |
| | | | Wind Directio | | The second second second second | d (knots): | | agy stations of | \sim |
| Dus | t in area: Vis | iii / iviist / : | Snow / Ice / None Not Visible ☑ | 9 | Snow Con | er: 0% / 109 | 6 / 25% / | 50% / 75% / 1 | 100% Vet □ Dry □ |
| | | | | | CHOW COM | undon. Grysta | allizeu [_ | ı∟acked⊠i M | vet \square Dry \square |
| | C | Depth | The second of th | Weight of | Weight of | Water | | Dunt Bro | |
| | Core Number | of | Snow | Tube | Empty | Content | | Dust Pres | sent |
| Dus | Number | Snow (cm) | Core (cm) | & Core (SWE) | Tube (SWE) | (SWE) | Yes / No | Commo | onte |
| st C | 1 | 41 | 46 | 57.5 | 40 | 17.5 | Y D | Commi | ents |
| O | | | 11 | | LIN | | 11 6 | | |
| Cores | 2 | 46 | 46 | 57.5 | 40 | 11.2 | YW | | |
| Cores | 3 | 46 | 46 | 57 | 40 | 17.5 | Y (0) | | |
| Cores | | | and the second s | - | | | 1 | | |
| Cores | 3 | | 45 | 57 | | 17 | Y N | | |
| Cores | 3 4 | | 45 | 57 | 40 | 17 | Y N | | |
| Cores | 3 4 | 46 | Ust (Min. o | 57 of 3 cores – To | 40 tal Water Con- | 7 tent SWE =/: | Y N Y N | | |
| Cores | 3 4 | 45 | Dust (Min. o | 57 of 3 cores – To 56.5 | 40 tal Water Con- | 7 tent SWE =/: | Y N Y N > 25) | | |
| | 3 4 1 2 | 45 | Ust (Min. c) 45 45 | 57 of 3 cores – To 56.5 56.5 | 40 Hal Water Con- 40 Ho | 17 tent SWE =/: [6.5 16.5 | Y N Y N > 25) Y N Y N | | |
| | 3 4 1 2 3 4 5 | 45 46 45 45 | Ust (Min. o 45 45 45 | 57 of 3 cores – To 56.5 56.5 | 40 tal Water Con- | | Y N Y N > 25) Y N Y N Y N | | |
| | 3 4 1 2 3 4 5 6 | 45 46 45 | Ust (Min. o 45 45 45 44 | 57 of 3 cores – To 56.5 56.5 51 56.5 | 40 tal Water Con 40 40 40 | 17 tent SWE =/: 16.5 16.5 17 16.5 | Y N Y N > 25) Y N Y N Y N Y N | | |
| | 3 4 1 2 3 4 5 6 7 | 45 46 45 45 | Ust (Min. c) 45 45 45 45 47 | 57 of 3 cores – To 56.5 56.5 57 56.5 | 40 40 40 40 40 40 | 17 tent SWE =/: 16.5 16.5 | Y N Y N > 25) Y N Y N Y N Y N Y N | | |
| Dust Cores Water Quality Cor | 3 4 1 2 3 4 5 6 7 8 | 45 46 45 45 | Ust (Min. c) 45 45 45 45 47 | 57 of 3 cores – To 56.5 56.5 57 56.5 | 40 40 40 40 40 40 | 17 tent SWE =/: 16.5 16.5 17 16.5 | Y N Y N > 25) Y N Y N Y N Y N Y N Y N Y N | | |
| Cores Water Quality Cores | 3 4 1 2 3 4 5 6 7 8 9 | 45 46 45 45 | Ust (Min. c) 45 45 45 45 47 | 57 of 3 cores – To 56.5 56.5 57 56.5 | 40 40 40 40 40 40 | 17 tent SWE =/: 16.5 16.5 17 16.5 | Y N Y N > 25) Y N Y N Y N Y N Y N | | |
| | 3 4 1 2 3 4 5 6 7 8 9 | 45 46 45 45 | Ust (Min. c) 45 45 45 45 47 | 57 of 3 cores – To 56.5 56.5 57 56.5 | 40 40 40 40 40 40 | 17 tent SWE =/: 16.5 16.5 17 16.5 | Y N Y N > 25) Y N Y N Y N Y N Y N Y N | | |
| | 3 4 1 2 3 4 5 6 7 8 9 | 45 46 45 45 | Ust (Min. c) 45 45 45 45 47 | 57 of 3 cores – To 56.5 56.5 57 56.5 | 40 40 40 40 40 40 | 17 tent SWE =/: 16.5 16.5 17 16.5 | Y N N 25) Y N N N N N N N N N N N N N N N N N N N | | |

Document #: ENVI-177-0312 R6 Effective Date: 26-March-2012

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| Snow Sampling Fiel | d Sheet | | | |
|---------------------------|---------------------|--|--|--|
| | No: | EN | /I-177-0 | 312 |
| 8000 | Revision: | R6 | | |
| 26-MAR-2012 | By: | D. Dul | | |
| Snow Sampling Field Sheet | | | | |
| | Page: | 2 | of | 2 |
| | 8000 26-MAR-2012 | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet | 8000 Revision: R6 26-MAR-2012 By: D. I | 8000 Revision: R6 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet |

Total Volume of Melted Snow : 1635,000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 115.1 mg | 240.7 mg | 125.6 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 115.1 ms | 240.700 | 125.6mm | |

Water Quality Bottles

Total Volume of Melted Snow : 3115,000 (mL)

1560,000

| F1IC. a | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| Filling Order | Allaryolo | Туре | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | 1 mL- HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Υ | Ø | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
|---------------------|----|
| | NI |
| | |
| | |
| | |

| Snow Sampling Fiel | d Sheet | | | |
|---------------------------|--|--|--|--|
| 8000 | No: Revision: | ENVI-177-0312 R6 D. Dul | | |
| 26-MAR-2012 | By: | | | |
| Snow Sampling Field Sheet | | | | |
| | Page: | 1 of 2 | | |
| S3-8 DATE (yyyy-mm-dd): | 017-04-03 | TIME (24:00): 16:05 | | |
| | 8000 26-MAR-2012 Snow Sampling Field Sheet | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet Page: | | |

| LOCATION NAME: 553-8 | DATE (yyyy-mm-dd): <u>2017-04-03</u> TIME (24:00): 16:1 | 05 |
|--|---|-------------|
| SAMPLED BY: JG.66,55 | TYPE OF SAMPLE: Dust Water Quality QAQC: | |
| GPS COORDINATES (UTM): 5366 | 93 E 7150806 N (Zone) 12 | NAD 83 |
| DESCRIPTION: Distance to Diavik I or Road | SIA SE km & Direction On: Land ∨ Lak | ke 🗸 |
| CLIMATE CONDITIONS (if sampling outs | side) | |
| Air Temp:\5_*C Wind Direction | | |
| Precipitation: Rain / Mist / Snow / Ice / Nor Dust in area: Visible ☐ Not Visible ☑ | | 100% |
| Dust in area. Visible Not Visible | Snow Condition: Crystallized ☐ Packed ☑ W | Vet ∐ Dry ∐ |

| Dust | Core Number | Depth of Snow (cm) | Length of Snow Core (cm) | Weight of Tube & Core (SWE) | Weight of Empty Tube (SWE) | Water Content (SWE) | Yes / No | Dust Present |
|---------------------|----------------|-----------------------------|--------------------------------|--------------------------------------|-------------------------------------|---------------------------|----------|--------------|
| tc | 1 | 40 | 40 | 52 | 40 | 13 | YN | |
| Cores | 2 | 40 | 40 | 52.5 | 40 | 12.5 | YN | |
| | 3 | 40 | 39 | 52.0 | 40 | 12 | YN | |
| | 4 | - | 4.7 | 5 | | | YN | |
| | | | Dust (Min. o | | tal Water Cont | tent SWE =/ | > 25) | |
| | 1 | 41 | 40 | 51 | 40 | 17 | Y | T |
| | 2 | 41 | 41 | 53 | 40 | 13 | YN | |
| | 3 | 44 | 40 | 53 | 40 | -13 | YN | V |
| 8 | 4 | 41 | 40 | 52 | 40 | 12 | YN | 10fd |
| ater | 5 | 41 | 40 | 52 | 40 | 12 | Y (N) | |
| Qu | 6 | 41 | 40 | 52 | 40 | 12 | YN | |
| ality | 7 | 41 | 40.5 | 51.5 | 40 | 12.5 | YN | |
| Water Quality Cores | 8 | 40 | 39 | 51 | 40 | 12 | YN | |
| es | 9 | 41 | 40 | 52 | 40 | 12 | YW | |
| | 10 | | | | | | YN | |
| | 11 | | 1 | | | | YN | |
| | 12 | | | | | | YN | |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} - Wt. of Empty Tube _{SWE} ***

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|---|---|--|
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| É | 5 | |

| | | | <u> </u> | now San | принд | i ioia c | No: | F | NVI-177-0312 |
|----------|---|--|----------|----------------|---------------------------------------|------------------|---------------------------------------|--|--|
| rea: | | 8000 | | | | | Revis | | 26 |
| ffective | e Date: | | R-201 | 2 | | | _Ry: | 1 |). Dul |
| ask: | | | | ing Field | Sheet | o n | | _ | |
| | | _ | | | | | Page: | | 2 of 2 |
| ust S | ample l | Filters | | | | Total Vo | olume of | Melted S | now : <u> 85000</u> (m |
| Filter # | Weight | of Filter | Filte | er + Resid | due | Residue | Weigh | t | Comments |
| 1 | 114.6 | | | 154.6 | | 40 | y mu | | |
| 2 | 111.0 | 1,01 | | .0 1. (7) | | rV | 1 17 | | |
| 3 | | | | | | | | | |
| 4 | | | 1 | | | | | | |
| Totals | 114.5 | 1 | 11 | 54.6 mg | | 110 | . y my | | |
| illing ' | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
| | | Туре | Rinse | | GW | | | when added) | Location preserved if no in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Y | N | GW ☑ | | | | |
| 1 2 | 2.45.40.40.40.40.4 | 60 mL Falcon | | N Y | 1 | | | added) | |
| 2 | Total Total | 60 mL Falcon Tube 40 mL clear | Y | | Ø | | | NA 1 mL | |
| 2 | Total Total Mercury | 60 mL Falcon Tube 40 mL clear glass | Y | Υ | d d | | | NA TIME HCL | |
| 3 4 | Total Total Mercury Nutrients | 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL | Y | Y | A | | | NA 1 mL HCl H2SO | |
| 3 4 | Total Total Mercury Nutrients Routine | 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Y Y Y Y | Y N N W, DUPW1 | □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ | | □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ | NA 1 mL HC 1mL H ₂ SO N/A N/A | |

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| | | | Sr | now Sampl | ing Field S | heet | | | | |
|---------------------|-----------------|---------------------|----------------------------------|-----------------------------|----------------------------|---------------------------|------------|---------------|-------------|--|
| Avec: 8000 | | | | | | No: | EN | ENVI-177-0312 | | |
| Area: | | _ | 3000 | | | Revision | n: R6 | | | |
| | ective Da | | 26-MAR-201 | | | _By: | D. D |)ul | | |
| Tas | sk: | 5 | Snow Sampli | ing Field Sh | ieet | | | | | |
| | | | | | | Page: | _1_ | of | 2 | |
| LOC | II LLD DI. | 70,00 | | THE OF SAN | IPLE: Dust L | ∠Jvvater Qua | lity Q | AQC: | | |
| GPS | COORDINA | TES (UTM |): <u>531 491</u> | E | 7152206 | N (Z | one) | N | _NAD 83 | |
| | | | Diavik | | | | | | | |
| CLIP | MATE CONDI | TIONS (if | sampling outsid | dal | | | 2 | | | |
| | | | Wind Directio | | | | 10 | | | |
| | | | | | | d (knots): | | | | |
| Prec | ipitation: Ka | in / Mist / S | Snow / Ice / None Not Visible | a | Cloud Cove | er: 0% /10% | / 25% / 50 |)% / 75% / | 100% | |
| Jus | . Ili alta. Vis | sible 🗀 | Not visible | | Snow Cond | dition: Crysta | Illized L | acked ∐ \ | Net ∐ Dry l | |
| סר | Core Number | Depth of Snow | Length of Snow Core (cm) | Weight of Tube & Core | Weight of Empty Tube | Water Content (SWE) | | Dust Pre | | |
| tst | 1 | (cm) | 5. | (SWE) | (SWE) | *** | Yes / No | Comm | ients | |
| Dust Cores | 1 | 35 | 21 | 44 | | 4 | Y (N) | | | |
| res | 2 | 34 | 7-8 | 45 | | 5 | Y N | | | |
| | 3 | 35 | 24 | 45 | | 5 | YN | | | |
| | 4 | 39 | 21 | 44 | | 4 | YN | | | |
| | | | Dust (Min. c | of 3 cores - To | tal Water Con | tent SWE =/> | > 25) | | | |
| 5+ | 1 | 44 | 37 | 48 | | 8 | YN | | | |
| 7. | 2 | | | 1 0 | | | YN | | | |
| | 3 | | 7.5 | | | | YN | | | |
| 5 | 4 | | | | | | YN | | | |
| ate | 5 | | | | | | YN | | | |
| Q | 6 | | | | | | YN | | | |
| alit | 7 | | | | | | YN | | | |
| < | 8 | | | | | | YN | | | |
| Ö | | | | | | | YN | | | |
| Water Quality Cores | 9 | | | | | | | | | |
| Cores | 9 | | | | | 1 | A 1/1 | | | |
| Cores | 10 | | | | | | YN | | | |
| Cores | | | | | | | YNYN | | | |

| 1 | J |
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| 7 | 5 |
| - | 3 |
| F | |
| | 3 |
| 2 | + |
| C | |

| Snow Sampling Fiel | ld Sheet | | | | |
|---------------------------|---------------------|---|--|---|--|
| | No: | ENVI-177-0312 | | | |
| 8000 | Revision: | R6 | | | |
| 26-MAR-2012 | By: | D. Dul | | | |
| Snow Sampling Field Sheet | | | | | |
| | Page: | 2 | of _ | 2 | |
| | 8000 26-MAR-2012 | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet | 8000 Revision: R6 26-MAR-2012 By: D. I Snow Sampling Field Sheet | 8000 Revision: ENVI-177-03 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet | |

Total Volume of Melted Snow : 990,000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------------------------|
| 1 | 114.5 | 145.5 | 31.0 | twigs, leaves, moss in san |
| 2 | 115.7 | 166.8 166.6 | 50.9 | |
| 3 | | | | |
| 4 | | | | |
| Totals | 230.2 | 312.1 | 81.9 mg | |

Water Quality Bottles

| Total Volume | of Melted | Snow . | (mL) |
|---------------|-----------|--------|------|
| I Otal Volume | OI MICHEL | OHOW. | |

| Fillian | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments DI Batch # for QAQC, |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| Filling Order | Allaryolo | Туре | Rinse | | | | | added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Υ | | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Υ | Υ | | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | | | | | |
|---------------------|--|--|--|--|--|
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| E | 7 |
| F | 3 |
| 7 | 100 |
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|------------------------|--|---------------------------|---------------------------------|--|----------------|----------------|---|------------|---|
| | | | 000 | | | No: | - | NVI-177-0 | 0312 |
| Are | | | 000 | | | Revision | V 2500 | | J. |
| Effective Dar Task: | | | 6-MAR-201 | | 224 | By: | <u>D.</u> | Dul | |
| iask. | | 3 | now Sampli | ng Fleid Sn | eet | Dones | | | |
| | | | | | | Page: | _1 | _ of | 2 |
| GEN | IERAL | | | | | | | | |
| .00 | ATION NAM | E: 454 | GC -7 | DATE (yyyy-n | nm-dd): 2017 | 2-04-17 | TIME | (24:00): / | 325 |
| AN | IPLED BY: | JG | GC | TYPE OF SAN | IPLE: Dust | Water Qual | lity 🔲 | QAQC: | |
| 3PS | COORDINA | TES (UTM) | 053 | 1351 E | 715225 | N (Ze | one) | 17 | NAD 83 |
| | | | Diavik | | | | | / | |
| | | | ampling outsid | | | | 20, 0,20,467, | | |
| | | | Wind Direction | The state of the s | 222-22 | i i | 0 | | |
| | | | | | | d (knots): | | 0 | |
| | t in area: Vis | in / Mist / Si sible 🏻 | now / Ice / None Not Visible | | Cloud Cove | er: 0% / 10% | / 25% / | 50% / 75% | / 100% Wet |
| 10.00 | 10.000 | | THE VIOLE LE | | Show Conc | illion. Crysta | ilizeu 🖸 | Packed L | vvet 🗀 Dry [|
| | C | Depth | Length of | Weight of | Weight of | Water | | Dust Pr | rocent |
| | Core | lumber Snow | OI CITOW | Tube & Core | Empty | Content | | Dust Pr | esent |
| Du | Number | Snow Core (cm) | | Tube | (SWE) | | 727 . 73 | 2.7.5 | |
| 7 | | (CIIII | | LOVVE | (SWE) | *** | Yes / No | Comr | ments |
| 2 | 1 | 43 | 35 | (SWE) | (SWE) | 8 | Yes/No Y (N) | | ments some two |
| let Corne | 1 2 | | 35 25 | 48 | | | | | 331000000000000000000000000000000000000 |
| Toron | | 43 | 35 25 35 | 48 | | | Y (N) | | 3310 |
| et Coron | 2 | 43 | 35 35 36 | 48 45 48 | 40 | | Y (N) | Removed | some two |
| of Corns | 2 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 | 40 | 8 5 | Y (N) Y (N) Y (N) | Removed | 3310 |
| Diet Corns | 2 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 | 40 40 40 | 8 5 | Y (N) Y (N) Y (N) | Removed | some two |
| Comp | 3 4 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 | 40 40 40 | 8 5 | Y (N) Y (N) Y (N) Y (N) Y (N) | Removed | some two |
| Comp | 2 3 4 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 | 40 40 40 | 8 5 | Y (N) | Removed | some two |
| | 2 3 4 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 | 40 40 40 | 8 5 | Y N Y N Y N Y N Y N Y N | Removed | some two |
| | 2 3 4 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 | 40 40 40 | 8 5 | Y N Y N Y N Y N Y N Y N | Removed | some two |
| | 2 3 4 1 2 3 4 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 | 40 40 40 | 8 5 | Y (N) | Removed | some two |
| | 2 3 4 1 2 3 4 5 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 of 3 cores – To | 40 40 40 | 8 5 | Y N) Y N) Y N) Y N) Y N Y N Y N Y N Y N Y N Y N | Removed | some two |
| 107 | 2 3 4 1 2 3 4 5 6 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 of 3 cores – To | 40 40 40 | 8 5 | Y (N) | Removed | some two |
| | 2 3 4 1 2 3 4 5 6 7 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 of 3 cores – To | 40 40 40 | 8 5 | Y N) Y N) Y N) Y N) Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Removed | some two |
| | 2 3 4 1 2 3 4 5 6 7 8 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 of 3 cores – To | 40 40 40 | 8 5 | Y (N) | Removed | some two |
| | 2 3 4 1 2 3 4 5 6 7 8 9 | 43 41 48 | 35 35 36 Dust (Min. c | 48 45 48 49 of 3 cores – To | 40 40 40 | 8 5 | Y (N) | Removed | some two |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} – Wt. of Empty Tube _{SWE} ***

Document #: ENVI-177-0312 R6 Effective Date: 26-March-2012

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|------------------|---|--|-----------------|---------------------|------------------|------------------|------------------|--|------|--|---------------------------|
| | | | | | | | No: | _ | | 1-177-03 | 312 |
| rea: | | 8000 | | | | | _Revis | _ | R6 | 32f | |
| | ve Date: | | R-201 | | Chast | | _By: | <u>-</u> | D. D | ui | |
| ask: | | Snow | Sampi | ing Field | Sneet | | Page: | -3-2 | 2 | of | 2 |
| | | | | | | | . ugo. | - | | | |
| Dust | Sample I | Filters | | | | Total Vo | olume of | Melted S | Snow | v: 960 |) <u>.000</u> n |
| Filter | # Weight | of Filter | Filte | er + Resid | due | Residue | Weigh | t | С | omment | s |
| 1 | 114 | . 2 mg | 156.H | 55-9 | ma 2 | 11.94 | 19-41. | 7. | | | |
| 2 | 11.1 | . a ray | 100.11 | | | | 41 | | | | |
| 3 | | | | | | -6- | | | | | |
| 4 | | | | | | | | | | | |
| Tota | Is 14. | 0 | 1 | 56.1 | | U | 1.9 | | | | |
| | | 1 1900 PB 1 | 2012 22 | | Sample | | Sample | Preserved | | | omments |
| Filling Order | Analysis | Bottle Type | Triple Rinse | Preserve | Sample Type * | Sample Type * | Sample Type * | (circle when added) | | DI Batch # Location pre in field, lab | for QAQC, served if no |
| | Analysis Metals Total | | | Preserve N | | | | (circle when | | DI Batch # Location pre | for QAQC, served if no |
| Order | Metals | Type 60 mL Falcon | Rinse | | Type * | Type * | Type * | (circle when added) | | DI Batch # Location pre | for QAQC, served if no |
| Order 1 | Metals Total | 60 mL Falcon Tube 40 mL clear | Rinse | N | Type * | Type * | Typė * | (circle when added) NA | | DI Batch # Location pre | for QAQC, served if no |
| Order 1 2 | Metals Total Total Mercury | 60 mL Falcon Tube 40 mL clear glass | Y | N | Type* | Typė* | Type* | (circle when added) NA 1 mL - HCL 1mL - | | DI Batch # Location pre | for QAQC, served if no |
| 1 2 3 | Metals Total Total Mercury Nutrients | Falcon Tube 40 mL clear glass 120 mL plastic | Y Y Y | N Y Y | Typė* | Typė* | Type* | (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ | | DI Batch # Location pre | for QAQC, served if no |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y Y Y | N Y Y N | Type* | Typė* | Type * | (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A N/A | | <u>DI Batch #</u> Location pre in field, lab | for QAQC, served if no |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y Y Y | N Y Y | Type* | Typė* | Type * | (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A N/A | | <u>DI Batch #</u> Location pre in field, lab | for QAQC, served if no |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y Y Y | N Y Y N N SW, DUPW1 | Type* | Typė* | Type* | (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A N/A | | <u>DI Batch #</u> Location pre in field, lab | for QAQC, served if no |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y Y Y | N Y Y N N SW, DUPW1 | Type* | Typė* | Type* | (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A N/A | | <u>DI Batch #</u> Location pre in field, lab | for QAQC, served if no |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y Y Y | N Y Y N N SW, DUPW1 | Type* | Typė* | Type* | (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A N/A | | <u>DI Batch #</u> Location pre in field, lab | for QAQC, served if no |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y Y Y | N Y Y N N SW, DUPW1 | Type* | Typė* | Type* | (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A N/A | | <u>DI Batch #</u> Location pre in field, lab | for QAQC, served if no |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y Y Y | N Y Y N N SW, DUPW1 | Type* | Typė* | Type* | (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A N/A | | <u>DI Batch #</u> Location pre in field, lab | for QAQC, served if no |

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| | | | Sr | now Sampl | ing Field S | heet | | | |
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| | | 534 | 20200 | | | No: | EI | VI-177 | -0312 |
| | ea: | _ | 000 | | | _Revision | | | |
| | fective Dat sk: | | 6-MAR-201 | | 0.00 | _By: | D. | Dul | |
| ıa | SK. | 5 | now Sampli | ng Field Sh | eet | Description | | | |
| | | | | | | Page: | _1 | _ of | 2 |
| GEN | NERAL | | | | | | | | |
| | | 554 | -3 | DATE (www.m | m-dd): 2013 | 1-NU-07 | TIME | (24.00). | 1250 |
| SAN | /IPLED BY: | 111- 6 | el | TYPE OF SAM | IPLE: Dust F | Water Qua | lity 🖂 | OAOC: | 6 |
| GPS | COORDINAT | TES (UTM) | : 05313 | 21. E | 71524 | 76 N/Z | one) | | NAD 83 |
| | | | Diavik | | | | | | |
| | | | | | G 2.100001 | | i. Land | @ &/OI | Lake |
| | | | ampling outsid | *** | | | i A | | |
| | | | Wind Direction | | | d (knots): | | |) |
| Dus | tin area: Vis | ible 🔲 | Not Visible | | | er: 0% / 10% dition: Crysta | | | 6 / 100% Wet □ Dry |
| ÷ | | D | | | | | | , dolled L | a vvet in Diy |
| | Core | Depth of | Length of Snow | Weight of Tube | Weight of | Water Content | | Dust F | resent |
| | Number | Snow | Core (cm) | & Core | Empty Tube | (SWE) | | | , |
| ust | | (cm) | | (SWE) | (SWE) | *** | Yes / No | Com | ments |
| Dust Cores | 1 | 57 | 54 | 53 | 40 | 13 | 7 | Removed | forme |
| res | 2 | 60 | 57 | 55 | 40 | 15 | Y (N) | Remove | d vegitation |
| | 3 | 55 | 53 | 52 | 40 | 12 | YN | Romareo | lves |
| | 4 | | | | | | YN | | |
| | | | D 4 (BR: | f 3 cores - To | tal Water Cont | tent SWE =/> | 25) | | |
| | | | Dust (IVIII). C | | | | 20) | | |
| | 1 | | Dust (IVIII). C | | | | Y N | | |
| | 1 2 | | Dust (iviin. c | | | | | | |
| | | | Dust (Min. c | | | | YN | | |
| \$ | 2 | | Dust (Win. c | | | | Y N Y N | | |
| Wate | 2 | | Dust (Win. c | | | | Y N Y N Y N | | |
| | 3 4 | | Dust (Win. c | | | | Y N Y N Y N Y N | | |
| | 2 3 4 5 | | Dust (Win. c | | | | Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 2 3 4 5 6 7 | | Dust (Win. c | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| Water Quality Cores | 2 3 4 5 6 7 8 | | Dust (Win. c | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 2 3 4 5 6 7 8 | | Dust (Win. c | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 2 3 4 5 6 7 8 9 | | Dust (Win. c | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 2 3 4 5 6 7 8 | | Dust (Win. c | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |

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| | Snow Sampling Fiel | d Sheet | | | |
|-----------------|---------------------------|-----------|--------|-----------|-----|
| | | No: | EN | /1-177-03 | 312 |
| Area: | 8000 | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. Dul | | |
| Task: | Snow Sampling Field Sheet | | | | |
| 1.75 | | Page: | 2 | of _ | 2 |

| Total Volume of Melted | Snow :_ | 1435.000 | _(mL |
|------------------------|---------|----------|------|
|------------------------|---------|----------|------|

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 114.9 mg | 178.5 mg | 63.6 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 114.9 | 178.5 | 63.6 | |

Water Quality Bottles

| Total Volume of Melted Snow : | (mL) |
|-------------------------------|------|
|-------------------------------|------|

| | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments <u>DI Batch # for QAQC</u> , Location preserved if not |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|---|
| Filling Order | Allalysis | Туре | Rinse | 11000110 | | | | added) | in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Y | N | | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Υ | | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
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| | | | <u>Sr</u> | now Sampl | ing Field S | heet | | | |
|--------------------------------|--|--|---|--|--------------------|--|---|-----------------------|-----------------------|
| | 10.7 | - | | | | No: | | IVI-177- | 0312 |
| Area: Effective Da Task: | | _ | 000 | 0 | | _Revision | 10.00 | | |
| | | | 6-MAR-2012 now Sampli | | oot | _By: | <u>D.</u> | Dul | |
| 1 4 | JK. | | now Sampii | ng riela Sn | eet | Page: | 1 | of | 2 |
| GEN | VERAL | | | | | - | | | |
| LOC | CATION NAM | E: 554- JG GC | 4 | DATE (yyyy-m TYPE OF SAM | nm-dd): 201 | 7 -04-07 Water Qua | TIME | (24:00): | 1705 |
| GPS | COORDINA | TES (UTM) | : 531142 | Е | 715316 | 8 N/Z | one) | 14 | NAD 83 |
| | | | Diavik | | | | | | |
| Pred | ipitation: Ra | in / Mist / S | Wind Direction now / Ice / None Not Visible ☑ | | Cloud Cove | d (knots): er: 0% / 10% dition: Crysta | 6/25% | 50% / 75% Packed ☑ | / 100% Wet □ Dry |
| | Core | Depth of | Length of Snow | Weight of Tube | Weight of Empty | Water Content | | Dust P | resent |
| Dus | Number | Snow (cm) | Core (cm) | & Core (SWF) | Tube (SWF) | (SWE) | Ves / No | Com | mente |
| Dust C | 1 | Snow (cm) | Core (cm) | & Core (SWE) | Tube (SWE) | 1000 3000000 | Yes / No Y N | Com | ments |
| Dust Core | | (cm) | 72 | (SWE) 55 | | 1000 3000000 | Yes / No Y N | Com | ments |
| Dust Cores | 1 | (cm) 7 °f | 7 ₂ | (SWE) 55 58 | | 1000 3000000 | YN | Com | ments |
| Dust Cores | 1 2 | (cm) 74 74 | 72 | (SWE) 55 | | 1000 3000000 | YN | Com | ments |
| Dust Cores | 1 2 3 | (cm) 74 74 | 72 76 69 | (SWE) 55 58 58 | (SWE) | *** | Y (N) Y (N) Y (N) Y (N | Com | ments |
| Dust Cores | 1 2 3 | (cm) 74 74 | 72 76 69 | (SWE) 55 58 | (SWE) | *** | Y (N) Y (N) Y (N) Y (N) Y (N) 25) | Com | ments |
| Dust Cores | 1 2 3 4 | (cm) 79 74 74 | 72 76 69 Dust (Min. c | (SWE) 55 58 58 of 3 cores – To | (SWE) | *** tent SWE =/> | Y (N) Y (N) Y (N) Y (N | Com | ments |
| Dust Cores | 1 2 3 4 | (cm) 79 74 74 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To | (SWE) | *** tent SWE =/> | Y (N) | V | ments |
| S | 1 2 3 4 | (cm) 79 74 74 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To | (SWE) | tent SWE =/> | Y (N) | Com | ments |
| V | 1 2 3 4 | (cm) 79 74 74 74 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To | (SWE) | **** tent SWE =/> | Y (N) | V | ments |
| V | 1 2 3 4 1 2 3 4 4 | (cm) 79 74 74 74 75 75 75 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To 59 59 59 | (SWE) | tent SWE =/2 | Y (N) | 10fd | ments |
| V | 1 2 3 4 5 5 | (cm) 79 74 74 75 75 75 75 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To 59 59 59 | (SWE) | tent SWE =/> | Y (N) | V | ments |
| V | 1 2 3 4 5 6 | (cm) 79 74 74 75 75 75 75 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To 59 59 59 | (SWE) | tent SWE =/2 | Y (N) | 10fd | ments |
| V | 1 2 3 4 5 6 7 | (cm) 79 74 74 75 75 75 75 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To 59 59 59 | (SWE) | tent SWE =/2 | Y (N) | 10fd | ments |
| | 1 2 3 4 5 6 7 8 | (cm) 79 74 74 75 75 75 75 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To 59 59 59 | (SWE) | tent SWE =/2 | Y (N) | 10fd | ments |
| × | 1 2 3 4 1 2 3 4 5 6 7 8 | (cm) 79 74 74 75 75 75 75 | 72 76 69 Dust (Min. o | (SWE) 55 58 58 of 3 cores – To 59 59 59 | (SWE) | tent SWE =/2 | Y (N) | 10fd | ments |

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| Snow Sampling Fiel | d Sheet | | | | | |
|---------------------------|---------------------|--|--|--|--|--|
| | No: | | ENVI-177-0312 | | | |
| 8000 | Revision: | R6 D. Dul | | | | |
| 26-MAR-2012 | By: | | | | | |
| Snow Sampling Field Sheet | | | | | | |
| | Page: | 2 | of | 2 | | |
| | 8000 26-MAR-2012 | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet | 8000 Revision: R6 26-MAR-2012 By: D. | 8000 Revision: R6 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet | | |

| Dust | Sam | nle | Fil | ters |
|------|-------|-----|------|-------|
| Dust | Jaili | hie | 1 11 | rei 2 |

| Total Volume of Melted Snow : | <i>150,000</i> (ml |
|-------------------------------|--------------------|
|-------------------------------|--------------------|

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|----------|
| 1 | 1154 mg | 155.9 mg | 40.5 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 1154 | 155.9 | 40.5 | |

Water Quality Bottles

Total Volume of Melted Snow : 3630,000 (mL)

1805,000

| Filling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments DI Batch # for QAQC, |
|---------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|--|--|
| Order | Palalyolo | Туре | Rinse | | DOGGW | | | added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Υ | Y | ∀ | | | 1 mL HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | o T | 1mt= H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
|---------------------|--|
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Document #: ENVI-177-0312 R6 Effective Date: 26-March-2012 This is not a controlled document when printed

| | | | <u>Sı</u> | now Sampl | ing Field S | heet | | | |
|----------------------------------|---|----------------------|---------------------------------|-----------------|----------------------|---|--|-----------------|-----------|
| | | | S. e. V. | | | No: | EN | √I-177-0 | 312 |
| Area: Effective Date Task: | | _ | 000 | | | Revision | 4.00 | | |
| | | | 6-MAR-201 | | | _By: | D. I | Dul | |
| ias | sk: | 5 | Snow Sampli | ng Field Sh | eet | _ | | | |
| | | | | | | Page: | _1_ | of _ | 2 |
| GEN | IERAL | | | | | | | | |
| LOC | ATION NAME | E: 554 | -5-4 | DATE (yyyy-n | nm-dd): 701 | 7-04-07 | TIME (2 | 4:00): | 106 |
| SAIV | IPLED BY: | JG | GC | TYPE OF SAM | //PLE: Dust [| - - - - - - - - - - - - - - - - - - - | lity 🖟 | DAQC: DW | pow |
| GPS | COORDINA | TES (UTM) | 05314 | 109 E | 7154119 | N (Z | one) / | 2 | NAD 83 |
| | | | Diavik | | | | | | |
| | | | sampling outsi | | | | 7 | | |
| | | | | | | | 1 | | |
| | | | Wind Directio | | | d (knots): | | | |
| Prec | ipitation: Rai | in / Mist / S | now / Ice / None Not Visible | | | er: 0% / 10% | | | |
| Duc. | illi area. | Sible L | Not visible | | Show Cond | dition: Crysta | illized L. P | acked LLV | Net ∐ Dry |
| | | Depth L | | Weight of | Weight of | Water | | Carrier at 1997 | |
| | Core | of | Snow | Tube | Empty | Content | | Dust Pre | esent |
| Du | Number | Snow | Core (cm) | & Core | Tube | (SWE) | | Late | |
| St | 1 | (cm) | 10 | (SWE) | (SWE) | *** | Yes/No Y N | Comm | nents |
| Dust Cores | 2 | 20 | 50 | 53 | 40 | 13 | Y (N) | | |
| es | 3 | 24 | 49 | 52.5 | 40 | 12.5 | 7 | | |
| | | | 48 | 5 4 | 40 | 14 | YW | | |
| | | 51 | 70 | 11 | 1.0 | , , | | | |
| | 4 | 51 | 40 | 7.7 | | , , | YN | | |
| | | 51 | - 0 | of 3 cores – To | tal Water Con | tent SWE =/> | | | |
| | | 71 | - 0 | of 3 cores – To | otal Water Con | tent SWE =/> | | | |
| | 4 | 52 | Dust (Min. o | of 3 cores – To | 40 | tent SWE =/> | 25) Y/N/ | | |
| | 1 | 71 | Dust (Min. o | 53 52 | 40 40 | 13 | Y N/ Y N/ | | |
| | 1 2 | 71 | Dust (Min. o | 53 52.5 | 40 40 40 | 13 | Y N/ Y N/ Y N) | 1, 1, 7 | |
| Wate | 1 2 3 4 | 71 | Dust (Min. o | 53 52 | 40 40 40 | 13 | Y (N) Y (N) Y (N) Y (N) | 10 f 2 | |
| | 1 2 3 4 5 | 52 51 51 51 | Dust (Min. of 50 50 50 50 | 53 52.5 | 40 40 40 40 | 13 12.5 | Y (N) Y (N) Y (N) Y (N) Y (N) | 15f2 | |
| | 1 2 3 4 5 | 71 | Dust (Min. o | 53 52.5 | 40 40 40 40 | 13 | Y N N Y N Y N Y N Y N Y N Y N Y N Y N Y | 10 f 2 | |
| | 1 2 3 4 5 6 7 | 52 51 51 51 | Dust (Min. of 50 50 50 50 | 53 52.5 | 40 40 40 40 | 13 12.5 | Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) | 10 f 2 | |
| | 1 2 3 4 5 6 7 8 | 52 51 51 51 | Dust (Min. of 50 50 50 50 | 53 52.5 | 40 40 40 40 | 13 12.5 | Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) | 10 f Z | |
| | 1 2 3 4 5 6 7 8 9 | 52 51 51 51 | Dust (Min. of 50 50 50 50 | 53 52.5 | 40 40 40 40 | 13 12.5 12.5 12.5 12.5 12.5 | Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) | 10 f 2 | |
| | 1 2 3 4 5 6 7 8 9 | 52 51 51 51 | Dust (Min. of 50 50 50 50 | 53 52.5 | 40 40 40 40 | 13 12.5 12.5 12.5 12.5 12.5 | Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) | 10 f 2 | |
| Water Quality Cores | 1 2 3 4 5 6 7 8 9 | 52 51 51 51 | Dust (Min. of 50 50 50 50 | 53 52.5 | 40 40 40 40 | 13 12.5 12.5 12.5 12.5 12.5 | Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) | 16f2 | |

*** Water Content SWE = Wt. of Tube & Core SWE - Wt. of Empty Tube SWE ***

Water Quality (Min. of 3 cores - Total Water Content SWE =/> 100)

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| Snow Sampling Fiel | d Sheet | | | | | |
|---------------------------|---------------------|---|--|--|--|--|
| | No: | | ENVI-177-0312 | | | |
| 8000 | Revision: | R6 | | | | |
| 26-MAR-2012 | By: | D. Dul | | | | |
| Snow Sampling Field Sheet | | | | | | |
| | Page: | 2 | of | 2 | | |
| | B000 26-MAR-2012 | No: Revision: 26-MAR-2012 Snow Sampling Field Sheet | No: ENV B000 Revision: R6 26-MAR-2012 By: D. | No: ENVI-177-03 8000 Revision: R6 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet | | |

| ITT MAA | |
|---------|---------|
| 155,000 | _(mL |
| | 155.000 |

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|----------|
| 1 | 114.8 mg | 150,4 mg | 35.6 mg | |
| 2 | V V | 0 | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 114.8 au | 150.4 mg | 35.6 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 3440.000 (mL)

Bag 1= 1930.000

| Filling Order | Analysis | vsis Bottle | | | | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments DI Batch # for QAQC, |
|------------------|------------------|-------------------------|-------|---|--------|--------|----------|---|--|------------------|------------------------------|---------------------------------------|
| | | Туре | Rinse | | DUPW 1 | | | added) | Location preserved if not in field, label changes | | | |
| 1 | Metals Total | 60 mL Falcon Tube | Y | N | Ø | | | NA | | | | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | (mL) HCL | | | | |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | | 1mL - H ₂ SO ₄ | | | | |
| 4 | Routine | 1000 mL plastic | Y | N | Ø | | | N/A | 7 | | | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | | | | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
|----------------------------|--|
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| | | | Sı | now Sampl | ling Field S | heet | | | |
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| | | | 2006 | | | No: | | VI-177- | 0312 |
| | ea: footivo Do | | 3000 36 MAD 2044 | | _Revision | 7 200 | | | |
| | fective Da sk: | | 26-MAR-2012 Snow Sampling Field Sheet | | | _By: | D. | Dul | |
| ı a | JN. | 3 | Jilow Sampii | ng rieid Sr | ieet | Page: | 1 | of | 2 |
| _ | | | | | | raye. | | _ 01 | |
| | NERAL | | | | | | | | 2-50- |
| .00 | CATION NAM | E: 554 | 1-5-5 | DATE (yyyy-n | nm-dd): <u>20</u> | 17-04-07 | TIME (| 24:00): | 1126 |
| | MPLED BY: | -06 | 6-C | TYPE OF SAN | MPLE: Dust [| Water Qual | lity 🖳 | QAQC: | wow |
| | | | n: 05314 | | | | | d | _NAD 83 |
| ES | CRIPTION: I | Distance to | Diavik | km | & Direction | Or | n: Land [| &/or L | ake 🗸 |
| LII | MATE COND | ITIONS (if | sampling outsid | de) | | | | 1 | |
| ir ' | Temp: | c | Wind Direction | n: NE | Wind Spee | d (knots): | 16 | | |
| | | | Snow / Ice / None | | | er: 0% / 10% | | 0% / 75% | /100% |
|)us | t in area: Vi | sible | Not Visible | Case . | Snow Cond | dition: Crysta | Ilized 🗀 | acked 🔲 | Wet ☐ Dry |
| | | Core of Number Spow | Length of | Weight of | Weight of | Water | | The day | |
| Dust Cores | | | Snow | Tube | Empty | Content | | Dust Present | |
| | Number | Snow (cm) | Core (cm) | & Core (SWE) | Tube (SWE) | (SWE) | V All | Com | ments |
| , | 1 | SU | 52 | (34/E) | 40 | 13 | Yes/No Y N | Com | ments |
| 5 | 2 | 54 | 52 | 57 | 40 | 13 | YN | | |
| es | 3 | 51 | 50 | 62 | 40 | 12 | Y NS | | |
| | | | 2.19 | 0 | (** | | YN | | |
| | 4 | | | of 3 cores - To | tal Water Con | tent SWE =/> | 25) | | |
| | 4 | | Dust (Min. o | / | | | | | |
| | 1 | 52 | Dust (Min. c | 53 | 40 | 13 | YN | | |
| | | 52 | 51 50 | 53 | 40 | 13 | Y (N) | | - |
| | 1 | 52 | 51 50 | 53 52 53 | 40 | 13 | V. | | - 2 |
| | 1 2 | 52 52 52 | 51 50 50 | 53 52 53 52 | 40 | 13 | (N) Y | Inf | 2 |
| | 1 2 3 | 52 52 52 52 52 | 51 50 50 70 70 | 53 52 53 52 53 | 40 40 40 40 | 13 12 13 | Y (N) | ło f | 2 |
| | 1 2 3 4 < | 52 52 52 52 | 51 50 50 70 49 49 | 53 52 53 53 52 53 | 40 40 40 40 40 | 13 12 | Y (N) Y (N) Y (N) | łof | 2 |
| With the same of t | 1 2 3 4 < | 57 57 57 57 | 51 50 50 49 57 49 | 53 52 53 52 53 52 53 | 40 40 40 40 40 | 13 12 13 12 12 | A (A) | łof | 2 |
| , in the second of the second | 1 2 3 4 < 5 | 52 52 52 52 53 | 51 50 50 50 49 49 49 | 53 52 53 53 52 53 52 52 | 40 40 40 40 40 40 | 13 12 13 12 12 13 | Y (N) Y (N) Y (N) Y (N) | łof | 2 |
| W. T. D. T. | 1 2 3 4 < 5 6 7 | 52 52 52 53 53 53 53 53 | 51 50 50 50 49 49 48 | 53 53 53 53 53 52 53 | 40 40 40 40 40 40 | 13 12 13 12 12 13 | Y (N) Y (N) Y (N) Y (N) Y (N) Y (N) | łof | 2 |
| | 1 2 3 4 < 5 6 7 8 | 52 52 52 53 | 51 50 50 50 49 49 49 | 53 52 53 52 53 52 52 53 | 40 40 40 40 40 40 40 | 13 12 13 12 12 13 | Y (N) | łof | 2 |
| | 1 2 3 4 < 5 6 7 8 | 52 52 52 53 | 51 50 50 50 49 49 48 | 53 53 53 53 53 53 52 52 53 | 40 40 40 40 40 40 | 13 12 13 12 13 | Y (N) | łof | 2 |

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| Snow Sampling Fiel | d Sheet | | | |
|---------------------------|---------------------|--|--|--|
| | No: | EN\ | /1-177-03 | 312 |
| 8000 | Revision: | R6 | | |
| 26-MAR-2012 | By: | D. Dul | | |
| Snow Sampling Field Sheet | | | | |
| | Page: | 2 | of | 2 |
| | 8000 26-MAR-2012 | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet | 8000 Revision: R6 26-MAR-2012 By: D. I | 8000 Revision: R6 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet |

Total Volume of Melted Snow : 1180,000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 115.7 | 161.3 | 45.6 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 115.7 | 161.3 | 45.6 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 3100,000 (mL) 1545.000

| Filling | Analysis | Pottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|---------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|----------------------------|---|
| Order | raidiyele | Туре | Rinse | | DUPW2 | 2 | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Υ | Y | Ø | | | 1 mL HCL | 4 |
| 3 | Nutrients | 120 mL plastic | Υ | Υ | Ø | | | fmL - H ₂ SO | |
| 4 | Routine | 1000 mL plastic | Y | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | □/ | | | N/A | 14 |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
|---------------------|--|
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| | | | Sr | now Sampl | ing Field S | heet | | | |
|------------|--|----------------------|------------------|----------------|--------------------|--------------------------------|---|-------------------------|------------------|
| | | | | | | No: | | IVI-177- | 0312 |
| | ea: | | 000 | | | _Revision | - | | |
| | ective Dat sk: | | 6-MAR-201 | | | _By: | D. | Dul | |
| Id | SK. | 3 | now Sampli | ng Field Sh | ieet | Denis | | | |
| | | | | | | Page: | _1 | _ of | 2 |
| | NERAL | | | | | | | | |
| LOC | CATION NAM | E: 555- | G C | DATE (vvvv-n | nm-dd): 2013 | 7-04-01 | TIME | (24:00) | 1/05 |
| SAN | IPLED BY: | JG 55 | GC | TYPE OF SAM | /PLE: Dust | Water Qual | lity 🔲 | QAQC: | 100 |
| GPS | COORDINA | TES (UTM) | : >33150 |)E | 7148925 | N (Ze | one) | 12 | NAD 83 |
| | | | Diavik | | | | | | |
| CLI | VIATE CONDI | TIONS (if s | ampling outsid | do) | | | | | |
| | | | Wind Directio | | 100 | | 9 | | |
| Prec | initation: Rai | _ C in / Mist / S | now / Ice /(None | 5 - W | | d (knots): | | =00/ /==0/ | |
| Dus | t in area: Vis | sible 🗌 | Not Visible | | Snow Cond | er: 0% / 10% dition: Crysta | 1 25% / s | 50% / 75% Packed⊄ | /100% Wet Dry |
| + | | Depth | Length of | Weight of | | |) | | |
| | Core | of | Snow | Tube | Weight of Empty | Water Content | | Dust Pi | resent |
| D | Number | | Core (cm) | | Tube | (SWE) | | | |
| ust | 1 | (cm) | 7. | (SWE) | (SWE) | *** | Yes / No | Comi | ments |
| ıst C | | | | 48 | 40 | (3) | Y / N/ | A | 1.0 . / |
| Co | | 40 | 35 | - 1 | | 8 | 0 | Kemore | Vogita HIM |
| Dust Cores | ~2 | 39 | | 48 | 40 | 8 | Y (70) | Removed s | ome uegitation |
| Cores | 3 | 39 30 | 35 25 | 48 | | 8 | Y (9) | Removeds | one ungitation |
| Cores | ~2 | 39 | | 48 | 40 | 8 | Y (9) | Removed so Removed v | one vegitation |
| Cores | 3 | 39 30 | 35 25 35 | 48 | 40 | 8 | Y (9) Y (9) Y N | Removed so Removed v | one ungitation |
| Cores | 3 4 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (9) Y (9) Y N | Removed so Removed v | one vegitation |
| Cores | 2 3 4 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) | Removed so Removed v | one vegitation |
| Cores | 2 3 4 1 2 3 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (9) Y (19) Y N N 25) | Removed so Removed v | one vegitation |
| \$ | 2 3 4 1 2 3 4 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) | Removed so Removed v | one vegitation |
| × | 2 3 4 1 2 3 4 5 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) | Removed so Removed v | one vegitation |
| \$ | 2 3 4 1 2 3 4 5 6 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) | Removed so Removed v | one vegitation |
| × | 2 3 4 1 2 3 4 5 6 7 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) | Removed so Removed v | one vegitation |
| × | 2 3 4 1 2 3 4 5 6 7 8 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) | Removed so Removed v | one vegitation |
| | 2 3 4 1 2 3 4 5 6 7 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) | Removed so Removed v | one vegitation |
| × | 2 3 4 1 2 3 4 5 6 7 8 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Removed so Removed v | one vegitation |
| × | 2 3 4 1 2 3 4 5 6 7 8 9 | 39 30 | 35 25 35 | 48 46 48 | 40 | 8 | Y (N) | Removed so Removed v | one vegitation |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} - Wt. of Empty Tube _{SWE} ***

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|------------------|--|-------------------------|-----------------|-----------|------------------|------------------|------------------|---------------------------------------|---------|---|-------------------------|
| Area: | | 8000 | | | | Revision: | | | R6 | | |
| | ve Date: <u>26-MAR-2012</u> Snow Sampling Field She | | | | | By: | | | D. Dul | | |
| Task: | | Snow | Sampl | ing Field | Sheet | | Page: | | 2 | of | 2 |
| Dust : | Sample I | ilters | | | | Total Vo | olume of | f Melted | Snov | w: <u>925</u> | 000 |
| Filter | | of Filter | Filte | r + Resid | due I | Residue | Weigh | t | C | omment | s |
| 1 | " (1111 | 7 | 1 3 20 10 | 9.6 mg | | 104. | | | it g | raso in sa | mple |
| 2 | 117 | i 7 mg | OLI | 1.0 mg | | 10.1. | 1 7 | 6 | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| Total | s 11// | 7 109 | 1 | 19.6 m | | 104 | 9 mg | | | | |
| | 1 1110 | 119 | | | - | | | | | | |
| Filling Order | Analysis | Bottle Type | Triple Rinse | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserve (circle when added) | | Sample C DI Batch # Location pre in field, labe | for QAQC served if r |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | | | | NA | | | |
| 2 | Total Mercury | 40 mL clear glass | Υ | Y | | | | 1 mL - HCL | | | |
| 3 | Nutrients | 120 mL plastic | Υ | Υ | | | | 1mL - H₂SO₄ | | | |
| | Routine | 1000 mL plastic | Y | N | | | | N/A | | | |
| 4 | | 1000 mL | Υ | N | | | | N/A | | | |
| 5 | TSS/Turb/pH | plastic | | 1 | | | | | | | |

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|-------------------|---|-----------------------------------|--------------------------------|-----------------------|--|--------------------------------|---|----------------------|---------------------------|--|--|
| Ar | ea: | | | | | | 0.0 | R6 | | | |
| | fective Da | 2.22.2 | 26-MAR-2012 | | | Ву: | | Dul | | | |
| Ta | sk: | S | Snow Sampli | | | | | | | | |
| | | | | | | Page: | _1 | _ of | 2 | | |
| SAN GPS DES | MPLED BY: COORDINA CRIPTION: [MATE CONDI Temp: -(),5 | TES (UTM) Distance to TIONS (if s | : 0533 | TYPE OF SAM \$0 | MPLE: Dust [7/4/887 & Direction_ Wind Spee | Water Qual N (Z | ality Cone) in: Land | € &/or | Dupw 1/ NAD 83 Lake | | |
|)us | t in area: Vis | sible 🗌 | Not Visible | | Snow Cond | er: 0% / 10% dition: Crysta | % / 25% / allized □ | 50% / 75 Packed [| % / 100% ☑Wet ☐ Dry | | |
| Du | Core Number | Depth of Snow (cm) | Length of Snow Core (cm) | Weight of Tube & Core | Weight of Empty Tube | Water Content (SWE) | | | Present . | | |
| st c | 1 | 30 | 29 | (SWE) | (SWE) | 7 | Yes/No Y (N) | Cor | nments | | |
| Core | 2 | 20 | 28 | 47 | 40 | 7 | | | | | |
| Dust Cores | 3 | 28 | | 4+ | 40 | 7 | () | | | | |
| • | | | 78 | 47 | 40 | + | YN | | | | |
| | Δ | 061 | | 4+ | 90 | + | 10, 100 | | | | |
| | 4 | 28 | | | | Land CHAIR . A | > 251 | | | | |
| | | 28 | | of 3 cores - To | tal Water Conf | ent SWE =/ | | | | | |
| | 1 | 78 | | of 3 cores - To | tal Water Con | ent SWE =/ | YN | | | | |
| | 1 2 | 28 | | of 3 cores – To | tal Water Con | ent SWE =/ | Y N Y N | | | | |
| | 1 2 3 | 28 | | of 3 cores – To | tal Water Con | ent SWE =/ | Y N Y N Y N | | | | |
| | 1 2 3 4 | ** | | of 3 cores – To | tal Water Conf | ent SWE =/2 | Y N Y N | | | | |
| Wat | 1 2 3 4 5 | ** | | of 3 cores - To | tal Water Conf | ent SWE =/ | Y N Y N Y N | | | | |
| Wat | 1 2 3 4 5 6 | *** | | of 3 cores – To | tal Water Conf | ent SWE =/ | Y N Y N Y N Y N | | | | |
| Wat | 1 2 3 4 5 | ** | | of 3 cores – To | tal Water Conf | ent SWE =/ | Y N Y N Y N Y N Y N | | | | |
| Wat | 1 2 3 4 5 6 | ** | | of 3 cores – To | tal Water Conf | ent SWE =/ | Y N Y N Y N Y N Y N Y N Y N Y N | | | | |
| Wat | 1 2 3 4 5 6 7 | ** | | of 3 cores – To | tal Water Conf | ent SWE =/ | Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | | |
| | 1 2 3 4 5 6 7 8 | ** | | of 3 cores – To | tal Water Conf | ent SWE =/ | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | | |
| Wat | 1 2 3 4 5 6 7 8 9 | *** | | of 3 cores – To | tal Water Conf | ent SWE =/ | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | | | |

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| Area: | Deter | 8000 36 MA | | now San | | | No: Revisi By: | on: | ENVI-177-0312 R6 D. Dul | | 312 |
|--------------------------|---|---|-----------------------------|------------------------------------|------------------|------------------|----------------------|---|-------------------------------|---|--------------------------------------|
| rnecu Task: | | | | AR-2012 Every Sampling Field Sheet | | | | | D. D. | 41 | |
| ask. | | Onow | Cumpii | ing riola | 0,1001 | | Page: | | 2_ | of _ | 2 |
| Dust | Sample I | Filters | | | | Total Vo | olume of | Melted S | Snow | : 86 | 5,000 |
| Filter | # Weight | of Filter | Filte | r + Resid | due F | Residue | Weight | lea | Co | omment | s |
| 1 | 117. | 1 mg | 172 | 1.2 mg | | 55. | l my | leave | 5 | | |
| 2 | 11.16 | 1 | - | | | | | | | | - kildali |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | - |
| Tota | ls 117 | .Ing | 17 | 2,2 m | 4. | 55. | ling | | | | |
| Wate | r Quality | 0 | 5 | | | Total Vo | olume of | Preserve | d | Sample C | omments |
| Wate Filling Order | | 0 | Triple Rinse | Preserve | Sample Type * | | | | d J | | omments for QAQC, served if n |
| Filling | r Quality | Bottles | Triple | Preserve N | Sample | Sample | Sample | Preserve (circle when | d J | Sample C DI Batch # ocation pre | omments for QAQC, served if n |
| Filling Order | r Quality Analysis Metals | Bottles Bottle Type 60 mL Falcon | Triple Rinse | | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when added) | d J | Sample C DI Batch # ocation pre | omments for QAQC, served if n |
| Filling Order | r Quality Analysis Metals Total | Bottles Bottle Type 60 mL Falcon Tube 40 mL clear | Triple Rinse | N | Sample Type * | Sample Type * | Sample Type * | Preserver (circle when added) NA | d J | Sample C DI Batch # ocation pre | omments for QAQC served if n |
| Filling Order | Analysis Metals Total Mercury | Bottles Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL | Triple Rinse | N | Sample Type * | Sample Type * | Sample Type * | Preserver (circle when added) NA 1 mL - HCL | d J | Sample C DI Batch # ocation pre | omments for QAQC, served if n |
| Filling Order | r Quality Analysis Metals Total Total Mercury Nutrients | Bottles Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL | Triple Rinse Y Y | N Y Y | Sample Type * | Sample Type * | Sample Type * | Preserver (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ | d J | Sample C DI Batch # ocation pre | omments for QAQC, served if no |
| Filling Order 1 2 3 | Analysis Metals Total Mercury Nutrients Routine | Bottles Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y | Sample Type * | Sample Type * | Sample Type * | Preserver (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | d J | Sample C DI Batch # ocation pre in field, lab | omments for QAQC, served if n |
| Filling Order 1 2 3 | Analysis Metals Total Mercury Nutrients Routine | Bottles Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N W, DUPW1 | Sample Type * | Sample Type * | Sample Type * | Preserver (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | d J | Sample C DI Batch # ocation pre in field, lab | omments for QAQC, served if n |
| Filling Order 1 2 3 | Analysis Metals Total Mercury Nutrients Routine | Bottles Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N W, DUPW1 | Sample Type * | Sample Type * | Sample Type * | Preserver (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | d J | Sample C DI Batch # ocation pre in field, lab | omments for QAQC, served if no |

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|-------------------|--------------------------------------|---------------|-------------------|-----------------|--------------------|--------------------------------|---|---------------------------|-------------------|
| | ea: | _ | 000 | | | Revision | _ | | |
| | ective Da | - | 6-MAR-201 | | | Ву: | D. | Dul | |
| Ta | sk: | S | now Sampli | ng Field Sh | eet | | | | |
| | | | | | | Page: | _1_ | _ of _ | 2 |
| E | NERAL | | | | | | | | |
| 00 | CATION NAM | E: <u>S57</u> | 5-2-5 | DATE (yyyy-n | nm-dd): <u>201</u> | 7-04-01 | TIME (| 24:00): | 38 |
| A۱ | MPLED BY: | JG 55 | 66 | TYPE OF SAM | IPLE: Dust | ☑Water Qua | lity 🔲 | QAQC: Du | pw//2 |
| PS | COORDINA | TES (UTM) | : 05 3315 | 0 E | 71488 | 74 N (Z | one) | 12 | NAD 83 |
| ES | CRIPTION: | Distance to | Diavik | km | & Direction | 0 | n: Land [| &/or La | ke 🔲 |
| LII | MATE CONDI | TIONS (if s | ampling outsid | del | | | | | |
| | | | Wind Directio | | | 10.757 | 9 | | |
| | | | now / Ice / None | | | ed (knots): | | | |
| | t in area: Vis | | Not Visible | | Snow Con | er: 0% / 10% dition: Crysta | 6 / 25% / 5 | 50% / 75% / Packed / 1 | 100% Net □ Day |
| | | | | W/2 - 175 - 10- | | | amzed 🗀 | acked 2 | vet 🗀 Diy |
| | Core | Depth of | Length of Snow | Weight of | Weight of | Water | | Dust Pre | sent |
| | Number | Snow | Core (cm) | Tube & Core | Empty Tube | Content | | Bustille | Jone |
| | 1,000 | (cm) | oore (cili) | (SWE) | (SWE) | (SWE) | Yes / No | Comm | ents |
| | 1 | 30 | 30 | 48 | 40 | 8 | YN | | |
| 3 | 2 | 31 | 30 | 48 | 40 | 8 | YN | | |
| n | 3 | 33 | 32 | 48 | 40 | 8 | Y | | |
| , | | /- | 0 | dA | 40 | 8 | YN | | |
| | 4 | 31 | 30 | 1.0 | | | | | |
| | 4 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/> | > 25) | | |
| • | 1 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/> | > 25) Y N | | |
| , | | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/> | | | |
| , | 1 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/ | YN | | |
| | 1 2 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N | | |
| | 1 2 3 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N Y N | | |
| | 1 2 3 4 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N Y N Y N | | |
| | 1 2 3 4 5 5 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N Y N Y N Y N | | |
| | 1 2 3 4 5 6 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N Y N Y N Y N Y N | | |
| Water Ouglit. Own | 1 2 3 4 5 6 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 1 2 3 4 5 6 7 8 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| | 1 2 3 4 5 6 7 8 | 31 | , , , | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} - Wt. of Empty Tube _{SWE} ***

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| | | | <u>S</u> | now San | npling | Field S | | | | | |
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| | | 22.00 | | | | | No: | | - | /I-177-C | 312 |
| Area: | | | 8000 26-MAR-2012 | | | | | on: | R6 D. Dul | | |
| Effective Date: | | | | | By: | | | | | | |
| Task: | | Snow | Snow Sampling Field Sheet | | | | | | | | |
| | | | | | | | Page: | - | 2 | of | 2 |
| Dust | Sample I | Filters | | | | Total Vo | olume of | Melted | Snov | v: 1000 | <u>).()()()</u> (n |
| Filter | r# Weight | t of Filter | Filte | er + Resid | due | Residue | Weight | t | Comments | | |
| 1 | 116.4 | 1 mg | | 16h 5 mg | | 45 | . I may | | | | |
| 2 | | -/- | | / | | | 1 | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| Tota | Is 161 | 1 mg | | 161.5 mg | , | 45. | 1 mg | | | | |
| Wate | er Quality | Bottles | | | Sample | | Sample | Preserve | ed | Sample (| Comments |
| Wate Filling Order | er Quality Analysis | Bottles Bottle Type | Triple Rinse | Preserve | Sample Type * | | | | ed | Sample (DI Batch # Location pr | Comments for QAQC, eserved if no |
| Filling | | Bottle | Triple | Preserve N | Sample Type * | Sample | Sample | Preserve (circle when | ed | Sample (DI Batch # Location pr | Comments |
| Filling Order | Analysis Metals | Bottle Type 60 mL Falcon | Triple Rinse | | Type * | Sample Type * | Sample Type * | Preserve (circle when added) | ed) | Sample (DI Batch # Location pr | Comments for QAQC, eserved if no |
| Filling Order | Analysis Metals Total | Bottle Type 60 mL Falcon Tube 40 mL clear | Triple Rinse | N | Type * | Sample Type * | Sample Type * | Preserve (circle when added) NA | ed) | Sample (DI Batch # Location pr | Comments for QAQC, eserved if no |
| Filling Order | Analysis Metals Total Total Mercury | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL | Triple Rinse Y | N Y | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL | ed) | Sample (DI Batch # Location pr | Comments for QAQC, eserved if no |
| Filling Order | Analysis Metals Total Total Mercury Nutrients | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y | N Y Y | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ | ed) | Sample (DI Batch # Location pr | for QAQC, eserved if no |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample (DI Batch # Location pr in field, lal | Comments For QAQC, eserved if no pel changes |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample (DI Batch # Location pr in field, lal | Comments For QAQC, eserved if no pel changes |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample (DI Batch # Location pr in field, lal | Comments For QAQC, eserved if no pel changes |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N N W, DUPW1 | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample (DI Batch # Location pr in field, lal | Comments For QAQC, eserved if no pel changes |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N N W, DUPW1 | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample (DI Batch # Location pr in field, lal | Comments For QAQC, eserved if no pel changes |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N N W, DUPW1 | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample (DI Batch # Location pr in field, lal | Comments For QAQC, eserved if no pel changes |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N N W, DUPW1 | Type* | Sample Type * | Sample Type * | Preserve (circle when added) NA 1 mL - HCL 1mL - H ₂ SO ₄ N/A | ed) | Sample (DI Batch # Location pr in field, lal | Comments For QAQC, eserved if no pel changes |

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| | ective Da sk: | | 6-MAR-201: now Sampli | | oot | _By: | <u>D.</u> | Dul | | | |
| ıa | SK. | | now Sampii | rig Field Si | ieet | Dogot | 1 | of | 0 | | |
| - | | | | | | Page: | - 4- | _ 01 | 2 | | |
| GEN | NERAL | | | | | | | | | | |
| LOC | CATION NAM | E: 555 | -3 | DATE (vvvv-n | nm-dd): 201 | 7-04-01 | TIME (| 24:00): / | 150 | | |
| SAN | MPLED BY: | JG 5 | -3 5 GC | TYPE OF SAM | /PLE: Dust [| Water Qua | lity 🔽 | QAQC: | | | |
| | | | :_053314 | | | | | | | | |
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| | | | sampling outsid | | | | | - | | | |
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| | | | Wind Direction | | | d (knots): | | | and to a | | |
| Dus | t in area: Vi | sible 🔲 | Not Visible | | Snow Con | er: 0% / 10% dition: Crysta | 6 / 25% / 5 allized \Box | 50% / 75% Packed T | /100% Wet □ Dr. | | |
| | | D | | | | | | | = 5., | | |
| | Core | ore of Snow Tub | | 그 그 그 살이 살아보다 그 살아 있다면 하게 되었다. | Weight of Tube | Weight of Empty | Water Content | | Dust Present | | |
| | Number | | & Core | Tube | (SWE) | | | 0.0-100-1 | | | |
|)ust | . 1. 11 | (cm) | 3 92 3 3 | (SWE) | (SWE) | *** | Yes / No | Com | ments | | |
| Dust Cores | 1 | 30 | 30 | 49 | 40 | 9 | Y (N) | | | | |
| res | 2 | 30 | 29 | 49 | 40 | 9 | Y (N) | | | | |
| | 3 | 30 | 27 | 49 | 40 | 9 | Y M | | | | |
| | 4 | | | | | | YN | | | | |
| | | | Dust (Min. o | of 3 cores - To | tal Water Con | tent SWE =/> | > 25) | | | | |
| | 1 | 29 | 26 | 48.5 | 40 | 8.5 | YOY | | | | |
| | Principle of the second | | | | | 0.4 | | | | | |
| | 2 | 32 | 30 | Sto | 40 | 10 | YM | | | | |
| | | | 20 | Sb 50 | - 10 | 10 | 0 | | | | |
| 8 | 2 | 32 | 30 30 | 50 50 | 40 | 10 | Y (N) Y (N) | | | | |
| Water | 2 | 32 32 | 30 | 50 50 51 | | 10 | Y (N) | <u> </u> | ~£1 | | |
| Water Qu | 2 3 4 | 32 32 33 | 30 | 50 50 51 | 40 | 10 | Y (N) Y (V) Y (V) | - 1 | of I | | |
| Water Quality | 2 3 4 5 | 32 32 33 33 | 30 31 33 33 | 50 50 51 51 | 40 40 40 | 10 | Y (N) Y (N) Y (V) | ÷ 1 | of 1 | | |
| Water Quality Co | 2 3 4 5 | 32 32 33 33 33 | 30 31 33 33 32 | 50 50 51 51 50.5 | 40 40 40 40 | 10 | Y (N) Y (N) Y (N) Y (N) | ÷ 1 | of 1 | | |
| Water Quality Cores | 2 3 4 5 6 7 | 32 32 33 33 33 33 | 30 31 33 32 32 32 | 50,5 | 40 40 40 40 40 | 10 10 11 11 10:5 10:5 | Y (N) Y (N) Y (N) Y (N) | - 1 | of I | | |
| Water Quality Cores | 2 3 4 5 6 7 8 | 32 32 33 33 33 33 | 30 31 33 33 32 32 32 | 50,5 50,5 | 40 40 40 40 | 10 10 11 10:5 10:5 10:5 | Y (N) | - 1 | of 1 | | |
| Water Quality Cores | 2 3 4 5 6 7 8 | 32 32 33 33 33 33 | 30 31 33 32 32 32 | 50,5 | 40 40 40 40 40 | 10 10 11 11 10:5 10:5 | Y (N) | - 1 | of I | | |
| Water Ouslity Cores | 2 3 4 5 6 7 8 9 | 32 32 33 33 33 33 | 30 31 33 33 32 32 32 | 50,5 50,5 | 40 40 40 40 40 | 10 10 11 10:5 10:5 10:5 | Y (N) | - 1 | of I | | |

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| Snow Sampling Fie | ld Sheet | | | |
|---------------------------|---------------------|--|--|--|
| | No: | EN\ | /1-177-03 | 312 |
| 8000 | Revision: | R6 D. Dul | | |
| 26-MAR-2012 | By: | | | |
| Snow Sampling Field Sheet | | | | |
| | Page: | 2 | of | 2 |
| | 8000 26-MAR-2012 | 8000 Revision: 26-MAR-2012 By: Snow Sampling Field Sheet | 8000 Revision: R6 26-MAR-2012 By: D. E Snow Sampling Field Sheet | 8000 Revision: R6 26-MAR-2012 By: D. Dul Snow Sampling Field Sheet |

Total Volume of Melted Snow : 945.000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 117.6 mg | 138. Gray | 21.0 mg | |
| 2 | | | | |
| 3 | | | | 8 |
| 4 | | | | |
| Totals | 117.6 ma | 138.6 mg | 21.0 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 3170,000 (mL) 1640 000

| Filling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|---------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|----------------------------|--|
| Order | , analysis | Туре | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Υ | Y | □⁄ | | | 1mL - H ₂ SO | |
| 4 | Routine | 1000 mL plastic | Υ | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | | | | | | |
|---------------------|--|--|--|--|--|--|
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| | | | Si | now Sampl | ling Field S | heet | | |
|--------------------|---------------|----------------|------------------------|------------------------|---------------------|------------------------|-------------|------------------------------|
| Are | ea: | | 8000 | | | No: Revision | | VI-177-0312 |
| Eff | ective Da | | 26-MAR-201 | 2 | | By: | 4.00 | Dul |
| Tas | sk: | | Snow Sampli | ing Field Sh | neet | | | Dui |
| | | | | | | Page: | _1 | _ of2 |
| GEN | IERAL | | - 11 | | | | | |
| LOC | ATION NAM | 1E: 55 | 5-4 5 G C | DATE (yyyy-n | nm-dd): <u>2017</u> | -04-01 | TIME (| 24:00): <u>1220</u> QAQC: |
| GPS | COORDINA | TES (LITE | m. DS37(| 17 = | 21U191 | VValer Qua | uity 🖭 | (2 NAD 83 |
| 750 | | Distance to | (1): | () = | 71770 | N (2 | one) | NAD 83 |
| JES | SKIPTION. I | Distance u | 5 Diavik | Km | & Direction | 0 | n: Land L | &/or Lake |
| | | | sampling outside | | | | | |
| Air 7 | emp:0.0 | j_°c | Wind Directio | n: <u>SW</u> | Wind Spee | d (knots): | 7 | |
| Prec | ipitation: Ra | ain / Mist / | Snow / Ice / None | 9 | Cloud Cove | er: 0% / 10% | 6/25%/5 | 60% / 75% / 100% |
| Dust | in area: Vi | sible 🔲 | Not Visible | | Snow Cond | dition: Crysta | allized 🗌 I | Packed Wet Dry |
| | | Depth | Length of | Weight of | Weight of | Water | | |
| | Core | of | Snow | Tube | Empty | Content | | Dust Present |
| D | Number | Snow | Core (cm) | & Core | Tube | (SWE) | | 72500 00000 |
| Dust Cores | 1 | (cm) | 34 | (SWE) | (SWE) | 1 / | Yes/No | Comments |
| Cor | 2 | 35 | 37 | 21 | 40 | 11 | 0 | |
| es | 3 | 34 | 33 | 51 | 40 | 11 | YW | |
| | 4 | 74 | 33 | 51 | 40 | (| Y | |
| | 4 | | | | | | YN | |
| | | | Dust (Min. c | of 3 cores - To | tal Water Conf | tent SWE =/> | > 25) | |
| | 1 | 35 | 34 | 52 | 40 | 12 | Y (N/ | |
| | 2 | 34 | 30 | 50 | 40 | 10 | YN | |
| | 3 | 35 | 33.5 | 51 | 40 | 11 | YN | |
| € | 4 | 34 | 33 | 51 | 40 | 11 | Y | |
| | 5 | 33 | 32 | 51 | -40 | 1) | YN | 10f1 |
| 9 | | 34 | 33 | 51 | UD | 11 | Y N | 1011 |
| er O | 6 | | | | · (U | - 1 1 | | |
| er Quality | 7 | 34 | 32 | 51.5 | 40 | 11.5 | YN | |
| er Quality Co | | 7 | 32 | 51.5 | 40 | 11.5 | YN | |
| ater Quality Cores | 7 | 34 | 32 28 32.5 | 51,5 50 51 | 40 | 11.5 | 0 | |
| er Quality Cores | 7 | 34 | 32 28 32.5 29 | 51,5 50 51 50 | 40 | 11.5 10 11 10 | YM | |
| er Quality Cores | 7 8 9 | 34 33 34 | 32 28 32.5 29 | 51,5 50 51 50 | 40 | 11.5 | Y Ñ Y Ñ | |

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| | Snow Sampling Fiel | d Sheet | | | |
|-----------------|---------------------------|-----------|-------------------------------|----|---|
| | | No: | ENVI-177-0312 R6 D. Dul | | |
| Area: | 8000 | Revision: | | | |
| Effective Date: | 26-MAR-2012 | By: | | | |
| Task: | Snow Sampling Field Sheet | | | | |
| | · · | Page: | 2 | of | 2 |

Total Volume of Melted Snow : 1030.000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 117.5 mg | 126.0 mg | 8,5 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| Totals | 117.5 mg | 126.0 mg | 8.5 mg | |

Water Quality Bottles

Total Volume of Melted Snow : $\underline{3335,000}$ (mL)

1685 000

| Eilling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| Filling Order | Aldrysis | Туре | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Υ | Υ | d | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Ÿ | Additional Comments | |
|---|---------------------|--|
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Document #: ENVI-177-0312 R6 Effective Date: 26-March-2012 This is not a controlled document when printed

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| | | | Sı | now Sampl | ing Field S | heet | | | | |
|---------------------|-----------------------|-------------|---------------------------|-----------------|---------------------|------------------|---|------------|---------|--|
| | | | | | | No: | EN | VI-177-0 | 312 | |
| Are | | | 3000 | | | _Revision | A 883 | | | |
| Tas | ective Da | - | 26-MAR-201 Snow Sampli | | noot. | _By: | D. | Dul | | |
| ıa | SK. | _ | onow Sampi | rig Field Si | ieet | Page: | 1 | of | 2 | |
| | | | | | | i age. | | _ 01 | | |
| | NERAL | | | | | | | | | |
| LOC | NAM NOITA | IE: 555 | J6 | DATE (yyyy-n | nm-dd): <u>2017</u> | 7-04-01 | TIME (| 24:00): 13 | :04 | |
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| GPS | COORDINA | TES (UTM |): 0533146 | E | 714695 | 0 N(Z | one)l | 2 | _NAD 83 | |
| DES | CRIPTION: | Distance to | Diavik | km | & Direction | 0 | n: Land [| &/or La | ake 🔽 | |
| CLI | MATE COND | ITIONS (if | sampling outsi | de) | | | | | | |
| | | | Wind Directio | | Wind Spee | ed (knots): | 7 | | | |
| | | | Snow / Ice / None | | | er: 0% / 10% | | 00/ (750) | 14000/ | |
| | | | Not Visible | | | dition: Crysta | | | | |
| | 1 | Depth | Longeth of | Mainht of | | | | | | |
| | Core of | | Length of Snow | Weight of Tube | Weight of Empty | Water Content | | Dust Pr | esent | |
| D | Number | mber Snow | Core (cm) | & Core | Tube | (SWE) | | | | |
| ıst | - 1 | (cm) | 1.2 | (SWE) | (SWE) | *** | Yes / No | Comn | nents | |
| Dust Cores | 1 | 45 | 45 | 54.5 | 40 | 14.5 | YN | | | |
| res | 2 | 45 | 45 | 54.5 | 40 | 14.5 | YN | | | |
| | 3 | 45 | 45 | 54 | 40 | 14 | YN | | | |
| | 4 | | | | | | YN | | | |
| | | | Dust (Min. | of 3 cores - To | otal Water Con | tent SWE =/ | > 25) | | | |
| | 1 | 45 | 41 | 54 | 40 | 14 | YN | | | |
| | 2 | 46 | 45 | 55 | 40 | 15 | Y (N) | | | |
| | 3 | 46 | 45 | 55 | 40 | 15 | YN | | | |
| | | | | | | | | | | |
| V | 4 | 46 | 45 | 55 | 40 | 15 | Y (N) | 100 | | |
| Water | 5 | 46 | | | 40 | - / | YN | 1 2 | | |
| Water Qua | | 46 | 45 | 55 55 | 40 | 15 | | 182 | | |
| Water Quality | 5 | 46 | 45 | 55 55 55 | | 15 15 | YN | | | |
| Water Quality Co. | 5 | 46 | 45 45 45 | 55 55 | 40 | 15 | Y (N) | 2062 | | |
| Water Quality Cores | 5 6 7 | 46 | 45 45 45 | 55 55 55 | 40 | 15 15 | Y (N) Y (N) Y (N) | | | |
| Water Quality Cores | 5 6 7 8 | 46 | 45 45 45 | 55 55 55 | 40 | 15 15 | Y (N) Y (N) Y (N) Y (N) Y (N) | | | |
| Water Quality Cores | 5 6 7 8 9 | 46 | 45 45 45 | 55 55 55 | 40 | 15 15 | Y (N) | | | |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} - Wt. of Empty Tube _{SWE} ***

Water Quality (Min. of 3 cores - Total Water Content SWE =/> 100)

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|---|---|--|
| 5 | 5 | |
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| E | 3 | |
| 2 | 5 | |

| | Snow Sampling Fie | ld Sheet | | | |
|-----------------|---------------------------|-----------|------|----------|-----|
| | | No: | EN | /I-177-0 | 312 |
| Area: | 8000 | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. E | Dul | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of _ | 2 |
| | | | | | |

Total Volume of Melted Snow : 1325.000 (mL)

| Filter# | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|---------|------------------|------------------|----------------|----------|
| 1 | 115,2 ma | 121.5 mg | 6.3 mg | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | P |
| Totals | 115.2 mg | 121.5 mg | 6.3 mu | |

Water Quality Bottles

Total Volume of Melted Snow : 3195,000 (mL) 1810 000

| Filling | Analysis Bottle Triple Preserve Type * | | CONTRACT VALUE OF | Preserve | | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|---------|--|-------------------------|-------------------|-------------|--|------------------|------------------|----------------------|---------------------------------------|
| Order | | | | when added) | Location preserved if not in field, label changes | | | | |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | 1 mL- HCL | |
| 3 | Nutrients | 120 mL plastic | Υ | Y | Ø | | | 1mL- H₂SO₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Υ | N | | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | | | | | |
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| | ea: | | 8000 | | | _Revision | A 5.5 | | |
| | fective Dat sk: | | 26-MAR-201 | | 7.01 | _By: | D. I | Dul | |
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| | | | | | | Page: | _1_ | _ of | 2 |
| GEN | VERAL | | | | | | | | |
| LOC | CATION NAME | <u> :: 50</u> | C-BAG | DATE (yyyy-n | nm-dd): 201 | 7-04-10 |) TIME (| 24:00): | |
| SAN | IPLED BY: | 55 | C-BAG | TYPE OF SAM | /IPLE: Dust | Water Qua | lity 🕱 (| QAQC: | |
| GPS | COORDINA | TES (UTIV | /i): | E | | N (Z | one) | | NAD 83 |
| DES | CRIPTION: D | istance to | Diavik | km | & Direction_ | Or | n: Land | ☐ &/or L | ake 🗍 |
| | | | sampling outsion | | Wind Spee | d (knots): | | | |
| Pred | cipitation: Rai | n / Mist / | Snow / Ice / None | Э | | er: 0% / 10% | | 0% / 75% | / 100% |
| Dus | t in area: Vis | ible 🗌 | Not Visible | | | dition: Crysta | | | |
| 0 | Core Number | Depth of Snow | Snow | Weight of Tube & Core | Weight of Empty Tube | Water Content (SWE) | | Dust P | resent |
| ust | 1 | (cm) | | (SWE) | (SWE) | *** | Yes / No | Com | ments |
| Dust Cores | | | | | | | YN | | |
| 'es | 2 | | | | | | YN | | |
| | 3 | | | | | | YN | | |
| | 4 | | | | | | YN | | |
| | | | | of 3 cores - To | tal Water Con | tent SWE -/> | 25) | | |
| | | | Dust (Min. o | 10 00100 10 | | LETTE SAAF -/- | | | |
| | 1 | | Dust (Min. o | li o doi do i i i | | tent SWL =/2 | YN | | |
| | | | Dust (Min. o | | | lent GWL =/> | | | |
| | 1 | | Dust (Min. o | | | ent owe =/> | YN | | |
| W | 1 2 | | Dust (Min. o | | | ent GWL =/> | Y N Y N | | |
| Water | 1 2 3 | | Dust (Min. o | | | ent SWL - | Y N Y N Y N | | |
| Water Ou | 1 2 3 4 | | Dust (Min. o | | | ent own - i | Y N Y N Y N Y N | | |
| Water Quality | 1 2 3 4 5 | | Dust (Min. o | | | ent SWL - I | Y N Y N Y N Y N Y N Y N | | |
| Water Quality Co | 1 2 3 4 5 6 | | Dust (Min. o | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| Water Quality Cores | 1 2 3 4 5 6 7 | | Dust (Min. o | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| Water Quality Cores | 1 2 3 4 5 6 7 8 | | Dust (Min. o | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| Water Quality Cores | 1 2 3 4 5 6 7 8 | | Dust (Min. o | | | | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} – Wt. of Empty Tube _{SWE} ***

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| :песи Гask: | ve Date. | | | ing Field | Sheet | 9 | | | | |
| ask. | | GHOW | Campi | ing riola | 01100 | | Page: | 2 | of | 2 |
| | | | | | | | | | 107 10w: 107 f | |
| | Sample F | | T- sad | | | | | | Comment | |
| Filter | # Weight | of Filter | Filte | er + Resid | due | Residue | Weigh | | Comment | ıs |
| 1 | 115 | . 6 mg | | 5.0 mg | 111 | (|) my | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| Tota | le 115 | 6 mg | 1 11 | 5.0 mg | | (| 7 2 | | | |
| Wate | r Quality | Bottles | S | | Factoria de la constantina della constantina del | | | | 2915 now: <u>2915</u> | <u>000</u> (m |
| Filling | r Quality Analysis | Bottles Bottle Type | Triple Rinse | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample C DI Batch # Location pre | Comments for QAQC, eserved if no |
| | | Bottle | Triple | Preserve N | | Sample Type * | Sample | Preserved (circle | Sample C | Comments for QAQC, eserved if no |
| Filling Order | Analysis Metals | Bottle Type 60 mL Falcon | Triple Rinse | | Type * | Sample Type * | Sample Type * | Preserved (circle when added) | Sample C DI Batch # Location pre | Comments for QAQC, eserved if no |
| Filling Order | Analysis Metals Total | Bottle Type 60 mL Falcon Tube 40 mL clear | Triple Rinse | N | Type * EßL ☑ | e Sample Type* | Sample Type * | Preserved (circle when added) | Sample C DI Batch # Location pre | Comments for QAQC, eserved if no |
| Filling Order | Analysis Metals Total Total Mercury | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic | Triple Rinse Y | N | Typė * EßL | e Sample Type* | Sample Type * | Preserved (circle when added) NA NA 1 mL HCL 1 mL H ₂ SO ₄ N/A | Sample C DI Batch # Location pre | Comments for QAQC, eserved if no |
| Filling Order 1 2 | Analysis Metals Total Total Mercury Nutrients | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N | Type* EßL | e Sample Type* | Sample Type * | Preserved (circle when added) NA I mL- HCL TmL- H ₂ SO ₄ N/A N/A | Sample C DI Batch # Location pre in field, lab | Comments for QAQC, eserved if no |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N | Type* EßL | e Sample Type* | Sample Type * | Preserved (circle when added) NA I mL- HCL TmL- H ₂ SO ₄ N/A N/A | Sample C DI Batch # Location pre | comments for QAQC, eserved if no |
| Filling Order 1 2 3 4 | Analysis Metals Total Total Mercury Nutrients Routine | Bottle Type 60 mL Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Triple Rinse Y Y Y Y Y | N Y Y N N SW, DUPWI | Type* EBL | e Sample Type* | Sample Type* | Preserved (circle when added) NA I mL- HCL TmL- H ₂ SO ₄ N/A N/A | Sample C DI Batch # Location pre in field, lab | comments for QAQC, eserved if no |

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| | Snov | v Sampling Fi | eld Sheet | | | |
|--|---------------|--|---------------|----------|-----------|--------------|
| - | Lavia village | No: | ENVI-177-0312 | | | |
| Area: | 8000 | | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. Dul | | | |
| Task: | Snow Sampling | | | | | |
| P | | | Page: | 1 | of | 2 |
| GENERAL LOCATION NAME: Stampled BY: Stampled | JG, GC TY | TE (yyyy-mm-dd): PE OF SAMPLE: E 714 | | QAC |)C: | 15 NAD 83 |
| DESCRIPTION: Distant | e to Diavik | km & Direc | ctionOn: I | Land 🔽 a | &/or Lake | e |

| Pred | Temp: cipitation: Ra t in area: Vi | ain / Mist / Si | Wind Direction now / Ice None Not Visible | 9) | Cloud Cov | d (knots): 3 er: 0% / 10% / 2 dition: Crystallize | |
|------|--|-----------------|---|-----------|-----------|---|--------------|
| ī | Core | Depth of | Length of Snow | Weight of | Weight of | Water | Dust Present |

Content

| Dust | Number | Snow (cm) | Core (cm) | & Core (SWE) | Tube (SWE) | (SWE) | Yes / No | Comments |
|---------------------|--------|--------------|------------|-----------------|----------------|------------|----------|-------------|
| | 1 | 54 | 41 | 54 | 40 | 114 | YN | 20111101110 |
| Cores | 2 | 53 | 41 | 52 | 46 | 12 | Y (N) | |
| | 3 | 53 | 40 | 53 | 46 | 13_ | YN | |
| | 4 | , | | | | 161.01 | YN | |
| | | | Dust (Min. | of 3 cores - 1 | otal Water Con | tent SWE = | /> 25) | |
| | 1 | 64 | 47 | 54- | 40 | 14 | Y (N) | 7 |
| | 2 | 60 | 46 | 54 | 40 | 14 | YN | |
| | 3 | 60 | 48 | 55 | 40 | 15 | Y(N) | · · |
| 8 | 4 | 54 | 47 | 54 | 40 | 14 | YN | 1072 |
| ater | 5 | 48 | 47 | 55 | 40 | 15 | Y (N) | T |
| Qua | 6 | 63 | 45,5 | 55 | 40 | 15 | Y (N) | |
| ality | 7 | 62 | 45 | 53 | 40 | 13 | Y (N) | 2011 |
| Water Quality Cores | 8 | | | | | | YN | N P |
| res | 9 | | | | 19 | | YN | |
| | 10 | | | | | | YN | 1 |
| | 11 | | | | | | YN | |
| | 12 | | | | | | YN | |

*** Water Content $_{\text{SWE}}$ = Wt. of Tube & Core $_{\text{SWE}}$ – Wt. of Empty Tube $_{\text{SWE}}$ ***

Document #: ENVI-177-0312 R6 Effective Date: 26-March-2012

CLIMATE CONDITIONS (if sampling outside)

Snow

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| | | No: | EN | /1-177-03 | 312 |
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| Area: | 8000 | Revision: | R6 | | |
| Effective Date: | 26-MAR-2012 | By: | D. Dul | | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of | 2 |

Dust Sample Filters

Total Volume of Melted Snow : 1215,000 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|-------------------------|
| 1 | 115.3 mg | 119.9 my | 4.6 mg | leaves, tuigs in sample |
| 2 | | - | / | |
| 3 | | | | |
| 4 | | | | |
| Totals | 115.3 mg | 119.9 mg | 4.6 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 3110,000 (mL)

1755,600

| Filling | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments DI Batch # for QAQC, |
|---------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|--|--|
| Order | | Type | Rinse | | GW | | | added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Y | Y | Ø | | | 1 mL HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | | TmL- H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | | | | | |
|---------------------|--|--|--|--|--|
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| Are | ea: | 8 | 000 | | No: Revision | | ENVI-177-0312 | | |
| Effective Date: 26-MAR-20 | | | | 2 | | _Revision _By: | D. | | |
| Task: Snow Samp | | | | eet | _Dy. | <u>D.</u> | Dui | | |
| | | _ | 22.5 | | | Page: | _1 | of | 2 |
| GEN | IERAL | | powerf B1 | | | | | | |
| LOC | CATION NAME | 550 | +1 | DATE (yyyy-n | nm-dd): 201 | 7-14-01 | TIME (| 24:00): / | 647 |
| SAN | IPLED BY: | JG- (| 4 | TYPE OF SAN | /IPLE: Dust [| Water Qua | lity 🔲 | QAQC: | EBW |
| | | | | | | | | | |
| | | | Diavik | | | | | | |
| CLI | MATE CONDI | TIONS (if a | ampling outsi | 4-1 | | | - | | |
| | | | Wind Directio | | Aur die | J | 9 | | |
| | | | | | | d (knots): | | | 5.000 |
| | | | now / Ice / None | 9 | | er: 0% / 10% | | | √ 100% Wet □ Dry |
| | | | T. T | | Chow Con | untion. Orysta | illized 🗀 | -ackeu _ | I wer 🗀 Dry |
| | | Depth | Length of | Weight of | Weight of | Water | | Dust P | rocont |
| | Core Number | of Snow | Tube | Empty | Content | | Dust P | resent | |
| Dus | Rumber | Snow Core (c | Core (cm) | & Core (SWE) | Tube (SWE) | (SWE) | Yes / No | Com | ments |
| 35 | 1 | (0111) | | (OVIL) | (OWL) | | YN | Com | ments |
| Cor | | | | | | | | | |
| ore | 2 | | | | | | YN | | |
| Dust Cores | 2 | | | | | | Y N Y N | | |
| ores | | | | | | | | | |
| ores | 3 | | Dust (Min. o | of 3 cores – To | otal Water Con | tent SWE =/2 | Y N Y N | | |
| ores | 3 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/> | Y N Y N | | |
| ores | 3 4 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N | | |
| ores | 3 4 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/> | Y N Y N > 25) | | |
| | 3 4 1 2 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/> | Y N Y N > 25) Y N Y N | | |
| Wa | 3 4 1 2 3 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/2 | Y N Y N 25) Y N Y N Y N Y N | | |
| Wa | 3 4 1 2 3 4 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/> | Y N Y N > 25) Y N Y N Y N Y N | | |
| Wa | 3 4 1 2 3 4 5 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/> | Y N Y N 25) Y N Y N Y N Y N Y N Y N | | |
| Wa | 3 4 1 2 3 4 5 6 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/> | Y N Y N 25) Y N Y N Y N Y N Y N Y N Y N Y N | | |
| cores Water Quality Cores | 3 4 1 2 3 4 5 6 7 | | Dust (Min. o | of 3 cores – To | tal Water Con | tent SWE =/> | Y N Y N P N P N P N P N P N P N P N P N | | |
| Wa | 3 4 1 2 3 4 5 6 7 8 | | Dust (Min. o | of 3 cores - To | tal Water Con | tent SWE =/> | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |
| Wa | 3 4 1 2 3 4 5 6 7 8 9 | | Dust (Min. o | of 3 cores - To | otal Water Con | tent SWE =/> | Y N Y N 25) Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | | |

*** Water Content _{SWE} = Wt. of Tube & Core _{SWE} - Wt. of Empty Tube _{SWE} ***

Document #: ENVI-177-0312 R6 Effective Date: 26-March-2012

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| Area: | | 8000 | | | | | Revis | ion: | R6 | v1-1/1-0 | 012 |
| Effective Date | | | 26-MAR-2012 | | | | | | D. E | Dul | |
| Γask: | ive Date. | | | ng Field | Sheet | | _By: | | | | |
| Task: | | | r. r. | 3 | | | Page: | | 2 | of | 2 |
| | | | | | | | 200 | | | | |
| Dust | Sample l | Filters | | lu II | | Total Vo | olume of | f Melted | d Snov | w : | (|
| Filter | # Weight | t of Filter | Filte | r + Resid | due F | Residue | Weigh | it | (| Commen | ts |
| 1 | 11/2 | 16 | İ | 6.6 | | C |) | | | | |
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| 3 | | | | | | | | | | | |
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| Tota | ls | | | | | | | | | | |
| | | Bottle | Triple | Deces | Sample Type * | Sample Type * | Sample Type * | (circl | е | DI Batch # | |
| Filling Order | Analysis | Туре | Rinse | Preserve | Type * | Type * | Type * | wher | 1 | DI Batch # Location pre | for QAQC eserved if n |
| | Analysis Metals Total | 40.004.44 | | Preserve | | Type* | Type * | | r (k | DI Batch # | for QAQC eserved if n el changes |
| Order | Metals | Type 60 mL Falcon | Rinse | 1 | Type * | Type * | Type * | NA 1 mL | (d) | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| Order | Metals Total | 60 mL Falcon Tube 40 mL clear | Rinse | N | Type * | Type* | Type * | NA 1 mL | 1 (1) | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| Order 1 2 | Metals Total Total Mercury | 60 mL Falcon Tube 40 mL clear glass | Rinse | (N) | Type* | Type * | Type * □ | NA 1 mL HC | | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| 1 2 3 | Metals Total Total Mercury Nutrients | Falcon Tube 40 mL clear glass 120 mL plastic | Y | (N) (Y) (Y) | Type* | Type * | Type * | NA 1 mL HC 1mL H ₂ SC | | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y | N Y Z Z | Type* | Type * | Type * | wher added NA NA N/A N/A | | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y | N Y Z Z | Type* | Type * | Type * | wher added NA NA N/A N/A | | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y | N Y N N W, DUPW1 | Type* | Type * | Type * | wher added NA NA N/A N/A | | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y | N Y N N W, DUPW1 | Type* | Type * | Type * | wher added NA NA N/A N/A | | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y | N Y N N W, DUPW1 | Type* | Type * | Type * | wher added NA NA N/A N/A | | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |
| 1 2 3 4 | Metals Total Total Mercury Nutrients Routine | Falcon Tube 40 mL clear glass 120 mL plastic 1000 mL plastic 1000 mL plastic | Y Y Y | N Y N N W, DUPW1 | Type* | Type * | Type * | wher added NA NA N/A N/A | | DI Batch # Location pre in field, lab | for QAQC eserved if n el changes |

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| | ea: <u>8000</u> | | | | | Revision | n: Re | 3 | |
| | ective Da | | 6-MAR-201 | | | _By: | D. | Dul | |
| ıa | sk: | 5 | Snow Sampli | ing Field Sh | neet | | | | |
| | | | | | | Page: | _1 | _ of | 2 |
| GEN | NERAL | | | | | | | | |
| _ | | E: 550 | -2 | DATE (www.n | nm-dd): 21/3 | 221102 | TIME | (24.00). 10 | 500 |
| JAIN | IF LLD DI. | 10 150 | | TYPE OF SAN | /IPLE: Dust | →Water Qua | lity 🖂 | QAQC: | |
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| | Гетр: <u> </u> | | | | | ed (knots): | | _ | |
| rec | ipitation: Ra | ain / Mist / S | now / Ice / None | / | Cloud Cov | er: 0% / 10% | 6/25% | 50% / 75% / | /100% |
| | cini dica. Vi | Sible [| NOT VISIBLE T | | Snow Cond | dition: Crysta | allized [_ | Packed L | Wet ∐ Dry l |
| | | Depth | Length of | Weight of | Weight of | Water | | | - 100 |
| | Core Number | per Snow | | Tube & Core (SWE) | Empty | Content | | Dust Pr | esent |
| Dust Cores | Number | | | | Tube (SWE) | (SWE) | | 0 | Tree and the co |
| | | | | (SAAE) | COVVE | | | (-amn | nents |
| ist C | 1 | | 45 | | | 17 | Yes/No Y (.N/ | John | |
| ist Core | 1 2 | 64 | 45 | 53 | 40 | 13 | | John | |
| ist Cores | | 65 | 46 | 53 53 | 40 | 13 | Y (N) | Comm | |
| Ist Cores | 2 | 64 | | 53 | 40 | 13 | YN | Comm | |
| ist Cores | 2 | 65 | 46 50 | 53 53 54, | 40 | ĺÝ | Y (N) Y (N) Y (N) | Comm | |
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| ist Cores | 3 4 | 64 65 60 | 46 50 Dust (Min. c | 53 53 54, | 40 40 40 stal Water Cons | ĺÝ | Y (N) Y (N) Y (N) Y (N) 25) | Comm | |
| Ist Cores | 2 3 4 | 64 65 60 | 46 50 Dust (Min. c | 53 53 54, | 40 40 40 40 40 40 | ĺÝ | Y (N) Y (N) Y (N) Y (N) | Some lit | le Jeures |
| | 2 3 4 | 64 65 60 | 46 50 Dust (Min. c | 53 53 54, | 40 40 40 stal Water Cons | tent SWE = 12 | Y (N) | Some litt | le Jeures |
| | 2 3 4 1 2 3 | 69 65 60 59 57 57 | 46 50 Dust (Min. c | 53 53 54, of 3 cores – To 55 52 53 | 40 40 40 40 40 40 | tent SWE = 12 | Y N Y N Y N Y N Y N Y N Y N Y N Y N | Some lit | le Jeures |
| | 2 3 4 1 2 3 4 | 69 65 60 59 57 57 | 46 50 Dust (Min. c | 53 53 54, of 3 cores – To 55 52 53 | 40 40 40 40 40 40 | tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N | Some litt | le Jeures |
| | 2 3 4 1 2 3 4 5 | 69 65 60 59 57 57 | 46 50 Dust (Min. c | 53 53 54, of 3 cores – To 55 52 53 | 40 40 40 40 40 40 | tent SWE = 12 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Some litt | le Jeures |
| | 2 3 4 1 2 3 4 5 6 | 69 65 60 59 57 57 | 46 50 Dust (Min. c | 53 53 54, of 3 cores – To 55 52 53 | 40 40 40 40 40 40 | tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Some litt | le Jeures |
| | 2 3 4 1 2 3 4 5 6 7 | 69 65 60 59 57 57 | 46 50 Dust (Min. c | 53 53 54, of 3 cores – To 55 52 53 | 40 40 40 40 40 40 40 40 40 40 | tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Some litt | le Jeures |
| | 2 3 4 1 2 3 4 5 6 7 8 | 69 65 60 59 57 57 | 46 50 Dust (Min. c | 53 53 54, of 3 cores – To 55 52 53 | 40 40 40 40 40 40 | tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Some litt | le Jeures |
| | 2 3 4 1 2 3 4 5 6 7 8 9 | 69 65 60 59 57 57 | 46 50 Dust (Min. c | 53 53 54, of 3 cores – To 55 52 53 | 40 40 40 40 40 40 40 40 40 40 | tent SWE =/2 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Some litt | le Jeures |

*** Water Content $_{\text{SWE}}$ = Wt. of Tube & Core $_{\text{SWE}}$ – Wt. of Empty Tube $_{\text{SWE}}$ ***

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| | Snow Sampling Fiel | d Sheet | | | |
|-----------------|---------------------------|-----------|---------------|----|---|
| | | No: | ENVI-177-0312 | | |
| Area: | 8000 | Revision: | R6 D. Dul | | |
| Effective Date: | 26-MAR-2012 | By: | | | |
| Task: | Snow Sampling Field Sheet | | | | |
| | | Page: | 2 | of | 2 |

Dust Sample Filters

Total Volume of Melted Snow : 1295,000 (mL)

| Filter # | Weight of Filter | Filter + Residue | Residue Weight | Comments |
|----------|------------------|------------------|----------------|----------|
| 1 | 115.3 mg | 126.5 mg | 11.2 mg | twigs |
| 2 | 1 | | | 1 |
| 3 | | | | |
| 4 | | | | |
| Totals | 115.3 mg | 126.5 mg | 11.2 mg | |

Water Quality Bottles

Total Volume of Melted Snow : 3565.000(mL)

1925.000

| | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle when | Sample Comments DI Batch # for QAQC, Location preserved if not |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|------------------------------|--|
| Filling Order | 3 | Туре | Rinse | | GW | | | added) | in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Q | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Υ | Y | Ø | | | 1 mL HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Y | Ø | | | ImL - H₂SO₄ | |
| 4 | Routine | 1000 mL plastic | Y | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

^{*}Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

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| Additional Comments | |
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| | | | <u>Sr</u> | now Sampl | ing Field S | heet | | | |
|--------------|-------------------|---------------------------|--------------------------------|--|--|---|--|----------------|--------|
| | | | | | | No: | EN | VI-177-031 | 2 |
| | ea: | | 000 | | | Revision | n: R6 | | |
| | ective Da | - | 6-MAR-201 | | | _By: | D. | Dul | |
| ıa | sk: | 5 | now Sampli | ing Field Sh | eet | | | | |
| | | | | | | Page: | _1 | _ of | 2 |
| GEN | NERAL | | | | | | | | |
| LOC | ATION NAIV | TE: 550 | -3 | DATE (yyyy-n | nm-dd): 2017 | 7-04-03 | TIME (| 24:00): 14:4 | 16 |
| SAN | IPLED BY: | GC, JI | 6.55 | TYPE OF SAN | /IPLE: Dust | ☑ Water Qua | lity 🔟 | QAQC: | |
| GPS | COORDINA | ATES (UTM) | : 53862 | 9E | 714879 | 73_N(Z | one)_ | 12 N | AD 83 |
| DES | CRIPTION: | Distance to | Diavik | km | & Direction | | n: Land [| V &/or Lake | |
| | | | sampling outsid | | | | | | |
| ir ' | Гетр: <u>~ 6</u> | c | Wind Directio | n: N | Wind Spee | d (knots): | 8 | | |
| rec | ipitation: Ra | ain / Mist / S | now / Ice / None | | | | | 50% / 75% / 10 | 0% |
| Dus | t in area: Vi | isible 🗌 | Not Visible 🗹 | | Snow Cond | dition: Crysta | allized | Packed We | t 🔲 Dr |
| - | | Depth | Length of | Weight of | Majahtaf | Water | | | |
| | Core | of | Snow | Tube | Weight of Empty | Content | | Dust Prese | ent |
| | Number | Snow | Com (om) | & Core | Tube | (0)4(5) | X | | |
| D | Number | SHOW | Core (cm) | | lube | (SWE) | L' | | |
| Dust | | (cm) | V. | (SWE) | (SWE) | *** | Yes / No | Commer | nts |
| Dust Co | 1 | (cm) | 9(| | (SWE) 40 | | YN | Commer | nts |
| Dust Cores | 1 2 | (cm) | 91 | (SWE) 78:5 76.5 | (SWE) 40 | *** | YN | Commer | its |
| Dust Cores | 1 | (cm) | 9(| (SWE) | (SWE) 40 | *** | YN | Commer | nts |
| Dust Cores | 1 2 | (cm) | 91 | (SWE) 78:5 76.5 | (SWE) 40 | *** | YN | Commer | nts |
| Dust Cores | 1 2 3 | (cm) | 96 | (SWE) 78:5 76.5 | (SWE) 40 40 | 38.5 36.5 37.5 | Y N Y N Y N | Commer | nts |
| Dust Cores | 1 2 3 | (cm) | 96 | (SWE) 78:5 76.5 77,5 | (SWE) 40 40 | 38.5 36.5 37.5 tent SWE = 1 | Y N Y N Y N | Commer | nts |
| Dust Cores | 1 2 3 4 | (cm) 110 110 108 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77,5 of 3 cores – To | (SWE) 40 40 40 etal Water Cons | 38.5 36.5 37.5 | Y N Y N Y N Y N > 25) | I | nts |
| Dust Cores | 1 2 3 4 | (cm) 110 110 108 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77.5 of 3 cores – To | (SWE) 40 40 vtal Water Conf | 38.5 36.5 37.5 37.5 tent SWE =1 | Y N Y N Y N Y N Y N Y N Y N | Tol 2 | nts |
| Dust Cores W | 1 2 3 4 1 2 1 2 1 | (cm) 110 110 108 112 107 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77,5 of 3 cores – To | (SWE) 40 40 data Water Conf | 38.5 36.5 37.5 tent SWE =1: | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | I | nts |
| ₩ | 1 2 3 4 1 2 3 3 | (cm) 110 110 108 112 107 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77.5 of 3 cores – To | (SWE) 40 40 vtal Water Conf | 38.5 36.5 37.5 37.5 tent SWE =1 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Tol 2 | nts |
| ₩ | 1 2 3 4 1 2 3 4 | (cm) 110 110 108 112 107 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77.5 of 3 cores – To | (SWE) 40 40 vtal Water Conf | 38.5 36.5 37.5 37.5 tent SWE =1 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Tol 2 | nts |
| ₩ | 1 2 3 4 5 5 | (cm) 110 110 108 112 107 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77.5 of 3 cores – To | (SWE) 40 40 vtal Water Conf | 38.5 36.5 37.5 37.5 tent SWE =1 | Y N Y N Y N Y N > 25) Y N Y N Y N Y N | Tol 2 | nts |
| ₩ | 1 2 3 4 5 6 | (cm) 110 110 108 112 107 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77.5 of 3 cores – To | (SWE) 40 40 vtal Water Conf | 38.5 36.5 37.5 37.5 tent SWE =1 | Y N Y N Y N Y N Y N Y N Y N Y N | Tol 2 | nts |
| W | 1 2 3 4 5 6 7 | (cm) 110 110 108 112 107 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77.5 of 3 cores – To | (SWE) 40 40 vtal Water Conf | 38.5 36.5 37.5 37.5 tent SWE =1 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Tol 2 | nts |
| | 1 2 3 4 5 6 7 8 | (cm) 110 110 108 112 107 | 9(94 95 Dust (Min. c | (SWE) 78:5 76.5 77.5 of 3 cores – To | (SWE) 40 40 vtal Water Conf | 38.5 36.5 37.5 37.5 tent SWE =1 | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Tol 2 | nts |

*** Water Content $_{\text{SWE}}$ = Wt. of Tube & Core $_{\text{SWE}}$ – Wt. of Empty Tube $_{\text{SWE}}$ ***

Water Quality (Min. of 3 cores - Total Water Content SWE =/> 100)

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| | | Snow Samplin | ng Field Sheet | | | |
|----------------|-------------|--------------------|-------------------|-------|---------------------------|---|
| | | | No: | ENV | 1-177-031 | 2 |
| ea: | 8000 | | Revision | n: R6 | | |
| fective Date: | 26-MAI | R-2012 | By: | D. D | ul | |
| sk: | Snow S | Sampling Field She | eet | | | |
| | . 0.0 | | Page: | 2 | of | 2 |
| ust Sample | Filters | | Total Volume of M | | | |
| | Filters | Filter + Residue | Total Volume of M | | n: <u>344%</u> omments | |
| Filter# Weigh | t of Filter | | | | omments | |
| Filter# Weigh | | Filter + Residue | Residue Weight | C | omments | |
| Filter # Weigh | t of Filter | | Residue Weight | C | omments | |
| Filter # Weigh | t of Filter | | Residue Weight | C | omments | |

| rillia a | Analysis | Bottle | Triple | Preserve | Sample Type * | Sample Type * | Sample Type * | Preserved (circle | Sample Comments DI Batch # for QAQC, |
|------------------|------------------|-------------------------|--------|----------|------------------|------------------|------------------|---|--|
| Filling Order | Alaryolo | Туре | Rinse | | GW | | | when added) | Location preserved if not in field, label changes |
| 1 | Metals Total | 60 mL Falcon Tube | Υ | N | Ø | | | NA | |
| 2 | Total Mercury | 40 mL clear glass | Υ | Y | Ø | | | 1 mL - HCL | |
| 3 | Nutrients | 120 mL plastic | Y | Υ | Ø | | | 1mL - H ₂ SO ₄ | |
| 4 | Routine | 1000 mL plastic | Υ | N | Ø | | | N/A | |
| 5 | TSS/Turb/pH | 1000 mL plastic | Y | N | Ø | | | N/A | |

*Sample Type: GW, DUPW1/DUPW2, FBW, TBW, EBW, REP1/ REP2, Filter Blank

| Additional Comments | |
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Document #: ENVI-177-0312 R6 Effective Date: 26-March-2012

Appendix D

Snow Water Chemistry Analytical Results

DIAVIK DIAMOND MINE

2017 Dust Deposition Report

| Parameter | Unit | Site | Date | Data Poin | t Graphable Value | RDL | Lab Ref | Sample Type | Comment |
|----------------------------|--------------|------------------------|-----------------------|----------------|-------------------|--------------|---|----------------|--|
| Acidity (pH 4.5) | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | 0.50 | QV4618 | EBW | |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | 0.50 | QW9657 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | <0.50 | 0.25 | 0.50 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QW9659 | GW | |
| | mg/L mg/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | <0.50 <0.50 | 0.25 0.25 | 0.50 0.50 | QW9639 QW9640 | GW GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QW9647 | GW | |
| | mg/L mg/L | SS3-6 SS3-6 | 4/3/2017 4/30/2017 | <0.50 <0.50 | 0.25 0.25 | 0.50 0.50 | QW9648 QZ4969 | GW GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QZ4909 QW9649 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-8 | 4/3/2017 | < 0.50 | 0.25 | 0.50 | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9653 | DUPW2 | |
| | mg/L | SS5-3 | 4/1/2017 | < 0.50 | 0.25 | 0.50 | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | <0.50 | 0.25 | 0.50 | QW9655 | GW | |
| Acidity (pH 8.3) | mg/L | SS5-5 | 4/1/2017 | <0.50 <0.50 | 0.25 | 0.50 | QW9656 | GW GW | |
| | mg/L mg/L | CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 | <0.50 | 0.25 0.25 | 0.50 0.50 | QW9657 QV4618 | GW EBW | |
| | mg/L | CONTROL 1 | 4/7/2017 | <0.50 | 0.25 | 0.50 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | < 0.50 | 0.25 | 0.50 | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.6 | 0.6 | 0.50 | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | <0.50 | 0.25 | 0.50 | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0.67 | 0.67 | 0.50 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.57 | 0.57 | 0.50 | QW9643 | GW DUDW2 | |
| | mg/L mg/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 0.6 <0.50 | 0.6 0.25 | 0.50 0.50 | QW9645 QW9644 | DUPW2 DUPW1 | |
| | mg/L | SS3-4 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | < 0.50 | 0.25 | 0.50 | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | < 0.50 | 0.25 | 0.50 | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | < 0.50 | 0.25 | 0.50 | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | < 0.50 | 0.25 | 0.50 | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | <0.50 | 0.25 | 0.50 | QW9651 | GW | |
| | mg/L mg/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | <0.50 <0.50 | 0.25 0.25 | 0.50 0.50 | QW9653 QW9652 | DUPW2 DUPW1 | |
| | mg/L | 554-5 SS5-3 | 4/1/2017 | <0.50 | 0.25 | 0.50 | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | < 0.50 | 0.25 | 0.50 | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | < 0.50 | 0.25 | 0.50 | QW9656 | GW | |
| Alkalinity | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | 0.50 | QV4618 | EBW | |
| (PP as CaCO ₃) | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | 0.50 | QW9657 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QW9659 | GW | |
| | mg/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | <0.50 <0.50 | 0.25 0.25 | 0.50 0.50 | QW9639 QW9640 | GW GW | |
| | mg/L mg/L | SS2-1 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | < 0.50 | 0.25 | 0.50 | QW9646 | GW | Sample received past method-specified hold time. |
| | mg/L | SS3-5 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QW9647 | GW | Sample received past method-specified hold time. |
| | mg/L | SS3-6 | 4/3/2017 4/30/2017 | <0.50 <0.50 | 0.25 | 0.50 | QW9648 | GW GW | Recompled at corrected coordinate |
| | mg/L mg/L | SS3-6 SS3-7 | 4/30/2017 4/3/2017 | <0.50 <0.50 | 0.25 0.25 | 0.50 0.50 | QZ4969 QW9649 | GW GW | Resampled at corrected coordinate. |
| | mg/L | SS3-8 | 4/3/2017 | <0.50 | 0.25 | 0.50 | QW9649 QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | <0.50 | 0.25 | 0.50 | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | <0.50 | 0.25 | 0.50 | QW9655 | GW | |
| Alkalinity | mg/L | SS5-5 | 4/1/2017 | <0.50 | 0.25 | 0.50 | QW9656 QW9657 | GW | |
| (Total as $CaCO_3$) - | mg/L mg/L | CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 | <0.50 <0.50 | 0.25 0.25 | 0.50 0.50 | QW9657 QV4618 | GW EBW | |
| Total | mg/L | CONTROL 1 | 4/7/2017 | 0.63 | 0.63 | 0.50 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 1.5 | 1.5 | 0.50 | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | < 0.50 | 0.25 | 0.50 | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0.56 | 0.56 | 0.50 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.6 | 0.6 | 0.50 | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.54 | 0.54 | 0.50 | QW9643 | GW DUPW2 | |
| | mg/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | < 0.50 | 0.25 | 0.50 | QW9645 QW9644 | DUPW2 | |
| | mg/L mg/L | SS2-4 SS3-4 | 4/8/2017 4/3/2017 | 0.51 3.98 | 0.51 3.98 | 0.50 0.50 | QW9644 QW9646 | DUPW1 GW | Sample received past method-specified hold time. |
| | mg/L | SS3-5 | 4/3/2017 | 2.47 | 2.47 | 0.50 | QW9647 | GW | Sample received past method-specified hold time. |
| | mg/L | SS3-6 | 4/3/2017 | 6.29 | 6.29 | 0.50 | QW9648 | GW | Sample received past method-specified hold time. |
| | mg/L | SS3-6 | 4/30/2017 | 3.18 | 3.18 | 0.50 | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 3.32 | 3.32 | 0.50 | QW9649 | GW | Sample received past method-specified hold time. |
| | mg/L | SS3-8 | 4/3/2017 | 3.08 | 3.08 | 0.50 | QW9650 | GW | Sample received past method-specified hold time. |
| | mg/L | SS4-4 | 4/7/2017 | 1.89 | 1.89 | 0.50 | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 1.12 | 1.12 | 0.50 | QW9652 | DUPW1 | |
| | mg/L | SS4-5 SS5-3 | 4/7/2017 4/1/2017 | 1.03 3.2 | 1.03 | 0.50 0.50 | QW9653 QW9654 | DUPW2 GW | |
| | mg/L mg/L | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | < 0.50 | 3.2 0.25 | 0.50 | QW9654 QW9655 | GW GW | |
| | mg/L | SS5-4 SS5-5 | 4/1/2017 | <0.50 | 0.25 | 0.50 | QW9656 QW9656 | GW | |
| | 6/ L | 200-0 | -/ -/ -01/ | -0.00 | 0.20 | 5.50 | ~.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 911 | |

| Parameter | Unit | Site | Data | Data Point | Craphable Value | RDL | Lab Rof | Sample Type | Commont |
|--------------------------|--------------|------------------------|----------------------|-----------------|-------------------------|-----|------------------|-------------|--|
| Aluminum (Al) - | ug/L | CONTROL 1 | Date 4/1/2017 | 45.8 | Graphable Value 45.8 | KDL | QW9657 | GW | Comment |
| Total | mg/L | CONTROL 1 | 4/1/2017 | 0.05 | 0.0458 | | QW9657 | GW | Automatically converted from value: 45.8 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | 0.67 | 0.67 | | QV4618 | EBW | Automatically converted from value. 45.5 ug/ E to hig/ E. |
| | ug/L | CONTROL 2 | 4/7/2017 | 529 | 529 | | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.53 | 0.529 | | QW9658 | GW | Automatically converted from value: 529 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.41 | 0.405 | | QW9659 | GW | Automatically converted from value: 405 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 405 | 405 | | QW9659 | GW | , |
| | ug/L | SS1-4 | 4/7/2017 | 166 | 166 | | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.17 | 0.166 | | QW9639 | GW | Automatically converted from value: 166 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0.42 | 0.418 | | QW9640 | GW | Automatically converted from value: 418 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 418 | 418 | | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 227 | 227 | | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.23 | 0.227 | | QW9641 | GW | Automatically converted from value: 227 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0.13 | 0.125 | | QW9642 | GW | Automatically converted from value: 125 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 125 | 125 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.16 | 0.16 | | QW9643 | GW | Automatically converted from value: 160 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 160 | 160 | | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 109 | 109 | | QW9645 | DUPW2 | |
| | ug/L | SS2-4 | 4/8/2017 | 449 | 449 | | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.45 | 0.449 | | QW9644 | DUPW1 | Automatically converted from value: 449 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.11 | 0.109 | | QW9645 | DUPW2 | Automatically converted from value: 109 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 3.95 | 3.95 | | QW9646 | GW | Automatically converted from value: 3950 ug/L to mg/L. |
| | ug/L ug/L | SS3-4 SS3-5 | 4/3/2017 4/3/2017 | 3950 326 | 3950 326 | | QW9646 QW9647 | GW GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.33 | 0.326 | | QW9647 QW9647 | GW | Automatically converted from value: 326 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 2.39 | 2.39 | | QW9648 | GW | Automatically converted from value: 320 ug/L to mg/L. Automatically converted from value: 2390 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 2.39 | 2390 | | QW9648 QW9648 | GW | value. 2070 ug/ L to mg/ L. |
| | ug/L ug/L | SS3-6 | 4/30/2017 | 836 | 836 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 674 | 674 | | QW9649 | GW | 1 |
| | mg/L | SS3-7 | 4/3/2017 | 0.67 | 0.674 | | QW9649 | GW | Automatically converted from value: 674 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 1.42 | 1.42 | | QW9650 | GW | Automatically converted from value: 1420 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 1420 | 1420 | | QW9650 | GW | |
| | ug/L | SS4-4 | 4/7/2017 | 364 | 364 | | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.36 | 0.364 | | QW9651 | GW | Automatically converted from value: 364 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 1.7 | 1.7 | | QW9652 | DUPW1 | Automatically converted from value: 1700 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 1.31 | 1.31 | | QW9653 | DUPW2 | Automatically converted from value: 1310 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 1700 | 1700 | | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 1310 | 1310 | | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 1360 | 1360 | | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 1.36 | 1.36 | | QW9654 | GW | Automatically converted from value: 1360 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0.1 | 0.102 | | QW9655 | GW | Automatically converted from value: 102 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | 102 | 102 | | QW9655 | GW | |
| | ug/L | SS5-5 | 4/1/2017 | 156 | 156 | | QW9656 | GW | A |
| America (NI) | mg/L | SS5-5 | 4/1/2017 | 0.16 | 0.156 | | QW9656 | GW | Automatically converted from value: 156 ug/L to mg/L. |
| Ammonia (N) | mg/L | CONTROL 1 | 4/1/2017 | 0.074 | 0.074 | | QW9657 | GW | |
| | mg/L | CONTROL 1 CONTROL 2 | 4/1/2017 4/7/2017 | 0.027 0.083 | 0.027 0.083 | | QV4618 QW9658 | EBW GW | |
| | mg/L mg/L | CONTROL 2 | | 0.065 | 0.065 | | QW9659 | GW | |
| | mg/L mg/L | SS1-4 | 4/3/2017 4/7/2017 | 0.065 | 0.13 | | QW9639 QW9639 | GW | |
| | mg/L | SS1-4 SS1-5 | 4/7/2017 | 0.054 | 0.054 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.11 | 0.11 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0.13 | 0.13 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.12 | 0.12 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.084 | 0.084 | | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.097 | 0.097 | | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.1 | 0.1 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.22 | 0.22 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.12 | 0.12 | | QW9648 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 0.11 | 0.11 | | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | 0.11 | 0.11 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.11 | 0.11 | | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 0.14 | 0.14 | | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.14 | 0.14 | | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | 0.061 | 0.061 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.055 | 0.055 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0.047 | 0.047 | | QW9656 | GW | |
| Antimony (Sb) - Total | ug/L | CONTROL 1 | 4/1/2017 | <0.020 | 0.01 | | QV4618 | EBW | |
| Total | ug/L | CONTROL 1 | 4/1/2017 | <0.020 | 0.01 | | QW9657 | GW | Automotically account of form 1 40,000 /7 / /7 |
| | mg/L | CONTROL 2 | 4/1/2017 | <0.00 | 0.00001 | | QW9657 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| | mg/L | CONTROL 2 | 4/7/2017 | <0.00 | 0.00001 | | QW9658 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/7/2017 | <0.020 | 0.01 | | QW9658 | GW | Automatically converted from value 0.050 /T to /T |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 058 | 0.000058 | | QW9659 | GW | Automatically converted from value: 0.058 ug/L to mg/L. |
| | ug/L ug/L | CONTROL 3 SS1-4 | 4/3/2017 4/7/2017 | 0.058 <0.020 | 0.058 0.01 | | QW9659 QW9639 | GW GW | |
| | ug/L mg/L | SS1-4 SS1-4 | 4/7/2017 | <0.020 | 0.0001 | | QW9639 QW9639 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| | mg/L mg/L | SS1-4 SS1-5 | 4/7/2017 | <0.00 | 0.00001 | | QW9639 QW9640 | GW | Automatically converted from value: <0.020 ug/L to mg/L. Automatically converted from value: <0.020 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | <0.00 | 0.001 | | QW9640 QW9640 | GW | Tatomateury converted from value. 10.020 ug/ E to mg/ E. |
| | ug/L ug/L | SS2-1 | 4/8/2017 | <0.020 | 0.01 | | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | <0.020 | 0.00001 | | QW9641 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | <0.00 | 0.00001 | | QW9642 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | <0.020 | 0.01 | | QW9642 | GW | , |
| | mg/L | SS2-3 | 4/8/2017 | <0.00 | 0.00001 | | QW9643 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | < 0.020 | 0.01 | | QW9643 | GW | <i>5. 6.</i> |
| | ug/L | SS2-4 | 4/8/2017 | < 0.020 | 0.01 | | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | < 0.020 | 0.01 | | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.00 | 0.00001 | | QW9644 | DUPW1 | Automatically converted from value: <0.020 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | < 0.00 | 0.00001 | | QW9645 | DUPW2 | Automatically converted from value: <0.020 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.000049 | | QW9646 | GW | Automatically converted from value: 0.049 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 0.049 | 0.049 | | QW9646 | GW | |
| | ug/L | SS3-5 | 4/3/2017 | < 0.020 | 0.01 | | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | < 0.00 | 0.00001 | | QW9647 | GW | Automatically converted from value: $< 0.020 \text{ ug/L}$ to mg/L . |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.000039 | | QW9648 | GW | Automatically converted from value: $0.039~\mathrm{ug/L}$ to $\mathrm{mg/L}$. |
| | ug/L | SS3-6 | 4/3/2017 | 0.039 | 0.039 | | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | 0.025 | 0.025 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | _ | | | · | | _ | · <u> </u> | | |

| Parameter Antimony (Sb) - | Unit ug/L | Site SS3-7 | Date 4/3/2017 | 0.028 | Graphable Value 0.028 | RDL Lab Ref S QW9649 | Sample Type GW | e Comment |
|---|--------------|------------------------|-----------------------|-----------------|-----------------------|-------------------------|-------------------|--|
| otal (cont'd) | ug/L mg/L | SS3-7 SS3-7 | 4/3/2017 | 0.028 | 0.00028 | QW9649 QW9649 | GW | Automatically converted from value: 0.028 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.000028 | QW9650 | GW | Automatically converted from value: 0.026 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.026 | 0.026 | QW9650 | GW | Automatically converted from value, 0.020 ug/ E to fitg/ E. |
| | mg/L | SS4-4 | 4/7/2017 | <0.00 | 0.00001 | QW9651 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | < 0.020 | 0.01 | QW9651 | GW | |
| | ug/L | SS4-5 | 4/7/2017 | 0.03 | 0.03 | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 0.025 | 0.025 | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00003 | QW9652 | DUPW1 | Automatically converted from value: 0.030 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000025 | QW9653 | DUPW2 | Automatically converted from value: 0.025 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.000033 | QW9654 | GW | Automatically converted from value: 0.033 ug/L to mg/L. |
| | ug/L | SS5-3 | 4/1/2017 | 0.033 | 0.033 | QW9654 | GW | |
| | ug/L | SS5-4 | 4/1/2017 | < 0.020 | 0.01 | QW9655 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | <0.00 | 0.00001 | QW9655 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | <0.00 | 0.00001 | QW9656 | GW | Automatically converted from value: <0.020 ug/L to mg/L. |
| . (4.) | ug/L | SS5-5 | 4/1/2017 | <0.020 | 0.01 | QW9656 | GW | |
| rsenic (As) - otal | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.000022 | QW9657 | GW | Automatically converted from value: 0.022 ug/L to mg/L. |
| J. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | ug/L ug/L | CONTROL 1 CONTROL 1 | 4/1/2017 | 0.022 <0.020 | 0.022 0.01 | QW9657 QV4618 | GW EBW | |
| | ug/L ug/L | CONTROL 1 | 4/1/2017 4/7/2017 | 0.12 | 0.12 | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.12 | 0.00012 | QW9658 | GW | Automatically converted from value: 0.120 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.000076 | QW9659 | GW | Automatically converted from value: 0.726 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.076 | 0.076 | QW9659 | GW | The state of the s |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.000034 | QW9639 | GW | Automatically converted from value: 0.034 ug/L to mg/L. |
| | ug/L | SS1-4 | 4/7/2017 | 0.034 | 0.034 | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.000102 | QW9640 | GW | Automatically converted from value: 0.102 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 0.102 | 0.102 | QW9640 | GW | J. U |
| | ug/L | SS2-1 | 4/8/2017 | 0.052 | 0.052 | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.000052 | QW9641 | GW | Automatically converted from value: $0.052~\mathrm{ug/L}$ to $\mathrm{mg/L}$. |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.000056 | QW9642 | GW | Automatically converted from value: 0.056 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 0.056 | 0.056 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.000062 | QW9643 | GW | Automatically converted from value: 0.062 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 0.062 | 0.062 | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 0.106 | 0.106 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 0.047 | 0.047 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.000106 | QW9644 | DUPW1 | Automatically converted from value: 0.106 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.000047 | QW9645 | DUPW2 | Automatically converted from value: 0.047 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.000717 | QW9646 | GW | Automatically converted from value: 0.717 ug/L to mg/L. |
| | ug/L | SS3-4 SS3-5 | 4/3/2017 4/3/2017 | 0.717 0.067 | 0.717 0.067 | QW9646 QW9647 | GW GW | |
| | ug/L mg/L | SS3-5 | 4/3/2017 | 0.067 | 0.00067 | QW9647 QW9647 | GW | Automatically converted from value: 0.067 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.000362 | QW9648 | GW | Automatically converted from value: 0.362 ug/L to mg/L. Automatically converted from value: 0.362 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 0.362 | 0.362 | QW9648 | GW | Automatically converted from value. 0.502 ug/ E to fig/ E. |
| | ug/L | SS3-6 | 4/30/2017 | 0.166 | 0.166 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.15 | 0.15 | QW9649 | GW | neomipieu at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.00015 | QW9649 | GW | Automatically converted from value: 0.150 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.000288 | QW9650 | GW | Automatically converted from value: 0.288 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.288 | 0.288 | QW9650 | GW | 3 |
| | ug/L | SS4-4 | 4/7/2017 | 0.088 | 0.088 | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.000088 | QW9651 | GW | Automatically converted from value: 0.088 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000564 | QW9652 | DUPW1 | Automatically converted from value: 0.564 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00071 | QW9653 | DUPW2 | Automatically converted from value: 0.710 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 0.71 | 0.71 | QW9653 | DUPW2 | |
| | ug/L | SS4-5 | 4/7/2017 | 0.564 | 0.564 | QW9652 | DUPW1 | |
| | ug/L | SS5-3 | 4/1/2017 | 0.205 | 0.205 | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.000205 | QW9654 | GW | Automatically converted from value: 0.205 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.000032 | QW9655 | GW | Automatically converted from value: 0.032 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | 0.032 | 0.032 | QW9655 | GW | |
| | ug/L | SS5-5 | 4/1/2017 | 0.074 | 0.074 | QW9656 | GW | |
| · (D.) | mg/L | SS5-5 | 4/1/2017 | 0 | 0.000074 | QW9656 | GW | Automatically converted from value: 0.074 ug/L to mg/L. |
| arium (Ba) - otal | ug/L | CONTROL 1 | 4/1/2017 | <0.020 | 0.01 | QV4618 | EBW | |
| ota i | ug/L | CONTROL 1 | 4/1/2017 | 1.51 | 1.51 | QW9657 | GW | Automotically consents I form and 1 a Fd 17 1 17 |
| | mg/L | CONTROL 2 | 4/1/2017 4/7/2017 | 0 8 32 | 0.00151 8 32 | QW9657 QW9658 | GW | Automatically converted from value: 1.51 ug/L to mg/L. |
| | ug/L mg/L | CONTROL 2 CONTROL 2 | 4/7/2017 4/7/2017 | 8.32 0.01 | 8.32 0.00832 | QW9658 QW9658 | GW GW | Automatically converted from value: 8.32 ug/L to mg/L. |
| | mg/L mg/L | CONTROL 2 | 4/7/2017 4/3/2017 | 0.01 | 0.0109 | QW9658 QW9659 | GW GW | Automatically converted from value: 8.52 ug/L to mg/L. Automatically converted from value: 10.9 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 10.9 | 10.9 | QW9659 QW9659 | GW | 1. a.o. ing/ E to mg/ E. |
| | ug/L ug/L | SS1-4 | 4/7/2017 | 2.46 | 2.46 | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.00246 | QW9639 | GW | Automatically converted from value: 2.46 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0.01 | 0.00557 | QW9640 | GW | Automatically converted from value: 5.57 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 5.57 | 5.57 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.0042 | QW9641 | GW | Automatically converted from value: 4.20 ug/L to mg/L. |
| | ug/L | SS2-1 | 4/8/2017 | 4.2 | 4.2 | QW9641 | GW | |
| | ug/L | SS2-2 | 4/8/2017 | 2.82 | 2.82 | QW9642 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.00282 | QW9642 | GW | Automatically converted from value: 2.82 ug/L to mg/L. |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.00306 | QW9643 | GW | Automatically converted from value: $3.06\ \text{ug/L}$ to mg/L . |
| | ug/L | SS2-3 | 4/8/2017 | 3.06 | 3.06 | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 6.02 | 6.02 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 3.87 | 3.87 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.01 | 0.00602 | QW9644 | DUPW1 | Automatically converted from value: 6.02 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.00387 | QW9645 | DUPW2 | Automatically converted from value: 3.87 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0.12 | 0.124 | QW9646 | GW | Automatically converted from value: 124 ug/L to mg/L. |
| | ug/L | SS3-4 SS3-5 | 4/3/2017 | 124 | 124 13.2 | QW9646 | GW | |
| | ug/L | SS3-5 | 4/3/2017 | 13.2 | 13.2 | QW9647 | GW | Automotically convented from value 10.0 · · /I |
| | mg/L | SS3-5 | 4/3/2017 | 0.01 | 0.0132 | QW9647 | GW | Automatically converted from value: 13.2 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0.09 85.2 | 0.0852 85.2 | QW9648 QW9648 | GW GW | Automatically converted from value: 85.2 ug/L to mg/L. |
| | ug/L | SS3-6 SS3-6 | 4/3/2017 4/30/2017 | 85.2 21.9 | 85.2 21.9 | QW9648 QZ4969 | GW GW | Resampled at corrected coordinate. |
| | ug/L | | | | | | | resumpted at corrected coordinate. |
| | | SS3-7 | 4/3/2017 | 35.6 | 35.6 | QW9649 | GW | Automatically converted from value: 35.6 ug/L to mg/L. |
| | ug/L mg/L | CC2 7 | 1/2/2017 | 0.04 | (1) (1/2) 4.4 | / MA/(1/2, 4/1) | | |
| | mg/L | SS3-7 | 4/3/2017 | 0.04 | 0.0356 | QW9649 | GW | |
| | mg/L mg/L | SS3-8 | 4/3/2017 | 0.05 | 0.0541 | QW9650 | GW | Automatically converted from value: 54.1 ug/L to mg/L. |
| | mg/L | | | | | | | |

| | | | Allalytical | | | | | | |
|---------------------------------|--------------|----------------|----------------------|----------------|----------------------|-----|--------------------|----------------|---|
| Parameter | Unit | Site | Date | | Graphable Value | RDL | Lab Ref | 1 /1 | Comment |
| Barium (Ba) - Total (cont'd) | ug/L | SS4-5 | 4/7/2017 | 25.9 | 25.9 | | QW9652 | DUPW1 | |
| Total (cont u) | ug/L | SS4-5 | 4/7/2017 | 18.2 | 18.2 | | QW9653 OW9652 | DUPW2 | Automotically convented from values 25 0 cm/L to ma/L |
| | mg/L | SS4-5 | 4/7/2017 | 0.03 | 0.0259 0.0182 | | ~ | DUPW1 | Automatically converted from value: 25.9 ug/L to mg/L. |
| | mg/L mg/L | SS4-5 SS5-3 | 4/7/2017 4/1/2017 | 0.02 0.02 | 0.0182 | | QW9653 QW9654 | DUPW2 GW | Automatically converted from value: 18.2 ug/L to mg/L. Automatically converted from value: 22.2 ug/L to mg/L. |
| | ug/L | SS5-3 | 4/1/2017 | 22.2 | 22.2 | | QW9654 | GW | Automatically converted from value. 22.2 ug/ E to fig/ E. |
| | ug/L ug/L | SS5-4 | 4/1/2017 | 3.39 | 3.39 | | QW9655 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.00339 | | QW9655 | GW | Automatically converted from value: 3.39 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.0031 | | QW9656 | GW | Automatically converted from value: 3.10 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | 3.1 | 3.1 | | QW9656 | GW | , |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.00 | 0.000005 | | QW9657 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | < 0.010 | 0.005 | | QW9657 | GW | , |
| | ug/L | CONTROL 1 | 4/1/2017 | < 0.010 | 0.005 | | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.000013 | | QW9658 | GW | Automatically converted from value: 0.013 ug/L to mg/L. |
| | ug/L | CONTROL 2 | 4/7/2017 | 0.013 | 0.013 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.000016 | | QW9659 | GW | Automatically converted from value: 0.016 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.016 | 0.016 | | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 0.012 | 0.012 | | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.000012 | | QW9639 | GW | Automatically converted from value: 0.012 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.000014 | | QW9640 | GW | Automatically converted from value: 0.014 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 0.014 | 0.014 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.000012 | | QW9641 | GW | Automatically converted from value: 0.012 ug/L to mg/L. |
| | ug/L | SS2-1 | 4/8/2017 | 0.012 | 0.012 | | QW9641 | GW | |
| | ug/L | SS2-2 | 4/8/2017 | <0.010 | 0.005 | | QW9642 | GW | Automotically assessed for an automotical of the second |
| | mg/L | SS2-2 | 4/8/2017 | <0.00 | 0.000005 | | QW9642 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | mg/L | SS2-3 | 4/8/2017 | 0 011 | 0.000011 | | QW9643 | GW | Automatically converted from value: 0.011 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 0.011 | 0.011 | | QW9643 | GW DUDWA | |
| | ug/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 0.02 <0.010 | 0.02 0.005 | | QW9644 QW9645 | DUPW1 DUPW2 | |
| | ug/L mg/I | SS2-4 SS2-4 | 4/8/2017 | <0.010 0 | 0.005 | | QW9645 QW9644 | DUPW2 DUPW1 | Automatically converted from value: 0.020 ug/L to mg/L. |
| | mg/L | SS2-4 SS2-4 | 4/8/2017 | <0.00 | 0.00002 | | QW9644 QW9645 | DUPW1 DUPW2 | Automatically converted from value: 0.020 ug/L to mg/L. Automatically converted from value: <0.010 ug/L to mg/L. |
| | mg/L | SS2-4 SS3-4 | 4/8/2017 4/3/2017 | <0.00 0 | 0.00005 | | QW9645 QW9646 | GW | Automatically converted from value: <0.010 ug/L to mg/L. Automatically converted from value: 0.132 ug/L to mg/L. |
| | mg/L | SS3-4 SS3-4 | 4/3/2017 | 0.132 | 0.000132 | | QW9646 QW9646 | GW GW | Automaticany converted from value. 0.132 ug/ L to mg/ L. |
| | ug/L | | | | | | | | |
| | ug/L mg/I | SS3-5 | 4/3/2017 | 0.011 | 0.011 | | QW9647 | GW GW | Automatically converted from value: 0.011 ug/L to mg/L. |
| | mg/L mg/L | SS3-5 SS3-6 | 4/3/2017 4/3/2017 | 0 0 | 0.000011 0.000062 | | QW9647 QW9648 | GW GW | Automatically converted from value: 0.011 ug/L to mg/L. Automatically converted from value: 0.062 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 0.062 | 0.062 | | QW9648 QW9648 | GW | Automatically converted from value, 0.062 ug/ E to fitg/ E. |
| | ug/L ug/L | SS3-6 | 4/30/2017 | 0.082 | 0.024 | | QVV 9048 QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L ug/L | SS3-7 | 4/3/2017 | 0.024 | 0.024 | | QZ4969 QW9649 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0.03 | 0.00003 | | QW9649 QW9649 | GW | Automatically converted from value: 0.030 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.000052 | | QW9650 | GW | Automatically converted from value: 0.052 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.052 | 0.052 | | QW9650 | GW | Automatically converted from value. 0.032 ug/ E to flig/ E. |
| | mg/L | SS4-4 | 4/7/2017 | 0.032 | 0.00002 | | QW9651 | GW | Automatically converted from value: 0.020 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | 0.02 | 0.02 | | QW9651 | GW | Automatically converted from value. 0.020 ug/ E to fig/ E. |
| | ug/L ug/L | SS4-5 | 4/7/2017 | 0.029 | 0.029 | | QW9653 | DUPW2 | |
| | ug/L ug/L | SS4-5 | 4/7/2017 | 0.023 | 0.033 | | QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.033 | 0.000033 | | QW9652 | DUPW1 | Automatically converted from value: 0.033 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000039 | | QW9653 | DUPW2 | Automatically converted from value: 0.029 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.000029 | | QW9654 | GW | Automatically converted from value: 0.040 ug/L to mg/L. |
| | ug/L | SS5-3 | 4/1/2017 | 0.04 | 0.04 | | QW9654 | GW | Automatically converted from value. 0.040 ug/ E to fig/ E. |
| | ug/L ug/L | SS5-4 | 4/1/2017 | < 0.010 | 0.005 | | QW9655 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | <0.00 | 0.000005 | | QW9655 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | <0.00 | 0.000005 | | QW9656 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | < 0.010 | 0.005 | | QW9656 | GW | Nationalizating converted from value. (0.010 ug/ E to fitg/ E. |
| Bicarbonate | mg/L | CONTROL 1 | 4/1/2017 | <0.50 | 0.25 | | QW9657 | GW | |
| (HCO ₃) | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.77 | 0.77 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 1.83 | 1.83 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | < 0.50 | 0.25 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0.68 | 0.68 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.72 | 0.72 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | < 0.50 | 0.25 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.66 | 0.66 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | <0.50 | 0.25 | | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.62 | 0.62 | | QW9644 | DUPW1 | |
| | mg/L | SS3-4 | 4/3/2017 | 4.86 | 4.86 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 3.01 | 3.01 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 7.67 | 7.67 | | QW9648 | GW | Sample received past method-specified hold time. |
| | mg/L | SS3-6 | 4/30/2017 | 3.88 | 3.88 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 4.05 | 4.05 | | QW9649 | GW | Sample received past method-specified hold time. |
| | mg/L | SS3-8 | 4/3/2017 | 3.76 | 3.76 | | QW9650 | GW | Sample received past method-specified hold time. |
| | mg/L | SS4-4 | 4/7/2017 | 2.31 | 2.31 | | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 1.26 | 1.26 | | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 1.37 | 1.37 | | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | 3.9 | 3.9 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | < 0.50 | 0.25 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | <0.50 | 0.25 | | QW9656 | GW | |
| Bismuth (Bi) - | ug/L | CONTROL 1 | 4/1/2017 | < 0.0050 | 0.0025 | | QV4618 | EBW | |
| Total | ug/L | CONTROL 1 | 4/1/2017 | <0.0050 | 0.0025 | | QW9657 | GW | |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.00 | 0.0000025 | | QW9657 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | ug/L | CONTROL 2 | 4/7/2017 | 0.024 | 0.024 | | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.000024 | | QW9658 | GW | Automatically converted from value: 0.0240 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.0000131 | | QW9659 | GW | Automatically converted from value: 0.0131 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.0131 | 0.0131 | | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 0.0066 | 0.0066 | | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.0000066 | | QW9639 | GW | Automatically converted from value: 0.0066 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.0000163 | | QW9640 | GW | Automatically converted from value: 0.0163 ug/L to mg/L. |
| 1 | ug/L | SS1-5 | 4/7/2017 | 0.0163 | 0.0163 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.0000112 | | QW9641 | GW | Automatically converted from value: 0.0112 ug/L to mg/L. |
| | ug/L | SS2-1 | 4/8/2017 | 0.0112 | 0.0112 | | QW9641 | GW | |
| | ug/L | SS2-2 | 4/8/2017 | 0.0067 | 0.0067 | | QW9642 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.0000067 | | QW9642 | GW | Automatically converted from value: 0.0067 ug/L to mg/L. |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.000012 | | QW9643 | GW | Automatically converted from value: 0.0120 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 0.012 | 0.012 | | QW9643 | GW | |

| ismuth (Bi) - | Unit ug/L | Site SS2-4 | Date 4/8/2017 | 0.0165 | Graphable Value 1 | RDL Lab Ref S QW9644 | Sample Type DUPW1 | e Comment |
|----------------|--------------|----------------|----------------------|----------------|--------------------|-------------------------|----------------------|--|
| otal (cont'd) | ug/L ug/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 0.0165 | 0.0165 | QW9644 QW9645 | DUPW1 DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.0108 | 0.000165 | QW9643 QW9644 | DUPW1 | Automatically converted from value: 0.0165 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.0000108 | QW9645 | DUPW2 | Automatically converted from value: 0.0108 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.000203 | QW9646 | GW | Automatically converted from value: 0.203 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 0.203 | 0.203 | QW9646 | GW | Ç. G. |
| | ug/L | SS3-5 | 4/3/2017 | 0.0206 | 0.0206 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.0000206 | QW9647 | GW | Automatically converted from value: 0.0206 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.000189 | QW9648 | GW | Automatically converted from value: 0.189 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 0.189 | 0.189 | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | 0.05 | 0.05 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.0643 | 0.0643 | QW9649 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.0000643 | QW9649 | GW | Automatically converted from value: 0.0643 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.0000654 | QW9650 | GW | Automatically converted from value: 0.0654 ug/L to mg/L . |
| | ug/L | SS3-8 | 4/3/2017 | 0.0654 | 0.0654 | QW9650 | GW | |
| | ug/L | SS4-4 | 4/7/2017 | 0.0225 | 0.0225 | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.0000225 | QW9651 | GW DUDW1 | Automatically converted from value: 0.0225 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000177 | QW9652 | DUPW1 | Automatically converted from value: 0.177 ug/L to mg/L. |
| | mg/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 0 0.177 | 0.0000681 0.177 | QW9653 QW9652 | DUPW2 DUPW1 | Automatically converted from value: 0.0681 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 0.177 | 0.0681 | QW9653 | DUPW2 | |
| | ug/L ug/L | SS5-3 | 4/1/2017 | 0.0661 | 0.154 | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 0.134 | 0.000154 | QW9654 | GW | Automatically converted from value: 0.154 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.000005 | QW9655 | GW | Automatically converted from value: 0.0050 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | 0.005 | 0.005 | QW9655 | GW | ug/ L to mg/ L. |
| | mg/L | SS5-5 | 4/1/2017 | <0.00 | 0.0000025 | QW9656 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | < 0.0050 | 0.0025 | QW9656 | GW | , |
| on (B) - Total | mg/L | CONTROL 1 | 4/1/2017 | <0.01 | 0.0025 | QW9657 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | <5.0 | 2.5 | QW9657 | GW | <i>J.</i> |
| | ug/L | CONTROL 1 | 4/1/2017 | <5.0 | 2.5 | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | < 0.01 | 0.0025 | QW9658 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | CONTROL 2 | 4/7/2017 | <5.0 | 2.5 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | < 0.01 | 0.0025 | QW9659 | GW | Automatically converted from value: $<$ 5.0 ug/L to mg/L . |
| | ug/L | CONTROL 3 | 4/3/2017 | <5.0 | 2.5 | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | <5.0 | 2.5 | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | <0.01 | 0.0025 | QW9639 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | <0.01 | 0.0025 | QW9640 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | <5.0 | 2.5 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.01 | 0.0025 | QW9641 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | SS2-1 | 4/8/2017 | <5.0 | 2.5 | QW9641 | GW | |
| | ug/L mg/I | SS2-2 SS2-2 | 4/8/2017 4/8/2017 | <5.0 <0.01 | 2.5 0.0025 | QW9642 QW9642 | GW GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L mg/L | SS2-2 SS2-3 | 4/8/2017 4/8/2017 | <0.01 <0.01 | 0.0025 0.0025 | QW9642 QW9643 | GW GW | Automatically converted from value: <5.0 ug/L to mg/L. Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L ug/L | SS2-3 SS2-3 | 4/8/2017 | <0.01 <5.0 | 2.5 | QW9643 QW9643 | GW GW | Matorialicary converted from value. \0.0 ug/ L to file/ L. |
| | ug/L ug/L | SS2-3 SS2-4 | 4/8/2017 | <5.0 | 2.5 | QW9643 QW9644 | DUPW1 | |
| | ug/L ug/L | SS2-4 | 4/8/2017 | <5.0 | 2.5 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | <0.01 | 0.0025 | QW9644 | DUPW1 | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | < 0.01 | 0.0025 | QW9645 | DUPW2 | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | <0.01 | 0.0025 | QW9646 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | <5.0 | 2.5 | QW9646 | GW | , |
| | ug/L | SS3-5 | 4/3/2017 | < 5.0 | 2.5 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | < 0.01 | 0.0025 | QW9647 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | < 0.01 | 0.0025 | QW9648 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | < 5.0 | 2.5 | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | <10 | 5 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | < 5.0 | 2.5 | QW9649 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | < 0.01 | 0.0025 | QW9649 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | < 0.01 | 0.0025 | QW9650 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | <5.0 | 2.5 | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | < 0.01 | 0.0025 | QW9651 | GW | Automatically converted from value: $<5.0 \text{ ug/L}$ to mg/L . |
| | ug/L | SS4-4 | 4/7/2017 | <5.0 | 2.5 | QW9651 | GW | |
| | ug/L | SS4-5 | 4/7/2017 | <5.0 | 2.5 | QW9653 | DUPW2 | |
| | ug/L | SS4-5 | 4/7/2017 | <5.0 | 2.5 | QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | < 0.01 | 0.0025 | QW9652 | DUPW1 | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | <0.01 | 0.0025 | QW9653 | DUPW2 | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | <0.01 | 0.0025 | QW9654 | GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | <5.0 <5.0 | 2.5 2.5 | QW9654 QW9655 | GW GW | |
| | ug/L mg/I | SS5-4 SS5-4 | 4/1/2017 4/1/2017 | <5.0 <0.01 | 2.5 0.0025 | QW9655 QW9655 | GW GW | Automatically converted from value: <5.0 ug/L to mg/L. |
| | mg/L mg/L | SS5-4 SS5-5 | 4/1/2017 4/1/2017 | <0.01 | 0.0025 | QW9655 QW9656 | GW GW | Automatically converted from value: <5.0 ug/L to mg/L. Automatically converted from value: <5.0 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | <5.0 | 2.5 | QW9656 QW9656 | GW | |
| lmium (Cd) - | ug/L ug/L | CONTROL 1 | 4/1/2017 | <0.0050 | 0.0025 | QV4618 | EBW | |
| al | ug/L | CONTROL 1 | 4/1/2017 | < 0.0050 | 0.0025 | QW9657 | GW | |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.00 | 0.0000025 | QW9657 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | | 4/7/2017 | 0 | 0.000008 | QW9658 | GW | Automatically converted from value: 0.0080 ug/L to mg/L. |
| | ug/L | CONTROL 2 | | 0.008 | 0.008 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.0000074 | QW9659 | GW | Automatically converted from value: $0.0074~\text{ug/L}$ to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.0074 | 0.0074 | QW9659 | GW | - |
| | ug/L | SS1-4 | 4/7/2017 | 0.005 | 0.005 | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.000005 | QW9639 | GW | Automatically converted from value: 0.0050 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | < 0.00 | 0.0000025 | QW9640 | GW | Automatically converted from value: $<0.0050~\text{ug/L}$ to mg/L . |
| | ug/L | SS1-5 | 4/7/2017 | < 0.0050 | 0.0025 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.0000145 | QW9641 | GW | Automatically converted from value: 0.0145 ug/L to mg/L. |
| | ug/L | SS2-1 | 4/8/2017 | 0.0145 | 0.0145 | QW9641 | GW | |
| | ug/L | SS2-2 | 4/8/2017 | 0.007 | 0.007 | QW9642 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.000007 | QW9642 | GW | Automatically converted from value: 0.0070 ug/L to mg/L. |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.0000055 | QW9643 | GW | Automatically converted from value: 0.0055 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 0.0055 | 0.0055 | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | < 0.0050 | 0.0025 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 0.0056 | 0.0056 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.00 | 0.0000025 | QW9644 | DUPW1 | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.0000056 | QW9645 | DUPW2 | Automatically converted from value: 0.0056 ug/L to mg/L. |
| | 0/ | | | | | | | , |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.0000678 | QW9646 | GW | Automatically converted from value: 0.0678 ug/L to mg/L. |

| | | tter Chemistry | | | | | | | |
|------------------------------|--------------|----------------|-----------|----------|-----------------|-----|------------------|-------------|---|
| Parameter | Unit | Site | Date | | Graphable Value | RDL | | Sample Type | Comment |
| Cadmium (Cd) - | ug/L | SS3-5 | 4/3/2017 | 0.0082 | 0.0082 | | QW9647 | GW | |
| Total (cont'd) | mg/L | SS3-5 | 4/3/2017 | 0 | 0.0000082 | | QW9647 | GW | Automatically converted from value: 0.0082 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.0000392 | | QW9648 | GW | Automatically converted from value: 0.0392 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 0.0392 | 0.0392 | | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | 0.0124 | 0.0124 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.0113 | 0.0113 | | QW9649 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.0000113 | | QW9649 | GW | Automatically converted from value: 0.0113 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.0000308 | | QW9650 | GW | Automatically converted from value: 0.0308 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.0308 | 0.0308 | | QW9650 | GW | , 0, |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.0000101 | | QW9651 | GW | Automatically converted from value: 0.0101 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | 0.0101 | 0.0101 | | QW9651 | GW | Tratomatically converted from variet, 0.0101 ag/ 2 to hig/ 2. |
| | ug/L ug/L | SS4-5 | 4/7/2017 | 0.0263 | 0.0263 | | QW9652 | DUPW1 | |
| | ug/L ug/L | SS4-5 | 4/7/2017 | 0.0203 | 0.0151 | | QW9653 | DUPW2 | |
| | | | | 0.0151 | | | | | Automotically convented from value 0.0262 va/I to ma/I |
| | mg/L | SS4-5 | 4/7/2017 | | 0.0000263 | | QW9652 | DUPW1 | Automatically converted from value: 0.0263 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.0000151 | | QW9653 | DUPW2 | Automatically converted from value: 0.0151 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.0000213 | | QW9654 | GW | Automatically converted from value: 0.0213 ug/L to mg/L. |
| | ug/L | SS5-3 | 4/1/2017 | 0.0213 | 0.0213 | | QW9654 | GW | |
| | ug/L | SS5-4 | 4/1/2017 | < 0.0050 | 0.0025 | | QW9655 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | < 0.00 | 0.0000025 | | QW9655 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | < 0.00 | 0.0000025 | | QW9656 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | < 0.0050 | 0.0025 | | QW9656 | GW | |
| Calcium (Ca) - | mg/L | CONTROL 1 | 4/1/2017 | 0.105 | 0.105 | | QW9657 | GW | |
| Total | mg/L | CONTROL 1 | 4/1/2017 | < 0.050 | 0.025 | | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.395 | 0.395 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.615 | 0.615 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.134 | 0.134 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0.171 | 0.171 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 2.27 | 2.27 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0.209 | 0.209 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.178 | 0.178 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.245 | 0.245 | | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.245 | 0.266 | | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 5.11 | 5.11 | | QW9646 QW9646 | GW GW | |
| | | SS3-4 SS3-5 | 4/3/2017 | 0.853 | 0.853 | | QW9646 QW9647 | GW | |
| | mg/L | SS3-5 SS3-6 | 4/3/2017 | 4.01 | 0.853 4.01 | | QW9647 QW9648 | GW GW | |
| | mg/L | | | | | | | | D |
| | mg/L | SS3-6 | 4/30/2017 | 1.56 | 1.56 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 1.95 | 1.95 | | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | 1.63 | 1.63 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.728 | 0.728 | | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 0.815 | 0.815 | | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 1.07 | 1.07 | | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | 1.67 | 1.67 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.239 | 0.239 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0.226 | 0.226 | | QW9656 | GW | |
| Carbonate (CO ₃) | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | | QW9657 | GW | |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | < 0.50 | 0.25 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | < 0.50 | 0.25 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | < 0.50 | 0.25 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | < 0.50 | 0.25 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.50 | 0.25 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | < 0.50 | 0.25 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.50 | 0.25 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | <0.50 | 0.25 | | QW9644 | DUPW1 | |
| | mg/L | SS3-4 | 4/3/2017 | <0.50 | 0.25 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | <0.50 | 0.25 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | < 0.50 | 0.25 | | QW9648 | GW | |
| | | | | | | | | | December of at assume and according to |
| | mg/L | SS3-6 | 4/30/2017 | <0.50 | 0.25 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | <0.50 | 0.25 | | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | <0.50 | 0.25 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | <0.50 | 0.25 | | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | <0.50 | 0.25 | | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | <0.50 | 0.25 | | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | <0.50 | 0.25 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | < 0.50 | 0.25 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | <0.50 | 0.25 | | QW9656 | GW | |
| Chloride (Cl) - | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.5 | | QV4618 | EBW | |
| Dissolved | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.5 | | QW9657 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | < 0.50 | 0.5 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | < 0.50 | 0.5 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | < 0.50 | 0.5 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | < 0.50 | 0.5 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.50 | 0.5 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | < 0.50 | 0.5 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.50 | 0.5 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.5 | | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.5 | | QW9645 | DUPW2 | |
|] | mg/L | SS3-4 | 4/3/2017 | < 0.50 | 0.5 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | <0.50 | 0.5 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.56 | 0.56 | | OW9648 | GW | |
|] | mg/L | SS3-6 | 4/30/2017 | 0.76 | 0.76 | | QZ4969 | GW | Resampled at corrected coordinate. |
|] | mg/L | SS3-7 | 4/3/2017 | < 0.50 | 0.5 | | QW9649 | GW | r |
| | | SS3-8 | 4/3/2017 | 0.52 | 0.52 | | QW9649 QW9650 | GW | |
| | mg/L | | | | | | | | |
| | mg/L | SS4-4 | 4/7/2017 | <0.50 | 0.5 | | QW9651 | GW DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | <0.50 | 0.5 | | QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | <0.50 | 0.5 | | QW9653 | DUPW2 | |
| | mg/L | SS5-3 | 4/1/2017 | <0.50 | 0.5 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | <0.50 | 0.5 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | < 0.50 | 0.5 | | QW9656 | GW | |
| Chromium (Cr) - | ug/L | CONTROL 1 | 4/1/2017 | < 0.050 | 0.025 | | QV4618 | EBW | |
| Total | ug/L | CONTROL 1 | 4/1/2017 | 1.32 | 1.32 | | QW9657 | GW | |
| Ī | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.00132 | | QW9657 | GW | Automatically converted from value: 1.32 ug/L to mg/L. |
| | ug/L | CONTROL 2 | 4/7/2017 | 6.38 | 6.38 | | QW9658 | GW | |

| Parameter (C) | Unit | Site | | | - | | Sample Type | |
|--------------------|---------------|-------------------------|----------------------------------|--------------|---------------------|----------------------------|-------------|--|
| Chromium (Cr) - | mg/L | CONTROL 2 | 4/7/2017 | 0.01 | 0.00638 | QW9658 | GW | Automatically converted from value: 6.38 ug/L to mg/L. |
| otal (cont'd) | mg/L | CONTROL 3 | 4/3/2017 | 0.01 | 0.00606 | QW9659 | GW | Automatically converted from value: 6.06 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 6.06 | 6.06 | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 0.881 | 0.881 | QW9639 | GW | A |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.000881 | QW9639 | GW | Automatically converted from value: 0.881 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.00266 | QW9640 | GW | Automatically converted from value: 2.66 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 2.66 | 2.66 | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 1.48 | 1.48 | QW9641 | GW | Automotically convented from value 1.40 cm/I to may/I |
| | mg/L | SS2-1 | 4/8/2017 4/8/2017 | 0 | 0.00148 0.000845 | QW9641 | GW | Automatically converted from value: 1.48 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0 0.845 | 0.000845 | QW9642 QW9642 | GW GW | Automatically converted from value: 0.845 ug/L to mg/L. |
| | ug/L | SS2-2 | | | | | | Automatically converted from value 0.042 ug/L to mg/L |
| | mg/L | SS2-3 | 4/8/2017 | 0 042 | 0.000942 0.942 | QW9643 | GW GW | Automatically converted from value: 0.942 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 0.942 | | QW9643 | | |
| | ug/L | SS2-4 | 4/8/2017 | 0.599 | 0.599 | QW9645 | DUPW2 | |
| | ug/L | SS2-4 | 4/8/2017 | 2.79 | 2.79 | QW9644 | DUPW1 | Automotically agreed 1 (agreed 1 - 270 agriculture / I |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.00279 | QW9644 | DUPW1 | Automatically converted from value: 2.79 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.000599 | QW9645 | DUPW2 | Automatically converted from value: 0.599 ug/L to mg/L. |
| | mg/L | SS3-4 SS3-4 | 4/3/2017 | 0.09 86.9 | 0.0869 86.9 | QW9646 QW9646 | GW GW | Automatically converted from value: 86.9 ug/L to mg/L. |
| | ug/L ug/L | SS3-4 SS3-5 | 4/3/2017 4/3/2017 | 3.91 | 3.91 | QW9647 | GW | |
| | | SS3-5 | | 0 | 0.00391 | QW9647 QW9647 | GW | Automatically converted from value: 3.91 ug/L to mg/L. |
| | mg/L | | 4/3/2017 | | | | | , |
| | mg/L | SS3-6 | 4/3/2017 | 0.04 | 0.0435 | QW9648 | GW | Automatically converted from value: 43.5 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 43.5 | 43.5 | QW9648 | GW | D 11 |
| | ug/L | SS3-6 SS3-7 | 4/30/2017 | 8.37 | 8.37 | QZ4969 QW9649 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 10.4 | 10.4 | QW9649 | GW | Automotically convented from 11, 104 /T |
| | mg/L | SS3-7 | 4/3/2017 | 0.01 | 0.0104 | QW9649 | GW | Automatically converted from value: 10.4 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0.03 | 0.0312 | QW9650 | GW | Automatically converted from value: 31.2 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 31.2 | 31.2 | QW9650 | GW | |
| | ug/L | SS4-4 | 4/7/2017 | 3.86 | 3.86 | QW9651 | GW | Automotically |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.00386 | QW9651 | GW DUDW1 | Automatically converted from value: 3.86 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0.01 | 0.0139 | QW9652 | DUPW1 | Automatically converted from value: 13.9 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0.01 | 0.0106 | QW9653 | DUPW2 | Automatically converted from value: 10.6 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 13.9 | 13.9 | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 10.6 | 10.6 | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 17.2 | 17.2 | QW9654 | GW | A |
| | mg/L | SS5-3 | 4/1/2017 | 0.02 | 0.0172 | QW9654 | GW | Automatically converted from value: 17.2 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.00184 | QW9655 | GW | Automatically converted from value: 1.84 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | 1.84 | 1.84 | QW9655 | GW | |
| | ug/L | SS5-5 | 4/1/2017 | 6.48 | 6.48 | QW9656 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0.01 | 0.00648 | QW9656 | GW | Automatically converted from value: 6.48 ug/L to mg/L. |
| obalt (Co) - Total | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.0000797 | QW9657 | GW | Automatically converted from value: $0.0797~\mathrm{ug/L}$ to $\mathrm{mg/L}$. |
| | ug/L | CONTROL 1 | 4/1/2017 | 0.0797 | 0.0797 | QW9657 | GW | |
| | ug/L | CONTROL 1 | 4/1/2017 | < 0.0050 | 0.0025 | QV4618 | EBW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 0.668 | 0.668 | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.000668 | QW9658 | GW | Automatically converted from value: 0.668 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.000774 | QW9659 | GW | Automatically converted from value: 0.774 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.774 | 0.774 | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 0.149 | 0.149 | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.000149 | QW9639 | GW | Automatically converted from value: 0.149 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.00038 | QW9640 | GW | Automatically converted from value: 0.380 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 0.38 | 0.38 | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 0.315 | 0.315 | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.000315 | QW9641 | GW | Automatically converted from value: 0.315 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.000142 | QW9642 | GW | Automatically converted from value: 0.142 ug/L to mg/L . |
| | ug/L | SS2-2 | 4/8/2017 | 0.142 | 0.142 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.000174 | QW9643 | GW | Automatically converted from value: 0.174 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 0.174 | 0.174 | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 0.399 | 0.399 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 0.11 | 0.11 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.000399 | QW9644 | DUPW1 | Automatically converted from value: 0.399 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.00011 | QW9645 | DUPW2 | Automatically converted from value: 0.110 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0.01 | 0.012 | QW9646 | GW | Automatically converted from value: 12.0 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 12 | 12 | QW9646 | GW | <u> </u> |
| | ug/L | SS3-5 | 4/3/2017 | 0.615 | 0.615 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.000615 | QW9647 | GW | Automatically converted from value: 0.615 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0.01 | 0.00632 | QW9648 | GW | Automatically converted from value: 6.32 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 6.32 | 6.32 | QW9648 | GW | <u> </u> |
| | ug/L | SS3-6 | 4/30/2017 | 1.48 | 1.48 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 1.64 | 1.64 | QW9649 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.00164 | QW9649 | GW | Automatically converted from value: 1.64 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.0049 | QW9650 | GW | Automatically converted from value: 4.90 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 4.9 | 4.9 | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.000642 | QW9651 | GW | Automatically converted from value: 0.642 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | 0.642 | 0.642 | QW9651 | GW | <i></i> |
| | ug/L | SS4-5 | 4/7/2017 | 2.3 | 2.3 | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 1.46 | 1.46 | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.0023 | QW9652 | DUPW1 | Automatically converted from value: 2.30 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00146 | QW9653 | DUPW2 | Automatically converted from value: 1.46 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.00207 | QW9654 | GW | Automatically converted from value: 2.07 ug/L to mg/L. |
| | ug/L | SS5-3 | 4/1/2017 | 2.07 | 2.07 | QW9654 | GW | J. J. |
| | ug/L | SS5-4 | 4/1/2017 | 0.188 | 0.188 | QW9655 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.000188 | QW9655 | GW | Automatically converted from value: 0.188 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.000225 | QW9656 | GW | Automatically converted from value: 0.225 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | 0.225 | 0.225 | QW9656 | GW | , compared the same of the sam |
| nductivity | ug/L us/cm | CONTROL 1 | 4/1/2017 | 1.1 | 1.1 | QV4618 | EBW | |
| uctivity | • | CONTROL 1 | 4/1/2017 4/1/2017 | 3.4 | 3.4 | QV4618 QW9657 | GW GW | |
| | | CONTROL 1 | 4/1/2017 4/7/2017 | | | QW9657 QW9658 | GW GW | |
| | | | | 4 | 4 | | | |
| | us/cm | | 4/3/2017 | 4.4 | 4.4 | QW9659 | GW | |
| | us/cm | SS1-4 | 4/7/2017 | 4.2 | 4.2 | QW9639 | GW | |
| | us/cm | SS1-5 | 4/7/2017 | 3 | 3 | QW9640 | GW | |
| | us/cm | SS2-1 | 4/8/2017 | 3.5 | 3.5 | QW9641 | GW | |
| | | | | _ | E | OW9642 | GW | |
| | us/cm | SS2-2 | 4/8/2017 | 5 | 5 | ~ | | |
| | | SS2-2 SS2-3 SS2-4 | 4/8/2017 4/8/2017 4/8/2017 | 4.5 4.2 | 4.5 4.2 | QW9642 QW9643 QW9645 | GW DUPW2 | |

| Appendix D. 31 | | | | | | | | | |
|---------------------------------|----------------|----------------|-----------------------|--------------|--------------|-----|-------------------|----------------|--|
| Parameter | Unit | Site | Date | | - | RDL | | Sample Type | Comment |
| Conductivity (cont'd) | us/cm | SS2-4 | 4/8/2017 | 3.9 | 3.9 | | QW9644 | DUPW1 | |
| (cont u) | us/cm | SS3-4 | 4/3/2017 | 12.9 | 12.9 | | QW9646 | GW | |
| | us/cm | SS3-5 | 4/3/2017 | 6.7 | 6.7 | | QW9647 QW9648 | GW GW | |
| | us/cm us/cm | SS3-6 SS3-6 | 4/3/2017 4/30/2017 | 15.8 12.2 | 15.8 12.2 | | QVV9648 QZ4969 | GW | Resampled at corrected coordinate. |
| | us/cm | SS3-7 | 4/3/2017 | 12.5 | 12.5 | | QZ4909 QW9649 | GW | Resampled at corrected coordinate. |
| | us/cm | SS3-8 | 4/3/2017 | 8.4 | 8.4 | | QW9650 | GW | |
| | us/cm | SS4-4 | 4/7/2017 | 6.7 | 6.7 | | QW9651 | GW | |
| | us/cm | SS4-5 | 4/7/2017 | 5.3 | 5.3 | | QW9653 | DUPW2 | |
| | us/cm | SS4-5 | 4/7/2017 | 5.2 | 5.2 | | QW9652 | DUPW1 | |
| | us/cm | SS5-3 | 4/1/2017 | 7.4 | 7.4 | | QW9654 | GW | |
| | us/cm | SS5-4 | 4/1/2017 | 2.9 | 2.9 | | QW9655 | GW | |
| | us/cm | SS5-5 | 4/1/2017 | 2.7 | 2.7 | | QW9656 | GW | |
| Copper (Cu) - | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.000139 | | QW9657 | GW | Automatically converted from value: 0.139 ug/L to mg/L. |
| Total | ug/L | CONTROL 1 | 4/1/2017 | 0.139 | 0.139 | | QW9657 | GW | Automatically converted from value. 0.139 ug/ E to mg/ E. |
| | ug/L | CONTROL 1 | 4/1/2017 | < 0.050 | 0.025 | | QV4618 | EBW | |
| | ug/L ug/L | CONTROL 2 | 4/7/2017 | 0.742 | 0.742 | | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.742 | 0.000742 | | QW9658 | GW | Automatically converted from value: 0.742 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.000555 | | QW9659 | GW | Automatically converted from value: 0.555 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.555 | 0.555 | | QW9659 | GW | rationatically converted from value, 0.000 ug/ E to htg/ E. |
| | ug/L | SS1-4 | 4/7/2017 | 0.261 | 0.261 | | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.201 | 0.000261 | | QW9639 | GW | Automatically converted from value: 0.261 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.000477 | | QW9640 | GW | Automatically converted from value: 0.477 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 0.477 | 0.477 | | QW9640 | GW | Automatically converted from value. 0.477 ug/ E to fig/ E. |
| | ug/L ug/L | SS2-1 | 4/8/2017 | 0.477 | 0.619 | | QW9641 | GW | |
| | mg/L mg/L | SS2-1 SS2-1 | 4/8/2017 | 0.619 | 0.00619 | | QW9641 QW9641 | GW | Automatically converted from value: 0.619 ug/L to mg/L. |
| | mg/L | SS2-1 SS2-2 | 4/8/2017 | 0 | 0.000819 | | QW9641 QW9642 | GW | Automatically converted from value: 0.019 ug/L to mg/L. Automatically converted from value: 0.229 ug/L to mg/L. |
| | mg/L ug/L | SS2-2 SS2-2 | 4/8/2017 | 0.229 | 0.000229 | | QW9642 QW9642 | GW | Transmitted y converted from value. 0.229 ug/ L to mg/ L. |
| | ug/L mg/L | SS2-2 SS2-3 | 4/8/2017 | 0.229 | 0.229 | | QW9642 QW9643 | GW | Automatically converted from value: 0.256 ug/L to mg/L. |
| | | SS2-3 SS2-3 | 4/8/2017 | 0.256 | 0.000256 | | QW9643 QW9643 | GW | Transmitted y converted from value. 0.250 ug/ L to mg/ L. |
| | ug/L | SS2-3 SS2-4 | 4/8/2017 | 0.256 | 0.256 | | QW9643 QW9644 | GW DUPW1 | |
| | ug/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 0.429 | 0.429 | | QW9644 QW9645 | DUPW1 DUPW2 | |
| | ug/L mg/L | | | | | | | | Automatically converted from value: 0.429 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.000429 | | QW9644 | DUPW1 | , |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.000264 | | QW9645 | DUPW2 | Automatically converted from value: 0.264 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0.01 | 0.00808 | | QW9646 | GW | Automatically converted from value: 8.08 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 8.08 | 8.08 | | QW9646 | GW | |
| | ug/L | SS3-5 | 4/3/2017 | 0.569 | 0.569 | | QW9647 | GW | A |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.000569 | | QW9647 | GW | Automatically converted from value: 0.569 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.00449 | | QW9648 | GW | Automatically converted from value: 4.49 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 4.49 | 4.49 | | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | 1.28 | 1.28 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 1.38 | 1.38 | | QW9649 | GW | A |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.00138 | | QW9649 | GW | Automatically converted from value: 1.38 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.00372 | | QW9650 | GW | Automatically converted from value: 3.72 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 3.72 | 3.72 | | QW9650 | GW | |
| | ug/L | SS4-4 | 4/7/2017 | 0.679 | 0.679 | | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.000679 | | QW9651 | GW | Automatically converted from value: 0.679 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00235 | | QW9652 | DUPW1 | Automatically converted from value: 2.35 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00205 | | QW9653 | DUPW2 | Automatically converted from value: 2.05 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 2.35 | 2.35 | | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 2.05 | 2.05 | | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 2.41 | 2.41 | | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.00241 | | QW9654 | GW | Automatically converted from value: 2.41 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.000317 | | QW9655 | GW | Automatically converted from value: 0.317 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | 0.317 | 0.317 | | QW9655 | GW | |
| | ug/L | SS5-5 | 4/1/2017 | 0.514 | 0.514 | | QW9656 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.000514 | | QW9656 | GW | Automatically converted from value: 0.514 ug/L to mg/L. |
| Fluoride (F) | mg/L | CONTROL 1 | 4/1/2017 | 0.013 | 0.013 | | QV4618 | EBW | |
| | mg/L | CONTROL 1 | 4/1/2017 | 0.014 | 0.014 | | QW9657 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.015 | 0.015 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.015 | 0.015 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.016 | 0.016 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0.016 | 0.016 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.015 | 0.015 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0.015 | 0.015 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.015 | 0.015 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.015 | 0.015 | | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.015 | 0.015 | | QW9644 | DUPW1 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.016 | 0.016 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.015 | 0.015 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.017 | 0.017 | | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | 0.014 | 0.014 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0.016 | 0.016 | | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | 0.015 | 0.015 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.015 | 0.015 | | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 0.015 | 0.015 | | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.015 | 0.015 | | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | 0.017 | 0.017 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.016 | 0.016 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0.014 | 0.014 | | QW9656 | GW | |
| Hardness | mg/L | CONTROL 1 | 4/1/2017 | 1 | 1 | | QW9657 | GW | |
| (as CACO ₃) - Total | 1116/ 12 | CONTROL 1 | 4/1/2017 | <0.50 | 0.25 | | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 9.18 | 9.18 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 10.4 | 10.4 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 1.39 | 1.39 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 3.67 | 3.67 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 10.1 | 10.1 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 1.51 | 1.51 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 1.52 | 1.52 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 3.79 | 3.79 | | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | 1.42 | 1.42 | | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 143 | 143 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 7.53 | 7.53 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 75.8 | 75.8 | | QW9648 | GW | |
| • | U, | | | | | | | | |

| Appendix D. 311 | | | | | | | | | |
|---------------------------------|--------------|----------------|----------------------|----------------|-----------------|-----|------------------|-------------|---|
| Parameter Hardness | Unit | Site | Date | | Graphable Value | RDL | | Sample Type | |
| (as CACO ₃) - Total | mg/L | SS3-6 | 4/30/2017 | 15.5 | 15.5 | | QZ4969 | GW | Resampled at corrected coordinate. |
| (cont'd) | mg/L | SS3-7 | 4/3/2017 | 20.6 | 20.6 | | QW9649 | GW | |
| (com u) | mg/L | SS3-8 | 4/3/2017 | 50 7.10 | 50 | | QW9650 | GW GW | |
| | mg/L mg/L | SS4-4 SS4-5 | 4/7/2017 4/7/2017 | 7.19 20.9 | 7.19 20.9 | | QW9651 QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 13.8 | 13.8 | | QW9653 | DUPW2 | |
| | mg/L | SS5-3 | 4/1/2017 | 22.6 | 22.6 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 2.22 | 2.22 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 3.43 | 3.43 | | QW9656 | GW | |
| Hydroxide (OH) | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | | QW9657 | GW | |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | < 0.50 | 0.25 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | < 0.50 | 0.25 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | < 0.50 | 0.25 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | < 0.50 | 0.25 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.50 | 0.25 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | < 0.50 | 0.25 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.50 | 0.25 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | | QW9644 | DUPW1 | |
| | mg/L | SS3-4 | 4/3/2017 | < 0.50 | 0.25 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | < 0.50 | 0.25 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | < 0.50 | 0.25 | | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | < 0.50 | 0.25 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | <0.50 | 0.25 | | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | <0.50 | 0.25 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | <0.50 | 0.25 | | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | <0.50 | 0.25 | | QW9653 | DUPW2 | |
| | mg/L | SS4-5 SS5-3 | 4/7/2017 4/1/2017 | <0.50 <0.50 | 0.25 | | QW9652 QW9654 | DUPW1 GW | |
| | mg/L | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | <0.50 <0.50 | 0.25 0.25 | | QW9654 QW9655 | GW GW | |
| | mg/L mg/L | SS5-4 SS5-5 | 4/1/2017 4/1/2017 | <0.50 <0.50 | 0.25 | | QW9655 QW9656 | GW GW | |
| Iron (Fe) - Total | ug/L | CONTROL 1 | 4/1/2017 | 3.2 | 3.2 | | QW9656 QV4618 | EBW | |
| 1000 | mg/L | CONTROL 1 | 4/1/2017 | 0.13 | 0.125 | | QV4618 QW9657 | GW | Automatically converted from value: 125 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | 125 | 125 | | QW9657 QW9657 | GW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 1010 | 1010 | | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 1.01 | 1.01 | | QW9658 | GW | Automatically converted from value: 1010 ug/L to mg/L. |
| | mg/L | | 4/3/2017 | 0.87 | 0.872 | | QW9659 | GW | Automatically converted from value: 872 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 872 | 872 | | QW9659 | GW | , |
| | ug/L | SS1-4 | 4/7/2017 | 262 | 262 | | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.26 | 0.262 | | QW9639 | GW | Automatically converted from value: 262 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0.7 | 0.705 | | QW9640 | GW | Automatically converted from value: 705 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 705 | 705 | | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 283 | 283 | | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.28 | 0.283 | | QW9641 | GW | Automatically converted from value: 283 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0.18 | 0.184 | | QW9642 | GW | Automatically converted from value: 184 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 184 | 184 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.25 | 0.25 | | QW9643 | GW | Automatically converted from value: 250 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 250 | 250 | | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 763 | 763 | | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 148 | 148 | | QW9645 | DUPW2 | 1 7 7 7 |
| | mg/L | SS2-4 | 4/8/2017 | 0.76 | 0.763 | | QW9644 | DUPW1 | Automatically converted from value: 763 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.15 | 0.148 | | QW9645 | DUPW2 | Automatically converted from value: 148 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 10.5 | 10.5 | | QW9646 | GW | Automatically converted from value: 10500 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 10500 | 10500 | | QW9646 QW9647 | GW | |
| | ug/L | SS3-5 SS3-5 | 4/3/2017 4/3/2017 | 599 | 599 0.599 | | QW9647 QW9647 | GW GW | Automatically converted from value: 599 ug/L to mg/L. |
| | mg/L mg/L | SS3-6 | 4/3/2017 | 0.6 5.89 | 5.89 | | QW9648 | GW | Automatically converted from value: 5890 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 5890 | 5890 | | QW9648 | GW | Automatically converted from value. 3090 ug/ E to fig/ E. |
| | ug/L ug/L | SS3-6 | 4/30/2017 | 1410 | 1410 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L ug/L | SS3-7 | 4/3/2017 | 1430 | 1430 | | QZ4969 QW9649 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 1.43 | 1.43 | | QW9649 | GW | Automatically converted from value: 1430 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 3.79 | 3.79 | | QW9650 | GW | Automatically converted from value: 3790 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 3790 | 3790 | | QW9650 | GW | , oi - · · oi - |
| | ug/L | SS4-4 | 4/7/2017 | 639 | 639 | | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.64 | 0.639 | | QW9651 | GW | Automatically converted from value: 639 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 2.92 | 2.92 | | QW9652 | DUPW1 | Automatically converted from value: 2920 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 2.2 | 2.2 | | QW9653 | DUPW2 | Automatically converted from value: 2200 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 2920 | 2920 | | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 2200 | 2200 | | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 2830 | 2830 | | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 2.83 | 2.83 | | QW9654 | GW | Automatically converted from value: 2830 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0.21 | 0.207 | | QW9655 | GW | Automatically converted from value: 207 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | 207 | 207 | | QW9655 | GW | |
| | ug/L | SS5-5 | 4/1/2017 | 484 | 484 | | QW9656 | GW | |
| Land (DI) mand | mg/L | SS5-5 | 4/1/2017 | 0.48 | 0.484 | | QW9656 | GW | Automatically converted from value: 484 ug/L to mg/L. |
| Lead (Pb) - Total | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.0000822 | | QW9657 | GW | Automatically converted from value: 0.0822 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | 0.0822 | 0.0822 | | QW9657 | GW | |
| | ug/L | CONTROL 1 | 4/1/2017 | <0.0050 | 0.0025 | | QV4618 | EBW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 0.514 | 0.514 | | QW9658 | GW | Automotically approved from 1 0544 /7 / /7 |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.000514 | | QW9658 | GW | Automatically converted from value: 0.514 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.000299 | | QW9659 | GW | Automatically converted from value: 0.299 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.299 | 0.299 | | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 0.204 | 0.204 | | QW9639 | GW | Automotically agreed from 1 0004 /7 / /7 |
| | mg/L | SS1-4 SS1-5 | 4/7/2017 | 0 | 0.000204 | | QW9639 | GW | Automatically converted from value: 0.204 ug/L to mg/L. |
| | mg/L | SS1-5 SS1-5 | 4/7/2017 | 0 | 0.000298 | | QW9640 | GW GW | Automatically converted from value: 0.298 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 0.298 | 0.298 | | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 0.24 | 0.24 | | QW9641 | GW | Automotically agreed from 1 0040 /7 / /7 |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.00024 | | QW9641 | GW | Automatically converted from value: 0.240 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.000327 | | QW9642 | GW | Automatically converted from value: 0.327 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 0.327 | 0.327 | | QW9642 | GW | Automotically converted for words 10000 /T / /T |
| | mg/L | SS2-3 | 4/8/2017 | 0 250 | 0.000259 | | QW9643 | GW | Automatically converted from value: 0.259 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 0.259 | 0.259 | | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 0.145 | 0.145 | | QW9645 | DUPW2 | |

| Parameter | Unit | Site | Date | | • | | Sample Type | Comment |
|-------------------------------|--------------|------------------------|-----------------------|----------------|----------------------|--------------------|----------------|--|
| Lead (Pb) - Total (cont'd) | ug/L | SS2-4 | 4/8/2017 4/8/2017 | 0.325 | 0.325 | QW9644 | DUPW1 | Automatically converted from values 0.225 /I to /I |
| (cont u) | mg/L mg/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 0 | 0.000325 0.000145 | QW9644 QW9645 | DUPW1 DUPW2 | Automatically converted from value: 0.325 ug/L to mg/L. Automatically converted from value: 0.145 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.00349 | QW9646 | GW | Automatically converted from value: 3.49 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 3.49 | 3.49 | QW9646 | GW | , |
| | ug/L | SS3-5 | 4/3/2017 | 0.756 | 0.756 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.000756 | QW9647 | GW | Automatically converted from value: 0.756 ug/L to mg/L. |
| | mg/L | SS3-6 SS3-6 | 4/3/2017 4/3/2017 | 0 2.39 | 0.00239 2.39 | QW9648 QW9648 | GW GW | Automatically converted from value: 2.39 ug/L to mg/L. |
| | ug/L ug/L | SS3-6 | 4/30/2017 | 0.715 | 0.715 | QVV 9646 QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.962 | 0.962 | QW9649 | GW | resumpted at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.000962 | QW9649 | GW | Automatically converted from value: 0.962 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.00126 | QW9650 | GW | Automatically converted from value: 1.26 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 1.26 | 1.26 | QW9650 | GW | 1 0 10 17 |
| | mg/L | SS4-4 SS4-4 | 4/7/2017 4/7/2017 | 0 0.418 | 0.000418 0.418 | QW9651 QW9651 | GW GW | Automatically converted from value: 0.418 ug/L to mg/L. |
| | ug/L ug/L | 554-4 SS4-5 | 4/7/2017 | 1.36 | 1.36 | QW9651 QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 1.23 | 1.23 | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00136 | QW9652 | DUPW1 | Automatically converted from value: 1.36 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00123 | QW9653 | DUPW2 | Automatically converted from value: 1.23 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.00144 | QW9654 | GW | Automatically converted from value: 1.44 ug/L to mg/L. |
| | ug/L ug/L | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | 1.44 0.133 | 1.44 0.133 | QW9654 QW9655 | GW GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.133 | 0.000133 | QW9655 | GW | Automatically converted from value: 0.133 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.000199 | QW9656 | GW | Automatically converted from value: 0.199 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | 0.199 | 0.199 | QW9656 | GW | |
| Lithium (Li) - | mg/L | CONTROL 1 | 4/1/2017 | <0.00 | 0.00025 | QW9657 | GW | Automatically converted from value: <0.50 ug/L to mg/L. |
| Total | ug/L | CONTROL 1 | 4/1/2017 | <0.50 | 0.25 | QW9657 | GW | |
| | ug/L ug/L | CONTROL 1 CONTROL 2 | 4/1/2017 4/7/2017 | <0.50 1.31 | 0.25 1.31 | QV4618 QW9658 | EBW GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.00131 | QW9658 | GW | Automatically converted from value: 1.31 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.00089 | QW9659 | GW | Automatically converted from value: 0.89 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.89 | 0.89 | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | <0.50 | 0.25 | QW9639 | GW | Automotivillaria (17) 1 (27) (7) |
| | mg/L mg/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | <0.00 0 | 0.00025 0.00117 | QW9639 QW9640 | GW GW | Automatically converted from value: <0.50 ug/L to mg/L. Automatically converted from value: 1.17 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 1.17 | 1.17 | QW9640 | GW | Automatically converted from value. 1.17 ug/ E to flig/ E. |
| | ug/L | SS2-1 | 4/8/2017 | 1.15 | 1.15 | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.00115 | QW9641 | GW | Automatically converted from value: 1.15 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | < 0.00 | 0.00025 | QW9642 | GW | Automatically converted from value: <0.50 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | <0.50 | 0.25 | QW9642 | GW | Automotically assessed discovered to 0.55 up /T to may /T |
| | mg/L ug/L | SS2-3 SS2-3 | 4/8/2017 4/8/2017 | 0 0.55 | 0.00055 0.55 | QW9643 QW9643 | GW GW | Automatically converted from value: 0.55 ug/L to mg/L. |
| | ug/L | SS2-4 | 4/8/2017 | 1.34 | 1.34 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.00134 | QW9644 | DUPW1 | Automatically converted from value: 1.34 $\mathrm{ug/L}$ to $\mathrm{mg/L}$. |
| | mg/L | SS2-4 | 4/8/2017 | < 0.00 | 0.00025 | QW9645 | DUPW2 | Automatically converted from value: <0.50 ug/L to mg/L. |
| | mg/L ug/L | SS3-4 SS3-4 | 4/3/2017 4/3/2017 | 0.01 8.63 | 0.00863 8.63 | QW9646 QW9646 | GW GW | Automatically converted from value: 8.63 ug/L to mg/L. |
| | ug/L ug/L | SS3-5 | 4/3/2017 | 0.89 | 0.89 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.00089 | QW9647 | GW | Automatically converted from value: 0.89 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0.01 | 0.00724 | QW9648 | GW | Automatically converted from value: 7.24 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 7.24 | 7.24 | QW9648 | GW | |
| | ug/L | SS3-6 SS3-7 | 4/30/2017 4/3/2017 | 2.61 1.74 | 2.61 1.74 | QZ4969 QW9649 | GW GW | Resampled at corrected coordinate. |
| | ug/L mg/L | SS3-7 | 4/3/2017 | 0 | 0.00174 | QW9649 QW9649 | GW | Automatically converted from value: 1.74 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.00307 | QW9650 | GW | Automatically converted from value: 3.07 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 3.07 | 3.07 | QW9650 | GW | , |
| | ug/L | SS4-4 | 4/7/2017 | 1.07 | 1.07 | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 01 | 0.00107 | QW9651 | GW DI IDM/1 | Automatically converted from value: 1.07 ug/L to mg/L. |
| | mg/L mg/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 0.01 0 | 0.00603 0.00441 | QW9652 QW9653 | DUPW1 DUPW2 | Automatically converted from value: 6.03 ug/L to mg/L. Automatically converted from value: 4.41 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 6.03 | 6.03 | QW9652 | DUPW1 | части и и и и и и и и и и и и и и и и и и |
| | ug/L | SS4-5 | 4/7/2017 | 4.41 | 4.41 | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 4.52 | 4.52 | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.00452 | QW9654 | GW | Automatically converted from value: 4.52 ug/L to mg/L. |
| | mg/L ug/L | SS5-4 SS5-4 | 4/1/2017 4/1/2017 | <0.00 <0.50 | 0.00025 0.25 | QW9655 QW9655 | GW GW | Automatically converted from value: <0.50 ug/L to mg/L. |
| | ug/L ug/L | SS5-5 | 4/1/2017 | <0.50 | 0.25 | QW9656 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | <0.00 | 0.00025 | QW9656 | GW | Automatically converted from value: <0.50 ug/L to mg/L. |
| Magnesium (Mg) - | ug/L | CONTROL 1 | 4/1/2017 | 179 | 179 | QW9657 | GW | Automatically converted from value: 0.179 mg/L to ug/L. |
| Total | mg/L | CONTROL 1 | 4/1/2017 | 0.179 | 0.179 | QW9657 | GW | |
| | mg/L | CONTROL 2 | 4/1/2017 | < 0.050 | 0.025 | QV4618 | EBW | |
| | mg/L ug/L | CONTROL 2 CONTROL 2 | 4/7/2017 4/7/2017 | 1.99 1990 | 1.99 1990 | QW9658 QW9658 | GW GW | Automatically converted from value: 1.99 mg/L to ug/L. |
| | ug/L ug/L | CONTROL 3 | 4/3/2017 | 2160 | 2160 | QW9659 | GW | Automatically converted from value: 1.55 mg/L to ug/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 2.16 | 2.16 | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.257 | 0.257 | QW9639 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 257 | 257 | QW9639 | GW | Automatically converted from value: 0.257 mg/L to ug/L. |
| | ug/L mg/L | SS1-5 SS1-5 | 4/7/2017 4/7/2017 | 787 0.787 | 787 0.787 | QW9640 QW9640 | GW GW | Automatically converted from value: 0.787 mg/L to ug/L. |
| | mg/L | SS2-1 | 4/8/2017 | 1.07 | 1.07 | QW9640 QW9641 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 1070 | 1070 | QW9641 | GW | Automatically converted from value: 1.07 mg/L to ug/L. |
| | ug/L | SS2-2 | 4/8/2017 | 240 | 240 | QW9642 | GW | Automatically converted from value: 0.240 mg/L to ug/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0.24 | 0.24 | QW9642 | GW | · · · · · · · · · · · · · · · · · · · |
| | mg/L | SS2-3 | 4/8/2017 | 0.262 | 0.262 | QW9643 | GW | |
| | ug/L | SS2-3 | 4/8/2017 | 262 773 | 262 773 | QW9643 | GW DUDW1 | Automatically converted from value: 0.262 mg/L to ug/L. |
| | ug/L ug/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 773 184 | 773 184 | QW9644 QW9645 | DUPW1 DUPW2 | Automatically converted from value: 0.773 mg/L to ug/L. Automatically converted from value: 0.184 mg/L to ug/L. |
| | ug/L mg/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 0.184 | 184 0.184 | QW9645 QW9645 | DUPW2 DUPW2 | rationiaticany converted from value: 0.164 mg/L to ug/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.773 | 0.773 | QW9644 | DUPW1 | |
| | mg/L | SS3-4 | 4/3/2017 | 31.7 | 31.7 | QW9646 | GW | |
| | ug/L | SS3-4 | 4/3/2017 | 31700 | 31700 | QW9646 | GW | Automatically converted from value: 31.7 mg/L to ug/L. |
| | ug/L | SS3-5 | 4/3/2017 | 1310 | 1310 | QW9647 | GW | Automatically converted from value: 1.31 mg/L to ug/L. |

| | Unit mg/L | Site SS3-5 | Date 4/3/2017 | Data Point | Graphable Value 1 | RDL Lab Ref S QW9647 | Sample Type GW | e Comment |
|-----------------|--|---|--|--|---|---|--|---|
| otal (cont'd) | mg/L mg/L | SS3-5 SS3-6 | 4/3/2017 4/3/2017 | 1.31 16 | 1.31 16 | QW9647 QW9648 | GW GW | |
| (00.11.17) | ug/L | SS3-6 | 4/3/2017 | 16000 | 16000 | QW9648 | GW | Automatically converted from value: 16.0 mg/L to ug/L. |
| | mg/L | SS3-6 | 4/30/2017 | 2.81 | 2.81 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 3820 | 3820 | QW9649 | GW | Automatically converted from value: 3.82 mg/L to ug/L. |
| | mg/L | SS3-7 | 4/3/2017 | 3.82 | 3.82 | QW9649 | GW | <i>(i)</i> |
| | mg/L | SS3-8 | 4/3/2017 | 11.2 | 11.2 | QW9650 | GW | |
| | ug/L | SS3-8 | 4/3/2017 | 11200 | 11200 | QW9650 | GW | Automatically converted from value: 11.2 mg/L to ug/L. |
| | ug/L | SS4-4 | 4/7/2017 | 1300 | 1300 | QW9651 | GW | Automatically converted from value: 1.30 mg/L to ug/L. |
| | mg/L | SS4-4 | 4/7/2017 | 1.3 | 1.3 | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 4.42 | 4.42 | QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 2.85 | 2.85 | QW9653 | DUPW2 | |
| | ug/L | SS4-5 | 4/7/2017 | 4420 | 4420 | QW9652 | DUPW1 | Automatically converted from value: 4.42 mg/L to ug/L. |
| | ug/L | SS4-5 | 4/7/2017 | 2850 | 2850 | QW9653 | DUPW2 | Automatically converted from value: 2.85 mg/L to ug/L. |
| | ug/L | SS5-3 | 4/1/2017 | 4480 | 4480 | QW9654 | GW | Automatically converted from value: 4.48 mg/L to ug/L. |
| | mg/L | SS5-3 | 4/1/2017 | 4.48 | 4.48 | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.395 | 0.395 | QW9655 | GW | |
| | ug/L | SS5-4 | 4/1/2017 | 395 | 395 | QW9655 | GW | Automatically converted from value: 0.395 mg/L to ug/L. |
| | ug/L | SS5-5 | 4/1/2017 | 696 | 696 | QW9656 | GW | Automatically converted from value: 0.696 mg/L to ug/L. |
| anganese (Mn) - | mg/L | SS5-5 | 4/1/2017 | 0.696 | 0.696 | QW9656 | GW | Automotically agreed 1 (non-select 2 02 or /I to see /I |
| tal | mg/L | CONTROL 1 CONTROL 1 | 4/1/2017 | 0 | 0.00202 | QW9657 | GW GW | Automatically converted from value: 2.02 ug/L to mg/L. |
| ш | ug/L | | 4/1/2017 | 2.02 | 2.02 | QW9657 | | |
| | ug/L | CONTROL 2 | 4/1/2017 | 0.063 | 0.063 | QV4618 | EBW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 14.2 | 14.2 | QW9658 | GW | Automatically converted from value: 14.2 ug/L to mg/L |
| | mg/L mg/L | CONTROL 2 CONTROL 3 | 4/7/2017 4/3/2017 | 0.01 0.01 | 0.0142 0.0126 | QW9658 QW9659 | GW GW | Automatically converted from value: 14.2 ug/L to mg/L. Automatically converted from value: 12.6 ug/L to mg/L. |
| | mg/L ug/L | CONTROL 3 | 4/3/2017 4/3/2017 | 0.01 12.6 | 0.0126 12.6 | QW9659 QW9659 | GW GW | Matomaticany converted from value. 12.0 ug/ L to mg/ L. |
| | ug/L ug/L | SS1-4 | 4/3/2017 4/7/2017 | 3.64 | 3.64 | QW9639 QW9639 | GW GW | (10% of analytes failure allowed). |
| | ug/L mg/L | SS1-4 SS1-4 | 4/7/2017 | 0 | 0.00364 | QW9639 QW9639 | GW GW | Matrix Spike outside acceptance criteria (10% of analytes failure |
| | mg/L | SS1-4 SS1-5 | 4/7/2017 | 0.01 | 0.00364 | QW9639 QW9640 | GW | Automatically converted from value: 9.15 ug/L to mg/L. |
| | ug/L | SS1-5 SS1-5 | 4/7/2017 | 9.15 | 9.15 | QW9640 QW9640 | GW | 1. a.o. aug L to Hig L. |
| | ug/L ug/L | SS2-1 | 4/7/2017 4/8/2017 | 9.15 29.6 | 29.6 | QW9640 QW9641 | GW | |
| | ug/L mg/L | SS2-1 SS2-1 | 4/8/2017 | 0.03 | 0.0296 | QW9641 QW9641 | GW GW | Automatically converted from value: 29.6 ug/L to mg/L. |
| | mg/L mg/L | SS2-1 SS2-2 | 4/8/2017 4/8/2017 | 0.03 | 0.0296 | QW9641 QW9642 | GW GW | Automatically converted from value: 29.6 ug/L to mg/L. Automatically converted from value: 3.52 ug/L to mg/L. |
| | | | | | | | | Automatically converted from value. 3.32 ug/ L to mg/ L. |
| | ug/L mg/L | SS2-2 SS2-3 | 4/8/2017 4/8/2017 | 3.52 0 | 3.52 0.00434 | QW9642 QW9643 | GW GW | Automatically converted from value: 4.34 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 4.34 | 4.34 | QW9643 QW9643 | GW | Materialicary converted from value. 4.04 ug/ L to flig/ L. |
| | ug/L ug/L | SS2-4 | 4/8/2017 | 10.1 | 10.1 | QW9644 | DUPW1 | |
| | ug/L ug/L | SS2-4 | 4/8/2017 | 3.83 | 3.83 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.01 | 0.0101 | QW9644 | DUPW1 | Automatically converted from value: 10.1 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.01 | 0.00383 | QW9645 | DUPW2 | Automatically converted from value: 3.83 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0.19 | 0.192 | QW9646 | GW | Automatically converted from value: 192 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 192 | 192 | QW9646 | GW | Automatically converted from value. 192 ug/ E to hig/ E. |
| | ug/L | SS3-5 | 4/3/2017 | 11.2 | 11.2 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.01 | 0.0112 | QW9647 | GW | Automatically converted from value: 11.2 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0.11 | 0.112 | QW9648 | GW | Automatically converted from value: 112 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 112 | 112 | QW9648 | GW | rationalizary converted from value. 112 ug/ E to hig/ E. |
| | ug/L | SS3-6 | 4/30/2017 | 23.6 | 23.6 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 29.1 | 29.1 | QW9649 | GW | resumpted at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0.03 | 0.0291 | QW9649 | GW | Automatically converted from value: 29.1 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0.07 | 0.0717 | QW9650 | GW | Automatically converted from value: 71.7 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 71.7 | 71.7 | QW9650 | GW | rationalizary converted from value. 71.7 ug/ E to mg/ E. |
| | ug/L | SS4-4 | 4/7/2017 | 11.6 | 11.6 | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.01 | 0.0116 | QW9651 | GW | Automatically converted from value: 11.6 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0.05 | 0.0468 | QW9652 | DUPW1 | Automatically converted from value: 46.8 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0.03 | 0.0315 | QW9653 | DUPW2 | Automatically converted from value: 31.5 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 46.8 | 46.8 | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 31.5 | 31.5 | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 46 | 46 | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 0.05 | 0.046 | QW9654 | GW | Automatically converted from value: 46.0 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.0038 | QW9655 | GW | Automatically converted from value: 3.80 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | 3.8 | 3.8 | QW9655 | GW | |
| | ug/L | SS5-5 | | 4.93 | 4.93 | QW9656 | GW | |
| | | 333-3 | 4/1/2017 | | | | | |
| | | SS5-5 | 4/1/2017 | 0 | 0.00493 | QW9656 | GW | Automatically converted from value: 4.93 ug/L to mg/L. |
| Tercury (Hg) - | mg/L | | | | 0.00493 0.000001 | | GW GW | Automatically converted from value: 4.93 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0 | | QW9656 | | |
| | mg/L mg/L ug/L | SS5-5 CONTROL 1 | 4/1/2017 4/1/2017 | 0 <0.00000 | 0.000001 | QW9656 QW9657 | GW | |
| | mg/L mg/L | SS5-5 CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 4/1/2017 | 0 <0.00000 <0.0020 | 0.000001 0.001 | QW9656 QW9657 QW9657 | GW GW | |
| otal | mg/L mg/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 | 0 <0.00000 <0.0020 <0.0020 | 0.000001 0.001 0.001 | QW9656 QW9657 QW9657 QV4618 | GW GW EBW | |
| otal | mg/L ug/L ug/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 CONTROL 2 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 | 0.000001 0.001 0.001 0.001 | QW9656 QW9657 QW9657 QV4618 QW9658 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| otal | mg/L mg/L ug/L ug/L ug/L mg/L mg/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 | GW GW EBW GW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L mg/L mg/L mg/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 | GW GW EBW GW GW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| ıtal | mg/L ug/L ug/L ug/L mg/L mg/L mg/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.0020 <0.0020 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9659 QW9639 | GW GW EBW GW GW GW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| tal | mg/L ug/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 0.001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9659 QW9639 QW9639 | GW GW EBW GW GW GW GW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| ıtal | mg/L mg/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 | GW GW EBW GW GW GW GW GW GW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| tal | mg/L ug/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L mg/L mg/L mg/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 0.001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 QW9640 | GW GW EBW GW GW GW GW GW GW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| tal | mg/L mg/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS1-5 SS2-1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 0.001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 QW9640 | GW GW EBW GW GW GW GW GW GW GW GW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| ıtal | mg/L ug/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 <0.0020 <0.0020 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 0.000001 0.000001 0.000001 0.001 0.001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 QW9641 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| tal | mg/L ug/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 <0.0020 <0.00000 <0.0020 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.0001 0.000001 0.000001 0.001 0.000001 0.000001 0.000001 0.001 0.001 0.001 0.001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9640 QW9640 QW9641 QW9641 QW9642 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| ıtal | mg/L mg/L ug/L ug/L mg/L ug/L ug/L ug/L mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 <0.0020 <0.00000 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.000000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.0000000 <0.0000000 <0.0000000 | 0.000001 0.001 0.001 0.0001 0.000001 0.000001 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| otal | mg/L mg/L ug/L ug/L mg/L ug/L ug/L ug/L mg/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.0020 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 0.0020 <0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 0.000001 0.000001 0.000001 0.001 0.001 0.000001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0021 | 0.000001 0.001 0.001 0.0001 0.000001 0.000001 0.001 0.000001 0.000001 0.001 0.001 0.001 0.001 0.00001 0.003 0.000003 0.0000023 0.0023 0.0021 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9643 QW9643 QW9644 | GW G | Automatically converted from value: <0.0020 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 SS2-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.0021 <0.0020 <0.0020 <0.0023 <0.0021 <0.0020 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.0001 0.000001 0.000001 0.000001 0.001 0.000001 0.000001 0.0003 0.000003 0.000003 0.0023 0.0021 0.001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9643 QW9643 QW9643 QW9644 QW9644 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-2 SS2-3 SS2-4 SS2-4 SS2-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.00000 <0.00020 <0.00020 <0.00020 <0.00020 <0.0020 <0.00020 <0.00020 <0.00020 <0.00020 0.003 0 0 0.0023 0.0021 <0.0020 0 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.001 0.000001 0.000001 0.001 0.001 0.000001 0.001 0.000001 0.001 0.003 0.000003 0.000003 0.000023 0.0021 0.001 0.001 0.001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9643 QW9643 QW9643 QW9644 QW9644 QW9644 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 SS2-4 SS2-4 SS2-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.00000 <0.0023 <0.0021 <0.0020 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 0.001 0.000001 0.001 0.003 0.000003 0.000003 0.00023 0.0021 0.001 0.0000021 0.0000021 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9643 QW9643 QW9644 QW9645 QW9644 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. Automatically converted from value: 0.0021 ug/L to mg/L. Automatically converted from value: <0.0021 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.00000 <0.0023 00.0021 <0.0020 0 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.00001 0.000001 0.000001 0.000001 0.000001 0.001 0.001 0.000001 0.003 0.000003 0.000003 0.000023 0.0023 0.0021 0.001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9642 QW9643 QW9643 QW9644 QW9645 QW9645 QW9646 | GW GW EBW GW DUPW1 DUPW2 DUPW1 DUPW2 GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 SS2-4 SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/3/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0023 0 0 0 0.0021 <0.0020 0 <0.00000 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.00001 0.000001 0.000001 0.000001 0.000001 0.000001 0.0003 0.000003 0.000003 0.000023 0.0023 0.0021 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9642 QW9643 QW9644 QW9645 QW9644 QW9645 QW9646 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. Automatically converted from value: 0.0021 ug/L to mg/L. Automatically converted from value: <0.0021 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-4 SS3-5 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 4/3/2017 4/3/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0021 <0.0023 00.0021 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 0 <0.0020 0 <0.0020 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 0.003 0.0000023 0.0023 0.0023 0.0021 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9642 QW9645 QW9645 QW9646 QW9646 QW9646 QW9646 | GW GW EBW GW | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. Automatically converted from value: 0.0021 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-5 SS3-5 SS3-5 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 0.003 0 0 0.0023 0.0021 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 0.001 0.003 0.0000023 0.0023 0.0023 0.0021 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9642 QW9645 QW9644 QW9645 QW9645 QW9646 QW9646 QW9647 | GW G | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. Automatically converted from value: 0.0021 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| | mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-5 SS3-5 SS3-5 SS3-6 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.003 0 0 0.0023 0.0021 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 0.0003 0.0000023 0.0023 0.0023 0.0021 0.001 0.000001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QW4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9645 QW9644 QW9645 QW9646 QW9645 QW9646 QW9647 QW9647 | GW G | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. Automatically converted from value: 0.0021 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| otal | mg/L mg/L ug/L ug/L mg/L ug/L ug/L mg/L ug/L SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS2-1 SS2-1 SS2-2 SS2-2 SS2-2 SS2-3 SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-5 SS3-5 SS3-6 SS3-6 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 0 0 0 0.0023 0.0021 <0.0020 0 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00020 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000003 0.0000023 0.0023 0.0021 0.001 0.000001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9642 QW9645 QW9645 QW9645 QW9646 QW9646 QW9646 QW9647 QW9648 | GW G | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0036 ug/L to mg/L. Automatically converted from value: 0.0021 ug/L to mg/L. |
| otal | mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 SS2-3 SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-5 SS3-5 SS3-5 SS3-6 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 4/3/2017 | 0 <0.00000 <0.0020 <0.0020 <0.0020 <0.00000 <0.00000 <0.0020 <0.0020 <0.00000 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.0020 <0.003 0 0 0.0023 0.0021 <0.0020 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 | 0.000001 0.001 0.001 0.001 0.000001 0.000001 0.000001 0.000001 0.000001 0.000001 0.0003 0.0000023 0.0023 0.0023 0.0021 0.001 0.000001 0.000001 0.000001 0.000001 | QW9656 QW9657 QW9657 QW4618 QW9658 QW9658 QW9659 QW9659 QW9639 QW9640 QW9641 QW9641 QW9641 QW9642 QW9642 QW9645 QW9644 QW9645 QW9646 QW9645 QW9646 QW9647 QW9647 | GW G | Automatically converted from value: <0.0020 ug/L to mg/L. Automatically converted from value: 0.0030 ug/L to mg/L. Automatically converted from value: 0.0023 ug/L to mg/L. Automatically converted from value: 0.0021 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |

| Parameter | | C'i | | | C 1 11 7/1 | DDI | D . (| C 1 T | |
|---------------------|--------------|------------------------|----------------------|-----------------|-----------------------------|-----|-------------------|-------------------|---|
| Mercury (Hg) - | Unit mg/L | Site SS3-8 | Date 4/3/2017 | <0.00000 | Graphable Value 0.000001 | RDL | Lab Ref QW9650 | Sample Type GW | Comment Automatically converted from value: <0.0020 ug/L to mg/L. |
| Total (cont'd) | ug/L | SS3-8 | 4/3/2017 | <0.0020 | 0.001 | | QW9650 | GW | Automatically converted from value. 50,0020 ug/ E to hig/ E. |
| | mg/L | SS4-4 | 4/7/2017 | <0.00000 | 0.000001 | | QW9651 | GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | < 0.0020 | 0.001 | | QW9651 | GW | , |
| | ug/L | SS4-5 | 4/7/2017 | 0.0022 | 0.0022 | | QW9653 | DUPW2 | |
| | ug/L | SS4-5 | 4/7/2017 | <0.0020 | 0.001 | | QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | <0.00000 | 0.000001 | | QW9652 | DUPW1 | Automatically converted from value: <0.0020 ug/L to mg/L. |
| | mg/L | SS4-5 SS5-3 | 4/7/2017 4/1/2017 | 0 <0.00000 | 0.0000022 0.000001 | | QW9653 QW9654 | DUPW2 GW | Automatically converted from value: 0.0022 ug/L to mg/L. Automatically converted from value: <0.0020 ug/L to mg/L. |
| | mg/L ug/L | SS5-3 | 4/1/2017 | <0.0020 | 0.000 | | QW9654 QW9654 | GW | Automatically converted from value. <0.0020 ug/ E to flig/ E. |
| | ug/L | SS5-4 | 4/1/2017 | < 0.0020 | 0.001 | | QW9655 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | <0.00000 | 0.000001 | | QW9655 | GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | <0.00000 | 0.000001 | | QW9656 | GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | < 0.0020 | 0.001 | | QW9656 | GW | |
| Molybdenum | ug/L | CONTROL 1 | 4/1/2017 | < 0.050 | 0.025 | | QV4618 | EBW | |
| (Mo) - Total | ug/L | CONTROL 1 | 4/1/2017 | 0.095 | 0.095 | | QW9657 | GW | |
| | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.000095 | | QW9657 | GW | Automatically converted from value: 0.095 ug/L to mg/L. |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.000111 | | QW9658 | GW | Automatically converted from value: 0.111 ug/L to mg/L. |
| | ug/L mg/L | CONTROL 2 CONTROL 3 | 4/7/2017 4/3/2017 | 0.111 0 | 0.111 0.0001 | | QW9658 QW9659 | GW GW | Automatically converted from value: 0.100 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.1 | 0.0001 | | QW9659 | GW | Automatically converted from value. 0.100 ug/ E to hig/ E. |
| | ug/L | SS1-4 | 4/7/2017 | <0.050 | 0.025 | | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | <0.00 | 0.000025 | | QW9639 | GW | Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | < 0.00 | 0.000025 | | QW9640 | GW | Automatically converted from value: <0.050 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | < 0.050 | 0.025 | | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | < 0.050 | 0.025 | | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.00 | 0.000025 | | QW9641 | GW | Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | <0.00 | 0.000025 | | QW9642 | GW | Automatically converted from value: <0.050 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | <0.050 | 0.025 | | QW9642 | GW | Automotiveller and 1.16 days for the |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.000324 | | QW9643 | GW | Automatically converted from value: 0.324 ug/L to mg/L. |
| | ug/L | SS2-3 SS2-4 | 4/8/2017 4/8/2017 | 0.324 <0.050 | 0.324 0.025 | | QW9643 QW9644 | GW DUPW1 | |
| | ug/L ug/L | SS2-4 SS2-4 | 4/8/2017 | <0.050 | 0.025 | | QW9644 QW9645 | DUPW1 DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | <0.00 | 0.000025 | | QW9644 QW9644 | DUPW1 | Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | <0.00 | 0.000025 | | QW9645 | DUPW2 | Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.000647 | | QW9646 | GW | Automatically converted from value: 0.647 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 0.647 | 0.647 | | QW9646 | GW | |
| | ug/L | SS3-5 | 4/3/2017 | 0.108 | 0.108 | | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.000108 | | QW9647 | GW | Automatically converted from value: 0.108 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.0021 | | QW9648 | GW | Automatically converted from value: 2.10 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 2.1 | 2.1 | | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | 0.194 | 0.194 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.266 0 | 0.266 | | QW9649 | GW | Automatically converted from value 0.266 ug/I to mg/I |
| | mg/L mg/L | SS3-7 SS3-8 | 4/3/2017 4/3/2017 | 0 | 0.000266 0.000345 | | QW9649 QW9650 | GW GW | Automatically converted from value: 0.266 ug/L to mg/L. Automatically converted from value: 0.345 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.345 | 0.345 | | QW9650 | GW | Automatically converted from value. 0.343 ug/ E to flig/ E. |
| | ug/L | SS4-4 | 4/7/2017 | 0.108 | 0.108 | | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.000108 | | QW9651 | GW | Automatically converted from value: 0.108 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000215 | | QW9652 | DUPW1 | Automatically converted from value: 0.215 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.0002 | | QW9653 | DUPW2 | Automatically converted from value: 0.200 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 0.215 | 0.215 | | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 0.2 | 0.2 | | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 0.538 | 0.538 | | QW9654 | GW | 4 |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.000538 | | QW9654 | GW | Automatically converted from value: 0.538 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.000117 0.117 | | QW9655 QW9655 | GW GW | Automatically converted from value: 0.117 ug/L to mg/L. |
| | ug/L ug/L | SS5-4 SS5-5 | 4/1/2017 4/1/2017 | 0.117 0.444 | 0.117 | | QW9656 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.000444 | | QW9656 | GW | Automatically converted from value: 0.444 ug/L to mg/L. |
| Nickel (Ni) - Total | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.00117 | | QW9657 | GW | Automatically converted from value: 1.17 ug/L to mg/L. |
| , | ug/L | CONTROL 1 | 4/1/2017 | 1.17 | 1.17 | | QW9657 | GW | |
| | ug/L | CONTROL 1 | 4/1/2017 | 0.043 | 0.043 | | QV4618 | EBW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 8.65 | 8.65 | | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.01 | 0.00865 | | QW9658 | GW | Automatically converted from value: 8.65 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.01 | 0.0125 | | QW9659 | GW | Automatically converted from value: 12.5 $$ ug/L to $$ mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 12.5 | 12.5 | | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 1.42 | 1.42 | | QW9639 | GW | Automatically converted from 11.140 /T |
| | mg/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | 0 0 | 0.00142 0.0037 | | QW9639 QW9640 | GW GW | Automatically converted from value: 1.42 ug/L to mg/L. Automatically converted from value: 3.70 ug/L to mg/L. |
| | mg/L ug/L | SS1-5 SS1-5 | 4/7/2017 | 3.7 | 3.7 | | QW9640 QW9640 | GW GW | rationialicany converted from value, 3.70 ug/ L to mg/ L. |
| | ug/L ug/L | SS2-1 | 4/8/2017 | 2.78 | 2.78 | | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.00278 | | QW9641 | GW | Automatically converted from value: 2.78 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.00157 | | QW9642 | GW | Automatically converted from value: 1.57 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 1.57 | 1.57 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.00184 | | QW9643 | GW | Automatically converted from value: 1.84 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 1.84 | 1.84 | | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 3.62 | 3.62 | | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 1.35 | 1.35 | | QW9645 | DUPW2 | A |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.00362 | | QW9644 | DUPW1 | Automatically converted from value: 3.62 ug/L to mg/L. |
| | mg/L | SS2-4 SS3-4 | 4/8/2017 | 0 | 0.00135 | | QW9645 | DUPW2 GW | Automatically converted from value: 1.35 ug/L to mg/L. |
| | mg/L ug/L | SS3-4 SS3-4 | 4/3/2017 4/3/2017 | 0.23 226 | 0.226 226 | | QW9646 OW9646 | GW GW | Automatically converted from value: 226 ug/L to mg/L. |
| | ug/L ug/L | SS3-4 SS3-5 | 4/3/2017 | 10.7 | 10.7 | | QW9646 QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.01 | 0.0107 | | QW9647 QW9647 | GW | Automatically converted from value: 10.7 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0.01 | 0.116 | | QW9648 | GW | Automatically converted from value: 116 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 116 | 116 | | QW9648 | GW | ,, |
| | ug/L | SS3-6 | 4/30/2017 | 23.1 | 23.1 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 28.5 | 28.5 | | QW9649 | GW | - |
| | mg/L | SS3-7 | 4/3/2017 | 0.03 | 0.0285 | | QW9649 | GW | Automatically converted from value: 28.5 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0.08 | 0.0798 | | QW9650 | GW | Automatically converted from value: 79.8 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 79.8 | 79.8 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.01 | 0.00887 | | QW9651 | GW | Automatically converted from value: 8.87 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | 8.87 | 8.87 | | QW9651 | GW | |
| | ug/L | SS4-5 | 4/7/2017 | 22.9 | 22.9 | | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 15 | 15 | | QW9653 | DUPW2 | |

| _ | | tter Chemistry | | | | | | | |
|---------------------|------|----------------|-----------|----------|-----------------|-----|---------|-------|--|
| Parameter | Unit | Site | Date | | Graphable Value | RDL | Lab Ref | 1 /1 | |
| Nickel (Ni) - Total | mg/L | SS4-5 | 4/7/2017 | 0.02 | 0.0229 | | QW9652 | DUPW1 | Automatically converted from value: 22.9 ug/L to mg/L. |
| (cont'd) | mg/L | SS4-5 | 4/7/2017 | 0.01 | 0.015 | | QW9653 | DUPW2 | Automatically converted from value: 15.0 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0.03 | 0.0289 | | QW9654 | GW | Automatically converted from value: 28.9 ug/L to mg/L. |
| | ug/L | SS5-3 | 4/1/2017 | 28.9 | 28.9 | | QW9654 | GW | |
| | ug/L | SS5-4 | 4/1/2017 | 2.92 | 2.92 | | QW9655 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.00292 | | QW9655 | GW | Automatically converted from value: 2.92 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.0032 | | QW9656 | GW | Automatically converted from value: 3.20 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | 3.2 | 3.2 | | QW9656 | GW | , 0, 0, |
| Nitrate (N) | mg/L | CONTROL 1 | 4/1/2017 | <0.0020 | 0.001 | | QV4618 | EBW | |
| Tittate (Ti) | | CONTROL 1 | 4/1/2017 | 0.0797 | 0.0797 | | QW9657 | GW | |
| | mg/L | | | | | | | | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.107 | 0.107 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.0782 | 0.0782 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.125 | 0.125 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0.0769 | 0.0769 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.112 | 0.112 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0.151 | 0.151 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.136 | 0.136 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.125 | 0.125 | | QW9645 | DUPW2 | |
| | | SS2-4 | 4/8/2017 | 0.123 | 0.12 | | QW9644 | DUPW1 | |
| | mg/L | | | | | | | | |
| | mg/L | SS3-4 | 4/3/2017 | 0.106 | 0.106 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.109 | 0.109 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.133 | 0.133 | | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | 0.155 | 0.155 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0.0933 | 0.0933 | | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | 0.0867 | 0.0867 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.129 | 0.129 | | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 0.147 | 0.147 | | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.145 | 0.147 | | QW9652 | DUPW1 | |
| | | | | | | | | | |
| | mg/L | SS5-3 | 4/1/2017 | 0.0747 | 0.0747 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.0773 | 0.0773 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0.0695 | 0.0695 | | QW9656 | GW | |
| Nitrate plus | mg/L | CONTROL 1 | 4/1/2017 | 0.0797 | 0.0797 | | QW9657 | GW | |
| Nitrite (N) | mg/L | CONTROL 1 | 4/1/2017 | < 0.0020 | 0.001 | | QV4618 | EBW | |
| 1 | mg/L | CONTROL 2 | 4/7/2017 | 0.107 | 0.107 | | QW9658 | GW | |
| 1 | mg/L | CONTROL 3 | 4/3/2017 | 0.0782 | 0.0782 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.125 | 0.125 | | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0.0769 | 0.0769 | | OW9640 | GW | |
| | _ | SS2-1 | | 0.112 | 0.112 | | QW9641 | GW | |
| | mg/L | | 4/8/2017 | | | | | | |
| | mg/L | SS2-2 | 4/8/2017 | 0.151 | 0.151 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.136 | 0.136 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.125 | 0.125 | | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.12 | 0.12 | | QW9644 | DUPW1 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.109 | 0.109 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.109 | 0.109 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.137 | 0.137 | | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | 0.157 | 0.157 | | QZ4969 | GW | |
| | | SS3-7 | | 0.137 | 0.0967 | | QW9649 | GW | |
| | mg/L | | 4/3/2017 | | | | | | |
| | mg/L | SS3-8 | 4/3/2017 | 0.0888 | 0.0888 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.131 | 0.131 | | QW9651 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 0.147 | 0.147 | | QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.149 | 0.149 | | QW9653 | DUPW2 | |
| | mg/L | SS5-3 | 4/1/2017 | 0.0747 | 0.0747 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.0773 | 0.0773 | | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0.0695 | 0.0695 | | QW9656 | GW | |
| Nitrite (N) - Total | mg/L | CONTROL 1 | 4/1/2017 | <0.0020 | 0.001 | | QV4618 | EBW | |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.0020 | 0.001 | | QW9657 | GW | |
| | | | | | | | | | |
| | mg/L | CONTROL 2 | 4/7/2017 | <0.0020 | 0.001 | | QW9658 | GW | |
|] | mg/L | CONTROL 3 | 4/3/2017 | <0.0020 | 0.001 | | QW9659 | GW | |
| 1 | mg/L | SS1-4 | 4/7/2017 | < 0.0020 | 0.001 | | QW9639 | GW | |
| 1 | mg/L | SS1-5 | 4/7/2017 | < 0.0020 | 0.001 | | QW9640 | GW | |
| 1 | mg/L | SS2-1 | 4/8/2017 | < 0.0020 | 0.001 | | QW9641 | GW | |
| 1 | mg/L | SS2-2 | 4/8/2017 | < 0.0020 | 0.001 | | QW9642 | GW | |
| 1 | mg/L | SS2-3 | 4/8/2017 | < 0.0020 | 0.001 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.0020 | 0.001 | | QW9645 | DUPW2 | |
| 1 | mg/L | SS2-4 | 4/8/2017 | < 0.0020 | 0.001 | | QW9644 | DUPW1 | |
| 1 | mg/L | SS3-4 | 4/3/2017 | 0.0033 | 0.0033 | | QW9646 | GW | |
| 1 | mg/L | SS3-5 | 4/3/2017 | <0.0020 | 0.001 | | QW9647 | GW | |
| 1 | mg/L | SS3-6 | 4/3/2017 | 0.0049 | 0.0049 | | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | 0.0049 | 0.0049 | | QZ4969 | GW | |
| 1 | | | | | | | | | |
| 1 | mg/L | SS3-7 | 4/3/2017 | 0.0034 | 0.0034 | | QW9649 | GW | |
| 1 | mg/L | SS3-8 | 4/3/2017 | 0.0021 | 0.0021 | | QW9650 | GW | |
| 1 | mg/L | SS4-4 | 4/7/2017 | 0.0022 | 0.0022 | | QW9651 | GW | |
| 1 | mg/L | SS4-5 | 4/7/2017 | 0.002 | 0.002 | | QW9653 | DUPW2 | |
|] | mg/L | SS4-5 | 4/7/2017 | 0.002 | 0.002 | | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | < 0.0020 | 0.001 | | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | < 0.0020 | 0.001 | | QW9655 | GW | |
| <u></u> | mg/L | SS5-5 | 4/1/2017 | < 0.0020 | 0.001 | | QW9656 | GW | |
| Nitrogen (N) - | mg/L | CONTROL 1 | 4/1/2017 | 0.153 | 0.153 | | QW9657 | GW | |
| Total | mg/L | CONTROL 1 | 4/1/2017 | 0.039 | 0.039 | | QV4618 | EBW | |
|] | mg/L | CONTROL 2 | 4/7/2017 | 0.188 | 0.188 | | QW9658 | GW | |
|] | mg/L | | 4/3/2017 | 0.15 | 0.15 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.13 | 0.249 | | QW9639 | GW | |
| | | | | | | | | | |
| | mg/L | SS1-5 | 4/7/2017 | 0.119 | 0.119 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.217 | 0.217 | | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 0.265 | 0.265 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.257 | 0.257 | | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.187 | 0.187 | | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.193 | 0.193 | | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.197 | 0.197 | | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.446 | 0.446 | | QW9647 | GW | |
| 1 | mg/L | SS3-6 | 4/3/2017 | 0.253 | 0.253 | | QW9648 | GW | |
| | | SS3-6 | 4/30/2017 | 0.233 | 0.348 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | | | | | | | | resumpted at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0.209 | 0.209 | | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | 0.237 | 0.237 | | QW9650 | GW | |

| Parameter | Unit | Site | Date | | t Graphable Value R | | Sample Type | e Comment |
|--|--------------|------------------------|----------------------|-------------------|---------------------|------------------|----------------|--|
| Nitrogen (N) - | mg/L | SS4-4 | 4/7/2017 | 0.253 | 0.253 | QW9651 | GW | |
| Total (cont'd) | mg/L | SS4-5 | 4/7/2017 | 0.283 | 0.283 | QW9652 | DUPW1 | |
| | mg/L mg/L | SS4-5 SS5-3 | 4/7/2017 4/1/2017 | 0.298 0.112 | 0.298 0.112 | QW9653 QW9654 | DUPW2 GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.121 | 0.121 | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0.106 | 0.106 | QW9656 | GW | |
| Orthophosphate (PO ₄ -P) | mg/L | CONTROL 1 | 4/1/2017 | 0.0027 | 0.0027 | QW9657 | GW | |
| (104-1) | mg/L mg/L | CONTROL 1 CONTROL 2 | 4/1/2017 4/7/2017 | <0.0010 0.0047 | 0.0005 0.0047 | QV4618 QW9658 | EBW GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.004 | 0.004 | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.0032 | 0.0032 | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0.0011 | 0.0011 | QW9640 | GW | |
| | mg/L mg/L | SS2-1 SS2-2 | 4/8/2017 4/8/2017 | 0 0.0028 | 0 0.0028 | QW9641 QW9642 | GW GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.003 | 0.003 | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.0029 | 0.0029 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.0034 | 0.0034 | QW9644 | DUPW1 | |
| | mg/L mg/L | SS3-4 SS3-5 | 4/3/2017 4/3/2017 | 0.0053 0.0041 | 0.0053 0.0041 | QW9646 QW9647 | GW GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.0041 | 0.0041 | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | 0.0098 | 0.0098 | QZ4969 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 0.0058 | 0.0058 | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | 0.0077 | 0.0077 | QW9650 | GW | |
| | mg/L mg/L | SS4-4 SS4-5 | 4/7/2017 4/7/2017 | 0.0042 0.008 | 0.0042 0.008 | QW9651 QW9653 | GW DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.0048 | 0.0048 | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | 0.0035 | 0.0035 | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.0031 | 0.0031 | QW9655 | GW | |
| рН | mg/L pH | SS5-5 CONTROL 1 | 4/1/2017 4/1/2017 | 0.0018 5.27 | 0.0018 5.27 | QW9656 QV4618 | GW EBW | |
| , | рН | CONTROL 1 | 4/1/2017 | 5.3 | 5.3 | QW9657 | GW | |
| | рН | CONTROL 2 | 4/7/2017 | 5.68 | 5.68 | QW9658 | GW | |
| | рН | CONTROL 3 | 4/3/2017 | 6.31 | 6.31 | QW9659 | GW | |
| | pН pН | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | 6.3 5.87 | 6.3 5.87 | QW9639 QW9640 | GW GW | |
| | рН | SS2-1 | 4/8/2017 | 5.46 | 5.46 | QW9641 | GW | |
| | pН | SS2-2 | 4/8/2017 | 5.33 | 5.33 | QW9642 | GW | |
| | pН | SS2-3 | 4/8/2017 | 5.59 | 5.59 | QW9643 | GW | |
| | pН | SS2-4 | 4/8/2017 | 5.35 | 5.35 | QW9645 | DUPW2 | |
| | pН pН | SS2-4 SS3-4 | 4/8/2017 4/3/2017 | 5.35 6.91 | 5.35 6.91 | QW9644 QW9646 | DUPW1 GW | |
| | pН | SS3-5 | 4/3/2017 | 6.51 | 6.51 | QW9647 | GW | |
| | рН | SS3-6 | 4/3/2017 | 7.07 | 7.07 | QW9648 | GW | |
| | pН | SS3-6 | 4/30/2017 | 6.94 | 6.94 | QZ4969 | GW | Resampled at corrected coordinate. |
| | pН pН | SS3-7 SS3-8 | 4/3/2017 4/3/2017 | 6.86 6.52 | 6.86 6.52 | QW9649 QW9650 | GW GW | |
| | рН | SS4-4 | 4/7/2017 | 6.44 | 6.44 | QW9651 | GW | |
| | pН | SS4-5 | 4/7/2017 | 6.21 | 6.21 | QW9652 | DUPW1 | |
| | рН | SS4-5 | 4/7/2017 | 6.21 | 6.21 | QW9653 | DUPW2 | |
| | pH pH | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | 6.74 5.63 | 6.74 5.63 | QW9654 QW9655 | GW GW | |
| | pН pН | SS5-5 | 4/1/2017 | 5.51 | 5.51 | QW9656 | GW | |
| Phosphorus (P) - | ug/L | CONTROL 1 | 4/1/2017 | 5 | 5 | QW9657 | GW | |
| Dissolved (TDP) | mg/L | CONTROL 1 | 4/1/2017 | 0.005 | 0.005 | QW9657 | GW | |
| | mg/L mg/L | CONTROL 1 CONTROL 2 | 4/1/2017 4/7/2017 | <0.0020 0.015 | 0.001 0.015 | QV4618 QW9658 | EBW GW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 15 | 15 | QW9658 QW9658 | GW | |
| | ug/L | CONTROL 3 | 4/3/2017 | 19.7 | 19.7 | QW9659 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.0197 | 0.0197 | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.0106 | 0.0106 | QW9639 | GW | |
| | ug/L ug/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | 10.6 15.6 | 10.6 15.6 | QW9639 QW9640 | GW GW | |
| | mg/L | SS1-5 | 4/7/2017 | 0.0156 | 0.0156 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.019 | 0.019 | QW9641 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 19 | 19 | QW9641 | GW | |
| | ug/L mg/L | SS2-2 SS2-2 | 4/8/2017 4/8/2017 | 13.8 0.0138 | 13.8 0.0138 | QW9642 QW9642 | GW GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.0138 | 0.018 | QW9643 | GW | |
| | ug/L | SS2-3 | 4/8/2017 | 18 | 18 | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 14.9 | 14.9 | QW9644 | DUPW1 | |
| | ug/L mg/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 16.3 0.0149 | 16.3 0.0149 | QW9645 QW9644 | DUPW2 DUPW1 | Automatically converted from value: 0.0163 mg/L to ug/L. |
| | mg/L mg/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 0.0149 | 0.0149 | QW9644 QW9645 | DUPW1 DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.0659 | 0.0659 | QW9646 | GW | |
| | ug/L | SS3-4 | 4/3/2017 | 65.9 | 65.9 | QW9646 | GW | Automatically converted from value: 0.0659 mg/L to ug/L. |
| | ug/L mg/L | SS3-5 | 4/3/2017 4/3/2017 | 39.2 | 39.2 | QW9647 | GW GW | Automatically converted from value: 0.0392 mg/L to ug/L. |
| | mg/L mg/L | SS3-5 SS3-6 | 4/3/2017 4/3/2017 | 0.0392 0.143 | 0.0392 0.143 | QW9647 QW9648 | GW GW | Dissolved greater than total. Reanalysis yields similar results. |
| | ug/L | SS3-6 | 4/3/2017 | 143 | 143 | QW9648 | GW | Dissolved greater than total. Reanalysis yields similar results. |
| | mg/L | SS3-6 | 4/30/2017 | 0.042 | 0.042 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 78.5 | 78.5 | QW9649 | GW | Automatically converted from value: 0.0785 mg/L to ug/L. |
| | mg/L mg/L | SS3-7 SS3-8 | 4/3/2017 4/3/2017 | 0.0785 0.033 | 0.0785 0.033 | QW9649 QW9650 | GW GW | |
| | mg/L ug/L | SS3-8 SS3-8 | 4/3/2017 | 33 | 33 | QW9650 QW9650 | GW GW | Automatically converted from value: 0.0330 mg/L to ug/L. |
| | mg/L | SS4-4 | 4/7/2017 | 0.0209 | 0.0209 | QW9651 | GW | ing, b to ug, b. |
| | ug/L | SS4-4 | 4/7/2017 | 20.9 | 20.9 | QW9651 | GW | Automatically converted from value: 0.0209 mg/L to ug/L . |
| | ug/L | SS4-5 | 4/7/2017 | 42.8 | 42.8 | QW9652 | DUPW1 | Dissolved greater than total. Reanalysis yields similar results. |
| | ug/L mg/L | SS4-5 | 4/7/2017 4/7/2017 | 46.4 | 46.4 | QW9653 QW9652 | DUPW2 | Automatically converted from value: 0.0464 mg/L to ug/L. |
| | mg/L mg/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 0.0428 0.0464 | 0.0428 0.0464 | QW9652 QW9653 | DUPW1 DUPW2 | Dissolved greater than total. Reanalysis yields similar results. |
| | mg/L | SS5-3 | 4/1/2017 | 0.0351 | 0.0351 | QW9654 | GW | |
| | ug/L | SS5-3 | 4/1/2017 | 35.1 | 35.1 | QW9654 | GW | Automatically converted from value: 0.0351 mg/L to ug/L. |
| | ug/L | SS5-4 | 4/1/2017 | 10.1 | 10.1 | QW9655 | GW | Automatically converted from value: 0.0101 mg/L to ug/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0.0101 | 0.0101 | QW9655 | GW | |

| Parameter Phosphorus (P) - | Unit mg/L | Site SS5-5 | Date 4/1/2017 | 0.0134 | Graphable Value R 0.0134 | ADL Lab Ref QW9656 | Sample Type GW | e Comment |
|----------------------------|----------------------|------------------------|-----------------------|-------------------|-----------------------------|-----------------------|-------------------|--|
| Dissolved (TDP) | ug/L | SS5-5 | 4/1/2017 | 13.4 | 13.4 | QW9656 | GW | Automatically converted from value: 0.0134 mg/L to ug/L. |
| Phosphorus (P) - | ug/L | CONTROL 1 | 4/1/2017 | 5.7 | 5.7 | QW9657 | GW | Automatically converted from value: $0.0057~\mathrm{mg/L}$ to ug/L. |
| Total | mg/L mg/L | CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 | <0.0020 0.0057 | 0.001 0.0057 | QV4618 QW9657 | EBW GW | |
| | mg/L | CONTROL 1 | 4/7/2017 | 0.0037 | 0.0037 | QW9658 | GW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 12.1 | 12.1 | QW9658 | GW | Automatically converted from value: 0.0121 mg/L to ug/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 26.6 | 26.6 | QW9659 | GW | Automatically converted from value: 0.0266 mg/L to ug/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.0266 | 0.0266 | QW9659 | GW | |
| | mg/L ug/L | SS1-4 SS1-4 | 4/7/2017 4/7/2017 | 0.0141 14.1 | 0.0141 14.1 | QW9639 QW9639 | GW GW | Automatically converted from value: 0.0141 mg/L to ug/L. |
| | ug/L | SS1-5 | 4/7/2017 | 19.2 | 19.2 | QW9640 | GW | Automatically converted from value: 0.0192 mg/L to ug/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0.0192 | 0.0192 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.0226 | 0.0226 | QW9641 | GW | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| | ug/L ug/L | SS2-1 SS2-2 | 4/8/2017 4/8/2017 | 22.6 12.6 | 22.6 12.6 | QW9641 QW9642 | GW GW | Automatically converted from value: 0.0226 mg/L to ug/L. Automatically converted from value: 0.0126 mg/L to ug/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0.0126 | 0.0126 | QW9642 | GW | Automatically converted from value. 0.0120 file, E to ug, E. |
| | mg/L | SS2-3 | 4/8/2017 | 0.0195 | 0.0195 | QW9643 | GW | |
| | ug/L | SS2-3 | 4/8/2017 | 19.5 | 19.5 | QW9643 | GW | Automatically converted from value: 0.0195 mg/L to ug/L. |
| | ug/L ug/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 15.9 40.8 | 15.9 40.8 | QW9644 QW9645 | DUPW1 DUPW2 | Automatically converted from value: 0.0159 mg/L to ug/L. Automatically converted from value: 0.0408 mg/L to ug/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.0159 | 0.0159 | QW9643 QW9644 | DUPW1 | Automatically converted from value. 0.0408 filg/ L to ug/ L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.0408 | 0.0408 | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.104 | 0.104 | QW9646 | GW | |
| | ug/L | SS3-4 | 4/3/2017 | 104 | 104 | QW9646 | GW | Automatically converted from value: 0.104 mg/L to ug/L. |
| | ug/L mg/L | SS3-5 SS3-5 | 4/3/2017 4/3/2017 | 53.5 0.0535 | 53.5 0.0535 | QW9647 QW9647 | GW GW | Automatically converted from value: 0.0535 mg/L to ug/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0.109 | 0.109 | QW9648 | GW | |
| | ug/L | SS3-6 | 4/3/2017 | 109 | 109 | QW9648 | GW | Automatically converted from value: 0.109 mg/L to ug/L. |
| | mg/L | SS3-6 | 4/30/2017 | 0.0542 | 0.0542 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L mg/L | SS3-7 SS3-7 | 4/3/2017 4/3/2017 | 103 0.103 | 103 0.103 | QW9649 QW9649 | GW GW | Automatically converted from value: $0.103\ mg/L$ to ug/L . |
| | mg/L | SS3-8 | 4/3/2017 | 0.103 | 0.0445 | QW9650 | GW | |
| | ug/L | SS3-8 | 4/3/2017 | 44.5 | 44.5 | QW9650 | GW | Automatically converted from value: $0.0445\ mg/L$ to ug/L . |
| | ug/L | SS4-4 | 4/7/2017 | 30.7 | 30.7 | QW9651 | GW | Automatically converted from value: $0.0307 \ mg/L$ to ug/L . |
| | mg/L | SS4-4 SS4-5 | 4/7/2017 4/7/2017 | 0.0307 0.0307 | 0.0307 0.0307 | QW9651 QW9652 | GW DUPW1 | |
| | mg/L mg/L | SS4-5 | 4/7/2017 | 0.0389 | 0.0389 | QW9653 | DUPW2 | |
| | ug/L | SS4-5 | 4/7/2017 | 30.7 | 30.7 | QW9652 | DUPW1 | Automatically converted from value: 0.0307 mg/L to ug/L. |
| | ug/L | SS4-5 | 4/7/2017 | 38.9 | 38.9 | QW9653 | DUPW2 | Automatically converted from value: 0.0389 mg/L to ug/L. |
| | ug/L | SS5-3 | 4/1/2017 | 31 | 31 | QW9654 | GW | Automatically converted from value: 0.0310 mg/L to ug/L. |
| | mg/L mg/L | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | 0.031 0.0101 | 0.031 0.0101 | QW9654 QW9655 | GW GW | |
| | ug/L | SS5-4 | 4/1/2017 | 10.1 | 10.1 | QW9655 | GW | Automatically converted from value: 0.0101 mg/L to ug/L. |
| | ug/L | SS5-5 | 4/1/2017 | 12.2 | 12.2 | QW9656 | GW | Automatically converted from value: 0.0122 mg/L to ug/L. |
| Potassium (K) - | mg/L | SS5-5 | 4/1/2017 | 0.0122 | 0.0122 | QW9656 | GW | Automotically consists of consists of OFO may II to any II |
| Fotassium (K) - Fotal | ug/L mg/L | CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 | <50.00 <0.050 | 25 0.025 | QW9657 QW9657 | GW GW | Automatically converted from value: $< 0.050 \text{ mg/L}$ to ug/L . |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.050 | 0.025 | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.217 | 0.217 | QW9658 | GW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 217 | 217 | QW9658 | GW | Automatically converted from value: 0.217 mg/L to ug/L. |
| | ug/L mg/L | CONTROL 3 CONTROL 3 | 4/3/2017 4/3/2017 | 189 0.189 | 189 0.189 | QW9659 QW9659 | GW GW | Automatically converted from value: 0.189 mg/L to ug/L. |
| | mg/L | SS1-4 | 4/7/2017 | 0.098 | 0.098 | QW9639 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 98 | 98 | QW9639 | GW | Automatically converted from value: 0.098 mg/L to ug/L. |
| | ug/L | SS1-5 | 4/7/2017 | 182 | 182 | QW9640 | GW | Automatically converted from value: 0.182 mg/L to ug/L. |
| | mg/L mg/L | SS1-5 SS2-1 | 4/7/2017 4/8/2017 | 0.182 0.206 | 0.182 0.206 | QW9640 QW9641 | GW GW | |
| | ug/L | SS2-1 | 4/8/2017 | 206 | 206 | QW9641 QW9641 | GW | Automatically converted from value: 0.206 mg/L to ug/L. |
| | ug/L | SS2-2 | 4/8/2017 | 74 | 74 | QW9642 | GW | Automatically converted from value: 0.074 mg/L to ug/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0.074 | 0.074 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.104 | 0.104 | QW9643 | GW | Automotically requested for a value 0.104 and /T to con/T |
| | ug/L ug/L | SS2-3 SS2-4 | 4/8/2017 4/8/2017 | 104 206 | 104 206 | QW9643 QW9644 | GW DUPW1 | Automatically converted from value: 0.104 mg/L to ug/L. Automatically converted from value: 0.206 mg/L to ug/L. |
| | ug/L ug/L | SS2-4 | 4/8/2017 | 73 | 73 | QW9645 | DUPW2 | Automatically converted from value: 0.200 mg/L to ug/L. Automatically converted from value: 0.073 mg/L to ug/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.206 | 0.206 | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.073 | 0.073 | QW9645 | DUPW2 | |
| | mg/L ug/L | SS3-4 SS3-4 | 4/3/2017 4/3/2017 | 1.42 1420 | 1.42 1420 | QW9646 QW9646 | GW GW | Automatically converted from value: 1.42 mg/L to ug/L. |
| | ug/L ug/L | SS3-5 | 4/3/2017 | 235 | 235 | QW9647 | GW | Automatically converted from value: 1.42 mg/L to ug/L. Automatically converted from value: 0.235 mg/L to ug/L. |
| | mg/L | SS3-5 | 4/3/2017 | 0.235 | 0.235 | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 1.2 | 1.2 | QW9648 | GW | |
| | ug/L | SS3-6 | 4/3/2017 4/30/2017 | 1200 | 1200 | QW9648 | GW | Automatically converted from value: 1.20 mg/L to ug/L. Resampled at corrected coordinate. |
| | mg/L ug/L | SS3-6 SS3-7 | 4/30/2017 4/3/2017 | 0.42 441 | 0.42 441 | QZ4969 QW9649 | GW GW | Resampled at corrected coordinate. Automatically converted from value: 0.441 mg/L to ug/L. |
| | mg/L | SS3-7 | 4/3/2017 | 0.441 | 0.441 | QW9649 | GW | , |
| | mg/L | SS3-8 | 4/3/2017 | 0.528 | 0.528 | QW9650 | GW | |
| | ug/L | SS3-8 | 4/3/2017 | 528 | 528 | QW9650 | GW | Automatically converted from value: 0.528 mg/L to ug/L. |
| | ug/L mg/L | SS4-4 SS4-4 | 4/7/2017 4/7/2017 | 231 0.231 | 231 0.231 | QW9651 QW9651 | GW GW | Automatically converted from value: 0.231 mg/L to ug/L. |
| | mg/L | SS4-4 SS4-5 | 4/7/2017 | 0.231 | 0.863 | QW9651 QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.593 | 0.593 | QW9653 | DUPW2 | |
| | ug/L | SS4-5 | 4/7/2017 | 863 | 863 | QW9652 | DUPW1 | Automatically converted from value: 0.863 mg/L to ug/L. |
| | ug/L | SS4-5 | 4/7/2017 | 593 508 | 593 | QW9653 | DUPW2 | Automatically converted from value: 0.593 mg/L to ug/L. |
| | ug/L mg/L | SS5-3 SS5-3 | 4/1/2017 4/1/2017 | 508 0.508 | 508 0.508 | QW9654 QW9654 | GW GW | Automatically converted from value: 0.508 mg/L to ug/L. |
| | mg/L mg/L | SS5-3 SS5-4 | 4/1/2017 | 0.061 | 0.061 | QW9654 QW9655 | GW GW | |
| | ug/L | SS5-4 | 4/1/2017 | 61 | 61 | QW9655 | GW | Automatically converted from value: 0.061 mg/L to ug/L. |
| | ug/ L | CCE E | 4/1/2017 | 61 | 61 | QW9656 | GW | Automatically converted from value: 0.061 mg/L to ug/L. |
| | ug/L | SS5-5 | | | | | | |
| Palanium (C.) | ug/L mg/L | SS5-5 | 4/1/2017 | 0.061 | 0.061 | QW9656 | GW | |
| ` , | ug/L mg/L ug/L | SS5-5 CONTROL 1 | 4/1/2017 4/1/2017 | < 0.040 | 0.02 | QV4618 | EBW | |
| Selenium (Se) - Total | ug/L mg/L | SS5-5 | 4/1/2017 | | | | | Automatically converted from value: <0.040 ug/L to mg/L. |

| Selenium (Se) - | Unit mg/L | Site CONTROL 2 | Date 4/7/2017 | <0.00 | Graphable Value 0.00002 | RDL Lab Ref S QW9658 | Sample Type GW | Automatically converted from value: <0.040 ug/L to mg/L. |
|--------------------|--------------|-------------------|----------------------|-----------------|----------------------------|-------------------------|-------------------|--|
| otal (cont'd) | mg/L | CONTROL 3 | 4/3/2017 | <0.00 | 0.00002 | QW9659 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | < 0.040 | 0.02 | QW9659 | GW | Transmitted from Taluer Store ug, 2 to mg, 2. |
| | ug/L | SS1-4 | 4/7/2017 | < 0.040 | 0.02 | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | < 0.00 | 0.00002 | QW9639 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | < 0.00 | 0.00002 | QW9640 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | < 0.040 | 0.02 | QW9640 | GW | Ç. G. |
| | ug/L | SS2-1 | 4/8/2017 | < 0.040 | 0.02 | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.00 | 0.00002 | QW9641 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | < 0.00 | 0.00002 | QW9642 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | < 0.040 | 0.02 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.00 | 0.00002 | QW9643 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | < 0.040 | 0.02 | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | < 0.040 | 0.02 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | < 0.040 | 0.02 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | <0.00 | 0.00002 | QW9644 | DUPW1 | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | <0.00 | 0.00002 | QW9645 | DUPW2 | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.000067 | QW9646 | GW | Automatically converted from value: 0.067 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 0.067 | 0.067 | QW9646 | GW | |
| | ug/L | SS3-5 SS3-5 | 4/3/2017 | <0.040 <0.00 | 0.02 0.00002 | QW9647 QW9647 | GW GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L mg/L | SS3-6 | 4/3/2017 4/3/2017 | <0.00 | 0.00002 | QW9648 | GW | Automatically converted from value: <0.040 ug/L to mg/L. Automatically converted from value: <0.040 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | <0.040 | 0.0002 | QW9648 QW9648 | GW | Automatically converted from value. \0.040 ug/ L to fing/ L. |
| | ug/L ug/L | SS3-6 | 4/30/2017 | <0.040 | 0.02 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L ug/L | SS3-7 | 4/3/2017 | <0.040 | 0.02 | QZ4969 QW9649 | GW | resumpted at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | <0.040 | 0.00002 | QW9649 QW9649 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | <0.00 | 0.00002 | QW9650 | GW | Automatically converted from value: <0.040 ug/L to mg/L. Automatically converted from value: <0.040 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | <0.040 | 0.02 | QW9650 QW9650 | GW | |
| | ug/L ug/L | SS4-4 | 4/7/2017 | <0.040 | 0.02 | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | <0.00 | 0.00002 | QW9651 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | <0.00 | 0.00002 | QW9652 | DUPW1 | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | <0.00 | 0.00002 | QW9653 | DUPW2 | Automatically converted from value: <0.040 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | < 0.040 | 0.02 | QW9652 | DUPW1 | , |
| | ug/L | SS4-5 | 4/7/2017 | < 0.040 | 0.02 | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | < 0.040 | 0.02 | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | < 0.00 | 0.00002 | QW9654 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | < 0.00 | 0.00002 | QW9655 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | < 0.040 | 0.02 | QW9655 | GW | Ç. G. |
| | ug/L | SS5-5 | 4/1/2017 | < 0.040 | 0.02 | QW9656 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | < 0.00 | 0.00002 | QW9656 | GW | Automatically converted from value: <0.040 ug/L to mg/L. |
| licon (Si) - Total | mg/L | CONTROL 1 | 4/1/2017 | 0.11 | 0.113 | QW9657 | GW | Automatically converted from value: 113 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | 113 | 113 | QW9657 | GW | |
| | ug/L | CONTROL 1 | 4/1/2017 | <50 | 25 | QV4618 | EBW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 1170 | 1170 | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 1.17 | 1.17 | QW9658 | GW | Automatically converted from value: 1170 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 1.51 | 1.51 | QW9659 | GW | Automatically converted from value: 1510 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 1510 | 1510 | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 290 | 290 | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.29 | 0.29 | QW9639 | GW | Automatically converted from value: 290 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0.74 | 0.74 | QW9640 | GW | Automatically converted from value: 740 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 740 | 740 | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 359 | 359 | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.36 | 0.359 | QW9641 | GW | Automatically converted from value: 359 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0.21 | 0.207 | QW9642 | GW | Automatically converted from value: 207 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 207 | 207 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.26 | 0.26 | QW9643 | GW | Automatically converted from value: 260 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 260 | 260 | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 777 | 777 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 194 | 194 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.78 | 0.777 | QW9644 | DUPW1 | Automatically converted from value: 777 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.19 | 0.194 | QW9645 | DUPW2 | Automatically converted from value: 194 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 9.47 | 9.47 | QW9646 | GW | Automatically converted from value: 9470 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 9470 | 9470 | QW9646 | GW | |
| | ug/L | SS3-5 | 4/3/2017 | 801 | 801 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.8 | 0.801 | QW9647 | GW | Automatically converted from value: 801 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 6.3 | 6.3 | QW9648 | GW | Automatically converted from value: 6300 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 6300 | 6300 | QW9648 | GW | December 1 2 2 |
| | ug/L | SS3-6 | 4/30/2017 | 2870 | 2870 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 1790 | 1790 | QW9649 | GW | A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| | mg/L | SS3-7 | 4/3/2017 | 1.79 | 1.79 | QW9649 | GW | Automatically converted from value: 1790 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 3.7 | 3.7 | QW9650 | GW | Automatically converted from value: 3700 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 3700 | 3700 | QW9650 | GW | Automotically conserved 1 C. 1 FOO /T · /T |
| | mg/L | SS4-4 | 4/7/2017 | 0.78 | 0.783 | QW9651 | GW | Automatically converted from value: 783 ug/L to mg/L. |
| | ug/L | SS4-4 SS4-5 | 4/7/2017 | 783 3100 | 783 3100 | QW9651 | GW DUDW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 3100 | 3100 | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 4/7/2017 | 2410 3.1 | 2410 3.1 | QW9653 QW9652 | DUPW2 | Automatically converted from value, 2100 /I + /I |
| | mg/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 3.1 2.41 | 3.1 | QW9652 QW9653 | DUPW1 DUPW2 | Automatically converted from value: 3100 ug/L to mg/L. Automatically converted from value: 2410 ug/L to mg/L. |
| | mg/L mg/L | SS4-5 SS5-3 | 4/7/2017 4/1/2017 | 2.41 2.91 | 2.41 2.91 | QW9653 QW9654 | GW GW | Automatically converted from value: 2410 ug/L to mg/L. Automatically converted from value: 2910 ug/L to mg/L. |
| | | | | | 2.91 2910 | QW9654 QW9654 | GW GW | Matomaticany converted from value, 2710 ug/ L to mg/ L. |
| | ug/L | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | 2910 242 | | | | |
| | ug/L mg/L | SS5-4 SS5-4 | 4/1/2017 4/1/2017 | 242 | 242 | QW9655 | GW | Automatically converted from value 242 va /I to /I |
| | mg/L | SS5-4 SS5-5 | 4/1/2017 | 0.24 | 0.242 | QW9655 | GW | Automatically converted from value: 242 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0.44 | 0.439 | QW9656 | GW | Automatically converted from value: 439 ug/L to mg/L. |
| vor (Ac) Tat-1 | ug/L | SS5-5 | 4/1/2017 | 439 | 0.0025 | QW9656 | GW | |
| ver (Ag) - Total | ug/L | CONTROL 1 | 4/1/2017 | <0.0050 | 0.0025 | QV4618 | EBW | |
| | ug/L | CONTROL 1 | 4/1/2017 | <0.0050 | 0.0025 | QW9657 | GW | Automotiveller (16 1 1 20000 17 17 |
| | mg/L | CONTROL 1 | 4/1/2017 | <0.00 | 0.0000025 | QW9657 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | ug/L | CONTROL 2 | 4/7/2017 | <0.0050 | 0.0025 | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | <0.00 | 0.0000025 | QW9658 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | <0.00 | 0.0000025 | QW9659 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | <0.0050 | 0.0025 | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | <0.0050 | 0.0025 | QW9639 | GW | |
| | | 004.4 | 4 /5 /0045 | -0.00 | 0.000000 | OT170.000 | CIM | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L mg/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | <0.00 <0.00 | 0.0000025 0.0000025 | QW9639 QW9640 | GW GW | Automatically converted from value: <0.0050 ug/L to mg/L. Automatically converted from value: <0.0050 ug/L to mg/L. |

| Parameter | Unit | Site | Date | Data Point | Graphable Value | RDL | Lab Ref | Sample Type | e Comment |
|---------------------|--------------|----------------|----------------------|------------------|---------------------|-----|------------------|----------------|--|
| Silver (Ag) - Total | ug/L | SS1-5 | 4/7/2017 | <0.0050 | 0.0025 | | QW9640 | GW | |
| (cont'd) | ug/L | SS2-1 | 4/8/2017 | < 0.0050 | 0.0025 | | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.00 | 0.0000025 | | QW9641 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | <0.00 | 0.0000025 | | QW9642 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | <0.0050 | 0.0025 | | QW9642 | GW | 1 1 10 0050 /1 / |
| | mg/L | SS2-3 SS2-3 | 4/8/2017 4/8/2017 | <0.00 <0.0050 | 0.0000025 0.0025 | | QW9643 QW9643 | GW GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | ug/L ug/L | SS2-3 SS2-4 | 4/8/2017 | <0.0050 | 0.0025 | | QW9643 QW9644 | DUPW1 | |
| | ug/L ug/L | SS2-4 | 4/8/2017 | <0.0050 | 0.0025 | | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | <0.00 | 0.0000025 | | QW9644 | DUPW1 | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | <0.00 | 0.0000025 | | QW9645 | DUPW2 | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.0000254 | | QW9646 | GW | Automatically converted from value: 0.0254 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 0.0254 | 0.0254 | | QW9646 | GW | , |
| | ug/L | SS3-5 | 4/3/2017 | < 0.0050 | 0.0025 | | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | < 0.00 | 0.0000025 | | QW9647 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.0000216 | | QW9648 | GW | Automatically converted from value: 0.0216 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 0.0216 | 0.0216 | | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | < 0.010 | 0.005 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.0055 | 0.0055 | | QW9649 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.0000055 | | QW9649 | GW | Automatically converted from value: 0.0055 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.000011 | | QW9650 | GW | Automatically converted from value: 0.0110 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.011 | 0.011 | | QW9650 | GW | |
| | ug/L | SS4-4 | 4/7/2017 | <0.0050 | 0.0025 | | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | <0.00 | 0.0000025 | | QW9651 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| | mg/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 0 | 0.0000196 | | QW9652 QW9653 | DUPW1 | Automatically converted from value: 0.0196 ug/L to mg/L. |
| | mg/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 0 0.0196 | 0.000011 | | QW9653 | DUPW2 | Automatically converted from value: 0.0110 ug/L to mg/L. |
| | ug/L ug/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 0.0196 0.011 | 0.0196 0.011 | | QW9652 QW9653 | DUPW1 DUPW2 | |
| | ug/L ug/L | SS4-3 SS5-3 | 4/1/2017 | 0.011 | 0.011 | | QW9653 QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 0.0128 | 0.0000128 | | QW9654 | GW | Automatically converted from value: 0.0128 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | <0.00 | 0.0000123 | | QW9655 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. Automatically converted from value: <0.0050 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | < 0.0050 | 0.0025 | | QW9655 | GW | , , , , , , , , , , , , , , , , , , , |
| | ug/L | SS5-5 | 4/1/2017 | <0.0050 | 0.0025 | | QW9656 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | <0.00 | 0.0000025 | | QW9656 | GW | Automatically converted from value: <0.0050 ug/L to mg/L. |
| Sodium (Na) - | ug/L | CONTROL 1 | 4/1/2017 | 81 | 81 | | QW9657 | GW | Automatically converted from value: 0.081 mg/L to ug/L. |
| Total | mg/L | CONTROL 1 | 4/1/2017 | 0.081 | 0.081 | | QW9657 | GW | |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.050 | 0.025 | | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.102 | 0.102 | | QW9658 | GW | |
| | ug/L | CONTROL 2 | 4/7/2017 | 102 | 102 | | QW9658 | GW | Automatically converted from value: 0.102 mg/L to ug/L . |
| | ug/L | CONTROL 3 | 4/3/2017 | 107 | 107 | | QW9659 | GW | Automatically converted from value: $0.107~\mathrm{mg/L}$ to $\mathrm{ug/L}$. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.107 | 0.107 | | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.069 | 0.069 | | QW9639 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 69 | 69 | | QW9639 | GW | Automatically converted from value: 0.069 mg/L to ug/L. |
| | ug/L | SS1-5 | 4/7/2017 | 92 | 92 | | QW9640 | GW | Automatically converted from value: 0.092 mg/L to ug/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0.092 | 0.092 | | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.427 | 0.427 | | QW9641 | GW | Automotically convented from value 0.427 m a /I to 42 /I |
| | ug/L | SS2-1 | 4/8/2017 | 427 115 | 427 115 | | QW9641 QW9642 | GW GW | Automatically converted from value: 0.427 mg/L to ug/L. Automatically converted from value: 0.115 mg/L to ug/L. |
| | ug/L mg/L | SS2-2 SS2-2 | 4/8/2017 4/8/2017 | 0.115 | 0.115 | | QW9642 QW9642 | GW | Automatically converted from value: 0.115 mg/ L to ug/ L. |
| | mg/L | SS2-3 | 4/8/2017 | 0.115 | 0.085 | | QW9643 | GW | |
| | ug/L | SS2-3 | 4/8/2017 | 85 | 85 | | QW9643 | GW | Automatically converted from value: 0.085 mg/L to ug/L. |
| | ug/L | SS2-4 | 4/8/2017 | 81 | 81 | | QW9644 | DUPW1 | Automatically converted from value: 0.081 mg/L to ug/L. |
| | ug/L | SS2-4 | 4/8/2017 | 85 | 85 | | QW9645 | DUPW2 | Automatically converted from value: 0.085 mg/L to ug/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.081 | 0.081 | | QW9644 | DUPW1 | 6, 6, |
| | mg/L | SS2-4 | 4/8/2017 | 0.085 | 0.085 | | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.287 | 0.287 | | QW9646 | GW | |
| | ug/L | SS3-4 | 4/3/2017 | 287 | 287 | | QW9646 | GW | Automatically converted from value: 0.287 mg/L to ug/L. |
| | ug/L | SS3-5 | 4/3/2017 | 161 | 161 | | QW9647 | GW | Automatically converted from value: 0.161 mg/L to ug/L. |
| | mg/L | SS3-5 | 4/3/2017 | 0.161 | 0.161 | | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.227 | 0.227 | | QW9648 | GW | |
| | ug/L | SS3-6 | 4/3/2017 | 227 | 227 | | QW9648 | GW | Automatically converted from value: 0.227 mg/L to ug/L. |
| | mg/L | SS3-6 | 4/30/2017 | < 0.25 | 0.125 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 214 | 214 | | QW9649 | GW | Automatically converted from value: 0.214 mg/L to ug/L. |
| | mg/L | SS3-7 | 4/3/2017 | 0.214 | 0.214 | | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | 0.128 | 0.128 | | QW9650 | GW | Automotivillaria (17 1 0400 7) |
| | ug/L | SS3-8 | 4/3/2017 | 128 | 128 | | QW9650 | GW | Automatically converted from value: 0.128 mg/L to ug/L. |
| | ug/L mg/L | SS4-4 SS4-4 | 4/7/2017 4/7/2017 | 130 0.13 | 130 0.13 | | QW9651 QW9651 | GW GW | Automatically converted from value: 0.130 mg/L to ug/L. |
| | mg/L mg/L | SS4-4 SS4-5 | 4/7/2017 | 0.13 | 0.13 | | QW9651 QW9652 | GW DUPW1 | |
| | mg/L mg/L | SS4-5 SS4-5 | 4/7/2017 | 0.152 | 0.082 | | QW9652 QW9653 | DUPW1 DUPW2 | |
| | ug/L | SS4-5 | 4/7/2017 | 152 | 152 | | QW9652 | DUPW1 | Automatically converted from value: 0.152 mg/L to ug/L. |
| | ug/L ug/L | SS4-5 | 4/7/2017 | 82 | 82 | | QW9653 | DUPW2 | Automatically converted from value: 0.082 mg/L to ug/L. |
| | ug/L | SS5-3 | 4/1/2017 | 102 | 102 | | QW9654 | GW | Automatically converted from value: 0.102 mg/L to ug/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0.102 | 0.102 | | QW9654 | GW | , |
| | mg/L | SS5-4 | 4/1/2017 | 0.063 | 0.063 | | QW9655 | GW | |
| | ug/L | SS5-4 | 4/1/2017 | 63 | 63 | | QW9655 | GW | Automatically converted from value: 0.063 mg/L to ug/L. |
| | ug/L | SS5-5 | 4/1/2017 | 60 | 60 | | QW9656 | GW | Automatically converted from value: 0.060 mg/L to ug/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0.06 | 0.06 | | QW9656 | GW | |
| Strontium (Sr) - | ug/L | CONTROL 1 | 4/1/2017 | < 0.050 | 0.025 | | QV4618 | EBW | |
| Гotal | ug/L | CONTROL 1 | 4/1/2017 | 0.745 | 0.745 | | QW9657 | GW | |
| | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.000745 | | QW9657 | GW | Automatically converted from value: $0.745~\text{ug/L}$ to mg/L . |
| | ug/L | CONTROL 2 | 4/7/2017 | 2.41 | 2.41 | | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.00241 | | QW9658 | GW | Automatically converted from value: 2.41 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.00413 | | QW9659 | GW | Automatically converted from value: 4.13 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 4.13 | 4.13 | | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 0.749 | 0.749 | | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.000749 | | QW9639 | GW | Automatically converted from value: 0.749 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.00115 | | QW9640 | GW | Automatically converted from value: 1.15 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 1.15 | 1.15 | | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 7.75 | 7.75 | | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.01 | 0.00775 | | QW9641 | GW | Automatically converted from value: 7.75 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.00114 | | QW9642 | GW | Automatically converted from value: 1.14 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 1.14 | 1.14 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.00102 | | QW9643 | GW | Automatically converted from value: 1.02 ug/L to mg/L. |

| Parameter | Unit | Site | Date | | - | | Sample Type | e Comment |
|------------------------------|----------------------|----------------|----------------------|----------------|-----------------|-------------------|----------------|--|
| Strontium (Sr) - | ug/L | SS2-3 | 4/8/2017 | 1.02 | 1.02 | QW9643 | GW | |
| Total (cont'd) | ug/L | SS2-4 | 4/8/2017 | 1.39 | 1.39 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 | 1.65 0 | 1.65 0.00139 | QW9645 QW9644 | DUPW2 DUPW1 | Automatically converted from value: 1.30 µg/L to mg/L |
| | mg/L mg/L | SS2-4 | 4/8/2017 | 0 | 0.00139 | QW9645 | DUPW2 | Automatically converted from value: 1.39 ug/L to mg/L. Automatically converted from value: 1.65 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/8/2017 | 0.06 | 0.0555 | QW9645 QW9646 | GW GW | Automatically converted from value: 1.65 ug/L to mg/L. Automatically converted from value: 55.5 ug/L to mg/L. |
| | ug/L | SS3-4 SS3-4 | 4/3/2017 | 55.5 | 55.5 | QW9646 QW9646 | GW | |
| | ug/L | SS3-5 | 4/3/2017 | 6.84 | 6.84 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.01 | 0.00684 | QW9647 | GW | Automatically converted from value: 6.84 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0.04 | 0.0366 | QW9648 | GW | Automatically converted from value: 36.6 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 36.6 | 36.6 | QW9648 | GW | 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, |
| | ug/L | SS3-6 | 4/30/2017 | 9.11 | 9.11 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 16.2 | 16.2 | QW9649 | GW | • |
| | mg/L | SS3-7 | 4/3/2017 | 0.02 | 0.0162 | QW9649 | GW | Automatically converted from value: 16.2 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0.02 | 0.0197 | QW9650 | GW | Automatically converted from value: 19.7 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 19.7 | 19.7 | QW9650 | GW | |
| | ug/L | SS4-4 | 4/7/2017 | 4.81 | 4.81 | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.00481 | QW9651 | GW | Automatically converted from value: 4.81 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0.01 | 0.00592 | QW9652 | DUPW1 | Automatically converted from value: 5.92 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00422 | QW9653 | DUPW2 | Automatically converted from value: 4.22 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 5.92 | 5.92 | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 4.22 | 4.22 | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 7.48 | 7.48 | QW9654 | GW | A |
| | mg/L | SS5-3 | 4/1/2017 | 0.01 | 0.00748 | QW9654 | GW | Automatically converted from value: 7.48 ug/L to mg/L. |
| | mg/L | SS5-4 SS5-4 | 4/1/2017 4/1/2017 | 0 1.63 | 0.00163 | QW9655 | GW | Automatically converted from value: 1.63 ug/L to mg/L. |
| | ug/L ug/L | SS5-4 SS5-5 | 4/1/2017 4/1/2017 | 1.63 1.13 | 1.63 1.13 | QW9655 QW9656 | GW GW | |
| | ug/L mg/L | SS5-5 SS5-5 | 4/1/2017 | 0 | 0.00113 | QW9656 QW9656 | GW GW | Automatically converted from value: 1.13 ug/L to mg/L. |
| ulphate (SO ₄) - | mg/L | CONTROL 1 | 4/1/2017 | <0.50 | 0.00113 | QVV9636 QV4618 | EBW | onuncung converted from value. 1.10 ug/ E to flig/ E. |
| issolved | mg/L | CONTROL 1 | 4/1/2017 | <0.50 | 0.25 | QW9657 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | <0.50 | 0.25 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | <0.50 | 0.25 | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | <0.50 | 0.25 | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | < 0.50 | 0.25 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | < 0.50 | 0.25 | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | < 0.50 | 0.25 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.50 | 0.25 | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.71 | 0.71 | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | < 0.50 | 0.25 | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.57 | 0.57 | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | < 0.50 | 0.25 | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.86 | 0.86 | QW9648 | GW | B 114 |
| | mg/L | SS3-6 | 4/30/2017 | 0.86 | 0.86 | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0.64 | 0.64 | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | <0.50 | 0.25 | QW9650 | GW | |
| | mg/L | SS4-4 SS4-5 | 4/7/2017 4/7/2017 | <0.50 | 0.25 | QW9651 | GW DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.52 | 0.52 | QW9652 | DUPW1 | |
| | mg/L mg/L | SS4-5 SS5-3 | 4/7/2017 4/1/2017 | <0.50 <0.50 | 0.25 0.25 | QW9653 QW9654 | DUPW2 GW | |
| | mg/L mg/L | SS5-3 SS5-4 | 4/1/2017 | <0.50 | 0.25 | QW9654 QW9655 | GW GW | |
| | mg/L | SS5-5 | 4/1/2017 | <0.50 | 0.25 | QW9656 | GW | |
| ulphur (S) - Total | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | QV4618 | EBW | |
| | mg/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | QW9657 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | < 0.50 | 0.25 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | < 0.50 | 0.25 | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | < 0.50 | 0.25 | QW9639 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | < 0.50 | 0.25 | QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 2.45 | 2.45 | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | < 0.50 | 0.25 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.50 | 0.25 | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | <0.50 | 0.25 | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | <0.50 | 0.25 | QW9645 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | <0.50 | 0.25 | QW9646 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | <0.50 | 0.25 | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | <0.50 | 0.25 | QW9648 | GW | Pagampled at apprected against the |
| | mg/L | SS3-6 | 4/30/2017 | <3.0 <0.50 | 1.5 | QZ4969 QM/9649 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 SS3-8 | 4/3/2017 4/3/2017 | <0.50 <0.50 | 0.25 | QW9649 QW9650 | GW GW | |
| | mg/L mg/I | SS3-8 SS4-4 | 4/3/2017 4/7/2017 | <0.50 <0.50 | 0.25 0.25 | QW9650 QW9651 | GW GW | |
| | mg/L mg/L | SS4-4 SS4-5 | 4/7/2017 4/7/2017 | <0.50 <0.50 | 0.25 0.25 | QW9651 QW9652 | GW DUPW1 | |
| | mg/L mg/L | SS4-5 SS4-5 | 4/7/2017 | <0.50 | 0.25 | QW9653 | DUPW1 DUPW2 | |
| | mg/L | SS5-3 | 4/1/2017 | <0.50 | 0.25 | QW9654 | GW GW | |
| | mg/L | SS5-4 | 4/1/2017 | <0.50 | 0.25 | QW9655 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | <0.50 | 0.25 | QW9656 | GW | |
| hallium (Tl) - | ug/L | CONTROL 1 | 4/1/2017 | <0.0020 | 0.001 | QW9657 | GW | |
| otal | mg/L | CONTROL 1 | | < 0.00 | 0.000001 | QW9657 | GW | Automatically converted from value: <0.0020 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | < 0.0020 | 0.001 | QV4618 | EBW | <i>5. 6.</i> |
| | ug/L | CONTROL 2 | 4/7/2017 | 0.01 | 0.01 | QW9658 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.00001 | QW9658 | GW | Automatically converted from value: 0.0100 ug/L to mg/L. |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.0000069 | QW9659 | GW | Automatically converted from value: 0.0069 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 0.0069 | 0.0069 | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 0.0048 | 0.0048 | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0 | 0.0000048 | QW9639 | GW | Automatically converted from value: $0.0048~\mbox{ug/L}$ to $\mbox{mg/L}$. |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.0000081 | QW9640 | GW | Automatically converted from value: 0.0081 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 0.0081 | 0.0081 | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 0.0092 | 0.0092 | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.0000092 | QW9641 | GW | Automatically converted from value: $0.0092~\text{ug/L}$ to mg/L . |
| | mg/L | SS2-2 | 4/8/2017 | 0 | 0.0000041 | QW9642 | GW | Automatically converted from value: $0.0041~\mbox{ug/L}$ to $\mbox{mg/L}$. |
| | ug/L | SS2-2 | 4/8/2017 | 0.0041 | 0.0041 | QW9642 | GW | - |
| | O, | 000.0 | 4/8/2017 | 0 | 0.0000059 | QW9643 | GW | Automatically converted from value: 0.0059 ug/L to mg/L. |
| | mg/L | SS2-3 | 4/0/2017 | • | | ~ | | • |
| | | SS2-3 SS2-3 | 4/8/2017 | 0.0059 | 0.0059 | QW9643 | GW | |
| | mg/L ug/L ug/L | | 4/8/2017 4/8/2017 | | | | | |
| | mg/L ug/L | SS2-3 | 4/8/2017 | 0.0059 | 0.0059 | QW9643 | GW | Automatically converted from value: 0.0107 ug/L to mg/L. |

| Parameter | | | | | Cook the Welse | DDI | I -l- D -C | C1- T | Command |
|------------------|--|---|--|---|---|-----|--|----------------------------------|---|
| Thallium (Tl) - | Unit mg/L | Site SS2-4 | Date 4/8/2017 | 0 | Graphable Value 0.0000041 | KDL | QW9645 | Sample Type DUPW2 | Comment Automatically converted from value: 0.0041 ug/L to mg/L. |
| Total (cont'd) | mg/L | SS3-4 | 4/3/2017 | 0 | 0.0000771 | | QW9646 | GW | Automatically converted from value: 0.0771 ug/L to mg/L. |
| , , | ug/L | SS3-4 | 4/3/2017 | 0.0771 | 0.0771 | | QW9646 | GW | rationalizating converted from value, 0.0771 ug/ E to hig/ E. |
| | ug/L | SS3-5 | 4/3/2017 | 0.0099 | 0.0099 | | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.0000099 | | QW9647 | GW | Automatically converted from value: 0.0099 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.0000643 | | QW9648 | GW | Automatically converted from value: 0.0643 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 0.0643 | 0.0643 | | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | 0.0204 | 0.0204 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.0146 | 0.0146 | | QW9649 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.0000146 | | QW9649 | GW | Automatically converted from value: 0.0146 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.0000257 | | QW9650 | GW | Automatically converted from value: 0.0257 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.0257 | 0.0257 | | QW9650 | GW | |
| | ug/L | SS4-4 | 4/7/2017 | 0.0098 | 0.0098 | | QW9651 | GW | A |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.0000098 | | QW9651 | GW DUDW1 | Automatically converted from value: 0.0098 ug/L to mg/L. |
| | mg/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 0 | 0.000051 0.0000366 | | QW9652 QW9653 | DUPW1 DUPW2 | Automatically converted from value: 0.0510 ug/L to mg/L. Automatically converted from value: 0.0366 ug/L to mg/L. |
| | mg/L ug/L | SS4-5 | 4/7/2017 | 0.0366 | 0.0366 | | QW9653 | DUPW2 | Automatically converted from value. 0.0300 ug/ L to flig/ L. |
| | ug/L ug/L | SS4-5 | 4/7/2017 | 0.0500 | 0.051 | | QW9652 | DUPW1 | |
| | ug/L | SS5-3 | 4/1/2017 | 0.0322 | 0.0322 | | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.0000322 | | QW9654 | GW | Automatically converted from value: 0.0322 ug/L to mg/L. |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.0000034 | | QW9655 | GW | Automatically converted from value: 0.0034 ug/L to mg/L. |
| | ug/L | SS5-4 | 4/1/2017 | 0.0034 | 0.0034 | | QW9655 | GW | |
| | ug/L | SS5-5 | 4/1/2017 | 0.0034 | 0.0034 | | QW9656 | GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.0000034 | | QW9656 | GW | Automatically converted from value: 0.0034 ug/L to mg/L. |
| Tin (Sn) - Total | ug/L | CONTROL 1 | 4/1/2017 | <0.010 | 0.005 | | QV4618 | EBW | |
| | mg/L | CONTROL 1 | 4/1/2017 | <0.00 | 0.000005 | | QW9657 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | <0.010 | 0.005 | | QW9657 | GW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0 | 0.000028 | | QW9658 | GW | Automatically converted from value: 0.028 ug/L to mg/L. |
| | ug/L | CONTROL 2 | 4/7/2017 | 0.028 | 0.028 | | QW9658 | GW | Automatically converted from value 0.007 ··· (T. L /T |
| | mg/L | CONTROL 3 | 4/3/2017 | 0 | 0.000027 0.027 | | QW9659 QW9659 | GW GW | Automatically converted from value: 0.027 ug/L to mg/L. |
| | ug/L ug/L | CONTROL 3 SS1-4 | 4/3/2017 4/7/2017 | 0.027 <0.010 | 0.027 | | QW9659 QW9639 | GW GW | |
| | ug/L mg/L | SS1-4 SS1-4 | 4/7/2017 | <0.010 | 0.00005 | | QW9639 QW9639 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0 | 0.000016 | | QW9640 | GW | Automatically converted from value: 0.016 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 0.016 | 0.016 | | QW9640 | GW | , |
| | ug/L | SS2-1 | 4/8/2017 | 0.021 | 0.021 | | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0 | 0.000021 | | QW9641 | GW | Automatically converted from value: 0.021 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | < 0.00 | 0.000005 | | QW9642 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | < 0.010 | 0.005 | | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | < 0.00 | 0.000005 | | QW9643 | GW | Automatically converted from value: $<0.010 \text{ ug/L}$ to mg/L . |
| | ug/L | SS2-3 | 4/8/2017 | < 0.010 | 0.005 | | QW9643 | GW | |
| | ug/L | SS2-4 | 4/8/2017 | 0.027 | 0.027 | | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | <0.010 | 0.005 | | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.000027 | | QW9644 | DUPW1 | Automatically converted from value: 0.027 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | <0.00 | 0.000005 | | QW9645 | DUPW2 | Automatically converted from value: <0.010 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.000094 | | QW9646 | GW | Automatically converted from value: 0.094 ug/L to mg/L. |
| | ug/L ug/L | SS3-4 SS3-5 | 4/3/2017 4/3/2017 | 0.094 <0.010 | 0.094 0.005 | | QW9646 QW9647 | GW GW | |
| | mg/L | SS3-5 | 4/3/2017 | <0.010 | 0.00005 | | QW9647 QW9647 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.00008 | | QW9648 | GW | Automatically converted from value: 0.080 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 0.08 | 0.08 | | QW9648 | GW | Transmitted years of the state |
| | ug/L | SS3-6 | 4/30/2017 | <0.20 | 0.1 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.035 | 0.035 | | QW9649 | GW | • |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.000035 | | QW9649 | GW | Automatically converted from value: 0.035 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.000045 | | QW9650 | GW | Automatically converted from value: 0.045 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.045 | 0.045 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.000022 | | QW9651 | GW | Automatically converted from value: 0.022 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | 0.022 | 0.022 | | QW9651 | GW | |
| | ug/L | SS4-5 | 4/7/2017 | 0.115 | 0.115 | | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 0.105 | 0.105 | | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000115 | | QW9652 | DUPW1 | Automatically converted from value: 0.115 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000105 | | QW9653 | DUPW2 | Automatically converted from value: 0.105 ug/L to mg/L. |
| | mg/L | SS5-3 SS5-3 | 4/1/2017 | 0 | 0.000124 | | QW9654 | GW GW | Automatically converted from value: 0.124 ug/L to mg/L. |
| | ug/L ug/L | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | 0.124 <0.010 | 0.124 0.005 | | QW9654 QW9655 | GW GW | |
| | mg/L | SS5-4 | 4/1/2017 | <0.010 | 0.00005 | | QW9655 | GW | Automatically converted from value: <0.010 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.000033 | | QW9656 | GW | Automatically converted from value: 0.033 ug/L to mg/L. |
| <u></u> | ug/L | SS5-5 | 4/1/2017 | 0.033 | 0.033 | | QW9656 | GW | |
| Titanium (Ti) - | ug/L | CONTROL 1 | 4/1/2017 | 4.14 | 4.14 | | QW9657 | GW | |
| Total | mg/L | CONTROL 1 | 4/1/2017 | 0 | 0.00414 | | QW9657 | GW | Automatically converted from value: 4.14 ug/L to mg/L. |
| | ug/L | CONTROL 1 | 4/1/2017 | < 0.50 | 0.25 | | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.06 | 0.0561 | | QW9658 | GW | Automatically converted from value: 56.1 ug/L to mg/L. |
| | ug/L | CONTROL 2 | 4/7/2017 | 56.1 | 56.1 | | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.04 | 0.0353 | | QW9659 | GW | Automatically converted from value: 35.3 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 35.3 | 35.3 | | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 16.6 | 16.6 | | QW9639 | GW | Automatically converted from value 16.6 · II i · II |
| | mg/L mg/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | 0.02 0.04 | 0.0166 0.0403 | | QW9639 QW9640 | GW GW | Automatically converted from value: 16.6 ug/L to mg/L. Automatically converted from value: 40.3 ug/L to mg/L. |
| | mg/L ug/L | SS1-5 SS1-5 | 4/7/2017 | 40.3 | 40.3 | | QW9640 QW9640 | GW GW | rationalicany converted from value. 40.5 ug/ L to mg/ L. |
| | ug/L ug/L | SS2-1 | 4/7/2017 | 40.3 17.4 | 40.3 17.4 | | QW9640 QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.02 | 0.0174 | | QW9641 QW9641 | GW | Automatically converted from value: 17.4 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0.02 | 0.0174 | | QW9642 | GW | Automatically converted from value: 17.4 ug/L to mg/L. Automatically converted from value: 11.0 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 11 | 11 | | QW9642 | GW | , |
| Ī | mg/L | SS2-3 | 4/8/2017 | 0.02 | 0.0151 | | QW9643 | GW | Automatically converted from value: 15.1 ug/L to mg/L. |
| | 1115/ - | | | 15.1 | 15.1 | | QW9643 | GW | , 0, 0, |
| | ug/L | SS2-3 | 4/8/2017 | | | | QW9644 | DUPW1 | |
| | | SS2-3 SS2-4 | 4/8/2017 | 45.3 | 45.3 | | | | |
| | ug/L ug/L | | | 45.3 8.36 | 45.3 8.36 | | QW9645 | DUPW2 | |
| | ug/L | SS2-4 | 4/8/2017 | | | | | DUPW2 DUPW1 | Automatically converted from value: 45.3 ug/L to mg/L. |
| | ug/L ug/L ug/L | SS2-4 SS2-4 | 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 8.36 | 8.36 | | QW9645 | | Automatically converted from value: 8.36 ug/L to mg/L. |
| | ug/L ug/L ug/L mg/L mg/L mg/L | SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 | 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 | 8.36 0.05 | 8.36 0.0453 | | QW9645 QW9644 QW9645 QW9646 | DUPW1 DUPW2 GW | • |
| | ug/L ug/L ug/L mg/L mg/L mg/L ug/L | SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-4 | 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 4/3/2017 | 8.36 0.05 0.01 0.35 354 | 8.36 0.0453 0.00836 0.354 354 | | QW9645 QW9644 QW9645 QW9646 | DUPW1 DUPW2 GW GW | Automatically converted from value: 8.36 ug/L to mg/L. |
| | ug/L ug/L ug/L mg/L mg/L mg/L ug/L ug/L ug/L | SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-4 SS3-5 | 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 4/3/2017 | 8.36 0.05 0.01 0.35 354 28.7 | 8.36 0.0453 0.00836 0.354 354 28.7 | | QW9645 QW9645 QW9646 QW9646 QW9647 | DUPW1 DUPW2 GW GW GW | Automatically converted from value: 8.36 ug/L to mg/L. Automatically converted from value: 354 ug/L to mg/L. |
| | ug/L ug/L ug/L mg/L mg/L mg/L ug/L | SS2-4 SS2-4 SS2-4 SS2-4 SS3-4 SS3-4 | 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/3/2017 4/3/2017 | 8.36 0.05 0.01 0.35 354 | 8.36 0.0453 0.00836 0.354 354 | | QW9645 QW9644 QW9645 QW9646 | DUPW1 DUPW2 GW GW | Automatically converted from value: 8.36 ug/L to mg/L. |

| Parameter | Unit | Site | Date | Data Point | Graphable Value R | DL Lab Ref | Sample Type | Comment |
|-------------------------------|--------------|------------------------|----------------------|----------------|-------------------|------------------|----------------|--|
| Titanium (Ti) - | ug/L | SS3-6 | 4/3/2017 | 217 | 217 | QW9648 | GW | |
| Total (cont'd) | ug/L | SS3-6 | 4/30/2017 | 67.6 | 67.6 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 57.4 | 57.4 | QW9649 | GW | Automotically composited from values 57.4 yz /I. to ma /I |
| | mg/L mg/L | SS3-7 SS3-8 | 4/3/2017 4/3/2017 | 0.06 0.13 | 0.0574 0.127 | QW9649 QW9650 | GW GW | Automatically converted from value: 57.4 ug/L to mg/L. Automatically converted from value: 127 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 127 | 127 | QW9650 | GW | Tutonateany converted non-value 121 ag, 2 to hig, 2. |
| | ug/L | SS4-4 | 4/7/2017 | 33.1 | 33.1 | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.03 | 0.0331 | QW9651 | GW | Automatically converted from value: 33.1 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0.16 | 0.159 | QW9652 | DUPW1 | Automatically converted from value: 159 ug/L to mg/L. |
| | mg/L ug/L | SS4-5 SS4-5 | 4/7/2017 4/7/2017 | 0.14 135 | 0.135 135 | QW9653 QW9653 | DUPW2 DUPW2 | Automatically converted from value: 135 ug/L to mg/L. |
| | ug/L ug/L | SS4-5 | 4/7/2017 | 159 | 159 | QW9652 | DUPW1 | |
| | ug/L | SS5-3 | 4/1/2017 | 136 | 136 | QW9654 | GW | |
| | mg/L | SS5-3 | 4/1/2017 | 0.14 | 0.136 | QW9654 | GW | Automatically converted from value: 136 $\mbox{ug/L}$ to $\mbox{mg/L}$. |
| | mg/L | SS5-4 | 4/1/2017 | 0.01 | 0.00862 | QW9655 | GW | Automatically converted from value: 8.62 ug/L to mg/L. |
| | ug/L ug/L | SS5-4 SS5-5 | 4/1/2017 4/1/2017 | 8.62 14.3 | 8.62 14.3 | QW9655 QW9656 | GW GW | |
| | mg/L | SS5-5 | 4/1/2017 | 0.01 | 0.0143 | QW9656 | GW | Automatically converted from value: 14.3 ug/L to mg/L. |
| Total Dissolved | mg/L | CONTROL 1 | 4/1/2017 | 2.8 | 2.8 | QW9657 | GW | |
| Solids (TDS) | mg/L | CONTROL 1 | 4/1/2017 | <1.0 | 0.5 | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 3.6 | 3.6 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 3.2 | 3.2 | QW9659 QW9639 | GW GW | |
| | mg/L mg/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | 2 1.6 | 2 1.6 | QW9639 QW9640 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 2 | 2 | QW9641 | GW | |
| | mg/L | SS2-2 | 4/8/2017 | 2 | 2 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 1.6 | 1.6 | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 1.6 | 1.6 | QW9644 | DUPW1 | |
| | mg/L mg/L | SS2-4 SS3-4 | 4/8/2017 4/3/2017 | 2 6 | 2 6 | QW9645 QW9646 | DUPW2 GW | |
| | mg/L mg/L | SS3-4 SS3-5 | 4/3/2017 | 3.6 | 3.6 | QW9647 | GW | |
| | mg/L | SS3-6 | 4/3/2017 | 8 | 8 | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | 6 | 6 | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 11 | 11 | QW9649 | GW | |
| | mg/L mg/L | SS3-8 SS4-4 | 4/3/2017 4/7/2017 | 7.2 5.6 | 7.2 5.6 | QW9650 QW9651 | GW GW | |
| | mg/L | SS4-5 | 4/7/2017 | 4 | 4 | QW9653 | DUPW2 | |
| | mg/L | SS4-5 | 4/7/2017 | 2.8 | 2.8 | QW9652 | DUPW1 | |
| | mg/L | SS5-3 | 4/1/2017 | 6 | 6 | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 2.8 | 2.8 | QW9655 | GW | |
| Total Kjeldahl | mg/L | SS5-5 CONTROL 1 | 4/1/2017 | 1.6 | 1.6 0.039 | QW9656 | GW EBW | |
| Nitrogen (TKN) - | mg/L mg/L | CONTROL 1 | 4/1/2017 4/1/2017 | 0.039 0.073 | 0.073 | QV4618 QW9657 | GW | |
| (Calc) | mg/L | CONTROL 2 | 4/7/2017 | 0.081 | 0.081 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 0.072 | 0.072 | QW9659 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.124 | 0.124 | QW9639 | GW | |
| | mg/L mg/L | SS1-5 SS2-1 | 4/7/2017 4/8/2017 | 0.042 0.105 | 0.042 0.105 | QW9640 QW9641 | GW GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.103 | 0.114 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.121 | 0.121 | QW9643 | GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.066 | 0.066 | QW9644 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.068 | 0.068 | QW9645 | DUPW2 | |
| | mg/L mg/L | SS3-4 SS3-5 | 4/3/2017 4/3/2017 | 0.088 0.337 | 0.088 0.337 | QW9646 QW9647 | GW GW | |
| | mg/L | SS3-6 | 4/3/2017 | 0.116 | 0.116 | QW9648 | GW | |
| | mg/L | SS3-6 | 4/30/2017 | 0.191 | 0.191 | QZ4969 | GW | Resampled at corrected coordinate. |
| | mg/L | SS3-7 | 4/3/2017 | 0.112 | 0.112 | QW9649 | GW | |
| | mg/L | SS3-8 | 4/3/2017 | 0.149 | 0.149 | QW9650 | GW | |
| | mg/L mg/L | SS4-4 SS4-5 | 4/7/2017 4/7/2017 | 0.122 0.137 | 0.122 0.137 | QW9651 QW9652 | GW DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.157 | 0.15 | QW9653 | DUPW2 | |
| | mg/L | SS5-3 | 4/1/2017 | 0.038 | 0.038 | QW9654 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0.044 | 0.044 | QW9655 | GW | |
| Total Ousseis | mg/L | SS5-5 | 4/1/2017 | 0.037 | 0.037 | QW9656 | GW | |
| Total Organic Carbon (TOC) | mg/L mg/L | CONTROL 1 CONTROL 2 | 4/1/2017 4/7/2017 | 0.31 2.5 | 0.31 2.5 | EFV176 EFV177 | GW GW | |
| ` ' | mg/L | CONTROL 3 | 4/3/2017 | 0.31 | 0.31 | EFV190 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.27 | 0.27 | EFV140 | GW | |
| | mg/L | SS1-5 | 4/7/2017 | <0.20 | 0.1 | EFV141 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.29 | 0.29 | EFV142 | GW | |
| | mg/L mg/L | SS2-2 SS2-3 | 4/8/2017 4/8/2017 | 0.47 0.33 | 0.47 0.33 | EFV143 EFV144 | GW GW | |
| | mg/L | SS2-4 | 4/8/2017 | 0.35 | 0.25 | EFV145 | DUPW1 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.29 | 0.29 | EFV146 | DUPW2 | |
| | mg/L | SS3-4 | 4/3/2017 | 0.36 | 0.36 | EFV147 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.33 | 0.33 | EFV148 | GW | |
| | mg/L mg/L | SS3-6 SS3-7 | 4/3/2017 4/3/2017 | 0.54 0.47 | 0.54 0.47 | EFV149 EFV168 | GW GW | |
| | mg/L | SS3-8 | 4/3/2017 | 0.46 | 0.46 | EFV169 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.44 | 0.44 | EFV170 | GW | |
| | mg/L | SS4-5 | 4/7/2017 | 0.56 | 0.56 | EFV171 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 0.5 | 0.5 | EFV172 | DUPW2 | |
| | mg/L mg/L | SS5-3 SS5-4 | 4/1/2017 4/1/2017 | 0.38 0.2 | 0.38 0.2 | EFV173 EFV174 | GW GW | |
| | mg/L mg/L | SS5-4 SS5-5 | 4/1/2017 4/1/2017 | <0.20 | 0.2 | EFV174 EFV175 | GW GW | |
| Total Suspended | mg/L | CONTROL 1 | 4/1/2017 | 3.4 | 3.4 | QW9657 | GW | |
| Solids (TSS) | mg/L | CONTROL 1 | 4/1/2017 | <1.0 | 0.5 | QV4618 | EBW | |
| | mg/L | CONTROL 2 | 4/7/2017 | 7.8 | 7.8 | QW9658 | GW | |
| | mg/L | CONTROL 3 | 4/3/2017 | 11.1 | 11.1 | QW9659 | GW | |
| | mg/L mg/L | SS1-4 SS1-5 | 4/7/2017 4/7/2017 | 12.2 13.3 | 12.2 13.3 | QW9639 QW9640 | GW GW | |
| | mg/L mg/L | SS1-5 SS2-1 | 4/7/2017 4/8/2017 | 13.3 | 13.3 | QW9640 QW9641 | GW | |
| | | | 4/8/2017 | 7.2 | 7.2 | QW9642 | GW | |
| | mg/L mg/L | SS2-2 | 4/0/2017 | 7.2 | 1.2 | QW9042 | GW | |

| Fig. | Parameter | Unit | C:to | Date | Data Point | Craphable Value | DDI | Lab Dof | Cample Type | Commont |
|--|----------------|------|---------------|----------|------------|-----------------|-----|---------|-------------|--|
| Selection | | | Site SS2-4 | | | _ | KDL | | | Comment |
| Section Sect | | | | | | | | | | |
| | (cont'd) | | | | | | | | | |
| mg/1 Self. 4/19/207 12 15 10 10 10 10 10 10 10 | | | | | | | | QW9647 | | |
| mg/s 952 973707 27 29 970000 9700 9 | | _ | | | | | | | | |
| mg/ | | _ | | | | | | | | Resampled at corrected coordinate. |
| Page | | | | | | | | | | |
| Page | | | | | | | | | | |
| mg/L 64.5 77.737 77 70 70.000 70.0 | | | | | | | | | | |
| mg/L 95.2 3/1.00 25.2 25 20 20 20 20 20 20 2 | | | | | | | | | | |
| Tendary 1985 | | | SS5-3 | | 25 | 25 | | QW9654 | GW | |
| | | mg/L | | 4/1/2017 | | | | | | |
| NTI | m. 1 · 1· | | | | | | | | | |
| NNO | Turbidity | | | | | | | | | |
| NTU CNNTROL 34/3/397 5-14 14 COPASIO CW | | | | | | | | | | |
| NIU | | | | | | | | | | |
| NIU | | | | | | | | QW9639 | | |
| NTI | | NTU | SS1-5 | 4/7/2017 | 1.81 | 1.81 | | QW9640 | GW | |
| No. | | | | | | | | | | |
| No. | | | | | | | | | | |
| NTU 954 4/8/207 1.00 1.46 CN9946 C | | | | | | | | | | |
| NTU 59.54 47/2017 127 | | | | | | | | | | |
| NTL SS1-5 4/7/2017 181 181 C/09/69 C/V | | | | | | | | | | |
| NTIL SS14 47/2077 192 161 161 022696 GW | | | | | | | | | | |
| NTU \$857 47/3077 102 102 102 107/999 GV | | | | | | | | | | |
| NIU 984 47/7307 23 23 23 23 23 23 23 2 | | | | | | | | | | |
| NII | | | | | | | | | | |
| NTU 9845 47/7807 34 | | | | | | | | | | |
| NTU \$84.5 47/2017 434 434 QVWW55 DETW2 | | | | | | | | | | |
| NTU \$55.3 | | | | | | | | | | |
| NIU | | | | | | | | | | |
| Carstiant (C) | | | | | | | | | GW | |
| Tread | | | | , , | | | | | | |
| mg/L CONTROL 41/7907 0 0,000015 CWe97 CW Automatically converted from value 0.0215 ug/L to mg/L mg/L CONTROL 47/7907 0 0,000016 CWe98 CW Automatically converted from value 0.0215 ug/L to mg/L mg/L CONTROL 44/7907 0 0,00016 CWe99 CW Automatically converted from value 0.137 ug/L to mg/L ug/L SS-4 47/7907 0.0514 0.0164 CWe99 CW Automatically converted from value 0.147 ug/L to mg/L ug/L SS-4 47/7907 0.0514 0.0164 CWe99 CW Automatically converted from value 0.0375 ug/L to mg/L ug/L SS-5 47/7907 0.000077 CWe94 CW Automatically converted from value 0.0937 ug/L to mg/L ug/L SS-5 47/7907 0.000077 CWe94 CW Automatically converted from value 0.0937 ug/L to mg/L ug/L SS-5 47/7907 0.000077 CWe94 CW Automatically converted from value 0.0937 ug/L to mg/L ug/L SS-5 44/5/207 0 0.000088 CWe94 CW Automatically converted from value 0.0937 ug/L to mg/L ug/L SS-2 44/5/207 0 0.000088 CWe94 CW Automatically converted from value 0.0938 ug/L to mg/L ug/L SS-2 44/5/207 0 0.000088 CWe94 CW Automatically converted from value 0.0588 ug/L to mg/L ug/L SS-2 44/5/207 0 0.00088 CWe94 CW Automatically converted from value 0.0588 ug/L to mg/L ug/L SS-2 44/5/207 0 0.000088 CWe94 CW Automatically converted from value 0.0588 ug/L to mg/L ug/L SS-2 44/5/207 0 0.00008 CWe94 CW Automatically converted from value 0.0598 ug/L to mg/L ug/L SS-2 44/5/207 0 0.00008 CWe94 CW Automatically converted from value 0.0598 ug/L to mg/L ug/L SS-2 44/5/207 0 0.00008 CWe94 CW Automatically converted from value 0.0598 ug/L to mg/L ug/L SS-2 44/5/207 0 0.00008 CWe94 CW Automatically converted from value 0.0598 ug/L to mg/L ug/L SS-2 44/5/207 0 0.00008 CWe94 CW Automatically converted from value 0.0598 ug/L to mg/L ug/L SS-3 44/5/207 0 0.00008 CWe94 CW Automatically converted from value 0.0598 ug/L to mg/L | | | | | | | | | | |
| mg/L CONTROL 2 47/7307 0 0.000171 CWests CW mg/L CONTROL 3 47/3207 0.148 0.148 CWests C | Total | | | | | | | | | Automotically appropriate from values 0.001F up/I to ma/I |
| mg/L CONTROL 24/72817 0 0.001016 0.0095 CW Automatically converted from value 0.125 mg/L mg/L 1.00 0.001016 0.00016 0.001016 0.0 | | | | | | | | | | Automatically converted from value: 0.0215 ug/ L to mg/ L. |
| mg/L CONTROLS 4/3/2017 | | | | | | | | | | Automatically converted from value: 0.173 ug/L to mg/L. |
| Work | | _ | | | | | | | | |
| mg/1 | | | CONTROL 3 | | 0.148 | 0.148 | | QW9659 | GW | , |
| mg/L SS1.5 47/72017 0 0.0000917 QW960 CW Automatically converted from value 0.0917 ug/L to mg/L ug/L CW ug/L SS2.1 4/8/2017 0.0851 0.0851 QW961 CW Automatically converted from value 0.0878 ug/L to mg/L mg/L SS2.1 4/8/2017 0 0.0000678 QW9612 CW Automatically converted from value 0.0678 ug/L to mg/L mg/L SS2.2 4/8/2017 0 0.000053 QW9612 CW Automatically converted from value 0.0678 ug/L to mg/L ug/L SS2.3 4/8/2017 0 0.000053 QW9613 CW Automatically converted from value 0.0678 ug/L to mg/L ug/L SS2.4 4/8/2017 0.03 0.13 0.13 QW9645 DUPW Automatically converted from value 0.053 ug/L to mg/L ug/L SS2.4 4/8/2017 0 0.0002 QW9645 DUPWQ Automatically converted from value 0.053 ug/L to mg/L ug/L SS2.4 4/8/2017 0 0.00029 QW9645 QWW9655 QWW9651 QWW9651 QW | | | SS1-4 | 4/7/2017 | 0.0514 | 0.0514 | | QW9639 | GW | |
| ug/L SS1.5 4/7/2017 0.9917 0.9918 CW CW ug/L SS2.4 4/8/2017 0.0000851 0.99641 CW Automatically converted from value 0.0851 ug/L to mg/L ug/L SS2.2 4/8/2017 0 0.0000878 0.09842 GW Automatically converted from value 0.0678 ug/L to mg/L ug/L SS2.2 4/8/2017 0.0000878 0.0088 0.99842 GW Automatically converted from value 0.0678 ug/L to mg/L ug/L SS2.3 4/8/2017 0.00838 0.00838 0.00838 0.00838 0.00838 0.00838 0.00842 0.00842 0.00842 0.00842 0.00844 1.00114 0.00827 0.00845 GW Automatically converted from value 0.0853 ug/L to mg/L 0.00827 0.00842 0.00844 1.00114 0.00827 0.00845 0.00842 0.00844 1.00114 0.00827 0.00845 0.00842 0.00842 0.00844 1.00114 0.00827 0.00845 0.00827 0.00845 0.00827 0.00845 0.00828 0.00828 0.00828 | | | | | | | | | | |
| ug/L SS-1 4/8/2017 0.0851 0.0851 0.0000881 0.0000881 0.000681 | | | | | | | | | | Automatically converted from value: 0.0917 ug/L to mg/L. |
| mg/L SS2 4/8/2017 0 0.0000878 QW9461 GW Automatically converted from value 0.0678 mg/L mg/L SS2 4/8/2017 0 0.0000878 QW9462 GW QW94622 GW QW9462 GW QW9462 GW QW94622 GW QW9462 GW QW94622 GW QW94622 | | | | | | | | | | |
| mg/L 582.2 4/8/2017 0 0.0000678 OW9462 CW Automatically converted from value: 0.0678 ug/L to mg/L ug/L 582.5 4/8/2017 0 0.0000573 OW9443 CW Automatically converted from value: 0.0578 ug/L to mg/L ug/L 582.5 4/8/2017 0.0553 OW9443 CW Automatically converted from value: 0.0583 ug/L to mg/L ug/L 582.4 4/8/2017 0.0503 OW9443 OUPW1 OW9444 OUPW1 Ug/L 582.4 4/8/2017 0 0.000032 OW9445 OUPW1 OW9444 OW944 | | | | | | | | | | Automatically converted from value: 0.0851 ug/L to mg/L. |
| wg/L SS2-1 4/8/2017 0.00/878 0.00/ | | | | | | | | | | • |
| ug/L SS24 4/8/2017 0.0553 0.0553 0.0953 0.0953 0.0953 0.0953 0.0953 0.0953 0.0953 0.0953 0.0953 0.0953 0.0953 0.0954 0.0974 0.0 | | | SS2-2 | 4/8/2017 | 0.0678 | 0.0678 | | QW9642 | GW | , |
| ug/L SS-4 4/8/2017 0.0492 0.0 | | | | | | | | | | Automatically converted from value: $0.0553~\text{ug/L}$ to mg/L . |
| wg/L SS24 4/8/2017 0 0.000342 0.0492 | | | | | | | | | | |
| mg/I. S524 4/8/2017 0 0.000013 CW9644 DUPWI Automatically converted from value 0.130 ug/L to mg/L mg/I. S524 4/3/2017 0 0.00001897 CW9646 CW Automatically converted from value 0.130 ug/L to mg/L mg/L S534 4/3/2017 0 0.000297 CW9646 CW Automatically converted from value 0.230 ug/L to mg/L wg/L S535 4/3/2017 0 0.000213 CW9647 CW Automatically converted from value 0.230 ug/L to mg/L S535 4/3/2017 0 0.000213 CW9647 CW Automatically converted from value 0.230 ug/L to mg/L S536 4/3/2017 0 0.000213 CW9647 CW Automatically converted from value: 0.230 ug/L to mg/L S536 4/3/2017 0 0.000123 CW9648 CW Automatically converted from value: 0.230 ug/L to mg/L S536 4/3/2017 0 0.00013 CW9649 CW Automatically converted from value: 0.230 ug/L to mg/L S537 4/3/2017 0 0.00013 CW9649 CW Automatically converted from value: 0.230 ug/L to mg/L S538 4/3/2017 0 0.00013 CW9649 CW Automatically converted from value: 0.230 ug/L to mg/L ug/L S538 4/3/2017 0 0.00013 CW9649 CW Automatically converted from value: 0.230 ug/L to mg/L ug/L S538 4/3/2017 0 0.00013 CW9650 CW Automatically converted from value: 0.230 ug/L to mg/L ug/L S544 4/7/2017 0 0.00020 CW9651 CW Automatically converted from value: 0.230 ug/L to mg/L mg/L S545 4/7/2017 0 0.00002 CW9651 CW Automatically converted from value: 0.200 ug/L to mg/L ug/L S545 4/7/2017 0 0.00002 CW9651 CW Automatically converted from value: 0.200 ug/L to mg/L ug/L S545 4/7/2017 0 0.000002 CW9652 DUPW1 ug/L S545 4/7/2017 0 0.0000060 CW9653 DUPW2 ug/L S545 4/7/2017 0 0.0000060 CW9653 DUPW2 ug/L S545 4/7/2017 0 0.0000060 CW9655 CW ug/L Ug/L S545 4/7/2017 0 0.0000060 CW9655 CW ug/L S545 4/7/2017 0 0.000060 CW9655 CW ug/L Ug/L Ug/L S545 4/7/2017 0 0.000060 CW9655 CW ug/L Ug/L Ug/L CONTROL 1 4/1/2017 0.0000060 CW9655 CW ug/L Ug/L Ug/L CONTROL 1 4/1/2017 0.0000060 CW9655 CW ug/L Ug/L Ug/L Ug/L Ug/L Ug/L Ug/L Ug/L U | | | | | | | | | | |
| mg/L SS-4 4/8/2017 0 0,0000492 QW9645 DUTW2 Automatically converted from value: 0,4892 ug/L to mg/L ug/L sS-34 4/3/2017 0 0,0000492 QW9646 GW Automatically converted from value: 2,97 ug/L to mg/L ug/L sS-34 4/3/2017 0 0,000133 QW9647 GW Automatically converted from value: 0,213 ug/L to mg/L ug/L sS-35-5 4/3/2017 0 0,000135 QW9648 GW Automatically converted from value: 0,213 ug/L to mg/L ug/L sS-36 4/3/2017 0 0,000135 QW9648 GW Automatically converted from value: 1,25 ug/L to mg/L ug/L sS-36 4/3/2017 0.501 0,501 QZ4969 GW Resampled at corrected coordinate. ug/L sS-37 4/3/2017 0 0,000133 QW9649 GW Resampled at corrected coordinate. ug/L sS-38 4/3/2017 0 0,000133 QW9649 GW Automatically converted from value: 1,33 ug/L to mg/L ug/L sS-38 4/3/2017 0 0,000133 QW9649 GW Automatically converted from value: 0,823 ug/L to mg/L ug/L sS-38 4/3/2017 0 0,000823 QW9650 GW Automatically converted from value: 0,823 ug/L to mg/L ug/L sS-44 4/7/2017 0 0,000967 QW9651 GW Automatically converted from value: 0,823 ug/L to mg/L ug/L sS-45 4/7/2017 0 0,000967 QW9652 DUTW1 ug/L sS-45 4/7/2017 0 0,000968 QW9653 DUTW2 ug/L sS-45 4/7/2017 0 0,000968 QW9653 DUTW2 ug/L sS-45 4/7/2017 0 0,000866 QW9653 DUTW2 ug/L sS-45 4/7/2017 0 0,000866 QW9653 DUTW2 ug/L sS-45 4/7/2017 0 0,000869 QW9653 GW Automatically converted from value: 0,868 ug/L to mg/L ug/L sS-45 4/7/2017 0 0,000086 QW9653 GW Automatically converted from value: 0,869 ug/L to mg/L ug/L sS-55 4/1/2017 0 0,000090 QW9655 GW Automatically converted from value: 0,860 ug/L to mg/L ug/L sS-55 4/1/2017 0 0,00009 QW9655 GW Automatically converted from value: 0,0000 ug/L to mg/L ug/L sS-55 4/1/2017 0 0,00009 QW9655 GW Automatically converted from value: 0,0000 ug/L to mg/L ug/L sS-55 4/1/2017 0 0,00014 QW9656 GW Automatically converted from value: 0,0000 ug/L to mg/L ug/L control. 4/1/2017 0 0,00014 QW9656 GW Automatically converted from value: 1.13 ug/L to mg/ | | | | | | | | | | Automatically converted from value: 0.130 ug/L to mg/L |
| mg/L SS3-4 | | | | | | | | | | • |
| ug/L SS3-4 4/3/2017 2.97 QW9616 GW ug/L SS3-5 4/3/2017 0.213 QU9647 GW Automatically converted from value: 0.213 ug/L to mg/L. mg/L SS3-5 4/3/2017 0 0.000213 QW9647 GW Automatically converted from value: 0.213 ug/L to mg/L. ug/L SS3-6 4/3/2017 0 0.00155 QW9648 GW Automatically converted from value: 1.55 ug/L to mg/L. ug/L SS3-6 4/3/2017 0.501 0.501 QZ4969 GW Resampled at corrected coordinate. ug/L SS3-7 4/3/2017 0 0.00033 QW9699 GW Automatically converted from value: 1.33 ug/L to mg/L. ug/L SS3-7 4/3/2017 0 0.00033 QW9650 GW Automatically converted from value: 1.33 ug/L to mg/L. ug/L SS4-8 4/3/2017 0.823 0.823 QW9650 GW Automatically converted from value: 0.823 ug/L to mg/L. ug/L SS4-4 4/7/2017 0 0.0002 QW9651 GW | | | | | | | | | | • |
| mg/L SS3-5 | | | SS3-4 | 4/3/2017 | 2.97 | 2.97 | | QW9646 | GW | |
| mg/L SS3-6 | | | | | 0.213 | | | | | |
| ug/l. SS3-6 4/3/2017 1.55 1.55 QW9648 GW ug/l. SS3-6 4/3/2017 0.501 0.501 QZ4969 GW Resampled at corrected coordinate. ug/l. SS3-7 4/3/2017 0. 0.00133 QW9649 GW Automatically converted from value: 1.33 ug/l. to mg/l. ug/l. SS3-8 4/3/2017 0. 0.000823 QW9660 GW Automatically converted from value: 1.33 ug/l. to mg/l. ug/l. SS3-8 4/3/2017 0. 823 0.823 QW9650 GW ug/l. SS3-8 4/3/2017 0. 0.202 QW9651 GW ug/l. SS4-4 4/7/2017 0. 0.00002 QW9661 GW Automatically converted from value: 0.823 ug/l. to mg/l. ug/l. SS4-4 4/7/2017 0. 0.00002 QW9661 GW Automatically converted from value: 0.907 ug/l. to mg/l. ug/l. SS4-5 4/7/2017 0. 0.00002 QW9661 GW Automatically converted from value: 0.907 ug/l. to mg/l. ug/l. SS4-5 4/7/2017 0. 0.0000686 QW9653 DUPW1 ug/l. SS4-5 4/7/2017 0. 0.0000686 QW9653 DUPW2 ug/l. SS4-5 4/7/2017 0.907 0.907 QW9652 DUPW1 ug/l. SS4-5 4/7/2017 0.9097 0.907 QW9652 DUPW1 ug/l. SS4-5 4/7/2017 0.886 0.686 QW9653 DUPW2 ug/l. SS5-3 4/1/2017 0.886 0.686 QW9653 DUPW2 ug/l. SS5-3 4/1/2017 0. 0.000085 QW9654 GW Automatically converted from value: 0.895 ug/l. to mg/l. ug/l. SS5-3 4/1/2017 0. 0.000085 QW9655 GW ug/l. SS5-4 4/1/2017 0.002 0.002 QW9655 GW ug/l. SS5-4 4/1/2017 0.002 0.002 QW9655 GW Automatically converted from value: 0.895 ug/l. to mg/l. ug/l. SS5-5 4/1/2017 0.0050 0.062 QW9655 GW Automatically converted from value: 0.0620 ug/l. to mg/l. ug/l. SS5-5 4/1/2017 0.0502 0.0502 QW9656 GW Automatically converted from value: 0.0620 ug/l. to mg/l. ug/l. CONTROL 2 4/1/2017 0.0000 0.0005 QW9657 GW Automatically converted from value: 4.010 ug/l. to mg/l. ug/l. CONTROL 2 4/1/2017 0.000 0.0005 QW9657 GW Automatically converted from value: 4.010 ug/l. to mg/l. ug/l. CONTROL 2 4/1/2017 0.000 0.0005 QW9659 GW Automatically converted from value: 4.10 ug/l. to mg/l. ug/l. SS1-4 4/1/2017 0.000 0.0004 QW9659 GW Automatically converted from value: 4.10 ug/l. to mg/l. ug/l. SS1-4 4/1/2017 0.0000045 QW9659 GW Automatically converted from value: 4.10 | | | | | | | | | | |
| ug/L S53-6 4/30/2017 0.501 0.501 0.24969 GW Resampled at corrected coordinate. | | | | | | | | | | Automatically converted from value: 1.55 ug/L to mg/L. |
| ug/L S3-7 4/3/2017 1.33 1.33 QW9649 GW Mutomatically converted from value: 1.33 ug/L to mg/L mg/L S3-8 4/3/2017 0 0.000823 QW9650 GW Automatically converted from value: 0.823 ug/L to mg/L ug/L S5-4 4/7/2017 0 0.000823 QW9650 GW Automatically converted from value: 0.823 ug/L to mg/L ug/L S5-4 4/7/2017 0 0.00002 QW9651 GW Automatically converted from value: 0.200 ug/L to mg/L mg/L S5-5 4/7/2017 0 0.000066 QW9652 DUPW1 Automatically converted from value: 0.200 ug/L to mg/L ug/L S5-5 4/7/2017 0 0.000666 QW9653 DUPW2 Automatically converted from value: 0.907 ug/L to mg/L ug/L S5-5 4/7/2017 0 0.000666 QW9653 DUPW2 Ug/L S5-5 4/7/2017 0.686 0.686 QW9653 DUPW2 Ug/L S5-5 4/7/2017 0.686 0.686 QW9653 DUPW2 Ug/L S5-5 4/7/2017 0.0895 0.8995 QW9654 GW Automatically converted from value: 0.686 ug/L to mg/L Ug/L S5-5 4/1/2017 0 0.0000895 QW9655 GW Automatically converted from value: 0.895 ug/L to mg/L Ug/L S5-5 4/1/2017 0 0.000062 QW9655 GW Automatically converted from value: 0.0620 ug/L to mg/L Ug/L S5-5 4/1/2017 0 0.000062 QW9655 GW Automatically converted from value: 0.0620 ug/L to mg/L Ug/L S5-5 4/1/2017 0 0.0502 QW9655 GW Automatically converted from value: 0.0502 ug/L to mg/L Ug/L CONTROL 1 4/1/2017 0.0102 0.0502 QW9656 GW Automatically converted from value: 0.0502 ug/L to mg/L Ug/L CONTROL 1 4/1/2017 0 0.0502 QW9657 GW Automatically converted from value: 0.0502 ug/L to mg/L Ug/L CONTROL 1 4/1/2017 0 0.0014 QW9658 GW Automatically converted from value: 1.40 ug/L Ug/L CONTROL 1 4/1/2017 0 0.0014 QW9659 GW Automatically converted from value: 1.40 ug/L Ug/L CONTROL 1 4/1/2017 0 0.0014 QW9659 GW Automatically converted from value: 1.40 ug/L Ug/L CONTROL 1 4/1/2017 0 0.0014 QW9659 GW Automatically converted from value: | | | | | | | | | | Resampled at corrected coordinate |
| mg/L SS3-7 4/3/2017 0 0.000323 QW9659 GW Automatically converted from value: 1.33 ug/L to mg/L. mg/L SS3-8 4/3/2017 0.2 0.202 QW9650 GW ug/L SS4-4 4/7/2017 0.2 0.2 QW9651 GW mg/L SS4-4 4/7/2017 0 0.00002 QW9651 GW mg/L SS4-5 4/7/2017 0 0.00002 QW9651 GW mg/L SS4-5 4/7/2017 0 0.00002 QW9651 GW mg/L SS4-5 4/7/2017 0 0.000907 QW9652 DUPW1 Automatically converted from value: 0.200 ug/L to mg/L. mg/L SS4-5 4/7/2017 0 0.0000866 QW9653 DUPW2 Automatically converted from value: 0.000 ug/L to mg/L. ug/L SS4-5 4/7/2017 0.907 0.907 QW9652 DUPW1 ug/L SS4-5 4/7/2017 0.907 0.907 QW9653 DUPW2 ug/L SS4-5 4/7/2017 0.895 0.895 QW9653 DUPW2 ug/L SS5-3 4/1/2017 0.895 0.895 QW9654 GW mg/L SS5-3 4/1/2017 0.0002 QW9655 GW Automatically converted from value: 0.895 ug/L to mg/L. mg/L SS5-4 4/1/2017 0.0002 QW9655 GW Automatically converted from value: 0.895 ug/L to mg/L. ug/L SS5-4 4/1/2017 0.0002 QW9655 GW Automatically converted from value: 0.000 ug/L to mg/L. ug/L SS5-4 4/1/2017 0.0002 QW9655 GW Automatically converted from value: 0.0002 ug/L to mg/L. ug/L SS5-5 4/1/2017 0.0002 QW9655 GW Automatically converted from value: 0.0002 ug/L to mg/L. Vanadium (V) - mg/L CONTROL 1 4/1/2017 < 0.000 0.000005 QW9657 GW Automatically converted from value: 0.0502 ug/L to mg/L. Vanadium (V) - mg/L CONTROL 1 4/1/2017 < 0.010 0.000 QW9657 GW Automatically converted from value: <0.10 ug/L to mg/L. ug/L CONTROL 2 4/7/2017 0.0 0.0014 QW9658 GW Automatically converted from value: <0.10 ug/L to mg/L. ug/L CONTROL 2 4/7/2017 0.0 0.0014 QW9658 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L CONTROL 3 4/3/2017 1.4 1.4 QW9658 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L CONTROL 3 4/3/2017 0.0 0.00115 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L SS1-5 4/7/2017 0.0 0.00116 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 0.48 0.48 QW9690 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 0.48 0.48 QW9690 GW Automati | | | | | | | | | | Totalipea in corrected coordinate. |
| mg/L SS3-8 4/3/2017 0 0.000823 QW9650 GW Automatically converted from value: 0.823 ug/L to mg/L ug/L SS3-8 4/3/2017 0.823 0.823 QW9651 GW Automatically converted from value: 0.820 ug/L to mg/L mg/L SS4-4 4/7/2017 0 0.0002 QW9651 GW Automatically converted from value: 0.200 ug/L to mg/L mg/L SS4-5 4/7/2017 0 0.000907 QW9652 DUPW1 Automatically converted from value: 0.907 ug/L to mg/L ug/L SS4-5 4/7/2017 0 0.000686 QW9653 DUPW2 Automatically converted from value: 0.686 ug/L to mg/L ug/L SS4-5 4/7/2017 0.907 0.907 0.907 QW9652 DUPW1 ug/L SS4-5 4/7/2017 0.896 0.686 QW9653 DUPW2 ug/L SS5-5 4/1/2017 0.895 0.895 QW9654 GW Automatically converted from value: 0.686 ug/L to mg/L ug/L SS5-3 4/1/2017 0 0.000895 QW9654 GW Automatically converted from value: 0.895 ug/L to mg/L ug/L SS5-5 4/1/2017 0 0.0008062 QW9655 GW Automatically converted from value: 0.0620 ug/L to mg/L ug/L SS5-5 4/1/2017 0.0622 0.0622 QW9655 GW Automatically converted from value: 0.0620 ug/L to mg/L Ug/L SS5-5 4/1/2017 0.0502 0.0652 QW9655 GW Automatically converted from value: 0.0502 ug/L to mg/L Ug/L CONTROL 1 4/1/2017 0.000 0.000052 QW9656 GW Automatically converted from value: <1.0002 ug/L to mg/L Ug/L CONTROL 1 4/1/2017 0.010 0.05 QW9657 GW Automatically converted from value: <1.010 ug/L to mg/L Ug/L CONTROL 2 4/7/2017 0 0.0014 QW9658 GW Automatically converted from value: <1.010 ug/L to mg/L Ug/L CONTROL 2 4/7/2017 0 0.0014 QW9658 GW Automatically converted from value: 1.13 ug/L to mg/L ug/L CONTROL 3 4/3/2017 0 0.0014 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L ug/L CONTROL 3 4/3/2017 0 0.0014 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L ug/L SS1-4 4/7/2017 0 0.00045 QW9659 GW Automatically converted from value | | | | | | | | | | Automatically converted from value: 1.33 ug/L to mg/L. |
| ug/L SS4-4 4/7/2017 0.2 0. | | mg/L | SS3-8 | 4/3/2017 | 0 | 0.000823 | | QW9650 | GW | |
| mg/L | | | | | | | | | | |
| mg/L SS4-5 4/7/2017 0 0.000907 QW9652 DUPW1 Automatically converted from value: 0.907 ug/L to mg/L. | | | | | | | | | | |
| mg/L SS4-5 | | | | | | | | | | |
| ug/L SS4-5 4/7/2017 0.907 0.907 0.907 0.90852 DUPW1 ug/L SS4-5 4/7/2017 0.686 0.686 0.686 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.895 0.8965 0 | | | | | | | | | | Ç. Ç. |
| Ug/L SS4-5 4/7/2017 0.686 0.686 QW9653 DUPW2 Ug/L SS5-3 4/1/2017 0.895 0.895 QW9654 GW Mg/L SS5-3 4/1/2017 0 0.000895 QW9655 GW Ug/L SS5-4 4/1/2017 0 0.000062 QW9655 GW Ug/L SS5-4 4/1/2017 0.062 0.062 QW9655 GW Ug/L SS5-5 4/1/2017 0.0502 0.0502 QW9656 GW Ug/L SS5-5 4/1/2017 0.0502 0.0502 QW9656 GW Ug/L SS5-5 4/1/2017 0.0502 0.0502 QW9656 GW Ug/L SS5-5 4/1/2017 0.00000502 QW9656 GW Ug/L CONTROL 1 4/1/2017 <0.00 0.0000502 QW9657 GW Ug/L CONTROL 1 4/1/2017 <0.10 0.05 QW9657 GW Ug/L CONTROL 1 4/1/2017 <0.10 0.05 QW9658 GW Ug/L CONTROL 2 4/7/2017 0 0.0014 QW9658 GW Ug/L CONTROL 2 4/7/2017 0 0.0014 QW9658 GW Ug/L CONTROL 3 4/3/2017 0 0.0014 QW9658 GW Ug/L CONTROL 3 4/3/2017 0 0.0014 QW9659 GW Ug/L CONTROL 3 4/3/2017 0 0.0013 QW9659 GW Ug/L CONTROL 3 4/3/2017 0.45 0.45 QW9659 GW Ug/L SS1-4 4/7/2017 0 0.000045 QW9639 GW Ug/L SS1-5 4/7/2017 0 0.00116 QW9640 GW Ug/L SS1-5 4/7/2017 0 0.00116 QW9640 GW Ug/L SS1-5 4/7/2017 0.16 0.116 QW9640 GW Ug/L SS1-5 4/7/2017 0.16 0.116 QW9640 GW Ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | | | | | | | | | The state of the s |
| ug/L SS5-3 4/1/2017 0.895 0.895 QW9654 GW mg/L SS5-3 4/1/2017 0 0.0000895 QW9654 GW Automatically converted from value: 0.895 ug/L to mg/L. mg/L SS5-4 4/1/2017 0 0.000062 QW9655 GW Automatically converted from value: 0.0620 ug/L to mg/L. ug/L SS5-4 4/1/2017 0.062 0.062 QW9655 GW ug/L SS5-5 4/1/2017 0 0.00002 QW9656 GW mg/L SS5-5 4/1/2017 0 0.0000502 QW9656 GW Automatically converted from value: 0.0502 ug/L to mg/L. Vanadium (V) - mg/L CONTROL 1 4/1/2017 <0.00 0.0000502 QW9657 GW Automatically converted from value: <0.10 ug/L to mg/L. Total ug/L CONTROL 1 4/1/2017 <0.10 0.05 QW9657 GW ug/L CONTROL 2 4/7/2017 <0.10 0.05 QV4618 EBW mg/L CONTROL 2 4/7/2017 0 0.0014 QW9658 GW Automatically converted from value: 1.40 ug/L to mg/L. ug/L CONTROL 3 4/3/2017 0 0.00113 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L CONTROL 3 4/3/2017 0 0.00113 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L SS1-4 4/7/2017 0.45 0.45 QW9639 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L SS1-4 4/7/2017 0.45 0.45 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L. ug/L SS1-5 4/7/2017 0 0.00045 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L. ug/L SS1-5 4/7/2017 0 0.00045 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 0 0.000116 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 0.48 0.48 QW9641 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW Automatically converted from value: 1.16 ug/L to mg/L. | | | | | | | | | | |
| mg/L SS5-4 4/1/2017 0 0.000062 QW9655 GW Automatically converted from value: 0.0620 ug/L to mg/L ug/L SS5-4 4/1/2017 0.062 0.062 QW9655 GW ug/L SS5-5 4/1/2017 0.0502 0.0502 QW9656 GW Automatically converted from value: 0.0502 ug/L to mg/L SS5-5 4/1/2017 0 0.0000502 QW9656 GW Automatically converted from value: 0.0502 ug/L to mg/L Vanadium (V) - mg/L CONTROL 1 4/1/2017 <0.00 0.0000502 QW9657 GW Automatically converted from value: <0.10 ug/L to mg/L CONTROL 1 4/1/2017 <0.10 0.05 QW9657 GW Automatically converted from value: <0.10 ug/L to mg/L Ug/L CONTROL 1 4/1/2017 <0.10 0.05 QW9658 GW Automatically converted from value: 1.40 ug/L to mg/L ug/L CONTROL 2 4/7/2017 0 0.00114 QW9658 GW Automatically converted from value: 1.40 ug/L to mg/L ug/L CONTROL 3 4/3/2017 1.4 1.4 QW9658 GW Automatically converted from value: 1.13 ug/L to mg/L ug/L CONTROL 3 4/3/2017 1.13 1.13 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L ug/L SS1-4 4/7/2017 0 0.00045 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L ug/L SS1-5 4/7/2017 0 0.00016 QW9640 GW Automatically converted from value: 0.45 ug/L to mg/L ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW Automatically converted from value: 1.16 ug/L to mg/L ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW Automatically converted from value: 1.16 ug/L to mg/L ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW Automatically converted from value: 1.16 ug/L to mg/L ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW Automatically converted from value: 1.16 ug/L U | | ug/L | SS5-3 | 4/1/2017 | | 0.895 | | QW9654 | GW | |
| ug/L SS5-4 4/1/2017 0.062 0.062 QW9655 GW ug/L SS5-5 4/1/2017 0.0502 0.0502 QW9656 GW Mandium (V) - mg/L SS5-5 4/1/2017 0 0.0000502 QW9656 GW Automatically converted from value: 0.0502 ug/L to mg/L. Vanadium (V) - mg/L CONTROL 1 4/1/2017 <0.00 | | | | | | | | | | <i>y</i> |
| ug/L SS5-5 4/1/2017 0.0502 0.0502 QW9656 GW Automatically converted from value: 0.0502 ug/L to mg/L. Vanadium (V) - mg/L Mg/L CONTROL 1 4/1/2017 <0.00 | | | | | | | | | | Automatically converted from value: 0.0620 ug/L to mg/L. |
| Madium (V) - Mg/L SS5-5 4/1/2017 0 0.0000502 QW9656 GW Automatically converted from value: 0.0502 ug/L to mg/L | | | | | | | | | | |
| Vanadium (V) - Total mg/L CONTROL 1 4/1/2017 | | | | | | | | | | Automatically converted from value: 0.0502 ug/L to mg/L |
| Total ug/L CONTROL 1 4/1/2017 <0.10 0.05 QW9657 GW ug/L CONTROL 2 4/7/2017 <0.10 0.05 QV4618 EBW mg/L CONTROL 2 4/7/2017 0 0.0014 QW9658 GW Automatically converted from value: 1.40 ug/L to mg/L. ug/L CONTROL 2 4/7/2017 1.4 1.4 QW9658 GW mg/L CONTROL 3 4/3/2017 0 0.00113 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L CONTROL 3 4/3/2017 1.13 1.13 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L SS1-4 4/7/2017 0.45 0.45 QW9639 GW aug/L SS1-4 4/7/2017 0 0.00045 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L. mg/L SS1-5 4/7/2017 0 0.00016 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | Vanadium (V) - | | | | | | | | | ÿ. ÿ. |
| ug/L CONTROL 1 4/1/2017 <0.10 | ` ' | _ | | | | | | | | |
| mg/L CONTROL 2 4/7/2017 0 0.0014 QW9658 GW Automatically converted from value: 1.40 ug/L to mg/L. ug/L CONTROL 2 4/7/2017 1.4 1.4 QW9658 GW mg/L CONTROL 3 4/3/2017 0 0.00113 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L CONTROL 3 4/3/2017 1.13 1.13 QW9659 GW ug/L SS1-4 4/7/2017 0.45 QW9639 GW mg/L SS1-4 4/7/2017 0 0.00045 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L. mg/L SS1-5 4/7/2017 0 0.00116 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | ug/L | CONTROL 1 | | | | | | EBW | |
| mg/L CONTROL 3 4/3/2017 0 0.00113 QW9659 GW Automatically converted from value: 1.13 ug/L to mg/L. ug/L CONTROL 3 4/3/2017 1.13 1.13 QW9659 GW ug/L SS1-4 4/7/2017 0.45 QW9639 GW mg/L SS1-4 4/7/2017 0 0.00045 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L. mg/L SS1-5 4/7/2017 0 0.00116 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | mg/L | | | | | | | | Automatically converted from value: 1.40 ug/L to mg/L. |
| ug/L CONTROL 3 4/3/2017 1.13 1.13 QW9659 GW ug/L SS1-4 4/7/2017 0.45 QW9639 GW mg/L SS1-4 4/7/2017 0 0.00045 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L. mg/L SS1-5 4/7/2017 0 0.00116 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | _ | | | | | | | | |
| ug/L SS1-4 4/7/2017 0.45 0.45 QW9639 GW mg/L SS1-4 4/7/2017 0 0.00045 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L. mg/L SS1-5 4/7/2017 0 0.00116 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | _ | | | | | | | | Automatically converted from value: 1.13 ug/L to mg/L. |
| mg/L SS1-4 4/7/2017 0 0.00045 QW9639 GW Automatically converted from value: 0.45 ug/L to mg/L. mg/L SS1-5 4/7/2017 0 0.00116 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | _ | | | | | | | | |
| mg/L SS1-5 4/7/2017 0 0.00116 QW9640 GW Automatically converted from value: 1.16 ug/L to mg/L. ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | | | | | | | | | Automatically converted from value: 0.45 ug/L to mg/L |
| ug/L SS1-5 4/7/2017 1.16 1.16 QW9640 GW ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | | | | | | | | | • |
| ug/L SS2-1 4/8/2017 0.48 0.48 QW9641 GW | | | | | | | | | | |
| /T 000 d / 10 100 T | | | SS2-1 | 4/8/2017 | | | | | | |
| mg/L SS2-1 $4/8/2017$ 0 0.00048 QW9641 GW Automatically converted from value: 0.48 ug/L to mg/L . | | | SS2-1 | 4/8/2017 | 0 | 0.00048 | | QW9641 | GW | Automatically converted from value: $0.48~\mbox{ug/L}$ to $\mbox{mg/L}$. |

| Vanadium (V) - | Unit | Site | Date | Data Point | Graphable Value | RDL Lab Ref | Sample Type | e Comment |
|-------------------------|---|---|--|--|---|--|---|--|
| variacium (v) - | mg/L | SS2-2 | 4/8/2017 | 0 | 0.0003 | QW9642 | GW | Automatically converted from value: 0.30 ug/L to mg/L. |
| otal (cont'd) | ug/L | SS2-2 | 4/8/2017 | 0.3 | 0.3 | QW9642 | GW | , |
| | mg/L | SS2-3 | 4/8/2017 | 0 | 0.00041 | QW9643 | GW | Automatically converted from value: 0.41 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 0.41 | 0.41 | QW9643 | GW | , |
| | ug/L | SS2-4 | 4/8/2017 | 1.35 | 1.35 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 0.23 | 0.23 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.00135 | QW9644 | DUPW1 | Automatically converted from value: 1.35 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0 | 0.00023 | QW9645 | DUPW2 | Automatically converted from value: 0.23 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0.01 | 0.0129 | QW9646 | GW | Automatically converted from value: 12.9 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 12.9 | 12.9 | QW9646 | GW | , |
| | ug/L | SS3-5 | 4/3/2017 | 0.84 | 0.84 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.00084 | QW9647 | GW | Automatically converted from value: 0.84 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0.01 | 0.00732 | QW9648 | GW | Automatically converted from value: 7.32 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 7.32 | 7.32 | QW9648 | GW | Tratefliated by Converted from Value, 7,62 u.g/ 2 to 11.g/ 2. |
| | ug/L | SS3-6 | 4/30/2017 | 2.16 | 2.16 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 1.99 | 1.99 | QW9649 | GW | The sum product corrected coordinates |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.00199 | QW9649 | GW | Automatically converted from value: 1.99 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.00467 | QW9650 | GW | Automatically converted from value: 4.67 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 4.67 | 4.67 | QW9650 | GW | Tratomatically converted from value. Not ug/ 2 to mg/ 2. |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.00097 | QW9651 | GW | Automatically converted from value: 0.97 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | 0.97 | 0.97 | QW9651 | GW | rationalically converted from value. 0.57 ag/ E to fig/ E. |
| | ug/L ug/L | SS4-5 | 4/7/2017 | 3.26 | 3.26 | QW9653 | DUPW2 | |
| | | | 4/7/2017 | 4.42 | 4.42 | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | | | | | | Automotically convented from value, 4.42 cm/I to ma/I |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.00442 | QW9652 | DUPW1 | Automatically converted from value: 4.42 ug/L to mg/L. |
| | mg/L | SS4-5 SS5-3 | 4/7/2017 4/1/2017 | 0 | 0.00326 | QW9653 | DUPW2 GW | Automatically converted from value: 3.26 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0 3 55 | 0.00355 | QW9654 | | Automatically converted from value: 3.55 ug/L to mg/L. |
| | ug/L | SS5-3 | 4/1/2017 | 3.55 | 3.55 | QW9654 | GW | |
| | ug/L | SS5-4 | 4/1/2017 | 0.24 | 0.24 | QW9655 | GW | Automotive Transport of Control o |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.00024 | QW9655 | GW | Automatically converted from value: 0.24 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.00035 | QW9656 | GW | Automatically converted from value: 0.35 ug/L to mg/L. |
| ma (7:-) m · 1 | ug/L | SS5-5 | 4/1/2017 | 0.35 | 0.35 | QW9656 | GW | |
| inc (Zn) - Total | ug/L | CONTROL 1 | 4/1/2017 | <0.10 | 0.05 | QV4618 | EBW | |
| | ug/L | CONTROL 1 | 4/1/2017 | 1.48 | 1.48 | QW9657 | GW | |
| | mg/L | CONTROL 1 | 4/1/2017 | 0.00148 | 0.00148 | QW9657 | GW | Automatically converted from value: 1.48 ug/L to mg/L. |
| | mg/L | CONTROL 2 | 4/7/2017 | 0.0046 | 0.0046 | QW9658 | GW | Automatically converted from value: 4.60 ug/L to mg/L. |
| | ug/L | CONTROL 2 | 4/7/2017 | 4.6 | 4.6 | QW9658 | GW | |
| | mg/L | CONTROL 3 | | 0.00325 | 0.00325 | QW9659 | GW | Automatically converted from value: 3.25 ug/L to mg/L. |
| | ug/L | CONTROL 3 | 4/3/2017 | 3.25 | 3.25 | QW9659 | GW | |
| | ug/L | SS1-4 | 4/7/2017 | 1.95 | 1.95 | QW9639 | GW | |
| | mg/L | SS1-4 | 4/7/2017 | 0.00195 | 0.00195 | QW9639 | GW | Automatically converted from value: 1.95 ug/L to mg/L. |
| | mg/L | SS1-5 | 4/7/2017 | 0.00308 | 0.00308 | QW9640 | GW | Automatically converted from value: 3.08 ug/L to mg/L. |
| | ug/L | SS1-5 | 4/7/2017 | 3.08 | 3.08 | QW9640 | GW | |
| | ug/L | SS2-1 | 4/8/2017 | 16.8 | 16.8 | QW9641 | GW | |
| | mg/L | SS2-1 | 4/8/2017 | 0.0168 | 0.0168 | QW9641 | GW | Automatically converted from value: 16.8 ug/L to mg/L. |
| | mg/L | SS2-2 | 4/8/2017 | 0.0024 | 0.0024 | QW9642 | GW | Automatically converted from value: 2.40 ug/L to mg/L. |
| | ug/L | SS2-2 | 4/8/2017 | 2.4 | 2.4 | QW9642 | GW | |
| | mg/L | SS2-3 | 4/8/2017 | 0.00207 | 0.00207 | QW9643 | GW | Automatically converted from value: 2.07 ug/L to mg/L. |
| | ug/L | SS2-3 | 4/8/2017 | 2.07 | 2.07 | QW9643 | GW | , |
| | ug/L | SS2-4 | 4/8/2017 | 3.27 | 3.27 | QW9644 | DUPW1 | |
| | ug/L | SS2-4 | 4/8/2017 | 4.53 | 4.53 | QW9645 | DUPW2 | |
| | mg/L | SS2-4 | 4/8/2017 | 0.00327 | 0.00327 | QW9644 | DUPW1 | Automatically converted from value: 3.27 ug/L to mg/L. |
| | mg/L | SS2-4 | 4/8/2017 | 0.00453 | 0.00453 | QW9645 | DUPW2 | Automatically converted from value: 4.53 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0.0238 | 0.0238 | QW9646 | GW | Automatically converted from value: 23.8 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 23.8 | 23.8 | QW9646 | GW | Tratomatically converted from value, 2010 ug/ 2 to 11/6/ 21 |
| | ug/L | SS3-5 | 4/3/2017 | 2.57 | 2.57 | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0.00257 | 0.00257 | QW9647 | GW | Automatically converted from value: 2.57 ug/L to mg/L. |
| | | SS3-6 | 4/3/2017 | 0.00257 | 0.0155 | QW9648 | GW | Automatically converted from value: 2.57 ug/L to mg/L. Automatically converted from value: 15.5 ug/L to mg/L. |
| | mg/L | | | | | | | Automatically converted from value. 15.5 ug/ L to mg/ L. |
| | ug/L | SS3-6 | 4/3/2017 | 15.5 | 15.5 | QW9648 | GW | D 11. |
| | ug/L | SS3-6 | 4/30/2017 | 5.4 | 5.4 | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 5.12 | 5.12 | QW9649 | GW | A |
| | mg/L | SS3-7 | 4/3/2017 | 0.00512 | 0.00512 | QW9649 | GW | Automatically converted from value: 5.12 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0.0126 | 0.0126 | QW9650 | GW | Automatically converted from value: 12.6 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 12.6 | 12.6 | QW9650 | GW | |
| | ug/L | SS4-4 | 4/7/2017 | 3.68 | 3.68 | QW9651 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0.00368 | 0.00368 | QW9651 | GW | Automatically converted from value: 3.68 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0.0148 | 0.0148 | QW9652 | DUPW1 | Automatically converted from value: 14.8 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0.00951 | 0.00951 | QW9653 | DUPW2 | Automatically converted from value: 9.51 ug/L to mg/L. |
| | ug/L | SS4-5 | 4/7/2017 | 14.8 | 14.8 | QW9652 | DUPW1 | |
| | ug/L | SS4-5 | 4/7/2017 | 9.51 | 9.51 | QW9653 | DUPW2 | |
| | ug/L | SS5-3 | 4/1/2017 | 9.6 | 9.6 | QW9654 | GW | |
| | | | 4/1/2017 | 0.0096 | 0.0096 | QW9654 | GW | Automatically converted from value: 9.60 ug/L to mg/L. |
| | mg/L | SS5-3 | | 0.00140 | 0.00148 | QW9655 | GW | Automatically converted from value: 1.48 ug/L to mg/L. |
| | mg/L | SS5-3 SS5-4 | 4/1/2017 | 0.00148 | | Q117000 | | |
| | mg/L ug/L | | 4/1/2017 4/1/2017 | 1.48 | 1.48 | QW9655 | GW | |
| | mg/L | SS5-4 | | 1.48 1.78 | 1.48 1.78 | QW9655 QW9656 | GW GW | |
| | mg/L ug/L ug/L mg/L | SS5-4 SS5-4 SS5-5 SS5-5 | 4/1/2017 4/1/2017 4/1/2017 | 1.48 | | QW9655 | | Automatically converted from value: 1.78 ug/L to mg/L. |
| | mg/L ug/L ug/L | SS5-4 SS5-4 SS5-5 | 4/1/2017 4/1/2017 | 1.48 1.78 | 1.78 | QW9655 QW9656 | GW | Automatically converted from value: 1.78 ug/L to mg/L. Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L | SS5-4 SS5-4 SS5-5 SS5-5 | 4/1/2017 4/1/2017 4/1/2017 | 1.48 1.78 0.00178 | 1.78 0.00178 | QW9655 QW9656 QW9656 | GW GW | |
| | mg/L ug/L ug/L mg/L mg/L ug/L ug/L | SS5-4 SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 | 1.48 1.78 0.00178 <0.00 | 1.78 0.00178 0.000025 0.025 0.025 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 | GW GW GW EBW | Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L mg/L | SS5-4 SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 | 1.48 1.78 0.00178 <0.00 <0.050 | 1.78 0.00178 0.000025 0.025 | QW9655 QW9656 QW9656 QW9657 QW9657 | GW GW GW | |
| | mg/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L | SS5-4 SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 | 1.78 0.00178 0.000025 0.025 0.025 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 | GW GW GW EBW | Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L mg/L ug/L mg/L | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 CONTROL 2 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 | 1.78 0.00178 0.000025 0.025 0.025 0.000224 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 | GW GW GW EBW GW | Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 | 1.78 0.00178 0.000025 0.025 0.025 0.000224 0.224 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 | GW GW GW EBW GW | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L mg/L ug/L ug/L ug/L mg/L ug/L mg/L | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 | 1.78 0.00178 0.000025 0.025 0.025 0.000224 0.224 0.000269 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 | GW GW GW EBW GW GW GW | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 | 1.78 0.00178 0.000025 0.025 0.025 0.000224 0.224 0.000269 0.269 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 | GW GW GW EBW GW GW GW GW | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 | 1.78 0.00178 0.000025 0.025 0.0025 0.000224 0.224 0.000269 0.269 0.071 0.000071 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 | GW GW GW EBW GW GW GW GW GW GW | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. Automatically converted from value: 0.071 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-4 SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 0 | 1.78 0.00178 0.000025 0.025 0.0025 0.000224 0.224 0.000269 0.269 0.071 0.000071 0.000152 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 | GW GW GW EBW GW GW GW GW GW GW | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. |
| | mg/L ug/L mg/L mg/L ug/L ug/L mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L | SS5-4 SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 0 0 | 1.78 0.00178 0.000025 0.025 0.025 0.000224 0.224 0.000269 0.269 0.071 0.000071 0.000152 0.152 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 QW9640 | GW GW GW EBW GW GW GW GW GW GW GW GW | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. Automatically converted from value: 0.071 ug/L to mg/L. Automatically converted from value: 0.152 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-4 SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 0 0 0.152 0 | 1.78 0.00178 0.000025 0.025 0.025 0.000224 0.224 0.000269 0.269 0.071 0.000071 0.000152 0.152 0.000189 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 QW9640 | GW GW GW EBW GW | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. Automatically converted from value: 0.071 ug/L to mg/L. |
| | mg/L ug/L mg/L mg/L ug/L ug/L mg/L ug/L mg/L ug/L ug/L ug/L mg/L ug/L mg/L ug/L ug/L ug/L | SS5-4 SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 0 0 0.152 0 0.189 | 1.78 0.00178 0.000025 0.025 0.025 0.00224 0.224 0.000269 0.269 0.071 0.000071 0.000071 0.000152 0.152 0.000189 0.189 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 QW9640 QW9641 | GW GW GW EBW GW | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. Automatically converted from value: 0.071 ug/L to mg/L. Automatically converted from value: 0.152 ug/L to mg/L. |
| | mg/L ug/L mg/L ug/L ug/L ug/L mg/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 0 0.152 0 0.189 0.07 | 1.78 0.00178 0.000025 0.025 0.025 0.00224 0.224 0.000269 0.269 0.071 0.000071 0.0000152 0.152 0.000189 0.189 0.07 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9639 QW9640 QW9641 QW9641 | GW G | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. Automatically converted from value: 0.071 ug/L to mg/L. Automatically converted from value: 0.152 ug/L to mg/L. Automatically converted from value: 0.189 ug/L to mg/L. |
| | mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 0 0.152 0 0.189 0.07 0 | 1.78 0.00178 0.000025 0.025 0.025 0.00224 0.224 0.000269 0.269 0.071 0.000071 0.000152 0.152 0.000189 0.189 0.07 0.00007 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9640 QW9640 QW9641 QW9641 QW9642 QW9642 | GW G | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. Automatically converted from value: 0.071 ug/L to mg/L. Automatically converted from value: 0.152 ug/L to mg/L. Automatically converted from value: 0.189 ug/L to mg/L. Automatically converted from value: 0.070 ug/L to mg/L. |
| | mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-2 SS2-2 SS2-3 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 0 0.152 0 0.189 0.07 0 0 | 1.78 0.00178 0.000025 0.025 0.025 0.000224 0.224 0.000269 0.269 0.071 0.000071 0.000152 0.152 0.000189 0.189 0.07 0.00007 0.00007 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9658 QW9659 QW9639 QW9640 QW9640 QW9641 QW9641 QW9642 QW9642 QW9643 | GW G | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. Automatically converted from value: 0.071 ug/L to mg/L. Automatically converted from value: 0.152 ug/L to mg/L. Automatically converted from value: 0.189 ug/L to mg/L. |
| irconium (Zr) - otal | mg/L ug/L ug/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u | SS5-4 SS5-5 SS5-5 CONTROL 1 CONTROL 1 CONTROL 2 CONTROL 2 CONTROL 3 CONTROL 3 SS1-4 SS1-4 SS1-5 SS1-5 SS2-1 SS2-1 SS2-1 SS2-2 SS2-2 | 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/1/2017 4/7/2017 4/7/2017 4/3/2017 4/3/2017 4/7/2017 4/7/2017 4/7/2017 4/7/2017 4/8/2017 4/8/2017 4/8/2017 4/8/2017 | 1.48 1.78 0.00178 <0.00 <0.050 <0.050 0 0.224 0 0.269 0.071 0 0.152 0 0.189 0.07 0 | 1.78 0.00178 0.000025 0.025 0.025 0.00224 0.224 0.000269 0.269 0.071 0.000071 0.000152 0.152 0.000189 0.189 0.07 0.00007 | QW9655 QW9656 QW9656 QW9657 QW9657 QV4618 QW9658 QW9659 QW9659 QW9639 QW9640 QW9640 QW9641 QW9641 QW9642 QW9642 | GW G | Automatically converted from value: <0.050 ug/L to mg/L. Automatically converted from value: 0.224 ug/L to mg/L. Automatically converted from value: 0.269 ug/L to mg/L. Automatically converted from value: 0.071 ug/L to mg/L. Automatically converted from value: 0.152 ug/L to mg/L. Automatically converted from value: 0.189 ug/L to mg/L. Automatically converted from value: 0.070 ug/L to mg/L. |

Appendix D. Snow Water Chemistry Analytical Results

| Parameter | Unit | Site | Date | Data Point | Graphable Value | RDL | Lab Ref | Sample Type | Comment |
|------------------|------|-------|-----------|------------|-----------------|-----|---------|-------------|--|
| Zirconium (Zr) - | mg/L | SS2-4 | 4/8/2017 | 0 | 0.000192 | | QW9644 | DUPW1 | Automatically converted from value: 0.192 ug/L to mg/L. |
| Total (cont'd) | mg/L | SS2-4 | 4/8/2017 | < 0.00 | 0.000025 | | QW9645 | DUPW2 | Automatically converted from value: <0.050 ug/L to mg/L. |
| | mg/L | SS3-4 | 4/3/2017 | 0 | 0.00121 | | QW9646 | GW | Automatically converted from value: 1.21 ug/L to mg/L. |
| | ug/L | SS3-4 | 4/3/2017 | 1.21 | 1.21 | | QW9646 | GW | |
| | ug/L | SS3-5 | 4/3/2017 | 0.219 | 0.219 | | QW9647 | GW | |
| | mg/L | SS3-5 | 4/3/2017 | 0 | 0.000219 | | QW9647 | GW | Automatically converted from value: 0.219 ug/L to mg/L. |
| | mg/L | SS3-6 | 4/3/2017 | 0 | 0.000895 | | QW9648 | GW | Automatically converted from value: 0.895 ug/L to mg/L. |
| | ug/L | SS3-6 | 4/3/2017 | 0.895 | 0.895 | | QW9648 | GW | |
| | ug/L | SS3-6 | 4/30/2017 | 0.44 | 0.44 | | QZ4969 | GW | Resampled at corrected coordinate. |
| | ug/L | SS3-7 | 4/3/2017 | 0.58 | 0.58 | | QW9649 | GW | |
| | mg/L | SS3-7 | 4/3/2017 | 0 | 0.00058 | | QW9649 | GW | Automatically converted from value: 0.580 ug/L to mg/L. |
| | mg/L | SS3-8 | 4/3/2017 | 0 | 0.000392 | | QW9650 | GW | Automatically converted from value: 0.392 ug/L to mg/L. |
| | ug/L | SS3-8 | 4/3/2017 | 0.392 | 0.392 | | QW9650 | GW | |
| | mg/L | SS4-4 | 4/7/2017 | 0 | 0.000233 | | QW9651 | GW | Automatically converted from value: 0.233 ug/L to mg/L. |
| | ug/L | SS4-4 | 4/7/2017 | 0.233 | 0.233 | | QW9651 | GW | |
| | ug/L | SS4-5 | 4/7/2017 | 0.885 | 0.885 | | QW9653 | DUPW2 | |
| | ug/L | SS4-5 | 4/7/2017 | 0.644 | 0.644 | | QW9652 | DUPW1 | |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000644 | | QW9652 | DUPW1 | Automatically converted from value: 0.644 ug/L to mg/L. |
| | mg/L | SS4-5 | 4/7/2017 | 0 | 0.000885 | | QW9653 | DUPW2 | Automatically converted from value: 0.885 ug/L to mg/L. |
| | mg/L | SS5-3 | 4/1/2017 | 0 | 0.00105 | | QW9654 | GW | Automatically converted from value: 1.05 ug/L to mg/L. |
| | ug/L | SS5-3 | 4/1/2017 | 1.05 | 1.05 | | QW9654 | GW | |
| | ug/L | SS5-4 | 4/1/2017 | 0.17 | 0.17 | | QW9655 | GW | |
| | mg/L | SS5-4 | 4/1/2017 | 0 | 0.00017 | | QW9655 | GW | Automatically converted from value: 0.170 ug/L to mg/L. |
| | mg/L | SS5-5 | 4/1/2017 | 0 | 0.000077 | | QW9656 | GW | Automatically converted from value: 0.077 ug/L to mg/L. |
| | ug/L | SS5-5 | 4/1/2017 | 0.077 | 0.077 | | QW9656 | GW | |

Appendix E

Dust Gauge Collection Standard Operating Procedure (ENVR-508-0112)

DIAVIK DIAMOND MINE

2017 Dust Deposition Report



| Environment STANDARD OPERATING PROCEDURE | | | | | | | |
|--|--|-----------------------|--|--|--|--|--|
| Area No.: | 8000 | Document #: Revision: | ENVR-508-0112 | | | | |
| Task Title: | SOP - Dust Gauge Collection | | <u>, </u> | | | | |
| Next Review: Effective Date: | 1 Year from Final Approval in I Date on approved stamp in foo | | | | | | |

1 REFERENCES/RELATED DOCUMENTS

- **1.1 ENVI-403-0112 SOP Total Suspended Solids** Located in: Diavik Intranet SOPs Environment Folder
- **1.2 ENVR-301-0112 SOP General Laboratory Safety** Located in: Diavik Intranet SOPs Environment Folder
- **1.3 ENVR-605-0112 SOP Snowmobiles** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs
- **1.4 ENVR-602-0112 SOP Watercraft** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs
- **1.5 ENVR-501-0112 SOP Remote Field Safety** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs
- **1.6 ENVI-101-0813 SOP Lightning Response -** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs
- **1.7 ENVR-601-0112 SOP Helicopter -** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs
- **1.8 ENVI-135-0112 Remote Field Safety Permit Form** Located in: P:\DDMI Environment\10.0 Operational Control\10.2 Forms\Current Forms\Approved\Remote Field Safety Plans
- **1.9 ENVI-178-0312 Dust Gauge Collection Field Sheet -** Located in: P:\DDMI Environment\10.0 Operational Control\10.2 Forms\Current Forms\Approved

| Revision History | | | | | | | | | |
|------------------|---|-------------------------|-------------------------------|--|--|--|--|--|--|
| Revision | Revision Description | Date of Revision | Author | | | | | | |
| 0 | Initial Release | 11-Jan-12 | D. Meredith | | | | | | |
| 1 | New SOP format, Clarify procedures, adds photos. | 23-Nov-14 | D. Dul/ D. Bourassa | | | | | | |
| 2 | Format update | 19-Jul-15 | D. Birch | | | | | | |
| 3 | Annual Update | 10-Feb-2016 | S. Sinclair | | | | | | |
| 4 | New Template, clarification of representative sampling, decrease in oven temperature to be consistent with Standard Methods | 04-Nov-16/10- Nov-16 | S. Martin-Elson/N. Goodman | | | | | | |



| 5 | Template and area manager updated | 20-Oct-2017 | S. Skinner |
|---|-----------------------------------|-------------|------------|

| Authorized Electronically in Documentum By: | | | | | | |
|---|-------------------------------|--|--|--|--|--|
| Area Superintendent: | Area Superintendent: D. Wells | | | | | |
| Area Manager: | Area Manager: J. Kozian | | | | | |



CRITICAL RISKS ARE HIGHLIGHTED IN GREY



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Dust Gauge Site 5 in the Summer

Dust Gauge Site 7 in the Winter



Dust Gauge Tubes in the Field Lab

Description

This Standard Operating Procedure (SOP) provides guidelines on procedures to follow when carrying out Dust Gauge Collections.



2 PURPOSE

The purpose of this Standard Operating Procedure is to outline the methodology for collecting dust gauges. This program is aimed at understanding dust deposition rates associated with project activities. Results collected from this program are compiled and placed in the Appendix of the annual AEMP report.

3 SCOPE

3.1 Scope of Procedure

This standard operating procedure (SOP) describes the responsibilities and processes for the deployment, collection and analysis of Dust Gauge Samples. These procedures apply to all Diavik Mine personnel and contractor personnel authorized for sample collection activities.

3.2 Scope of Activities

Twelve-dust gauges (10 sample sites, plus 2 control sites) are established on and around East Island for monitoring airborne dust particles. The-dust gauges are collected quarterly throughout the year.

4 DEFINITIONS

| Definitions | | | | | | | |
|--------------|----------|-------------|----------|----------|----------|-------|---|
| PPE | √ | GPS | √ | DO | × | NTU | × |
| MSDS | x | SOP | √ | DI Water | √ | ELT | × |
| Problem Bear | √ | JHA | V | AEMP | √ | WLWB | × |
| QA | x | Groundwater | × | сос | √ | PAL | × |
| QC | x | Seepage | × | WHMIS | × | ACTS | × |
| Remote Work | √ | SNP | × | TSS | √ | PROVE | × |
| TSP | | | | | | | |

See: ENVI-443-0415 - Environment Term Definitions - Located in: Diavik Intranet - SOPs - Environment Folder



5 RESPONSIBILITIES

See: ENVI-444-0415 - Environment Roles and Responsibilities - Located in: Diavik Intranet – SOPs – Environment Folder

6 PROCEDURE

6.1 Key HSEQ Aspects

| Task Hazards | | | | | | | | |
|-------------------------|-------------|---------------------|-------------|--------------------------------|-------------|-------------------------------|-------------|--|
| Slip, Trip, Fall | \ | Chemical Contact | × | Rotating Parts | √ | Uneven Terrain / Ground | > | |
| Sprain / Strain | > | Fall into Water | > | Firearms / Deterrents | \ | Perception | \ | |
| Working Remotely | > | Overhead Objects | × | Dehydration | > | Risk to Wildlife | > | |
| Aircraft | √ | Visibility | √ | Ergonomics | × | Unfamiliar Area | × | |
| Watercraft Operation | √ | Fire | × | Glass | V | Falling | × | |
| Snowmobile Operation | ✓ | Line of Fire | √ | Fumes / Gases | × | Confined Space | × | |
| Light Vehicle | √ | Cuts Scrapes | √ | Entanglement | × | Heavy Equipment | √ | |
| Lifting | √ | Pinch Points | √ | Stored Energy | √ | Extreme Weather | √ | |
| Manual Labour | ✓ | Noise | ✓ | Burns | √ | Electrical | × | |
| Wildlife | √ | Spills | √ | Equipment Loss or Damage | √ | Sample Loss or Damage | √ | |

See: ENVI-445-0415 - Environment Hazard Definitions - Located in: Diavik Intranet - SOPs - Environment Folder

6.2 CRM Critical Risks

| Critical Risk | Critical Control | | | | |
|-------------------------------|---|--|--|--|--|
| Drowning | PFD | | | | |
| Vehicle collision or rollover | Seat Belt, Defensive driving, Segregation | | | | |
| Vehicle impact on person | Seat Belt, Defensive driving/walking, Segregation | | | | |

Document #:ENVR-508-0112-R5

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| Wildlife | Scans |
|--------------------|-------|
| Aircraft transport | PPE |

6.3 Tools Required

| Supplies, Tools and Equipment | | | | | | | |
|--|----------|--|----------|--|--|--|--|
| Tool / Equipment | Quantity | Supplies | Quantity | | | | |
| Snowmobile(2), Boat or Helicopter | 1 | Winter/Summer/Boat Survival Gear (Set) | 1 | | | | |
| GPS/ Loaded Coordinates | 2 | Spare Batteries | 4 | | | | |
| Satellite Phone | 1 | Personal Gear (per person) | 1 | | | | |
| Spot (per snowmobile) | 1 | Wildlife Deterrents (air horn/banger kit) | 1 | | | | |
| Camera (per person) | 1 | Field Permit and Map | 1 | | | | |
| Radio with spare battery (per person) | 1 | Adjustable Wrench's | 1 | | | | |
| Forceps, Pliers, Leatherman or Tweezers | 1 | Field Sheets | 14 | | | | |
| Clean Replacement Sample Tubes | 6 | Pencils, Pens or Markers | 2 | | | | |
| Glass Beakers (1000 mL) | 6 | Large/Clear/Heavy-duty Plastic Bags or Gloves | 6 | | | | |
| High Temp Oven | 1 | TSS Filters | 12 - 36 | | | | |
| Fire Proof Gloves/Tongs | 1 | Duct Tape | 12 - 36 | | | | |
| Vice Grips | 1 | | | | | | |

6.4 Procedural Steps

6.4..1 Pre-Deployment

Spare tubes are stored in the Environment field lab Shelf B3. **Tubes needs to be cleaned and checked for leaks**. To clean and check for leaks fill spare tubes with water and leave overnight on counter in Environment Lab. If leaks are discovered tag out and make arrangements with truck shop to have them fixed.

6.4..2 Sample Collection and Deployment

Depending on location and season samples are collected using various methods of transportation; you can walk, drive, boat, snowmobile or use a helicopter to access the various

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sites. When using a Helicopter, a Hot Loading Variance is permitted (a JHA must be completed and signed off by OHSE Manager). The map in Figure 1 provides the Dust Gauges locations, and Table 1 provides the coordinates.



Figure 1: Map: Identifying Dust Gauge Sites

Table 1.0 below provides the coordinates for each Dust Gauge Site

| STATION | EASTING | NORTHING | STATION | EASTING | NORTHING |
|---------|---------|----------|---------|---------|----------|
| Dust 01 | 533964 | 7154321 | Dust 8 | 531401 | 7154146 |
| Dust 2A | 535678 | 7151339 | Dust 9 | 541204 | 7152154 |
| Dust 3 | 535024 | 7151872 | Dust 10 | 532908 | 7148924 |
| Dust 4 | 531397 | 7152127 | Dust 11 | 531493 | 7150156 |
| Dust 5 | 535696 | 7155138 | Dust 12 | 529323 | 7151191 |
| Dust 6 | 537502 | 7152934 | Dust C1 | 534979 | 7144270 |
| Dust 7 | 536819 | 7150510 | Dust C2 | 528714 | 7153276 |

 When you arrive at the sample location, first inspect the station for damage (fiberglass tube on ground, station on angle etc.) and document anything noted on the Dust Gauge Collection Field Sheet - ENVI-178-0312.

Carefully remove the copper tube out from the center of the fiberglass shield, keeping it
upright. If the tube is stuck or frozen, try wiggling it, or tapping it near the bottom. If the
tube is still stuck you may need extra leverage to free the tube and may if absolutely
necessary use vice grips to grab the top and wiggle while pulling up. If it will not come
free, you may have to remove the shield and pop the tube out. Be sure to replace the
shield and insert a new tube afterwards. See photo 1 & 2 below



Photo 1: Tube Retrieval



Photo 2: Fiberglass Shield Removed

 Once retrieved, keep the tube upright, place an extra-large latex glove over top of tube and seal with clean plastic bag and duct tape. Ensure tube is labelled with the station

Document #:ENVR-508-0112-R5

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number, date and time collected. Keep the tube upright and secure at all times during transport. See photo 3 below.

Place a clean, leak tested tube into the fiberglass shield (the tube should be labelled with
the Dust Gauge Site, deployment date and time). Note that tubes need to be upright and
secure in the base rims in order for the sample to be considered representative. Some of
the base rims are bent and the tubes will not seat in them properly. When this is the case,
place rocks around the tube within the fiberglass shell to ensure that tube will stay upright.



Photo 3: Sealing the Tube

6.4..3 Sample Analysis

- Once back in the Environment Lab, carefully transfer sample into a triple rinsed 1000ml glass beaker. Extract all debris including bugs and twigs and be sure to triple rinse them into the beaker to capture all the dust particles. Rinse the copper tube with DI water until all dust particles are removed. Record the total volume of water on the Dust Gauge Collection Field Sheet- ENVI-178-0312. If snow is present stand up the sample tube in a clean plastic bag (prevents sample loss if there is a leak) and allow samples to melt before conducting the above procedure.
- Cover the 1000ml beaker with parafilm and store the sample in the fridge until samples
 can be analysed for Total Suspended Solids (ENVI-403-0112). This should be conducted
 as soon as possible because some solids may dissolve in water, especially after snow
 melt. Note that it may take multiple filters to complete one sample.

• The resulting filter(s) with the dust particles are put into ceramic crucibles; ensure that you record the sample id on the crucibles **in pencil** before putting them into the oven. (1 filter per crucible) See photo 4 below.



Photo 4: Ceramic Crucibles with filter

• The high temperature oven is set up in the fume hood with the fan running. Heavy-duty fire-proof gloves and long tongs are used when placing or removing the crucibles from the oven. Filters are processed in the oven at 550 degrees Celsius for one hour. Allow oven to heat up to temperature before use. See photo 5 & photo 6 below.





Photo 5: High Heat Oven



Photo 6: Fire Proof Glove and Long Tongs

- When samples are removed from the oven, place the crucibles into their original labeled tin tray. Let the sample cool for at least 10 minutes before carefully removing the filters from their ceramic crucible using tweezers. Add any dust that has fallen off into the crucible to the top of the filter. Place the tin tray into the desiccator and allow the sample to cool further for a minimum of one hour.
- Remove the tin tray from the desiccator and weigh the filter according to the procedure outlined in the Total Suspended Solids SOP ENVI-403-0112.
- Record the results on the Dust Gauge Data Form (ENVI-178-0312) and in 13.14 Annual Dust Gauge Collection excel file in the P-Drive in for the given year.

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The dust fall deposition rate is determined using the equation below:

Daily Dust fall Deposition $(mg/dm_2/d) = (TP (mg) / SA (dm_2)) / TDD (d)$

Where:

TP (mg) = Total Particulate

SA (dm₂) = Surface Area of Dust Gauge Collection Tube = (3.14*(6.25*6.25))*(100)

TDD = Total Days Gauge was Deployed

Calculations are setup in the excel file. If you have any questions about entering this data contact your supervisor.

7 QUALITY OUTCOMES AND EXPECTATIONS

- **7.1** To safely complete the tasks outlined in this SOP, without incident.
- **7.2** Produce quality, accurate and repeatable results.

Appendix F

Snow Core Survey Standard Operating Procedure (ENVR-512-0213)

DIAVIK DIAMOND MINE

2017 Dust Deposition Report

| Environment STANDARD OPERATING PROCEDURE | | | | | | | |
|--|--|-----------------------|---------------|--|--|--|--|
| Area No.: | 8000 | Document #: Revision: | ENVR-512-0213 | | | | |
| Task Title: | Snow Core Survey | | | | | | |
| | 1 Year from Final Approv Date on approved stamp | | | | | | |

1 REFERENCES/RELATED DOCUMENTS

- **1.1 ENVR-501-0112 SOP Remote Field Safety -** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs
- **1.2 ENVR-605-0112 SOP Snowmobile -** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs
- **1.3 ENVR-301-0112 SOP General Laboratory Safety -** Located in: Diavik Intranet SOPs Environment Folder
- **1.4 ENVR-303-0112 SOP Quality Assurance and Quality Control -** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs
- **1.5 ENVR-206-0112 SOP Chain of Custody and Sample Shipment -** Located in: Diavik Intranet SOPs Environment Folder
- **1.6 ENVR-403-0112 SOP Total Suspended Solids Analysis -** Located in: Diavik Intranet SOPs Environment Folder
- **1.7 ENVI-601-0916- Snowmobile Pre-Op Inspection -** Located in: P:\DDMI Environment\10.0 Operational Control\10.2 Forms\Current Forms\Approved\Check Sheets
- **1.8 ENVI-135-0112 Remote Field Safety Permit -** Located in: P:\DDMI Environment\10.0 Operational Control\10.2 Forms\Current Forms\Approved\Remote Field Safety Plans
- **1.9 ENVI-177-0312 Snow Sampling Field Sheet -** Located in: P:\DDMI Environment\10.0 Operational Control\10.2 Forms\Current Forms\Approved\Water Quality Forms

| | Revision History | | | | | | | |
|----------|--|------------------|-----------------|--|--|--|--|--|
| Revision | Revision Description | Date of Revision | Author | | | | | |
| 0 | Original Issue | 08-FEB-2012 | D. Grabke | | | | | |
| 1 | Updated Map for 2014, added SS3-6, SS3-7, SS3-8 sample points, updated to new environment SOP format | 8-Apr-2014 | D. Grabke | | | | | |
| 2 | Format update | 19-Jul-15 | D. Birch | | | | | |
| 3 | Format update | 06-Dec-15 | G.Reid | | | | | |
| 4 | Format update | 06-Nov-16 | S. Martin-Elson | | | | | |
| 5 | Format and area manager updated | 20-Oct-2017 | S. Skinner | | | | | |



| Authorized Electronically in Documentum By: | | | | |
|---|-----------|--|--|--|
| Area Superintendent: D. Wells | | | | |
| Area Manager: | J. Kozian | | | |



CRITICAL RISKS ARE HIGHLIGHTED IN GREY

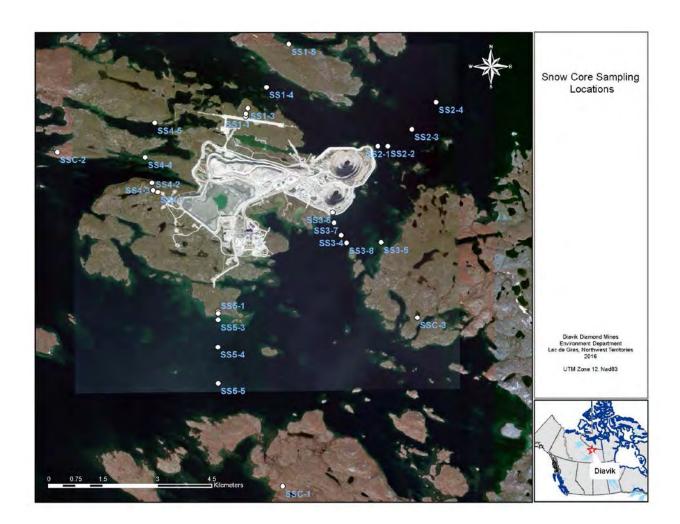


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Snow Survey Sample Program Map

Description

Snow sampling at the Diavik Diamond Mine consists of snow core sampling to monitor dust deposition rates relative to predictions outlined in the DDMI Environmental Effects Report (1998), and snow water quality sampling in support of the DDMI Aquatic Effects Monitoring Program (AEMP).

2 PURPOSE

The purpose of this guide is to promote efficient and accurate snow surveying and to establish uniform sampling procedures.

3 SCOPE

3.1 Scope of Procedure

This standard operating procedure (SOP) describes the responsibilities and processes for collecting, documenting, and processing snow samples from at the Diavik mine site a surrounding Lac de Gras area (during ice cover). This procedure applies to all Diavik Diamond Mines personnel and contractor personnel authorized to collect samples under the current years Aurora Research Institute – Aquatic Effects Monitoring Program (AEMP) Research Permit.

3.2 Scope of Activities

This procedure has been developed to be consistent with the requirements of the AEMP design document and Environmental Effects Monitoring.

4 DEFINITIONS

| Definitions | | | | | | | | |
|--------------|----------|-------------|----------|----------|----------|-------|----------|--|
| PPE | √ | GPS | √ | DO | × | NTU | √ | |
| MSDS | √ | SOP | √ | DI Water | √ | ELT | × | |
| Problem Bear | × | JHA | √ | AEMP | × | WLWB | × | |
| QA | × | Groundwater | × | сос | √ | PAL | × | |
| QC | √ | Seepage | × | WHMIS | √ | ACTS | × | |
| Remote Work | √ | SNP | × | TSS | √ | PROVE | × | |
| TSP | × | | | | | | | |

See: ENVI-443-0415 - Environment Term Definitions - Located in: Diavik Intranet - SOPs - Environment Folder

Document #: ENVR-512-0213-R5

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5 RESPONSIBILITIES

See: **ENVI-444-0415 - Environment Roles and Responsibilities** - Located in: Diavik Intranet – SOPs – Environment Folder

6 PROCEDURE

6.1 Key HSEQ Aspects

| Task Hazards | | | | | | | |
|-------------------------|----------|---------------------|-------------|--------------------------------|----------|-------------------------------|----------|
| Slip, Trip, Fall | ✓ | Chemical Contact | ✓ | Rotating Parts | ✓ | Uneven Terrain / Ground | \ |
| Sprain / Strain | | Fall into Water | \ | Firearms / Deterrents | × | Perception | \ |
| Working Remotely | √ | Overhead Objects | × | Dehydration | \ | Risk to Wildlife | ^ |
| Aircraft | × | Visibility | √ | Ergonomics | √ | Unfamiliar Area | ✓ |
| Watercraft Operation | × | Fire | V | Glass | × | Falling | \ |
| Snowmobile Operation | √ | Line of Fire | √ | Fumes / Gases | √ | Confined Space | ✓ |
| Light Vehicle | \ | Cuts Scrapes | > | Entanglement | \ | Heavy Equipment | × |
| Lifting | × | Pinch Points | √ | Stored Energy | √ | Extreme Weather | √ |
| Manual Labour | ✓ | Noise | × | Burns | √ | Electrical | × |
| Wildlife | √ | Spills | √ | Equipment Loss or Damage | √ | Sample Loss or Damage | √ |

See: ENVI-445-0415 - Environment Hazard Definitions - Located in: Diavik Intranet - SOPs - Environment Folder

6.2 CRM Critical Risks

| Critical Risk | Critical Control |
|----------------------------------|--|
| Wildlife | Scans |
| Vehicle collision or rollover | Seatbelt, Segregation, Defensive Driving |
| Vehicle impact on person | Seatbelt, Segregation, Defensive Driving/Walking |
| Drowning | PFD |
| Exposure to hazardous substances | PPE |
| Fall from height | Stay away from edges |

6.3 Tools Required

| Supplies, Tools and Equipment | | | | | | | |
|--|----------|-------------------------|----------|--|--|--|--|
| Tool / Equipment | Quantity | Supplies | Quantity | | | | |
| Snow Corer & Handles | 1 | Snow Survey Map | 2 | | | | |
| Transport Case | 1 | GPS & Waypoints | 2 | | | | |
| Weighing Scale & Cradle | 1 | Satellite Phone | 1 | | | | |
| Sample Collection Bags & Zip Ties | 20 | Spot Personal Locator | 2 | | | | |
| Black Permanent Marker | 2 | Survival Kit | 1 | | | | |
| Field Data Sheets (Pens/Pencils) & Clipboard | 10 | Ice Rescue Kit | 2 | | | | |
| Snowmobile | 1 | Radio and Spare Battery | 2 | | | | |
| Toboggan | 1 | Coolers | 5 | | | | |
| Camera | 1 | | | | | | |

6.4 Procedural Steps

6.4..1 Planning

6.4..1.1 Program Management

The sampling snow survey will be completed annually in April. The survey design consists of 27 sample stations, including 3 control areas established along 5 transect lines originating from East Island and extending onto Lac de Gras.

Table 1 - Snowcore Sampling Locations

| Transactions | | LITME (MAD 02) | T | Decembelon |
|---------------|-----------|----------------|----------------|-------------|
| Transect Line | Station | UTM E (NAD 83) | UTM W (NAD 83) | Description |
| | SS1-1 | 533911 | 7154288 | Land |
| 1 | SS1-2 | 533924 | 7154367 | Land |
| 1 | SS1-3 | 533966 | 7154517 | Land |
| | SS1-4 | 534485 | 7155094 | Ice |
| | SS1-5 | 535099 | 7156279 | Ice |
| | SS2-1 | 537553 | 7153473 | Ice |
| 2 | SS2-2 | 537829 | 7153476 | Ice |
| 2 | SS2-3 | 538484 | 7153939 | Ice |
| | SS2-4 | 539151 | 7154685 | Ice |
| | SS3-4 | 536585 | 7151002 | Ice |
| | SS3-5 | 537623 | 7150817 | Ice |
| 3 | SS3-6 | 536305 | 7151564 | Ice |
| | SS3-7 | 536344 | 7151366 | Ice |
| | SS3-8 | 536688 | 7150810 | Ice |
| | SS4-1 | 531491 | 7152211 | Land |
| | SS4-2 | 531356 | 7152261 | Land |
| 4 | SS4-3 | 531331 | 7152434 | Land |
| | SS4-4 | 531141 | 7153167 | Ice |
| | SS4-5 | 531405 | 7154116 | Ice |
| | SS5-1 | 533150 | 7148925 | Land |
| | SS5-2 | 533150 | 7148875 | Land |
| 5 | SS5-3 | 533150 | 7148700 | Ice |
| | SS5-4 | 533150 | 7147950 | Ice |
| | SS5-5 | 533150 | 7146950 | Ice |
| | Control 1 | 534983 | 7144271 | Land |
| | Control 2 | 528714 | 7153281 | Land |
| | Control 3 | 538650 | 7148750 | Land |

6.4..1.2 Sampling Requirements – Dust Deposition

Dust deposition will be measured in-house using standard DDMI Total Suspended Solids laboratory procedures ENVR-403-0112. To facilitate this analysis, a composite sample comprised of a minimum of 3 snow cores will be collected at **ALL** (land and Ice) of the snow sampling stations. Water content must add up to a minimum 25 SWE for there to be sufficient water for analysis.



6.4..1.3 Sampling Requirements – Snow Water Quality

Snow water quality samples are required for all sample stations on Lac de Gras identified as **on-ice** locations, as well as at the **three control** areas Table 1 - Snowcore Sampling Locations. Snow chemistry analysis will be conducted by Maxxam Analytics. To facilitate the required analysis Table 2- Snow Water Quality Sample Requirements, a composite sample comprised of a minimum of 3 snow cores with a water Content (SWE) of at least 100 will be collected at all of the snow water quality stations.

| Bottle Filling Sequence | Maxxam Bottle | Analysis | Minimum Volume of Sample Required (ml) | Preservative |
|-------------------------------|--|----------------------------------|--|---------------------------------|
| 1 | Metals | Total ICP Metals (Ultra Low) | 60mL Falcon Tube | 1ml Nitric Acid – HNO₃ |
| 2 | Mercury | Total | 40mL Glass Vial | 1 ml Hydrochloric Acid - HCL |
| 3 | Nutrients | Ammonia | 120mL HDPE | 1 ml Sulfuric Acid |
| 4 | Routine | Sulfates, Nitrates, and Nitrites | 1000mL HDPE | None Required |
| 5 | TSS, Turbidity & pH (Routine, 2 nd Bottle) | TSS, Turbidity & pH | 1000mL HDPE | None Required |
| Total Sample Volume Required | | | 2220ml + 30% Triple Rinse | 3000ml = 100SWE |

Table 2- Snow Water Quality Sample Requirements

Determining anticipated sample volume from Snow Water Equivalent (SWE)

Sample Water (ml) = SWE (cm) x 30(cm²)

3000ml /30cm² = SWE = 100cm SWE

Therefore the aggregate Water Content SWE collected at a sample site must add up to at least 100 to ensure sufficient volume for water quality analysis.

6.4..2 Quality Assurance and Quality Control

Quality Control will be achieved through the use of duplicate and blank samples.

- Duplicate samples will be collected for a minimum 10% of the total samples (both Dust and Water Quality).
- At least two duplicate samples for the dust deposition samples
- At least two duplicate samples for the water quality samples
- One equipment blank will be collected and processed by Maxxam for water quality chemical analysis and internally for TSS. Maxxam DI water batch number will be

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recorded on the field sheet. Equipment blanks will be completed from a single batch of DI water. Ensure that information from the DI water is recorded on the field sheet. Batch ID and Expiry date.

Quality assurance will be achieved via the following processes;

- Field data sheets will be utilized to document any and all observations, or occurrences
 that may impact the integrity of the samples, as well as corrective actions implemented
 to deal with those occurrences.
- If a sample becomes compromised, it will be recorded on the field data sheet, the sample will be discarded and a new sample collected.
- Individuals collecting the samples will take precautions to eliminate sample contamination during handling. Avoid touching insides of sample bags, avoid contacting the snow samples with anything other than the sampling corer.

Steps will be taken prior to, during, and after sampling to ensure all samples are correctly labeled with the sample date, sample ID, and sample type.

6.4..3 Equipment Inspection & Preparation

Prior to commencing the sampling program, inspect all sampling equipment for fouling, contamination, or damage. All of the polyacrylic tubes that will be utilized will be rinsed with a 10% Nitric Acid solution to ensure they are clean prior to the initiation of the program.

Snow Corer – Inspect the core tube to ensure measurement etchings are legible. Check the cutting edge to ensure blade is not deformed or damaged. Inspect the handles and threads to ensure they will assemble and disassemble without binding. Ensure the corer has been de-contaminated (acid rinsed) prior to commencing the program.

Weighing Scale and Cradle – Inspect the scale and cradle for deformity or damage

Snowmobiles – Inspection and use of snowmobiles will be in accordance with ENVR-603-0112

Communication – Inspect all communication equipment (Radios/Sat Phones, Spot Personal Locator) to ensure they are operational and functional. Ensure batteries (including spares) are fully charged. Ensure check-in times and procedures are clearly identified on the Field Work Permit.

Navigation – Inspect GPS and spare batteries to ensure equipment is functioning correctly. Verify that all sample locations are present and correct, and that the GPS Essentials file is loaded. Ensure an appropriate map is present to allow navigation back to site should the GPS fail.

Personnel Gear – In addition to winter survival equipment, each individual participating in off-site activities is expected to carry appropriate personal gear and equipment as is deemed necessary for the individual well being in an emergency situation.

Survival Kit – Inspect survival kit and Ice Rescue kits to ensure that they are complete and all items are functional and ready for use.

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Misc – Individual core samples will be compiled into plastic bags (soil sampling bags) and sealed with zip-ties until they are ready for processing. Prior to the program commencing bags must be inspected to ensure they are new and clean.

6.4..4 Sample Collection

Navigate to the sampling locations – If the sample point falls on or immediately adjacent to the winter road adjusts your location to the nearest area with natural snow coverage (i.e. not impacted by the road or snow clearing).

Assemble the corer by threading the handles onto the tube, and re-inspect the snow corer for fouling and/or damage that may have occurred during transportation.

Fill in station location and weather information on the field data sheet. Identify snow conditions and dust observations in the comments section.

Prior to collecting a sample re-inspect the tube to check for cleanliness.

- Take the weight of the empty snowcorer at each station prior to collecting any samples.
- For all station requiring snow water chemistry, collect the dust sample first this will effectively rinse the corer with ambient snow minimizing cross contamination from locations.

Hold the corer vertically (cutter end down) and drive it through the snow to the ground/ice surface below. Be sure the cutter contacts the ground/ice as compacted snow/ice may feel like the ground and result in an incomplete core.

Before raising the corer, read the depth of the snow (nearest cm) and record on the field datasheet.

Turn the corer at least one full turn to cut the core loose from the ground/ice surface. Carefully raise the corer and record the length of the core extracted. [Note: this could potentially be different from the depth of snow, see next]

Inspect the cutter end of the tube for dirt or litter, with gloves on carefully remove soil and litter from the core. If need be correct the length of the core extracted by subtracting the depth of the soil or litter (plug). Record adjusted core length and litter/soil observations on the field data sheet.

Carefully balance the corer containing the core on the weighing cradle.

• Suspend the corer (like a pendulum) do not hold the corer tube or handles

To ensure and accurate reading, gently tap the scale to be sure it is not sticking or binding.



Read the weight of the tube and core from the graduations on the scale. The scale is marked in cm of water.

Record the weight of the corer and the core to the nearest one-half cm.

To collect the core, lift the tube from the cradle and turn cutter und up. Gently tap the corer and the extracted core will slide out the top end. Be sure to use a clean/new sample bag to catch the core sample.

- Ensure all sample bags are clearly labelled with the station ID, sample type, date, and number of cores included in the composite
- Ensure all bags are sealed using a clean zip-tie

Weigh the empty sampling tube following the first and at least every fourth sample as the weight will change as small particle of water or snow accumulate/cling to the inside and outside of the tube and checking will make the data more accurate. Record the weight of the empty corer on the field data sheet.

Subtract the weight of the empty tube from the weight of the tube and core to obtain the water content of the sample.

Density calculations can be completed back in the lab following the completion of the program.

Density (g/cm³) = Total SWE Collected (g/cm²*) / Total Snow Core Length Collected (cm)

*assumes pure water density 1g/cm³

Prior to moving to the next sampling location ensure the field datasheet is complete.

6.4..5 Sample Processing

Prior to processing, all samples must be kept in a frozen state to minimize sample degradation.

When preparing the samples for decanting and analysis, remove the sample bags from the freezer. Check to ensure that the top of the bag is well twisted and the zip-tie is tight. Place the sample bag into a new (clean) sample bag and affix a zip-tie to seal the second bag. This double bagging will help to ensure no sample is lost during the melting process. To process samples, they will require anywhere from 12-36 hours to thaw at room temperature.

Place the sealed sample bags upright in clean coolers in the lab to thaw overnight.

Once a sample is completely melted it is ready for processing.

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Sample volume can be determined using a scale accurate to 1g, set up scale, tare the sampling basin with two bags and 2 zip-ties. Place sample bags in the basin and record the weight of each of the bags on the field sheet.

Dust deposition samples will be processed in the DDMI Lab for TSS.

- The entire volume of sample must be processed this may require the use of multiple filters.
- For samples with large quantities of organics (twigs/leaves etc.) it may be necessary to sieve the sample through a course filter prior to processing.
- Given the possibility of the samples containing organic matter, sample filters will be dried in the high temperature oven (650°F) for 1hr to burn off any organics on the filter.
- Allow Samples to cool in the desiccator prior to weighing the filters.

Snow Water Quality samples will be decanted to fill the appropriate (pre-labelled) Maxxam sample bottles as per standard water sampling procedures. Any excess sample water can be discarded.

6.4..6 Sample Chain of Custody

Samples will be shipped to Maxxam Analytics as per ENVR-206-0112 – CHAIN OF CUSTODY & SAMPLE SHIPPING – and accompanied by COC documentation.

7 QUALITY OUTCOMES AND EXPECTATIONS

- **7.1** To safely complete the tasks outlined in this SOP, without incident.
- **7.2** Producing quality, accurate and repeatable results.

Appendix G

Quality Assurance/Quality Control Standard Operating Procedure (ENVR-303-0112)

DIAVIK DIAMOND MINE

2017 Dust Deposition Report



| | ENVIRON STANDARD OPERAT | | Ē |
|----------------|------------------------------------|-------------------|---------------|
| Area No.: | 8000 | Document #: | ENVR-303-0112 |
| | | Revision: | 4 |
| Task Title: | Quality Assurance/Quality C | ontrol | |
| | Supersedes: ENV SOP 303 | | |
| FOR DOCUME | NT CONTROL USE ONLY: | | |
| Next Review: | 1 year from Area Manager A | uthorized Signatu | re Date below |
| Effective Date | : See Area Manager Authorize | ed Signature Date | below |

1 REFERENCES/RELATED DOCUMENTS

- **1.1 ENVI-656-0117 DDMI Environment Lab Training** Located in: P:\DDMI Environment\10.0 Operational Control\10.13 CALA Certification\Approved Quality Manual Documents\5.2 Training
- **1.2 ENVR-301-0112 SOP- General Laboratory Safety -** Located in: Diavik Intranet SOPs Environment Folder
- **1.3 ENVR-206-0112 SOP- Chain of Custody & Sample Shipping -** Located in: Diavik Intranet SOPs Environment Folder
- **1.4 ENVI-133-0112 Aquatic Effects Field Sheet -** Located in: P:\DDMI Environment\10.0 Operational Control\10.2 Forms\Current Forms\Approved\Water Quality Forms
- **1.5** ENVI-134-0112 1645-19 SNP Monitoring Field Sheet Located in: P:\DDMI Environment\10.0 Operational Control\10.2 Forms\Current Forms\Approved\Water Quality Forms
- 1.6 ENVI-668-0117 DDMI Environment Lab Equipment Management Located in: P:\DDMI Environment\10.0 Operational Control\10.13 CALA Certification\Approved Quality Manual Documents\5.5 Equipment
- 1.7 ENVI-669-0117 DDMI Environment Lab Measurement Traceability Located in: P:\DDMI Environment\10.0 Operational Control\10.13 CALA Certification\Approved Quality Manual Documents\5.6 Measurement Traceability
- 1.8 ENVI-653-0117 DDMI Environment Lab Record Control Located in: P:\DDMI Environment\10.0 Operational Control\10.13 CALA Certification\Approved Quality Manual Documents\4.13 Record Control
- 1.9 ENVI-650-0117 DDMI Environment Lab Document Control Located in: P:\DDMI Environment\10.0 Operational Control\10.13 CALA Certification\Approved Quality Manual Documents\4.3 Document Control
- **1.10 ENVR-403-0112 SOP Total Suspended Solids Analysis -** Located in: Diavik Intranet SOPs Environment Folder



ENVIRONMENT STANDARD OPERATING PROCEDURE Quality Control/Quality Assurance

- **1.11 ENVR-404-0112 SOP pH Analysis -** Located in: Diavik Intranet SOPs Environment Folder
- **1.12 ENVR-405-0112 SOP Turbidity Analysis -** Located in: Diavik Intranet SOPs Environment Folder
- **1.13 ENVR-604-0112 SOP Field Meter -** Located in: P:\DDMI Environment\10.0 Operational Control\10.1 SOPs\Working SOPs

| | Revision History | | | | | | |
|----------|--|------------------|------------|--|--|--|--|
| Revision | Revision Description | Date of Revision | Author | | | | |
| 0 | Initial Release | 01-Jan-12 | D. Grabke | | | | |
| 1 | Formatting | 08-Dec-15 | D. Birch | | | | |
| 2 | Revision of QC schedule and measures | 29-May-16 | N. Goodman | | | | |
| 3 | CALA Updates | 15-Dec-16 | N. Goodman | | | | |
| 4 | Update to template, area manager and CRM | 21-Oct-17 | A. Hehn | | | | |

| Authorized Electronically in Documentum By: | | | | |
|---|-----------|--|--|--|
| Area Superintendent: | D. Wells | | | |
| Area Manager: | J. Kozian | | | |

(Document owners will be prompted annually to update content; however, changes may or may not result.)

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CRITICAL RISKS ARE HIGHLIGHTED IN GREY

Please click on the CRM Risks that are applicable for this SOP







































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| Internal QA/QC |
|----------------|
| LABBW |
| LDUPW1/ LDUPW2 |
| DUPRDGS |
| EBINT |

| External QA/QC KEY | | | | | |
|--------------------|---|-------|--|--|--|
| -1 | = | EBW | | | |
| -2 | = | FBW | | | |
| -3 | = | TBW | | | |
| -4 | = | DUPW1 | | | |
| -5 | = | DUPW2 | | | |
| -6 | = | DLS | | | |

 $\frac{\textbf{Description}}{\textbf{This SOP reviews the quality assurance and quality control measures we use to ensure best}$ practices are being utilized while collecting and analysing samples.

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2 PURPOSE

The Objective of this Standard Operating Procedure is to establish consistent and uniform criteria and procedures to be implemented for laboratory activities undertaken during water quality analysis to ensure environmental data generated and processed is scientifically valid.

This SOP is intended to define Environmental Quality Assurance (QA) and Quality Control (QC) measures in place to ensure all data generated in the DDMI Environment Laboratory shall be of known precision and accuracy, be complete, representative, and comparable.

3 SCOPE

3.1 Scope of Procedure

This procedure applies to all Diavik Diamond Mines personnel and contract personnel authorized by the Environment Superintendent to collect, analyse and ship samples. All persons conducting analyses in the DDMI laboratory are required to read, understand, and fully comply with the methods outlined in the SOP for each analytical test conducted, respectively.

This procedure has been developed to be consistent with the requirements of the Rio Tinto HS & E standards.

4 DEFINITIONS

| Definitions | | | | | | | |
|--------------|--------------|-------------|--------------|----------|---|-------|----------|
| PPE | \checkmark | GPS | \checkmark | DO | × | NTU | × |
| MSDS | × | SOP | √ | DI Water | × | ELT | ✓ |
| Problem Bear | × | JHA | √ | AEMP | × | WLWB | × |
| QA | × | Groundwater | × | сос | × | PAL | × |
| QC | × | Seepage | × | WHMIS | × | ACTS | × |
| Remote Work | √ | SNP | × | TSS | × | PROVE | × |
| TSP | × | | | | | | |

See: ENVI-443-0415 - Environment Term Definitions - Located in: Diavik Intranet - SOPs - Environment Folder

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5 RESPONSIBILITIES

See ENVI-444-0415 - Environment Roles and Responsibilities - Located in: Diavik Intranet - SOPs - Environment Folder

6 PROCEDURE

6.1 Key Safety Aspects

| Task Hazards | | | | | | | |
|-------------------------|----------|---------------------|----------|--------------------------------|----------|-------------------------------|----------|
| Slip, Trip, Fall | \ | Chemical Contact | × | Rotating Parts | \ | Uneven Terrain / Ground | ✓ |
| Sprain / Strain | \ | Fall into Water | × | Firearms / Deterrents | \ | Perception | × |
| Working Remotely | ✓ | Overhead Objects | × | Dehydration | × | Risk to Wildlife | ✓ |
| Aircraft | √ | Visibility | × | Ergonomics | × | Unfamiliar Area | × |
| Watercraft Operation | × | Fire | × | Glass | × | Falling | × |
| Snowmobile Operation | × | Line of Fire | √ | Fumes / Gases | √ | Confined Space | × |
| Light Vehicle | × | Cuts Scrapes | × | Entanglement | × | Heavy Equipment | × |
| Lifting | × | Pinch Points | √ | Stored Energy | × | Extreme Weather | √ |
| Manual Labour | × | Noise | √ | Burns | × | Electrical | × |
| Wildlife | √ | Spills | √ | Equipment Loss or Damage | × | Sample Loss or Damage | × |

See: ENVI-445-0415 - Environment Hazard Definitions - Located in: Diavik Intranet - SOPs - Environment Folder

6.2 CRM Critical Risks

| Critical Risk | Critical Control | | |
|---------------|------------------|--|--|
| N/A | N/A | | |

Document #: ENVR-303-0112 R4

This is not a controlled document when printed

Effective Date: See Area Manager Authorized Signature Date on Page 1



6.3 Procedural Steps

6.3.1 Quality Assurance (QA)

Quality assurance for the environmental laboratory encompasses all quality-related activities that ensure the validity of aquatics testing and analysis and all relevant technical support. All DDMI environment personnel, from management to field laboratory technicians, are required to conscientiously follow applicable quality control measures and standard operating procedures (SOPs). Adherence to these documents, combined with staff vigilance, can help ensure that the analytical data and other test results collected will be acceptable as the bases for making significant decisions.

The DDMI laboratory ("the lab") encompasses a broad range of activities including preparation of samples for internal analytical processing, calibration and maintenance of equipment, data management, and sample handling for external analysis.

Our approach to quality assurance places an emphasis on four aspects:

- Infrastructure (instruments, testing capabilities, calibrations, SOP's)
- Control Measures (internal/external)
- Personnel (competence, ethics, and integrity)
- Data Management/Control of Non-Conforming Work

The quality of the outputs is at risk if any of these four aspects are deficient in any way.

6.3.2 Infrastructure

6.3.2.1 Equipment

All equipment is to be maintained and operated in accordance with manufacturer instructions and SOPs. Modifications to equipment/equipment settings/any issues are to be recorded in the spreadsheet in the relevant Equipment folder, which is accessible to all staff and should be regularly consulted during troubleshooting, as per ENVI DDMI Environment Lab - Equipment Management.

6.3.2.2 Testing Capabilities

Continued testing capability is verified through a regular (semi-annual) program of Proficiency Testing (PT). Environmental conditions within the lab (such as sample storage areas, as well as within test-specific equipment such as ovens and desiccators) shall be maintained such that the exact requirements of specific methods are met and testing capability is not impaired. Furthermore, lab management has a responsibility to review new editions of external method reference documents (such as the Standard Methods) whenever a new edition is released to ensure continued consistency with internationally approved best practice.

Document #: ENVR-303-0112 R4

This is not a controlled document when printed

Effective Date: See Area Manager Authorized Signature Date on Page 1



6.3.2.3 Calibrations

Calibrations are performed regularly on all pieces of lab equipment with the potential to impact test results, following a predefined schedule and bearing traceability to SI units wherever possible. When performed internally, calibrations are always done in accordance with method SOPs. All observations and maintenance actions must be reported in the QA/QC Lab Performance logbook.

The logbook must also keep record of the instrument calibration history. Calibration records for fixed and portable laboratory measuring equipment, and individual monitoring devices, shall be maintained and include dates, personnel, and specifics of calibration standards and reference solutions. Instrument calibration procedures and schedules are clearly outlined in individual SOP's.

More details on calibrations and calibration records are available in <u>ENVI-669-0117 R0 DDMI</u> <u>Environment Lab – Measurement Traceability</u>, <u>ENVI-670-0117 R0 DDMI Environment Lab – Record Control</u>, and <u>ENVI 650-0117 R0 DDMI Environment Lab – Document Control</u>

6.3.2.4 Purchasing and Verifying Supplies and Services

Services and supplies that affect the quality of tests and/or calibrations shall be purchased only from suppliers that have been investigated and approved. Suppliers shall only be approved when they have been verified as complying with standard specifications or requirements defined in the methods for the tests and/or calibrations concerned. All received supplies will be compared against their accompanying purchase documents, and their reception and specifications must be recorded. Supplies must be verified prior to use according to ENVI-651-0117 DDMI Environment Lab - Purchasing Supplies and Services

6.3.3 Internal Quality Control (QC) Measures

Laboratory quality control consists of both internal and external checks on precision and accuracy of analytical results. Employees are trained in quality control and good lab practices through the lab analyst certification process (ENVI-560-0616, ENVI-561-0616, ENVI-562-0616). An annual performance evaluation ensures that the integrity of analytical procedures remains intact.

Best practices in water quality monitoring dictate that QC samples will comprise at least 10% of all samples analyzed, and more as required to maintain assurance of quality across homogenous sampling matrices and conditions. Due to high sample volumes, the DDMI Environment department performs more than 10% internal QC in order to ensure that any errors or sources of contamination in procedures or equipment are caught immediately. No batch of samples is ever analyzed without some form of internal QC (at least a Lab Blank, below).

Document #: ENVR-303-0112 R4

This is not a controlled document when printed

Effective Date: See Area Manager Authorized Signature Date on Page 1



ENVIRONMENT STANDARD OPERATING PROCEDURE

Quality Assurance/Quality Control

Internal Quality Control sample types (descriptions below) consist of: Lab Blanks (LBW), Lab Duplicates (LDUPW1/LDUPW2), Duplicate Readings (DUPRDGS), Laboratory Splits (DLS), and Internal Equipment Blanks (EBINT). Results of Internal Quality Control samples are recorded as per <u>ENVI-670-0117 RO DDMI Environment Lab – Record Control</u>, and reviewed by Environment Supervisors to detect trends.

Lab Blanks (LABBW)

A laboratory blank is a sample comprised of deionised (DI) water, prepared in the lab, which remains in the lab for analysis. This blank is exposed to any and all reagents that are used in the analytical process and is carried through the entire analytical processes including any filtration required. Lab blanks may identify unsuspected contaminates associated with DI water purity, improper cleaning procedures, filters or air contaminants in the lab. LABBWs are the most frequent form of QC at DDMI and occur every day that samples are analyzed.

Lab Duplicates (LDUPW1/LDUPW2)

A laboratory duplicate consists of a single sample to be analyzed twice internally (using the same techniques) as though it is two separate samples. The entire lab procedure is repeated twice, using two separate aliquots of water poured from the same sample bottle. Lab duplicates evaluate analytical precision and sample homogeneity, as well as consistency of lab and operator procedures. LDUPW1/LDUPW2 are the most frequent form of QC at DDMI and occur every day that samples are analyzed.

*in Monitor Pro 5 (MP5), under regular sample data entry, the sample that is to be the LDUP is assigned a sample type of "LDUPW1." Then, in the data entry section for that day's LDUPW1/LDUPW2, the corresponding sample site is to be assigned a sample type of "LDUPW2."

Duplicate Readings (DUPRDG)

Duplicate readings are intentionally obtained during the analysis of samples, with a single sample being read twice. The only aspect of the lab procedure to be repeated is the actual measurement, with sample preparation occurring only once on a single sample. Variability between duplicate readings can be attributed to instrumentation or operator error, rather than variation in the sample. Note that field meters are included in DUPRDGS.

Allowable Discrepancy Limits between LDUPWs and DUPRDGs

If the relative percent difference (RPD) exceeds 20% when analyte concentrations are ≥ 5 times the detection limit (DL), the environment supervisor must be informed so that the data can be flagged and sampling/analytical methods and instrumentation performance can be reviewed. Relevant DLs for DDMI laboratory analysis are:

TSS - 0.3mg/L

Turbidity – 0.15 NTU

This is not a controlled document when printed

Document #: ENVR-303-0112 R4 Effective Date: See Area Manager Authorized Signature Date on Page 1

Conductivity – 0.9uS/cm

pH has no applicable detection limit.

Laboratory Splits (DLS)

A laboratory split consists of a single sample divided into two aliquots, one to be analyzed internally, and the other to be sent to an external lab using the same techniques to analyze their aliquot so that the two results would be compared. Variability of results must be considered carefully in light of analyte hold times. RPD between duplicate samples will be assessed by environment supervisor.

Equipment Blanks, Internal (EBINT)

An aliquot of DI water is subjugated, in the DDMI Environmental Laboratory, to all aspects of sample collection and analysis, using the same procedures that are utilized in the field, including contact with all sampling devices and apparatus (e.g. tubing, jars, samplers, filters). The purpose of the equipment blank is to determine if the sampling devices and apparatus for sample collection have been adequately cleaned before they are utilized at the field sampling location

6.3.4 Internal QC Scheduling

DDMI Environment internal QC falls under two schedules: Station-Dependent Internal QC and Station-Independent Internal QC. Station-Dependent Internal QC is tied to different sample matrices and is included in regular sampling schedules in MP5 (ex. samplers will be required to complete one EBINT with every set of monthly pond sampling.)

| Station-Dependent | | QC Frequency per sampling event | | | |
|-----------------------------------|------------------------|---------------------------------|--------|---------|--|
| Internal QC | | | | | |
| Sample Matrix Sampling Frequency* | | EBINT | DLS | DUPRDGS | |
| Ponds | Monthly | Every event | none | none | |
| Diffuser | Monthly | Every event | none | none | |
| PKC | Monthly | n/a | 1 in 4 | 1 in 4 | |
| UG /clarifiers | G /clarifiers Biweekly | | none | none | |
| NIWTP Influent/Effluent | 6 days | n/a | none | none | |

Document #: ENVR-303-0112 R4

This is not a controlled document when printed

Effective Date: See Area Manager Authorized Signature Date on Page 1

ENVIRONMENT STANDARD OPERATING PROCEDURE

Quality Assurance/Quality Control

*Note that sampling frequency refers to the frequency with which the entire set of samples is taken, and not the number of sites sampled (ex. the monthly pond sampling includes **10** sample sites but compromises **1** sampling event.)

Station-Independent Internal QC is not tied to any particular sample matrix and QC sample types are scheduled as stand-alone events in MP5.

| Station-Independent Internal QC | Frequency | | |
|------------------------------------|------------------------------|--|--|
| LABBW | Daily when samples collected | | |
| LDUPW | Daily when samples collected | | |

6.3.5 External Quality Control (QC) Measures

External QC samples comprise ~ 10% of all samples analyzed and are spaced across sampling matrices and sample events to capture as much process homogeneity as possible. With the exception of Trip Blanks (below), external quality control samples are prepared by DDMI Environment staff, who subjugate them to the relevant procedures. All external QC samples are then shipped off-site to a qualified external laboratory, where all analysis is conducted.

External QC sample types consist of Trip Blanks (TBW), Equipment Blanks (EBW), Field Blanks (FBW), and Duplicates (DUPW1/DUPW2). Results of External Quality Control samples are recorded as per ENVI-670-0117 RO DDMI Environment Lab — Record Control, and reviewed by Environment Supervisors to detect trends.

Trip Blanks (TBW)

A Trip Blank is an aliquot of laboratory grade distilled water, which is received from an external lab, in the same type of container that is required for the analytical test. The trip blank is sealed and labelled in the external lab from which it originates. Upon our receipt of the trip blanks they are to be stored, sealed, at \sim 4°C until such a time as they are to be utilized (no longer than 1 month). When utilized, trip blanks travel with the sampling cooler from the laboratory to the sampling site and back to the laboratory without being opened. The trip blank is then packaged and shipped to the originating laboratory to be analyzed. The purpose of the trip blank is to verify that no sample contamination occurred during transportation or sampling operations.

Equipment Blanks (EBW)

An aliquot of DI water is subjugated, in the Environment laboratory, to all aspects of sample collection and analysis, using the same procedures that are utilized in the field, including contact with all sampling devices and apparatus (e.g. tubing, jars, samplers, filters). The purpose of the equipment blank is to determine if the sampling devices and

Document #: ENVR-303-0112 R4

This is not a controlled document when printed

Effective Date: See Area Manager Authorized Signature Date on Page 1

apparatus for sample collection have been adequately cleaned before they are utilized at the field sampling location.

Field Blanks (FBW)

An aliquot of DI water is subjugated, in the field, to all aspects of sample collection and analysis, using the same procedures that are utilized in the field, including contact with all sampling devices and apparatus (e.g. tubing, jars, samplers, filters). The purpose of the field blank is to demonstrate that sample contamination has not occurred during field sample collection and processing.

Duplicates (DUPW1/DUPW2)

Co-located samples are independent samples collected as close as possible to the same point in space and time and are intended to assess precision of the entire program (field and laboratory components). The use of replicates for this purpose assumes that the variability between DUPW1 and DUPW2 is affected by the sampling method or technician. In most cases natural variability between samples collected in close succession will be low. When performing duplicate samples, the second sample will consist of each bottle that is regularly collected for that station, including the DDMI internal routine bottle.

*in MP5, under regular sample data entry, the sample that is to be the DUPW is assigned a sample type of "DUPW1." Then, in the data entry section for that day's DUPW1/DUPW2, the corresponding sample site is to be assigned a sample type of "DUPW2."

6.3.6 External QC Scheduling

DDMI Environment external QC is entirely station-dependent, and QC types have different frequencies for each sample matrix that are programmed into MP5.

| Externa | QC Frequency per sampling event | | | | | |
|----------------|---------------------------------|--------|--------|---------|--------|---------------------------------------|
| Sample Matrix* | Sampling Frequenc y | DUPW | FB | ТВ | ЕВ | Total % External QC (all types) |
| Ponds | Monthly | 1 in 2 | 1 in 6 | 1 in 6 | 1 in 3 | 11.7 |
| Diffuser | Monthly | 1 in 1 | 1 in 6 | 1 in 6 | 1 in 3 | 11.1 |
| PKC | Monthly | 1 in 2 | 1 in 8 | None | n/a | 12.5 |
| UG /clarifiers | Biweekly | 1 in 6 | 1 in 6 | 1 in 12 | n/a | 10.4 |

Document #: ENVR-303-0112 R4

This is not a controlled document when printed

Effective Date: See Area Manager Authorized Signature Date on Page 1



| Total QC type per month** | | 3.16 | 1.21 | 0.91 | 0.66 | 5.94 QC/month 11.2 % Ext. QC |
|----------------------------|--------|--------|---------|---------|------|---------------------------------|
| NIWTP Influent/Effluent | 6 days | 1 in 6 | 1 in 12 | 1 in 12 | n/a | 11.1 |

^{*}See ENVR-477-0815 - SOP A21 DCMP for A21 QC instructions/schedule

6.4 Data Management

6.4.1 External Sample Tracking - Chain of Custody

All samples collected, packaged and shipped to external laboratories are tracked via Chain of Custody documentation. The CoC record is used to document change in possession from sampling to delivery to receipt by the external analytical laboratory. CoC procedures are clearly outlined in ENVR-206-0112 - SOP- Chain of Custody.

6.4.2 Internal Sample Tracking

All samples collected are documented in Monitor Pro 5 on the Environment iPads as per the regular sampling schedule.

6.4.3 Data Recording/Record Keeping

The lab has a procedure in place (<u>ENVI-670-0117 RO DDMI Environment Lab – Record Control</u>), to ensure accurate and appropriate record keeping and review of records.

6.4.4 Data Reporting

Immediately following laboratory analyses, all records are transferred from the applicable field sheets, to their respective electronic databases.

Laboratory supervisors will regularly review the electronic databases to ensure that laboratory recordkeeping meets the aforementioned elements. Results can then be queried and exported as required from MP5 for reporting purposes.

Reporting considerations for individual methods can be found both in individual Method Validations and summarized in method SOPs.

Document #: ENVR-303-0112 R4

This is not a controlled document when printed

Effective Date: See Area Manager Authorized Signature Date on Page 1

^{**}Again, note that sampling frequency refers to the frequency with which the entire set of samples is taken, and not the number of sites sampled (ex. the monthly pond sampling includes **10** sample sites but compromises **1** sampling event.)



6.5 Control of Nonconforming Testing and/or Calibration Work

The lab has procedures in place to define responses to nonconforming test or calibration work or results (ENVI-652-0117 DDMI Environment Lab – Control of Nonconformances) Testing and/or Calibration Work). This procedure covers responsibility and authority pertaining to management of nonconforming work, evaluation of non-conformance significance, and guidelines for corrective action. Environment Supervisors are to ensure that all employees are trained in this procedure.

6.5.1.1 Corrective and Preventive Action

The laboratory has procedures (<u>ENVI-652-0117 DDMI Environment Lab – Control of Nonconformances</u>) in place to provide guidelines for both corrective action (as per 6.4, above, and also pertaining to departures from policies and procedures in the management system or technical operations). Procedures also provide guidance on identifying and incorporating preventive action (addressing needed improvements and potential sources of management or technical nonconformities).

6.5.1.2 Continual Improvement

The laboratory shall continually improve the effectiveness of its QAQC system and produced data through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

6.6 Personnel

6.6.1 Competency – Certification of Analyst Proficiency

Certification of Analyst Proficiency is the process for assessing and recognizing the technical competence and the effective quality processes of the DDMI Environment Laboratory and staff.

Staff proficiency means that an individual is capable of performing specified test methods and procedures correctly, and familiar with all related policies and procedures pertaining to lab quality as referenced in the Quality Manual. Staff will be trained and tested so as to document their competence for the range of activities they will be expected to perform in the lab, in accordance with all method SOPs.. A performance evaluation will be conducted annually at a minimum, to ensure that staff are fully trained and competent.

Details on staff training are available in <u>ENVI-656-0117 R0 DDMI Environment Lab – Training.</u>

Document #: ENVR-303-0112 R4

This is not a controlled document when printed

Effective Date: See Area Manager Authorized Signature Date on Page 1



6.6.2 Ethics

Ethics is a set of moral principles, code for right and wrong, or behaviour which conforms to acceptable professional practices.

All employees at all times shall conduct themselves in an honest and ethical manner.

Examples of unethical behaviour include but are not limited to the following:

- Improper manipulation of data or software
- Improper handling of data errors, non-compliant data, or QC outliers
- · Lack of reporting unethical behaviour of others
- Artificially fabricating results
- Misrepresenting data such as peak integration, calibration, tuning, or system suitability
- Improper clock setting to meet holding times
- Intentional deletion of non-compliant data

An employee must report any suspected unethical behaviour or fraudulent activities to the Environment Supervisor.

7 QUALITY OUTCOMES AND EXPECTATIONS

- **7.1**To safely complete the tasks outlined in this SOP, without incident.
- **7.2**Producing quality, accurate and repeatable results.