MARTEN LAW

February 28, 2019

Ms. Elizabeth McKenna
Assistant Regional Counsel
Environmental Protection Agency
Region 10
Park Place Building
1200 6th Avenue
Seattle, WA 98101

Re: Submittal of Supplemental Groundwater Data; Stibnite Gold Project

Dear Ms. McKenna:

On behalf of Midas Gold Idaho, Inc., I am writing to bring to the attention of the Environmental Protection Agency, Region 10 ("EPA") the results of recent groundwater sampling at the Stibnite Gold Project ("SGP" or "Project"). Midas Gold Idaho, Inc. and its corporate parent, Midas Gold Corporation (collectively, "Midas Gold" or "Company") are, jointly, a bona fide prospective purchaser ("BFPP") under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, codified as amended at 42 U.S.C §§ 9601-9675 ("CERCLA") with respect to their patented private lands on the Project Site acquired pursuant the 1872 Mining Law.[1] BFPP status is an exclusion from liability under CERCLA, and Midas is providing this information consistent with CERCLA § 101(40) to maintain that status.

EPA should have already received from the Payette National Forest ("PNF"), the SGP National Environmental Policy Act ("NEPA") lead agency, sampling results showing elevated levels of arsenic and antimony in groundwater at the SGP Project Site. This information has been gathered since 2012 in connection with Midas Gold's baseline characterization of the Site and in support of the NEPA review of the Plan of Restoration and Operations ("PRO") for the Stibnite Mine. I understand that Senior Management of Midas Gold met with you and others at EPA on December 17, 2018 and provided you a briefing that discussed SGP Site water quality as well as outlining the reasonable steps the Company is and has been taking on the Site pursuant to CERCLA.

In compliance with CERCLA § 101(40)(B), Midas Gold exercised all appropriate inquiry prior to perfecting title to its patented private lands on the Project Site. However, CERCLA requires that in order to maintain BFPP status, landowners must fulfill

1. Idaho Gold Resources Company, LLC and Stibnite Gold Company (a wholly owned subsidiary of Idaho Gold Resources Company, LLC), control patented and unpatented millsite and lode claims at the SGP. Idaho Gold Resources Company, LLC is a wholly owned subsidiary of Midas Gold Corporation. Midas Gold Idaho, Inc. provides management services to Idaho Gold Resources Company, LLC and Stibnite Gold Company and will operate the Project on their behalf.

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continuing obligations, including exercising appropriate care and providing notice with respect to discovered hazardous substances and providing full cooperation, assistance and access to persons authorized to conduct response actions or natural resource restoration at a facility. CERCLA §§ 101(40)(C)-(E). Midas Gold has been, and is presently, complying with these continuing obligations under CERCLA to maintain its BFPP status and attendant liability protection and fully comply with the law.

EPA Region 10 is a signatory to FS Agreement No. 2017-0412-Stibnite Gold-MU-02a (August 2017) ("Joint Review Agreement") and is thus a cooperating agency for the Stibnite Gold Project Environmental Impact Statement under NEPA. EPA entered into Joint Review Agreement under its various authority under the Clean Air Act and Clean Water Act, *see* Joint Review Agreement at page 3.

On June 30, 2017, as a part of the Stibnite Gold Project permitting process and NEPA review, Midas Gold provided the PNF information from water quality monitoring from 2012 through Q2 2016 indicating elevated arsenic and antimony levels in groundwater beneath the Project Site. A copy of that electronic correspondence is enclosed as Attachment A. Pursuant to NEPA information sharing protocols, the PNF was obligated to provide a copy of this information to EPA Region 10 as well as the other cooperating agencies, which obligation we assume they completed.

Consistent with Midas Gold's ongoing assessment of the current Site conditions, the Company has just completed the latest Water Quality Summary Report supplementing previously-provided data which is now inclusive of data collected through the remainder of 2016 and all of 2017. That report is enclosed as Attachment B. We will also be transmitting this report to PNF through the customary NEPA information sharing protocols with the understanding it will be distributed to the cooperating agencies, including EPA. A Water Quality Summary Report for calendar year 2018 is nearing completion and will be provided to PNF soon as well.

The most current Water Quality Summary Report includes measurements of elevated arsenic and antimony in ground and surface water sampling locations across the Site. One alluvial monitoring well (MWH-A19) has measured particularly high arsenic concentrations; typically ranging from 3,000 to 6,000 µg/L and as high as 7,520 µg/L from a sample gathered in Q2 2017. By comparison, the arsenic concentration measured in the East Fork of the South Fork of the Salmon River ("EFSFSR") near this location (site YP-SR-04) during the same quarterly monitoring period was measured at 48.4 µg/L.

It is unclear why these elevated arsenic levels were measured at MWH-A19, but its location is downgradient of a legacy Forest Service constructed repository for hazardous material that is adjacent to the EFSFSR. Other potential sources of the elevated arsenic and antimony in ground and surface water at the Site may also include naturally occurring, *in situ* mineralized rock, as well as development rock, spent ore, and milled tailings from historical mining operations. The latter were deposited primarily during World War II and the Korean War era.

Under Midas Gold's continuing CERCLA legal obligations and, more importantly, its dedication to the proper stewardship of the Site and surrounding area, Midas Gold has and will continue to provide full cooperation, assistance, and access to persons who are authorized to conduct response actions or natural resource restoration on the Stibnite Gold Project Site pursuant to CERCLA § 101(40)(E). Midas Gold remains committed to providing EPA Region 10 whatever additional information or assistance that the agency might find helpful in evaluating the information the Company is providing.

As you are aware, Midas Gold's PRO contains a comprehensive plan for the removal, remediation, reclamation and restoration of legacy contamination and addressing of legacy impacts across much of the Site.

Please give me a call if you have any questions about this letter. We continue to appreciate your involvement in the Midas Gold project.

Sincerely,

Bradley M. Marten

cc: Jim Werntz
Lynne Hood

Attachment A

From: Brandy Lapthorne
Sent: Friday, June 30, 2017 5:01 PM
To: Piper Goessel <kgoessel@fs.fed.us>; Valerie Porter <valerie.porter@aecom.com>
Cc: Glindeman, Todd (TGlindeman@brwncald.com) <TGlindeman@brwncald.com>; 'Alan Haslam' <ahaslam@agrium.com>; Shelley Bennett <sbennett@midasgoldinc.com>; Bob Barnes (bbarnes@midasgoldcorp.com) <bbarnes@midasgoldcorp.com>; Shepherd, Maria <maria.shepherd@aecom.com>; Rowles, Lisa (lrowles@BrwnCald.com) <lrowles@BrwnCald.com>; Steinpress, Martin (msteinpress@BrwnCald.com) <msteinpress@BrwnCald.com>
Subject: Midas - WRSR and SW/GW Baseline Reports

Piper/Valerie

The following documents have been uploaded to the Project SharePoint Site at the following location:

1. Water Resources Summary Report (WRSR) [https://midasgoldsp.aecomonline.net/Shared Documents/Midas Gold Transfer/Baseline/WR Summary Report]
    a. This WRSR summarizes the information contained in the following four baseline study reports. This document was created to assist the Forest Service/AECOM in understanding surface water and groundwater resources at the site and surface water/ groundwater interaction. It combines the water resources baseline studies with geologic information and an overview of the historical mine features into a comprehensive document that summarizes and analyzes the data. The WRSR document should be considered the primary review document for Forest Service/AECOM staff. We hope that by developing the WRSR that it makes the assimilation of the information more efficient. The foundational baseline study plans and reports are included here for reference.
    b. Report and Appendices

2. Groundwater Hydrology [https://midasgoldsp.aecomonline.net/Shared Documents/Midas Gold Transfer/Baseline/GW Hydrology]
    a. Work Plan
    b. Report

3. Groundwater Quality [https://midasgoldsp.aecomonline.net/Shared Documents/Midas Gold Transfer/Baseline/GW Quality]
    a. Work Plans – multiple revisions through the years
    b. QAPPs – multiple revisions through the years
    c. Report and Appendices

4. Surface Water Hydrology [https://midasgoldsp.aecomonline.net/Shared Documents/Midas Gold Transfer/Baseline/SW Hydrology]
    a. Work Plan
    b. Report
    c. Field Survey

5. Surface water Quality [https://midasgoldsp.aecomonline.net/Shared Documents/Midas Gold Transfer/Baseline/SW Quality]

a. Work Plan
b. QAPPs – multiple revisions through the years
c. Report and Appendices

Please note, Midas/BC had intended on supplying the Groundwater Model Work Plan, however, the document is still in internal review and will not be available for upload until next week. I will send a separate e-mail and link when the document is uploaded.

Please let me know if you have any questions. I hope you all have a nice holiday weekend. Thank you

Brandy Lapthorne for:

Todd Glindeman
Associate Scientist
Brown and Caldwell | Boise, ID
TGlindeman@brwncald.com
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Brown AND Caldwell

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Transmittal Cover Sheet

To: Piper Goessel, CMA1, MEC Stibnite Mine Project Manager 500 N Mission St, Bldg 1 McCall, ID 83638	**Date:** June 30, 2017	**Transmittal No.:** GWH-1
	Project No.: 150695	**Task No.:** 006
	Project Title: Midas Gold Stibnite Mine EIS Project	
From: Todd Glindeman, Project Manager		
We are sending the following item(s): ☒ NEPA Baseline Study Plan ☒ NEPA Baseline Study Report	**Sent via:** ☒ SharePoint Site Upload	
These are transmitted as checked below: ☒ For Review and Approval		

If attachments are not as noted, please notify sender at once.

No. of Copies	Description
1	20170504_MGII_Final GW Hydrology_BaselineStudy_WorkPlan.pdf
1	20170504_MGII_Final GW Hydrology_BaselineStudy_Report.pdf

Remarks:

cc: Valerie Porter, AECOM Maria Shepherd, AECOM Bob Barnes, Midas Gold Idaho, Inc. Alan Haslam, Midas Gold Idaho, Inc. Shelley Bennett, Midas Gold Idaho, Inc.	**Prepared by:** Brandy Lapthorne **Title:** Assistant PM

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Transmittal Cover Sheet

To: Piper Goessel, CMA1, MEC Stibnite Mine Project Manager 500 N Mission St, Bldg 1 McCall, ID 83638	**Date:** June 30, 2017	**Transmittal No.:** SWH-1
	Project No.: 150695	**Task No.:** 006
	Project Title: Midas Gold Stibnite Mine EIS Project	
From: Todd Glindeman, Project Manager		
We are sending the following item(s): ☒ NEPA Baseline Study Plan ☒ NEPA Baseline Study Reports	**Sent via:** ☒ SharePoint Site Upload	
These are transmitted as checked below: ☒ For Review and Approval		

If attachments are not as noted, please notify sender at once.

No. of Copies	Description
1	20170630_MGII_Final SW Hydrology_BaselineStudy_WorkPlan.pdf
1	20170630_MGII_Final SW Hydrology_BaselineStudy_Report.pdf
1	20170630_MGII_2012 SW Hydrology_BaselineStudy_FieldSurvey.pdf
1	20170630_MGII_2012 SWH Field Survey Appendix K
1	20170630_MGII_2012 SW Hydrology_BaselineStudy_FieldSurvey Figure 1-3.pdf

Remarks:

cc: Valerie Porter, AECOM Maria Shepherd, AECOM Bob Barnes, Midas Gold Idaho, Inc. Alan Haslam, Midas Gold Idaho, Inc. Shelley Bennett, Midas Gold Idaho, Inc.	**Prepared by:** Brandy Lapthorne **Title:** Assistant PM

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Transmittal Cover Sheet

To: Piper Goessel, CMA1, MEC Stibnite Mine Project Manager 500 N Mission St, Bldg 1 McCall, ID 83638	**Date:** June 30, 2017	**Transmittal No.:** SWQ-1
	Project No.: 150695	**Task No.:** 006
	Project Title: Midas Gold Stibnite Mine EIS Project	
From: Todd Glindeman, Project Manager		
We are sending the following item(s): ☒ NEPA Baseline Study Plan and QAPPs ☒ NEPA Baseline Study Reports	**Sent via:** ☒ SharePoint Site Upload	
These are transmitted as checked below: ☒ For Review and Approval		

If attachments are not as noted, please notify sender at once.

No. of Copies	Description
1	20170630_MGII_Final SW Quality_BaselineStudy_WorkPlan.pdf
1	20170630_MGII_2012 SW Quality_QAPP.pdf
1	20170630_MGII_2013 SW Quality_QAPP.pdf
1	20170630_MGII_2014 SW Quality_QAPP.pdf
1	20170630_MGII_2015 SW Quality_QAPP.pdf
1	20170630_MGII_2016 SW Quality_QAPP.pdf
1	20170630_MGII_Final SW Quality_BaselineStudy_Report.pdf
1	20170630_MGII_Final SWQ_BaselineStudy_Rept_Appendix A.pdf
1	20170630_MGII_Final SWQ_BaselineStudy_Rept_Appendix B.pdf
1	20170630_MGII_Final SWQ_BaselineStudy_Rept_Appendix C.pdf
1	20170630_MGII_Final SWQ_BaselineStudy_Rept_Appendix D.pdf
1	20170630_MGII_Final SWQ_BaselineStudy_Rept_Appendix E.pdf
1	20170630_MGII_Final SWQ_BaselineStudy_Rept_Appendix F.pdf
1	20170630_MGII_Final SWQ_BaselineStudy_Rept_Appendix G.pdf
1	20170630_MGII_Final SWQ_BaselineStudy_Rept_Appendix H.xlsx

Remarks:	
cc: Valerie Porter, AECOM Maria Shepherd, AECOM Bob Barnes, Midas Gold Idaho, Inc. Alan Haslam, Midas Gold Idaho, Inc. Shelley Bennett, Midas Gold Idaho, Inc.	**Prepared by:** Brandy Lapthorne **Title:** Assistant PM

20170630_BC_Midas Submittal_SW Quality Transmittal SWQ-1.docx

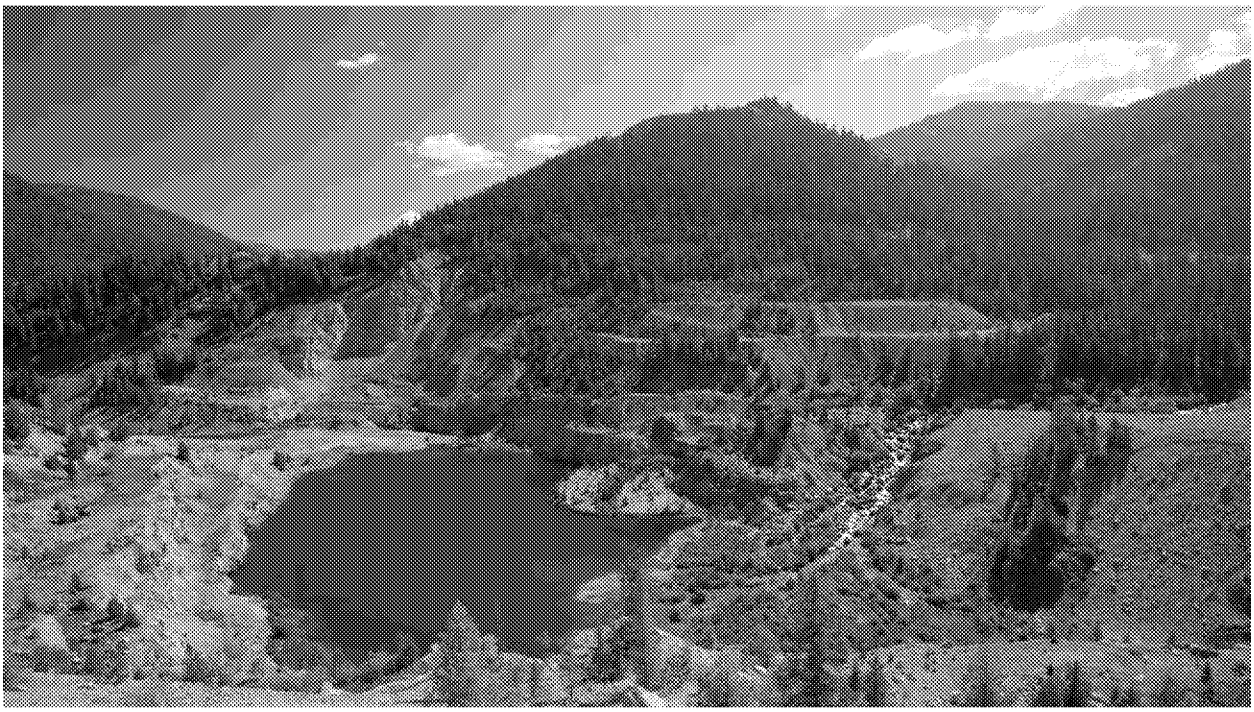
Attachment B

MIDAS GOLD

Stibnite Gold Project

Water Quality Summary Report

2012-2017



February 14, 2019

TABLE OF CONTENTS

SECTION PAGE

STIBNITE GOLD PROJECT I
WATER QUALITY SUMMARY REPORT I
1 INTRODUCTION 1
2 WATER QUALITY STUDY AREA 4
2.1 MINING HISTORY AND LEGACY MINE FEATURES 4
2.2 CLIMATE 6
2.3 GEOLOGY 6
3 WATER QUALITY RESOURCE SUMMARY 7
3.1 WATER QUALITY STANDARDS 7
3.1.1 Surface Water Quality Standards 8
3.1.2 Groundwater Quality Standards 8
3.2 DATA REVIEW, VERIFICATION, VALIDATION, AND USABILITY 9
3.2.1 Field Duplicates 9
3.2.2 Dissolved Versus Total Metals/Metalloids Concentrations 9
3.2.3 Summary Statistics Methodology 10
4 SURFACE WATER QUALITY 11
4.1 SURFACE WATER QUALITY ANALYSIS AND STANDARDS 11
4.2 SURFACE WATER FLOW SUMMARY 11
4.2.1 Stream Flow Summary Statistics 22
4.2.2 Adit Seep and Seep Flow Summary Statistics 22
4.3 SURFACE WATER QUALITY SUMMARY 22
4.3.1 Stream Water Quality Summary Statistics 22
4.3.2 Adit Seep and Seep Water Quality Summary Statistics 27
4.4 SUMMARY OF PRIMARY SURFACE WATER COIs 27
5 GROUNDWATER QUALITY 53
5.1 WATER QUALITY ANALYSIS AND STANDARDS 53
5.2 GROUNDWATER FLOW SUMMARY 53
5.2.1 Alluvial Monitoring Well Hydrographs 59
5.2.3 Bedrock Monitoring Well Hydrographs 62
5.3 GROUNDWATER QUALITY SUMMARY 64
5.4 SUMMARY OF PRIMARY COIs 65
6 REFERENCES 82

Appendix A. Data Validation Reports and Quarterly Data Usability Assessments ..... A

Appendix B. Surface Water Quality Data Summary Statistics..... B

Appendix C. Groundwater Quality Data Summary Statistics..... C

LIST OF TABLES

TABLE	DESCRIPTION	PAGE
Table 3-1.	Water Quality Resources Baseline Studies	7
Table 4-1.	Surface Water Sampling Locations	13
Table 4-2.	Adit Seep and Seep Sampling Locations	16
Table 4-3.	Surface Water Sampling Constituents	18
Table 4-4.	Flow Statistics at Stream Sampling Sites	23
Table 4-5.	Flow Statistics at Adit Seep and Seep Sampling Sites	24
Table 4-6.	Summary of Stream Sample Statistics	25
Table 4-7.	Summary of Adit Seep and Seep Sample Statistics	28
Table 4-8.	Statistics of Key COIs by Stream Reach	30
Table 4-9.	Statistics of Key COIs by Adit Seep and Seep Locations	31
Table 5-1.	Groundwater Well Details	55
Table 5-2.	Groundwater Well Sampling Constituents	57
Table 5-3.	Summary of Alluvial Well Sample Statistics	66
Table 5-4.	Summary of Bedrock Well Sample Statistics	68
Table 5-5.	Statistics of Key COIs by Aquifer	70

LIST OF FIGURES

FIGURE	DESCRIPTION	PAGE
Figure 1-1.	Vicinity Map	2
Figure 1-2.	Project and Study Area Boundaries	3
Figure 2-1.	Historical Mine Features	5
Figure 4-1.	Surface Water Quality Site Map	12
Figure 4-2.	Surface Water Key COI Plots for YP-T-33 at Meadow Creek above SODA	32
Figure 4-3.	Surface Water Key COI Plots For YP-T-22 at Meadow Creek above EFSFSR	34
Figure 4-4.	Surface Water Key COI Plots for YP-T-8A at Upper Sugar Creek	37
Figure 4-5.	Surface Water Key COI Plots for YP-T-1 at Sugar Creek above EFSFSR	39
Figure 4-6.	Surface Water Key COI Plots for YP-SR-13 at EFSFSR above Rabbit Creek	42
Figure 4-7.	Surface Water Key COI Plots for YP-SR-10 at EFSFSR below Meadow Creek	44
Figure 4-8.	Surface Water KEY COI Plots for YP-SR-4 at EFSFSR below Yellow Pine Pit	46
Figure 4-9.	Surface Water Key COI Plots for YP-SR-2 for EFSFSR below Sugar Creek	49
Figure 5-1.	Groundwater Well Map	54
Figure 5-2.	Hydrographs for Alluvial Monitoring Wells in the Meadow Creek Valley Area	59
Figure 5-3.	Hydrographs for Alluvial Monitoring Wells in the upper EFSFSR Valley Area	60
Figure 5-4.	Hydrographs for Alluvial Monitoring Wells in the lower EFSFSR Valley Area	61
Figure 5-5.	Hydrographs for Bedrock Monitoring Wells in the Meadow Creek Valley Area	62
Figure 5-6.	Hydrographs for Bedrock Monitoring Well in the Sugar Creek Valley Area	63
Figure 5-7.	Hydrographs for Bedrock Monitoring Wells in the EFSFSR Valley Area	64
Figure 5-8.	Groundwater Key COI Plots for Alluvial Well MWH-A01 at Upper Meadow Creek Valley	71
Figure 5-9.	Groundwater Key COI Plot for Bedrock Well MWH-B01 at Upper Meadow Creek Valley	72
Figure 5-10.	Groundwater Key COI Plot for Alluvial Well MWH-A02 at Meadow Creek Valley on SODA	73
Figure 5-11.	Groundwater Key COI Plot for Bedrock Well MWH-B02 at Meadow Creek Valley on SODA	74
Figure 5-12.	Groundwater Key COI Plot for Alluvial Well MWH-A05 at Meadow Creek Valley Near Middle of Airstrip	75
Figure 5-13.	Groundwater Key COI Plot for Bedrock Well MWH-B05 at Meadow Creek Valley near Middle of Airstrip	76
Figure 5-14.	Groundwater Key COI Plot for Alluvial Well MWH-A09 at EFSFSR Valley near Garnet Creek	77
Figure 5-15.	Groundwater Key COI Plot for Bedrock Well MWH-B09 at EFSFSR Valley near Garnet Creek	78
Figure 5-16.	Groundwater Key COI Plot for Alluvial Well MWH-A12 at EFSFSR Valley near Scout Prospect	79
Figure 5-17.	Groundwater Key COI Plot for Bedrock Well at EFSFSR Valley near Scout Prospect	80
Figure 5-18.	Groundwater Key COI Plot for Alluvial Well MWH-A19 at EFSFSR Valley near Homestake Road	81

LIST OF ABBREVIATIONS

amsl	above mean sea level
BC	Brown and Caldwell
BMC	Bradley Mining Company
BNF	Boise National Forest
CCC	Criteria Continuous Concentration
CMC	Criteria Maximum Concentration
COI	constituent of interest
CWA	Clean Water Act
District	Stibnite-Yellow Pine Mining District
DMEA	U.S. Defense Mineral Exploration Administration
EFSFSR	East Fork of the South Fork of the Salmon River
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
EQuIS	EarthSoft Environmental Quality Information Systems
GWQSP	Groundwater Quality Sampling Plan
HDR	HDR Engineering, Inc.
Hecla	Hecla Mining Company
HydroGeo	HydroGeo, Inc
IDAPA	Idaho Administrative Procedures Act
IDEQ	Idaho Department of Environmental Quality
IDL	Idaho Department of Lands
IDWR	Idaho Department of Water Resources
IGS	Idaho Geological Survey
MCL	maximum contaminant level
MGII	Midas Gold Idaho, Inc.
MSE	Millennium Science and Engineering, Inc.
MWH	MWH Americas Inc.
NEPA	National Environmental Protection Agency
NH3	ammonia
NTU	nephelometric turbidity unit(s)
OEMR	Governor's Office of Energy and Mineral Resources
PNF	Payette National Forest
PRO	Plan of Restoration and Operations
Plan	Plan of Restoration and Operations
Pioneer	Pioneer Metals Corporation
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
SGP	Stibnite Gold Project
Site	Project Area
SMI	Stibnite Mines, Inc.
SODA	spent ore disposal area
SPF	SPF Water Engineering, LLC
SRK	SRK Consulting, Inc.
Study Area	water resources study area
SWQSP	Surface Water Quality Sampling Plan
Tierra	Tierra Group International, Ltd.
USACE	U.S. Army Corps of Engineers
USFS	U.S. Forest Service
USGS	U.S. Geological Survey

WQSR Water Quality Summary Report

WRSR Water Resources Summary Report

1 INTRODUCTION

Midas Gold Idaho, Inc. (MGII or Midas Gold) is proposing to restore and redevelop portions of the historic Stibnite-Yellow Pine Mining District (District) in Valley County, central Idaho. The Stibnite Gold Project is described in Midas Gold's *Plan of Restoration and Operations* (PRO or Plan) (Midas Gold 2016).

The SGP is located about 8 miles east of the town of Yellow Pine (14 miles by road) (Figure 1-1) within both the Boise and Payette National Forests (BNF and PNF) and is administered by the Krassel Ranger District of the PNF. Surface ownership in the District is characterized by historical mining activities and includes both private (i.e., patented claims) and unpatented claims on national forest land. Mining began in the District in the late 1800s and continued intermittently through 1997.

In 2007, Midas Gold Inc., represented today by the operating company MGII (a subsidiary of Midas Gold Corporation) began to acquire mining claims throughout the District from prior owners or by staking claims on its own behalf. With federal and state approval, MGII initiated mineral exploration activities in 2009 to better define the mineral resource potential for the area. MGII also conducted extensive studies to understand current environmental conditions in order to develop the SGP and move forward with preparation of a plan to address and repair legacy mining issues and redevelop the historic mine site.

The proposed SGP is described in the *Plan of Restoration and Operations* (PRO or Plan) (Midas Gold 2016). The PRO was submitted to the U.S. Forest Service in September 2016 and was determined to be administratively compete by December 2016. The PNF is preparing an environmental impact statement (EIS) for the proposed SGP in compliance with the National Environmental Policy Act (NEPA). The United States Forest Service (USFS) has jurisdictional authority over surface disturbance associated with mining and exploration activities on national forest land in the Stibnite District. The Idaho Department of Lands (IDL) has jurisdictional authority over exploration and mining-related activities on private lands and oversight of these activities on Federal lands within its administrative area (Idaho Administrative Procedure Act [IDAPA] 20.03.02); the Project is in the IDL Payette Lakes supervisory area. The U.S. Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), Idaho Department of Environmental Quality (IDEQ), and the Governor's Office of Energy and Mineral Resources (OEMR) are Cooperating Agencies for the EIS.

Midas Gold and their consultants have conducted numerous environmental resource studies to provide baseline data for environmental effects analysis for the SGP EIS. A *Water Resources Summary Report* (WRSR) was prepared by Brown and Caldwell (BC) (BC 2017) and characterizes existing surface water and groundwater resources. The WRSR includes compilations of the available climatic, geologic, hydrologic, and surface water and groundwater quality data from 2012 through the first quarter 2016.

The surface water and groundwater monitoring networks at the SGP are sampled on a quarterly basis. This Water Quality Summary Report (WQSR) includes updated analytical laboratory data for surface water and groundwater sampling activities through 2017. Statistical analysis of surface and groundwater samples collected at the site from 2012 through 2017 are also provided to illustrate overall trends in analyte concentrations. The organization of this document is as follows:

- Section 2 provides a brief summary of the water quality Study Area, including legacy mine features;
- Section 3 describes the initial water resources baseline study, ongoing monitoring, and applicable regulatory framework;
- Section 4 discusses surface water quality and presents an analysis of sample data for 2012 through 2017;
- Section 5 discusses groundwater quality and presents an analysis of sample data for 2012 through 2017.

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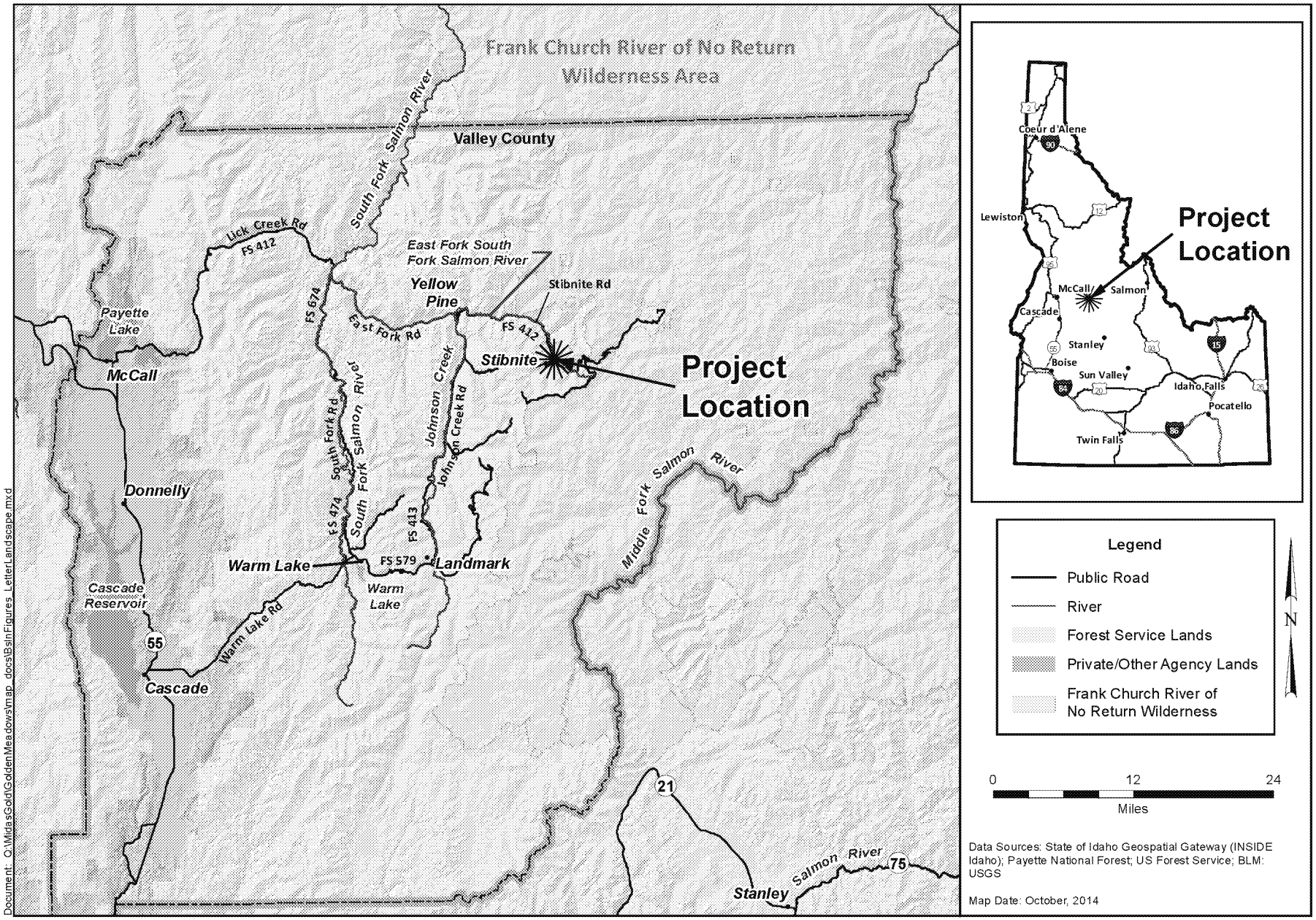
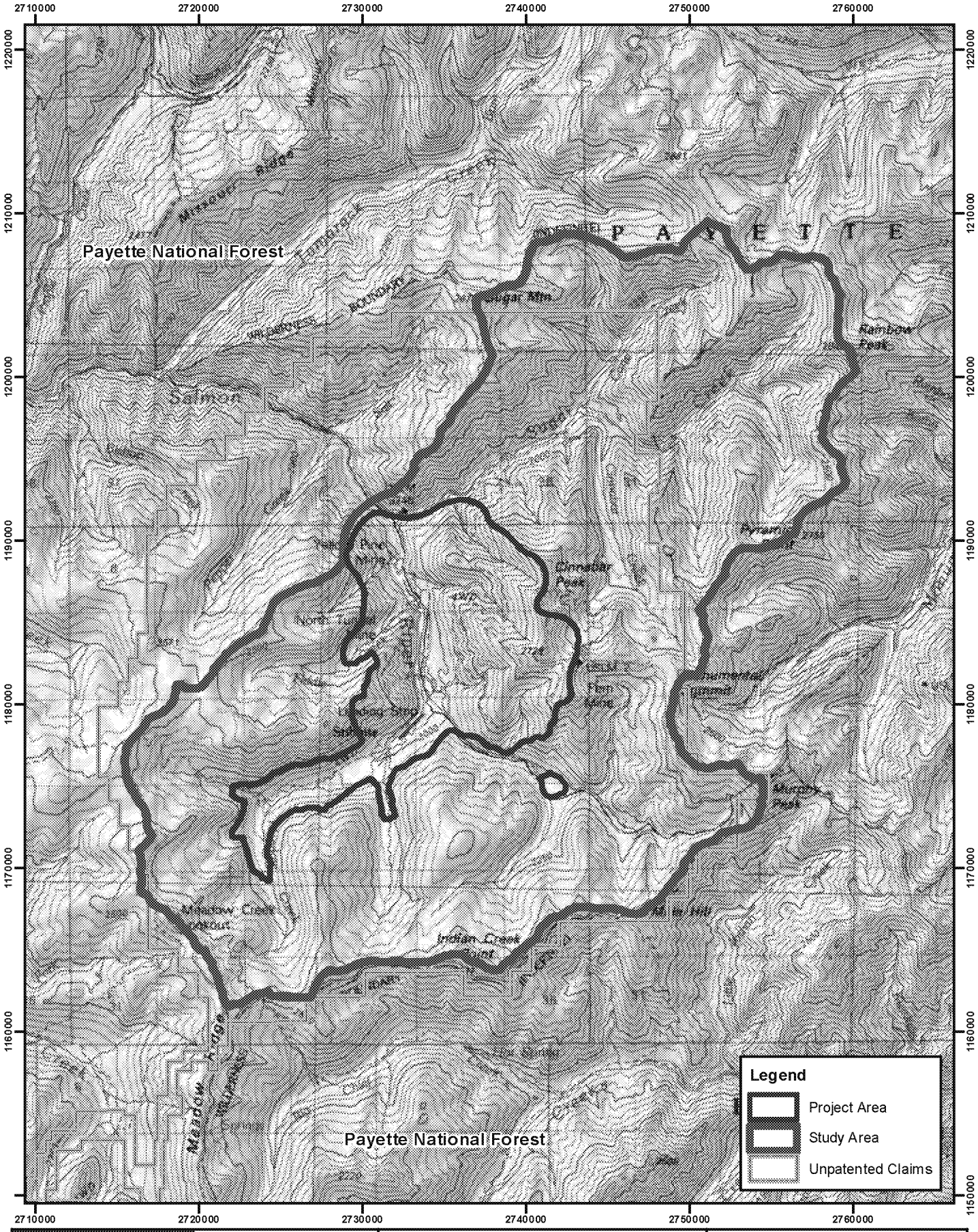


Figure 1-1
Vicinity Map
Stibnite Gold Project



Brown AND Caldwell

Date: June 2017

Project No: 150691

Client: Midas Gold

Basemap: 2013 National Geographic Society, i-cubed

0 4,000 8,000

Feet

N

Figure 1-2
Project and Study Area Boundaries
Water Resources Summary Report
Stibnite Gold Project

Path: Bcboi02\\\bcboifp01\gis\PROJECTS\Midas Gold\BC Maps\WRSR\Fig1-3_ProjectStudyArea_6000scale_8.5x11_20170531.mxd

2 WATER QUALITY STUDY AREA

The Study Area terrain consists of narrow valleys surrounded by steep mountains. Elevations along valley floors range from 6,000 to 6,600 feet above mean sea level (amsl). The surrounding mountains reach elevations greater than 8,900 feet amsl. The main drainage in the Study Area is the East Fork of the South Fork of the Salmon River (EFSFSR). Johnson Creek joins the EFSFSR 16 miles downstream near Yellow Pine. In this WQSR, watersheds within the Study Area are generally defined by the main drainage of the EFSFSR and its tributaries, including Sugar Creek, and Meadow Creek. The primary land uses or activities in the area have been mineral exploration, mining, logging, and dispersed recreation. Brief summaries of mining history, climate, and geology within the Study Area are presented in the following subsections.

2.1 MINING HISTORY AND LEGACY MINE FEATURES

The SGP site includes several legacy mine features that contribute to environmental degradation at the site. Prospectors first came to the District prior to and during the Thunder Mountain Gold Rush in the late 1890s. During the next few years, the number of miners continued to grow. Two periods of major mining operations occurred in the 20th century: (1) one in the early 1920s through the early 1950s and (2) another from the late 1970s through the mid-1990s. Details of the District history with historical photographs and detailed maps are included in Appendix D of the *PRO* (Midas Gold 2016). Legacy mine feature location details and a summary of past restoration activities are provided in the WRSR (BC 2017). The general locations of the historical mine features are shown on Figure 2-1.

Legacy mine features that currently exist in the Project Area are grouped into three areas from south to north for discussion. The South Area is where the Meadow Creek Mine and various processing facilities were located. The Central Area is generally representative of mine support facilities, the U.S. Defense Mineral Exploration Administration (DMEA) underground workings and the Garnet Pit. The North Area includes the Yellow Pine Mine and the West End pits and associated dumps.

South Area

The South Area encompasses the Meadow Creek Mine underground workings, and the area of the former Meadow Creek Mill and Smelter. This area was used to process ore from all the mines in the area (Meadow Creek, Yellow Pine, West End, and Homestake). Current legacy features include tailings and the spent ore disposal area (SODA) (Figure 2-1) in southern Meadow Creek valley; tailings from the Bradley Mining Company (BMC) mill and sediment in a former tailings pond near the former mill and smelter; and tailings with the overlying heap leach pads and processing facilities that were operated by Superior/Pioneer, Stibnite Mines Inc. (SMI) and Hecla Mining Co in the northern part of the valley (Figure 2-1). The Superior/Pioneer and Hecla leach pads were lined with asphalt and geomembrane, respectively and the pads and portions of the piles remain.

Central Area

The Central Area covers general mine support facilities and the various camps. It included the former sawmill area, the pilot plant, equipment staging areas, Stibnite town site, former man camps, old landfill area, and a rock dump from the DMEA adit (Figure 2-1).

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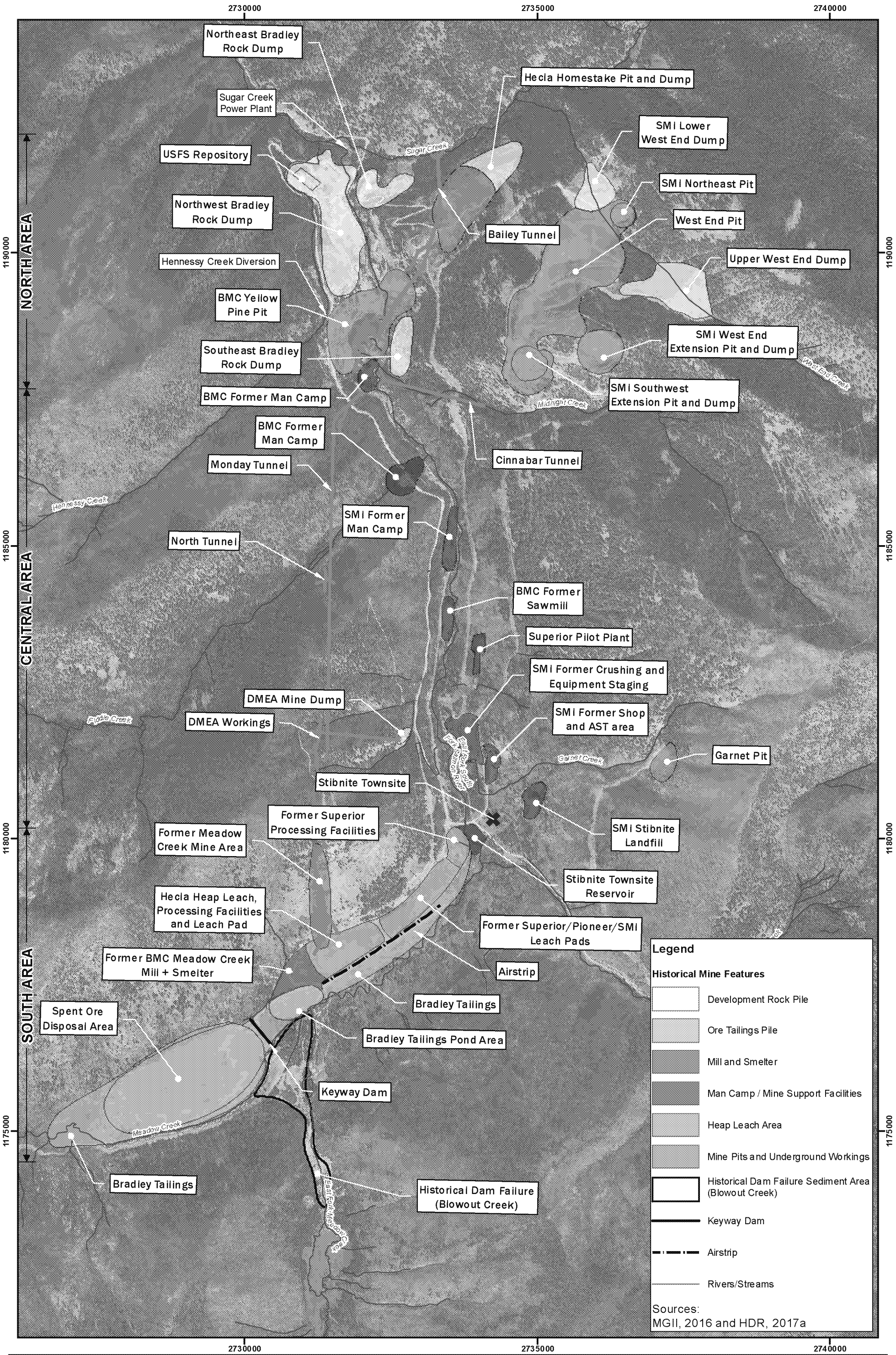

Brown AND Caldwell

Date: June 2017
Project No: 150691
Client: Midas Gold

Basemap: Aerial photo, 2015
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Figure 2-1
Historical Mine Features
Water Resources Summary Report
Stibnite Gold Project

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North Area

The North Area consists of the Yellow Pine Pit, which is a pit lake that the EFSFSR flows through. This northern area covers the Hecla's Homestake Pit to the northeast of the Yellow Pine Pit; and rock piles to the northwest, northeast, and to the southeast of the pits (referred to as the "Bradley Rock Dumps" on Figure 2-1). It also includes the West End pit, West End extension pit (sometimes referred to as the Stibnite Pit), SMI Northeast Pit, the SMI Midnight Pit, and the SMI Southeast Extension Pit. The rock piles at West End are referred to as the "Upper West End Dump" and "Lower West End Dump" on Figure 2-1.

2.2 CLIMATE

Generally, the climate of the Study Area is influenced by local patterns of wind, precipitation, and temperature that are influenced by topography, slope aspect, and elevation. The topography of the area is characterized by steep slopes and formerly glaciated valleys in the high mountains. Elevations in the Project Area range from roughly 6,050 to 8,900 feet amsl at Cinnabar Peak. The elevation along the main EFSFSR valley floor is near 6400 ft.

The *Air Quality Baseline Report* (Stantec and Trinity Consultants 2017) describes the Study Area Climate in greater detail. Generally, the Study Area experiences wide annual and diurnal variations in temperature and humidity. The winds follow in traditional up and down valley flow patterns as expected in mountain valleys. During winter, cloudy and unsettled weather is common with storms moving through the region resulting in snowfall accumulations of 2 feet or more. Spring months are normally wet and windy with weather conditions fluctuating quickly. Low elevation snow pack usually melts quickly during the spring, but high elevation snowpack can persist into June or later. Summer weather can begin suddenly with a rapid change to warm and dry weather. Daytime temperatures are usually warm by June, but chilly nights can persist throughout the summer. Rain showers are common from late spring through summer with an increased frequency in the surrounding regional high terrain.

2.3 GEOLOGY

Geologic data have been generated from exploration and studies in the region during the past approximately 90 years of previous mining operations. MGII has drilled more than 500 exploratory holes to further understand the geology and mineralization. A *Geology and Soils Baseline Study Work Plan* was developed for use in conducting these field activities (MWH 2012b). The *Geological Resources Baseline Study* report presents a detailed description that characterizes existing conditions for geologic resources including stratigraphic, structural, mineral, paleontological, and geomorphologic conditions identified within the Study Area (Midas Gold 2017).

For the purpose of this WQSR, geology generally consists of glacial moraines (glacial deposits) in the larger valleys, with lateral moraines along the sides of Meadow Creek and the EFSFSR. Alluvial deposits of primarily reworked glacial materials are generally confined to narrow ribbons in the middle of the valleys, such as near the confluence of Meadow Creek and the ESFSR. In addition, local geomorphology and manmade ground (mine dumps, tailing piles, spent ore piles and disturbed glacial and stream deposits) influence the groundwater flow and locations of seeps and springs.

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3 WATER QUALITY RESOURCE SUMMARY

Baseline study reports have been developed for the SGP in support of USFS NEPA activities. These studies provide a baseline for surface water and groundwater conditions to evaluate potential future impacts from mine construction, operation, and closure. The *WRSR* (BC 2017) synthesizes the data from these surface water and groundwater hydrology Studies. It documents the existing surface water and groundwater resources in the Study Area and includes compilations for the available baseline climatic, geologic hydrologic and water quality data. This WQSR was prepared by MGII as continued documentation of existing surface water and groundwater quality in the Study Area prior to the start of proposed mining.

Baseline study work plans were reviewed by Agency staff. Written approvals were received for the surface water hydrology, surface water quality, and groundwater hydrology work plans (PNF 2013). Baseline surface water monitoring by MGII began in February 2012 and included mapping and monitoring of discharge and water quality at area seeps, springs, and streams. Baseline groundwater monitoring by MGII began in September 2012 and included the installation of a monitoring well network and monitoring of groundwater levels and water quality. The field work and data validation activities were performed by MGII's contractors, including HDR Engineering, Inc. (HDR), HydroGeo, Inc., MWH Americas Inc. (MWH, subsequently acquired by and merged with Stantec), and SPF Water Engineering, LLC (SPF).

The baseline studies, Quality Assurance Project Plans (QAPPs), Surface Water Quality Sampling Plans (SWQSPs) and the Groundwater Quality Sampling Plans (GWQSPs)used as sources of information and guidance for the work presented in this WQSR are listed in Table 3-1.

Table 3-1. Water Quality Resources Baseline Studies

Baseline Resource	Baseline Study Documents
Surface Water Quality	*Surface Water Quality Baseline Study Work Plan* (HDR 2012)
	QAPP-SWQSPs (HDR 2014, 2015, 2016b)
	Surface Water Quality Baseline Study (HDR 2017c)
Groundwater Quality	*GWQSPs* (MWH 2012a, 2014a, 2016)
	QAPP-GWQSPs for Golden Meadows project (MWH 2012a, 2013, 2014b, 2015)
	Groundwater Quality Baseline Study (HDR 2016a)
Water Resources	*Water Resources Summary Report* (BC 2017)

3.1 WATER QUALITY STANDARDS

Water quality results presented in this WQSR were compared to the strictest potentially applicable standards or criteria identified in surface water and groundwater Quality Assurance Program Plans (QAPP's) for this Project (HDR 2016b, MWH 2015). These standards were provided for technical analytic purposes and should not be interpreted to include any legal or regulatory compliance conclusions. Water quality samples were collected and analyzed for constituents that could be of interest to multiple resource and regulatory agencies that will be part of NEPA activities associated with the environmental permitting process. Not all water bodies in the Study Area will be required to comply with all the

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reported standards. A summary of surface water and groundwater quality standards governing this Project is provided in the following subsections.

3.1.1 Surface Water Quality Standards

The Clean Water Act (CWA) is generally administered and overseen by the EPA and regulates surface water quality and pollutant discharge into waters of the United States under Section 303(c) of the CWA. The Idaho Water Quality Standards Program is a joint effort between IDEQ and EPA for implementation of the CWA. IDEQ is responsible for adopting and enforcing water quality standards that protect beneficial uses. EPA develops recommended criteria, regulations, policies, and guidance to help Idaho implement the Idaho Water Quality Standards Program and to ensure that Idaho's adopted standards are consistent with the requirements of the CWA and relevant regulations (IDEQ 2017).

Federal drinking water standards are set by EPA for domestic water supplies. Idaho water quality standards for surface water can be found in IDAPA 58.01.02 (IDAPA 2017a). The Idaho surface water quality standards are divided into two broad categories based on the designated beneficial use: (1) human health and (2) aquatic life, with the aquatic life standards generally being the most rigorous. The human health standards are divided into consumption of water and organisms or the consumption of organisms only. The aquatic life standards are also divided, based on the duration of exposure, and include acute exposure and chronic exposure criteria. Criteria Maximum Concentration (CMC) is the highest concentration that aquatic life can be exposed to for a 1-hour (i.e., acute) period without deleterious effects. Criteria Continuous Concentration (CCC) is the highest concentration that aquatic life can be exposed to for an extended (i.e., chronic) period. Cold water aquatic life standards are based on dissolved concentrations, with the exceptions of criteria for selenium, ammonia (NH3), and turbidity. The standard for selenium is based on total recoverable concentration. Standards for ammonia and turbidity are based on total concentration. The standard for ammonia is temperature- and pH-dependent. Turbidity is measured in nephelometric turbidity units (NTU) and is not to exceed 50 NTU above background instantaneously or 25 NTU for more than 10 days. Cadmium, chromium (III), copper, lead, nickel, silver, and zinc standards are hardness-dependent and calculated per equations provided in IDAPA 58.01.02 (IDAPA 2017b).

In addition to the surface water quality standards listed in IDAPA 58.01.02, Section 303(d) of the CWA provides for each state to identify and rank by priority waters that do not meet applicable water quality standards (known as the 303[d] list) for subsequent development of a total maximum daily load (IDAPA 2017b). A total maximum daily load determines the maximum amount of a pollutant allowed in a water body and allocates that total amount between its sources to restore the water body to its beneficial uses by meeting applicable water quality standards.

Applicable surface water quality standards are presented in Section 4.1.

3.1.2 Groundwater Quality Standards

IDEQ coordinates and administers the groundwater quality protection programs in Idaho. Idaho Ground Water Quality Rule (IDAPA 58.01.11) establishes requirements for the protection of groundwater by setting standards and beneficial uses and categorizing aquifers to be protected at different levels (IDAPA 2017a). The standards include both primary and secondary groundwater quality standards set to protect human health and the environment. IDEQ is also responsible for setting the point of compliance, if requested by a mine operator and pursuant to IDAPA 58.01.11, where groundwater downgradient of mining activity must meet the established groundwater quality standards.

EPA identifies contaminants to regulate in drinking water to protect public health. It sets regulatory limits for the amounts of certain contaminants in water provided by public water systems. These contaminant standards are established under the Safe Drinking Water Act. EPA works with states, tribes, and many other partners to implement these Safe Drinking Water Act provisions (EPA 2009). EPA has established National Primary Drinking Water Regulations that set

mandatory water quality standards for drinking water contaminants. These are enforceable standards called maximum contaminant levels (MCLs), which are established to protect the public against consumption of drinking water contaminants that present a risk to human health. An MCL is the maximum allowable amount of a contaminant in drinking water that is delivered to the consumer (EPA 2017b, c). In addition, EPA has established National Secondary Drinking Water Regulations that set nonmandatory water quality standards for 15 contaminants. EPA does not enforce these secondary maximum contaminant levels. They are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the secondary maximum contaminant level.

Applicable groundwater quality standards are presented in Section 5.1.

3.2 DATA REVIEW, VERIFICATION, VALIDATION, AND USABILITY

Water quality data were subjected to data review, verification, and validation as detailed in the surface water QAPP-SWQSPs (HDR 2014, 2015, 2016b, 2017c) and groundwater QAPP-GWQSPs (MWH 2012a, 2013, 2014a, 2015). Data review was performed by HDR and included examining the data for correct and complete recording, transmission, and processing. Data verification included evaluating whether the data met completeness goals. Data validation included evaluating whether the laboratory data met method, procedure, and contract requirements. Through these processes, data that were outside acceptance criteria were qualified and flagged per EPA's National Functional Guidelines for Inorganic Superfund Data Review (EPA 2013a). Although some data were qualified, it was determined that 100 percent of the baseline water quality data were considered usable for the purposes of characterizing baseline conditions in the Study Area (HDR 2016a, 2017c). Interim water quality data review was performed by HDR. It was determined that 100 percent of the water quality data were considered usable for the purposes of characterizing interim baseline conditions in the Study Area with the exception of groundwater samples from the second quarter of 2016 that were rejected due to temperature issues upon arrival at the laboratory; this data rejection resulted in second quarter of 2016 groundwater data meeting less than the project completeness goal of 90%. Interim water quality Data Validation Reports and Quarterly Data Usability Assessments are presented in Appendix A.

3.2.1 Field Duplicates

Field duplicate samples were collected at a rate of 1 duplicate for every 8 normal surface water samples and 1 duplicate for ever 15 normal groundwater samples. Duplicate sample results, agreements, and implications for baseline data usability were evaluated as part of the data validation process and discussed in data validation reports documented in the *Surface Water Quality Baseline Study* (HDR 2017c) and *Groundwater Quality Baseline Study* (HDR 2016a). Interim water quality duplicate sample results were also evaluated by HDR and are discussed in data their validation reports provided in Appendix A. Both parent and duplicate sample data are maintained in the database, but only parent sample concentrations are used for analysis.

3.2.2 Dissolved Versus Total Metals/Metalloids Concentrations

Each sample was analyzed for both total and dissolved metals and metalloids concentrations. The total concentration reflects the entire amount of the constituent present in an unfiltered sample. Thus, it measures a constituent in both the dissolved and solid (e.g., precipitate or sorbed to particulate) phases in the sample. For this study, the dissolved concentration reflects the amount of the constituent occurring as particles passing through an 0.45-micrometer filter.

In surface water, where solid particles are readily transported in currents, the total constituent concentration should always be greater than or equal to the dissolved constituent concentration. However, a goal of groundwater sampling is to minimize the occurrence of suspended particulate matter in the groundwater sample because this particulate

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matter is generally not considered to be mobile in the pore spaces of the aquifer. Thus, properly collected groundwater samples should (in theory) exhibit approximately equal dissolved and total concentrations.

In practice, dissolved concentrations may exceed total concentrations in a sample. This circumstance can indicate a procedural issue (e.g., filter contamination, high-flow groundwater sampling methods, or an inadvertent mis-labeling of total and dissolved samples), but it is frequently a result of the inherent limit of analytical precision. For example, if the total and dissolved constituent concentrations are very similar and/or close to the method reporting limit, then the difference in concentration between the total and dissolved fractions may be well within the error limits of the analytical method. Instances where dissolved metal/metalloid concentrations are greater than total metal/metalloid concentrations were evaluated per acceptance criteria adapted from EPA's National Functional Guidelines for Inorganic Superfund Data Review (EPA 2013a). The acceptance criteria establish acceptable levels of disagreement between total and dissolved concentrations as a function of concentration relative to the method detection limit. The *Surface Water Quality Baseline Study* found that approximately 1 percent of all total and dissolved metals/metalloids pairs had dissolved concentrations that were unacceptably higher than total concentrations (HDR 2017c). The *Groundwater Quality Baseline Study* found that approximately 3 percent of all total and dissolved metals/metalloids pairs had dissolved concentrations that were unacceptably higher than total concentrations (HDR 2016a). In most instances, the discrepancy occurred when the total concentration was below the method detection limit, but the dissolved concentration was detected. Because of the overall low occurrence and the relatively low concentrations involved, data were not rejected based on total versus dissolved concentrations of acceptance criteria.

3.2.3 Summary Statistics Methodology

Summary statistics were calculated using EarthSoft Environmental Quality Information Systems (EQuIS) statistical reports (EarthSoft 2017). Specific reports were used to compute various statistical functions that generate Mean, UCL, Median, Standard Deviation, Coefficient of Variation, Skewness, Minimum, Maximum, Count, Mann-Kendall S, Trend analysis (at 80%, confidence, 90% confidence, 95% confidence, 99% confidence) and Sen Slope based on saved analytical data reports. EQuIS Action Level Exceedance reports were used to identify statistical values greater than the associated action levels; the reports were configured to use non-detect and detect results in statistical calculations. The confidence level for statistical results is calculated based on the Data Quality Assessment: Statistical Methods for Practitioners (EPA 2017a).

4 SURFACE WATER QUALITY

Baseline surface water monitoring has been conducted in the Study Area to characterize existing surface water quality in support of NEPA activities and environmental permitting for the SGP. This baseline data for the period of April 2012 through February 2016 was presented in the *WRSR* (BC 2017). This WQSR provides a summary of the baseline water quality data, including interim surface monitoring results through November 2017. The sampling plan and rationale are detailed in the *Surface Water Quality Baseline Study Work Plan* and the QAPP-SWQSPs (HDR 2012, 2014, 2015, 2016b, 2017c).

Surface water monitoring locations capture data relevant to upstream and downstream historical and potential future mining activities. Surface water samples and flow measurements are collected at 32 surface water locations on perennial streams and 23 sites where surface water originates from seeps, adit seeps, or other legacy mining-related features. These sampling locations, site descriptions, and site selection rationales are summarized by drainage in Table 4-1 and 4-2. Their locations are shown on Figure 4-1.

Surface water monitoring locations and identifiers have remained consistent with those presented in the *Phase II Environmental Analysis and Review* (Millennium Science and Engineering, Inc. [MSE] 2011). Sample identifiers follow a format of "location descriptor - type descriptor - series number (e.g., YP-T-1)." The letter descriptor acronyms are listed below.

- YP = Yellow Pine project (former project name)
- SR = EFSFSR
- T = Tributary of the EFSFSR
- M = Miscellaneous (predominantly mine features)
- SEBS = Southeast Bradley dump seep
- HP = Homestake Pit seep
- S = Seep
- AS = Adit seep

4.1 SURFACE WATER QUALITY ANALYSIS AND STANDARDS

Samples collected from streams, seeps, adit seeps, and ponds were analyzed for metals/metalloids, anions, cations, and general water quality parameters. Frequency of monitoring at the 55 surface water locations has been determined by the needs of the project and the QAPP-SWQSP, which is revised annually to meet data quality objectives (HDR 2014, 2015, 2016a, 2017b). Generally, surface water sample locations are visited quarterly to measure field parameters and flow; collect water quality samples for a full suite of 68 analytic constituents; and to document field observations. Non-quarterly, monthly and/or higher frequency samples are generally analyzed for a reduced suite of 41 analytic constituents. Analytes, sampling frequency, regulatory standards, methods, reporting limits, and data quality indicators for the baseline surface water monitoring program are provided in Table 4-3.

4.2 SURFACE WATER FLOW SUMMARY

Surface water flows in the EFSFSR, flows in the tributaries to the EFSFSR, and discharges from seeps/springs were compiled and assessed and reported in the *WRSR* (BC 2017). Streamflow data is measured on the same schedule as water quality sampling, immediately after the samples are collected. Flow is measured as per the work plan using the mid-section method and a velocity meter along a transect for streams with moderate to high flows; for streams with very low flows and for adit seeps and seeps, graduated buckets in various sizes (1 quart, 1 gallon, 2 gallons, and 5 gallons) are used to measure flow.

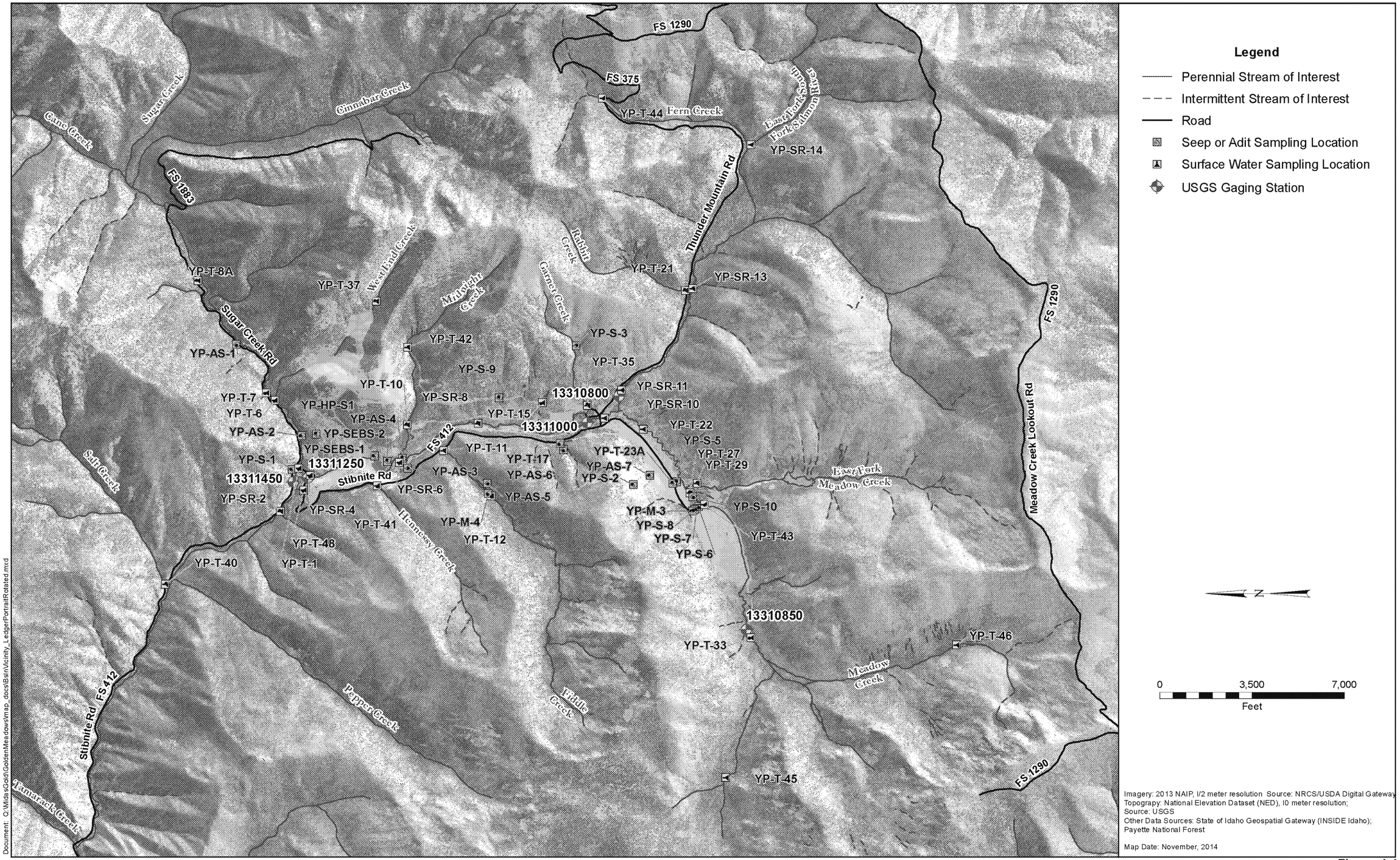

Figure 4-1
Surface Water Quality Site Map
Stibnite Gold Project

Table 4-1. Surface Water Sampling Locations						
Station Name[1]	**Location**	**Site Description and UTM Coordinates (northing, easting)**	**Legacy Upstream Activities**	**Potential Future Upstream Stibnite Gold Project Activities**	**Additional Rationale**	**Watershed**
Meadow Creek Surface Water Sites						
YP-T-46	South fork Meadow Creek	South fork of Meadow Creek (4969552, 629309)	None	None	Upstream of potential future tailings impoundment	Meadow Creek
YP-T-45	North fork Meadow Creek	North fork of Meadow Creek near old jeep trail (4972220, 627777)	None	None	Upstream of potential future tailings impoundment	Meadow Creek
YP-T-33	Meadow Creek above SODA	Meadow Creek, upstream of Spent Ore Disposal Area (SODA) and former pond (4971931, 629393)	None	Hangar Flats development rock storage facility	Locate near new USGS gaging station, has past water quality data	Meadow Creek
YP-T-43	Meadow Creek above Keyway Marsh	Meadow Creek, immediately upstream of Keyway Marsh (4972471, 630933)	SODA; Meadow Creek smelter tailings; petroleum contaminated land farm	Hangar Flats development rock storage facility	Discern between SODA and Keyway Marsh impacts	Meadow Creek
YP-T-27	Meadow Creek below Keyway Marsh	Meadow Creek downstream of Keyway Marsh and upstream of Blowout Creek (4972634, 631065)	SODA; Meadow Creek smelter tailings; Keyway; petroleum contaminated land farm	Hangar Flats development rock storage facility	Has past water quality data	Meadow Creek
YP-T-29	Blowout Creek	Blowout Creek (officially known as East Fork Meadow Creek) on debris fan(4972556, 631180)	Reservoir for hydroelectric power	Blowout Creek borrow and restoration area	Has past water quality data	Meadow Creek
YP-T-22	Meadow Creek above EFSFSR	Meadow Creek downstream of Blowout Creek and at east end of airstrip (4973181, 631797)	Meadow Creek Mine, mill, smelter, waste rock; Bradley tailings; SMI leach pads; Hecla heap leach and processing facilities; Keyway Marsh; fuel tank	Hangar Flats development rock storage facility	Has past water quality data	Meadow Creek
Sugar Creek Surface Water Sites						
YP-T-8A	Sugar Creek, uppermost site	Sugar Creek at downstream end of broad meadow (4978318, 633519)	Cinnabar Mine	None	Has limited past water quality data	Sugar Creek
YP-T-7	Sugar Creek above West End Creek	Sugar Creek upstream of West End Creek confluence (4977537, 632221)	Bonanza Adit	None	Has past water quality data	Sugar Creek
YP-T-37	Upper West End Creek	West End Creek upstream of uppermost West End waste rock dump(4976267, 633283)	None	None (Control)	Has limited past water quality data	Sugar Creek
YP-T-49	Middle West End Creek	West End Creek downstream of the uppermost West End waste rock dump	SMI West End pits and waste rock dumps	West End pit	Has limited past water quality data	Sugar Creek
YP-T-6	Lower West End Creek	West End just upstream of Sugar Creek confluence (4977435, 632146)	SMI West End pits and waste rock dumps	West End pit	Has past water quality data	Sugar Creek
YP-T-1	Sugar Creek above EFSFSR	Sugar Creek upstream of EFSFSR confluence and FS 412 (4977158, 631355)	Bailey Tunnel Outlet; BMI NE Bradley Tailings; Hecla Homestake pit	Yellow Pine and West End pits	Located near new USGS gaging station, has past water quality data	Sugar Creek
EFSFSR Surface Water Sites						
YP-T-44	Fern Creek	Fern Creek downstream of Fern Mine (4973647, 635632)	Fern Mine	None	Downstream of abandoned Fern mercury mine, upstream of confluence with EFSFSR	EFSFSR
YP-SR-14	EFSFSR, above Fern Creek	EFSFSSR upstream of Fern Creek confluence (4971931, 635093)	None	None	Upstream of confluence of Fern Creek, which originates in the abandoned Fern mercury mine	EFSFSR

Table 4-1. Surface Water Sampling Locations						
Station Name[1]	**Location**	**Site Description and UTM Coordinates (northing, easting)**	**Legacy Upstream Activities**	**Potential Future Upstream Stibnite Gold Project Activities**	**Additional Rationale**	**Watershed**
YP-SR-13	EFSFSR, above Rabbit Creek	EFSFSR upstream of Rabbit Creek confluence (4972601, 633435)	Fern Mine	None	Downstream of abandoned Fern mercury mine, upstream of mineralized and undisturbed tributary, upstream of future mining activities	EFSFSR
YP-T-21	Rabbit Creek	Unnamed tributary to EFSFSR (locally known as Rabbit Creek), north of FS 375 (4972682, 633402)	None	Rabbit exploration area	Mineralized but less disturbed tributary, has limited past water quality data	EFSFSR
YP-SR-11	EFSFSR above Meadow Creek	EFSFSR near USGS gaging station above Meadow Creek(4973430, 632257)	None	Rabbit exploration area	Located near new USGS gaging station, has past water quality data	EFSFSR
YP-SR-10	EFSFSR below Meadow Creek	EFSFSR by box culvert and USGS gaging station 13311000 (4973626, 631931)	Bradley tailings; SMI leach pads and processing facilities and all other impacts listed for YP-T-22 above ground storage tank	Hangar Flats potential pit	Located near USGS gaging station, has past water quality data	EFSFSR
YP-T-35	Garnet Creek	Garnet Creek south of MGI shop (4973820, 632085)	SMI Garnet pit, landfill and ammonium nitrate-fuel oil storage	None	Has past water quality data	EFSFSR
YP-T-15	Scout Creek	Unnamed drainage immediately north of MGI shop, draining the Scout prospect(4974345, 632105)	Possibly Garnet pit – needs field verification of drainage	Scout exploration area	Has limited past water quality data	EFSFSR
YP-SR-8	EFSFSR above Fiddle Creek	EFSFSR downstream of Garnet Creek and DMEA, upstream of Fiddle Creek (4975086, 631866)	BMI DMEA mine adit and dump, sawmill, recreation hall, service station; SMI shop, AST, crusher area, pilot plant and camp; Hecla equipment area and camp	All those listed above	Has past water quality data	EFSFSR
YP-T-12	Upper Fiddle Creek	Fiddle Creek upstream of North Tunnel (4974932, 631043)	None	Fiddle Creek development rock storage facility	Has limited past water quality data	EFSFSR
YP-T-11	Lower Fiddle Creek	Fiddle Creek upstream of FS 412 (4975489, 631564)	SMI North Tunnel Mine and North Camp	Fiddle Creek DRSF	Has limited past water quality data	EFSFSR
YP-SR-6	EFSFSR above Yellow Pine pit	EFSFSR downstream of Fiddle Creek and upstream of Midnight Creek(4976000, 631416)	SMI Monday Camp	All those listed above	Has limited past water quality data	EFSFSR
YP-T-42	Upper Midnight Creek	Midnight Creek immediately upstream of old upper haul road (4975900, 632744)	None	None (Control)	Upstream of past activities and potential future mining activities	EFSFSR
YP-T-10	Lower Midnight Creek	Midnight Creek along old lower haul road (4975905, 631854)	SMI Midnight and Southwest Extension pits	West End Pit	Has past water quality data	EFSFSR
YP-T-41	Hennessy Creek	Unnamed tributary to EFSFSR (locally Hennessy Creek), upstream of water withdrawal point(4976255, 631149)	None	Fiddle Creek DRSF	MGII water right	EFSFSR
YP-SR-4	EFSFSR below Yellow Pine pit	EFSFSR downstream of Yellow Pine pit and upstream of Sugar Creek(4977030, 631264)	BMI Yellow Pine pit, SE and NW Bradley waste rock dumps, Monday Camp waste rock dump, Bailey Tunnel Collar	Yellow Pine Pit	Located near new USGS gaging station, has past water quality data	EFSFSR
YP-T-48	Lower Hennessy Creek	Unnamed tributary to EFSFSR (locally Hennessy Creek), upstream of EFSFSR confluence(4977107, 631117)	NW Bradley waste rock dumps	Yellow Pine Pit	Downstream of past activities	EFSFSR
YP-SR-2	EFSFSR below Sugar Creek	EFSFSR, downstream of Sugar Creek confluence and by mile marker 10 (4977368, 630854)	All those listed above; USFS tailings repository	All those listed above	Location near USGS gaging station, has past water quality data	EFSFSR

Table 4-1. Surface Water Sampling Locations						
Station Name[1]	Location	Site Description and UTM Coordinates (northing, easting)	Legacy Upstream Activities	Potential Future Upstream Stibnite Gold Project Activities	Additional Rationale	Watershed
YP-T-40	Salt Creek	Salt Creek , north of FS 412 (4978703, 630017)	None	None (Control)	Mineralized but undisturbed tributary that represents mineralized baseline, has limited past water quality data	EFSFSR

Notes:

UTM Universal Transverse Mercator
1 Naming convention after MSE 2011b
7 assigned number, no other meaning
AS adit seep
AST above ground storage tank
DMEA U.S. Defense Mineral Exploration Administration
DRSF development rock storage facility
EFSFSR East Fork South Fork Salmon River
FS Forest Service
HP Homestake pit seep site
M Miscellaneous, mostly legacy mine-related
MGI Midas Gold Idaho
S seep
SEBS Southeast Bradley dump seep site
SMI Stibnite Mines, Inc
SODA spent ore disposal area
SR East Fork South Fork Salmon River site
T Tributary to East Fork South Fork Salmon River
USGS U.S. Geological Survey

Table 4-2. Adit Seep and Seep Sampling Locations			
Station Name[1]	**Site Description UTM Coordinates (northing, easting)**	**Site Description**	**Watershed**
Meadow Creek Adit Seep and Seep Sites			
YP-M-3	Settling pond on northeast corner of SODA (4972605, 630863)	Small settling pond at northeast corner of SODA, adjacent to Keyway Marsh; pond is sampled rather than flow into pond	Meadow Creek
YP-S-8	North Keyway Dam seep (4972585, 630876)	East side of SODA berm, adjacent to large marsh east of SODA on Hangar Flats	Meadow Creek
YP-S-7	Middle Keyway Dam seep (4972569, 630893)	East side of SODA berm, adjacent to large marsh east of SODA on Hangar Flats	Meadow Creek
YP-S-6	South Keyway Dam seep (4972547, 630907)	East side of SODA berm, adjacent to large marsh east of SODA on Hangar Flats	Meadow Creek
YP-S-10	Keyway Marsh outlet (4972604, 631024)	Outlet from large marsh east of SODA on Hangar Flats	Meadow Creek
YP-S-5	Smelter Flats seep (4972786, 631198)	Seep near former Bailey tailings pond next to former mill and smelter	Meadow Creek
YP-T-23A	Heap leach seep (4972831, 631180)	Seep from southwest corner of heap leach on Hangar Flats	Meadow Creek
YP-S-2	Meadow Creek Fault seep (4973297, 631161)	Halfway up Hangar Flats hillslope	Meadow Creek
YP-AS-7	Meadow Creek Mine adit seep (4973093, 631274)	On hillside above heap leach pad	Meadow Creek
Sugar Creek Adit Seep and Seep Sites			
YP-AS-1	Bonanza adit seep (4977882, 632780)	North side of Sugar Creek, between meadow and West End Creek confluence	Sugar Creek
YP-AS-2	Bailey Tunnel adit seep (4977119, 631730)	South side of Sugar Creek between EFSFSR and West End Creek confluences	Sugar Creek
YP-HP-S1	Homestake pit seep (4976952, 631745)	Outlet from lowest pond in the Homestake pit	Sugar Creek
YP-S-1	Hillside seep by Sugar Creek (4977232, 631337)	North side of Sugar Creek and FS 412, near EFSFSR confluence	Sugar Creek
EFSFSR Adit Seep and Seep Sites			
YP-S-3	Garnet pit seep (4973940, 632771)	Seep on open slope downhill from the Garnet pit	EFSFSR
YP-AS-6	DMEA adit seep (4974090, 631567)	Hillside west of EFSFSR and FS 412, north of confluence with Garnet Creek	EFFSFSR
YP-T-17	DMEA waste rock seep (4974141, 631644)	Seep on west side of FS 412 from toe of DMEA waste rock dump	EFSFSR

Table 4-2. Adit Seep and Seep Sampling Locations			
Station Name[1]	**Site Description UTM Coordinates (northing, easting)**	**Site Description**	**Watershed**
YP-S-9	Old haul road seep (4974840, 632172)	Hillside seep between Garnet and Midnight Creeks on old upper haul road	EFSFSR
YP-M-4	Fiddle Creek pond (4974969, 631062)	Pond on upstream side of breached dam on Fiddle Creek; Fiddle Creek flows through pond	EFSFSR
YP-AS-5	North Tunnel adit seep (4974987, 631185)	Downstream of pond and on south side of Fiddle Creek	EFSFSR
YP-AS-3	Monday Tunnel adit seep (4975898, 631355)	On Monday Camp flat, south of Yellow Pine pit on west side of EFSFSR	EFSFSR
YP-AS-4	Cinnabar Tunnel adit seep (4975960, 631472)	South of Midnight Creek and Yellow Pine pit on east side of EFSFSR	EFSFSR
YP-SEBS-2	South southeast Bradley waste rock seep (4976135, 631443)	Seep from bench on eastern side of Yellow Pine pit	EFSFSR
YP-SEBS-1	North southeast Bradley waste rock seep (4976284, 631492)	Seep from bench at northeast corner of Yellow Pine pit	EFSFSR

Notes:

UTM Universal Transverse Mercator
1 Naming convention after MSE 2011b
7 assigned number, no other meaning
AS adit seep
DMEA U.S. Defense Mineral Exploration Administration
EFSFSR East Fork South Fork Salmon River
HP Homestake pit seep site
M Miscellaneous, mostly legacy mine-related
S seep
SEBS Southeast Bradley dump seep site
SODA spent ore disposal area
SR East Fork South Fork Salmon River site

Table 4-3. Surface Water Sampling Constituents									
Surface Water Parameter	Sampling Frequency	Most Restrictive Limit			Best-Fit Method		Data Quality Indicators[1]		
		Strictest Regulatory Criteria	Units	Limiting Program(s)	Method Reporting Limit[1]	Method Number	Duplicate Samples RPD	LCS Percent Recovered	Matrix Spike Percent Recovered
Analytical Constituents									
Alkalinity	Monthly Quarterly	> 20	mg/L as $CaCO_3$	USEPA Freshwater Aquatic Life Criteria[2]	9	SM[3] 2320 B	20	90 - 110	NA
Aluminum	Monthly Quarterly	0.05	mg/L	USEPA Drinking Water Standards (secondary)[4]	0.002	USEPA[5] 6020A	20	85 - 120	75 - 125
Ammonia	Monthly Quarterly	NA	mg/L as NH_3	NA	0.01	USEPA 350.1	20	90 - 110	90 - 110
Antimony	Monthly Quarterly	0.0052	mg/L	Idaho Surface Water Standards[6]	0.00005	USEPA 6020A	20	91 - 112	75 - 125
Arsenic	Monthly Quarterly	0.01	mg/L	Idaho Surface Water Standards/USEPA Drinking Water Standard	0.0005	USEPA 6020A	20	89 - 112	75 - 125
Arsenic III	Quarterly	NA	mg/L	NA	0.00002	USEPA 1632	35	70 - 130	30 - 170
Barium	Quarterly	2	mg/L	USEPA Drinking Water Standards	0.00005	USEPA 6020A	20	92 - 111	75 - 125
Beryllium	Quarterly	0.004	mg/L	USEPA Drinking Water Standards	0.00002	USEPA 6020A	20	80 - 120	75 - 125
Bicarbonate	Monthly Quarterly	NA	mg/L as $CaCO_3$	NA	9	SM 2320 B	20	90 - 110	NA
Boron	Quarterly	120	mg/L	Wildlife Benchmark for Consumption of Surface Water[7]	0.010	USEPA 6010C	20	91 - 112	75 - 125
Cadmium	Quarterly	0.00025	mg/L	Idaho Criteria for Aquatic Life/USEPA Freshwater Aquatic Life Criteria	0.00002	USEPA 6020A	20	92 - 111	75 - 125
Calcium	Monthly Quarterly	NA	mg/L	NA	0.004	USEPA 6010C	20	85 - 116	75 - 125
Carbonate	Monthly Quarterly	NA	mg/L as $CaCO_3$	NA	9	SM 2320 B	20	90 - 110	NA
Chloride	Monthly Quarterly	230	mg/L	USEPA Freshwater Aquatic Life Criteria	0.2	USEPA 300.0	20	90 - 110	90 - 110
Chromium, Total	Quarterly	0.1	mg/L	USEPA Drinking Water Standards	0.0002	USEPA 6020A	20	88 - 113	75 - 125
Chromium III	Conditional[9]	0.074	mg/L	Idaho Criteria for Aquatic Life/USEPA Freshwater Aquatic Life Criteria	0.001	USEPA 218.6	ND	ND	ND
Chromium VI	Conditional	0.011	mg/L	Idaho Criteria for Aquatic Life/USEPA Freshwater Aquatic Life Criteria	0.001	USEPA 218.6	ND	ND	ND
Cobalt	Quarterly	NA	mg/L	NA	0.00002	USEPA 6020A	20	87 - 114	75 - 125
Copper	Quarterly	0.009	mg/L	USEPA Freshwater Aquatic Life Criteria	0.0001	USEPA 6020A	20	89 - 113	75 - 125
Cyanide, Free	Conditional	0.0200	mg/L	USEPA Drinking Water Standards	0.02	USEPA 9014	20	86 - 118	70 - 125

Table 4-3. Surface Water Sampling Constituents									
Surface Water Parameter	Sampling Frequency	Most Restrictive Limit			Best-Fit Method		Data Quality Indicators[1]		
		Strictest Regulatory Criteria	Units	Limiting Program(s)	Method Reporting Limit[1]	Method Number	Duplicate Samples RPD	LCS Percent Recovered	Matrix Spike Percent Recovered
Cyanide, Total	Quarterly	0.0052	mg/L	Idaho Criteria for Aquatic Life/USEPA Freshwater Aquatic Life Criteria	0.005	SM 4500 CN-E	20	84 - 115	23 - 148
Cyanide, Weak Acid Dissociable	Conditional	0.0052	mg/L	Idaho Criteria for Aquatic Life/USEPA Freshwater Aquatic Life Criteria	0.01	SM 4500 CN I	20	70 - 141	64 - 136
Fluoride	Monthly Quarterly	2.0000	mg/L	USEPA Drinking Water Standards (secondary)	0.200	USEPA 300.0	20	90 - 110	90 - 110
Hardness	Monthly Quarterly	NA	mg/L	NA	9.00	SM 2320 B	20	NA	NA
Iron	Monthly Quarterly	0.3000	mg/L	USEPA Drinking Water Standards (secondary)	0.001	USEPA 6010C	20	92 - 111	75 - 125
Lead	Monthly Quarterly	0.0025	mg/L	Idaho Criteria for Aquatic Life/USEPA Freshwater Aquatic Life Criteria	0.00	USEPA 6020A	20	90 - 112	75 - 125
Magnesium	Monthly Quarterly	NA	mg/L	NA	0.002	USEPA 6010C	20	86 - 115	75 - 125
Manganese	Monthly Quarterly	0.0500	mg/L	USEPA Drinking Water Standards (secondary)	0.00	USEPA 6010C	20	92 - 112	75 - 125
Mercury	Monthly Quarterly	0.0000	mg/L	Idaho Criteria for Aquatic Life[8]	0.000	USEPA 1631E	24	77 - 123	71 - 125
Methyl Mercury	Quarterly	NA	mg/L	NA	0.00	USEPA 1630	35	67 - 133	65 - 135
Molybdenum	Quarterly	0.6000	mg/L	Wildlife Benchmark for Consumption of Surface Water	0.000	USEPA 6020A	20	80 - 120	75 - 125
Nickel	Quarterly	0.0520	mg/L	Idaho Criteria for Aquatic Life/USEPA Freshwater Aquatic Life Criteria	0.00	USEPA 6020A	20	89 - 113	75 - 125
Nitrates	Conditional	10.0000	mg/L as N	USEPA Drinking Water Standards	0.200	USEPA 300.0	ND	ND	ND
Nitrates and Nitrites	Monthly Quarterly	NA	mg/L as N	NA	0.05	USEPA 353.2	20	90 - 110	89 - 114
Nitrites	Conditional	1.0000	mg/L as N	USEPA Drinking Water Standards	0.200	USEPA 300.0	ND	ND	ND
Nitrogen, Total	Quarterly	NA	mg/L as N	NA	0.20	USEPA 351.4 and USEPA 353.2	20	72 - 129	53 - 160
Phosphorous	Monthly Quarterly	NA	mg/L as P	NA	0.020	USEPA 6010C	20	80 - 120	75 - 125
Potassium	Monthly Quarterly	NA	mg/L	NA	0.10	USEPA 6010C	20	89 - 114	75 - 125
Selenium	Quarterly	0.0050	mg/L	Idaho Criteria for Aquatic Life/USEPA Aquatic Life Criteria	0.001	USEPA 6020A	2	87 - 115	75 - 125
Silver	Quarterly	0.0032	mg/L	USEPA Freshwater Aquatic Life Criteria	0.00	USEPA 6020A	20	80 - 120	75 - 125

Table 4-3. Surface Water Sampling Constituents									
Surface Water Parameter	Sampling Frequency	Most Restrictive Limit			Best-Fit Method		Data Quality Indicators[1]		
		Strictest Regulatory Criteria	Units	Limiting Program(s)	Method Reporting Limit[1]	Method Number	Duplicate Samples RPD	LCS Percent Recovered	Matrix Spike Percent Recovered
Sodium	Monthly Quarterly	NA	mg/L	NA	0.200	USEPA 6010C	20	80 - 120	75 - 125
Solids, Total Dissolved (TDS)	Monthly Quarterly	500.0000	mg/L	USEPA Drinking Water Standards (secondary)	5.00	SM 2540 C	10	90 - 108	NA
Solids, Total Suspended (TSS)	Monthly Quarterly	NA	mg/L	NA	5.000	USEPA 160.2	10	85 - 111	NA
Sulfate	Monthly Quarterly	250.0000	mg/L	USEPA Drinking Water Standards (secondary)	0.20	USEPA 300.0	20	90 - 110	90 - 110
Thallium	Quarterly	0.0000	mg/L	Idaho Surface Water Standards	0.000	USEPA 6020A	2	91 - 108	75 - 125
Vanadium	Quarterly	0.8350	mg/L	Wildlife Benchmark for Consumption of Surface Water	0.00	USEPA 6020A	2	87 - 113	75 - 125
Zinc	Monthly Quarterly	0.1200	mg/L	Idaho Criteria for Aquatic Life/USEPA Freshwater Aquatic Life Criteria	0.001	USEPA 6020A	20	86 - 119	75 - 125
Onsite Measurements									
Color	Quarterly	15.0000	(PT-CO)	USEPA Drinking Water Standards (secondary)	5.00	USEPA 110.2	NA	NA	NA
Dissolved Oxygen	Monthly Quarterly	> 6	mg/L	Idaho Criteria for Aquatic Life Use Designations[10]	NA	USEPA 360.1	NA	NA	NA
pH	Monthly Quarterly	≥ 6.5 and ≤ 9.0	units	Idaho Criteria for Aquatic Life Use Designations	NA	USEPA 150.1	NA	NA	NA
Specific conductivity	Monthly Quarterly	NA	mS/cm	NA	NA	USEPA 120.1	NA	NA	NA
Temperature	Monthly Quarterly	< 13	degree C	Idaho Criteria for Aquatic Life Use Designations	NA	USEPA 170.1	NA	NA	NA
Turbidity	Monthly Quarterly	Background + 50	NTU	Idaho Criteria for Aquatic Life Use Designations	NA	USEPA 180.1	NA	NA	NA

Notes:

> Greater than

≥ Greater than or equal to

≤ Less than or equal to

degree C degree Celsius

LCS Laboratory Control Sample

MCL maximum contaminant level.

mg/L milligrams per Liter

mg/L as $CaCO_3$ milligrams per Liter as calcium carbonate

mg/L as N milligrams per Liter as Nitrogen

mg/L as NH_3 milligrams per Liter Ammonia

mg/L as P milligrams per Liter as Phosphorus

mS/cm millisiemens per centimeter

NA not applicable. MCL = maximum contaminant level.

ND no data. NA = not applicable. MCL = maximum contaminant level.

Table 4-3. Surface Water Sampling Constituents									
Surface Water Parameter	Sampling Frequency	Most Restrictive Limit			Best-Fit Method		Data Quality Indicators[1]		
		Strictest Regulatory Criteria	Units	Limiting Program(s)	Method Reporting Limit[1]	Method Number	Duplicate Samples RPD	LCS Percent Recovered	Matrix Spike Percent Recovered

NTU Nephelometric Turbidity Unit

PT-CO Platinum-Cobalt Scale

RPD Relative Percent Different

1 The method reporting limits and data quality indicators as developed in-house and reported by the contract laboratory, ALS, in Kelso, Washington

2 USEPA National Recommended Water Quality Criteria for Aquatic Life. https://www.epa.gov/wqc/nationalrecommended-water-quality-criteria-aquatic-life-criteria-table.

3 Method numbers preceded by "SM" indicate Standard Methods.

4 USEPA National Primary Drinking Water Regulations. https://www.epa.gov/ground-water-and-drinkingwater/national-primary-drinking-water-regulations. Secondary Drinking Water Standards: Guidance for Nuisance Chemicals. https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisancechemicals.

5 Method numbers preceded by "USEPA" indicate a USEPA method.

6 IDAPA 58.01.02 Section 210, Numeric Criteria for Toxic Substances for Waters Designated for Domestic Water Supply Use, http://adminrules.idaho.gov/rules/2012/58/0102.pdf

7 Opresko, D.M., B.E. Sample and G.W. Suter II. 1996. Toxicological Benchmarks for Wildlife: 1996 Revision. Oak Ridge National Laboratory, Oak Ridge, TN, ES/ER/TM-86/R3.

9 Conditional" indicates that a speciation analysis will only be conducted if total species analysis indicates that analyte concentration meets or exceeds strictest regulatory criteria

8 IDAPA 58.01.02 Section 210, Numeric Criteria for Toxic Substances for Waters Designated for Aquatic Life - General (pH), Cold Water (dissolved oxygen and turbidity), Salmonid Spawning (temperature), http://adminrules.idaho.gov/rules/2012/58/0102.pdf

10 IDAPA 58.01.02 Section 250, Surface Water Quality Criteria for Aquatic Life Use Designations, http://adminrules.idaho.gov/rules/2012/58/0102.pdf

The long-term data set resulting from baseline surface water flow measurements provides a synoptic perspective on the surficial flow system in the Study Area, particularly during low-flow periods. Higher flows posing a safety issue for field staff are not reflected in this data set. The data are useful for assessing contributions of flow from tributaries and seeps for conceptualization of the surficial flow system (Meadow Creek, Sugar Creek, EFSFSR).

Statistics on surface water flow measurements by location from field events between 2012 and 2017 are presented by drainage in order of upgradient to downgradient.

4.2.1 Stream Flow Summary Statistics

Average surface water flows from stream sampling sites in the Meadow Creek drainage ranged from approximately 2 cubic feet per second (CFS) at the South Fork of Meadow Creek to 22 CFS above the EFSFSR. Sugar Creek drainage average flows ranged from less than, 1 CFS along West End Creek to 36 CFS above the EFSFSR. Average flows along the EFSFSR ranged from as low as 0.1 CFS at Scout Creek up to 90 CFS below Sugar Creek. Summary statistics on stream flow measurements from field events between 2012 and 2017 are presented in Table 4-4.

4.2.2 Adit Seep and Seep Flow Summary Statistics

Average flows from adit seep and seep sampling locations in the Meadow Creek drainage area ranged from approximately 0.003 CFS at the Meadow Creek Fault and Mine Adits to 0.19 CFS at the Keyway Marsh Outlet. Sugar Creek drainage area average adit seep and seep flows ranged from approximately 0.004 CFS at the Hillside Seep by Sugar Creek to 0.08 CFS at the Bailey Tunnel Adit. Average flows in the EFSFSR drainage area ranged from approximately 0.002 CFS at the Old Haul Road Seep to 0.27 CFS at the South-Southeast Bradley Waste Rock Seep. Summary statistics on adit seep and seep flow measurements recorded between 2012 and 2017 are provided in Table 4-5.

4.3 SURFACE WATER QUALITY SUMMARY

Individual sample summary statistics including the number of samples, number of detected measurements, number of non-detected measurements; minimum, maximum, mean, median, standard deviation; and 90th, 95th, and 99th percentiles were calculated for data collected between April 2012 and September 2017 using EQuIS 7.0 for each constituent at each of the 55-surface water quality monitoring locations. The evaluated data are provided on summary tables in Appendix B. These surface water sample results are presented by drainage in order of upgradient to downgradient locations within the Study Area.

4.3.1 Stream Water Quality Summary Statistics

Individual summary statistics including the number of samples; percent of non-detected measurements; percent of constituents detected below the most restrictive potentially applicable numeric standard/criterion; percent of samples exceeding the criterion; and minimum, maximum, and median concentrations were calculated for each constituent at each of the 32-stream water quality monitoring locations. Regulatory exceedance criteria for turbidity have not yet been determined for this Site, and thus an exceedance percent was not calculated. The summary of stream sample statistics is presented by drainage in upgradient to downgradient order in Table 4-6.

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Table 4-4 Flow Statistics at Stream Sampling Sites					
Station Name	Location	Minimum (cfs)	Maximum (cfs)	Median (cfs)	Mean (cfs)
Meadow Creek Surface Water Sites					
YP-T-46	South Fork Meadow Creek	0.225	9.67	0.692	2.36
YP-T-45	North Fork Meadow Creek	0.237	19.008	0.793	3.635
YP-T-33	Meadow Creek Above SODA	1.9	71	3.809	13.258
YP-T-43	Meadow Creek Above Keyway Marsh	1.974	73.908	4.891	15.84
YP-T-27	Meadow Creek Below Keyway Marsh	2.782	76.447	5.74	17.429
YP-T-29	Blowout Creek	0.776	24.445	2.049	5.492
YP-T-22	Meadow Creek Above EFSRSR	3.912	87	7.718	22.695
Sugar Creek Surface Water Sites					
YP-T-8A	Sugar Creek Uppermost Site	3.58	181	10.002	34.065
YP-T-7	Sugar Creek Above West End Creek	4.809	201	10.581	32.863
YP-T-37	Upper West End Creek	0.003	0.627	0.017	0.054
YP-T-49	Middle West End Creek	0.369	1.37	0.587	0.661
YP-T-6	Lower West End Creek	0.159	1.677	0.398	0.558
YP-T-1	Sugar Creek Above EFSFSR	4.2	213	11.737	36.062
EFSFSR Surface Water Sites					
YP-T-44	Fern Creek	0.059	2.65	0.223	0.541
YP-SR-14	EFEFSR Above Fern Creek	0.479	22.249	0.913	4.594
YP-SR-13	EFSFSR Above Rabbit Creek	2.05	67	5.043	14.331
YP-T-21	Rabbit Creek	0.216	4.425	0.762	1.141
YP-SR-11	EFSFSR Above Meadow Creek	3.046	80	5.934	16.434
YP-SR-10	EFSFSR Below Meadow Creek	6.234	169	15.952	40.776
YP-T-35	Garnet Creek	0.007	1.881	0.078	0.297
YP-T-15	Scout Creek	0.01	0.981	0.082	0.165
YP-SR-8	EFSFSR Above Fiddle Creek	5.877	195	16.477	43.488
YP-T-12	Upper Fiddle Creek	0.146	19.043	0.962	3.843
YP-T-11	Lower Fiddle Creek	0.218	20.572	0.878	3.491
YP-SR-6	EFSFSR Above Yellow Pine Pit	7.997	216	19.234	50.849
YP-T-42	Upper Midnight Creek	0.123	4.05	0.655	1.093
YP-T-10	Lower Midnight Creek	0.148	3.346	0.417	0.846
YP-T-41	Hennessy Creek	0.148	7.369	0.403	1.333
YP-SR-4	EFSFSR Below Yellow Pine Pit	7.673	227	17.045	52.151
YP-T-48	Lower Hennessy Creek	0.093	5.091	0.27	0.984
YP-SR-2	EFSFSR Below Sugar Creek	8.969	407	33.408	90.711
YP-T-40	Salt Creek	0.795	13.544	1.452	3.366

Notes:

(-) No Action Level Criteria

cfs cubic feet per second

NM Not Measured - Regulatory exceedance criteria for turbidity has not yet been determined

Table 4-5 Flow Statistics at Adit Seep and Seep Sampling Sites					
Station Name	Location	Minimum (cfs)	Maximum (cfs)	Median (cfs)	Mean (cfs)
Meadow Creek Adit Seep and Seep Sites					
YP-M-3	Settling Pond on Northeast Corner of SODA	0.006	0.746	0.073	0.112
YP-S-8	North Keyway Dam Seep	0	0.095	0.005	0.011
YP-S-7	Middle Keyway Dam Seep	0.004	0.012	0.007	0.008
YP-S-6	South Keyway Dam Seep	0	0.011	0.006	0.006
YP-S-10	Keyway Marsh Outlet	0.032	0.859	0.107	0.185
YP-S-5	Smelter Flats Seep	0.001	0.191	0.012	0.029
YP-T-23A	Heap Leach Seep	0	0.134	0.019	0.031
YP-S-2	Meadow Creek Fault Seep	0	0.025	0	0.003
YP-AS-7	Meadow Creek Mine Adit Seep	0	0.011	0.002	0.003
Sugar Creek Adit Seep and Seep Sites					
YP-AS-1	Bonanza Adit Seep	0	0.094	0.002	0.01
YP-AS-2	Bailey Tunnel Adit Seep	0.02	0.223	0.065	0.079
YP-HP-S1	Homestake Pit Seep	0.005	0.294	0.033	0.061
YP-S-1	Hillside Seep by Sugar Creek	0	0.028	0.001	0.004
EFSFSR Adit Seep and Seep Surface Water Sites					
YP-S-3	Garnet Pit Seep	0.004	0.23	0.017	0.045
YP-AS-6	DMEA Adit Seep	0	0.021	0.004	0.006
YP-T-17	DMEA Waste rock Seep	0	0.117	0.007	0.017
YP-S-9	Old Haul Road Seep	0.001	0.006	0.002	0.002
YP-M-4	Fiddle Creek Pond	NM	NM	NM	NM
YP-AS-5	North Tunnel Adit Seep	0.063	0.063	0.063	0.063
YP-AS-3	Monday Tunnel Adit Seep	0	0.036	0.002	0.007
YP-AS-4	Cinnabar Tunnel Adit Seep	0.01	0.367	0.061	0.096
YP-SEBS-2	South Southeast Bradley Waste rock Seep	0.021	0.539	0.266	0.271
YP-SEBS-1	North Southeast Bradley Waste rock Seep	0.006	0.084	0.028	0.033

Notes:

(-) No Action Level Criteria

cfs cubic feet per second

NM Not Measured - Regulatory exceedance criteria for turbidity has not yet been determined

Table 4-6. Summary of Stream Sample Statistics								
Constituent	Unit	No. of Samples	% Not Detected	% Detected and Below Criteria	% Exceeding Criteria	Min	Max	Median
Onsite Measurements								
Color, N	Pt-Co	658	0	100	0	0	0	0
Conductivity, N	mS/cm	1111	0	100	-	0.023	0.472	0.099
Dissolved Oxygen, N	mg/L	1130	0	0	100	6.15	15.81	10.34
pH, N	pH	1114	0	99	1	6.05	9.25	7.41
Temperature, Water, N	deg C	1139	0	95	5	-0.03	17.77	4.02
Turbidity, N	NTU	1137	0	100	NA	0	124	3.88
Analytical Constituents								
Alkalinity as CaCO3, N	mg/L as CaCO3	1126	0	5	95	7.8	154	41.7
Aluminum (Fume Or Dust), T	ug/L	758	1	63	36	<10 U	2730	27.75
Aluminum (Fume Or Dust), D	ug/L	758	19	80	1	<4 U	280 J+	6
Ammonia as Nitrogen, N	mg/L	1125	98	2	-	<0.05 U	0.202	<0.05 U
Antimony, T	µg/L	1126	1	55	44	<0.05 U	71.9	3.44
Antimony, D	µg/L	1126	1	55	44	<0.05 U	70.9	3.3
Arsenic (III), T	µg/L	647	6	94	-	<0.02 UJ	96	0.2
Arsenic, T	µg/L	1126	3	40	57	<0.5 U	221	15.6
Arsenic, D	µg/L	1126	3	42	55	<0.5 U	221	14.65
Barium, T	µg/L	647	0	100	0	3	59.4	10.1
Barium, D	µg/L	647	0	100	0	2.69	22	9.44 J+
Beryllium, T	µg/L	647	90	10	0	<0.02 U	0.23	<0.02 U
Beryllium, D	µg/L	647	99	1	0	<0.02 U	0.03	<0.02 U
Bicarbonate as CaCO3, N	mg/L	1126	0	100	-	7.8	154	42.7
Boron, T	ug/L	647	99	1	0	<21 U	21	<20 U
Boron, D	ug/L	647	99	1	0	<21 U	93.5	<20 U
Cadmium, T	ug/L	1015	99	1	0	<0.02 U	0.16 J+	<0.02 U
Cadmium, D	ug/L	1015	99	1	0	<0.02 U	0.27 J+	<0.02 U
Calcium, T	µg/L	1126	0	100	-	2310	60600	11400
Calcium, D	µg/L	1126	0	100	-	2290	60800	11400
Carbonate as CaCO3, N	mg/L	1126	99	1	-	<2 U	42	<15 U
Chloride, N	mg/L	1126	71	29	0	<0.2 U	45.8	<0.4 U
Chromium, T	µg/L	1015	74	26	0	<0.2 U	2.9	<0.2 U
Chromium, D	µg/L	1015	85	15	0	<0.2 UJ+	2	<.02 U
Cobalt, T	µg/L	647	25	75	-	<0.02 U	1.37 J+	0.042
Cobalt, D	µg/L	647	43	57	-	<0.02 U	0.22 J+	<0.02 U
Copper, D	ug/L	1015	6	94	0	<0.1 U	1.7	0.1
Copper, T	ug/L	1015	28	72	0	<0.1 U	8	0.2 J+
Cyanide, T	mg/L	648	97	1	2	<0.003 U	0.136	<0.047 U
Cyanide, Free, N	mg/L	1	100	0	0	<0.01 U	<0.01 U	<0.01 U
Cyanide, Weak Acid Dissociable (WAD), N	mg/L	2	100	0	0	<0.0047 U	<0.01 U	<0.00735 U
Fluoride, N	mg/L	1126	99	1	0	<0.2 U	0.37	<0.2 U
Hardness as CaCO3, N	mg/L	1126	0	100	-	6.9	242	40.1
Iron, T	ug/L	1126	19	73	8	<21 U	5470	72.1
Iron, D	ug/L	1126	67	33	0	<20 U	187	<20 U
Lead, T	µg/L	1126	47	53	0	<0.02 U	1.18	<0.02 U
Lead, D	µg/L	1126	94	6	0	<0.02 U	0.26	<0.02 U
Magnesium, T	µg/L	1126	0	100	-	286	22400	2500
Magnesium, D	µg/L	1126	0	100	-	279	23300	2465

Table 4-6. Summary of Stream Sample Statistics								
Constituent	Unit	No. of Samples	% Not Detected	% Detected and Below Criteria	% Exceeding Criteria	Min	Max	Median
Manganese, T	ug/L	758	19	80	1	<1.1 U	237	4.35
Manganese, D	ug/L	758	57	43	0	<1 U	50.6	<1.1 U
Mercury, T	ng/L	1126	3	70	27	<0.5 U	3660	4.8
Mercury, D	ng/L	1105	8	89	3	<0.5 U	98.3	2.5
Methyl Mercury, N	ng/L	647	89	11	-	<0.1 U	0.64	<0.1 U
Molybdenum, T	µg/L	647	3	97	0	<0.05 U	2.02	0.88 J+
Molybdenum, D	µg/L	647	4	96	0	<0.05 U	2.03	0.874
Nickel, T	µg/L	647	70	30	0	<0.2 U	1.5 J+	<0.02 U
Nickel, D	µg/L	647	65	35	0	<0.2 U	1.7	<0.2 U
Nitrate+Nitrite as Nitrogen, N	mg/L	1126	83	17	-	<0.05 U	1.65	<0.05 U
Nitrogen, Total as Nitrogen, N	mg/L	647	21	79	-	<0.25 U	67.4	0.49
Nitrogen, Total Kjeldahl (TKN), N	mg/L	647	20	80	-	<0.2 UJ	67	0.46 J+
Phosphorus, T	ug/L	1126	92	8	-	<42 U	316	<40 U
Phosphorus, D	ug/L	1126	97	3	-	<42 U	34 J+	<40 U
Potassium, T	µg/L	1126	0	100	-	293 J+	2310	780
Potassium, D	µg/L	1126	0	100	-	264 J+	2430	761.5
Selenium, T	µg/L	1015	99	1	0	<1 U	1 J+	<1.0 U
Selenium, D	µg/L	1015	100	0	0	<1 U	<1 UJ	<1.0 U
Silver, T	µg/L	647	98	2	0	<0.02 U	0.04 J+	<0.02 U
Silver, D	µg/L	647	99	1	0	<0.02 U	0.03 J+	<0.02 U
Sodium, T	ug/L	1126	1	99	-	<400 UJ	3070	1930
Sodium, D	ug/L	1126	1	99	-	<400 UJ	3120	1930
Solids, Total Dissolved, N	mg/L	1126	1	98	1	<5 U	1920	56
Solids, Total Suspended (TSS), N	mg/L	1126	89	11	-	<5 U	134	<5 U
Sulfate, N	mg/L	1126	1	99	0	<0.2 U	115	3.695
Thallium, T	µg/L	647	94	6	0	<0.02 U	0.11	<0.02 U
Thallium, D	µg/L	647	98	2	0	<0.02 U	0.05	<0.02 U
Vanadium (Fume Or Dust), T	µg/L	647	38	62	0	<0.2 U	7.2	0.2
Vanadium (Fume Or Dust), D	µg/L	647	65	35	0	<0.2 U	0.6	<0.2 U
Zinc, T	µg/L	1126	70	30	0	<2 U	18.1	<0.5 U
Zinc, D	µg/L	1126	56	44	0	<2 U	18.5	<0.5 U

Notes:

% Percent
(-) No Action Level Criteria
< Less than
D Dissolved
J The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit
J+ The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit; biased high
N Normal sample
T Total
U The analyte was not detected in the sample at the estimated detection limit
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mg/L as $CaCO_3$ milligrams per Liter as calcium carbonate
mS/cm millisiemens per centimeter
No. Number
NM Not Measured - Regulatory exceedance criteria for turbidity has not yet been determined
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

4.3.2 Adit Seep and Seep Water Quality Summary Statistics

The overall summary statistics for the water quality data collected from the 23 adit seep and seep sampling locations including the number of samples; percent of non-detected measurements; percent of constituents detected below the most restrictive potentially applicable numeric standard/criterion; percent of samples exceeding the criterion; and minimum, maximum, and median concentrations calculated for each constituent are presented by drainage in order of upgradient to downgradient in Table 4-7. Regulatory exceedance criteria for turbidity has not yet been determined for this Site: the percent of samples exceeding this criterion was not analyzed.

4.4 SUMMARY OF PRIMARY SURFACE WATER COIS

The *WRSR* (BC 2017) compared the analytical results of all the surface water samples to the potentially applicable numeric standard/criterion to provide a context in which to evaluate and compare the data. The lowest (most restrictive) numeric water quality standards were used to compare water quality of each constituent and develop a list of key Constituents of Interest (COIs) that were detected at total concentrations above the criteria in more than 10 percent of the samples.

Distributions of key COI (As, Sb and Hg) concentrations by stream, adit seep and seep locations are provided below. Summary statistics of key COIs by stream reach in order of upgradient to downgradient are presented in Table 4-8. Summary statistics of key COIs by adit seep or seep location in upgradient to downgradient order are provided in Table 4-9.

The following graphs (Figures 4-2 through 4-9) show total and dissolved antimony, arsenic and mercury concentrations for select sites to give a general sense of how concentrations vary over time. Typical seasonal fluctuations noted in the WRSR (BC 2017) have continued, with no noticeable changes in the overall range of concentrations.

ED_002764_00003042-00043

Table 4-7. Summary of Adit Seep and Seep Sample Statistics								
Constituent	Unit	No. of Samples	% Not Detected	% Detected and Below Criteria	% Exceeding Criteria	Min	Max	Median
Onsite Measurements								
Color, N	Pt-Co	380	0	100	0	0	10	0
Conductivity, N	mS/cm	675	0	100	-	0.034	4.16	0.317
Dissolved Oxygen, N	mg/L	689	0	26	74	0.53	15.06	8.35
pH, N	pH	676	0	99	1	5.95	9.47	7.175
Temperature, Water, N	deg C	689	0	87	13	-0.05	28.73	6.89
Turbidity, N	NTU	683	0	100	NA	0	2000	5.8
Analytical Constituents								
Alkalinity as CaCO3, N	mg/L as CaCO3	400	0	1	99	11.5	412	106
Aluminum (Fume Or Dust), T	ug/L	392	3	55	42	<2 U	37900	31.05
Aluminum (Fume Or Dust), D	ug/L	392	47	49	4	<2 U	13300	2.35
Ammonia as Nitrogen, N	mg/L	400	82	18	-	<0.05 U	4.92	<0.05 U
Antimony, T	µg/L	400	0	12	88	0.09	4920	45.35
Antimony, D	µg/L	400	0	15	85	0.09	5140	35.05
Arsenic (III), T	µg/L	388	2	98	-	<0.02 U	20200	1.885
Arsenic, T	µg/L	400	3	2	95	<0.5 U	67500	194.5
Arsenic, D	µg/L	400	4	100	95	<0.5 U	11900	137
Barium, T	µg/L	388	0	100	0	1.69	1780	32.85
Barium, D	µg/L	388	0	100	0	0.42 J+	354	23.85
Beryllium, T	µg/L	388	51	48	1	<0.02 U	6.83	<0.02 U
Beryllium, D	µg/L	388	85	15	0	<0.02 U	2.67	<0.02 U
Bicarbonate as CaCO3, N	mg/L	400	1	99	-	<15 U	412	105.5
Boron, T	ug/L	388	91	100	0	<20 U	56	<20 U
Boron, D	ug/L	388	94	6	0	<20 U	45.9 J+	<20 U
Cadmium, T	mg/L	396	88	11	1	<0.02 U	0.89	<0.02 U
Cadmium, D	mg/L	396	97	3	0	<0.02 U	0.31 J+	<0.02 U
Calcium, T	µg/L	400	0	100	0	2880	432000	41950
Calcium, D	µg/L	400	0	100	0	2970	459000	41550
Carbonate as CaCO3, N	mg/L	400	99	100	-	<9 U	24	<15 U
Chloride, N	mg/L	400	32	68	0	<0.2 U	148	0.445
Chromium, T	µg/L	396	64	36	0	<0.2 U	62.5	<0.02 U
Chromium, D	µg/L	396	86	14	0	<0.2 U	18	<0.02 U
Cobalt, T	µg/L	388	13	87	0	<0.02 U	158	0.31 J+
Cobalt, D	µg/L	388	24	76	-	<0.02 U	161	0.15
Copper, T	ug/L	396	9	88	3	<0.1 U	55	0.38 J+
Copper, D	ug/L	396	10	89	1	<0.1 U	57.5	0.3 J+
Cyanide, T	mg/L	388	75	2	23	<0.0027 U	0.0605	<0.0047 U
Cyanide, Free, N	mg/L	6	100	0	0	<0.01 U	<0.01 U	<0.01 U
Cyanide, Weak Acid Dissociable (WAD), N	mg/L	6	100	0	0	<0.0047 U	<0.0047 U	<0.0047 U
Fluoride, N	mg/L	400	89	11	0	<0.2 U	1.02	<0.2 U
Hardness as CaCO3, N	mg/L	400	0	100	-	8.76	1940	146
Iron, T	ug/L	400	10	38	52	<20 U	335000	344
Iron, D	ug/L	400	52	27	21	<20 U	91000	<21.3 U
Lead, T	µg/L	400	32	63	5	<0.02 U	24.9	0.0495
Lead, D	µg/L	400	85	14	1	<0.02 U	38.7	<0.02 U
Magnesium, T	µg/L	400	0	100	-	384	213000	10450
Magnesium, D	µg/L	400	0	100	-	369	212000	10200

Table 4-7. Summary of Adit Seep and Seep Sample Statistics								
Constituent	Unit	No. of Samples	% Not Detected	% Detected and Below Criteria	% Exceeding Criteria	Min	Max	Median
Onsite Measurements								
Manganese, T	ug/L	392	11	41	48	<1 U	50200	39.75
Manganese, D	ug/L	392	28	33	39	<1 U	49600	9.65 J-
Mercury, T	ng/L	400	1	55	44	<1 U	11700	8.26
Mercury, D	ng/L	399	10	80	10	<0.5 U	2470	1.8
Methyl Mercury, N	ng/L	388	60	40	-	<0.1 U	17.4	<0.1 U
Molybdenum, T	µg/L	388	3	97	0	<0.05 U	9.19	1.07
Molybdenum, D	µg/L	388	3	97	0	<0.05 U	7.72	1.1 J+
Nickel, T	µg/L	388	26	73	1	<0.2 U	79.4	0.5 J+
Nickel, D	µg/L	388	28	71	1	<0.2 U	76.1	0.4 J+
Nitrate+Nitrite as Nitrogen, N	mg/L	400	62	38	-	<0.05 U	0.582	<0.05 U
Nitrogen, Total as Nitrogen, N	mg/L	388	11	89	-	<0.25 U	72.2	0.63
Nitrogen, Total Kjeldahl (TKN), N	mg/L	388	14	86	-	<0.2 UJ	72	0.55
Phosphorus, T	µg/L	400	50	50	-	<20 UJ	13700	<42 U
Phosphorus, D	µg/L	400	82	18	-	<20 U	2370	<40 U
Potassium, T	µg/L	400	0	100	-	360	20200	1965
Potassium, D	µg/L	400	1	99	-	<200 U	20000	1875
Selenium, T	µg/L	396	93	6	1	<1.0 U	14.5	<1.0 U
Selenium, D	µg/L	396	94	5	1	<1.0 U	14.2	<1.0 U
Silver, T	µg/L	388	84	16	0	<0.02 U	2.33	<0.02 U
Silver, D	µg/L	388	96	3	1	<0.02 U	8.65	<0.02 U
Sodium, T	µg/L	400	0	100	-	700	32800	3950
Sodium, D	µg/L	400	0	100	-	735	31200	3935
Solids, Total Dissolved, N	mg/L	400	1	88	11	<10 UJ	2680	183.5
Solids, Total Suspended (TSS), N	mg/L	400	51	49	-	<5 U	1320	<5 U
Sulfate, N	mg/L	400	0	90	10	0.86 J+	1700	37.65
Thallium, T	µg/L	388	75	21	4	<0.02 U	1.88	<0.02 U
Thallium, D	µg/L	388	89	10	1	<0.02 U	1.34	<0.02
Vanadium (Fume Or Dust), T	µg/L	388	48	52	0	<0.2 U	55.4	0.2
Vanadium (Fume Or Dust), D	µg/L	388	79	21	0	<0.2 U	30.8	<0.2 U
Zinc, T	µg/L	400	26	73	1	<0.5 U	1380	1.5 J+
Zinc, D	µg/L	400	30	69	1	<0.5 U	2460	1 J+

Notes:

% Percent
(-) No Action Level Criteria
< Less than
D Dissolved
J The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated
J+ The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated
N Normal
T Total
U The analyte was not detected in the sample at the estimated detection limit
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mg/L as $CaCO_3$ milligrams per Liter as calcium carbonate
mS/cm millisiemens per centimeter
NM Not Measured - Regulatory exceedance criteria for turbidity has not yet been determined
No. Number

Table 4-8 Statistics of Key COIs by Stream Reach															
				Antimony ug/L				Arsenic ug/L				Mercury ng/L			
				Standard for Comparison - 10 ug/L				Standard for Comparison - 5.2 ug/L				Standard for Comparison - 12 ng/L			
Station Name	Location Description	Average Flow (cfs)	Count	Minimum	Maximum	Mean	Median	Minimum	Maximum	Mean	Median	Minimum	Maximum	Mean	Median
Meadow Creek Surface Water Sites															
YP-T-46	South fork Meadow Creek	2.360	24	0.2	0.3	0.2	0.2	0.8	1.7	1.2	1.2	0.6	2.0	1.1	1.0
YP-T-45	North fork Meadow Creek	3.635	38	0.2	0.3	0.2	0.2	0.8	2.6	1.6	1.7	0.5	10.6	1.9	1.4
YP-T-33	Meadow Creek above SODA	13.258	84	0.2	0.8	0.3	0.3	0.7	2.6	1.2	1.3	0.5	4.8	1.4	1.0
YP-T-43	Meadow Creek above Keyway Dam	15.840	52	2.0	9.2	4.0	3.1	7.3	41.0	22.3	23.2	0.8	5.0	1.9	1.6
YP-T-27	Meadow Creek below Keyway Marsh	17.429	84	2.0	16.9	6.1	4.7	11.8	60.7	35.5	36.7	0.6	11.8	2.1	1.7
YP-T-29	Blowout Creek	5.492	84	0.4	1.6	1.0	1.1	3.5	10.5	6.7	7.0	1.0	113.0	5.2	2.6
YP-T-22	Meadow Creek above EFSFSR		84	2.4	38.2	8.3	5.7	13.6	63.5	35.7	35.7	0.7	404.0	9.2	1.9
Sugar Creek Surface Water Sites															
YP-T-8A	Sugar Creek uppermost site	34.065	70	0.3	0.7	0.5	0.5	3.5	7.2	4.8	4.7	3.8	863.0	59.0	13.6
YP-T-7	Sugar Creek above West End Creek	32.863	84	0.4	1.3	0.8	0.9	3.9	10.1	6.1	6.2	3.4	3660.0	105.4	13.2
YP-T-37	Upper West End Creek	0.054	44	1.7	2.4	2.1	2.2	7.7	10.5	8.8	8.6	27.5	777.0	143.0	85.2
YP-T-49	Middle West End Creek	0.661	16	3.5	4.4	3.8	3.9	16.8	20.1	18.0	17.9	4.8	29.5	8.9	7.0
YP-T-6	Lower West End Creek	0.558	82	3.6	13.0	10.6	10.8	28.7	97.3	80.1	80.9	3.0	18.1	5.9	5.6
YP-T-1	Sugar Creek above EFSFSR	36.062	84	1.3	8.6	3.5	3.0	6.5	24.1	13.7	13.8	1.6	2380.0	89.7	11.6
EFSFSR Surface Water Sites															
YP-T-44	Fern Creek	0.541	52.00	0.1	0.5	0.1	0.1	2.9	5.8	3.9	3.9	5.7	54.6	14.2	11.4
YP-SR-14	EFSFSR above Fern Creek	4.594	60.00	0.1	0.2	0.1	0.1	0.6	1.5	0.8	0.7	0.5	9.0	1.7	0.8
YP-SR-13	EFSFSR above Rabbit Creek	14.331	2.00	25.5	29.6	27.6	27.6	121.0	128.0	124.5	124.5	4.5	10.6	7.6	7.6
YP-T-21	Rabbit Creek	1.141	84.00	5.3	10.9	8.0	8.0	35.2	67.9	52.5	53.8	2.9	63.8	13.0	8.6
YP-SR-11	EFSFSR above Meadow Creek	16.434	84.00	0.5	1.9	1.1	1.1	4.3	13.2	10.2	11.3	1.6	37.0	5.4	3.7
YP-SR-10	EFSFSR below Meadow Creek	40.776	84.00	3.9	47.1	12.8	9.9	8.6	48.7	25.4	26.3	1.0	31.5	4.4	3.1
YP-T-35	Garnet Creek	0.297	74.00	21.2	58.8	44.6	49.6	65.8	221.0	166.1	177.5	1.7	37.6	6.3	4.4
YP-T-15	Scout Creek	0.165	84.00	32.0	58.9	45.3	44.4	69.7	134.0	88.9	84.7	0.6	11.9	2.5	2.0
YP-SR-8	EFSFSR above Fiddle Creek	43.488	84.00	5.7	61.8	17.5	12.7	12.3	57.7	29.0	28.6	1.0	20.1	4.4	3.3
YP-T-12	Upper Fiddle Creek	3.843	60.00	0.1	0.3	0.1	0.1	0.5	0.7	0.5	0.5	1.0	7.6	2.3	1.9
YP-T-11	Lower Fiddle Creek	3.491	84.00	0.2	1.2	0.6	0.5	0.5	3.9	1.7	1.7	0.8	13.9	2.7	1.8
YP-SR-6	EFSFSR above Yellow Pine pit	50.849	84.00	6.4	47.3	19.9	16.5	12.6	45.6	31.3	33.1	1.4	24.7	4.1	2.9
YP-T-42	Upper Midnight Creek	1.093	50.00	37.1	70.9	55.7	56.9	41.1	62.7	52.6	52.8	4.5	168.0	18.1	10.6
YP-T-10	Lower Midnight Creek	0.846	80.00	31.6	56.2	46.4	47.1	59.6	124.0	92.3	92.8	1.7	44.7	7.4	5.5
YP-T-41	Hennessy Creek	1.333	84.00	0.3	1.5	0.5	0.5	0.8	6.6	2.4	2.5	0.8	12.6	3.0	2.3
YP-SR-4	EFSFSR below Yellow Pine pit	52.151	84.00	10.2	62.2	31.5	30.3	20.8	116.0	66.2	69.2	1.3	32.7	4.3	3.0
YP-T-48	Lower Hennessy Creek	0.984	46.00	12.2	71.9	27.0	26.5	7.8	107.0	28.3	19.7	1.0	64.3	4.6	2.6
YP-SR-2	EFSFSR below Sugar Creek	90.711	84.00	6.8	38.8	22.1	22.1	14.7	76.2	46.7	50.0	1.7	395.0	24.6	7.4
YP-T-40	Salt Creek	3.366	84.00	0.1	0.2	0.1	0.1	1.8	3.7	2.8	2.8	0.5	6.0	1.1	1.0

Notes: Standards for comparison are the lowest criteria listed in Table 4-3
COIs Constituents of Interest
cfs cubic feet per second
EFSFSR East For South Fork Salmon River
ug/L micrograms per Liter
ng/L nanograms per Liter

Table 4-9 Statistics of Key COIs by Adit Seep and Seep																
					Antimony ug/L				Arsenic ug/L				Mercury ng/L			
					Standard for Comparison - 10 ug/L				Standard for Comparison - 5.2 ug/L				Standard for Comparison - 12 ng/L			
Station Name	Type	Location Description	Average Flow CFS	Count	Minimum	Maximum	Mean	Median	Minimum	Maximum	Mean	Median	Minimum	Maximum	Mean	Median
Meadow Creek Adit Seep and Seep Sites																
YP-M-3	SEEP	Settling pond on northeast corner of SODA	0.112	44	3.9	192.0	24.7	14.1	24.7	583.0	102.1	79.9	1.4	6600.0	182.2	7.5
YP-S-8	SEEP	North Keyway Dam seep	0.011	42	68.0	3450.0	517.7	358.5	283.0	67500.0	4102.8	2650.0	0.9	4080.0	103.9	3.3
YP-S-7	SEEP	Middle Keyway Dam seep	0.008	40	9.2	2450.0	324.4	96.6	485.0	48600.0	7563.4	3205.0	0.9	616.0	60.8	6.6
YP-S-6	SEEP	South Keyway Dam seep	0.006	40	2.9	229.0	41.6	21.5	119.0	34400.0	2867.5	569.5	1.0	201.0	31.5	13.4
YP-S-10	SEEP	Keyway Marsh outlet	0.185	46	11.5	139.0	47.3	43.9	27.2	6540.0	245.3	88.6	0.7	27.8	5.1	2.4
YP-S-5	SEEP	Smelter Flats seep	0.029	16	37.9	5140.0	2344.8	2275.0	817.0	5540.0	1508.6	1120.0	12.7	11700.0	839.9	45.2
YP-T-23A	SEEP	Heap leach seep	0.031	50	33.0	4940.0	1648.0	1115.0	324.0	5130.0	1221.3	859.5	1.6	405.0	42.0	8.3
YP-S-2	SEEP	Meadow Creek fault seep	0.003	14	9.2	21.1	13.1	10.6	671.0	1560.0	1079.1	1070.0	15.7	781.0	240.4	74.3
YP-AS-7	ADIT SEEP	Meadow Creek Mine adit seep	0.003	22	6.2	270.0	74.6	29.9	217.0	44800.0	10871.1	9255.0	1.1	5870.0	507.0	10.2
Sugar Creek Adit Seep and Seep Sites																
YP-AS-1	ADIT SEEP	Bonanza Adit seep	0.01	40	33.4	911.0	219.8	194.0	29.5	2190.0	175.0	75.7	3.0	3800.0	346.0	30.9
YP-AS-2	ADIT SEEP	Bailey Tunnel Outlet	0.079	46	111.0	308.0	179.0	168.0	52.7	794.0	208.4	159.5	0.5	6.5	1.0	0.8
YP-HP-S1	SEEP	Homestake Pit seep	0.061	36	4.4	52.8	25.3	25.4	21.3	3740.0	417.5	165.5	1.9	370.0	20.4	6.1
YP-S-1	SEEP	Hillside seep near Sugar Creek	0.004	22	0.5	1.0	0.6	0.6	36.2	71.6	47.0	43.4	1.0	159.0	20.0	7.0
EFSFSR Adit Seep and Seep Sites																
YP-S-3	SEEP	Garnet pit seep	0.045	34	8.3	32.6	24.0	29.1	17.0	245.0	151.4	197.0	0.6	67.0	9.6	5.9
YP-AS-6	ADIT SEEP	DMEA adit seep	0.006	42	14.0	27.0	22.2	23.4	192.0	326.0	241.3	233.5	0.6	34.8	3.0	1.4
YP-T-17	SEEP	DMEA waste rock seep	0.017	46	11.0	164.0	31.7	28.8	44.4	18800.0	791.4	210.0	0.8	632.0	51.1	3.3
YP-S-9	SEEP	Old haul road seep	0.002	32	73.9	123.0	90.1	88.6	86.9	1320.0	184.8	143.5	1.0	306.0	17.6	3.5
YP-M-4	SEEP	Fiddle Creek pond	NM	38	0.1	0.4	0.2	0.1	0.5	1.1	0.5	0.5	0.5	38.4	3.6	2.0
YP-AS-5	ADIT SEEP	North Tunnel adit	0.063	2	1.2	1.2	1.2	1.2	0.8	1.0	0.9	0.9	4.0	4.5	4.3	4.3
YP-AS-3	ADIT SEEP	Monday Tunnel adit seep	0.007	44	0.2	40.2	4.1	2.1	13.2	19600.0	977.5	48.2	0.9	882.0	60.9	2.5
YP-AS-4	ADIT SEEP	Cinnabar Tunnel adit seep	0.096	44	42.8	56.3	49.6	49.8	82.3	127.0	109.9	111.0	0.7	10.4	2.0	1.6
YP-SEBS-2	SEEP	South Bradley waste rock seep	0.271	30	51.1	60.1	55.6	55.4	118.0	169.0	139.9	138.5	0.5	4.9	1.5	1.2
YP-SEBS-1	SEEP	North Bradley waste rock seep	0.033	30	10.9	22.4	17.9	19.0	84.2	201.0	110.7	101.5	0.3	8.2	1.5	0.7

Notes: Standards for comparison are the lowest criteria listed in Table 4-3
COIs Constituents of Interest
cfs cubic feet per second
EFSFSR East For South Fork Salmon River
ug/L micrograms per Liter
ng/L nanograms per Liter

Figure 4-2a. Surfae Water Total Key COI Plot

YP-T-33 Meadow Creek above SODA

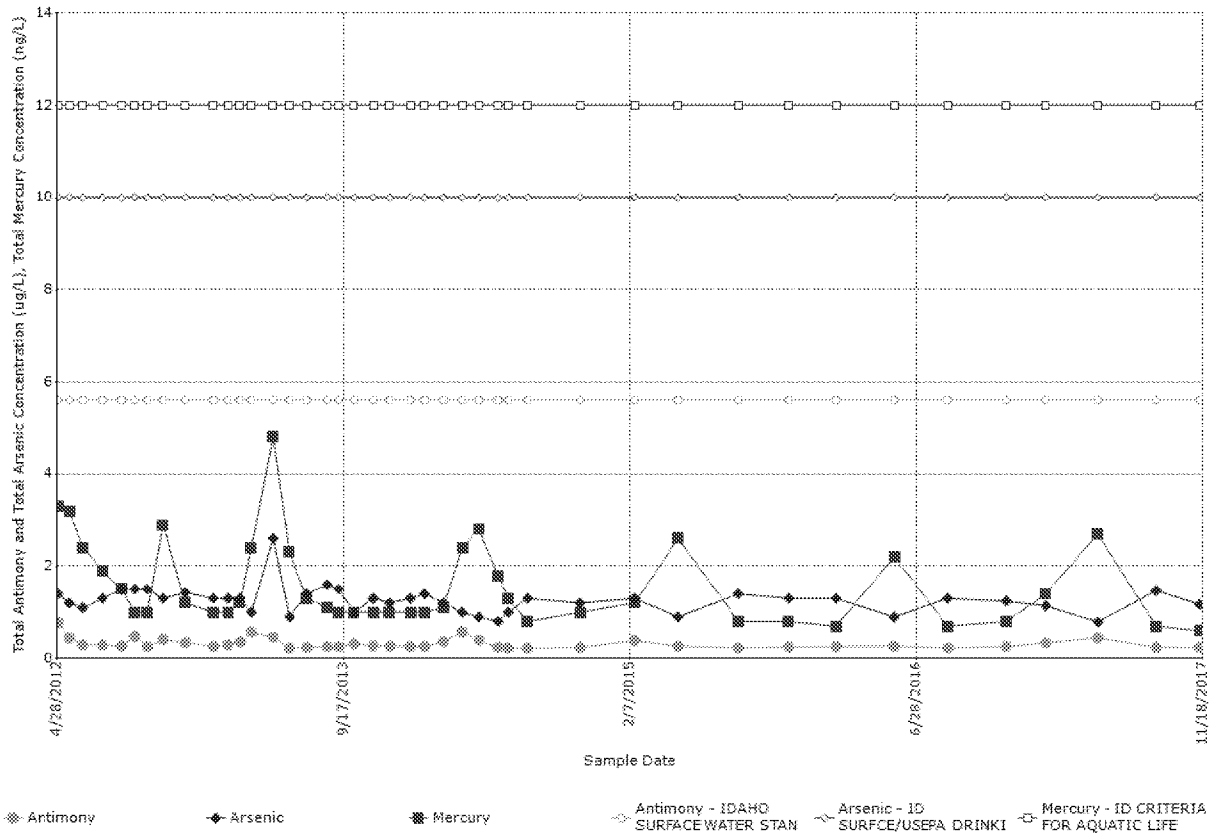

Figure 4-2. Surface Water Key COI Plots for YP-T-33 at Meadow Creek above SODA

Figure 4-2b. Surface Water Dissolved Key COI Plot

YP-T-33 Meadow Creek above SODA

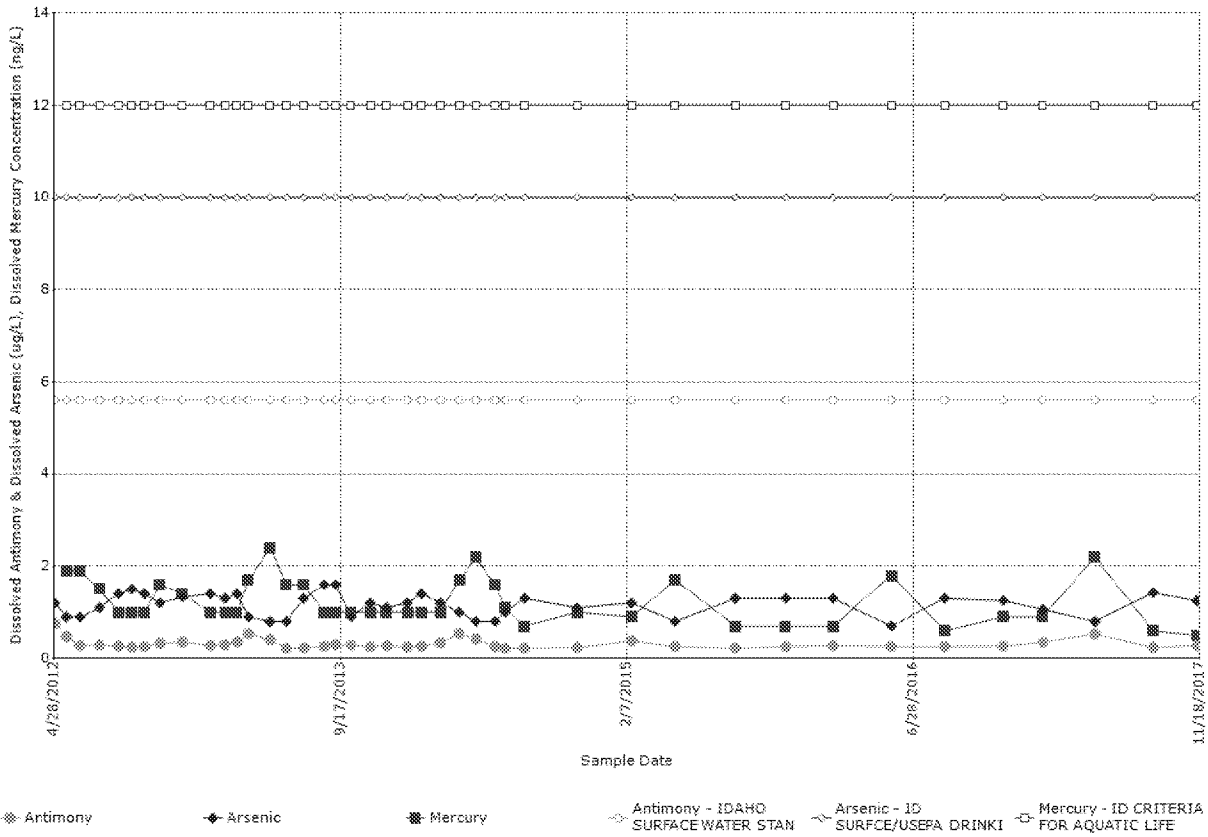

Figure 4-3. Surface Water Key COI Plots for YP-T-33 at Meadow Creek above SODA, continued.

Figure 4-3a. Surface Water Total Key COI Plot

YP-T-22 Meadow Creek above EFSFSR

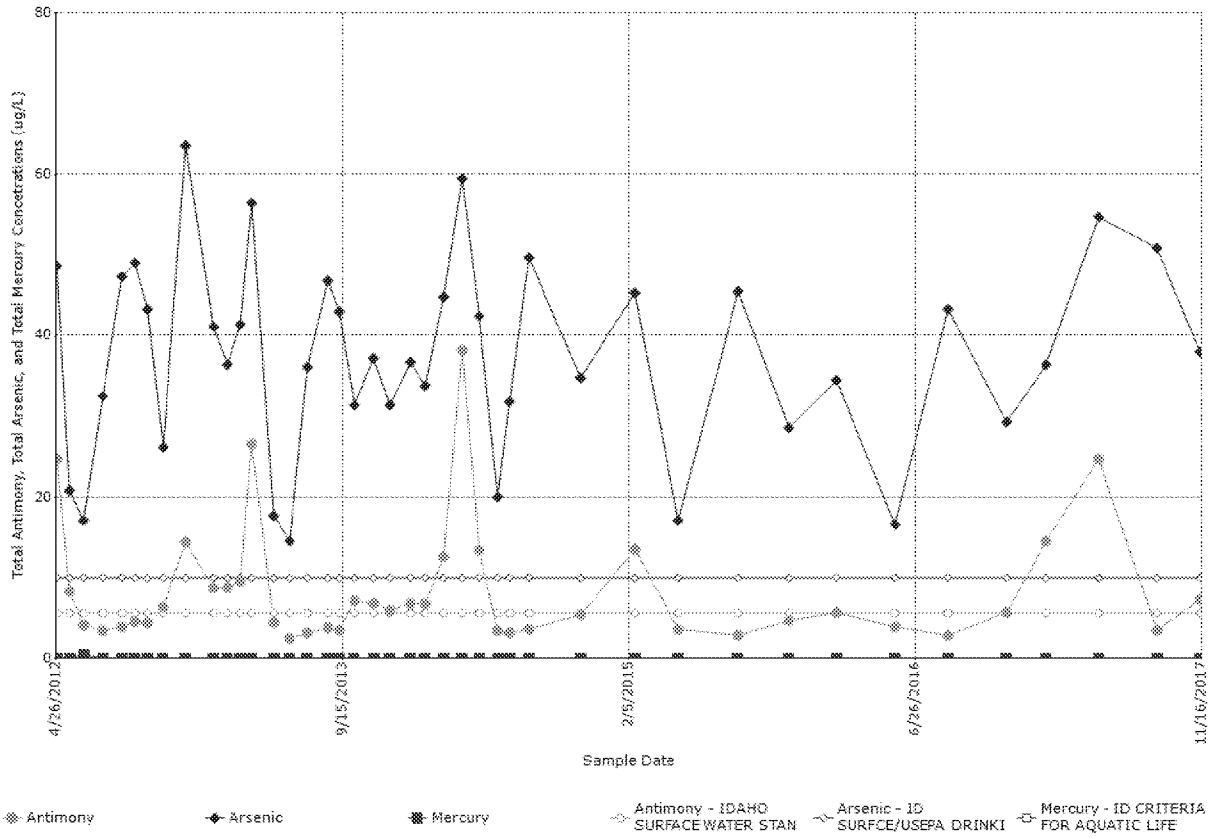

Figure 4-4. Surface Water Key COI Plots For YP-T-22 at Meadow Creek above EFSFSR

Figure 4-3b. Surface Water Dissolved Key COI Plot

YP-T-22 Meadow Creek above EFSFSR

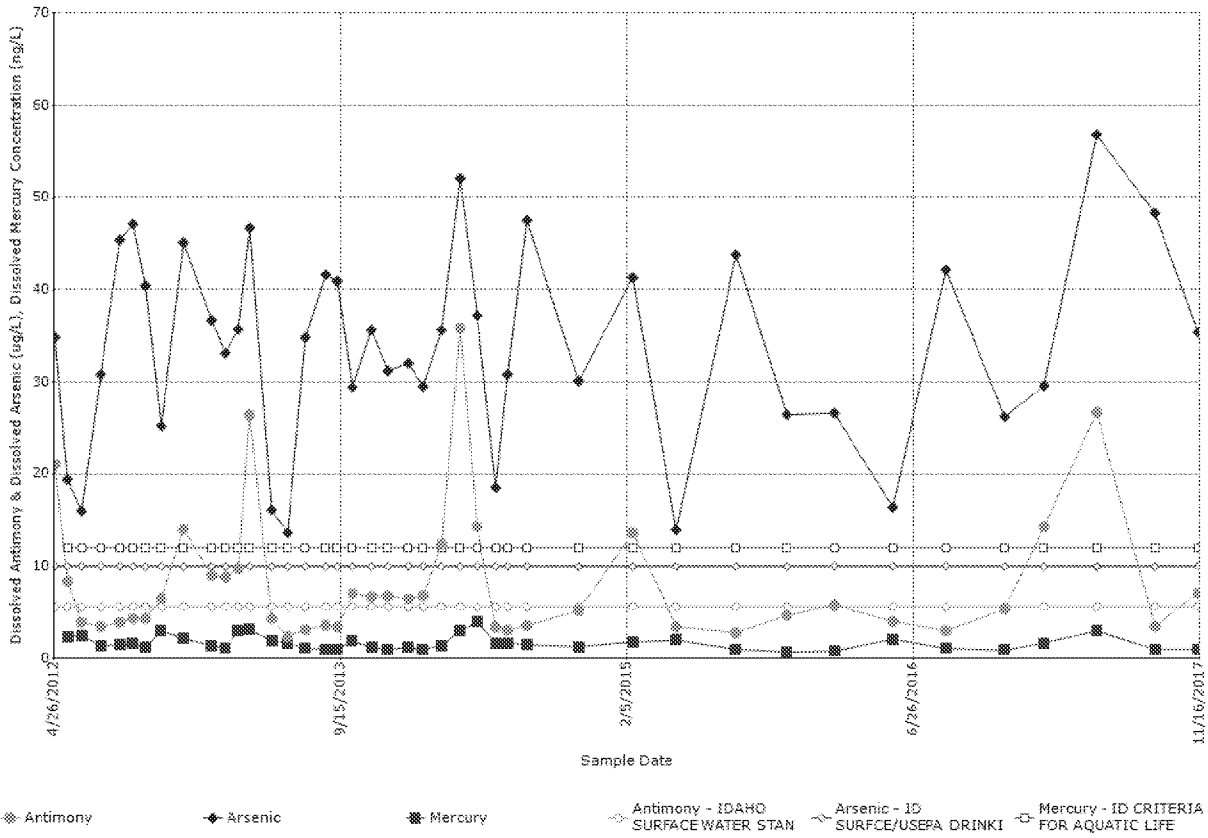

Figure 4 3. Surface Water Key COI Plots For YP-T-22 at Meadow Creek above EFSFSR, continued.

Figure 4-3c. Surface Water Total Key COI Plot

YP-T-22 Meadow Creek above EFSFSR

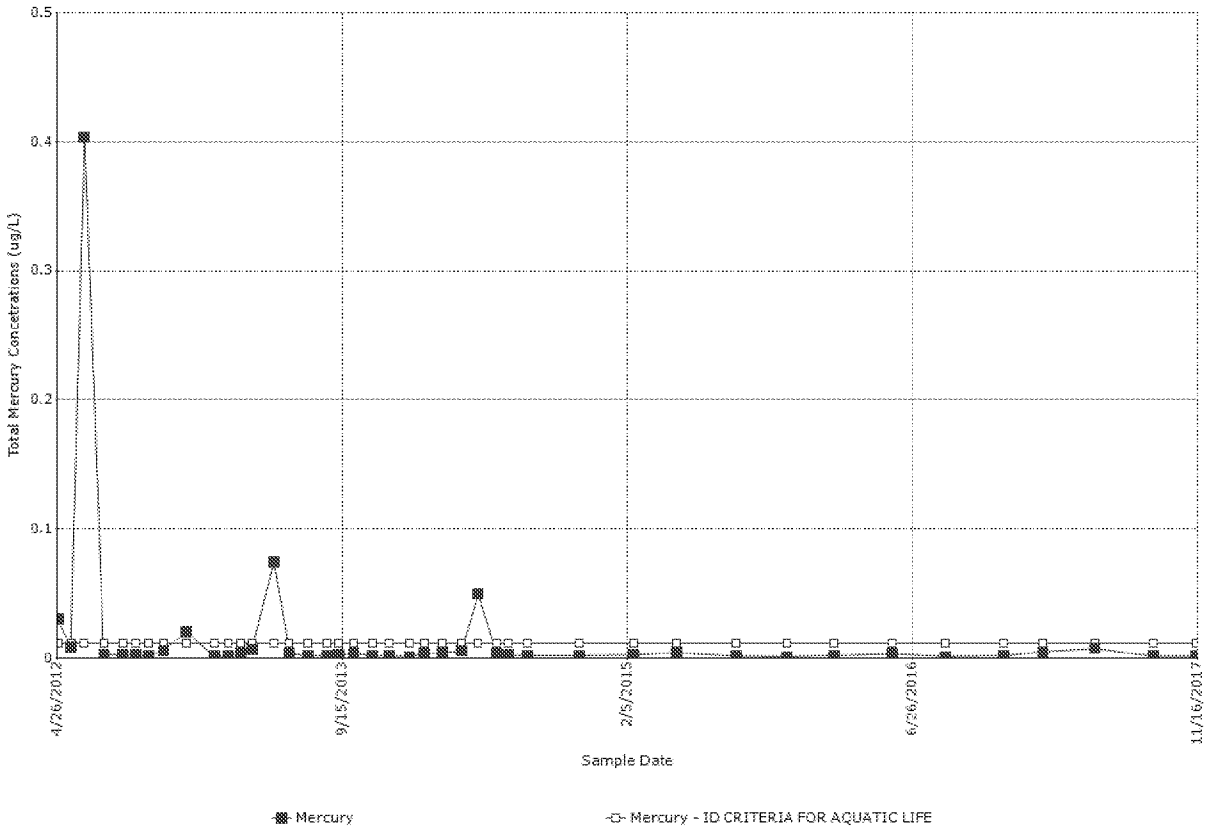

Figure 4 3. Surface Water Key COI Plots For YP-T-22 at Meadow Creek above EFSFSR, continued.

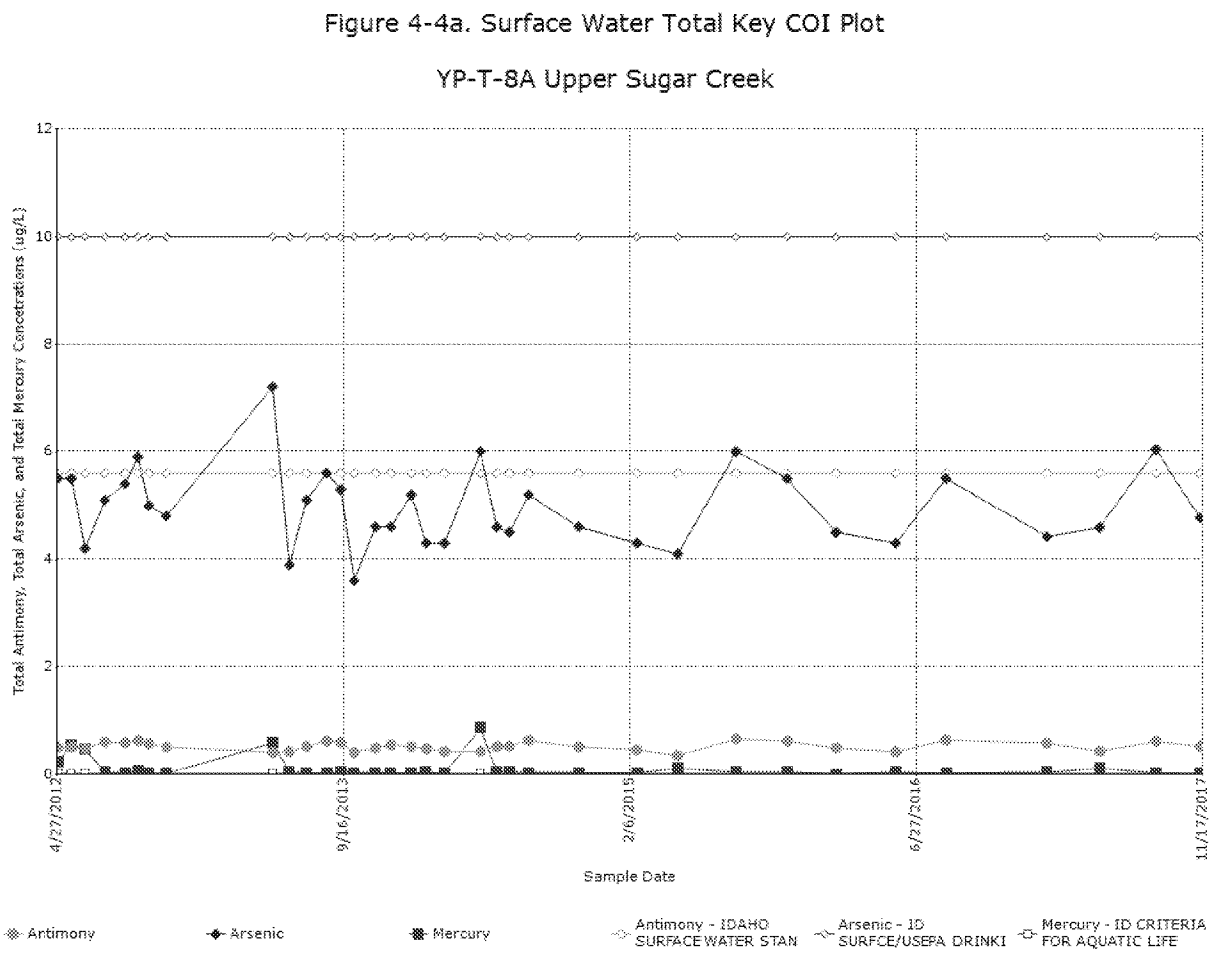

Figure 4-5. Surface Water Key COI Plots for YP-T-8A at Upper Sugar Creek

Figure 4-4b. Surface Water Dissolved Key COI Plot

YP-T-8A Upper Sugar Creek

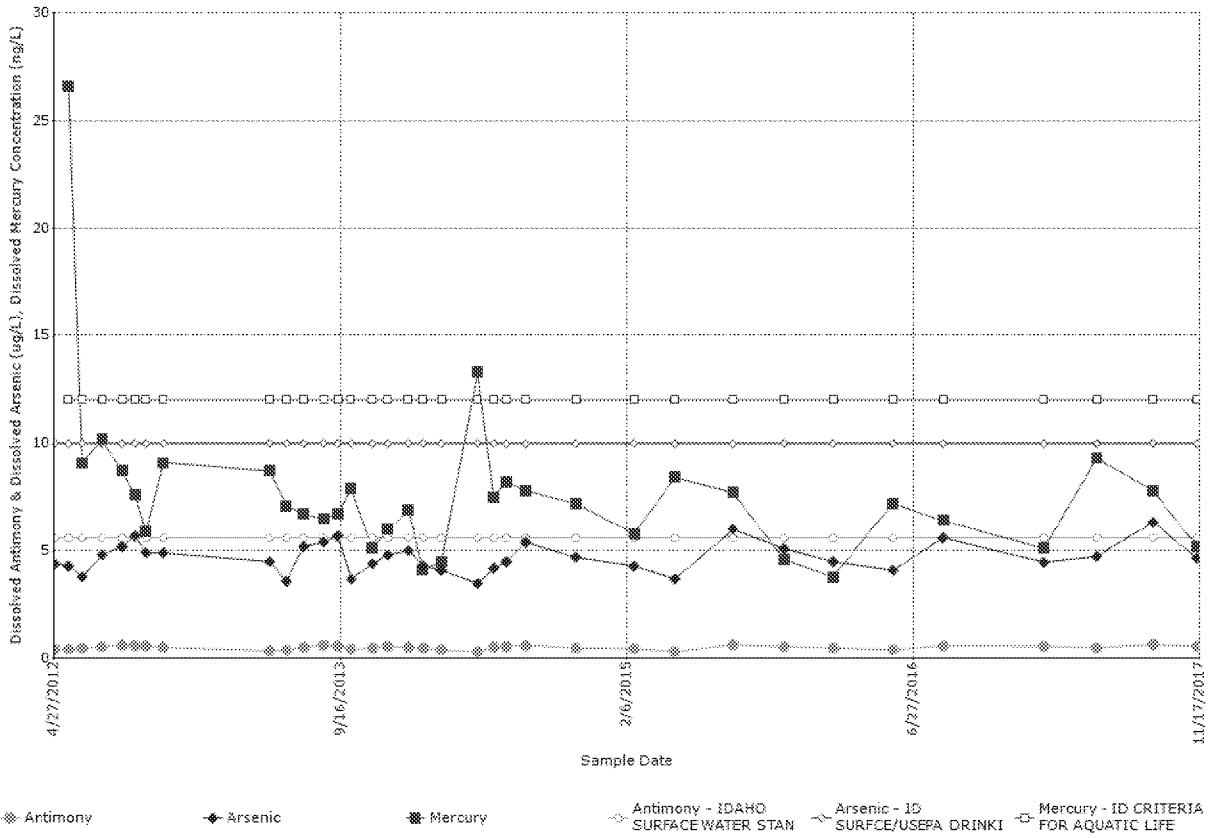

Figure 4 4. Surface Water Key COI Plots for YP-T-8A at Upper Sugar Creek, continued.

Figure 4-5a. Surface Water Total Key COI Plot

YP-T-1 Sugar Creek above EFSFSR

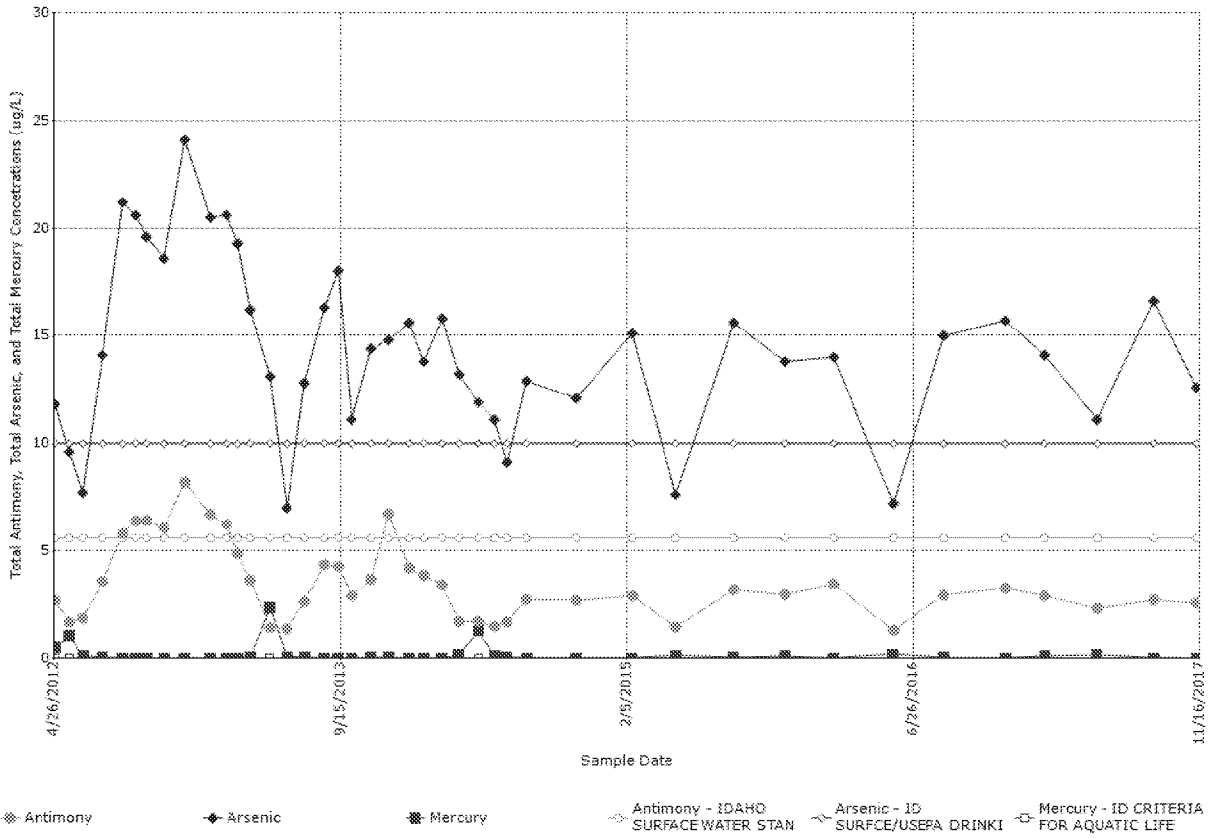

Figure 4-6. Surface Water Key COI Plots for YP-T-1 at Sugar Creek above EFSFSR

Figure 4-5b. Surface Water Dissolved COI Plot

YP-T-1 Sugar Creek above EFSFSR

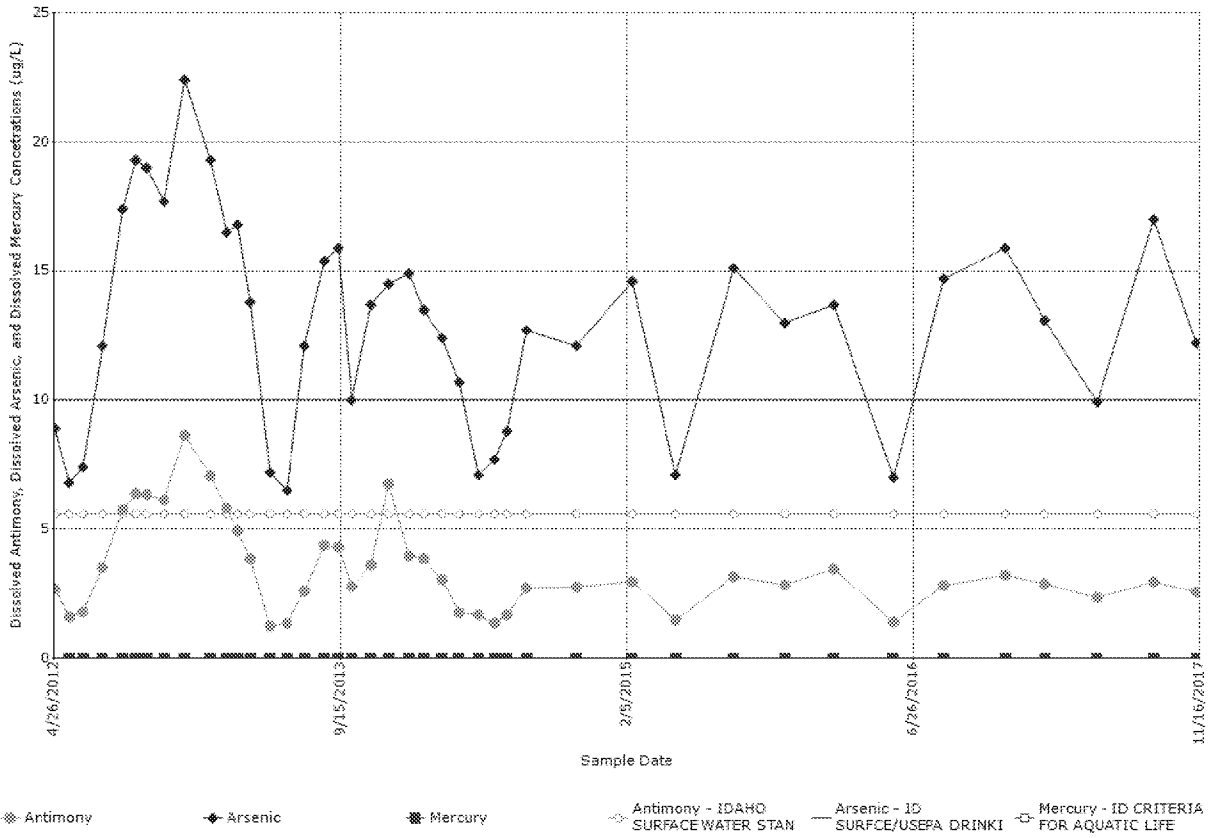

Figure 4 5. Surface Water Key COI Plots for YP-T-1 at Sugar Creek above EFSFSR, continued.

Figure 4-5c. Surface Water Total Key COI Plot

YP-T-1 Sugar Creek above EFSFSR

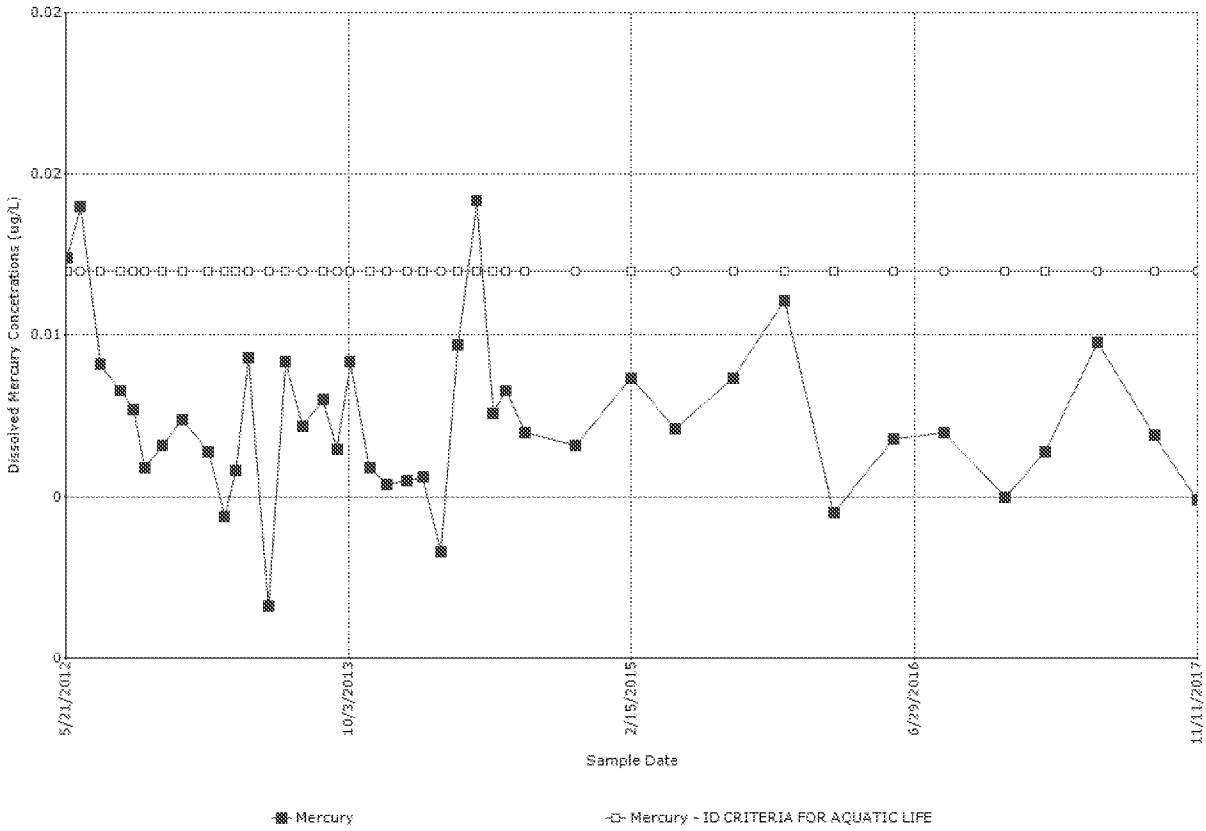

Figure 4 5. Surface Water Key COI Plots for YP-T-1 at Sugar Creek above EFSFSR, continued.

Figure 4-6a. Surface Water Total Key COI Plot

YP-T-13 EFSFSR above Rabbit Creek

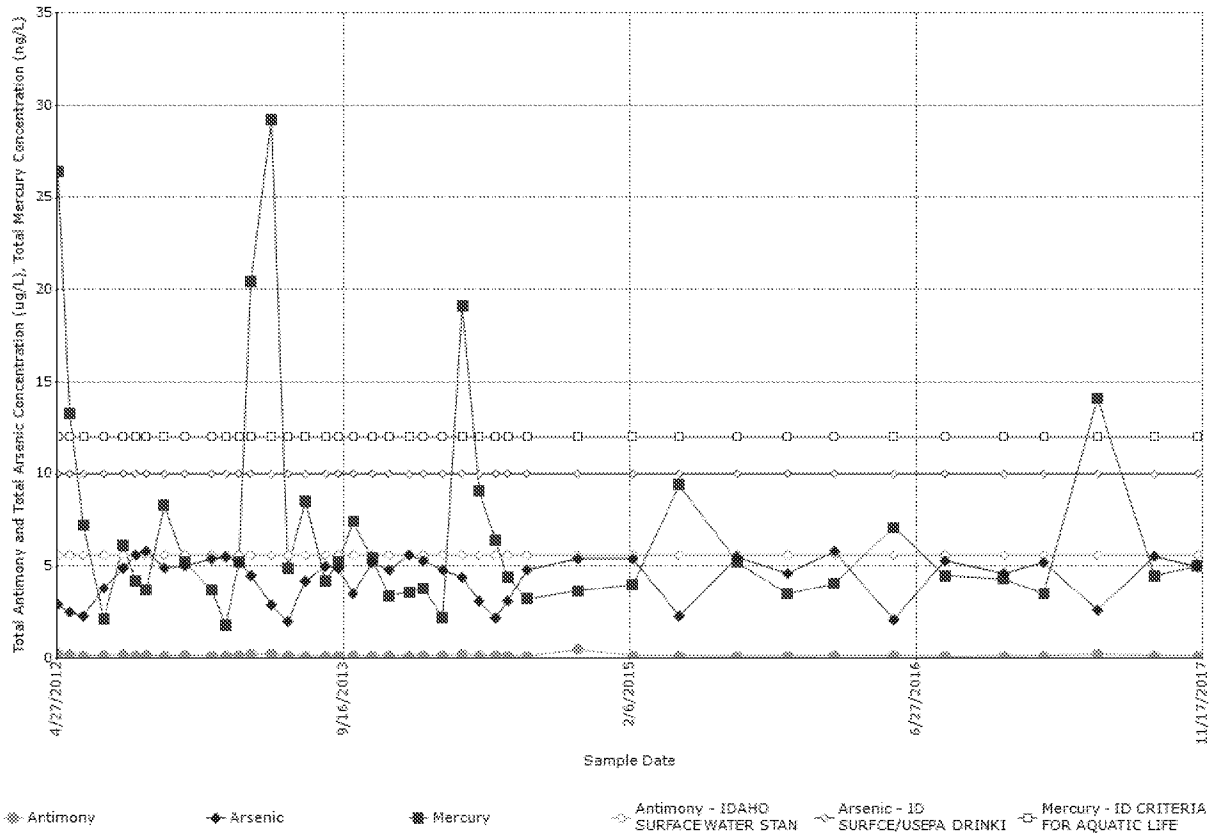

Figure 4-7. Surface Water Key COI Plots for YP-SR-13 at EFSFSR above Rabbit Creek

Figure 4-6b. Surface Water Dissolved Key COI Plot

YP-T-13 EFSFSR above Rabbit Creek

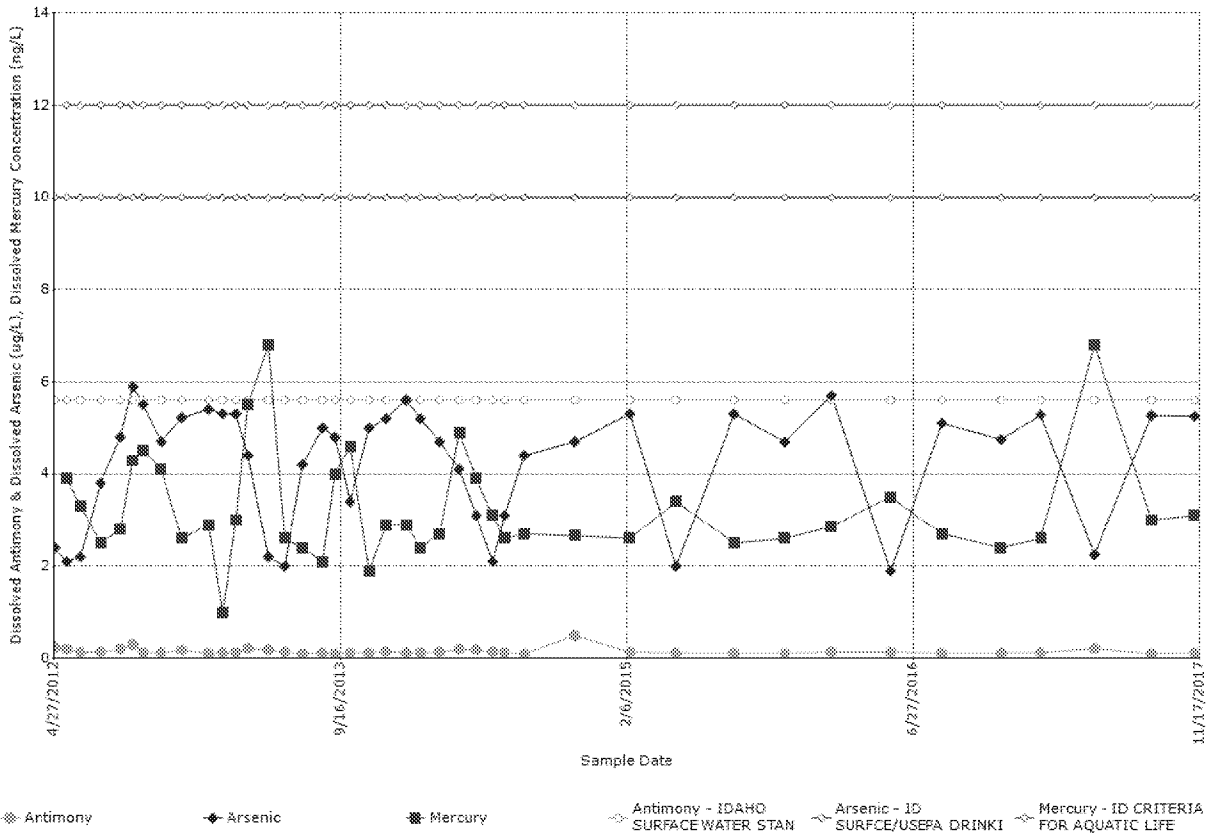

Figure 4 6. Surface Water Key COI Plots for YP-SR-13 at EFSFSR above Rabbit Creek, continued.

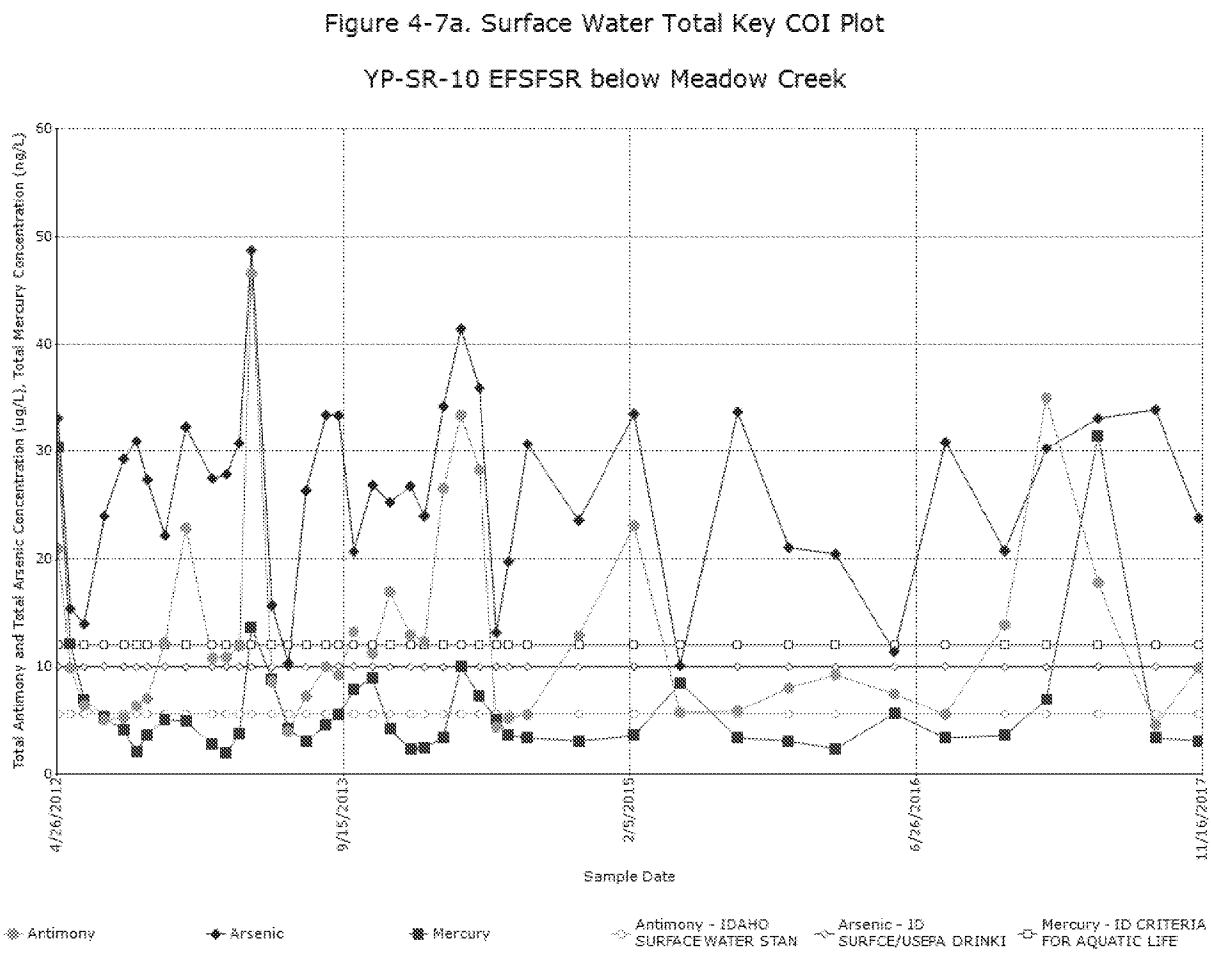

Figure 4-8. Surface Water Key COI Plots for YP-SR-10 at EFSFSR below Meadow Creek

Figure 4-7b. Surface Water Dissolved COI Plot

YP-SR-10 EFSFSR below Meadow Creek

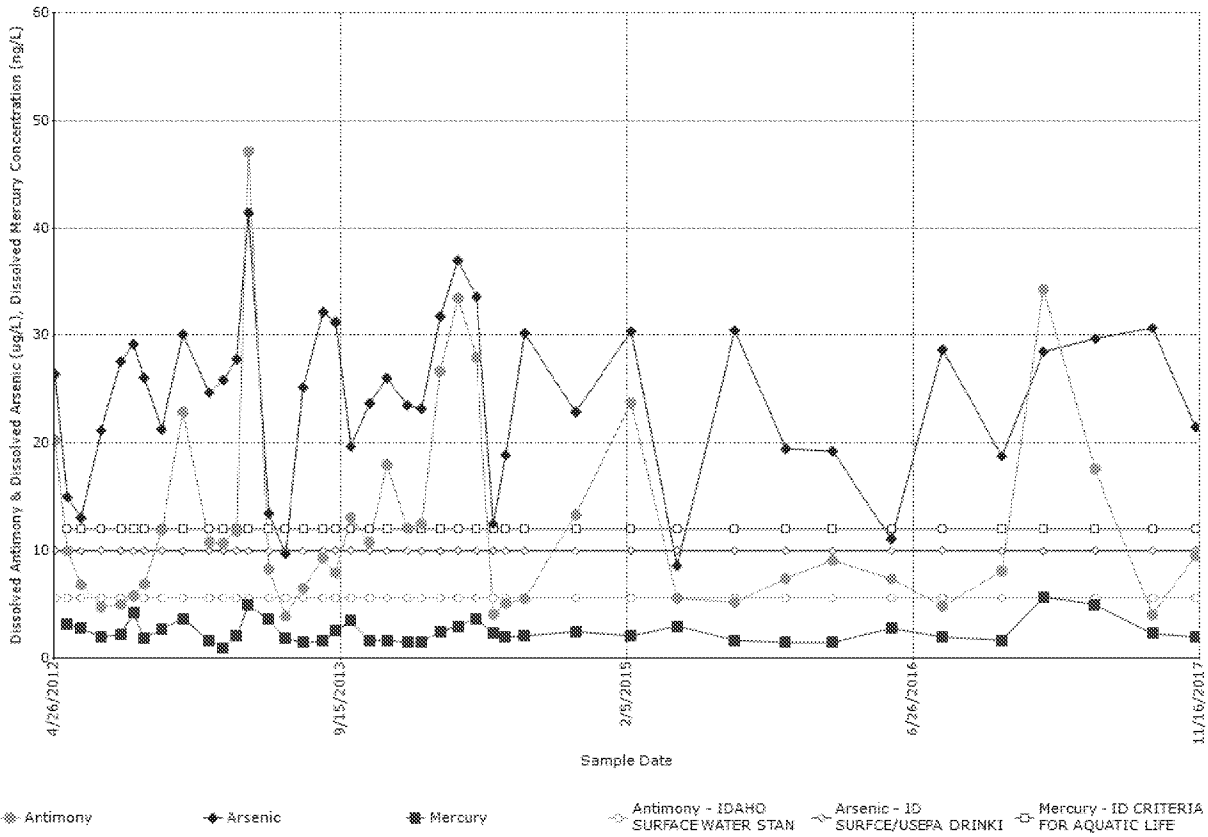

Figure 4 7. Surface Water Key COI Plots for YP-SR-10 at EFSFSR below Meadow Creek, continued.

Figure 4-8a. Surface Water Total Key COI Plot

YP-SR-4 EFSFSR below Yellow Pine Pit

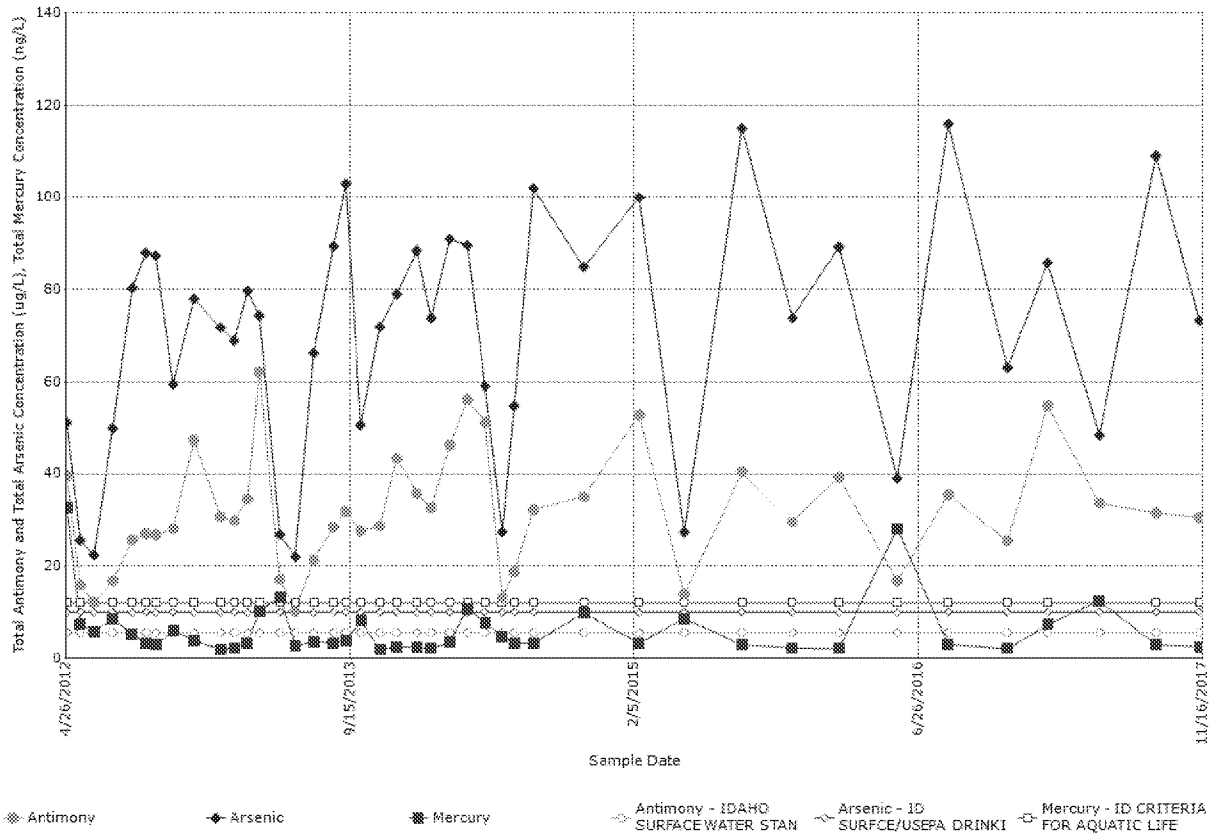

Figure 4-9. Surface Water KEY COI Plots for YP-SR-4 at EFSFSR below Yellow Pine Pit

Figure 4-8b. Surface Water Dissolved Key COI Plot

YP-SR-4 EFSFSR below Yellow Pine Pit

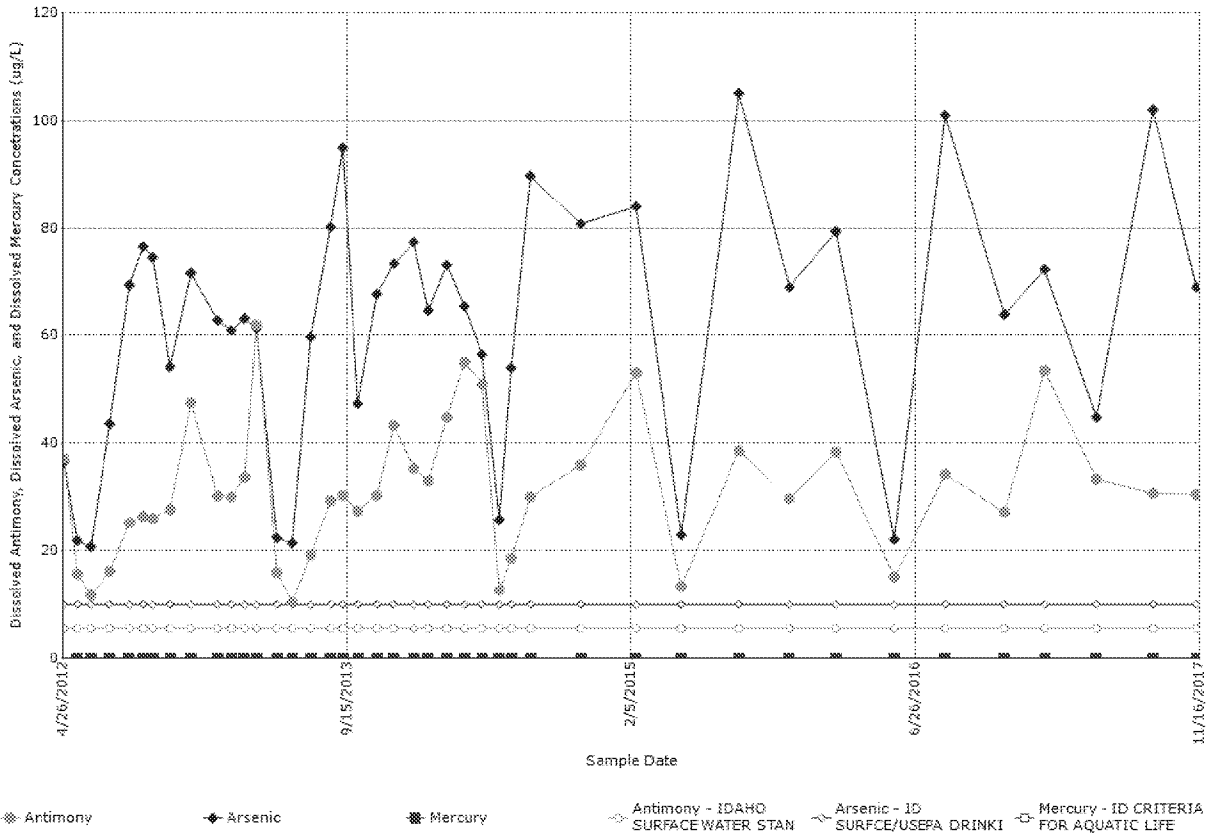

Figure 4 8. Surface Water KEY COI Plots for YP-SR-4 at EFSFSR below Yellow Pine Pit, continued.

Figure 4-8c. Surface Water Dissolved Key COI Plot

YP-SR-4 EFSFSR below Yellow Pine Pit

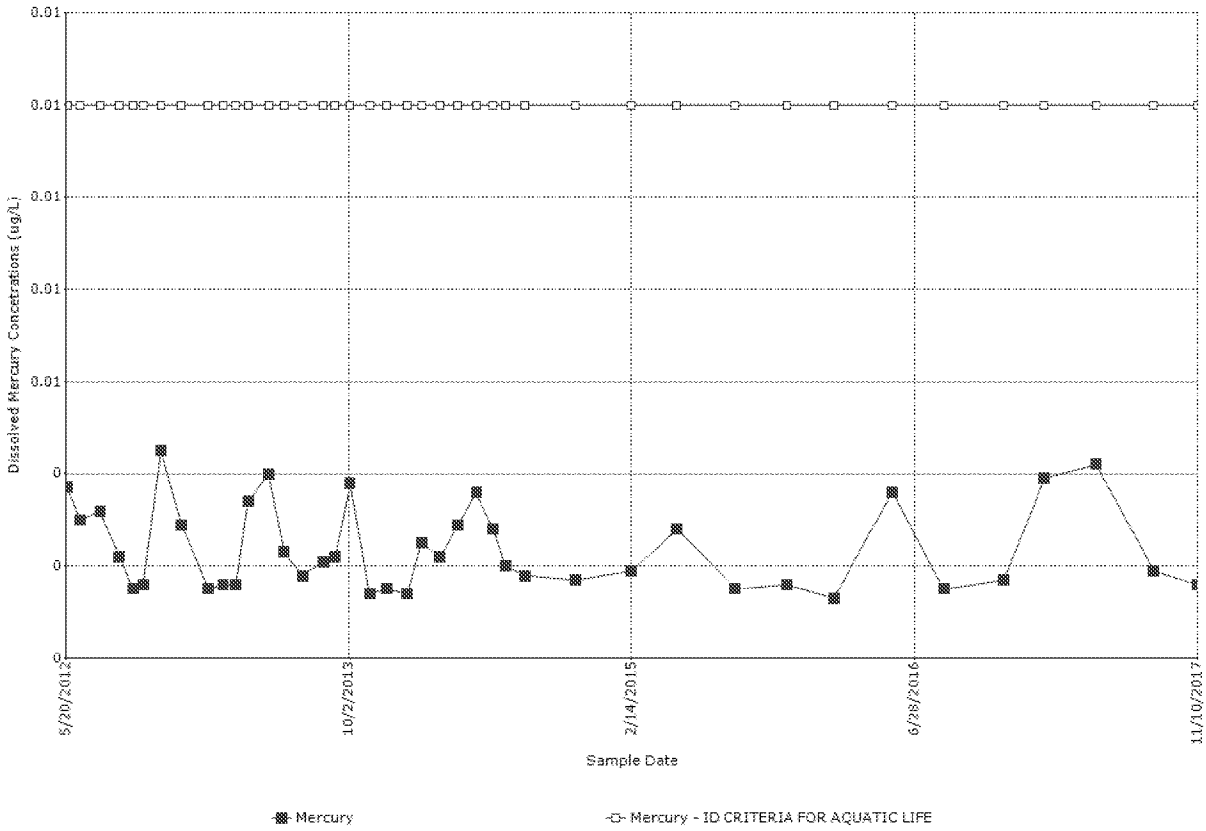

Figure 4 8. Surface Water KEY COI Plots for YP-SR-4 at EFSFSR below Yellow Pine Pit, continued.

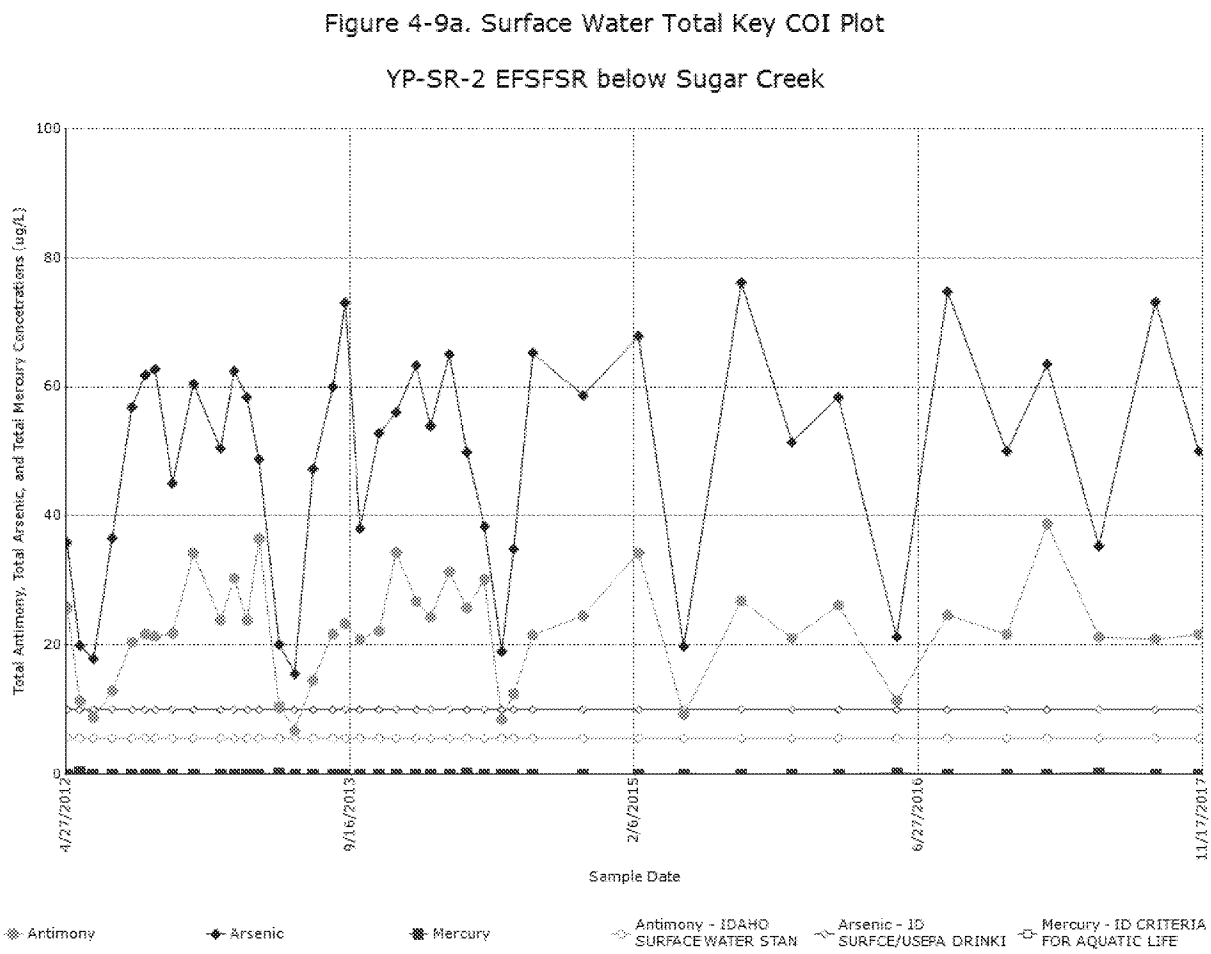

Figure 4-10. Surface Water Key COI Plots for YP-SR-2 for EFSFSR below Sugar Creek

Figure 4-9b. Surface Water Total Key COI Plot

YP-SR-2 EFSFSR below Sugar Creek

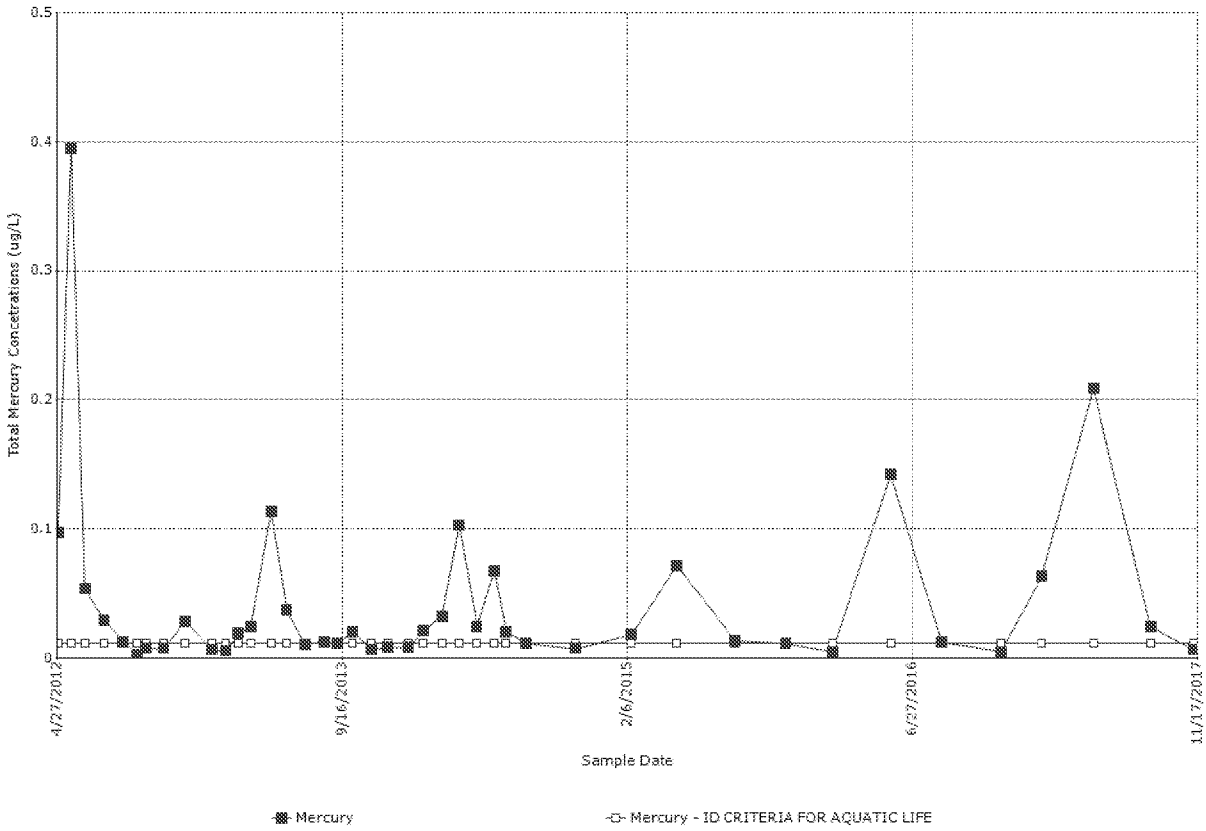

Figure 4 9. Surface Water Key COI Plots for YP-SR-2 for EFSFSR below Sugar Creek, continued.

Figure 4-9c. Surface Water Dissolved Key COI Plot

YP-SR-2 EFSFSR below Sugar Creek

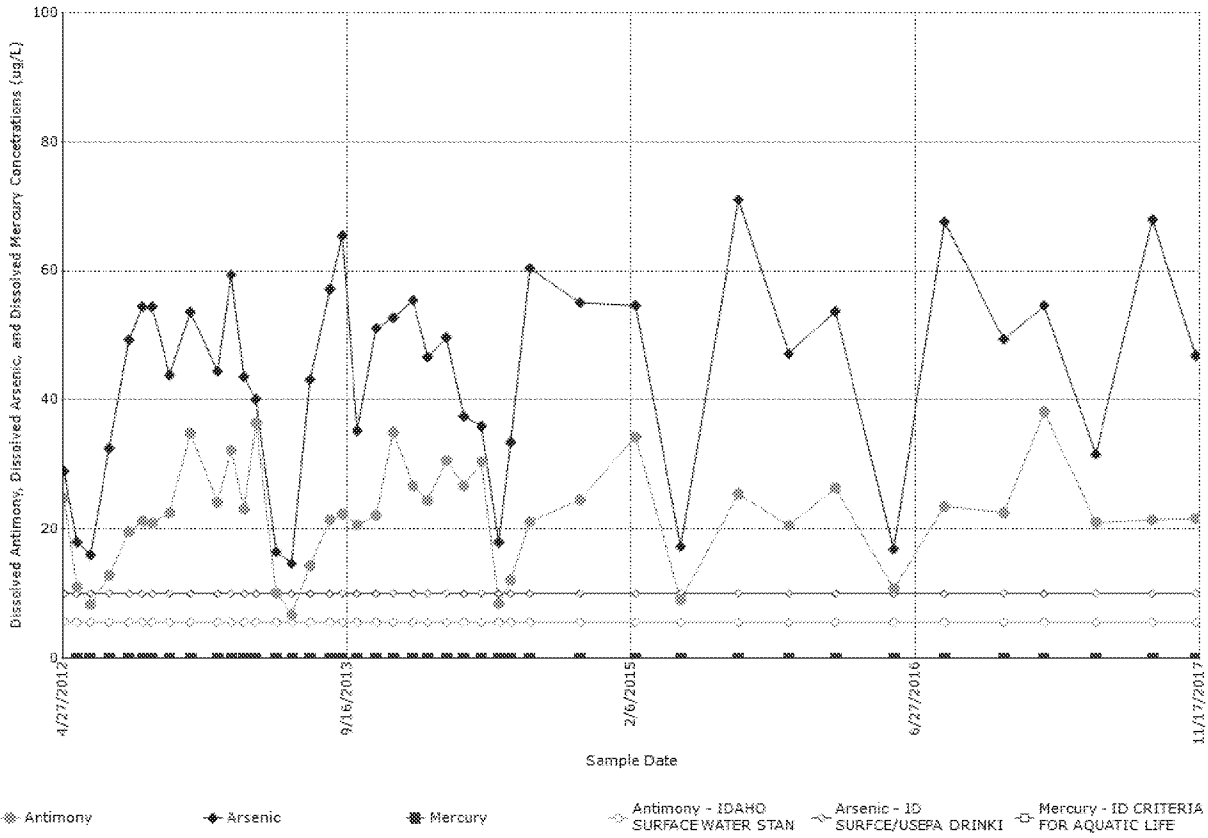

Figure 4 9. Surface Water Key COI Plots for YP-SR-2 for EFSFSR below Sugar Creek, continued.

Figure 4-9d. Surface Water Dissolved Key COI Plot

YP-SR-2 EFSFSR below Sugar Creek

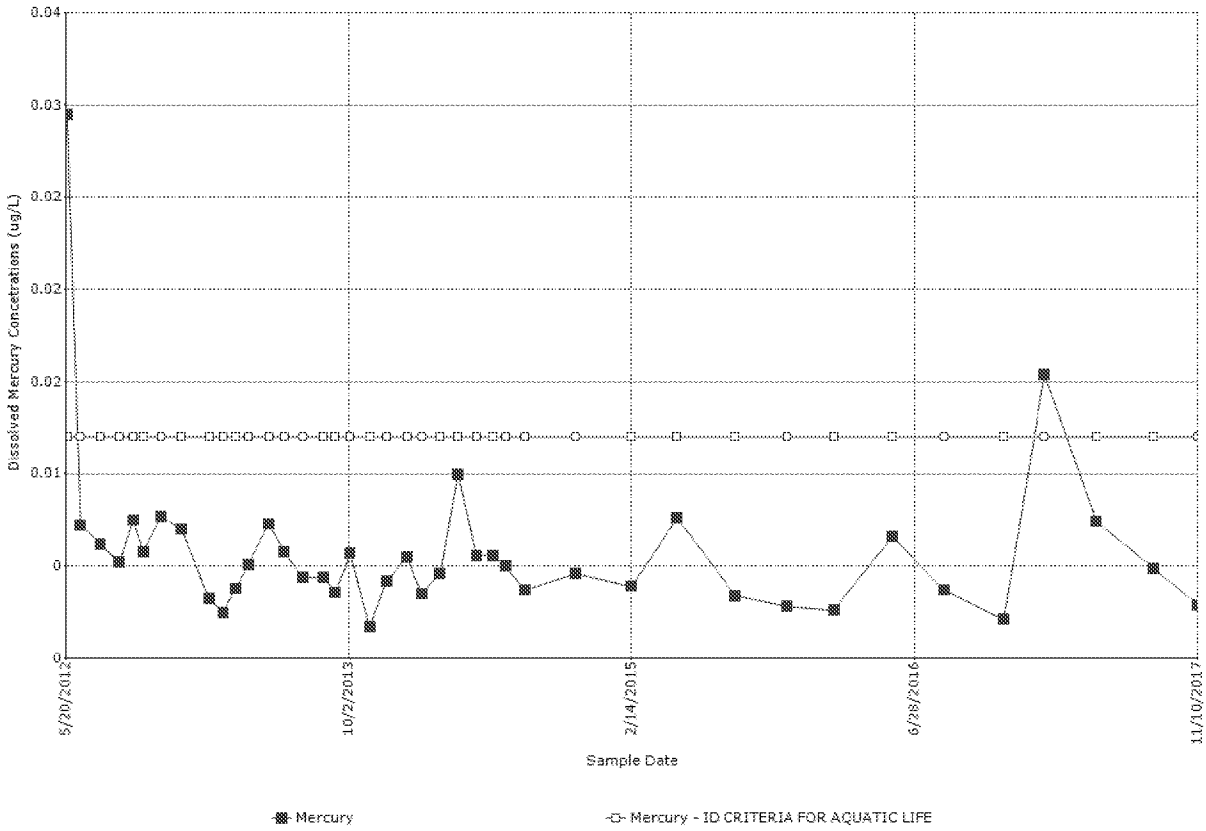

Figure 4 9. Surface Water Key COI Plots for YP-SR-2 for EFSFSR below Sugar Creek, continued.

5 GROUNDWATER QUALITY

Several groundwater quality baseline study work plans were developed for Midas Gold (MWH 2012a, 2014a, 2016). In addition, several corresponding QAPP-GWQSP documents were prepared (MWH 2012c, 2013, 2014b, 2015). These baseline field investigations consisted of multiple components including groundwater sample collection and laboratory analysis; groundwater elevation measurement; and data evaluation and reporting. A *Groundwater Quality Baseline Study* was generated to characterize existing groundwater quality prior to the start of mining operations at the SGP site (HDR 2016a). The *WRSR* (BC 2017) summarized this baseline groundwater quality data from September 2012 through March 2016, specifically to support the USFS EIS. This WQSR provides a summary of the baseline water monitoring data, including interim sampling results through December 2017.

The total groundwater monitoring well network at the Study Area consists of 66 wells. Of these wells 48 are completed in the alluvial aquifer, 18 are completed in bedrock, and 4 of the bedrock wells are completed as multi-level samplers. A total of 31 wells in the monitoring well network are used for water quality sampling: 19 are alluvial and 12 are bedrock wells. These monitoring well locations, site descriptions, and well construction details are summarized by drainage in order of upgradient to downgradient in Table 5-1 and are shown on Figure 5-1.

The 19 alluvial wells were installed to characterize groundwater conditions in the shallow alluvial aquifer. They are typically screened (open to the aquifer) in the first saturated zone of higher permeability encountered during drilling. Alluvial wells were installed only if shallow groundwater (i.e., a minimum of 5 vertical feet of saturated alluvium) was encountered during installation of the adjacent bedrock well (MWH 2012a).

5.1 WATER QUALITY ANALYSIS AND STANDARDS

Samples collected from groundwater monitoring wells were analyzed for metals/metalloids, anions, cations, and general water quality parameters. Frequency of monitoring at the 31 groundwater quality well locations has varied from 6 weeks to quarterly (HDR 2016a). Generally, groundwater samples are collected quarterly for 67 analytic constituents. Analytes, sampling frequency, regulatory standards, analytical methods, reporting limits, and data quality indicators for the baseline surface water monitoring program are provided in Table 5-2.

5.2 GROUNDWATER FLOW SUMMARY

Groundwater elevations observed in monitoring wells completed in both Quaternary alluvium and other unconsolidated deposits (i.e., the alluvial aquifer) are controlled by topography and stream elevations, with the highest and lowest groundwater elevations occurring in the southern and northern portions of the Study Area, respectively. Bedrock groundwater elevations similarly decline from south to north, generally mimicking both topography and stream elevations. Baseline groundwater flow summaries were reported in the WRSR (BC 2017).

In general, alluvial groundwater elevations showed a greater seasonal variation than bedrock groundwater elevations. The following subsections briefly summarize groundwater elevations and flow directions in the alluvium and bedrock.

ED_002764_00003042-00069

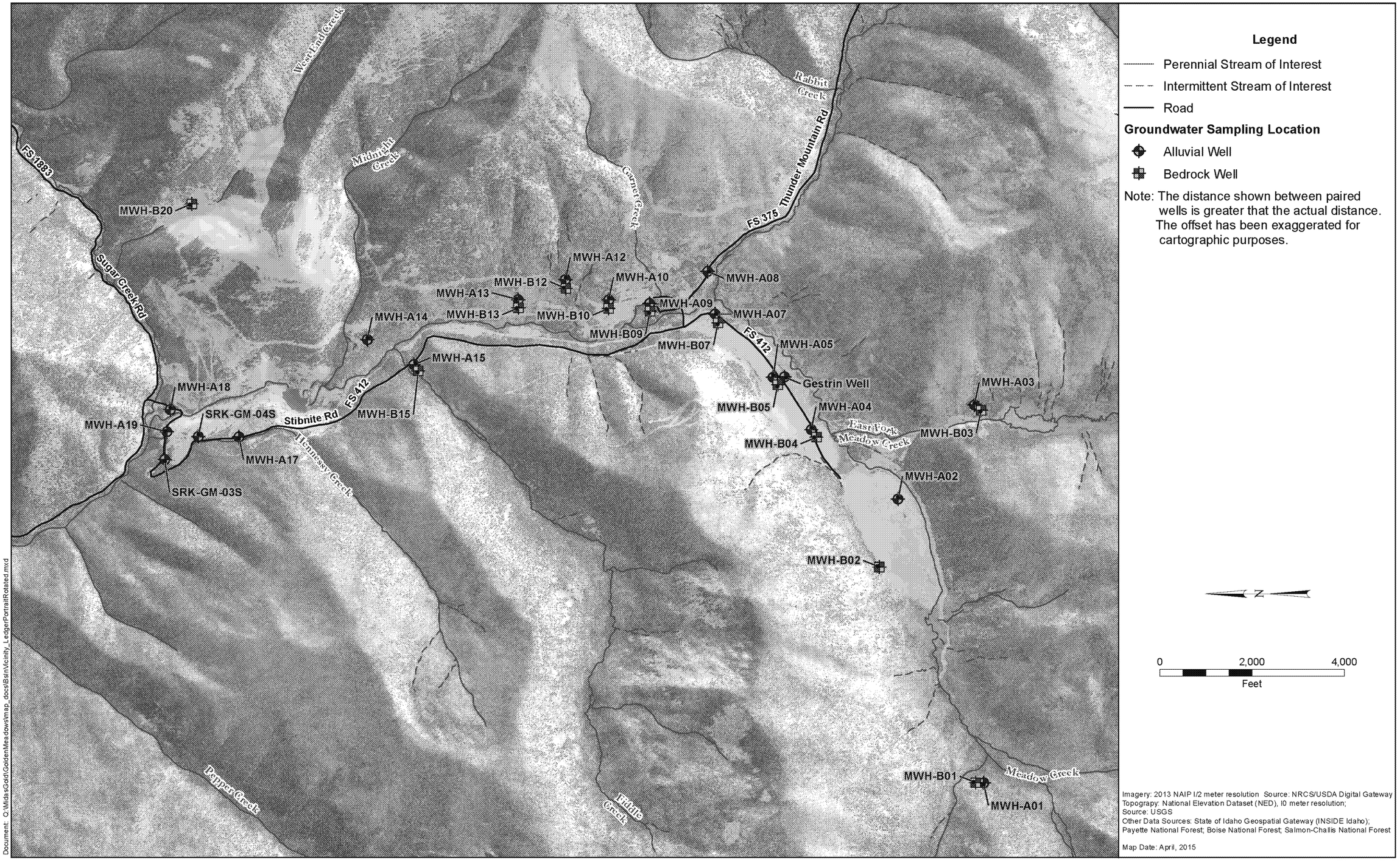

Figure 5-1
Groundwater Well Map
Stibnite Gold Project

Table 5-1 Groundwater Well Sampling Details															
Well Name[1]	Type[2]	Location	Date Well Completed	Surveyed Easting (UTM)	Surveyed Northing (UTM)	Surveyed Elevation (ft)[3]	Well Casing Stickup (ft)	Elevation at Top of Bedrock (ft)[4]	Top of Screen Elevation (ft)[4]	Bottom of Screen Elevation (ft)[4]	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Lithology in Screened Interval	Elevation at Bottom of Well (ft)[4,5]	Total Depth (ft bgs)
Meadow Creek Valley Wells															
MWH-A01	Alluvial	Upper Meadow Creek valley	2/22/2012	628834	4971703	6784.4	2.76	6736.4	6754.4	6744.4	30	40	Glacial Till	6729.4	55
MWH-B01	Bedrock	Upper Meadow Creek valley	3/2/2013	628833	4971706	6786.3	1.67	6730.3	6661.3	6651.3	125	135	Diorite/Granite	6607.7	178.6
MWH-A02	Alluvial	Meadow Creek valley on SODA	12/1/2011	630703	4972250	6659.2	1.33	6501.2	6559.2	6549.2	100	110	Overburden	6489.2	170
MWH-B02	Bedrock	Meadow Creek valley north of SODA	9/22/2012	630254	4972374	6637.2	1.93	6591.2	6589.2	6579.2	48	58	Quartz Monzonite/Granite	6577.2	60.0
MWH-A03	Alluvial	Blowout Creek hillside	3/16/2013	631315	4971731	7033.5	2.36	--	6743.5	6723.5	290	310	Overburden	6717.5	316
MWH-B03	Bedrock	Blowout Creek hillside	3/10/2013	631312	4971729	7038.3	4.03	6676.3	6575.3	6560.3	463	478	Alaskite	6491.3	547.0
MWH-A04	Alluvial	Meadow Creek valley in Smelter Flats	8/4/2012	631133	4972805	6563.3	2.38	--	6508.3	6498.3	55	65	Overburden	6488.3	75
MWH-B04	Bedrock	Meadow Creek valley in Smelter Flats	8/7/2012	631136	4972805	6563.3	2.47	6355.3	6325.1	6305.1	238	258	Quartz Monzonite	6303.3	260.0
MWH-A05	Alluvial	Meadow Creek valley near middle of airstrip	8/15/2012	631494	4973043	6542.9	2.34	--	6508.9	6498.9	34	44	Overburden	6495.4	48
MWH-B05	Bedrock	Meadow Creek valley near middle of airstrip	8/18/2012	631497	4973050	6543.2	2.58	6350.2	6335.2	6325.2	208	218	Quart Monzonite	6320.2	223.0
Gestrin	Alluvial	Meadow Creek valley near middle of airstrip	11/23/2011	631510	4973000	6543.0	2.23	--	6444.0	6434.0	99	109	Overburden	6434.0	109
MWH-A07	Alluvial	Meadow Creek valley near EFSFSR	8/7/2012	631904	4973448	6519.8	3.22	--	6487.8	6477.8	32	42	Overburden	6471.4	48.4
MWH-B07	Bedrock	Meadow Creek valley near EFSFSR	9/4/2012	631903	4973452	6519.6	2.20	6343.6	6235.6	6225.6	284	294	Quartz Monzonite	6224.6	295
Sugar Creek Valley Wells															
MWH-B20	Bedrock	Lower West End dump	7/24/2013	632652	4976916	6654.0	2.29	6613.0	6198.0	6178.0	446	476	Quartzite/Schist/Pelite/Meta- Siltstone	6177.6	476
EFSFSR Valley Wells															
MWH-A08	Alluvial	EFSFSR valley near town site	11/15/2012	632207	4973507	6525.4	1.59	--	6497.7	6487.7	27.7	37.7	Overburden	6485.9	39.5
MWH-A09	Alluvial	EFSFSR valley near Garnet Creek	9/9/2012	631972	4973886	6462.3	1.60	--	6441.3	6436.3	21	26	Overburden	6436.3	26
MWH-B09	Bedrock	EFSFSR valley near Garnet Creek	9/8/2012	631972	4973886	6462.4	1.65	6397.4	6377.4	6362.4	85.0	100.0	Calc-Silicate	6362.4	100.0
MWH-A10	Alluvial	EFSFSR valley between shop and camp	8/2/2012	631997	4974160	6438.9	1.89	--	6418.9	6408.9	20	30	Overburden	6408.9	30
MWH-B10	Bedrock	EFSFSR valley between shop and camp	7/20/2012	631995	4974164	6438.8	1.99	6363.8	6360.8	6350.8	78.0	88.0	Calc-silicate	6348.8	90.0
MWH-A12	Alluvial	EFSFSR valley near Scout prospect	2/15/2013	632129	4974443	6498.5	2.99	6432.5	6448.5	6438.5	50	60	Overburden	6437.7	61
MWH-B12	Bedrock	EFSFSR valley near Scout prospect	2/13/2013	632129	4974440	6498.1	2.91	6437.1	6368.1	6358.1	130.0	140.0	Quartz Monzonite	6342.1	156.0
MWH-A13	Alluvial	EFSFSR valley between Garnet and Midnight Creeks	2/21/2013	631995	4974760	6426.5	3.11	--	6376.5	6361.5	50	65	Overburden	6356.5	70
MWH-B13	Bedrock	EFSFSR valley between Garnet and Midnight Creeks	2/20/2013	631995	4974757	6426.3	2.94	6319.8	6306.3	6296.3	120.0	130.0	Quartzite-Schist	6123.3	303.0

Table 5-1 Groundwater Well Sampling Details															
Well Name[1]	Type[2]	Location	Date Well Completed	Surveyed Easting (UTM)	Surveyed Northing (UTM)	Surveyed Elevation (ft)[3]	Well Casing Stickup (ft)	Elevation at Top of Bedrock (ft)[4]	Top of Screen Elevation (ft)[4]	Bottom of Screen Elevation (ft)[4]	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Lithology in Screened Interval	Elevation at Bottom of Well (ft)[4,5]	Total Depth (ft bgs)
MWH-A15	Alluvial	EFSFSR valley near Fiddle Creek	11/10/2012	631574	4975439	6353.9	2.52	–	6283.9	6278.9	70	75	Overburden	6278.6	75
MWH-B15	Bedrock	EFSFSR valley near Fiddle Creek	11/7/2012	631571	4975438	6354.4	2.25	6207.4	6199.7	6169.7	154.7	184.7	Quartz Monzonite	6167.9	186.5
MWH-A14	Alluvial	EFSFSR valley near Midnight Creek	2/26/2013	631756	4975755	6287.6	3.36	–	6228.6	6218.6	59	69	Overburden	6217.6	70
MWH-A17	Alluvial	EFSFSR valley near upper Hennessy Creek	10/29/2011	631114	4976604	6201.8	0.61	6051.8	6103.8	6093.8	98.0	108.0	Overburden	6041.8	160.0
SRK-GM-04S	Alluvial	EFSFSR valley south of USFS tailings repository	10/25/2011	631116	4976872	6144.9	0.88	5982.9	6044.9	6034.9	100	110	Overburden	5964.9	180
SRK-GM-03S	Alluvial	EFSFSR valley north of USFS tailings repository	10/13/2011	630965	4977094	6047.2	1.01	5913.2	5937.2	5927.2	110.0	120.0	Overburden	5906.2	141.0
MWH-A19	Alluvial	EFSFSR valley near lower Hennessy Creek	10/15/2011	631148	4977079	6020.9	1.16	5925.9	5970.9	5960.9	50	60	Overburden	5920.9	100
MWH-A18	Alluvial	EFSFSR valley near Homestake road	9/13/2012	631294	4977057	5975.0	1.85	5936	5955.0	5945.0	20.0	30.0	Overburden	5944.6	30.4

Notes:

– drill hole did not reach bedrock

bgs below ground surface

EFSFSR East Fork South Fork Salmon River

ft feet

SODA spent ore disposal area

UTM Universal Transverse Mercator coordinate system

1 Bedrock and alluvial wells with the same number (e.g., MWH-B01 and MWH-A01) were screened in bedrock and alluvial aquifers, respectively, in the same location

2 Type = indicates whether the well was screened in an alluvial or bedrock aquifer

3 Elevation was surveyed at the point where the well casing extends from the top of the concrete pad

4 Elevation of bedrock, screen, and bottom of the hole were calculated using the surveyed elevation from MGI and depth below ground surface of these features as described in the bore hole logs (MWH 2013)

5 Some holes, if drilled deeper than the most significant aquifer, were subsequently partly backfilled and collapsed with drill cuttings; in these situations, the elevation at bottom of well is at the top of the backfilled surface. Therefore, because some holes were drilled deeper than the final well bottom, in some cases the elevation at the top of bedrock is deeper than the final elevation at the bottom of well.

Table 5-2. Groundwater Well Constituents								
Groundwater Parameter	Most Restrictive Limit			Best-Fit Method		Data Quality Indicators[1]		
	Strictest Regulatory Criteria	Units	Limiting Program(s)	Method Reporting Limit[1]	Method Number	Duplicate Samples RPD	LCS Percent Recovered	Matrix Spike Percent Recovered
Analytical Constituents								
Alkalinity	>20	mg/L as $CaCO_3$	USEPA Drinking Water Standard[2] (secondary)	9	SM[3] 2320 B	20	90 - 110	NA
Aluminum	200	µg/L	Idaho GW Quality Standard[4] (secondary)	2	USEPA[5] 6020A	20	85 - 120	75 - 125
Ammonia	NA	mg/L as NH_3	NA	0.05	USEPA 350.1	20	90 - 110	90 - 110
Antimony	6	µg/L	Idaho GW Quality Standard (secondary)	0.05	USEPA 6020A	20	91 - 112	75 - 125
Arsenic	10	µg/L	USEPA Drinking Water Standard[5]	0.5	USEPA 6020A	20	89 - 112	75 - 125
Arsenic III	NA	µg/L	NA	0.02	USEPA 1632	35	70 - 130	30 - 170
Barium	2000	µg/L	Idaho GW Quality Standard	0.05	USEPA 6020A	20	92 - 111	75 - 125
Beryllium	4	µg/L	Idaho GW Quality Standard	0.02	USEPA 6020A	20	80 - 120	75 - 125
Bicarbonate	NA	mg/L as $CaCO_3$	NA	9	SM 2320 B	20	90 - 110	NA
Boron	NA	µg/L	NA	20	USEPA 6010C	20	91 - 112	75 - 125
Cadmium	5	µg/L	Idaho GW Quality Standard	0.02	USEPA 6020A	20	92 - 111	75 - 125
Calcium	NA	µg/L	NA	20	USEPA 6010C	20	85 - 116	75 - 125
Carbonate	NA	mg/L as $CaCO_3$	NA	9	SM 2320 B	20	90 - 110	NA
Chloride	250	mg/L	Idaho GW Quality Standard (secondary)	0.4	USEPA 300.0	20	90 - 110	90 - 110
Chromium	100	µg/L	Idaho GW Quality Standard	0.2	USEPA 6020A	20	88 - 113	75 - 125
Cobalt	NA	µg/L	NA	0.02	USEPA 6020A	20	87 - 114	75 - 125
Copper	1000	µg/L	USEPA Drinking Water Standard (secondary)	0.1	USEPA 6020A	20	89 - 113	75 - 125
Cyanide, Total	0.2	mg/L	Idaho GW Quality Standard	0.0047	SM 4500 CN-E	20	84 - 115	23 - 148
Hardness	NA	mg/L	NA	9	SM 2320 B	20	NA	NA
Iron	300	µg/L	Idaho GW Quality Standard (secondary)	20	USEPA 6010C	20	92 - 111	75 - 125
Fluoride	2	mg/L	USEPA Drinking Water Standard (secondary)	0.2	USEPA 300.0	20	90 - 110	90 - 110
Lead	15	µg/L	Idaho GW Quality Standard	0.02	USEPA 6020A	20	90 - 112	75 - 125
Magnesium	NA	µg/L	NA	5	USEPA 6010C	20	86 - 115	75 - 125
Manganese	50	µg/L	Idaho GW Quality Standard (secondary)	1	USEPA 6010C	20	92 - 112	75 - 125
Mercury	2000	ng/L	Idaho GW Quality Standard	1	USEPA 1631E	24	77 - 123	71 - 125
Methyl Mercury	NA	ng/L	NA	0.1	USEPA 1630	35	67 - 133	65 - 135
Molybdenum	NA	µg/L	NA	0.05	USEPA 6020A	20	80 - 120	75 - 125
Nickel	NA	µg/L	NA	0.2	USEPA 6020A	20	89 - 113	75 - 125
Nitrates and Nitrites	10	mg/L as N	NA	0.05	USEPA 353.2	20	90 - 110	89 - 114
Nitrogen, Total	NA	mg/L as N	NA	0.4	USEPA 351.4	20	72 - 129	53 - 160
Phosphorous	NA	µg/L	NA	40	USEPA 6010C	20	80 - 120	75 - 125
Potassium	NA	µg/L	NA	200	USEPA 6010C	20	89 - 114	75 - 125
Selenium	50	µg/L	Idaho GW Quality Standard	1	USEPA 6020A	2	87 - 115	75 - 125
Silver	100	µg/L	Idaho GW Quality Standard (secondary)	0.02	USEPA 6020A	20	80 - 120	75 - 125

Table 5-2. Groundwater Well Constituents								
Groundwater Parameter	Most Restrictive Limit			Best-Fit Method		Data Quality Indicators[1]		
	Strictest Regulatory Criteria	Units	Limiting Program(s)	Method Reporting Limit[1]	Method Number	Duplicate Samples RPD	LCS Percent Recovered	Matrix Spike Percent Recovered
Sodium	NA	µg/L	NA	200	USEPA 6010C	20	80 - 120	75 - 125
Solids, Total Dissolved	500	mg/L	Idaho GW Quality Standard (secondary)	5	SM 2540 C	10	90 - 108	NA
Sulfate	250	mg/L	Idaho GW Quality Standard (secondary)	0.2	USEPA 300.0	20	90 - 110	90 - 110
Thallium	2	µg/L	Idaho GW Quality Standard	0.02	USEPA 6020A	2	91 - 108	75 - 125
Vanadium	NA	µg/L	NA	0.2	USEPA 6020A	2	87 - 113	75 - 125
Zinc	5000	µg/L	Idaho GW Quality Standard (secondary)	0.5	USEPA 6020A	20	86 - 119	75 - 125
Onsite Measurements								
Dissolved Oxygen	NA	mg/L	NA	0.05	USEPA 360.1	NA	NA	NA
Oxidation-reduction potential	NA	volts	NA	NA	SM 2580	NA	NA	NA
pH	≥ 6.5 and ≤ 8.5	pH units	Idaho GW Quality Standard (secondary)	0.1	USEPA 150.1	NA	NA	NA
Specific conductivity	NA	µS/cm	NA	NA	USEPA 120.1	NA	NA	NA
Temperature	NA	degrees Celsius	NA	NA	USEPA 170.1	NA	NA	NA
Turbidity	NA	NTU	NA	0	USEPA 180.1	NA	NA	NA

Notes:

≥ Greater than or equal to
≤ Less than or equal to
degree C degree Celsius
LCS Laboratory Control Sample
GW groundwater
MCL maximum contaminant level.
uS/cm micro siemens per centimeter
mg/L milligrams per Liter
mg/L as $CaCO_3$ milligrams per Liter as calcium carbonate
mg/L as N milligrams per Liter as Nitrogen
mg/L as NH_3 milligrams per Liter Ammonia
mg/L as P milligrams per Liter as Phosphorus
NTU Nephelometric Turbidity Unit
NA not applicable. MCL = maximum contaminant level.
pH potential of hydrogen
RPD Relative Percent Different

1 The method reporting limits and data quality indicators are developed in-house and reported by the contract laboratory, ALS Environmental, in Kelso, Washington
2 USEPA National Primary Drinking Water Regulations. https://www.epa.gov/ground-water-and-drinkingwater/national-primary-drinking-water-regulations. Secondary Drinking Water Standards: Guidance for Nuisance Chemicals. https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisancechemicals.
3 Method numbers preceded by "SM" indicate Standard Methods.
4 DAPA 58.01.11 Ground Water Quality Rule, http://adminrules.idaho.gov/rules/2012/58/0111.pdf
5 Method numbers preceded by "USEPA" indicate an EPA method.

5.2.1 Alluvial Monitoring Well Hydrographs

Hydrographs of alluvial groundwater levels grouped by general watershed area are presented on Figures 5-2 through 5-4. These hydrographs continue to show the highest alluvial water levels in the spring and lowest water levels in the fall and show that alluvial groundwater elevations fluctuate seasonally in a similar fashion and at approximately the same time as bedrock groundwater elevations.

Groundwater elevations in the alluvial aquifer vary the least in the Meadow Creek Valley area (approximately 2 to 6 feet) and varied the most at MWH-A03 in East Fork Meadow Creek (greater than 20 feet); this magnitude of change at MWH-A03 may be unreasonable.

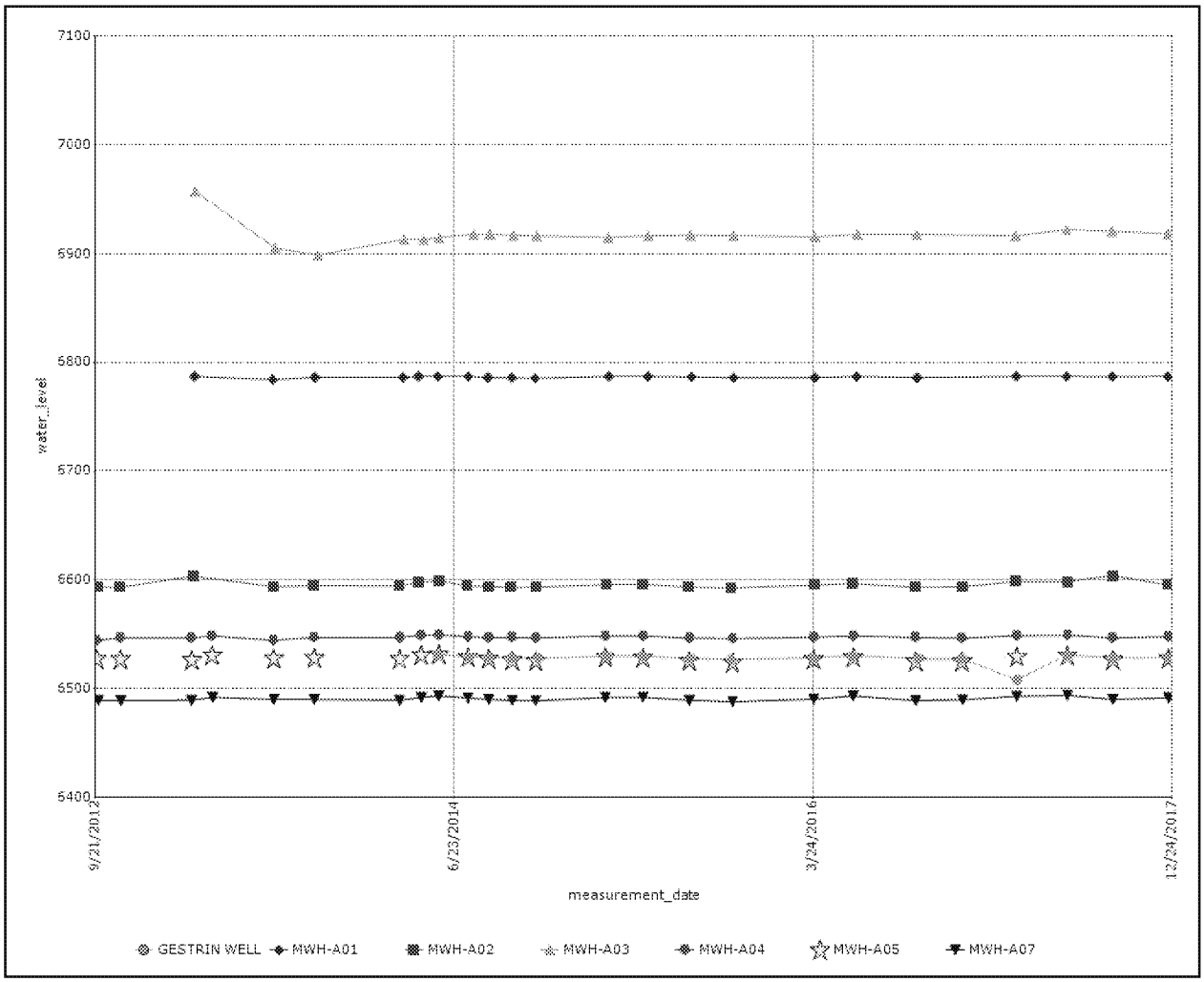

Figure 5-2. Hydrographs for Alluvial Monitoring Wells in the Meadow Creek Valley Area

Alluvial groundwater elevations over time in the upper EFSFSR Valley area varied approximately 2 to 18 feet. Water elevations varied the most for MWH-A15 near the mouth of Fiddle Creek (approximately 18 feet) and for MWH-A10 between the shop and camp (approximately 13 feet).

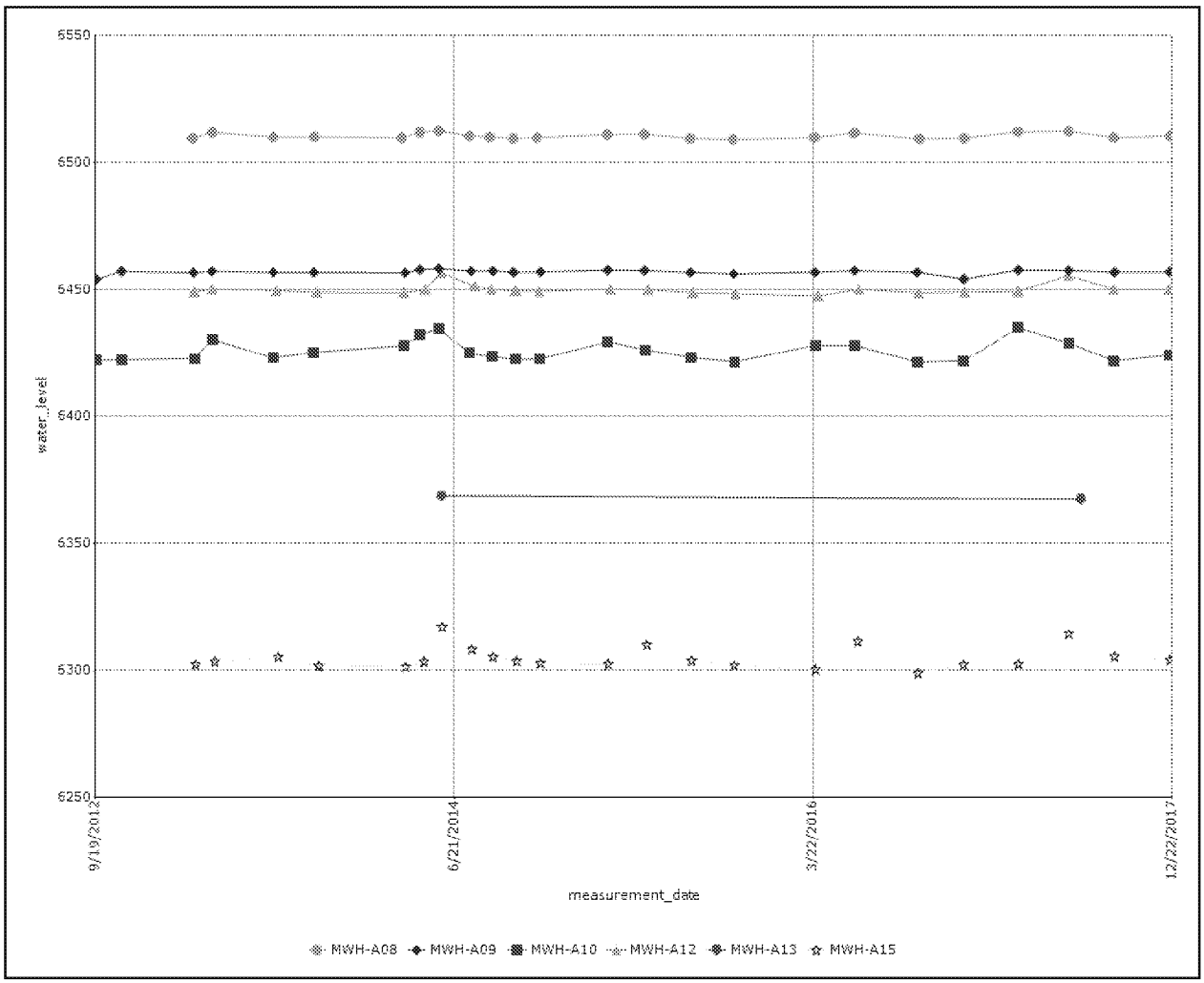

Figure 5-3. Hydrographs for Alluvial Monitoring Wells in the upper EFSFSR Valley Area

Alluvial groundwater elevations in the lower EFSFSR Valley area varied approximately 4 to 10 feet. The significant departure from long-term water levels shown in the hydrograph for SRK-GM-04S is believed to be erroneous, as this departure is not reflected in other bedrock or alluvial groundwater elevation data, and the magnitude of the change in the late March 2014 data point is unreasonable.

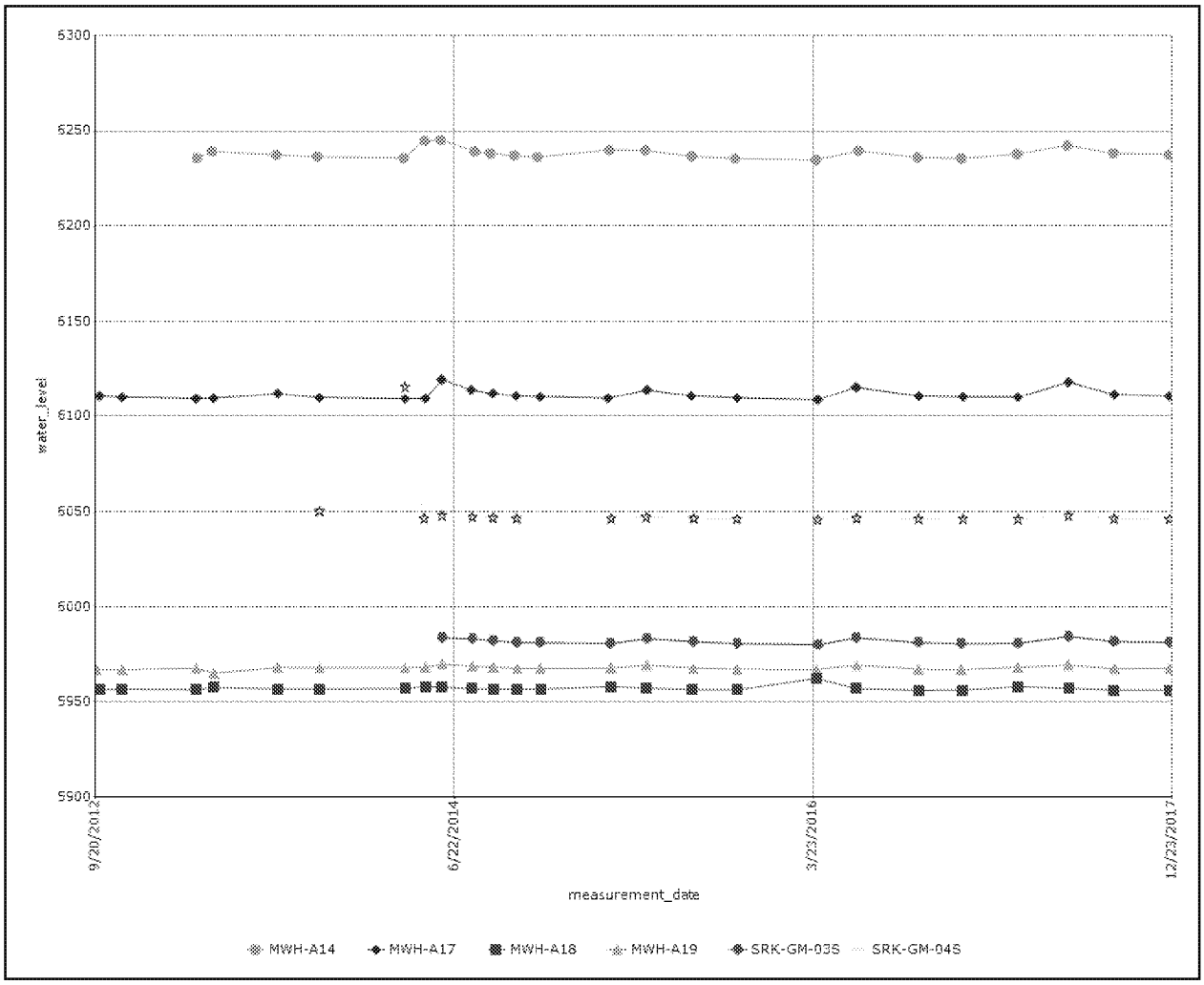

Figure 5-4. Hydrographs for Alluvial Monitoring Wells in the lower EFSFSR Valley Area

5.2.3 Bedrock Monitoring Well Hydrographs

Hydrographs of bedrock groundwater levels grouped by general area are presented on Figures 5-5 through 5-7. These hydrographs show that bedrock groundwater levels vary by season, with the highest water levels occurring in the spring and lowest water levels occurring in the fall. Water level elevations in bedrock vary the least in the Meadow Creek valley area (Figure 5-5).

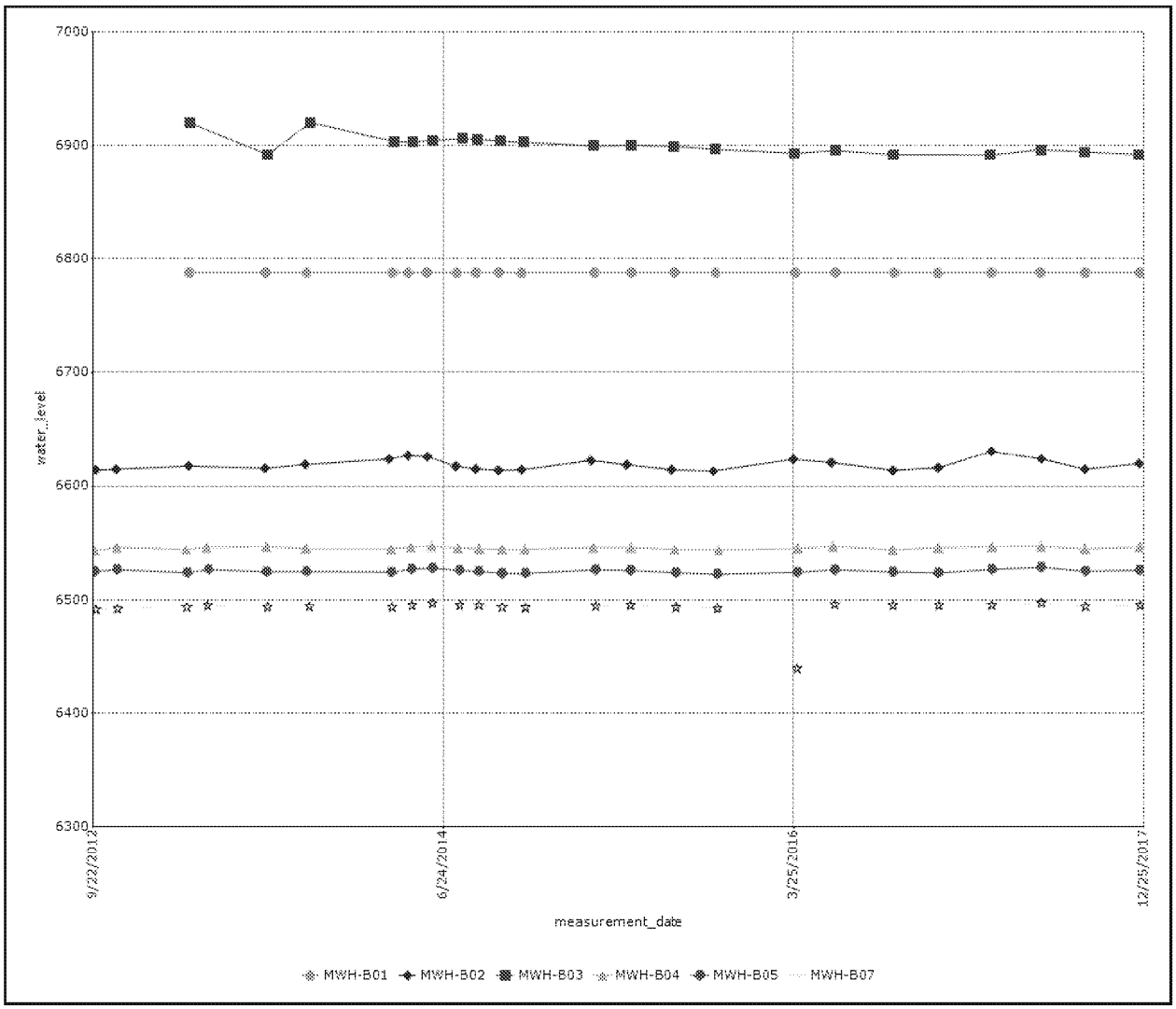

Figure 5-5. Hydrographs for Bedrock Monitoring Wells in the Meadow Creek Valley Area

The groundwater elevations vary by approximately 13 feet for the Sugar Creek Valley well at the lower West End dump. Elevated water levels are normal in the spring, and the magnitude of the increases observed in June of 2014 and 2017 (Figure 5-6) may be reasonable considering the geology in the area and the snow accumulation associated with those years.

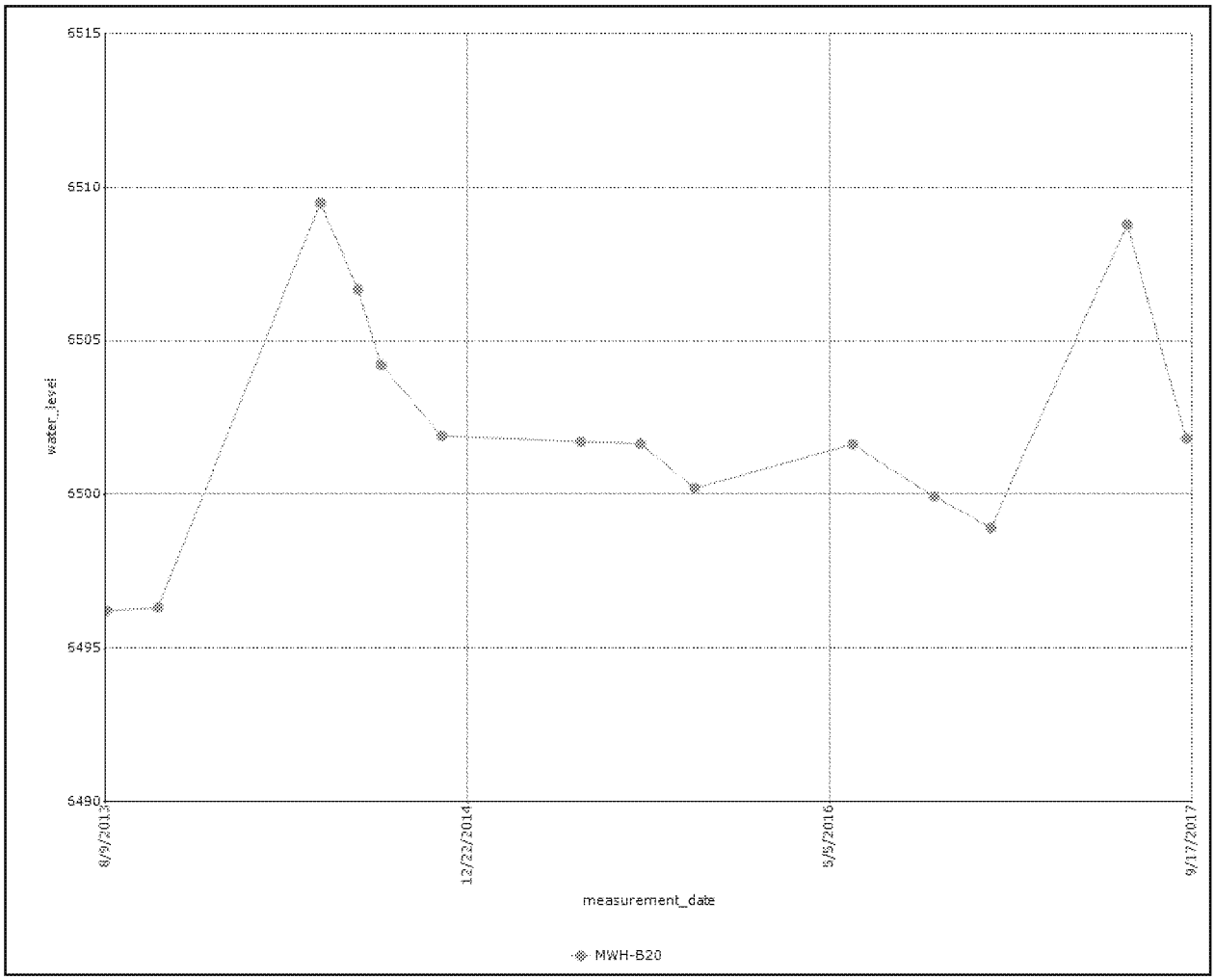

Figure 5-6. Hydrographs for Bedrock Monitoring Well in the Sugar Creek Valley Area

Bedrock groundwater elevations varied by approximately 4 to 9 feet in the EFSFSR valley area. The significant departures from long-term water level averages at MWH-B10, and MWH-B12 (Figure 5-7) are believed to be erroneous, as these departures are not reflected in other bedrock or alluvial groundwater elevation data, and the magnitude of these changes is unreasonable.

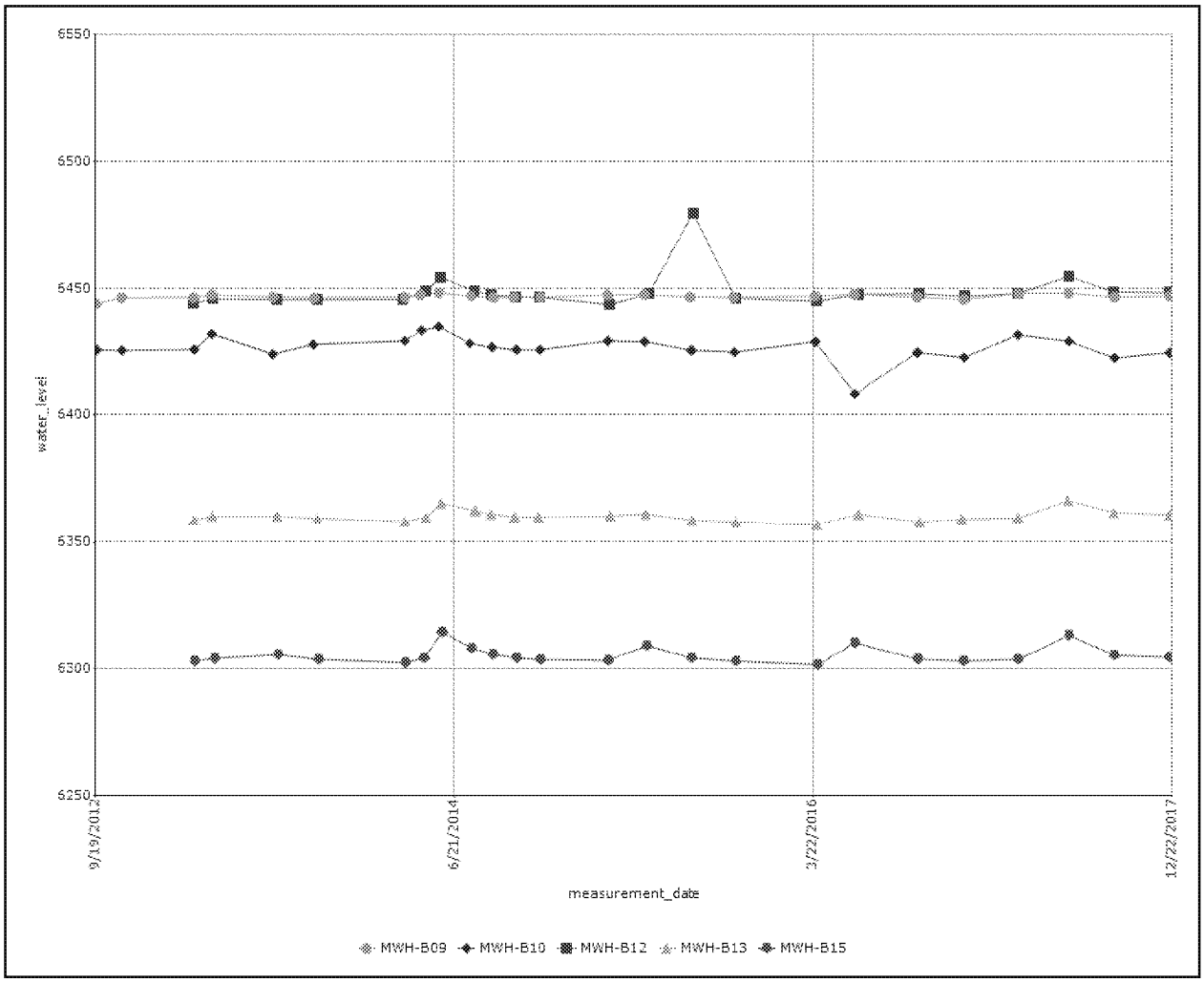

Figure 5-7. Hydrographs for Bedrock Monitoring Wells in the EFSFSR Valley Area

5.3 GROUNDWATER QUALITY SUMMARY

Individual summary statistics including the number of samples; number of detected measurements; number of non-detected measurements; minimum, maximum, mean, median, and standard deviation; and 90th, 95th, and 99th percentiles were calculated for each constituent in each monitoring well. The evaluated data collected between August 2012 and December 2017 are provided in Appendix C.

Overall summary statistics were performed on sampling data from the 19 alluvial and 12 groundwater monitoring wells. Analysis included the number of samples; percent of non-detected measurements; percent of constituents detected below the most restrictive potentially applicable numeric standard/criterion; percent of samples exceeding the criterion; and minimum, maximum, and median concentrations calculated for each analytic constituent. Regulatory criteria for turbidity have not yet been determined for this Site. These summary statistics are presented by drainages in order of upgradient to downgradient in Tables 5-3 and 5-4

5.4 SUMMARY OF PRIMARY COIS

The *WRSR* (BC 2017) compared groundwater quality data to potential numeric criteria for development of the list of COIs in the Study Area. COIs were identified for groundwater in a similar manner as was done for surface water and the most restrictive potential criteria were used to summarize each constituent. Distributions of the key COIs (As, Sb and Hg) concentrations by aquifer are provided below.

Summary statistics of key COIs by aquifer in upgradient to downgradient order are presented in Table 5-5.

ED_002764_00003042-00081

Table 5-3. Summary of Alluvial Well Sample Statistics								
Constituent	Unit	No. of Samples	% Not Detected	% Detected and Below Criteria	% Exceeding Criteria	Min	Max	Median
Onsite Measurements								
Conductivity, N	µS/cm	414	0	100	-	0.53	916.86	129.265
Dissolved Oxygen, N	mg/L	414	0	100	-	0	11.26	6.97
pH, N	pH	411	0	97	3	4.96	10.13	6.87
Oxidation-Reduction potential, N	volts	388	0	100	-	-0.537	0.761	0.09225
Temperature, Water, N	deg C	411	0	100	-	2.86	15.25	6.49
Turbidity, N	NTU	401	0	100	-	0	2271	5.1
Analytical Constituents								
Alkalinity as CaCO3, N	mg/L as CaCO3	416	0	2	98	16 J+	227	57.5
Aluminum (Fume Or Dust), T	ug/L	416	0	72	28	1.8 J+	16800	50.65
Aluminum (Fume Or Dust), D	ug/L	416	0	100	0	0.9 J+	183	4.3 J+
Ammonia as Nitrogen, N	mg/L	416	65	35	-	<0.05 U	0.132 J	< 0.05 U
Antimony, T	ug/L	417	0	47	53	0.044 J	1680	8.63
Antimony, D	ug/L	417	0	47	53	0.021 J	1580	8.87
Arsenic (III), T	ug/L	417	0	100	-	0.006 J	4050	0.416
Arsenic, T	ug/L	417	0	27	75	0.83	9710 J	82.6
Arsenic, D	ug/L	417	0	32	68	0.49 J	7490	63.8
Barium, T	ug/L	416	0	100	0	1.35	305	33.4
Barium, D	ug/L	416	0	100	0	0.988	303	21.55
Beryllium, T	ug/L	416	29	71	0	<0.02 U	1.63	0.012 J
Beryllium, D	ug/L	416	58	42	0	<0.02 U	0.489	<0.02 U
Bicarbonate as CaCO3, N	mg/L	416	0	100	-	16 J+	227	57.5
Boron, T	ug/L	416	4	96	-	<20 U	60.5	8.55 J
Boron, D	ug/L	416	7	93	-	<21 UJ	55.9	7.55
Cadmium, T	ug/L	416	32	68	0	<0.02 U	1.11	0.011 J
Cadmium, D	ug/L	416	36	64	0	<0.02 U	0.546	0.01 J
Calcium, T	ug/L	416	0	100	-	1 J	128000	22100
Calcium, D	ug/L	416	0	100	-	4180	129000	21900
Carbonate as CaCO3, N	mg/L	416	97	3	-	<15 U	44	<15 U
Chloride, N	mg/L	416	0	100	0	0.15 J+	41	0.525
Chromium, T	ug/L	416	2	98	0	<0.2 U	29.1	0.34
Chromium, D	ug/L	416	4	96	0	<0.2 U	1.88 J+	0.17
Cobalt, T	ug/L	416	1	99	-	<0.02 U	5.79	0.212
Cobalt, D	ug/L	416	2	98	-	<0.02 U	5.83	0.1315
Copper, T	ug/L	416	1	99	0	<0.1 U	46.5	0.525 J+
Copper, D	ug/L	416	1	99	0	<0.1 U	18.7	0.29 J+
Cyanide, T	mg/L	417	74	26	0	<0.0027 U	0.062	<0.0047 U
Fluoride, N	mg/L	416	14	86	0	<0.2 U	0.43	0.08 J
Hardness as CaCO3, N	mg/L	416	0	100	-	0.002	498	77.45
Iron, T	ug/L	416	3	47	50	<10 U	24500	300.5
Iron, D	ug/L	416	22	61	17	<20 U	3300	12.95 J
Lead, T	ug/L	416	6	94	0	<0.02 U	5.88	0.064
Lead, D	ug/L	416	19	81	0	<0.02 U	0.542	0.01 J
Magnesium, T	ug/L	416	1	99	-	<5.3 U	50500	5410
Magnesium, D	ug/L	416	0	100	-	668	51600	5300
Manganese, T	ug/L	416	5	53	42	<1.1 U	3000	15.25
Manganese, D	ug/L	416	8	60	32	<1.1 U	3020	2.5
Mercury, T	ng/L	413	1	99	0	<0.5 U	677	8.06

Table 5-3. Summary of Alluvial Well Sample Statistics								
Constituent	Unit	No. of Samples	% Not Detected	% Detected and Below Criteria	% Exceeding Criteria	Min	Max	Median
Onsite Measurements								
Mercury, D	ng/L	403	1	99	0	<0.5 U	126	1.16
Methyl Mercury, N	ng/L	416	64	36	-	<0.1 U	22.2	<0.1 U
Molybdenum, T	ug/L	416	1	99	-	<0.05 U	19.7	1.19
Molybdenum, D	ug/L	416	1	99	-	<0.1 U	18.5	1.16
Nickel, T	ug/L	416	2	98	-	<0.2 U	27	0.62 J+
Nickel, D	ug/L	416	1	99	-	<0.2 U	25.7	0.48 J+
Nitrate+Nitrite as Nitrogen, N	mg/L	416	20	80	-	<0.05 U	0.797	0.09 J+
Nitrogen, Total as Nitrogen, N	mg/L	415	3	97	-	<0.4 U	18.5 J+	0.59 J+
Nitrogen, Total Kjeldahl (TKN), N	mg/L	416	1	99	-	<0.4 U	18.2 J+	0.48
Phosphorus, T	ug/L	420	3	97	-	<40 U	629	31 J
Phosphorus, D	ug/L	416	11	89	-	<20 U	410	20 J
Potassium, T	ug/L	416	1	99	-	<210 U	9620	1560
Potassium, D	ug/L	416	0	100	-	400	4470	1500
Selenium, T	ug/L	416	76	24	0	<1 U	3.2	<1 UJ
Selenium, D	ug/L	416	79	21	0	<1 U	3.3	<1 UJ
Silver, T	ug/L	416	54	46	0	<0.02 U	0.482	n.d. U
Silver, D	ug/L	416	91	9	0	<0.02 U	0.22 J+	n.d. U
Sodium, T	ug/L	416	1	99	-	<210 U	59800	4215
Sodium, D	ug/L	416	0	100	-	1330	55000	4120
Solids, Total Dissolved, N	mg/L	416	0	96	4	18	732	113
Sulfate, N	mg/L	416	0	94	6	1.53	418	9.64
Thallium, T	ug/L	416	50	50	0	<0.02 U	0.338	<0.02 U
Thallium, D	ug/L	416	76	24	0	<0.02 U	0.044 J+	<0.02 U
Vanadium (Fume Or Dust), T	ug/L	416	0	100	-	0.03 J	22.3	0.47 J
Vanadium (Fume Or Dust), D	ug/L	416	1	99	-	<0.2 U	1.19	0.29
Zinc, T	ug/L	416	3	97	0	<0.5 U	774	1.555 J+
Zinc, D	ug/L	416	1	99	0	<0.5 U	382	1.12 J+

Notes:

% Percent

(-) No Action Level Criteria

D Dissolved

J The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit

J+ The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit; biased high

N Normal sample

T Total

U The analyte was not detected in the sample at the estimated detection limit

deg C degree Celsius

uS/cm micro siemens per centimeter

mg/L milligrams per Liter

mg/L as $CaCO_3$ milligrams per Liter as calcium carbonate

NTU Nephelometric Turbidity Unit

NA not applicable. MCL = maximum contaminant level.

pH potential of hydrogen

Table 5-4. Summary of Bedrock Well Sample Statistics								
Constituent	Unit	No. of Samples	% Not Detected	% Detected and Below Criteria	% Exceeding Criteria	Min	Max	Median
Onsite Measurements								
Conductivity, N	uS/cm	275	0	100	-	41.59	758.04	230.44
Dissolved Oxygen, N	mg/L	275	0	100	-	0	10.61	1
pH, N	pH	271	0	71	29	6.17	10.51	8.18
Oxidation-Reduction potential, N	volts	256	0	100	-	-0.555	0.42	-0.0045
Temperature, Water, N	deg C	274	0	100	-	4.98	17.64	7.665
Turbidity, N	NTU	269	0	100	-	0	2944.1	6.6
Analytical Constituents								
Alkalinity as CaCO3, N	mg/L as CaCO3	276	0	0	100	23 J+	226	125.5
Aluminum (Fume Or Dust), T	ug/L	276	0	65	35	1.9 J-	64200	54.85
Aluminum (Fume Or Dust), D	ug/L	276	0	91	9	1.3 J	6820	8.55 J+
Ammonia as Nitrogen, N	mg/L	276	62	38	-	<0.05 U	0.106	<0.05 U
Antimony, T	ug/L	276	0	46	54	0.066	1550	8.61
Antimony, D	ug/L	276	0	44	56	0.048 J	1500	8.59
Arsenic (III), T	ug/L	276	0	100	-	0.005 J+	1200	12.75
Arsenic, T	ug/L	276	0	9	91	0.22 J	1140	243.5
Arsenic, D	ug/L	276	1	9	90	<0.5 U	975	235.5
Barium, T	ug/L	276	0	100	0	2.21	1430	40.55
Barium, D	ug/L	276	0	100	0	1.47	863	31.9
Beryllium, T	ug/L	276	40	59	1	<0.02 UJ	11	0.0165 J
Beryllium, D	ug/L	276	63	37	0	<0.02 U	2.42	<0.02 U
Bicarbonate as CaCO3, N	mg/L	276	0	100	-	23 J+	222	122.5
Boron, T	ug/L	276	2	98	-	<20 UJ	100	16.2 J
Boron, D	ug/L	276	4	96	-	<20 U	75.2	14.25 J
Cadmium, T	ug/L	276	24	76	0	<0.02 UJ	1.3	0.014 J
Cadmium, D	ug/L	276	40	60	0	<0.02 U	0.141	0.01 J
Calcium, T	ug/L	276	0	100	-	4580	94500	22600
Calcium, D	ug/L	276	0	100	-	3070	92600	19450
Carbonate as CaCO3, N	mg/L	276	77	23	-	<15 U	70.6	<15 U
Chloride, N	mg/L	276	0	100	0	0.18 J	6.36	0.455
Chromium, T	ug/L	276	6	93	1	<0.2 U	176	0.35 J+
Chromium, D	ug/L	276	9	91	0	<0.2 U	5.94	0.15 J+
Cobalt, T	ug/L	276	3	97	-	<0.02 U	16.9	0.1655
Cobalt, D	ug/L	276	3	97	-	<0.02 U	8.28	0.177
Copper, T	ug/L	276	0	100	0	0.05 J	110	0.73 J+
Copper, D	ug/L	276	1	99	0	<0.1 U	5.68	0.23
Cyanide, T	mg/L	276	83	17	0	<0.0027 U	0.0665	<0.0047 U
Fluoride, N	mg/L	276	1	99	0	<0.2 U	3.49	0.395
Hardness as CaCO3, N	mg/L	276	0	100	-	17.8	397	88.05
Iron, T	ug/L	276	3	59	38	<20 U	108000	130
Iron, D	ug/L	276	16	75	9	<20 U	9630	21.9 J
Lead, T	ug/L	276	1	92	7	<0.02 U	184	0.175 J+
Lead, D	ug/L	276	11	88	1	<0.02 U	29.8	0.0265 J+
Magnesium, T	ug/L	276	0	100	-	789	46600	5550
Magnesium, D	ug/L	276	0	100	-	662	27500	4050
Manganese, T	ug/L	276	1	68	31	<1.1 U	1520	20.05
Manganese, D	ug/L	276	4	80	16	<0.6 UJ	628	12.1 J

Table 5-4. Summary of Bedrock Well Sample Statistics								
Constituent	Unit	No. of Samples	% Not Detected	% Detected and Below Criteria	% Exceeding Criteria	Min	Max	Median
Mercury, T	ng/L	276	3	97	0	<0.5 U	1980	2.44
Mercury, D	ng/L	270	7	93	0	<0.5 U	48.1	0.46 J
Methyl Mercury, N	ng/L	275	80	20	-	<0.1 U	1.02	<0.1 U
Molybdenum, T	ug/L	276	0	100	-	0.095	36.6	3.865
Molybdenum, D	ug/L	276	0	100	-	0.109	29	4.555
Nickel, T	ug/L	276	3	97	-	<0.2 U	75.6	0.62 J+
Nickel, D	ug/L	276	1	99	-	<0.2 U	6.99	0.4 J+
Nitrate+Nitrite as Nitrogen, N	mg/L	276	38	62	-	<0.05 U	1.08	0.0365 J+
Nitrogen, Total as Nitrogen, N	mg/L	273	3	97	-	<0.4 U	64	0.55
Nitrogen, Total Kjeldahl (TKN), N	mg/L	276	0	100	-	0.14 J+	64	0.475
Phosphorus, T	ug/L	280	8	92	-	<40 UJ	1740	20 J
Phosphorus, D	ug/L	276	18	82	-	<40 U	628	11.45 J-
Potassium, T	ug/L	276	0	100	-	510	16800	1580
Potassium, D	ug/L	276	0	100	-	271 J+	7130	1370
Selenium, T	ug/L	276	84	16	0	<1 U	7.8	<1 U
Selenium, D	ug/L	276	91	9	0	<1 U	0.9 J	<1 UJ
Silver, T	ug/L	276	40	60	0	<0.02 U	10.1	0.01 J
Silver, D	ug/L	276	77	23	0	<0.02 U	0.163	n.d. U
Sodium, T	ug/L	276	0	100	-	1850	142000	26600
Sodium, D	ug/L	276	0	100	-	1840	147000	26800
Solids, Total Dissolved, N	mg/L	276	0	99	1	22	800	179.5
Sulfate, N	mg/L	276	0	100	0	1.23	194	21.05
Thallium, T	ug/L	276	40	60	0	<0.02 U	1.26	0.01 J
Thallium, D	ug/L	276	63	37	0	<0.02 U	0.19	<0.02 U
Vanadium (Fume Or Dust), T	ug/L	276	5	95	-	<0.2 U	65.6	0.448
Vanadium (Fume Or Dust), D	ug/L	276	7	93	-	<0.2 U	9.22	0.255
Zinc, T	ug/L	276	1	99	0	<0.5 U	490	3.805
Zinc, D	ug/L	276	1	99	0	<0.5 U	103	1.3 J+

Notes:

% Percent

(-) No Action Level Criteria

D Dissolved

J The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit

J+ The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit; biased high

N Normal sample

T Total

U The analyte was not detected in the sample at the estimated detection limit

deg C degree Celsius

uS/cm micro siemens per centimeter

mg/L milligrams per Liter

mg/L as $CaCO_3$ milligrams per Liter as calcium carbonate

NTU Nephelometric Turbidity Unit

NA not applicable. MCL = maximum contaminant level.

pH potential of hydrogen

Table 5-5 Statistics of Key COIs by Monitoring Well															
				Antimony ug/L				Arsenic ug/L				Mercury ng/L			
				Standard for Comparison - 10 ug/L				Standard for Comparison - 5.2 ug/L				Standard for Comparison - 12 ng/L			
Well Name	Type	Location Description	Count	Minimum	Maximum	Mean	Median	Minimum	Maximum	Mean	Median	Minimum	Maximum	Mean	Median
Meadow Creek Valley Wells															
MWH-A01	ALLUVIAL	Upper Meadow Creek valley	42	0.9	3.2	2.0	2.0	4.7	10.8	6.5	6.3	0.2	5.2	0.8	0.5
MWH-B01	BEDROCK	Upper Meadow Creek valley	44	2.1	14.3	4.5	4.0	6.8	32.8	14.1	13.6	0.2	20.5	1.1	0.4
MWH-A02	ALLUVIAL	Meadow Creek valley north of SODA	48	0.0	0.2	0.1	0.1	4.8	6.3	5.5	5.5	3.8	93.5	14.4	10.6
MWH-B02	BEDROCK	Meadow Creek valley on SODA	48	0.4	2.8	1.4	1.3	0.2	5.1	0.8	0.5	0.4	97.4	9.3	2.1
MWH-A03	ALLUVIAL	Blowout Creek hillside	42	0.0	3.7	1.2	1.0	0.5	14.5	5.4	3.7	0.4	658.0	130.3	51.6
MWH-B03	BEDROCK	Blowout Creek hillside	42	0.0	3.0	1.0	1.0	1.2	58.4	16.5	16.5	0.1	1980.0	60.2	0.5
MWH-A04	ALLUVIAL	Meadow Creek valley in Smelter Flats	50	0.7	2.5	1.3	1.2	839.0	9710.0	1956.1	1550.0	6.6	367.0	53.7	30.7
MWH-B04	BEDROCK	Meadow Creek valley in Smelter Flats	50	0.2	3.7	0.6	0.5	10.2	958.0	84.9	23.0	0.2	43.0	2.5	0.7
MWH-A05	ALLUVIAL	Meadow Creek valley near middle of airstrip	50	37.8	578.0	124.6	109.5	51.5	2990.0	1857.6	1800.0	35.9	131.0	72.9	71.4
MWH-B05	BEDROCK	Meadow Creek valley near middle of airstrip	50	12.3	336.0	99.2	75.9	144.0	902.0	388.6	302.0	0.5	61.1	4.2	1.9
Gestrin Well	ALLUVIAL-PRODUCTION	Meadow Creek valley near middle of airstrip	42	2.0	3.4	2.4	2.3	3.1	782.0	110.0	51.7	0.3	4.6	1.1	0.7
MWH-A07	ALLUVIAL	Meadow Creek valley near EFSFSR	50	48.6	1680.0	993.8	943.0	21.0	2510.0	319.6	185.5	3.3	92.2	22.4	16.6
MWH-B07	BEDROCK	Meadow Creek valley near EFSFSR	50	0.3	2.5	1.1	0.9	116.0	301.0	244.3	249.0	0.1	83.1	6.2	0.5
Sugar Creek Valley Well															
MWH-B20	BEDROCK	Lower West End dump	30	3.1	101.0	21.1	15.2	248.0	370.0	308.2	298.0	0.1	3.8	0.5	0.4
EFSFSR Valley Wells															
MWH-A08	ALLUVIAL	EFSFSR valley near town site	46	13.5	19.6	15.3	14.9	16.6	27.6	19.9	19.6	0.3	46.6	3.9	1.0
MWH-A09	ALLUVIAL	EFSFSR valley near Garnet Creek	50	35.6	50.5	44.0	45.0	58.9	172.0	75.7	73.2	0.9	615.0	19.5	1.7
MWH-B09	BEDROCK	EFSFSR valley near Garnet Creek	50	8.1	10.5	8.8	8.8	15.8	19.6	17.4	17.3	0.7	51.4	4.4	2.2
MWH-A10	ALLUVIAL	EFSFSR valley between shop and camp	50	69.0	94.7	82.2	82.7	44.8	105.0	84.1	84.4	0.3	21.4	2.6	1.1
MWH-B10	BEDROCK	EFSFSR valley between shop and camp	50	13.3	1550.0	177.1	85.0	245.0	1140.0	592.6	653.5	0.1	84.7	13.3	1.3
MWH-A12	ALLUVIAL	EFSFSR valley near Scout prospect	46	103.0	136.0	113.3	111.0	124.0	228.0	172.9	173.0	0.3	114.0	6.0	0.7
MWH-B12	BEDROCK	EFSFSR valley near Scout prospect	46	89.2	134.0	108.0	104.5	331.0	497.0	374.4	367.5	0.1	18.7	1.5	0.6
MWH-A13	ALLUVIAL	EFSFSR valley between Garnet and Midnight Creeks	4	9.5	15.3	11.4	10.5	4.5	7.6	6.1	6.2	2.1	4.2	3.1	3.1
MWH-B13	BEDROCK	EFSFSR valley between Garnet and Midnight Creeks	46	7.9	62.3	28.7	24.4	97.7	350.0	264.6	272.0	0.1	322.0	20.0	0.7
MWH-A15	ALLUVIAL	EFSFSR valley near Fiddle Creek	46	3.4	4.8	4.1	4.2	76.7	106.0	87.8	86.4	0.2	52.3	2.9	0.7
MWH-B15	BEDROCK	EFSFSR valley near Fiddle Creek	46	2.4	52.4	9.7	7.4	172.0	722.0	334.3	339.5	0.1	1340.0	39.8	1.7
MWH-A14	ALLUVIAL	EFSFSR valley near Midnight Creek	46	35.5	45.5	41.9	41.5	312.0	401.0	358.3	361.0	0.1	57.1	2.9	0.4
MWH-A17	ALLUVIAL	EFSFSR valley near upper Hennessy Creek	50	1.0	3.5	1.4	1.3	2.9	10.1	4.3	3.8	0.1	126.0	11.8	2.6
SRK-GM-04S	ALLUVIAL-PIEZOMETER	EFSFSR valley south of USFS tailings repository	38	3.3	9.0	5.1	4.6	3.8	19.9	8.6	6.7	0.4	57.5	10.3	1.4
SRK-GM-03S	ALLUVIAL-PIEZOMETER	EFSFSR valley north of USFS tailings repository	34	1.5	3.3	1.7	1.6	7.5	21.7	9.0	8.3	0.4	18.8	2.8	1.0
MWH-A19	ALLUVIAL	EFSFSR valley near lower Hennessy Creek	50	3.9	23.4	9.8	8.3	3020.0	7520.0	4606.8	4300.0	0.6	157.0	10.7	4.3
MWH-A18	ALLUVIAL	EFSFSR valley near Homestake road	50	27.2	346.0	189.3	174.5	16.1	774.0	110.9	44.2	1.2	677.0	83.7	4.4

Notes: Standards for comparison are the lowest criteria listed in Table5-2
COIs Constituents of Interest
cfs cubic feet per second
EFSFSR East For South Fork Salmon River
ug/L micrograms per Liter
ng/L nanograms per Liter

The following graphs (Figures 5-8 through 5-18) show total antimony, arsenic and mercury concentrations for select sites to give a general sense of how concentrations vary over time. Typical seasonal fluctuations noted in the WRSR (BC 2017) have continued, with no noticeable changes in the overall range of concentrations.

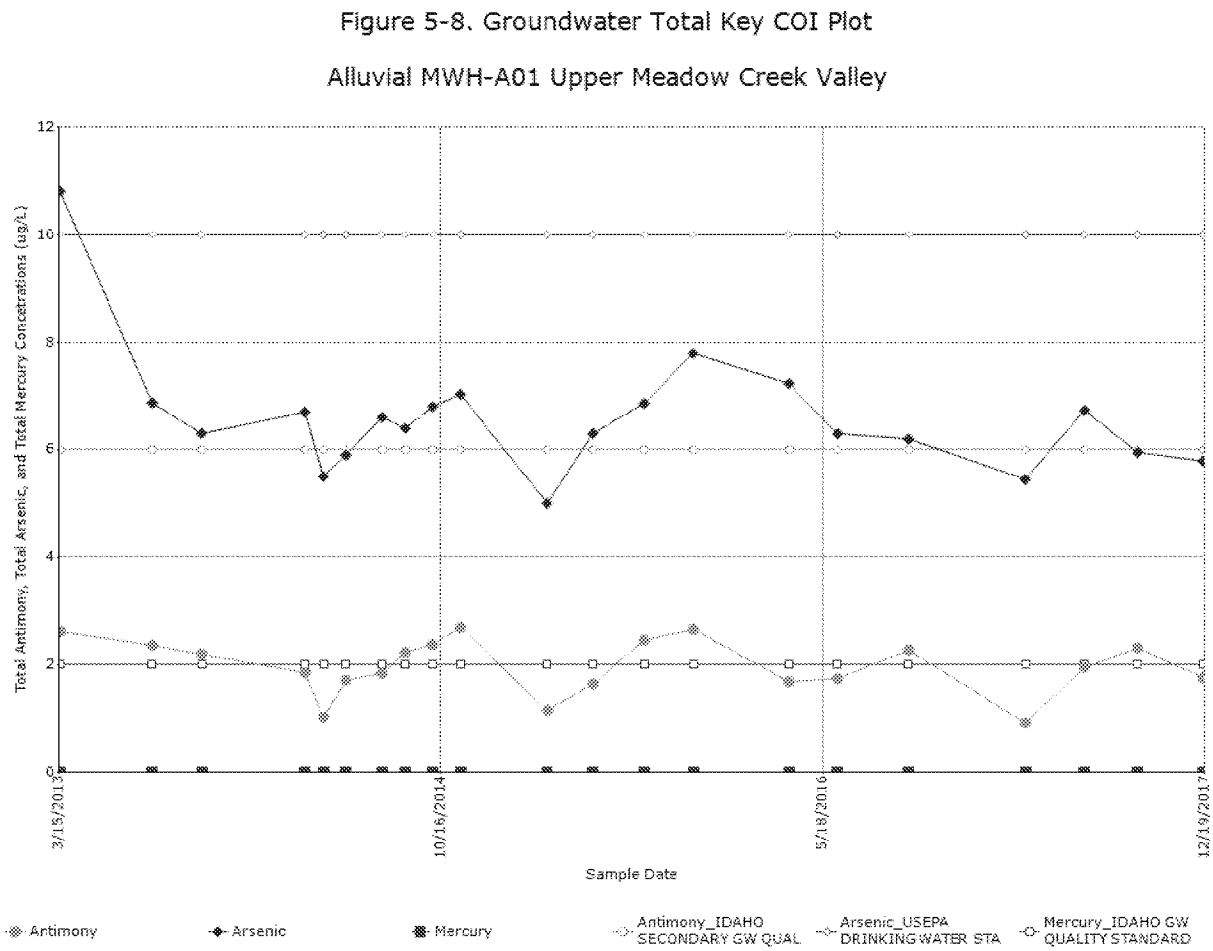

Figure 5-8. Groundwater Key COI Plots for Alluvial Well MWH-A01 at Upper Meadow Creek Valley

Figure 5-9. Groundwater Total Key COI Plot

Bedrock MWH-B01 Upper Meadow Creek Valley

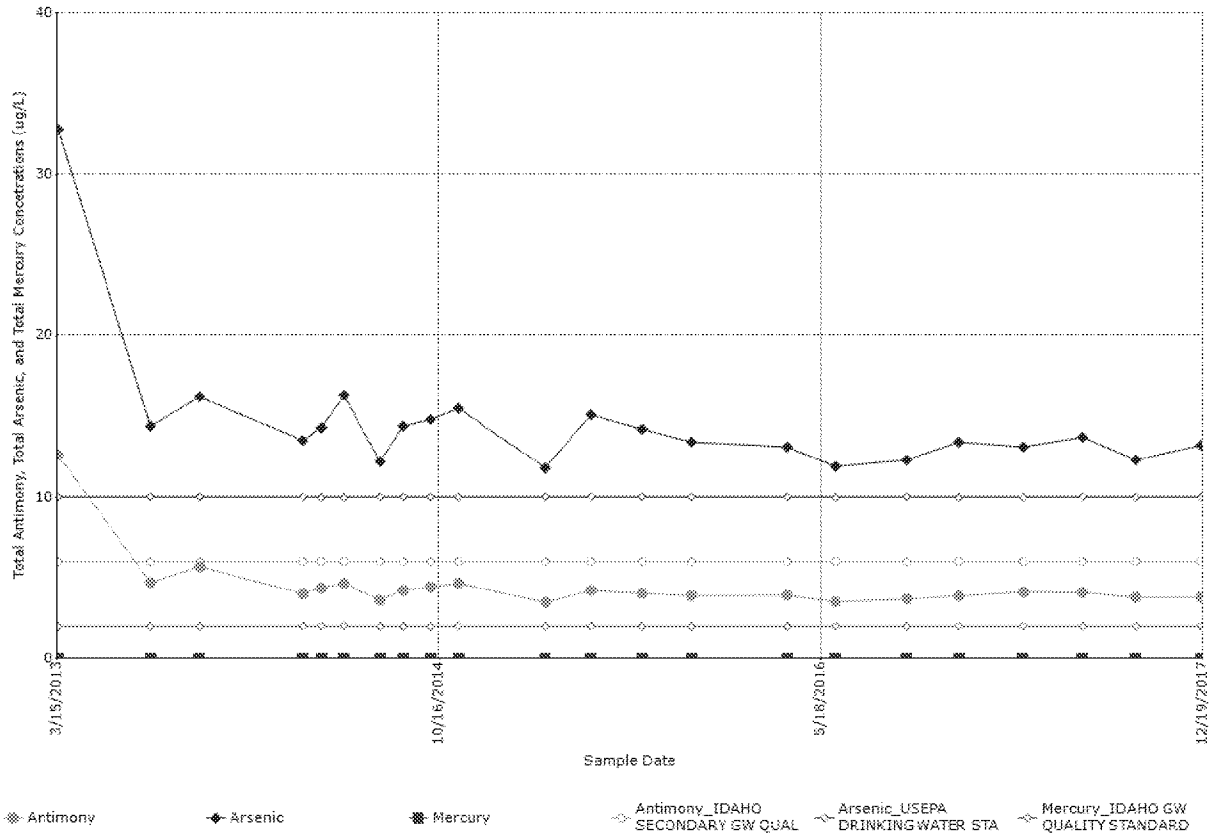

Figure 5-9. Groundwater Key COI Plot for Bedrock Well MWH-B01 at Upper Meadow Creek Valley

Figure 5-10. Groundwater Total Key COI Plot

Alluvial MWH-A02 Meadow Creek Valley on SODA

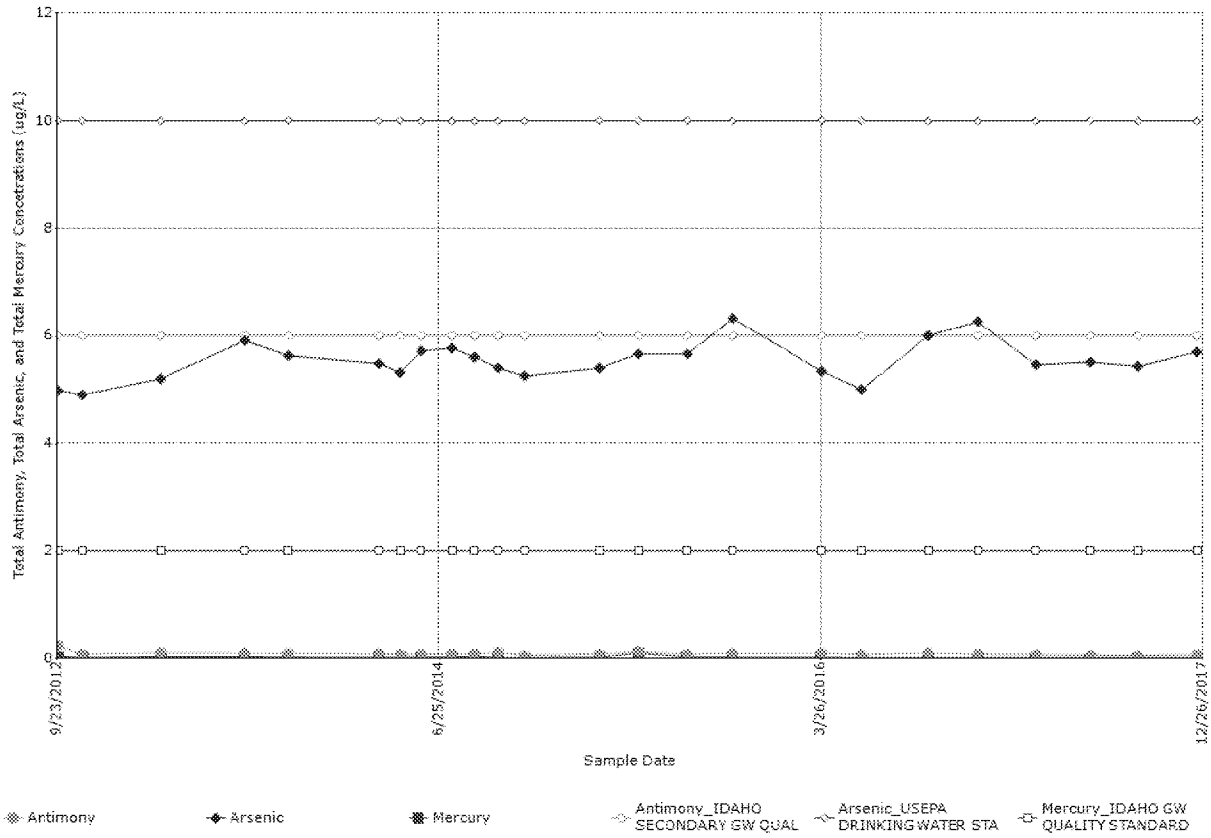

Figure 5-10. Groundwater Key COI Plot for Alluvial Well MWH-A02 at Meadow Creek Valley on SODA

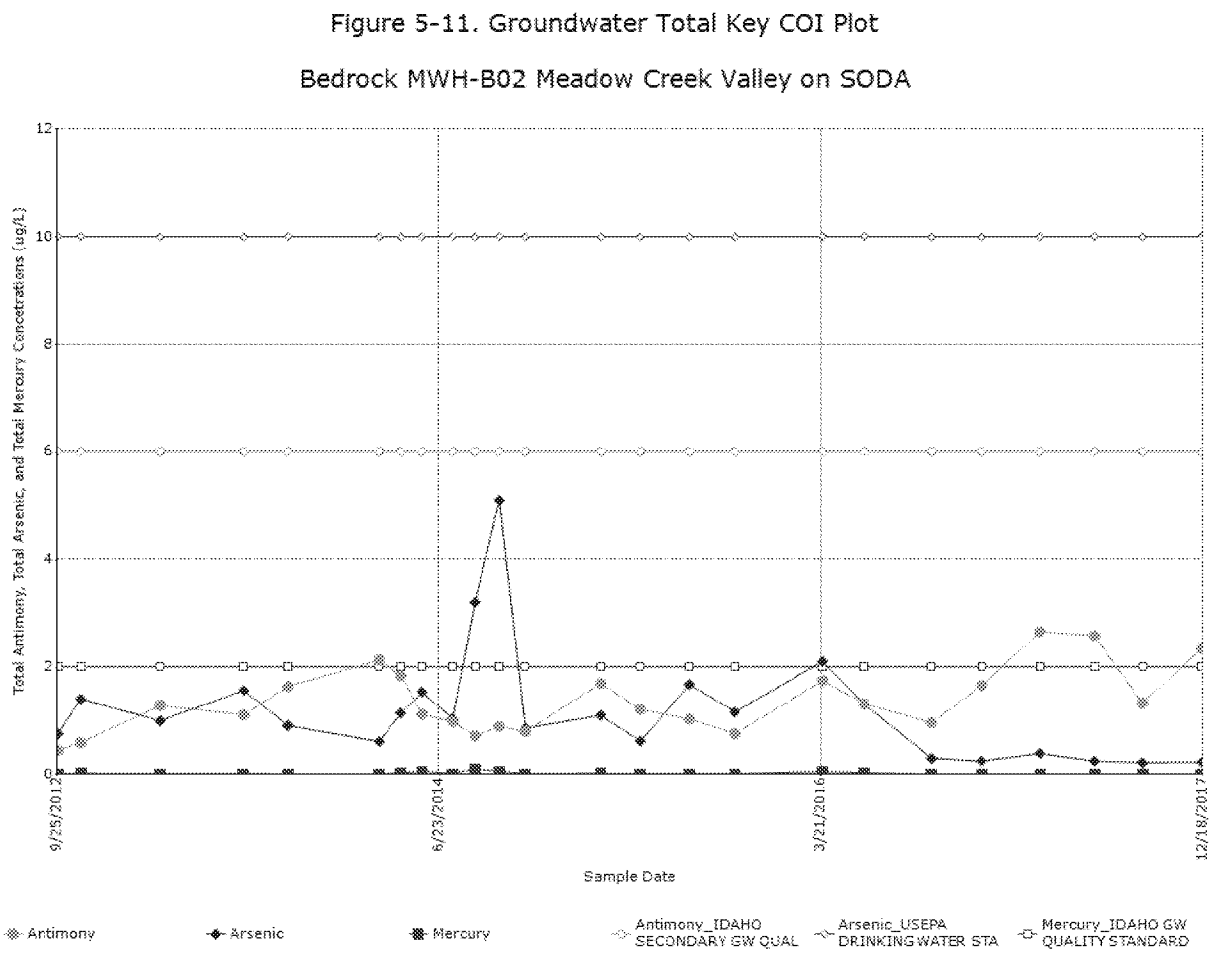

Figure 5-11. Groundwater Key COI Plot for Bedrock Well MWH-B02 at Meadow Creek Valley on SODA

Figure 5-12. Groundwater Total COI Plot

Alluvial MWH-A05 Upper Meadow Creek Valley near Middle of Airstrip

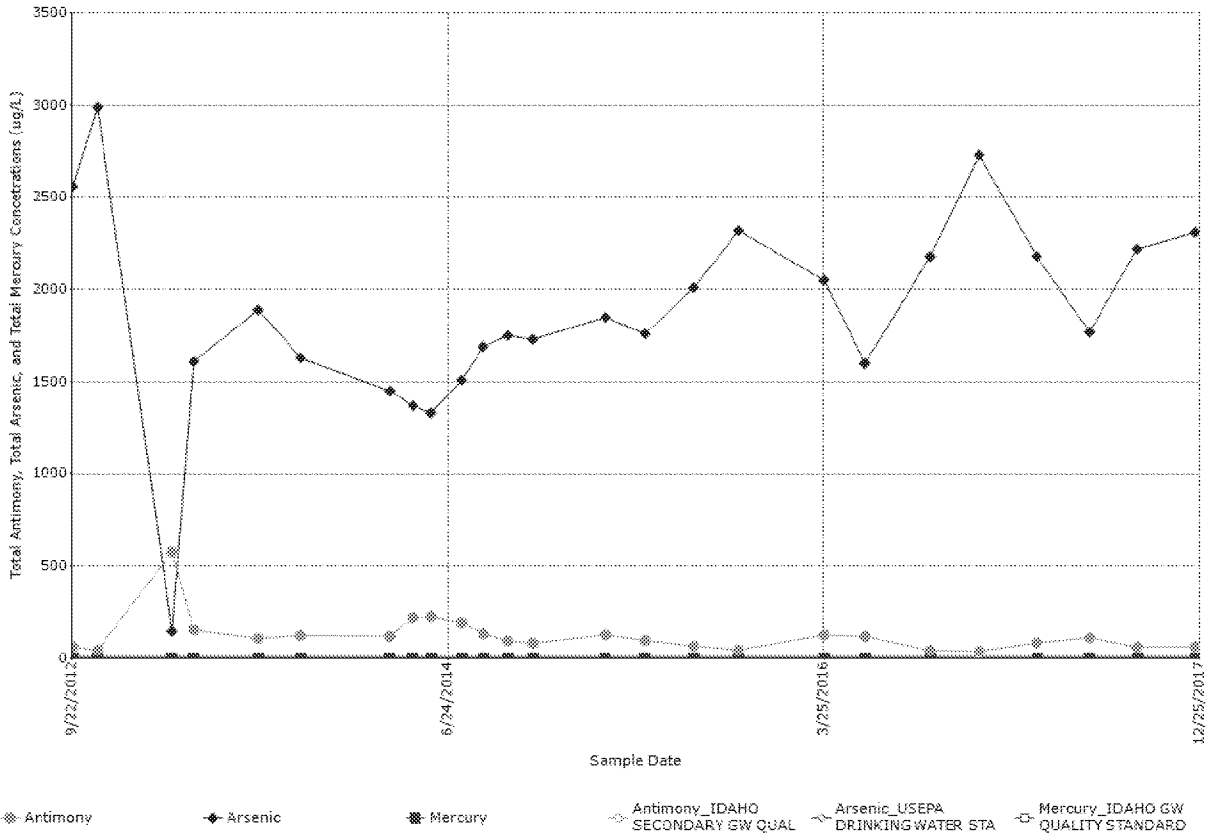

Figure 5-12. Groundwater Key COI Plot for Alluvial Well MWH-A05 at Meadow Creek Valley Near Middle of Airstrip

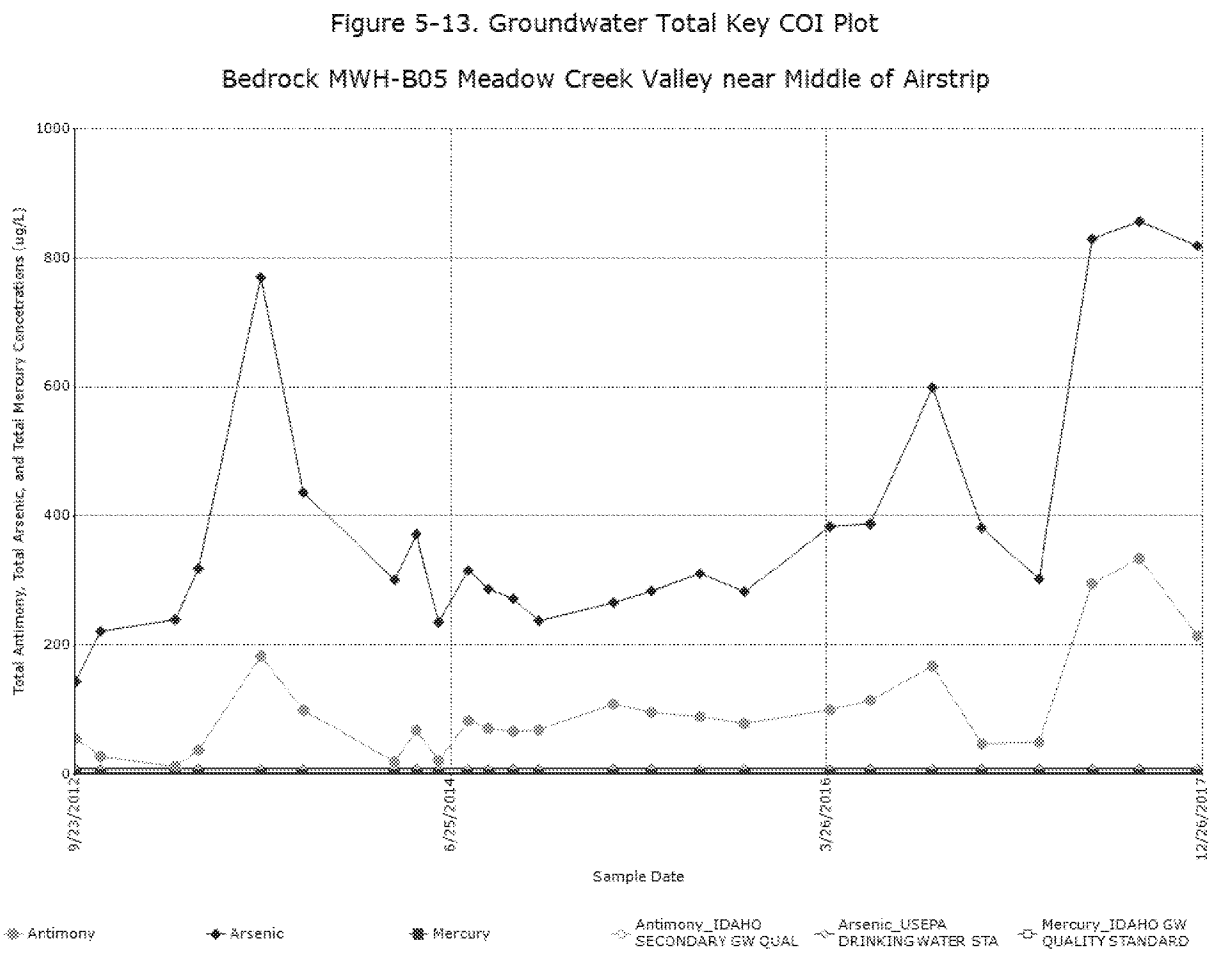

Figure 5-13. Groundwater Key COI Plot for Bedrock Well MWH-B05 at Meadow Creek Valley near Middle of Airstrip

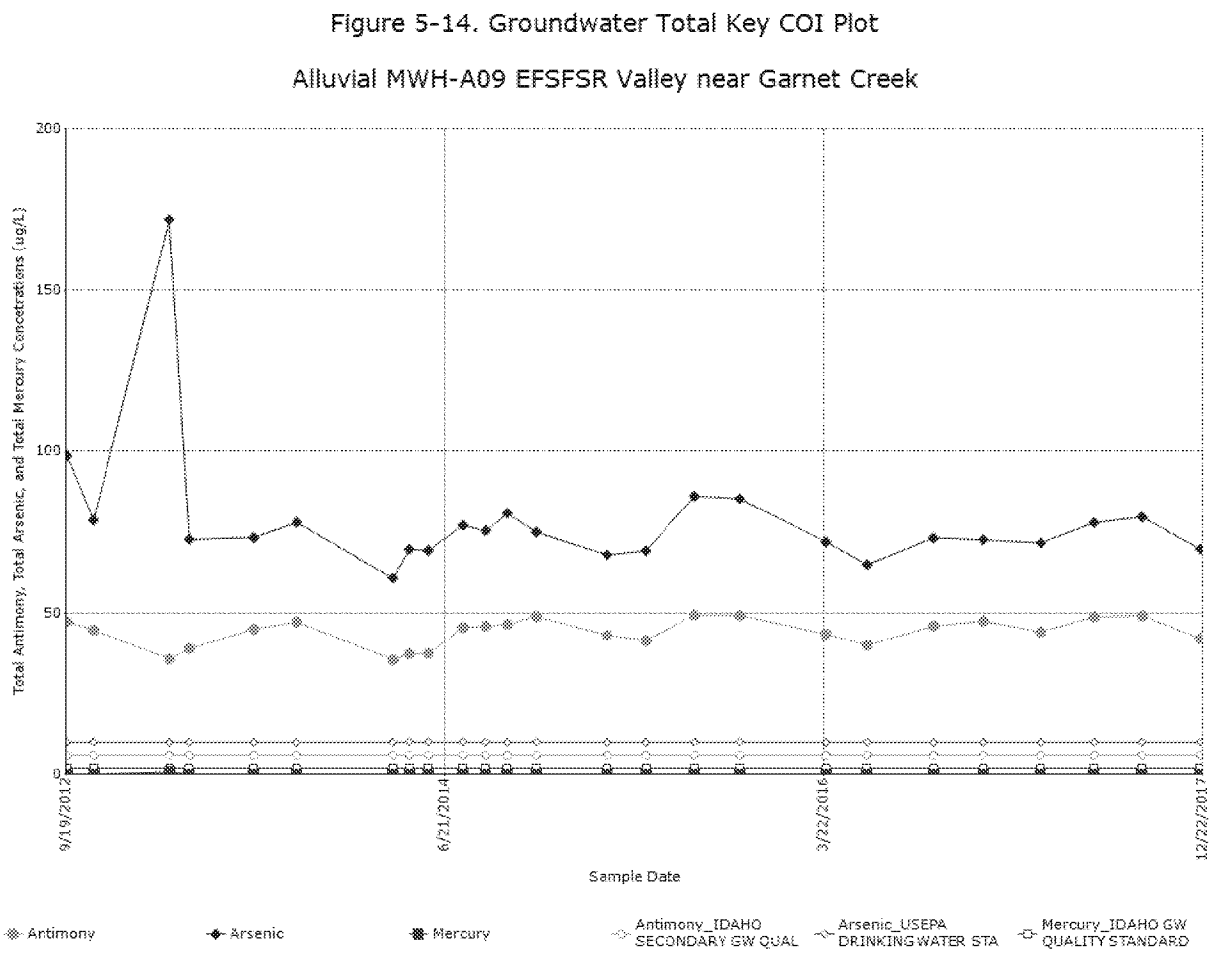

Figure 5-14. Groundwater Key COI Plot for Alluvial Well MWH-A09 at EFSFSR Valley near Garnet Creek

Figure 5-15. Groundwater Total COI Plot

Bedrock MWH-B09 Valley near Garnet Creek

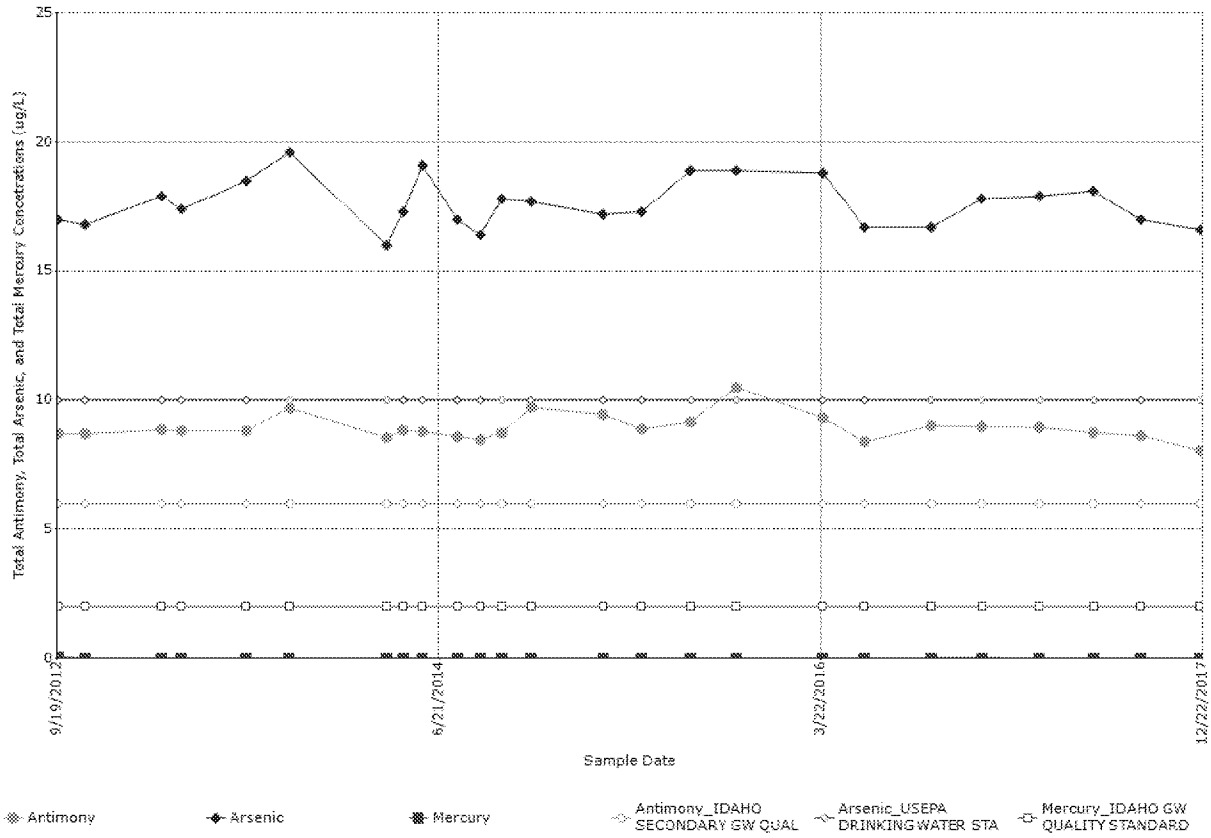

Figure 5-15. Groundwater Key COI Plot for Bedrock Well MWH-B09 at EFSFSR Valley near Garnet Creek

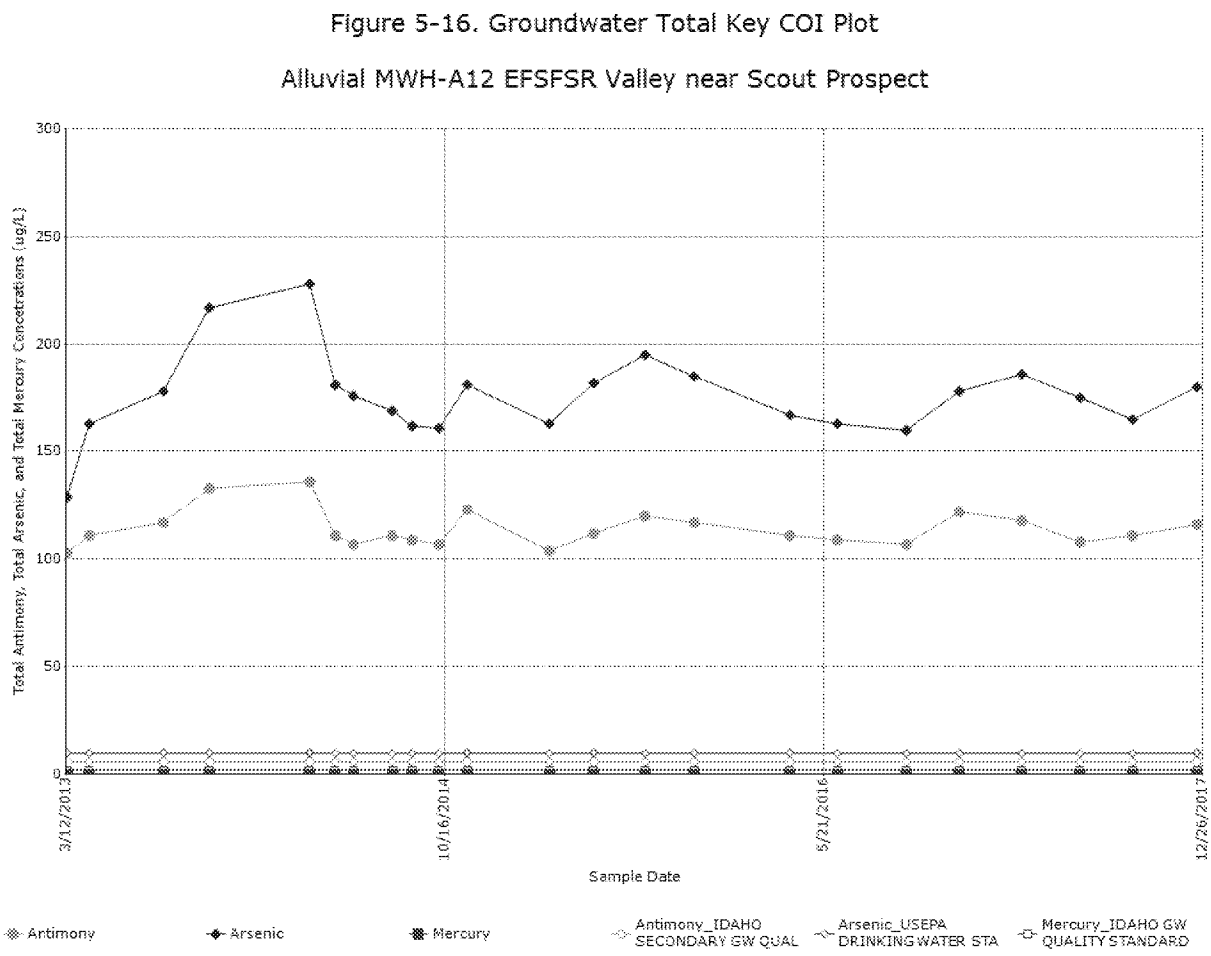

Figure 5-16. Groundwater Key COI Plot for Alluvial Well MWH-A12 at EFSFSR Valley near Scout Prospect

Figure 5-17. Groundwater Total Key COI Plot

Bedrock MWH-B12 EFSFSR Valley near Scout Prospect

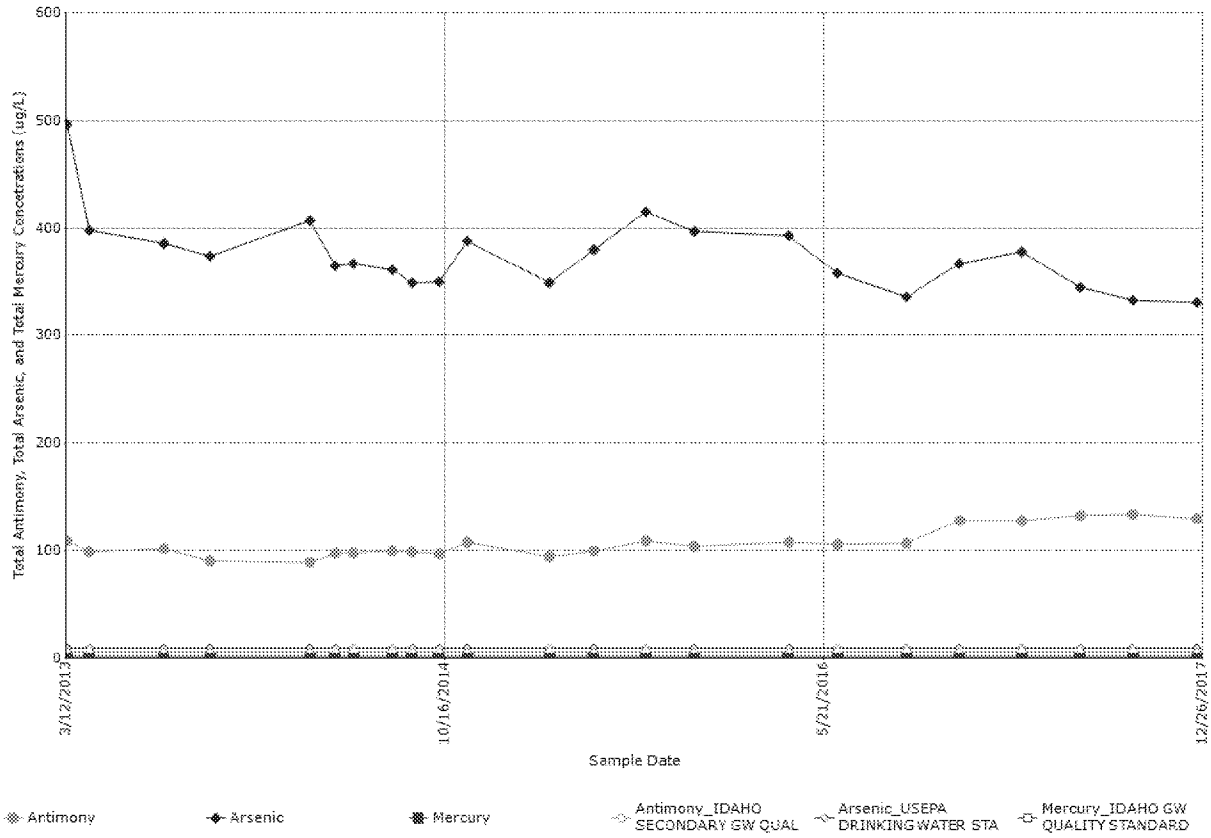

Figure 5-17. Groundwater Key COI Plot for Bedrock Well at EFSFSR Valley near Scout Prospect

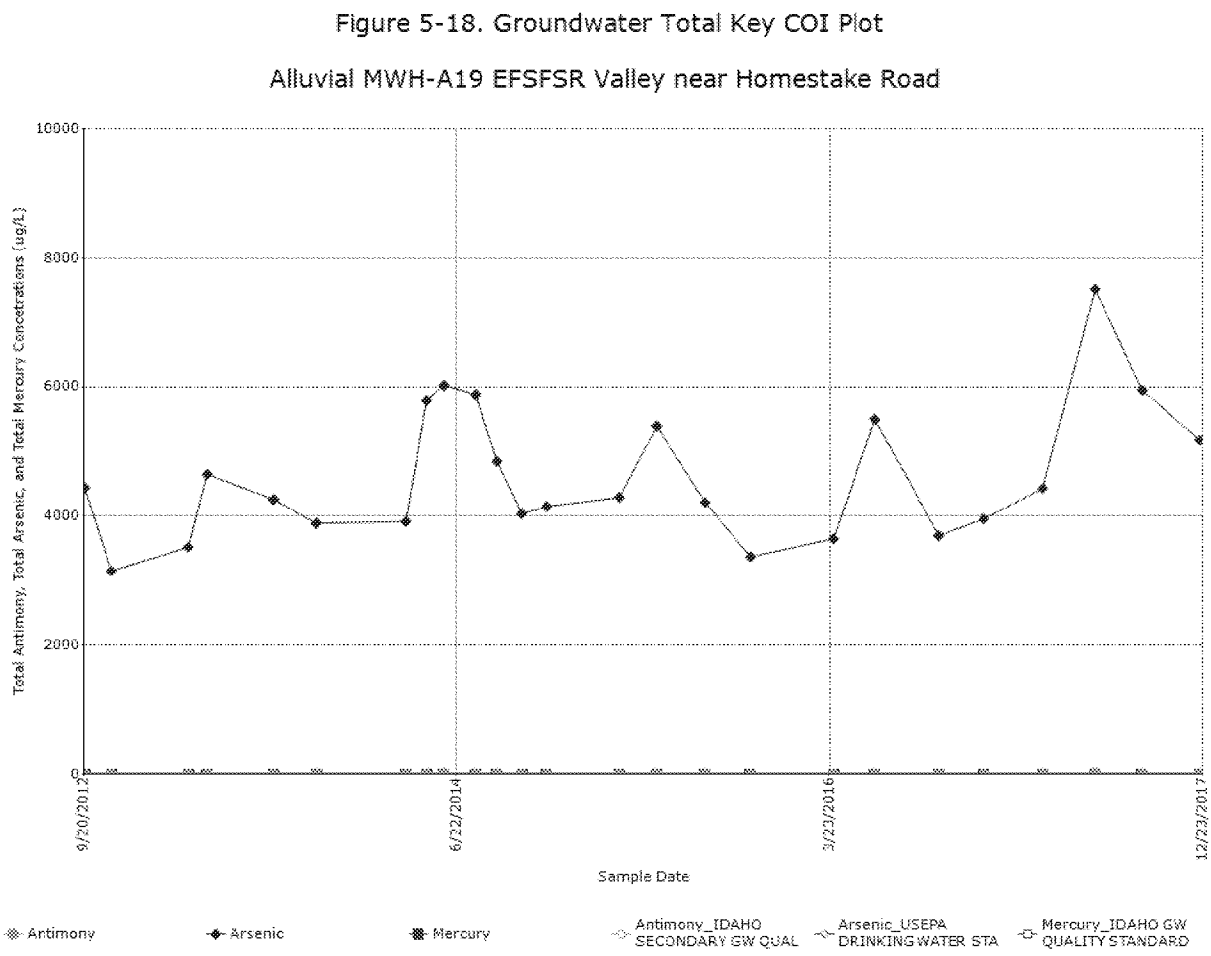

Figure 5-18. Groundwater Key COI Plot for Alluvial Well MWH-A19 at EFSFSR Valley near Homestake Road

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Appendix A; Data Validation Reports and Quarterly Assessments

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 1Q16 (March 2016) GW K1603060, K1603144, K1603312
Prepared By: Lynn K. Lutz, Chemist, HDR Inc.
Date: 14 May 2016

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		QAPP-GWQSP, March 2015
Project objectives identified?	X		The overall goal of the QAPP-GWQSP is to develop a groundwater quality program to continue characterizing groundwater quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality changes from future mining activities. The QAPPGWQSP outlines an approach that will support NEPA activities and environmental permitting. The sampling plan includes the collection of groundwater samples and measurement of onsite water quality parameters. The main objectives of the program are as follows: • Collect baseline data to provide defensible documentation of existing groundwater quality conditions, including characterization of spatial and temporal variability, and • Develop a baseline for evaluating possible changes in groundwater quality during construction, operation, and completion of future mining activities.
Sample design described?	X		
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.

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Data or Measurement Quality Objective	Yes	No	Comments
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-GWQSP
Sample types and numbers defined?	X		25-30 field samples, collected quarterly, from up to 36 bedrock wells and 29 alluvial wells.
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, not blind to lab and not blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package.
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		
Accuracy of data appropriate?	X	X	LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-GWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods and laboratory as previously, throughout the 2012-2015 period.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria
Do the data satisfy the project goals and meet the quality objectives?	X		

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DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 350.1
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL KJELDAHL NITROGEN by USEPA Method 351.4
TOTAL NITROGEN by USEPA Method 351.4
TOTAL ALKALINITY, CARBONATE, BICARBONATE as $CaCO_3$ by Standard Method 2320B
CYANIDE by Standard Method 4500E and USEPA Method 335.4
TOTAL DISSOLVED SOLIDS by Standard Method 2540C

Project:	Midas Gold - Golden Meadows
Project/Task Number:	103-273339-016
Sample Data Package:	K1603060, K1603144
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Groundwater
Sampling Dates:	24-29 March 2016
Validation Guidelines:	Project QAPP *(Quality Assurance Project Plan and Groundwater Quality Sampling Plan [QAPP-GWQSP] for the Golden Meadows Project* [MWH Americas, Inc., February 2014]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, August 2014); National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, August 2014)*; and professional judgment
Validation Level:	Stage 2BVM (100% of data), Stage 3VM (10%)
Data Reviewer:	Lynn K. Lutz, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation. Ten percent of the data underwent Stage 3VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

Not all samples were received at the correct temperature (between 0°C and 6°C). Three of the five coolers received under package K1603312 were received over temperature, at 6.2°C, 6.9°C and 8.5°C. The affected samples in this package were all except MWH-A12, MWH-B15 and MWH-SRK035. Sample results in the affected samples have generally been qualified as non-detect estimated (UJ) or estimated with a possible low bias (J-). Metals results have not been qualified, as preserved metals are not required to be iced.

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II. HOLDING TIMES

All holding time criteria were met and no qualification was required.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS

Target analytes were generally not detected in method blanks except as discussed below.

Total and Dissolved Metals: Some analytes were detected in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to MB results. Qualified results are well below the regulatory criteria and are fully usable.

Total and Dissolved Mercury: Total and dissolved mercury were detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). The qualified results were well below the regulatory criterion of 2000 ng/L and are fully usable.

As (III): Arsenic (III) was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Alkalinity: Total and bicarbonate alkalinity were detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There are no regulatory criteria listed in the QAPP, and the qualified results are fully usable.

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were generally not detected in the ICBs and CCBs except as noted below.

Total and Dissolved Metals: Several analytes were detected in some CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Ammonia: Ammonia was detected at trace levels in some CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

TKN: TKN was detected at trace levels in some CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high

ED_002764_00003042-00104

bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

EQUIPMENT BLANKS

Target analytes were generally not detected in the equipment blank (EB) (MWH-A08-04) except as noted below. Associated samples were all the samples collected in this event except the samples from the wells with dedicated pumps.

Total and Dissolved Metals: Several analytes were detected in the EB. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the EBs that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to EB results. Qualified results are well below the regulatory criteria and are fully usable.

As (III): Arsenic (III) was detected at a trace level in the EB. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Total Mercury: Total mercury was detected at a trace level in the EB. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). The qualified results were well below the regulatory criterion of 2000 ng/L and are fully usable.

TKN: TKN was detected at a trace level in the EB. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Nitrate + Nitrite: Nitrate + nitrite was detected at a trace level in the EB. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). The qualified results are well below the regulatory criterion of 10 mg/L and are fully usable.

Total Nitrogen: Total nitrogen was detected at a trace level in the EB. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Ammonia: Ammonia was detected at a trace level in the EB. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

FIELD BLANKS

Target analytes were generally not detected in the field blank (FB) (MWH-B15-03) except as noted below.

Total and Dissolved Metals: Several analytes (total thallium, and dissolved chromium, cobalt, copper, iron, lead, manganese, nickel and zinc) were detected at trace levels in the FB. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Qualified results are well below the regulatory criteria and are fully usable.

Total Mercury: Total mercury was detected in the FB at a trace level. The result in the parent sample was less than five times the blank concentration and has been qualified as estimated with a possible high bias (J+). The qualified results were well below the regulatory criterion of 2000 ng/L and are fully usable.

TKN: TKN was detected in the FB at a trace level. The result in the parent sample was less than five times the blank concentration and has been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified result is fully usable.

Total Nitrogen: Total nitrogen was detected at a trace level in the FB. The associated sample result was less than five times the blank concentrations and has been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified result is fully usable.

Ammonia: Ammonia was detected at a trace level in the FB. The associated sample result was less than five times the blank concentrations and has been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified result is fully usable.

Anions: Chloride was detected at a trace level in the field blank for MWH-B15. The associated sample result was less than five times the blank concentrations and has been qualified as estimated with a possible high bias (J+). The qualified result was well below the regulatory criterion of 250 mg/L and is fully usable.

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits and no qualification was required.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

MWH-A18 was designated on the COCs for MS/MSD analysis, and the lab selected additional samples from this project for MS/MSD analysis. Recoveries and RPDs were generally within the laboratory's control limits and no qualification was required except as noted below.

Methyl Mercury: The recoveries of methyl mercury in the MS spike of MWH-B02 at 59% was below the control limits of 65-135%. Methyl mercury was not detected in the parent sample and has been qualified as non-detect estimated (UJ). There is no regulatory criterion listed in the QAPP, and the qualified result is fully usable.

The recoveries of methyl mercury in the spike of MWH-A02 were within control limits, but the RPD of 29% was above the 20% control limit. Methyl mercury was detected in the parent sample and has been qualified as estimated (J). There is no regulatory criterion listed in the QAPP, and the qualified result is fully usable.

TKN: The recoveries of TKN in the spike of MWH-B02 were within control limits, but the RPD of 22% was above the 20% control limit. TKN was detected in the parent sample and has been qualified as estimated (J). There is no regulatory criterion listed in the QAPP, and the qualified result is fully usable.

Anions: The recoveries of sulfate in the spikes of MWH-A12 at 88% were below the control limits of 90-110%. Sulfate was detected in the parent samples and has been qualified as

estimated (J). The qualified result was well below the regulatory criterion of 250 mg/L and is fully usable.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. Most results were within control limits and no qualification was required.

In the dilution test for MWH-A18, total zinc had an 11% difference, above the 10% control limit, and this result in the parent sample has been qualified as estimated (J). The qualified result was well below the regulatory criterion of 5000 µg/L and is fully usable.

In the dilution test for MWH-A12, total molybdenum had a 21% difference, above the 10% control limit, and this result in the parent sample has been qualified as estimated (J). There is no regulatory criterion listed in the QAPP, and the qualified result is fully usable.

VIII. FIELD DUPLICATES

A field duplicate (FD) of sample MWH-A09 (MWH-A09-02) was collected. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Total and Dissolved Metals: Some RPDs were above the 20% control limit as shown in the table below. Either there is no regulatory criterion listed in the QAPP, and the qualified results are fully usable, or the qualified results are well below the regulatory criteria and are fully usable.

Arsenic(III): One RPD was above the 20% control limit as shown in the table below. There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Parent / FD pair	Analyte	Concentrations µg/L	RPD	Qualification	Regulatory Criterion, µg/L
MWH-A09 and MWH-A09-02	Aluminum, total	39.9 / 21.8	59%	J / J	200
	Copper, total	2.00 / 1.30	42%	J / J	1300
	Iron, total	99.9 / 37.7	90%	J / J	300
	Manganese, total	3.09 / 0.99	100%	J / J	50
	Nickel, total	0.85 / 0.49	54%	J / J	None
	Zinc, total	3.40 / 1.74	65%	J / J	5000
	Arsenic(III)	0.196 / 0.106	59%	J / J	None

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested

in the Functional Guidelines, were generally met and no qualification was required except as noted below.

Total and Dissolved Metals: One RPD was above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Anions: One RPD was above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Parent / Lab Dup pair	Analyte	Concentrations	RPD	Qualification	Regulatory Criterion
MWH-A18	Cadmium, dissolved	0.155 / 0.112 µg/L	32%	J / J	5 µg/L
MWH-B02	Chloride	0.25 / 0.32 mg/L	22%	J / J	250 mg/L

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: A number of metals were not spiked in ICSA and/or ICSAB but were detected near or above the MRLs. These analytes were detected in a number of samples at concentrations less than five or ten times the concentrations detected in the unspiked ICSA or ICSAB, and these results have been qualified as estimated with a possible high bias (J+). Some analytes were detected at negative concentrations, and results for these analytes have been qualified as non-detect estimated (UJ) or estimated with a possible low bias (J-). Some analytes have no regulatory criteria, and all other qualified metals were detected well below the regulatory criteria or were non-detect with MRLs well below the regulatory criteria; these results are fully usable.

XII. SAMPLE REPORTING LIMITS

All RLs were at or below either the regulatory criteria or the project RL as listed in the QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. Results reported between the MDLs and RLs were qualified as estimated (J).

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 2Q16 GW
June 2016 GW Samples: K1606039, K1606322, K1606466
Prepared By: Jennifer Chandler, Chemist, HDR Inc.
Date: August 31, 2016

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-GWQSP, March 2015
Project objectives identified?	X		The overall goal of the QAPP-GWQSP is to develop a groundwater quality program to continue characterizing groundwater quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality changes from future mining activities. The QAPPGWQSP outlines an approach that will support NEPA activities and environmental permitting. The sampling plan includes the collection of groundwater samples and measure-ment of onsite water quality parameters. The main objectives of the program are as follows: Collect baseline data to provide defensible documentation of existing groundwater quality conditions, including characterization of spatial and temporal variability, and Develop a baseline for evaluating possible changes in groundwater quality during construction, operation, and completion of future mining activities.
Sample design described?	X		33 field samples, collected quarterly, from up to 36 bedrock wells and 29 alluvial wells.
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-GWQSP
Sample types and numbers defined?	X		Approximately 33 locations for GW
Field SOPs defined?	X		

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Data or Measurement Quality Objective	Yes	No	Comments
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X	X	Metals in QAPP by 200.7, 200.8, lab used SW6010C, SW6020A.
Accuracy of data appropriate?	X	X	LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally well above or below the regulatory levels and fully usable. Precision of data failure I due to the questionable accuracy in two sets of Parent Sample/Field Duplicate recovery issues. See Data Validation report for specifics.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X	X	There were rejected results; data were 100% complete, meeting less than the project goal of 90%.
Comparability of data appropriate?	X	X	All samples were analyzed by the same methods throughout the quarter, and by the same lab as in previous quarters. The issue in this analysis appears to be a comparability problem, due to the temperature issues that happened with K1606039. Data was estimated for all detectable sample results (minus most of the Metals), and rejectable data for all non-detected analysis (minus Metals).
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X	X	All data was not fully usable for project objectives, due to the temperature issues upon arrival at the laboratory for K1606039.

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DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 350.1
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL KJELDAHL NITROGEN by USEPA Method 351.4
TOTAL NITROGEN by USEPA Method 351.4
TOTAL ALKALINITY, CARBONATE, BICARBONATE as $CaCO_3$ by Standard Method 2320B
CYANIDE by Standard Method 4500E and USEPA Method 335.4
TOTAL DISSOLVED SOLIDS by Standard Method 2540C

Project: Midas Gold - Golden Meadows
Project/Task Number: 10027847-273339-016
Sample Data Package: K1606039, K1606322, K1606466
Laboratory: ALS Environmental, Kelso, Washington (ALS)
Sample Matrix: Groundwater
Sampling Dates: 2-11 June 2016
Validation Guidelines: Project QAPP *(Quality Assurance Project Plan and Groundwater Quality Sampling Plan [QAPP-GWQSP] for the Golden Meadows Project* [MWH Americas, Inc., March 2015]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, August 2014); National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, August 2014)*; and professional judgment
Validation Level: Stage 2BVM (100% of data), Stage 3VM (10%)
Data Reviewer: Jennifer Chandler, HDR

Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Methyl Mercury, As (III), Hardness	Anions	NH_3, NO_3 + NO_2, TKN, Total N, Cyanide	Alkalinity, Bicarbonate, Carbonate	TDS
MWH-A01	K1606466-002	X	X	X	X	X
MWH-A02	K1606039-003	X	X	X	X	X
MWH-A03	K1606466-003	X	X	X	X	X
MWH-A04	K1606039-007	X	X	X	X	X
MWH-A05	K1606039-010	X	X	X	X	X
MWH-A07	K1606039-008	X	X	X	X	X

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Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Methyl Mercury, As (III), Hardness	Anions	NH_3, NO_3 + NO_2, TKN, Total N, Cyanide	Alkalinity, Bicarbonate, Carbonate	TDS
MWH-A07-02	K1606039-009	X	X	X	X	X
MWH-A08	K1606039-005	X	X	X	X	X
MWH-A08-03	K1606039-006	X	X	X	X	X
MWH-A09	K1606039-011	X	X	X	X	X
MWH-A10	K1606322-002	X	X	X	X	X
MWH-A12	K1606466-008	X	X	X	X	X
MWH-A14	K1606466-006	X	X	X	X	X
MWH-A15	K1606322-003	X	X	X	X	X
MWH-A15 MS	K1606322-003 MS	X	X	X	X	X
MWH-A15 MSD	K1606322-003 MSD	X	X	X	X	X
MWH-A17	K1606322-009	X	X	X	X	X
MWH-A18	K1606322-011	X	X	X	X	X
MWH-A19	K1606322-015	X	X	X	X	X
MWH-B01	K1606466-001	X	X	X	X	X
MWH-B01 MS	K1606466-001 MS	X	X	X	X	X
MWH-B01 MSD	K1606466-001 MSD	X	X	X	X	X
MWH-B02	K16006039-001	X	X	X	X	X
MWH-B02 MS	K1606039-001 MS	X	X	X	X	X
MWH-B02 MSD	K1606039-001 MSD	X	X	X	X	X
MWH-B02-04	K1606039-002	X	X	X	X	X
MWH-B03	K1606466-004	X	X	X	X	X
MWH-B04	K1606322-008	X	X	X	X	X
MWH-B05	K1606322-013	X	X	X	X	X
MWH-B07	K1606322-014	X	X	X	X	X
MWH-B09	K1606039-012	X	X	X	X	X
MWH-B10	K1606322-001	X	X	X	X	X
MWH-B12	K1606466-007	X	X	X	X	X
MWH-B13	K1606466-005	X	X	X	X	X
MWH-B15	K1606322-005	X	X	X	X	X
MWH-B15 MS	K1606322-005 MS	X	X	X	X	X
MWH-B15 MSD	K1606322-005 MSD	X	X	X	X	X
MWH-B20	K1606322-007	X	X	X	X	X
MWH-Gestrin Well	K1606039-004	X	X	X	X	X
SRK-GM-03S	K1606322-010	X	X	X	X	X
SRK-GM-04S	K1606322-012	X	X	X	X	X

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SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation. Ten percent of the data underwent Stage 3VM level validation.

Laboratory data were acceptable with qualification, with the exceptions, as noted below. Completeness goal, of 100%, was not met for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

Not all samples were received at the correct temperature (between 0°C and 6°C). All coolers associated to K1606039 were received over temperature, at 13.3°C, 15.2°C, 13.0°C, and 13.4°C. All samples and analysis were affected samples in this package, with the exception of the Metals analysis (due to method requirements for temperature). Sample results in the affected samples have generally been qualified as rejected (R) for all non-detect results (and highlighted in the EDD), or estimated with a possible low bias (J-), for any detected results. Metals results have not been qualified, for the temperature issue, as preserved metals are not required to be iced.

All remaining coolers arrived within acceptable temperature ranges.

II. HOLDING TIMES

All holding time criteria were met and no qualification was required.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS

Target analytes were generally not detected in method blanks except as discussed below.

Metals: Some analytes were detected in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to MB results. Qualified results are well below the regulatory criteria and are fully usable.

Hardness was detected in the method blanks; however, the values were greater than five times the blank concentration. No further qualification was required.

Mercury: Mercury was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). The qualified results are reportable.

Methyl Mercury: Methyl Mercury was not detected in the method blanks. No qualifications were required.

As (III): Arsenic (III) was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+) - for 1606039. However, in this case, all As (III) samples are estimated low biased, due to the temperature issues for 1606039. There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

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Alkalinity: Alkalinity was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other detections were greater than five times the blank concentration; therefore, no qualifications were required. There are no regulatory criteria listed in the QAPP, and the qualified results are fully usable.

Anions: Chloride was not detected in the method blanks. No qualifications were required.

Ammonia: Ammonia was not detected in the method blanks. No qualifications were required.

Cyanide: Cyanide was not detected in the method blanks. No qualifications were required.

TDS: TDS was not detected in the method blanks. No qualifications were required.

TKN: TKN was not detected in the method blanks. No qualifications were required.

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INITIAL AND CONTINUING CALIBRATION BLANKS
Target analytes were generally not detected in the ICBs and CCBs except as noted below.

Metals: Several analytes were detected in some CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Mercury: Mercury was not detected in the ICBs or CCBs. No qualifications were required.

Methyl Mercury: Methyl Mercury was not detected in the ICBs or CCBs. No qualifications were required.

As (III): Arsenic (III) was not detected in the ICBs or CCBs. No qualifications were required.

Alkalinity: Alkalinity was not detected in the ICBs or CCBs. No qualifications were required.

Anions: Chloride was detected in some CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Ammonia: Ammonia was detected at trace levels in some CCBs. All samples were non-detect; therefore, no qualification was required.

Cyanide: Cyanide was not detected in the ICBs or CCBs. No qualifications were required.

TDS: TDS was not detected in the ICBs or CCBs. No qualifications were required.

TKN: TKN was detected at trace levels in some CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

EQUIPMENT BLANKS

No equipment blanks were submitted for analysis with the COCs.

FIELD BLANKS

There were no field blanks submitted for analysis with the COCs.

V. LABORATORY CONTROL SAMPLES (LCS)
Recoveries and relative percent differences (RPDs) were within the laboratory's control limits, for all analysis, and no qualifications were required.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)
Recoveries and RPDs were generally within the laboratory's control limits and no qualification was required except as noted below.

ED_002764_00003042-00115

Metals: The recovery of Antimony in the MS spike of MWH-B02 at 73% was below the control limits of 75-125%. Antimony was detected in the parent sample and has been qualified as estimated (J-). The qualified result is usable.

Sample MWH-B02 MS/D % recoveries were within control limits, for Aluminum but the RPD of 31.1 % was above the 20% control limit. Aluminum was detect in the parent sample and has been qualified as estimated (J+). The qualified result is fully usable.

The recovery of Antimony in the MSD spike of MWH-B02 at 9% was below the control limits of 75-125%. Methyl mercury was not detected in the parent sample and has been qualified as non-detect estimated (R), due to the high temperature at time of receipt at the lab. The qualified result is not usable.

The recoveries of Aluminum (6%) and Antimony (70%), in the MSD spike of MWH-A15, were below the control limits of 75-125%. Both were detected in the parent sample and have been qualified as detect estimated (J-). The qualified result is usable.

Mercury: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Methyl Mercury: The recovery of methyl mercury in the MSD spike of MWH-B02 at 19% was below the control limits of 65-135%. Methyl mercury was not detected in the parent sample and has been qualified as non-detect estimated (R), due to the high temperature at time of receipt at the lab. There is no regulatory criterion listed in the QAPP, and the qualified result is not usable.

The recovery of methyl mercury in the MS/D spikes of MWH-B15 at 435/ 39% was below the control limits of 65-135%. Methyl mercury was not detected in the parent sample and has been qualified as non-detect estimated (UJ). There is no regulatory criterion listed in the QAPP, and the qualified result is usable. Sample MWH-B15 MS/D % recoveries were within control limits, but the RPD of 26% was above the 20% control limit. Methyl mercury was non-detect in the parent sample and has been qualified as estimated (UJ). There is no regulatory criterion listed in the QAPP, and the qualified result is fully usable.

As (III): All MS/MSD recoveries were within the required criteria. No qualifications were required.

Alkalinity: No MS/MSD was performed on a sample within these SDGs.

Anions: The recoveries of Chloride in the spikes of MWH-B02 at 89%/ 89% were below the control limits of 90-110%. Chloride was detected in the parent samples and has been qualified as estimated (J-). Fluoride %RPD failed high biased. The qualified result was reportable.

Ammonia: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Cyanide: All MS/MSD recoveries were within the required criteria. No qualifications were required.

TDS: No MS/MSD was performed on a sample within these SDGs.

TKN: All MS/MSD recoveries were within the required criteria. No qualifications were required.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These

tests are applicable only to total and dissolved metals by SW6010C and SW6020A. Most results were within control limits and no qualification was required.

In the dilution test for MWH-B02, Aluminum, Arsenic, Chromium, Phosphorus, Thallium, Silver, and Zinc had an % difference greater the 10% control limit, and this result in the parent sample has been qualified as estimated (J+). The qualified result was well below the regulatory criterion of 5000 µg/L and is fully usable.

VIII. FIELD DUPLICATES

A field duplicate (FD) of sample MWH-A09 (MWH-A09-02) was collected. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Anions: Nitrate RPD was above the 20% control limit as shown in the table below. Either there is no regulatory criterion listed in the QAPP, and the qualified results are fully usable, or the qualified results are well below the regulatory criteria and are fully usable.

Note: 99% of all compounds/analytes associated to Parent Sample/Field Duplicates for MWH-B02/B02-04 and MWH-A07/A07-02 do not pass any acceptable criteria for %RPD. Unless the laboratory can prove that these samples were initially logged in correctly and can prove their reproducibility for the analysis, all PS/FD samples will be considered estimated. Prior to this discovery, all analysis (with the exception of Metals analysis) was flagged as estimated (J-/UJ), due to the temperature issues upon arrival at the laboratory. All analysis (including Metals) will be flagged as estimated (UJ/J-), for these 4 samples.

Parent / FD pair	Analyte	Concentrations µg/L	RPD	Qualification	Regulatory Criterion, µg/L
MWH-A07 and MWH-A07-02	Nitrate	0.037 / 0.050	29.9%	J / J	10
MWH-B02 and MWH-B02-04	Note Above				
MWH-A07 and MWH-A07-02	Note Above				

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met and no qualification was required except as noted below.

Total and Dissolved Metals: Multiple RPDs were above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Anions: Multiple RPDs were above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

ED_002764_00003042-00117

Parent / Lab Dup pair	Analyte	Concentrations	RPD %	Qualification	Regulatory Criterion
MWH-B02	Beryllium (Dissolved)	0.023 / 0.029 µg/L	23.1	J / J	4.0 µg/L
	Boron (Dissolved)	7.5 / 4.9 µg/L	41.9	J / J	None
	Cadmium (Diss)	0.029 / 0.023 µg/L	23.1	J / J	5.0 µg/L
	Nickel (Dissolved)	0.54 / 0.71 µg/L	27.2	J / J	None
	Phosphorus (Diss)	9.5 / 12.8 µg/L	29.6	J / J	None
MWH-B02	Fluoride	0.04 / 0.08 mg/L	54.0	J / J	250 mg/L
MWH-A15	Fluoride	0.09 / 0.04 mg/L	78.0	J / J	250 mg/L
MWH-A15	Copper (Total)	0.07 / 0.09 µg/L	25.0	J / J	None
	Aluminum (Diss)	2.2 / 2.7 µg/L	24.0	J / J	200 µg/L
	Boron (Dissolved)	5.3 / 2.7 µg/L	65.0	J / J	None
	Lead (Dissolved)	0.004 / 0.005 µg/L	22.2	J / J	15 µg/L
MWH-B15	Manganese (Total)	15.1 / 29.2 µg/L	63.7	J / J	50 µg/L
	Silver (Total)	0.013 / 0.008 µg/L	47.6	J / J	100 µg/L
	Thallium (Total)	0.015 / 0.012 µg/L	22.2	J / J	2.0 µg/L
	Boron (Dissolved)	32.1 / 23.0 µg/L	33.0	J / J	None
	Chromium (Diss)	0.06 / 0.08 µg/L	28.6	J / J	100 µg/L
	Silver (Dissolved)	0.008 / 0.004 µg/L	66.7	J / J	100 µg/L
	Thallium (Diss)	0.004 / 0.003 µg/L	28.6	J / J	2.0 µg/L
	Zinc (Dissolved)	1.4 / 1.1 µg/L	24.0	J / J	5000 µg/L
MWH-B01	Copper (Total)	0.14 / 0.11 µg/L	24.0	J / J	1300 µg/L
MWH-B01	Lead (Total)	0.009 / 0.006 µg/L	40.0	J / J	15 µg/L
	Zinc (Total)	0.9 / 0.4 µg/L	76.9	J / J	5000 µg/L

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: A number of metals were not spiked in ICSA and/or ICSAB but were detected near or above the MRLs. These analytes were detected in a number of samples at concentrations less than five or ten times the concentrations detected in the unspiked ICSA or ICSAB, and these results have been qualified as estimated with a possible high bias (J+). Some analytes were detected at negative concentrations, and results for these analytes have been qualified as non-detect estimated (UJ) or estimated with a possible low bias (J-). Some analytes have no regulatory criteria, and all other qualified metals were detected well below the regulatory

criteria or were non-detect with MRLs well below the regulatory criteria; these results are fully usable.

XII. SAMPLE REPORTING LIMITS

All RLs were at or below either the regulatory criteria or the project RL as listed in the QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. Results reported between the MDLs and RLs were qualified as estimated (J).

All Analysis: No discrepancies were noted between the EDD and PDF versions of the reported laboratory data. All data was validated and reportable, with exceptions to the rejected data (for temperature issues) and the two sets of questionable estimated parent sample/field duplicate data listed above.

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Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 3Q16 GW
September 2016 GW Samples: K1611457, K1611511, K1611701
Prepared By: Jennifer Chandler, Chemist, HDR Inc.
Prepared Date: December 2, 2016

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-GWQSP
Project objectives identified?	X		The overall goal of the QAPP is to develop a groundwater quality program to continue characterizing groundwater quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality changes from future mining activities. The QAPP outlines an approach that will support NEPA activities and environmental permitting. The sampling plan includes the collection of groundwater samples and measurement of onsite water quality parameters. The main objectives of the program are as follows: Collect baseline data to provide defensible documentation of existing groundwater quality conditions, including characterization of spatial and temporal variability, and Develop a baseline for evaluating possible changes in groundwater quality during construction, operation, and completion of future mining activities.
Sample design described?	X		33 field samples (plus one Duplicate), collected quarterly, from up to 36 bedrock wells and 29 alluvial wells.
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP
Sample types and numbers defined?	X		Approximately 33 locations for GW
Field SOPs defined?	X		

ED_002764_00003042-00120

Data or Measurement Quality Objective	Yes	No	Comments
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X	X	351.4, 300.0, 353.2, 2320B, 4500-CNE, 4500NH3 G, 2340, 1630, 1631E, 1632, 6010C, 6020A.
Accuracy of data appropriate?	X	X	LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were outside control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP.
Completeness of data appropriate?	X	X	There were no rejected results; data were 100% complete, meeting less than the project goal of 90%.
Comparability of data appropriate?	X	X	All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X	X	All data were fully usable for project objectives.

ED_002764_00003042-00121

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 350.1
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL KJELDAHL NITROGEN by USEPA Method 351.4
TOTAL NITROGEN by USEPA Method 351.4
TOTAL ALKALINITY, CARBONATE, BICARBONATE as $CaCO_3$ by Standard Method 2320B
CYANIDE by Standard Method 4500E and USEPA Method 335.4
TOTAL DISSOLVED SOLIDS by Standard Method 2540C

Project: Midas Gold - Golden Meadows
Project/Task Number: 10027847-0273339
Sample Data Package: K1611457, K1611511, K1611701
Laboratory: ALS Environmental, Kelso, Washington (ALS)
Sample Matrix: Groundwater
Sampling Dates: 21-27 September 2016
Validation Guidelines: Project QAPP *(Quality Assurance Project Plan and Groundwater Quality Sampling Plan [QAPP-GWQSP] for the Golden Meadows Project* [MWH Americas, Inc., March 2015]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Meth*ods, *3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, August 2014); National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, August 2014)*; and professional judgment
Validation Level: Stage 2BVM (100% of data), Stage 3VM (10%)
Data Reviewer: Jennifer Chandler, HDR

Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Hardness, Arsenic (III), Methyl Mercury	Anions	TKN, NH_3, NO_3 + NO_2, and Total Nitrogen	Alkalinity, Bicarbonate, Carbonate	TDS and TSS	Total Cyanide
MWH-A01	K1611511-012	X	X	X	X	X	X
MWH-A02	K1611457-001	X	X	X	X	X	X
MWH-A02 MS	K1611457-001 MS	X	X	X	X	X	X

Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Hardness, Arsenic (III), Methyl Mercury	Anions	TKN, NH_3, NO_3 + NO_2, and Total Nitrogen	Alkalinity, Bicarbonate, Carbonate	TDS and TSS	Total Cyanide
MWH-A02 MSD	K1611457-001 MSD	X	X	X	X	X	X
MWH-A03	K1611511-008	X	X	X	X	X	X
MWH-A04	K1611457-003	X	X	X	X	X	X
MWH-A05	K1611457-005	X	X	X	X	X	X
MWH-A07	K1611457-007	X	X	X	X	X	X
MWH-A08	K1611701-007	X	X	X	X	X	X
MWH-A08-02	K1611701-009	X	X	X	X	X	X
MWH-A08-03	K1611701-006	X	X	X	X	X	X
MWH-A09	K1611511-003	X	X	X	X	X	X
MWH-A10	K1611511-002	X	X	X	X	X	X
MWH-A10 MS	K1611511-002 MS	X	X	X	X	X	X
MWH-A10 MSD	K1611511-002 MSD	X	X	X	X	X	X
MWH-A12	K1611511-011	X	X	X	X	X	X
MWH-A14	K1611511-013	X	X	X	X	X	X
MWH-A15	K1611511-007	X	X	X	X	X	X
MWH-A17	K1611701-005	X	X	X	X	X	X
MWH-A18	K1611701-001	X	X	X	X	X	X
MWH-A18 MS	K1611701-001 MS	X	X	X	X	X	X
MWH-A18 MSD	K1611701-001 MSD	X	X	X	X	X	X
MWH-A19	K1611701-002	X	X	X	X	X	X
MWH-B01	K1611511-009	X	X	X	X	X	X
MWH-B02	K1611457-002	X	X	X	X	X	X
MWH-B02-02	K1611457-009	X	X	X	X	X	X
MWH-B03	K1611511-006	X	X	X	X	X	X
MWH-B04	K1611457-004	X	X	X	X	X	X
MWH-B05	K1611457-006	X	X	X	X	X	X
MWH-B07	K1611457-008	X	X	X	X	X	X
MWH-B09	K1611511-005	X	X	X	X	X	X
MWH-B10	K1611511-004	X	X	X	X	X	X
MWH-B12	K1611511-010	X	X	X	X	X	X
MWH-B13	K1611701-008	X	X	X	X	X	X

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Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Hardness, Arsenic (III), Methyl Mercury	Anions	TKN, NH_3, NO_3 + NO_2, and Total Nitrogen	Alkalinity, Bicarbonate, Carbonate	TDS and TSS	Total Cyanide
MWH-B15	K1611511-001	X	X	X	X	X	X
MWH-B15 MS	K1611511-001 MS	X	X	X	X	X	X
MWH-B15 MSD	K1611511-001 MSD	X	X	X	X	X	X
MWH-B20	K1611701-012	X	X	X	X	X	X
Gestrin Well	K1611701-010	X	X	X	X	X	X
Gestrin-02	K1611701-011	X	X	X	X	X	X
SRK-GM-03S	K1611701-004	X	X	X	X	X	X
SRK-GM-04S	K1611701-003	X	X	X	X	X	X

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation. Ten percent of the data underwent Stage 3VM level validation.

Laboratory data were acceptable with qualification, with the exceptions, as noted below. Completeness goal, of 100%, was not met for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES

All holding time criteria were met and no qualification was required.

ED_002764_00003042-00124

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS

Target analytes were generally not detected in method blanks except as discussed below.

Metals: Some analytes were detected in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to MB results. Qualified results are well below the regulatory criteria and are fully usable.

Hardness was detected in the method blanks; however, the values were greater than five times the blank concentration. No further qualification was required.

Mercury: Mercury was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). The qualified results are reportable.

Methyl Mercury: Methyl Mercury was not detected in the method blanks. No qualifications were required.

As (III): Arsenic (III) was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Alkalinity: Alkalinity was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other detections were greater than five times the blank concentration; therefore, no qualifications were required. There are no regulatory criteria listed in the QAPP, and the qualified results are fully usable.

Anions: Fluoride was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). The qualified results are reportable.

Ammonia: Ammonia was not detected in the method blanks. No qualifications were required.

Cyanide: Cyanide was not detected in the method blanks. No qualifications were required.

TDS: TDS was not detected in the method blanks. No qualifications were required.

TKN: TKN was not detected in the method blanks. No qualifications were required.

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were generally not detected in the ICBs and CCBs except as noted below.

Metals: Several analytes were detected in some ICBs and CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected

ED_002764_00003042-00125

at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Alkalinity: Alkalinity was not detected in the ICBs or CCBs. No qualifications were required.

Anions: Chloride was detected in some CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Ammonia: Ammonia was detected at trace levels in some CCBs. All samples were non-detect; therefore, no qualification was required.

Cyanide: Cyanide was not detected in the ICBs or CCBs. No qualifications were required.

TDS: TDS was not detected in the ICBs or CCBs. No qualifications were required.

TKN: TKN was not detected in the ICBs or CCBs. No qualifications were required.

EQUIPMENT BLANKS

No equipment blanks were submitted for analysis with the COCs.

FIELD BLANKS

There were no field blanks submitted for analysis with the COCs.

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits, for all analysis, and no qualifications were required.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits and no qualification was required except as noted below.

Metals: The recovery of Antimony in the MS spike of MWH-B15 at 57%(Total) and MWH-A18 at 72% (Dissolved), and Aluminum in the MS spike of MWH-A18 at 74%(Total) and MWH-B15 at 182% (Dissolved), was below the control limits of 75-125%. Antimony was detected in the parent sample and has been qualified as estimated (J-/J+). The qualified result is usable.

Mercury: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Methyl Mercury: The recovery of methyl mercury in the MS spike of MWH-A10 at 57% was below the control limits of 65-135%. RPD was outside the 20 limit, at 39%. RPD was outside the limit of 20%, for MWH-A12 at 37%. The recovery of methyl mercury in the MSD spike of MWH-A18 at 42% was below the control limits of 65-135%, and the RPD was outside the 20 limit, at 42%.

As (III): All MS/MSD recoveries were within the required criteria. No qualifications were required.

Alkalinity: No MS/MSD was performed on a sample within these SDGs.

Anions: The recoveries of Flouride, in the spikes of MWH-A02, at 88%/ 88%, were below the control limits of 90-110 and have been qualified as estimated (J-). The qualified result was reportable.

Ammonia: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Cyanide: All MS/MSD recoveries were within the required criteria. No qualifications were required.

TDS: No MS/MSD was performed on a sample within these SDGs.

TKN: All MS/MSD recoveries were within the required criteria. No qualifications were required.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. Most results were within control limits and no qualification was required.

All results were within limit criteria No qualification was required.

VIII. FIELD DUPLICATES

A field duplicate (FD) of sample MWH-A09 (MWH-A09-02) was collected. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Note: Many compounds/analytes associated to Parent Sample/Field Duplicates for MWH-A08/A08-02 and MWH-B02/A02-02 did not pass any acceptable criteria for %RPD. All PS/FD samples will be considered estimated (J).

See the table below for the complete list:

Parent / FD pair	Analyte	Concentrations µg/L	RPD	Qualification	Regulatory Criterion, µg/L
MWH-B02 and MWH-B02-02	Aluminum (T)	342 / 1320	117.7%	J / J	50
	Boron (T)	13.8 / 6.8	68.0%	J / J	120,000
	Chromium (T)	0.27 / 0.20	29.8%	J / J	100
	Lead (T)	0.524 / 0.684	26.5%	J / J	2.5
	Nickel (T)	0.27 / 0.36	78.6%	J / J	52
	Potassium(T)	76.3 / 34.9	74.5%	J / J	NA
	Silver (T)	0.01 / 0.013	26.1%	J / J	3.2
	Sodium (T)	6610 / 4230	43.9%	J / J	NA
	Zinc (T)	18 / 2.5	32.6%	J / J	120
	Aluminum (D)	214 / 13.7	175.9%	J / J	50
	Beryllium (D)	0.05 / 0.013	117.5%	J / J	4.0
	Chromium (D)	0.16 / 0.12	28.6%	J / J	100
	Cobalt (D)	0.044 / 0.035	22.8%	J / J	NA
MWH-B02 and MWH-B02-02	Copper (D)	0.31 / 0.52	50.6%	J / J	9.0
	Iron (D)	74.7 / 13.8	137.6%	J / J	300

Parent / FD pair	Analyte	Concentrations µg/L	RPD	Qualification	Regulatory Criterion, µg/L
	Lead (D)	0.19 / .0.046	122.0%	J / J	2.5
	Manganese (D)	4.33 / 2.46	55.1%	J / J	50
	Potassium (D)	23.5 / 19.1	20.7%	J / J	NA
	Vanadium (D)	0.02 / 0.16	22.2%	J / J	835
	Chloride	0.46 / 0.29	45.3%	J / J	230
	TDS	49 / 67	34.0%	J / J	500
MWH-A08 and MWH-A08-02	Copper (T)	0.25 / 0.15	50.0%	J / J	9.0
	Phosphorus (T)	189 / 45.1	122.9%	J / J	NA
	Lead (T)	0.015 / 0.037	84.6%	J / J	2.5
	Copper (D)	0.39 / 0.19	69.0%	J / J	9.0
	Lead (D)	0.012 / 0.015	22.2%	J / J	2.5
	Zinc (D)	1.2 / 0.8	40.0%	J / J	120
	Methyl Mercury	0.23 / 0.12	62.9%	J / J	NA
	Arsenic III	0.035 / 0.026	29.5%	J / J	NA
	Fluoride	0.09 / 0.07	25.0%	J / J	2.0
	TKN	1.65 / 1.06	43.5%	J / J	NA

(T) = Total Metals
(D) = Dissolved Metals

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met and no qualification was required except as noted below.

Total and Dissolved Metals: Multiple RPDs were above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Anions: Multiple RPDs were above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Parent / Lab Dup pair	Analyte	Concentrations	RPD %	Qualification	Regulatory Criterion
MWH-A02	Beryllium (T)	0.009 / 0.006 µg/L	40.0	J / J	4.0 µg/L
	Boron (T)	5.3 / 4.0 µg/L	28.0	J / J	None
	Fluoride	0.10 / 0.06 mg/L	55.0	J / J	250 mg/L
MWH-B15	Cadmium (D)	0.024 / 0.017 µg/L	34.1	J / J	0.25 µg/L
	Silver (D)	0.009 / 0.006 µg/L	40.0	J / J	100 µg/L
MWH-A10	Fluoride	0.05 / 0.04 mg/L	22.0	J / J	250 mg/L
MWH-A18	Molybdenum (T)	0.1 / 0.6 µg/L	50.0	J / J	600 µg/L
	Silver (T)	0.017 / 0.011 µg/L	42.9	J / J	100 µg/L

ED_002764_00003042-00128

Parent / Lab Dup pair	Analyte	Concentrations	RPD %	Qualification	Regulatory Criterion
	Thallium (T)	0.014 / 0.005 µg/L	94.7	J / J	2.0 µg/L
	Cadmium (D)	0.008 / 0.012 µg/L	40.0	J / J	0.25 µg/L
	Chromium (D)	0.1 / 0.08 µg/L	22.2	J / J	100 µg/L
MWH-A17	Chloride	0.38 / 0.27 mg/L	32.0	J / J	230 mg/L

(T) = Total Metals
(D) = Dissolved Metals

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All ICS spiked analysis was within control limits; therefore, no qualification was required.

XII. SAMPLE REPORTING LIMITS

All RLs were at or below either the regulatory criteria or the project RL as listed in the QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. Results reported between the MDLs and RLs were qualified as estimated (J).

All Analysis: No discrepancies were noted between the EDD and PDF versions of the reported laboratory data. All data was validated and reportable, with exceptions to the rejected data (for temperature issues) and the two sets of questionable estimated parent sample/field duplicate data listed above.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 4Q16 GW
December 2016 GW Samples: K1615084 and K1615234

Prepared By: Jennifer Chandler, Chemist, HDR Inc.

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-GWQSP
Project objectives identified?	X		The overall goal of the QAPP is to develop a groundwater quality program to continue characterizing groundwater quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality changes from future mining activities. The QAPP outlines an approach that will support NEPA activities and environmental permitting. The sampling plan includes the collection of groundwater samples and measurement of onsite water quality parameters. The main objectives of the program are as follows: Collect baseline data to provide defensible documentation of existing groundwater quality conditions, including characterization of spatial and temporal variability, and Develop a baseline for evaluating possible changes in groundwater quality during construction, operation, and completion of future mining activities.
Sample design described?	X		33 field samples (plus one Duplicate), collected quarterly, from up to 36 bedrock wells and 29 alluvial wells.
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP
Sample types and numbers defined?	X		Approximately 33 locations for GW
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook,

ED_002764_00003042-00130

Data or Measurement Quality Objective	Yes	No	Comments
			blind to lab and blind on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X	X	351.4, 300.0, 353.2, 2320B, 4500-CNE, 4500NH3G, 2340, 1630, 1631E, 1632, 6010C, 6020A, 2540C
Accuracy of data appropriate?	X	X	LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were outside control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP.
Completeness of data appropriate?	X	X	There were no rejected results; data were 100% complete, meeting less than the project goal of 90%.
Comparability of data appropriate?	X	X	All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X	X	All data were fully usable for project objectives.

ED_002764_00003042-00131

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 350.1
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL KJELDAHL NITROGEN by USEPA Method 351.4
TOTAL NITROGEN by USEPA Method 351.4
TOTAL ALKALINITY, CARBONATE, BICARBONATE as $CaCO_3$ by Standard Method 2320B
CYANIDE by Standard Method 4500E
TOTAL DISSOLVED SOLIDS by Standard Method 2540C

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10027847-0273339
Sample Data Package:	K1615084 and K1615234
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Groundwater
Sampling Dates:	12-16 December 2016
Validation Guidelines:	Project QAPP *(Quality Assurance Project Plan and Groundwater Quality Sampling Plan [QAPP-GWQSP] for the Golden Meadows Project* [MWH Americas, Inc., March 2015]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, August 2014); National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, August 2014)*; and professional judgment
Validation Level:	Stage 2BVM (100% of data), Stage 3VM (10%)
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation. Ten percent of the data underwent Stage 3VM level validation.

Laboratory data were acceptable with qualification, with the exceptions, as noted below. Completeness goal, of 100%, was not met for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. All samples were not received at the correct temperature range (between 0°C and 6°C). Three samples (MWH-A18-03, MWH-A05, and MWH-B15) were received outside of temp at 9.2°C; therefore, all sample results will qualified as estimated (J/UJ). No further qualification was required.

II. HOLDING TIMES

All holding time criteria were met and no qualification was required.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS

Target analytes were generally not detected in method blanks except as discussed below.

Metals: Some analytes were detected in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to MB results. Qualified results are well below the regulatory criteria and are fully usable.

Mercury: Mercury was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). The qualified results are reportable.

Methyl Mercury: Methyl Mercury was not detected in the method blanks. No qualifications were required.

As (III): Arsenic (III) was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Alkalinity: Alkalinity was detected at trace levels in some method blanks. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other detections were greater than five times the blank concentration; therefore, no qualifications were required. There are no regulatory criteria listed in the QAPP, and the qualified results are fully usable.

Anions: Sulfate was detected in trace levels in one method blanks. All sample results were greater than five times the MB concentration; therefore, no qualification was required. The qualified results are reportable.

Ammonia: Ammonia was not detected in the method blanks. No qualifications were required.

Cyanide: Cyanide was not detected in the method blanks. No qualifications were required.

TDS: TDS was not detected in the method blanks. No qualifications were required.

TKN: TKN was not detected in the method blanks. No qualifications were required.

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were generally not detected in the ICBs and CCBs except as noted below.

Metals: Several analytes were detected in some ICBs and CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected

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at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Alkalinity: Alkalinity was not detected in the ICBs or CCBs. No qualifications were required.

Anions: Sulfate was detected in one CCB. All sample results were greater than five times the CCB concentration; therefore, no qualification was required. The qualified results are reportable.

Ammonia: Ammonia was not detected in the ICBs or CCBs. No qualifications were required.

Cyanide: Cyanide was not detected in the ICBs or CCBs. No qualifications were required.

TDS: TDS was not detected in the ICBs or CCBs. No qualifications were required.

TKN: TKN was detected in trace levels in one CCB. All sample results were greater than five times the CCB concentration; therefore, no qualification was required. The qualified results are reportable.

EQUIPMENT BLANKS

No equipment blanks were submitted for analysis with the COCs.

FIELD BLANKS

There were no field blanks submitted for analysis with the COCs.

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits, for all analysis, and no qualifications were required.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits and no qualification was required except as noted below.

Metals: The recovery of total calcium, in the MS spike of MWH-B05, at 67%, was below the control limits of 75-125%. Calcium (T) was detected in the parent sample and has been qualified as estimated (J-). The qualified result is usable.

Mercury: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Methyl Mercury: The recovery of methyl mercury in the MS/D spike of MWH-B05 (45%/59%) and MWH-B04 (27%/30%) were below the control limits of 65-135%. Sample results were qualified as estimated (UJ).

As (III): All MS/MSD recoveries were within the required criteria. No qualifications were required.

Alkalinity: No MS/MSD was performed on a sample within these SDGs.

Anions: All MS/MSD recoveries were within the required criteria. No qualifications were required

Ammonia: All MS/MSD recoveries were within the required criteria. No qualifications were required.

ED_002764_00003042-00134

Cyanide: All MS/MSD recoveries were within the required criteria. No qualifications were required.

TDS: No MS/MSD was performed on a sample within these SDGs.

TKN: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Cyanide: The % RPD was outside the 20% criteria limit, for the following compounds:

Parent Sample	Analyte	RPD %	Qualification
MWH-A18-03	Cyanide	39	UJ

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. Most results were within control limits and no qualification was required.

All results were within limit criteria. No qualification was required.

VIII. FIELD DUPLICATES

A field duplicate (FD) of sample SRK-GM-03S (SRK-GM-03S-02) was collected. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Note: Many compounds/analytes associated to Parent Sample/Field Duplicates did not pass any acceptable criteria for %RPD. See the table below for the complete list:

Parent / FD pair	Analyte	Concentrations µg/L	RPD %	Qualification	Regulatory Criterion, µg/L
SRK-GM-03S and SRK-GM-03S-02	Aluminum (T)	33.2 / 75	77.3	J / J	50
	Antimony (T)	1.81 / 2.22	20.3	J / J	5.6
	Beryllium (T)	0.006 / 0.01	50.0	J / J	4.0
	Boron (T)	13.8 / 6.8	68.0	J / J	120,000
	Cadmium (T)	0.007 / 0.009	25.0	J / J	0.25
	Chromium (T)	0.013 / 0.22	177.7	J / J	100
	Cobalt (T)	0.020 / 0.052	185.2	J / J	NA
	Copper (D)	0.18 / 0.26	36.4	J / J	9.0
	Iron (T)	54 / 148	93.1	J / J	300
	Lead (T)	0.053 / 0.11	69.9	J / J	2.5
	Manganese (T)	2.3 / 6.5	95.5	J / J	50
	Nickel (T)	0.12 / 0.2	50.0	J / J	52
	Phosphorus (T)	25 / 13	63.2	J / J	NA
	Silver (T)	0.005 / 0.004	22.2	J / J	3.2

Parent / FD pair	Analyte	Concentrations µg/L	RPD %	Qualification	Regulatory Criterion, µg/L
SRK-GM-03S and SRK-GM-03S-02	Vanadium (T)	0.2 / 0.3	40.0	J / J	835
	Zinc (T)	1.5 / 2.8	60.5	J / J	120
	Mercury (T)	3.04 / 6.27	69.4	J / J	0.012
	Boron (D)	3 / 4	28.6	J / J	120,000
	Cobalt (D)	0.005 / 0.003	50.0	J / J	NA
	Copper (T)	0.1 / 0.08	22.2	J / J	9.0
	Phosphorus (D)	20 / 14	35.3	J / J	NA
	Vanadium (D)	0.16 / 0.13	20.7	J / J	835
MWH-A18 and MWH-A18-02	Boron, (T)	7 / 19	92.3	J / J	120,000
	Iron, (T)	122 / 202	49.4	J / J	300
	Aluminum, (T)	78 / 124	45.5	J / J	50
	Cobalt, (D)	0.8 / 0.62	25.4	J / J	NA
	Copper, (D)	0.51 / 0.31	48.8	J / J	9.0
	Copper, (T)	0.33 / 0.47	35.0	J / J	9.0
	Lead, (T)	0.06 0.106	55.4	J / J	2.5
	Molybdenum, (T)	0.022 / 0.051	79.5	J / J	600
	Nickel, (D)	1.55 / 1.26	20.6	J / J	52
	Silver, (T)	0.006 / 0.02	107.7	J / J	3.2
	Zinc, (D)	3.02 / 2.39	23.3	J / J	120

(T) = Total Metals
(D) = Dissolved Metals

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met and no qualification was required except as noted below.

Multiple RPDs were above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Parent / Lab Dup pair	Analyte	RPD %	Qualification	Regulatory Criterion
MWH-A09	Fluoride	26	J	250 mg/L
MWH-B02	Fluoride	21	J	250 mg/L
MWH-B01	Boron (T)	66	J	120,000 ug/L
	Iron (T)	40	J	2.5 ug/L
	Cadmium (T)	21	J	0.25 ug/L
	Chromium (T)	66	J	100 ug/L
	Copper (T)	26	J	9.0 ug/L
	Silver (T)	43	J	3.2 ug/L
	Zinc (T)	37	J	120 ug/L

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Parent / Lab Dup pair	Analyte	RPD %	Qualification	Regulatory Criterion
MWH-B05	Iron (D)	26	J	2.5 ug/L
	Boron (T)	28	J	120,000 ug/L
	Beryllium (T)	77	J	4.0 ug/L
	Zinc (T)	24	J	120 ug/L
MWH-A17	Manganese (T)	22	J	50 ug/L
	Phosphorus (T)	21	J	NA
	Beryllium (T)	34	J	4.0 ug/L
	Cadmium (T)	26	J	0.25 ug/L

(T) = Total Metals
(D) = Dissolved Metals

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

(T) and (D) Metals: All ICS spiked analysis was within control limits; therefore, no qualification was required.

XII. SAMPLE REPORTING LIMITS

All RLs were at or below either the regulatory criteria or the project RL as listed in the QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. Results reported between the MDLs and RLs were qualified as estimated (J).

All Analysis: No discrepancies were noted between the EDD and PDF versions of the reported laboratory data. All data was validated and reportable, with exceptions to the rejected data (for temperature issues) and the two sets of questionable estimated parent sample/field duplicate data listed above.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 1Q17 GW, March 2017
GW Samples: K1702849, K1702903, K1702904, K1702905

Prepared By: Jennifer Chandler, Chemist, HDR Inc.

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-GWQSP
Project objectives identified?	X		The overall goal of the QAPP is to develop a groundwater quality program to continue characterizing groundwater quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality changes from future mining activities. The QAPP outlines an approach that will support NEPA activities and environmental permitting. The sampling plan includes the collection of groundwater samples and measurement of onsite water quality parameters. The main objectives of the program are as follows: Collect baseline data to provide defensible documentation of existing groundwater quality conditions, including characterization of spatial and temporal variability, and Develop a baseline for evaluating possible changes in groundwater quality during construction, operation, and completion of future mining activities.
Sample design described?	X		35 field samples (including duplicates and field blanks), collected quarterly, from up to 36 bedrock wells and 29 alluvial wells.
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP
Sample types and numbers defined?	X		Approximately 35 locations for GW
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook,

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Data or Measurement Quality Objective	Yes	No	Comments
			blind to lab and blind on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		351.4, 300.0, 353.2, 2320B, 4500-CN-E, 4500-NH3-G, 2340, 1630, 1631E, 1632, 6010C, 6020A, 2540C
Accuracy of data appropriate?	X	X	LCS, MS, and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were outside control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting less than the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

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DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by Standard Method 4500-NH3-G
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL KJELDAHL NITROGEN by USEPA Method 351.4
TOTAL NITROGEN by USEPA Method 351.4
TOTAL ALKALINITY, CARBONATE, BICARBONATE as $CaCO_3$ by Standard Method 2320B
CYANIDE by Standard Method 4500-CN-E
TOTAL DISSOLVED SOLIDS by Standard Method 2540C

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10051815 – 10.5
Sample Data Package:	K1702849, K1702903, K1702904, K1702905
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Groundwater
Sampling Dates:	20-23 March 2017
Validation Guidelines:	Project QAPP *(Quality Assurance Project Plan and Groundwater Quality Sampling Plan [QAPP-GWQSP] for the Golden Meadows Project* [MWH Americas, Inc., March 2015]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, August 2014); National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, August 2014)*; and professional judgment
Validation Level:	Stage 2BVM (100% of data), Stage 3VM (10%)
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation. Ten percent of the data underwent Stage 3VM level validation.

Laboratory data were acceptable with qualification, with the exceptions, as noted below. Completeness goal, of 100%, was not met for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. All samples were received at the correct temperature range (between 0°C and 6°C). No further qualification was required.

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II. HOLDING TIMES

All holding time criteria were not met. Cyanide samples for K1702849, were missed by the laboratory analyst, due to an issue with the Lab's LIMs system. Samples were analyzed 1-2 days, outside of the holding time specifications; therefore, all cyanide samples, from K1702849, were qualified as estimated.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS (MB)

Target analytes were generally not detected in method blanks except as discussed below.

Metals: Some analytes were detected in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the MBs that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to MBs results. Qualified results are well below the regulatory criteria and are fully usable.

Mercury: Mercury was not detected in the MBs. No qualifications were required.

Methyl Mercury: Methyl Mercury was not detected in the MBs. No qualifications were required.

As (III): Arsenic (III) was detected at trace levels in some MBs. Some associated sample results were less than five times the MBs concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Alkalinity: Alkalinity and Bicarbonate were detected at trace levels in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other detections were greater than five times the MB concentration; therefore, no qualifications were required. There are no regulatory criteria listed in the QAPP, and the qualified results are fully usable.

Anions: Anions were not detected in the MBs. No qualifications were required.

Ammonia: Ammonia was not detected in the MBs. No qualifications were required.

Cyanide: Cyanide was not detected in the MBs. No qualifications were required.

TDS: TDS was not detected in the MBs. No qualifications were required.

TKN: TKN was not detected in the MBs. No qualifications were required.

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were generally not detected in the ICBs and CCBs except as noted below.

Metals: Several analytes were detected in some ICBs and CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected

at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Alkalinity: Alkalinity was not detected in the ICBs or CCBs. No qualifications were required.

Anions: Sulfate was detected in one CCB. All sample results were greater than five times the CCB concentration; therefore, no qualification was required. The qualified results are reportable.

Ammonia: Ammonia was detected in the ICBs or CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

Cyanide: Cyanide was not detected in the ICBs or CCBs. No qualifications were required.

TKN: TKN was detected in trace levels in some CCBs. Sample results, less than five times the CCB concentration, were qualified as estimated (J+). The qualified results are reportable.

EQUIPMENT BLANKS

No equipment blanks were submitted for analysis with the COCs.

FIELD BLANKS (FB)

There were multiple field blanks, submitted for analysis, with the COCs. These FB samples were MWH-A02-03, MWH-A10-03, and MWH-B07-03.

Field Blank ID	Analyte	Concentrations µg/L	Qualification
MWH-A02-03	Ammonia	0.025 mg/L	None, all samples ND
	TKN	0.75 mg/L	J+
	Calcium (Diss)	6	None, all >BAL
	Calcium (Total)	4	None, all >BAL
	Magnesium (Diss)	0.4	None, all >BAL
	Magnesium (Total)	0.6	None, all >BAL
	Phosphorus (Diss)	13	J+
	Phosphorus (Total)	11	J+
	Aluminum (Diss)	1.3	J+
	Aluminum (Total)	1.4	J+
	Barium (Diss)	0.038	None, all >BAL
	Barium (Total)	0.036	None, all >BAL
	Cobalt (Total)	0.005	J+
	Copper (Diss)	0.09	None, all >BAL
	Copper (Total)	0.03	J+
	Lead (Diss)	0.009	J+
	Lead (Total)	0.009	J+
	Thallium (Diss)	0.010	J+
	Thallium (Total)	0.009	J+
	Zinc (Diss)	1.0	J+
	Zinc (Total)	0.7	J+
MWH-A10-03	Ammonia	0.024 mg/L	None, all samples ND
	TKN	0.13 mg/L	J+
	Sulfate	0.04 mg/L	None, all >BAL

Field Blank ID	Analyte	Concentrations µg/L	Qualification
MWH-A10-03	Mercury (Diss)	0.07	J+
	Calcium (Diss)	6	None, all >BAL
	Calcium (Total)	8	None, all >BAL
	Magnesium (Diss)	1.3	None, all >BAL
	Magnesium (Total)	1.1	None, all >BAL
	Phosphorus (Diss)	10	J+
	Phosphorus (Total)	7	J+
	Aluminum (Diss)	1.5	J+
	Aluminum (Total)	1.2	J+
	Antimony (Diss)	0.02	J+
	Barium (Diss)	0.023	None, all >BAL
	Barium (Total)	0.023	None, all >BAL
	Chromium (Diss)	0.04	J+
	Cobalt (Total)	0.006	J+
	Copper (Diss)	0.03	None, all >BAL
	Copper (Total)	0.02	J+
	Lead (Diss)	0.01	J+
	Molybdenum (Total)	0.008	J+
	Thallium (Total)	0.01	J+
	Zinc (Diss)	0.4	J+
	Zinc (Total)	0.3	J+
MWH-B07-03	TKN	0.28 mg/L	J+
	Calcium (Diss)	12	None, all >BAL
	Calcium (Total)	4	None, all >BAL
	Iron (Total)	6	J+
	Magnesium (Diss)	0.6	None, all >BAL
	Magnesium (Total)	0.5	None, all >BAL
	Phosphorus (Diss)	13	J+
	Phosphorus (Total)	15	J+
	Aluminum (Diss)	1.1	J+
	Aluminum (Total)	0.9	J+
	Antimony (Total)	0.026	None, all >BAL
	Chromium (Diss)	0.03	J+
	Copper (Diss)	0.03	J+
	Lead (Diss)	0.009	None, all >BAL or ND
	Zinc (Diss)	0.4	J+
	Zinc (Total)	0.2	J+

ND = Non-detect
BAL = Base Action Limit (5 times the FB concentration)

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits, for all analysis, and no qualifications were required.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits and no qualification was required except as noted below.

Metals: All MS/MSD recoveries were within the required criteria. No qualifications were required.

ED_002764_00003042-00143

Mercury: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Methyl Mercury: The recovery of methyl mercury in the MS/D spikes for MWH-A10 (96%/29%) and MWH-B07-02 (45%/43%) below the control limits of 65-135%. Relative Percent Difference (RPD) also failed outside of the 20% criteria, at 107%, for MWH-A10. Sample results were qualified as estimated (J+).

As (III): All MS/MSD recoveries were within the required criteria. No qualifications were required.

Alkalinity: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Anions: All MS/MSD recoveries were within the required criteria. No qualifications were required

Ammonia: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Cyanide: All MS/MSD recoveries were within the required criteria. No qualifications were required.

TDS: No MS/MSD was performed on a sample within these SDGs.

TKN: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Cyanide: All MS/MSD recoveries were within the required criteria. No qualifications were required.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. Most results were within control limits and no qualification was required.

All results were within limit criteria. No qualification was required.

VIII. FIELD DUPLICATES

A field duplicate (FD) of sample MWH-A02, MWH-A10, and MWH-B07 were collected. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below. Sample results were qualified as estimated (UJ/J).

Note: Many compounds/analytes associated to Parent Sample/Field Duplicates did not pass any acceptable criteria for %RPD. See the table below for the complete list:

Parent / FD pair	Analyte	Concentrations µg/L	RPD %	Regulatory Criterion, µg/L
MWH-A02 and MWH-A02-02	Antimony (T)	0.065 / 0.092	34.4	6.0
	Boron (D)	5 / 4	22.2	NL
	Boron (T)	4 / 5	22.2	NL
	Copper (D)	0.016 / 0.25	43.9	1300
	Cyanide (T)	0.0013 / 0.0024 mg/L	59.5	0.02 mg/L
	Fluoride	0.04 / 0.06 mg/L	40.0	4.0 mg/L
	Lead (D)	0.012 / 0.02	50.0	1.5

Parent / FD pair	Analyte	Concentrations µg/L	RPD %	Regulatory Criterion, µg/L
MWH-A02 and MWH-A02-02	Lead (T)	0.025 / 0.030	18.2	1.5
	Methyl Mercury	0.04 / 0.13 ng/L	105.9	NL
	TKN	0.49 / 0.37 mg/L	27.9	NL
	Nitrogen (T as N)	0.51 / 0.37 mg/L	31.8	NL
	Thallium (D)	0.011 / 0.014	24.0	2
	Zinc (D)	0.6 / 1.3	73.7	5000
	Zinc (T)	1.0 / 0.7	35.3	5000
MWH-A10 and MWH-A10-02	Arsenic III	0.155 / 0.06	88.4	NL
	Beryllium (T)	0.004 / 0.002	66.7	4
	Boron (T)	7.0 / 9.0	25.0	NL
	Chromium (T)	0.23 / 0.18	24.4	100
	Cobalt (D)	0.021 / 0.017	21.1	NL
	Cobalt (T)	0.055 / 0.200	113.7	NL
	Copper (T)	0.14 / 0.20	35.3	1300
	Lead (D)	0.020 / 0.012	50.0	15
	Mercury (D)	0.79 / 0.99 ng/L	22.5	2000 ng/L
	Nickel (T)	0.16 / 0.13	20.7	NL
	Thallium (D)	0.014 / 0.008	54.5	2
	Thallium (T)	0.009 / 0.015	50.0	2
	Zinc (D)	1.2 / 0.5	82.4	5000
MWH-B07 and MWH-B07-02	Ammonia as N	0.027 / 0.020 (ND) mg/L	29.8	NL
	Cadmium (D)	0.011 / 0.009 (ND)	20.0	NL
	Cadmium (T)	0.013 / 0.009 (ND)	36.4	NL
	Chromium (D)	0.05 / 0.04	22.2	100
	Chromium (T)	0.10 / 0.07	35.3	100
	Copper (D)	0.04 / 0.07	54.5	1300
	Lead (D)	0.010 / 0.021	71.0	15
	Phosphorus (T)	19 / 24	23.3	NL
	Zinc (T)	1.3 / 0.7	60.0	5000

(T) = Total Metals
(D) = Dissolved Metals
NL = Not Listed

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met and no qualification was required except as noted below.

Multiple RPDs were above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Lab Dup	Analyte	RPD %	Qualification	Regulatory Criterion
MWH-A01	Boron (T)	46	J	NL
	Beryllium (T)	30	J	4.0 ug/L
MWH-A07	Selenium (T)	21	J	50 ug/L
	Silver (T)	65	J	100 ug/L
	Thallium (T)	36	J	2 ug/L
MWH-A02	Antimony (T)	30	J	6 ug/L

Lab Dup	Analyte	RPD %	Qualification	Regulatory Criterion
MWH-A02	Cadmium (T)	28	J	5 ug/L
	Zinc (T)	33	J	5000 ug/L

(T) = Total Metals
(D) = Dissolved Metals
NL = Not Listed

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

(T) and (D) Metals: All ICS spiked analysis was within control limits; therefore, no qualification was required.

XII. SAMPLE REPORTING LIMITS

All RLs were at or below either the regulatory criteria or the project RL as listed in the QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. Results reported between the MDLs and RLs were qualified as estimated (J).

All Analysis: No discrepancies were noted between the EDD and PDF versions of the reported laboratory data. All data was validated and reportable, with exceptions to the rejected data (for temperature issues) and the two sets of questionable estimated parent sample/field duplicate data listed above.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 2Q17 GW, June-July 2017
GW Samples: K1706571, K1707402

Prepared By: Lynn K. Lutz, Chemist, HDR Inc.

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-GWQSP
Project objectives identified?	X		The overall goal of the QAPP is to develop a groundwater quality program to continue characterizing groundwater quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality changes from future mining activities. The QAPP outlines an approach that will support NEPA activities and environmental permitting. The sampling plan includes the collection of groundwater samples and measurement of onsite water quality parameters. The main objectives of the program are as follows: Collect baseline data to provide defensible documentation of existing groundwater quality conditions, including characterization of spatial and temporal variability, and Develop a baseline for evaluating possible changes in groundwater quality during construction, operation, and completion of future mining activities.
Sample design described?	X		37 field samples (including duplicates and field blanks), collected quarterly, from up to 36 bedrock wells and 29 alluvial wells.
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP
Sample types and numbers defined?	X		Approximately 37 locations for GW
Field SOPs defined?	X		
Field calibrations recorded?	X		

ED_002764_00003042-00147

Data or Measurement Quality Objective	Yes	No	Comments
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		351.4, 300.0, 353.2, 2320B, 4500-CN-E, 4500-NH3-G, 2340, 1630, 1631E, 1632, 6010C, 6020A, 2540C, 180.1
Accuracy of data appropriate?	X	X	LCS, MS, and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were outside control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting less than the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

ED_002764_00003042-00148

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by Standard Method 4500-NH3-G
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
TOTAL NITROGEN by USEPA Method 351.4
TOTAL ALKALINITY, CARBONATE, BICARBONATE as $CaCO_3$ by Standard Method 2320B
CYANIDE by Standard Method 4500-CN-E
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TURBIDITY by USEPA Method 180.1

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10051815 – 10.5
Sample Data Package:	K1706571, K1707402
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Groundwater
Sampling Dates:	June and July 2017
Validation Guidelines:	Project QAPP *(Quality Assurance Project Plan and Groundwater Quality Sampling Plan [QAPP-GWQSP] for the Golden Meadows Project* [MWH Americas, Inc., March 2015]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Meth*ods, *3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, August 2014); National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, August 2014)*; and professional judgment
Validation Level:	Stage 2BVM (100% of data), Stage 3VM (10%)
Data Reviewer:	Lynn K. Lutz, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation. Ten percent of the data underwent Stage 3VM level validation.

Laboratory data were acceptable with qualification, with the exceptions, as noted below. Completeness goal, of 100%, was not met for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. All samples were received at the correct temperature range (between 0°C and 6°C). No further qualification was required.

II. HOLDING TIMES

Not all holding time criteria were met. Turbidity samples for K1706571 were mostly analyzed one to two days past the holding time and results were qualified as estimated (J).

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS (MB)

Target analytes were generally not detected in method blanks except as discussed below.

Metals: Some analytes (aluminum, calcium, copper, iron, magnesium, manganese, phosphorus and zinc) were detected in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the MBs that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to MBs results. Qualified results are well below the regulatory criteria and are fully usable.

Mercury: Mercury was detected in one MB. The associated sample result was greater than five times the blank concentration and no qualification was required.

Arsenic (III): Arsenic (III) was detected at trace levels in some MBs. Some associated sample results were less than five times the MBs concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Alkalinity: Alkalinity and Bicarbonate were detected at trace levels in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other detections were greater than five times the MB concentration; therefore, no qualifications were required. There are no regulatory criteria listed in the QAPP, and the qualified results are fully usable.

Nitrate + Nitrite: Nitrate + Nitrite was detected in one MB. The associated sample result was greater than five times the blank concentration and no qualification was required.

Turbidity: Turbidity was detected at trace levels in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other detections were greater than five times the MB concentration; therefore, no qualifications were required

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were generally not detected in the ICBs and CCBs except as noted below.

Metals: Several analytes (antimony, boron, iron, molybdenum and phosphorus) were detected in some ICBs and CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

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Nitrate + Nitrite: Nitrate + Nitrite was detected in one CCB. The associated sample result (MWH-A01) was less than five times the blank concentration and has been qualified as estimated with a possible high bias (J+).

Ammonia: Ammonia was detected in one CCB at a trace level. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

Cyanide: Cyanide was detected at trace levels in some CCBs. Some associated sample results were less than five times the CCBs concentrations and have been qualified as estimated with a possible high bias (J+).

TKN: TKN was detected at trace levels in some CCBs. Some associated sample results were less than five times the CCBs concentrations and have been qualified as estimated with a possible high bias (J+).

Total Nitrogen: Total Nitrogen was detected at trace levels in some CCBs. Some associated sample results were less than five times the CCBs concentrations and have been qualified as estimated with a possible high bias (J+).

Turbidity: Turbidity was detected at trace levels in most CCBs. Some associated sample results were less than five times the CCBs concentrations and have been qualified as estimated with a possible high bias (J+).

EQUIPMENT BLANKS

No equipment blanks were submitted for analysis with the COCs.

FIELD BLANKS (FB)

There were multiple field blanks, submitted for analysis, with the COCs. These FB samples were MWH-A04-03, MWH-A10-03, and MWH-B20-03.

Field Blank ID	Analyte	Concentrations µg/L	Qualification
MWH-A04-03	TDS	1.5 mg/L	None, all >BAL
	TKN	0.43 mg/L	J+
	Turbidity	0.10 NTU	None, all >BAL
	Aluminum (Diss)	1.4	J+
	Boron (Total)	4	J+
	Vanadium	0.10	J+
	Mercury (Diss)	0.11 ng/L	None, all >BAL
	Mercury (Total)	0.29 ng/L	None, all >BAL
MWH-A10-03	TDS	5.0 mg/L	None, all >BAL
	Arsenic (III)	0.014 µg/L	None, all >BAL
	TKN	0.38 mg/L	J+
	Turbidity	0.09 NTU	J+
	Aluminum (Diss)	1.4	J+
	Boron (Diss)	3	J+
	Copper (Diss)	0.10	J+
	Copper (Total)	0.07	J+
	Iron (Total)	7	J+

Field Blank ID	Analyte	Concentrations µg/L	Qualification
	Nickel (Diss)	0.10	J+
	Phosphorus (Diss)	7	J+
	Phosphorus (Total)	7	J+
	Vanadium (Diss)	0.20	J+
	Zinc (Total)	0.1	J+
MWH-B20-03	TDS	2.0 mg/L	None, all >BAL
	Arsenic (III)	0.016 µg/L	None, all >BAL
	TKN	0.30 mg/L	J+
	Turbidity	0.09 NTU	None, all >BAL
	Aluminum (Diss)	0.9	J+
	Aluminum (Total)	1.1	J+
	Boron (Total)	4	J+
	Copper (Diss)	0.04	J+
	Copper (Total)	0.05	J+
	Nickel (Diss)	0.065	J+
	Vanadium (Diss)	0.08	J+
	Vanadium (Total)	0.07	J+

ND = Non-detect
BAL = Base Action Limit (5 times the FB concentration)

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits, for all analysis, and no qualifications were required.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits and no qualification was required except as noted below.

Metals: The recovery of antimony in the MS spike for MWH-B07 (52%) was below the control limits of 75-125%. The parent sample result was qualified as estimated (J) for MWH-B07.

Methyl Mercury: The recovery of methyl mercury in the MS/D spikes for MWH-A01 (67% and 63%) and MWH-B07 (MSD 35%) were below the control limits of 65-135%. The Relative Percent Difference (RPD) also failed outside of the 20% criteria, at 85%, for MWH-A01. The parent sample results were qualified as estimated (J) for MWH-A01 and non-detect estimated (UJ) for MWH-B07.

Nitrate + Nitrite: The recoveries of nitrate + nitrite in the MS/D spikes for MWH-A13 (112% and 114%) were above the control limits of 90-110%. The parent sample result was qualified as estimated (J).

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. Most results were within control limits and no qualification was required.

All results were within control limit criteria. No qualification was required.

VIII. FIELD DUPLICATES

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A field duplicate (FD) of sample MWH-A02, MWH-A10, and MWH-B07 were collected. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below. Sample results were qualified as estimated (UJ/J).

Note: A number of analytes associated to Parent Sample / Field Duplicates did not pass the acceptable criteria for %RPD. See the table below for the complete list. In all cases, either both results were well above or below the regulatory limit, or there was no regulatory limit listed in the QAPP. Qualified results are fully usable.

Parent / FD pair	Analyte	Concentrations µg/L	RPD %	Regulatory Criterion, µg/L
MWH-A04 and MWH-A04-02	Turbidity	38.6 / 21.3 NTU	58%	NL
	Aluminum (Total)	75.0 / 56.5	28%	200
	Arsenic (Total)	9710 / 7860	21%	10
	Iron (Total)	12,300 / 9070	30%	300
	Vanadium (Total)	1.71 / 1.38	21%	NL

(T) = Total Metals
(D) = Dissolved Metals
NL = Not Listed

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met and no qualification was required except as noted below.

One RPD was above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Lab Dup	Analyte	RPD %	Qualification	Regulatory Criterion
SRK-GM-03S	Turbidity	23%	J	NL

NL = Not Listed

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

(T) and (D) Metals: All ICS spiked analysis was within control limits; therefore, no qualification was required.

XII. SAMPLE REPORTING LIMITS

All RLs were at or below either the regulatory criteria or the project RL as listed in the QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. Results reported between the MDLs and RLs were qualified as estimated (J).

All Analyses: No discrepancies were noted between the EDD and PDF versions of the reported laboratory data. All data was validated and reportable.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, B & C 3Q17 GW, Sep 2017 GW Samples: K1709585

Prepared By: Jennifer Chandler, Chemist, HDR Inc.

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-GWQSP
Project objectives identified?	X		The overall goal of the QAPP is to develop a groundwater quality program to continue characterizing groundwater quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality changes from future mining activities. The QAPP outlines an approach that will support NEPA activities and environmental permitting. The sampling plan includes the collection of groundwater samples and measurement of onsite water quality parameters. The main objectives of the program are as follows: Collect baseline data to provide defensible documentation of existing groundwater quality conditions, including characterization of spatial and temporal variability, and Develop a baseline for evaluating possible changes in groundwater quality during construction, operation, and completion of future mining activities.
Sample design described?	X		36 field samples (including duplicates), collected quarterly, from up to 36 bedrock wells and 29 alluvial wells.
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP
Sample types and numbers defined?	X		Approximately 36 locations for GW
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook,

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Data or Measurement Quality Objective	Yes	No	Comments
			blind to lab and blind on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		351.4, 300.0, 353.2, 2320B, 4500-CN-E, 4500-NH3-G, 2340, 1630, 1631E, 1632, 6010C, 6020A, 2540C, 180.1
Accuracy of data appropriate?	X	X	LCS, MS, and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were outside control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting less than the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

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DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by Standard Method 4500-NH3-G
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL KJELDAHL NITROGEN by USEPA Method 351.4
TOTAL NITROGEN by USEPA Method 351.4
TOTAL ALKALINITY, CARBONATE, BICARBONATE as $CaCO_3$ by Standard Method 2320B
CYANIDE by Standard Method 4500-CN-E
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TURBIDITY by USEPA Method 180.1

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10051815 – 10.5
Sample Data Package:	K1709585
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Groundwater
Sampling Dates:	September 8-10 2017
Validation Guidelines:	Project QAPP *(Quality Assurance Project Plan and Groundwater Quality Sampling Plan [QAPP-GWQSP] for the Golden Meadows Project* [MWH Americas, Inc., March 2015]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Meth*ods, *3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, August 2014); National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, August 2014)*; and professional judgment
Validation Level:	Stage 2BVM (100% of data), Stage 3VM (10%)
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation. Ten percent of the data underwent Stage 3VM level validation.

Laboratory data were acceptable with qualification, with the exceptions, as noted below. Completeness goal, of 100%, was not met for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. All samples were received at the correct temperature range (between 0°C and 6°C). No further qualification was required.

II. HOLDING TIMES

All holding time criteria were not met. Turbidity samples were analyzed outside of the 48 hour holding times (for samples collected on 8th and 9th); however, all samples were analyzed within < 2x the holding time allotment. Therefore, all samples (from the 8th and 9th) will be qualified as estimated (J).

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS (MB)

Target analytes were generally not detected in method blanks except as discussed below.

Metals: Aluminum, barium, calcium, chromium, cobalt, copper, molybdenum, magnesium, manganese, phosphorus, silver, and sodium were detected in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the MBs that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to MBs results. Qualified results are well below the regulatory criteria and are fully usable.

Mercury: Mercury was detected in the MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

Methyl Mercury: Methyl Mercury was not detected in the MBs. No qualifications were required.

As (III): Arsenic (III) was detected at trace levels in some MBs. Some associated sample results were less than five times the MBs concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Alkalinity: Alkalinity and Bicarbonate were detected at trace levels in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other detections were greater than five times the MB concentration; therefore, no qualifications were required. There are no regulatory criteria listed in the QAPP, and the qualified results are fully usable.

Anions: Anions were not detected in the MBs. No qualifications were required.

Ammonia: Ammonia was not detected in the MBs. No qualifications were required.

Cyanide: Cyanide was not detected in the MBs. No qualifications were required.

Nitrogen, N + N: Nitrogen, N+N was not detected in the MBs. No qualifications were required.

TDS: TDS was detected at trace levels in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

TKN: TKN was not detected in the MBs. No qualifications were required.

Turbidity: Turbidity was detected at trace levels in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were generally not detected in the ICBs and CCBs except as noted below.

Metals: Several analytes were detected in some ICBs and CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Alkalinity: Alkalinity was not detected in the ICBs or CCBs. No qualifications were required.

Anions: Anions were not detected in ICBs/CCBs. No qualifications were required.

Ammonia: Ammonia was detected in the CCBs. Associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

Cyanide: Cyanide was detected in the CCBs. Associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

TKN: TKN was detected in trace levels in some CCBs. Sample results, less than five times the CCB concentration, were qualified as estimated (J+). The qualified results are reportable.

Nitrogen, N + N: Nitrogen, N as N was not detected in ICBs/CCBs. No qualifications were required.

Turbidity: Not applicable.

EQUIPMENT BLANKS

No equipment blanks were submitted for analysis with the COCs.

FIELD BLANKS (FB)

There were multiple field blanks, submitted for analysis, with the COCs. These 3 FB samples are listed below. Sample concentrations were marked, accordingly, and updated in the EDD file, either with a J+, for positive hits below five times the FB concentrations (listed below), or no qualification was required. No qualification occurs when the samples are ND (Non-Detect), or if the sample concentrations are greater than five times the FB concentrations (below).

Field Blank ID	Analyte	Concentrations µg/L
Gestrine-03	Aluminum (Total)	0.7
	Aluminum (Diss)	0.9
	Barium (Diss)	0.006
	Calcium (Diss)	2
	Calcium (Total)	0.9
	Copper (Diss)	0.04
	Copper (Total)	0.05
	Iron (Total)	7
	Magnesium (Diss)	0.7
	Magnesium (Total)	0.4
	Manganese (Diss)	0.08

Field Blank ID	Analyte	Concentrations µg/L
Gestrine-03	Nitrogen, Total as N	0.38 mg/L
	TKN	0.38 mg/L
	Phosphorus (Diss)	15
	Phosphorus (Total)	17
MWH-A01-03	Aluminum, Dissolved	2.4
	Aluminum, Total	2.1
	Ammonia as Nitrogen	0.033
	Arsenic (III)	0.013
	Barium, Dissolved	0.029
	Barium, Total	0.033
	Calcium, Dissolved	17
	Calcium, Total	5
	Cobalt, Dissolved	0.009
	Cobalt, Total	0.007
	Copper, Dissolved	0.03
	Copper, Total	0.06
	Magnesium, Dissolved	2.4
	Magnesium, Total	1.4
	Manganese, Dissolved	0.4
	Manganese, Total	0.1
	Mercury, Total	0.18
	Nitrogen, Total as Nitrogen	0.48
	TKN	0.48
	Phosphorus, Dissolved	15
	Phosphorus, Total	15
	Sodium, Dissolved	20
	Sodium, Total	30
	Turbidity	0.13
MWH-B20-03	Ammonia as Nitrogen	0.021
	Arsenic (III)	0.010
	Nitrogen, Total as Nitrogen	1.10
	TKN	1.10
	Turbidity	0.14
	Cobalt, Total	0.005
	Copper, Total	0.05
	Phosphorus, Total	18
	Aluminum, Dissolved	1.3
	Barium, Dissolved	0.010
	Calcium, Dissolved	9
	Cobalt, Dissolved	0.006
	Copper, Dissolved	0.04
	Magnesium, Dissolved	1.9
	Phosphorus, Dissolved	14
	Sodium, Dissolved	30

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits, for all analysis, and no qualifications were required.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits and no qualification was required except as noted below.

Metals: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Mercury: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Methyl Mercury: The recovery of methyl mercury in the MS/D spikes for MWH-A01 (114%/25%) and MWH-A08 (113%/77%) below the control limits of 65-135%. Relative Percent Difference (RPD) also failed outside of the 20% criteria, at 128%, for MWH-A01; and 38%, for sample MWH-A08. Sample results were qualified as estimated (J+).

As (III): All MS/MSD recoveries were within the required criteria. No qualifications were required.

Alkalinity: No MS/MSD was performed on a sample within these SDGs.

Anions: No MS/MSD was performed on a sample within these SDGs.

Ammonia: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Cyanide: No MS/MSD was performed on a sample within these SDGs.

Nitrogen, N + N: No MS/MSD was performed on a sample within these SDGs.

TDS: No MS/MSD was performed on a sample within these SDGs.

TKN: All MS/MSD recoveries were within the required criteria. No qualifications were required.

Cyanide: No MS/MSD was performed on a sample within these SDGs.

Turbidity: No MS/MSD was performed on a sample within these SDGs.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. Most results were within control limits and no qualification was required.

All results were within limit criteria. No qualification was required.

VIII. FIELD DUPLICATES

A field duplicate (FD) of sample MWH-A01, MWH-B20, and Gestrin were collected. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below. Sample results were qualified as estimated (UJ/J).

Note: Many compounds/analytes associated to Parent Sample/Field Duplicates did not pass any acceptable criteria for %RPD. See the table below for the complete list:

Parent / FD pair	Analyte	Concentrations µg/L	RPD %	Regulatory Criterion, µg/L
MWH-A01 and MWH-A01-02	Aluminum (T)	3.6 / 6.5	57.4	50
	Aluminum (D)	1.7 / 2.1	21.1	50
	Boron (T)	10 / 5	66.7	1200000
	Cobalt (T)	0.021 / 0.026	21.3	NL
	Copper (T)	0.08 / 0.12	40.0	9
	Nickel (T)	0.15 / 0.19	23.5	52
	Thallium (T)	0.003 / 0.01	107.7	0.24
	Zinc (T)	0.4 / 1.1	93.3	120
	Ammonia, as N	0.026 / 0.4	42.4	NL
	As III	0.014 / 0.005	94.7	NL
	Cyanide (T)	0.0009 / 0.007	61.5	5.2
	Mercury (T)	0.4 / 0.31	25.4	0.012
MWH-B20 and MWH-B20-02	Aluminum (T)	2.6 / 3.6	32.3	50
	Manganese (D)	12 / 8.3	36.5	NL
	Vanadium (D)	0.02 / 0.03	40.0	835000
	Zinc (D)	0.5 / 0.3	50.0	120
Gestrin and Gestrin-02	Aluminum (T)	13 / 16.4	23.1	50
	Copper (T)	0.18 / 0.26	26.4	9
	Iron (T)	4030 / 3180	23.69	300
	Lead (T)	0.009 / 0.019	71.4	2.5
	Arsenic (D)	19.5 / 26.4	30.1	10
	Chromium (D)	0.12 / 0.09	28.6	100
	Copper (D)	0.23 / 0.18	24.4	9
	Iron (D)	504 / 673	28.7	300
	Ammonia	0.07 / 0.027	88.7	NL
	Mercury (T)	1 / 1.31	26.8	0.012

(T) = Total Metals
(D) = Dissolved Metals
NL = Not Listed

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met and no qualification was required except as noted below.

Multiple RPDs were above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Lab Dup	Analyte	RPD %	Qualification	Regulatory Criterion, ug/L
MWH-A01-02	Phosphorus	22	J	NL
	Lead	40	J	2.5
	Thallium	86	J	0.24
MWH-A04	Lead	40	J	2.5
	Thallium	80	J	0.24
MWH-A19	Thallium	67	J	0.24
	Zinc	29	J	120000

Lab Dup	Analyte	RPD %	Qualification	Regulatory Criterion, ug/L
Gestrin-02	Lead	30	J	2.5
	Thallium	120	J	0.24

NL = Not Listed

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

(T) and (D) Metals: All ICS spiked analysis was within control limits; therefore, no qualification was required.

XII. SAMPLE REPORTING LIMITS

All RLs were at or below either the regulatory criteria or the project RL as listed in the QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. Results reported between the MDLs and RLs were qualified as estimated (J).

All Analysis: No discrepancies were noted between the EDD and PDF versions of the reported laboratory data. All data was validated and reportable.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 4Q17 GW, Dec 2017 K1713731

Prepared By: Jennifer Chandler, Chemist, HDR Inc.

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-GWQSP
Project objectives identified?	X		The overall goal of the QAPP is to develop a groundwater quality program to continue characterizing groundwater quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality changes from future mining activities. The QAPP outlines an approach that will support NEPA activities and environmental permitting. The sampling plan includes the collection of groundwater samples and measurement of onsite water quality parameters. The main objectives of the program are as follows: Collect baseline data to provide defensible documentation of existing groundwater quality conditions, including characterization of spatial and temporal variability, and Develop a baseline for evaluating possible changes in groundwater quality during construction, operation, and completion of future mining activities.
Sample design described?	X		35 field samples (including duplicates and field blanks), collected quarterly, from up to 36 bedrock wells and 29 alluvial wells.
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP
Sample types and numbers defined?	X		Approximately 35 locations for GW
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook,

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Data or Measurement Quality Objective	Yes	No	Comments
			blind to lab and blind on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		351.4, 300.0, 353.2, 2320B, 4500-CN-E, 4500-NH3-G, 2340, 1630, 1631E, 1632, 6010C, 6020A, 2540C, 180.1
Accuracy of data appropriate?	X	X	LCS, MS, and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were outside control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting less than the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

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DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by Standard Method 4500-NH3-G
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL KJELDAHL NITROGEN by USEPA Method 351.4
TOTAL NITROGEN by USEPA Method 351.4
TOTAL ALKALINITY, CARBONATE, BICARBONATE as $CaCO_3$ by Standard Method 2320B
CYANIDE by Standard Method 4500-CN-E
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TURBIDITY by USEPA Method 180.1

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10101315 – 3
Sample Data Package:	K1713731
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Groundwater
Sampling Dates:	16-19 December 2017
Validation Guidelines:	Project QAPP *(Quality Assurance Project Plan and Groundwater Quality Sampling Plan [QAPP-GWQSP] for the Golden Meadows Project* [MWH Americas, Inc., March 2015]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, August 2014); National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, August 2014)*; and professional judgment
Validation Level:	Stage 2BVM (100% of data), Stage 3VM (10%)
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation. Ten percent of the data underwent Stage 3VM level validation.

Laboratory data were acceptable with qualification, with the exceptions, as noted below. Completeness goal, of 100%, was not met for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. All samples were received at the correct temperature range (between 0°C and 6°C). No further qualification was required.

II. HOLDING TIMES

All holding time criteria were not met.

Anions: The following samples were analyzed outside of the holding times: for Sulfate – MWH-A05, MWH-A07, MWH-B05, MWH-B07; for Chloride, Fluoride, and Sulfate - MWH-A03. All samples were qualified as estimated (UJ, or J).

Cyanide: The following samples were analyzed outside of the holding times: for Cyanide - MWH-A01, MWH-A02, MWH-A03, MWH-B01, MWH-B02, and MWH-B03.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS (MB)

Target analytes were generally not detected in method blanks except as discussed below.

Metals: Some analytes were detected in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the MBs that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to MBs results. Qualified results are well below the regulatory criteria and are fully usable.

Mercury: Mercury was not detected in the MBs. No qualifications were required.

Methyl Mercury: Methyl Mercury was not detected in the MBs. No qualifications were required.

As (III): Arsenic (III) was detected at trace levels in some MBs. Some associated sample results were less than five times the MBs concentrations and have been qualified as estimated with a possible high bias (J+). There is no regulatory criterion listed in the QAPP, and the qualified results are fully usable.

Alkalinity: Alkalinity was detected at trace levels in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). There are no regulatory criteria listed in the QAPP, and the qualified results are fully usable.

Anions: Fluoride was detected at trace levels in some MBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

Ammonia: Ammonia was detected in the MBs. Associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

Cyanide: Cyanide was not detected in the MBs. No qualifications were required.

TDS: TDS was not detected in the MBs. No qualifications were required.

TKN: TKN was not detected in the MBs. No qualifications were required.

Turbidity: Turbidity was detected in the MBs. Associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were generally not detected in the ICBs and CCBs except as noted below.

Metals: Several analytes were detected in some ICBs and CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+). Other analytes were detected in the method blanks that were also detected at higher concentrations in other blanks, and in these cases the sample results were not qualified due to CCB results. Qualified results are well below the regulatory criteria and are fully usable.

Alkalinity: Alkalinity was not detected in the ICBs or CCBs. No qualifications were required.

Anions: Fluoride was detected in CCBs. All sample results were greater than five times the CCB concentration; therefore, no qualification was required. The qualified results are reportable.

Ammonia: Ammonia was not detected in the ICBs or CCBs. No qualifications were required.

Turbidity: Turbidity was detected in the CCBs. Some associated sample results were less than five times the blank concentrations and have been qualified as estimated with a possible high bias (J+).

Cyanide: Cyanide was not detected in the ICBs or CCBs. No qualifications were required.

TKN: TKN was not detected in the ICBs or CCBs. No qualifications were required.

EQUIPMENT BLANKS

No equipment blanks were submitted for analysis with the COCs.

FIELD BLANKS (FB)

There were multiple field blanks, submitted for analysis, with the COCs. These FB samples were MWH-A04-03, MWH-B07-03, and MWH-B15-03, and qualifications are noted below.

Field Blank ID	Analyte	Concentrations	Qualification
MWH-A04-03 (MWH-A04)	Alkalinity as CaCO3, T	5	None, all >BAL or ND
	Aluminum, Dissolved	1.1	J+
	Copper, Dissolved	0.05	None, all >BAL or ND
	Ammonia as Nitrogen	0.061	J+
	Magnesium, Dissolved	0.9	None, all >BAL or ND
	Sodium, Dissolved	30	None, all >BAL or ND
	Aluminum, Total	1.6	None, all >BAL or ND
	Magnesium, Total	1.6	None, all >BAL or ND
	Manganese, Dissolved	0.1	None, all >BAL or ND
	Bicarbonate as CaCO3	5	None, all >BAL or ND
	Arsenic, Dissolved	0.12	None, all >BAL or ND
	Manganese, Total	0.3	None, all >BAL or ND
	Arsenic, Total	0.69	None, all >BAL or ND
	Mercury, Dissolved	0.11	None, all >BAL or ND
	Barium, Total	0.022	None, all >BAL or ND
	Mercury, Total	0.24	None, all >BAL or ND
	Calcium, Dissolved	32	None, all >BAL or ND
	Nickel, Dissolved	0.08	J+
	Phosphorus, Dissolved	5	None, all >BAL or ND
	Nitrogen, Total as N	0.85	J+

Field Blank ID	Analyte	Concentrations	Qualification
MWH-A04-03 (MWH-A04)	(TKN)	0.84	J+
	Calcium, Total	21	None, all >BAL or ND
	Phosphorus, Total	7	None, all >BAL or ND
	Chromium, Dissolved	0.17	J+
	Methyl Mercury	0.03	None, all >BAL or ND
	Turbidity	0.11	None, all >BAL or ND
	Chromium, Total	0.06	J+
	Arsenic (III)	0.006	None, all >BAL or ND
	Sodium, Total	30	None, all >BAL or ND
MWH-B07-03 (MWH-B07)	Alkalinity as CaCO3, T	6	None, all >BAL or ND
	Aluminum, Dissolved	1.2	None, all >BAL or ND
	Aluminum, Total	1.4	None, all >BAL or ND
	Ammonia as Nitrogen	0.058	None, all >BAL or ND
	Antimony, Total	0.029	None, all >BAL or ND
	Arsenic (III)	0.014	None, all >BAL or ND
	Arsenic, Dissolved	0.17	None, all >BAL or ND
	Arsenic, Total	0.14	None, all >BAL or ND
	Barium, Total	0.021	None, all >BAL or ND
	Bicarbonate as CaCO3	6	None, all >BAL or ND
	Calcium, Dissolved	28	None, all >BAL or ND
	Calcium, Total	17	None, all >BAL or ND
	Chromium, Dissolved	0.08	J+
	Chromium, Total	0.17	J+
	Lead, Dissolved	0.004	J+
	Lead, Total	0.005	J+
	Magnesium, Dissolved	1.4	None, all >BAL or ND
	Magnesium, Total	1.4	None, all >BAL or ND
	Nickel, Total	0.04	J+
	Nitrogen, T Nitrogen	0.34	J+
	(TKN)	0.33	J+
	Phosphorus, Dissolved	9	None, all >BAL or ND
	Phosphorus, Total	6	None, all >BAL or ND
	Sodium, Dissolved	70	None, all >BAL or ND
	Sodium, Total	60	None, all >BAL or ND
	Turbidity	0.12	None, all >BAL or ND
	Zinc, Dissolved	0.5	J+
MWH-B15-03 (MWH-B15)	Alkalinity as CaCO3, T	6	None, all >BAL or ND
	Aluminum, Dissolved	2.2	J+
	Aluminum, Total	1	None, all >BAL or ND
	Ammonia as Nitrogen	0.056	None, all >BAL or ND
	Arsenic, Dissolved	0.14	None, all >BAL or ND
	Arsenic, Total	0.12	None, all >BAL or ND
	Bicarbonate as CaCO3	6	None, all >BAL or ND
	Calcium, Dissolved	8	None, all >BAL or ND
	Calcium, Total	7	None, all >BAL or ND
	Chromium, Dissolved	0.15	None, all >BAL or ND
	Chromium, Total	0.11	J+
	Mercury, Total	0.06	None, all >BAL or ND

ED_002764_00003042-00169

Field Blank ID	Analyte	Concentrations	Qualification
MWH-B15-03 (MWH-B15)	Nitrogen, T	0.18	J+
	(TKN)	0.17	J+
	Phosphorus, Dissolved	6	J+
	Phosphorus, Total	6	None, all >BAL or ND
	Sodium, Total	20	None, all >BAL or ND
	Sulfate	0.31	None, all >BAL or ND
	Turbidity	0.08	None, all >BAL or ND
	Zinc, Dissolved	0.3	J+

ND = Non-detect
BAL = Base Action Limit (5 times the FB concentration)

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits, for all analysis, and no qualifications were required.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits and no qualification was required except as noted below.

Metals: Barium (136%), and selenium (72%) recoveries were outside the required criteria, for MWH-B03. Sample results were qualified as estimated (UJ/J+).

Mercury: All percent recoveries were within the required criteria. No qualifications were required.

Methyl Mercury: Relative Percent Difference (RPD) also failed outside of the 20% criteria, at 42%, for MWH-B03. Sample results were qualified as estimated (UJ).

As (III): All percent recoveries were within the required criteria. No qualifications were required.

Alkalinity: No MS/MSD was performed on a sample within this SDG.

Anions: All percent recoveries were within the required criteria. No qualifications were required.

Ammonia: All percent recoveries were within the required criteria. No qualifications were required.

Cyanide: All percent recoveries were within the required criteria. No qualifications were required.

TDS: No MS/MSD was performed on a sample within this SDG.

TKN: All percent recoveries were within the required criteria. No qualifications were required.

Cyanide: All percent recoveries were within the required criteria. No qualifications were required.

N/N as N: All percent recoveries were within the required criteria. No qualifications were required.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These

ED_002764_00003042-00170

tests are applicable only to total and dissolved metals by SW6010C and SW6020A. Most results were within control limits and no qualification was required.

All results were within limit criteria. No qualification was required.

VIII. FIELD DUPLICATES

A field duplicate (FD) of sample MWH-A04-03, MWH-B07-03, and MWH-B15-03 were collected. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below. Sample results were qualified as estimated (UJ/J).

Note: Many compounds/analytes associated to Parent Sample/Field Duplicates did not pass any acceptable criteria for %RPD. See the table below for the complete list:

Parent / FD pair	Analyte	Concentrations	RPD %	Regulatory Criterion
MWH-A04 and MWH-A04-02	Fluoride	0.14 / 0.05	94.7	4.0
	TKN	0.42 / 0.53	23.2	NL
	Nitrogen, total	0.45 / 0.56	21.8	NL
	Ammonia, as N	0.064 / 0.03	72.3	NL
	Boron (T)	11 / 19	53.3	NL
	Chromium (T)	0.2 / 0.11	58.1	100
	Copper (T)	0.36 / 0.86	82.0	NL
	Zinc (T)	0.5 / 0.4	22.2	5000
	Cadmium (D)	0.01 / 0.013	26.1	5
	Zinc (D)	0.4 / 0.7	54.5	5000
MWH-B07 and MWH-B07-02	Mercury (D)	0.12 / 0.16	28.6	2000
	Chromium (T)	0.2 / 0.09	75.9	100
	Nickel (T)	0.17 / 0.08	72.0	NL
	Zinc (T)	0.4 / 0.3	28.6	5000
	Chromium (D)	0.1 / 0.08	22.2	100
	Copper (D)	0.1 / 0.04	85.7	NL
	Lead (D)	0.004 / 0.008	66.7	15
	Vanadium (D)	0.05 / 0.07	33.3	NL
	Zinc (D)	0.4 / 0.6	40.0	5000
MWH-B15 and MWH-B15-02	Mercury (T)	0.38 / 0.27	33.8	2000
	Turbidity	0.24 / 0.17	34.1	NL
	Aluminum (T)	11.1 / 8.7	24.2	200
	Chromium (T)	0.09 / 0.07	25.0	100
	Iron (T)	12 / 9	28.6	300
	Chromium (D)	0.1 / 0.05	66.7	100
	Copper (D)	0.04 / 0.05	22.2	1300
	Zinc (D)	0.2 / 0.6	100	5000

(T) = Total Metals
(D) = Dissolved Metals
NL = Not Listed

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met and no qualification was required except as noted below.

ED_002764_00003042-00171

Multiple RPDs were above the 20% control limits as shown in the table below. The qualified result was well below the regulatory criterion and is fully usable.

Lab Dup	Analyte	RPD %	Qualification	Regulatory Criterion
MWH-A08	Fluoride	83	J	4.0 mg/L
MWH-A08	Ammonia	30	J	NL
MWH-B03	Copper	25	J	1300 ug/L
	Vanadium	22	J	NL
	Zinc	29	J	5000 ug/L
MWH-A04-02	Copper	94	J	1300 ug/L
	Zinc	67	J	5000 ug/L

NL = Not Listed

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

(T) and (D) Metals: All ICS spiked analysis was within control limits; therefore, no qualification was required.

XII. SAMPLE REPORTING LIMITS

All RLs were at or below either the regulatory criteria or the project RL as listed in the QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. Results reported between the MDLs and RLs were qualified as estimated (J).

All Analysis: No discrepancies were noted between the EDD and PDF versions of the reported laboratory data. All data was validated and reportable, with exceptions to the rejected data (for temperature issues) and the two sets of questionable estimated parent sample/field duplicate data listed above.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 1Q16
February 2016 SW Samples, K1601208, K1601242, K1601387
Prepared By: Jennifer Chandler, Chemist, HDR Inc.
Date: March 25, 2016

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Quarterly sampling at approximately 43 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 43 locations for SW
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV

ED_002764_00003042-00173

Data or Measurement Quality Objective	Yes	No	Comments
Specified methods used and detection limits met?	X	X	Metals in QAPP by 200.7, 200.8, lab used SW6010C, SW6020A.
Accuracy of data appropriate?	X	X	LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally well above or below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter, and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

ED_002764_00003042-00174

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by Standard Method 4500 NH3-G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	103-246940-018
Sample Data Package:	K1601208, K1601242, K1601387
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	2 to 10 February 2016
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES
All holding time criteria were met and no qualification was required.

III. SAMPLES ANALYZED
All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS
METHOD BLANKS
Target analytes were not detected in method blanks.

TRIP BLANKS
Target analytes were generally not detected in the trip blanks (YP-TB-45 and YP-TB-46) except as noted below.

Total Metals:
Total calcium was detected in YP-TB-51. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. The qualified results are well below the regulatory criterion and are fully usable.

Total magnesium was detected in YP-TB-51. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. The qualified results are well below the regulatory criteria and are fully usable.

Total zinc was detected in YP-TB-51. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. The qualified results are well below the regulatory criteria and are fully usable.

Hardness: Target analyte was detected in YP-TB-51; however, all sample detections were greater than five times the concentration of the TB. Therefore, no qualifications were required.

TKN: TKN was detected in YP-TB-50 and YP-TB-51 at 0.42 and 0.64 mg/L respectively. Sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. There is no regulatory criterion for TKN listed in the QAPP, and the qualified results are fully usable.

INITIAL AND CONTINUING CALIBRATION BLANKS
Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)
Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)
Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Metals: The %RPD recovery in the spike, for YP-T-15, at 23.7%, was above the control limits of 20%. This analyte in the parent samples has been qualified as detect estimated (J+). The qualified results' RLs are well below the regulatory criterion and are fully usable.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES

Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Field Duplicate Sample	Parent Sample
YP-D-101	YP-SR-8
YP-D-102	YP-T-40
YP-D-103	YP-AS-2

Total Metals: Copper results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / FD	Analyte	Sample / FD concentrations	RPD	Regulatory Criterion	Qualification
YP-SR-8/YP-D-101	Copper	0.4/ 0.2 ug/L	66.7%	9 µg/L	J / J

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met except as noted below.

Total Metals: Two pairs of results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / LD	Analyte	RPD	Regulatory Criterion	Qualification
YP-T-15	Total Zinc	23.7 %	20% RPD	J+
	Dissolved Copper	66.7 %	20% RPD	J+
YP-T-43	Total Zinc	66.7%	20% RPD	J+
YP-M-4D	Total Arsenic	30.8%	20% RPD	J+

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All sample criteria was met. No qualification was required.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 2Q16
May 2016 SW Samples, K1605404, K1605470, K1605718
Prepared By: Jennifer Chandler, Chemist, HDR Inc.
Prepared Date: August 2016

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Monthly sampling at approximately 57 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 57 locations for SW
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV

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Data or Measurement Quality Objective	Yes	No	Comments
Specified methods used and detection limits met?	X		Metals in QAPP by 160.1, 160.2, 351.4, 300.0, 353.2, 2320A, 4500-CN3, 4500NH3 G, 2340, 1630, 1631, 1632, 6010B, 6020A.
Accuracy of data appropriate?	X		LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X		LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

The data are fully usable for report objectives, although some data are qualified. The monthly data validation reports describe in detail how data met or fell short of data quality objectives. Some of the general qualifications encountered are as follows. When constituents were detected in either field or laboratory quality control samples (i.e., trip blanks), the constituents were flagged as estimated with possible high bias (J+). Although a variety of constituents are qualified as J+, concentrations are generally far enough below regulatory criteria as to not affect the usability of the data for the purpose of establishing baseline data.

Parent samples and field duplicates occasionally displayed relative percent differences (RPD) greater than 20% (or other applicable control limit) for various constituents (various metals, total dissolved solids, TKN). Because laboratory quality control samples do not indicate that the laboratory methods were problematic, these large differences are thought to reflect heterogeneity in surface waters and hence in the field samples. Although large RPDs result in estimated (J) qualifiers, these qualifiers do not interfere with comparisons to regulatory criteria because constituents generally either far exceeded such criteria, or were far below. Thus, data with such qualifiers are considered fully usable for project objectives.

ED_002764_00003042-00180

In some matrix spikes and matrix spike duplicates, metal recoveries were below the control limits and qualified as estimated (J- or J+). Methyl mercury RPDs were above the control limit and qualified as estimated (UJ/J+). Arsenic (III) RPDs were above the control limits and qualified as estimated (J+). Although the constituents have been qualified as J+, J-, and UJ, the data are well above or below the regulatory criterion and are considered fully usable for project objectives.

Dissolved aluminum and zinc as well as total zinc in the lab duplicates were above the control limit of 20% and have been qualified as estimated (J). The qualified results are well above or well below the regulatory criterion and are considered fully usable for project objectives.

Thus, although data from May 2016 were occasionally qualified, these data are generally considered usable because the qualifiers did not affect comparisons to regulatory criteria and the establishment of baseline data. The reader is referred to the full length monthly data validation reports for greater detail regarding data qualification.

ED_002764_00003042-00181

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 3SM 4500-NH3 G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10027847-273339-015
Sample Data Package:	K1605404, K1605470, K1605718
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	17-25 May 2016
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010); National Functional Guidelines for Organic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Jennifer Chandler, HDR

Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Hardness, Arsenic (III), Methyl Mercury	Anions	TKN, NH_3, $NO_3 + NO_2$, and Total Nitrogen	Alkalinity, Bicarbonate, Carbonate	TDS and TSS	Total Cyanide
YP-AS-1	K1605470-021	X	X	X	X	X	X
YP-AS-2	K1605470-008	X	X	X	X	X	X
YP-AS-3	K1605470-003	X	X	X	X	X	X
YP-AS-4	K1605718-003	X	X	X	X	X	X
YP-AS-4 MS	K1605718-003 MS	X	X	X	X	X	X
YP-AS-6	K1605404-013	X	X	X	X	X	X
YP-AS-7	K1605718-009	X	X	X	X	X	X
YP-HP-S1	K1605718-015	X	X	X	X	X	X
YP-M-3	K1605404-004	X	X	X	X	X	X
YP-M-4	K1605718-016	X	X	X	X	X	X
YP-S-1	K1605470-007	X	X	X	X	X	X
YP-S-2	K1605718-008	X	X	X	X	X	X
YP-S-3	K1605718-004	X	X	X	X	X	X
YP-S-5	K1605470-024	X	X	X	X	X	X
YP-S-5 MS	K1605470-024 MS	X	X	X	X	X	X
YP-S-5 MSD	K1605470-024 MSD	X	X	X	X	X	X
YP-S-6	K1605404-001	X	X	X	X	X	X
YP-S-7	K1605404-002	X	X	X	X	X	X
YP-S-7 MS	K1605404-002 MS	X	X	X	X	X	X
YP-S-7 MSD	K1605404-002 MSD	X	X	X	X	X	X
YP-S-8	K1605404-003	X	X	X	X	X	X
YP-S-9	K1605718-005	X	X	X	X	X	X
YP-S-10	K1605470-013	X	X	X	X	X	X
YP-SEBS-1	K1605718-001	X	X	X	X	X	X
YP-SEBS-2	K1605718-002	X	X	X	X	X	X
YP-SR-2	K1605470-005	X	X	X	X	X	X
YP-SR-4	K1605470-004	X	X	X	X	X	X
YP-SR-6	K1605470-002	X	X	X	X	X	X
YP-SR-6	K1605470-002 MS	X	X	X	X	X	X
YP-SR-8	K1605404-012	X	X	X	X	X	X
YP-SR-10	K1605404-011	X	X	X	X	X	X
YP-SR-11	K1605404-010	X	X	X	X	X	X
YP-SR-13	K1605404-009	X	X	X	X	X	X
YP-SR-14	K1605404-006	X	X	X	X	X	X

Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Hardness, Arsenic (III), Methyl Mercury	Anions	TKN, NH_3, $NO_3 + NO_2$, and Total Nitrogen	Alkalinity, Bicarbonate, Carbonate	TDS and TSS	Total Cyanide
YP-T-1	K1605470-023	X	X	X	X	X	X
YP-T-6	K1605718-014	X	X	X	X	X	X
YP-T-7	K1605470-022	X	X	X	X	X	X
YP-T-8A	K1605470-020	X	X	X	X	X	X
YP-T-10	K1605718-013	X	X	X	X	X	X
YP-T-11	K1605718-019	X	X	X	X	X	X
YP-T-12	K1605718-017	X	X	X	X	X	X
YP-T-15	K1605470-019	X	X	X	X	X	X
YP-T-17	K1605470-018	X	X	X	X	X	X
YP-T-21	K1605404-007	X	X	X	X	X	X
YP-T-22	K1605470-017	X	X	X	X	X	X
YP-T-23A	K1605470-025	X	X	X	X	X	X
YP-T-27	K1605470-015	X	X	X	X	X	X
YP-T-29	K1605470-016	X	X	X	X	X	X
YP-T-33	K1605470-010	X	X	X	X	X	X
YP-T-35	K1605470-012	X	X	X	X	X	X
YP-T-37	K1605718-011	X	X	X	X	X	X
YP-T-40	K1605470-006	X	X	X	X	X	X
YP-T-41	K1605718-006	X	X	X	X	X	X
YP-T-43	K1605470-011	X	X	X	X	X	X
YP-T-44	K1605404-005	X	X	X	X	X	X
YP-T-45	K1605470-009	X	X	X	X	X	X
YP-T-48	K1605718-007	X	X	X	X	X	X
YP-T-49	K1605718-012	X	X	X	X	X	X
YP-D-104	K1605404-008	X	X	X	X	X	X
YP-D-105	K1605470-014	X	X	X	X	X	X
YP-D-106	K1605718-018	X	X	X	X	X	X
YP-TB-52	K1605470-001	X	X	X	X	X	X
YP-TB-53	K1605718-010	X	X	X	X	X	X

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

NOTE: The laboratory logged in the samples TP-T-12 and TP-T-10. However, these samples, listed on the COC, were YP-T-12 and YP-T-10. These have been corrected in the EDD, to reflect the correct names.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES

All holding time criteria were met and no qualification was required.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS

Target analytes were not detected in method blanks.

TRIP BLANKS

Target analytes were generally not detected in the trip blanks (YP-TB-52 and YP-TB-53) except as noted below.

Total Metals: Cobalt (YP-TB-52), aluminum, arsenic, and zinc (YP-TB-53) were detected. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. The qualified results are well below the regulatory criterion and are fully usable.

Dissolved Metals: Arsenic, copper, and zinc were detected in YP-TB-53. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. The qualified results are well below the regulatory criteria and are fully usable.

TKN: TKN was YP-TB-52 and YP-TB-53 at 0.49 and 0.31 mg/L respectively. Sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. There is no regulatory criterion for TKN listed in the QAPP, and the qualified results are fully usable.

TDS: TDS was not detected in method blanks, and no qualification was required.

Anions: Anions were not detected in method blanks, and no qualification was required.

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Methyl Mercury: % RPD failed at >20% in YP-S-7, YP-TB-52, YP-SEBS-1, and YP-SEBS-2. This analyte in the parent samples has been qualified as estimated (UJ/J+). The qualified results' RLs are well below the regulatory criterion and are fully usable.

Metals: The %R recoveries of total aluminum (58% /115%) and total barium (133% /108%) in the spike of YP-S-7 were below the control limits of 75-125%. All sample results have been qualified as estimated (J-, or J+). The qualified results' RLs are well below the regulatory criterion and are fully usable.

Arsenic III: The %RPD failed at >20%, for Arsenic III (YP-AS-7). This analyte in the parent samples has been qualified as estimated (J+). The qualified results' RLs are well below the regulatory criterion and are fully usable.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES

Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Field Duplicate Sample	Parent Sample
YP-D-104	YP-T-21
YP-D-105	YP-T-10
YP-D-106	YP-T-12

TDS: One pair of results was outside control limits as shown in the table below. The qualified results are fully usable.

TKN One pair of results was outside control limits as shown in the table below. The qualified results are fully usable.

Metals: Multiple pairs of results were outside the control limits as shown below. The qualified results are fully usable.

Sample / FD	Analyte	Sample / FD concentrations	RPD	Regulatory Criterion	Qualification
YP-T-12 and YP-D-106	Zinc (Total)	2.7 /1.0 µg/L	91.9%	120 µg/L	J / J
	Zinc (Dissolved)	1.2 /1.5 µg/L	22.2%	120 µg/L	J / J

Sample / FD	Analyte	Sample / FD concentrations	RPD	Regulatory Criterion	Qualification
	Cobalt (Diss)	0.04 /0.03 µg/L	28.6%	NL	J / J
	Copper (Diss)	0.3 /02 µg/L	40.0%	9.0 µg/L	J / J
YP-T-21 and YP-D-104	TKN	0.33/ 0.53 mg/L	46.5%	NL	J / J
	TDS	14 /26 µg/L	60.0 %	500 mg/L	J / J
YP-T-21 and YP-D-104	Cobalt (Total)	0.3 /0.4 µg/L	28.6%	NL	J / J
	Manganese (Total)	1.6 /2.1 µg/L	27.0%	50 µg/L	J / J
	Zinc (Total)	0.5 /1.4 µg/L	94.7%	120 µg/L	J / J
	Copper (Diss)	0.1 /0.2 µg/L	66.7%	9.0 µg/L	J / J
	Zinc (Diss)	0.9 /1.4 µg/L	43.5%	120 µg/L	J / J

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met except as noted below.

Total Metals: Metals results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / LD	Analyte	Sample / LD concentrations	RPD	Regulatory Criterion	Qualification
YP-S-7	Aluminum (Dissolved)	5.5 / 7.3 µg/L	28.1 %	50 µg/L	J
	Zinc (Dissolved)	1.7 / 2.8 µg/L	48.9 %	120 µg/L	J
YP-SR-6	Zinc (Total)	4.9 / 3.6 µg/L	30.6 %	120 µg/L	J
	Zinc (Dissolved)	4.9 / 3.6 µg/L	42.1 %	120 µg/L	J

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All ICP analysis passed % R (recovery) limit criteria.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 3Q16
August 2016 SW Samples, K1609698, K1609786, K1609978
Prepared By: Jennifer Chandler, Chemist - HDR Inc.
Date: August 2016

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Monthly sampling at approximately 54 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, and post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 51 locations for SW, 3 field duplicate samples also collected
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package

ED_002764_00003042-00189

Data or Measurement Quality Objective	Yes	No	Comments
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		160.2, 351.4, 300.0, 353.2, 2320A, 4500-CN3, 4500NH3 G, 2340, 1630, 1631, 1632, 6010C, 6020A.
Accuracy of data appropriate?	X		LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X		LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

The data are fully usable for project objectives, although some data are qualified. This exception is discussed in further detail below. The monthly data validation reports describe in detail how data met or fell short of data quality objectives.

Some of the general qualifications encountered are as follows. Some constituents were detected in field or laboratory quality control samples (i.e., trip blanks, laboratory method blanks). When these constituents were detected in samples at less than five times the control sample concentration, the constituents were flagged as estimated with possible high bias (J+). Although a variety of constituents are qualified as J+, concentrations are generally far enough below regulatory criteria as to not affect the usability of the data for the purpose of establishing baseline data.

Parent samples and field duplicates occasionally displayed relative percent differences (RPD) greater than 20 percent (or other applicable control limit) for various constituents (total and dissolved mercury, methyl mercury, arsenic, several total and dissolved metals, and total suspended solids). Because laboratory quality control samples do not indicate that the laboratory

ED_002764_00003042-00190

methods were problematic, these large differences are thought to reflect inherent heterogeneity in surface waters and hence in the field samples. Although larges RPDs result in estimated (J) qualifiers, there qualifiers do not interfere with comparisons to regulatory criteria because constituents generally either far exceeded such criteria, or were far below. Thus, data with such qualifiers are considered fully usable for project objectives.

In some matrix spikes and matrix spike duplicates, anion (chloride), methyl mercury, and metals (total magnesium) recoveries were well below or above the control limits. Chloride failed the control limit and was qualified as estimated (UJ). Methyl mercury recoveries failed the control limits and were well below regulatory control limits and qualified as estimated (UJ/J+) or failed control limits and were qualified as estimated (J+/UJ or UJ). Total magnesium was detected as above the control limits and qualified as estimated (J+).

Total magnesium and lead and total and dissolved aluminum in the lab duplicates were above the control limit of 20% and qualified as estimated (J). Although the constituents were qualified as J, the data are well above the regulatory criteria and are considered fully usable for project objectives.

Thus, although data from August 2016 were occasionally qualified, these data are generally considered fully usable because the qualifiers did not affect comparisons to regulatory criteria and the establishment of baseline data. The reader is referred to the full length monthly data validation reports for greater detail regarding data qualification.

ED_002764_00003042-00191

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 3SM 4500-NH3 G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10027847-273339-015
Sample Data Package:	K1609698, K1609786, K1609978
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	16-24 August 2016
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010); National Functional Guidelines for Organic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Jennifer Chandler, HDR

Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Hardness, Arsenic (III), Methyl Mercury	Anions	TKN, NH_3, NO_3 + NO_2, and Total Nitrogen	Alkalinity, Bicarbonate, Carbonate	TDS and TSS	Total Cyanide
YP-AS-1	K1605470-021	X	X	X	X	X	X
YP-AS-2	K1605470-008	X	X	X	X	X	X
YP-AS-3	K1605470-003	X	X	X	X	X	X
YP-AS-4	K1605718-003	X	X	X	X	X	X
YP-AS-6	K1605404-013	X	X	X	X	X	X
YP-AS-7	K1605718-009	X	X	X	X	X	X
YP-HP-S1	K1605718-015	X	X	X	X	X	X
YP-M-3	K1605404-004	X	X	X	X	X	X
YP-M-4	K1605718-016	X	X	X	X	X	X
YP-S-1	K1605470-007	X	X	X	X	X	X
YP-S-2	K1605718-008	X	X	X	X	X	X
YP-S-3	K1605718-004	X	X	X	X	X	X
YP-S-5	K1605470-024	X	X	X	X	X	X
YP-S-5 MS	K1605470-024 MS	X	X	X	X	X	X
YP-S-5 MSD	K1605470-024 MSD	X	X	X	X	X	X
YP-S-6	K1605404-001	X	X	X	X	X	X
YP-S-7	K1605404-002	X	X	X	X	X	X
YP-S-7 MS	K1605404-002 MS	X	X	X	X	X	X
YP-S-7 MSD	K1605404-002 MSD	X	X	X	X	X	X
YP-S-8	K1605404-003	X	X	X	X	X	X
YP-S-9	K1605718-005	X	X	X	X	X	X
YP-S-10	K1605470-013	X	X	X	X	X	X
YP-SEBS-1	K1605718-001	X	X	X	X	X	X
YP-SEBS-2	K1605718-002	X	X	X	X	X	X
YP-SR-2	K1605470-005	X	X	X	X	X	X
YP-SR-4	K1605470-004	X	X	X	X	X	X
YP-SR-6	K1605470-002	X	X	X	X	X	X
YP-SR-8	K1605404-012	X	X	X	X	X	X
YP-SR-10	K1605404-011	X	X	X	X	X	X
YP-SR-11	K1605404-010	X	X	X	X	X	X
YP-SR-13	K1605404-009	X	X	X	X	X	X
YP-SR-14	K1605404-006	X	X	X	X	X	X
YP-T-1	K1605470-023	X	X	X	X	X	X

Sample ID	Lab ID	Total and Dissolved Metals and Mercury, Hardness, Arsenic (III), Methyl Mercury	Anions	TKN, NH_3, NO_3 + NO_2, and Total Nitrogen	Alkalinity, Bicarbonate, Carbonate	TDS and TSS	Total Cyanide
YP-T-6	K1605718-014	X	X	X	X	X	X
YP-T-7	K1605470-022	X	X	X	X	X	X
YP-T-8A	K1605470-020	X	X	X	X	X	X
YP-T-10	K1605718-013	X	X	X	X	X	X
YP-T-11	K1605718-019	X	X	X	X	X	X
YP-T-12	K1605718-017	X	X	X	X	X	X
YP-T-15	K1605470-019	X	X	X	X	X	X
YP-T-17	K1605470-018	X	X	X	X	X	X
YP-T-21	K1605404-007	X	X	X	X	X	X
YP-T-22	K1605470-017	X	X	X	X	X	X
YP-T-23A	K1605470-025	X	X	X	X	X	X
YP-T-27	K1605470-015	X	X	X	X	X	X
YP-T-29	K1605470-016	X	X	X	X	X	X
YP-T-33	K1605470-010	X	X	X	X	X	X
YP-T-35	K1605470-012	X	X	X	X	X	X
YP-T-37	K1605718-011	X	X	X	X	X	X
YP-T-40	K1605470-006	X	X	X	X	X	X
YP-T-41	K1605718-006	X	X	X	X	X	X
YP-T-43	K1605470-011	X	X	X	X	X	X
YP-T-44	K1605404-005	X	X	X	X	X	X
YP-T-45	K1605470-009	X	X	X	X	X	X
YP-T-48	K1605718-007	X	X	X	X	X	X
YP-T-49	K1605718-012	X	X	X	X	X	X
YP-D-104	K1605404-008	X	X	X	X	X	X
YP-D-105	K1605470-014	X	X	X	X	X	X
YP-D-106	K1605718-018	X	X	X	X	X	X
YP-TB-52	K1605470-001	X	X	X	X	X	X
YP-TB-53	K1605718-010	X	X	X	X	X	X

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

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Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES

All holding time criteria were met and no qualification was required.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

METHOD BLANKS (MB)

Total Metals: Aluminum was detected in the MB (K1609698). Sample results, less than five times the blank concentration,s have been qualified as estimated with a possible high bias (J+) in the associated samples. The qualified results are well below the regulatory criterion and are fully usable.

TRIP BLANKS (TB)

Target analytes were generally not detected in the trip blanks (YP-TB-54, YP-TB-55, and YP-TB-56) except as noted below.

Total Metals: Metals were not detected in method blanks, and no qualification was required.

Dissolved Metals: Dissolved antimony, barium, and copper were detected in Trip Blank YP-TB-55 at 0.7ug/L, 0.12ug/L, and 0.10ug/L (respectively). Dissolved copper, nickel, and zinc were detected in TB YP-TB-56 at 0.2ug/L, 0.3ug/L, and 0.5ug/L (respectively). Sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples, for antimony and copper. Barium sample analysis results were greater than five times the MB concentration; therefore, no qualification was required.

Methyl Mercury: Methyl Mercury was detected in Trip Blank YP-TB-55, at 0.6 ng/L. Sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples.

Dissolved Mercury: Dissolved Mercury was detected in Trip Blank YP-TB-55, at 0.6 ng/L. Sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples.

Arsenic III: Arsenic III was detected in Trip Blank YP-TB-55 at 0.04 ng/L. Sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples.

TKN: TKN was detected in Trip Blanks YP-TB-54 (1.26 mg/L), YP-TB-55 (0.35 mg/L), and YP-TB-56 (0.45 mg/L). Sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. There is no regulatory criterion for TKN listed in the QAPP, and the qualified results are fully usable.

TDS: TDS was not detected in method blanks, and no qualification was required.

Anions: Anions were not detected in method blanks, and no qualification was required.

INITIAL AND CONTINUING CALIBRATION BLANKS
Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)
Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)
Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Methyl Mercury: % RPD failed at >20%, in YP-AS-6 (35%). This analyte in the parent samples has been qualified as estimated (UJ/J+). The qualified results RLs are well below the regulatory criterion and are fully usable. % Recovery, for YP-T-21, failed (137% / 36%); therefore, sample results were qualified as estimated (J+/UJ). % Recovery, for YP-T-46, failed at (90% / 64%) therefore, sample results were qualified as estimated (UJ).

Metals: The %RPD of total magnesium (130%), in the spike of YP-AS-6, was above the control limits of 20%. Sample results have been qualified as estimated (J+). The qualified results' RLs are well below the regulatory criterion and are fully usable. Post dilution spike (PDS) % recovery was >20% (27.5%), for sample YP-AS-4 was qualified as estimated.

Anions: Both MS/MSD Chloride %Recoveries (82% / 82%) failed the specified 90-110% control limits, for sample YP-M-3. Sample results were qualified as estimated (UJ).

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)
A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES
Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Field Duplicate Sample	Parent Sample
YP-D-107	YP-T-44
YP-D-108	YP-T-17
YP-D-109	YP-T-41

All results were within control limits, with the exception of analysis listed below.

Metals: Multiple pairs of results were outside the control limits as shown below. The qualified results are fully usable.

Sample / FD	Analyte	Sample / FD concentrations	RPD	Regulatory Criterion	Qualification

Sample / FD	Analyte	Sample / FD concentrations	RPD	Regulatory Criterion	Qualification
YP-T-44 and YP-D-107	Mercury (Total)	21.4 / 17.3 ng/L	21.2 %	12 ng/L	J / J
	Mercury (Diss)	6.4 / 8.4 ng/L	27.0 %	12 ng/L	J / J
	Arsenic III	0.5 / 0.4 µg/L	22.2 %	NL	J / J
YP-T-44 and YP-D-107	Manganese (Total)	1.7 / 1.1 µg/L	42.9 %	50 µg/L	J / J
YP-T-17 and YP-D-108	Methyl Hg (Total)	1.1 / 0.8 µg/L	31.6%	NL	J / J
	Aluminum (Dissolved)	15.2 / 7.0 ug/L	73.9 %	50 ug/L	J / J
	Cobalt (Diss)	0.21 / 0.17 µg/L	21.1 %	NL	J / J
	Copper (Diss)	0.3 /02 µg/L	40.0 %	9.0 µg/L	J / J
	Iron (Dissolved)	558 / 283 ug/L	65.4 %	300 ug/L	J / J
	Zinc (Dissolved)	2.4 / 1.6 µg/L	40.0 %	120 µg/L	J / J
	TSS	278 / 80 mg/L	110%	NL	J / J
YP-T-41 and YP-D-109	Mercury (Total)	2.2 / 7.1 ng/L	105.4%	12 ng/L	J / J
	Cobalt (Total)	0.02 / 0.03 µg/L	40.0%	NL	J / J
	Molybdenum (Dissolved)	0.08 / 1.0 µg/L	22.2 %	600 µg/L	J / J

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met except as noted below.

Total Metals: Metals results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / LD	Analyte	Sample / LD concentrations	RPD	Regulatory Criterion	Qualification
YP-AS-6	Magnesium (Total)	1.8 / 1.4 µg/L	25.0 %	2.0 µg/L	J
YP-AS-4	Aluminum (Total)	5.8 / 4.4 µg/L	27.5 %	2.0 µg/L	J
YP-T-7	Lead (Total)	0.3 / 0.2 µg/L	40.0 %	0.02 µg/L	J
YP-T-46	Aluminum (Diss)	7.9/ 12.1 µg/L	53.2%	2.0 µg/L	J

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All ICP analysis passed % R (recovery) limit criteria.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

ED_002764_00003042-00198

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 4Q16 November/December 2016 SW Samples, K1614625, K1614761, K1614889
Prepared By: Jennifer Chandler, Chemist - HDR Inc.
Date: December 2016

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Monthly sampling at approximately 54 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, and post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 41 locations for SW, 3 field duplicate samples also collected
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package

ED_002764_00003042-00199

Data or Measurement Quality Objective	Yes	No	Comments
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		160.2, 351.4, 300.0, 353.2, 2320, 4500-CN3, 4500NH3 G, 2340, 1630, 1631, 1632, 6010C, 6020A, 2540C
Accuracy of data appropriate?	X		LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X		LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

ED_002764_00003042-00200

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 3SM 4500-NH3 G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10051815-10.4
Sample Data Package:	K1614625, K1614761, K1614889
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	29-30 Nov; 1,2,4-7 Dec 2016
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010); National Functional Guidelines for Organic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES
All holding time criteria were met and no qualification was required.

III. SAMPLES ANALYZED
All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS
TRIP BLANKS (TB)
Target analytes were generally not detected in the trip blanks (YP-TB-57 and YP-TB-58) except as noted below.

Metals: Total Zinc was detected in one TB; three sample concentrations were less than five times the TB concentration. Samples were qualified as estimated (J+). Dissolved calcium and magnesium were detected in one TB; however, all sample concentrations were greater than five times the TB. Therefore, no qualifications were required.

TKN: TKN was detected in both TBs; sample concentrations that were less than five times the TB concentration were qualified as estimated (J+).

METHOD BLANKS (MB)
Total Metals: Barium and calcium was detected in MBs; however, all sample concentrations were greater than five times the MB concentration. No qualification was required.

INITIAL AND CONTINUING CALIBRATION BLANKS
Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)
Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)
Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Methyl Mercury: % RPD failed at >20%, in YP-T-21 (32%). Sample results has been qualified as estimated (UJ). The qualified results RLs are well below the regulatory criterion and are fully usable. % Recovery, for YP-T-23A, failed low (40% / 45%); therefore, sample results were qualified as estimated (J-). % Recovery, for YP-TB-58, failed at (56%) and %RPD failed at >20% (31%). Therefore, sample results were qualified as estimated (UJ). %RPD failed at >20% (23%) for YP-T-44. Sample results were qualified as estimated

TKN: %RPD failed at >20% (26%), in the spike of YP-T-21. Sample results have been qualified as estimated (J+).

N/N as Nitrogen: % Recoveries, for YP-SR-8. failed low (88% / 89%). Sample results have been qualified as estimated (UJ). % Recoveries, for Y-T-40, failed low (87% / 88%). Sample results have been qualified as estimated (UJ).

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)
A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on

samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES

Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Field Duplicate Sample	Parent Sample
YP-D-110	YP-SR-2
YP-D-111	YP-T-41
YP-D-112	YP-M-4

All results were within control limits, with the exception of analysis listed below.

Metals: Multiple pairs of results were outside the control limits as shown below. The qualified results are fully usable.

Sample / FD	Analyte	Sample / FD concentrations	RPD	Regulatory Criterion	Qualification
YP-SR-2 and YP-D-110	TKN	0.45 / 2.24 mg/L	133.1 %	NL	J / J
YP-T-41 and YP-D-111	TDS	28.8 / 22.5 mg/L	24.6 %	500 mg/L	J / J
YP-M-4 and YP-D-112	TSS	140 / 49.5 mg/L	95.5 %	NL	J / J
	TKN	0.76 / 0.47 mg/L	47.2 %	NL	J / J
	Mercury (Diss)	4.8 / 9.4 mg/L	64.8 %	0.000012 mg/L	J / J
	Aluminum (Diss)	3.2 / 2.1	41.5 %	0.5 mg/L	J / J

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met except as noted below.

Total Metals: Metals results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / LD	Analyte	Sample / LD concentrations	RPD	Regulatory Criterion	Qualification
YP-T-21	Aluminum (Diss)	2.0 / 2.7 µg/L	28.0 %	2.0 µg/L	J
YP-SR-8	Iron (Diss)	59 / 36 µg/L	49.0 %	2.0 µg/L	J

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All ICP analysis passed % R (recovery) limit criteria.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 1Q17
February 2017 SW Samples, K1701507 and K1701610
Prepared By: Jennifer Chandler, Chemist - HDR Inc.
Date Collected: February 7,8,12,13,14,15, 2017

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Monthly sampling at approximately 54 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, and post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 29 locations for SW, 2 field duplicate samples also collected
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package

ED_002764_00003042-00205

Data or Measurement Quality Objective	Yes	No	Comments
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		160.2, 351.4, 300.0, 353.2, 2320, 4500-CN3, 4500NH3 G, 2340, 1630, 1631, 1632, 6010C, 6020A, 2540C
Accuracy of data appropriate?	X		LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X		LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

ED_002764_00003042-00206

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 3SM 4500-NH3 G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10051815-10.4
Sample Data Package:	K1701507 and K1701610
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	7,8,12-15 February 2017
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010); National Functional Guidelines for Organic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES

TSS: Sample YP-T-15 is outside of holding time by one day. Sample results were qualified as estimated (UJ).

All remaining holding time criteria were met and no qualification was required.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

TRIP BLANKS (TB)

Target analytes were generally not detected in the trip blank YP-TB-59 except as noted below.

Metals: Total barium, lead, and magnesium were detected in one TB. Sample concentrations, for lead, were less than five times the TB concentration, and samples were qualified as estimated (J+). Dissolved copper and lead were detected in one TB. Sample concentrations were greater than five times the TB. Therefore, no qualifications were required.

TKN: TKN was detected in the TB. Sample concentrations that were less than five times the TB concentration were qualified as estimated (J+).

METHOD BLANKS (MB)

Total Metals: Calcium, Magnesium, Manganese, and Sodium were detected in MBs. Sample concentrations that were less than five times the MB concentrations were qualified as estimated (J+).

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Methyl Mercury: % RPDs failed at >20%, in YP-SR-13 (26%) and YP-T-15 (35%). Sample results has been qualified as estimated (UJ/J+). The qualified results RLs are well below the regulatory criterion and are fully usable. % Recovery, for YP-T-15, failed low* (45%* / 77%) and for YP-SR-13 (60% / 46%*). Sample results were qualified as estimated (UJ/J-).

As III: YP-T-48 failed %RPD at 21%>20%. Sample results have been qualified as estimated (J+).

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES

Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Field Duplicate Sample	Parent Sample
YP-D-113	YP-SR-13
YP-D-114	YP-T-48

All results were within control limits, with the exception of analysis listed below.

Metals: Multiple pairs of results were outside the control limits as shown below. The qualified results are fully usable.

Sample / FD	Analyte	RPD	Regulatory Criterion	Qualification
YP-T-48 and YP-D-114	Cadmium (T)	26.1 %	0.00025 mg/L	J / J
	Cobalt (T)	25.2 %	NL	J / J
	Thallium (T)	21.7 %	0.00024 mg/L	J / J
	Cobalt (D)	18.2 %	NL	J / J
	Copper (D)	21.3 %	0.009 mg/L	J / J
	Thallium (D)	28.6 %	0.00024 mg/L	J / J
	TKN	44.7 %	NL	J / J
YP-SR-13 and YP-D-113	Zinc (T)	141.2 %	0.120	J / J
	Copper (D)	25 %	0.009 mg/L	J / J
	Zinc (D)	57.1 %	0.120	J / J
	As III	40.0 %	NL	J / J
	TKN	79.7%	NL	J / J

T = Total Metals
D = Dissolved Metals

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met except as noted below.

Total Metals: Metals results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / LD	Analyte	RPD	Regulatory Criterion	Qualification
YP-S-10	Manganese (T)	28.0 %	2.0 µg/L	J

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All ICP analysis passed % R (recovery) limit criteria.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 2Q17
May 2017 SW Samples, K1705034 and K1705152
Prepared By: Jennifer Chandler, Chemist - HDR Inc.
Date Collected: May 13-17 2017

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Monthly sampling at approximately 54 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, and post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 31 locations for SW, including 2 field duplicate samples and 1 Trip Blank, were collected
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package

ED_002764_00003042-00211

Data or Measurement Quality Objective	Yes	No	Comments
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		160.2, 351.4, 300.0, 353.2, 2320, 4500-CN3, 4500NH3 G, 1630, 1631E, 1632, 6010C, 6020A, 2540C, 2340B
Accuracy of data appropriate?	X		LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X		LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

ED_002764_00003042-00212

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 3SM 4500-NH3 G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10051815-10.4
Sample Data Package:	K1705034 and K1705152
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	13-17 May 2017
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010); National Functional Guidelines for Organic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES

All holding time criteria were met, and no qualification was required.

III. SAMPLES ANALYZED

All planned samples were collected, and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

TRIP BLANKS (TB)

Target analytes were generally not detected in the trip blank YP-TB-60 except as noted below.

Metals: Total calcium, copper, and magnesium were detected in one TB. Sample concentrations, for copper, were less than five times the TB concentration, and samples were qualified as estimated (J+). Dissolved calcium and magnesium were detected in one TB. Sample concentrations were greater than five times the TB. Therefore, no qualifications were required.

TKN: TKN was detected in the TB. Sample concentrations that were less than five times the TB concentration were qualified as estimated (J+).

METHOD BLANKS (MB)

All method blanks were reported as non-detected above the MRLs. No qualifications were required.

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Metals: % Recovery, for YP-SR-6, failed low (74% <75% limit). Sample results were qualified as estimated (J-).

Methyl Mercury: % RPDs failed at >20%, in SGLF-02 (94%), YP-SR-6 (43%), and YP-D-116 (33%). Sample results has been qualified as estimated (UJ). The qualified results RLs are below the regulatory criterion and are fully usable. % Recovery, for failed low* for Y-SR-6 (105% / 68% *), and SGLF-02 (46% * / 17% *).Sample results were qualified as estimated (UJ).

As III: YP-T-33 failed %RPD at 24%>20%. Sample results have been qualified as estimated (J+).

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These

tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES

Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Field Duplicate Sample	Parent Sample
YP-D-115	SGLF-02
YP-D-116	YP-T-33

All results were within control limits, with the exception of analysis listed below.

Metals: Multiple pairs of results were outside the control limits as shown below. The qualified results are fully usable.

General Chemistry: See below for results outside of control limits. The qualified results are fully usable.

Sample / FD	Analyte	RPD	Regulatory Criterion	Qualification
SGLF-02 and YP-D-115	Cobalt (T)	22.6 %	NL	J / J
	Copper (D)	25.0 %	0.009 mg/L	J / J
	TKN	22.2 %	NL	J / J
	TSS	20.7 %	NL	J / J
YP-T-33 and YP-D-116	Copper (D)	50.6 %	0.009 mg/L	J / J

T = Total Metals
D = Dissolved Metals

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met except as noted below.

Total TSS: TSS results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / LD	Analyte	RPD	Regulatory Criterion	Qualification
YP-D-116	Manganese (D)	26 %	0.05 mg/L	J
YP-SR-6	Iron (D)	38 %	0.3 mg/L	J
	TSS	37 %	NL	J

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All ICP analysis passed % R (recovery) limit criteria.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 2Q17
May 2017 SW Samples, K1705186 and K1705245
Prepared By: Jennifer Chandler, Chemist - HDR Inc.
Date Collected: May 18-22 2017

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Monthly sampling at approximately 54 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicate and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, and post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 31 locations for SW, including 1 field duplicate sample
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD sample documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package

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Data or Measurement Quality Objective	Yes	No	Comments
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		160.2, 351.4, 300.0, 353.2, 2320, 4500-CN3, 4500NH3 G, 1630, 1631E, 1632, 6010C, 6020A, 2540C, 2340B
Accuracy of data appropriate?	X		LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X		LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

ED_002764_00003042-00218

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 3SM 4500-NH3 G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10051815-10.4
Sample Data Package:	K1705186 and K1705245
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	18-22 May 2017
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010); National Functional Guidelines for Organic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES
All holding time criteria were met, and no qualification was required.

III. SAMPLES ANALYZED
All planned samples were collected, and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS
TRIP BLANKS (TB)
No TBs were included with these two Sample Data Packages.

METHOD BLANKS (MB)
All method blanks were reported as non-detected above the MRLs. No qualifications were required.

INITIAL AND CONTINUING CALIBRATION BLANKS
Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)
Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)
Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Metals: % RPD, for YP-HP-S1, failed low (73% < 75% limit), for dissolved Calcium. Sample results were qualified as estimated (J-).

Methyl Mercury: % Recoveries failed low, in YP-T-50 (MS 32%/ MSD 32%) and YP-T-12 (MSD 26%). Sample results has been qualified as estimated (UJ). The qualified results RLs are below the regulatory criterion and are fully usable.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)
A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES
Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Field Duplicate Sample	Parent Sample
YP-D-117	Y-T-1

All results were within control limits, with the exception of analysis listed below.

Metals: Multiple pairs of results were outside the control limits as shown below. The qualified results are fully usable.

Sample / FD	Analyte	RPD	Regulatory Criterion	Qualification
YP-T-1 and YP-D-117	Copper (D)	40.0 %	0.009 mg/L	J / J
	Iron (T)	22.6 %	0.3 mg/L	J / J
	Mercury (T)	56.2 %	0.000012 mg/L	J / J

T = Total Metals
D = Dissolved Metals

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met except as noted below.

Metals: Copper results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / LD	Analyte	RPD	Regulatory Criterion	Qualification
YP-HP-S1	Copper (Dissolved)	29 %	0.009 mg/L	UJ

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All ICP analysis passed % R (recovery) limit criteria.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 3Q17
Aug 2017 SW Samples, K1709042, K1709092, and K1709187
Prepared By: Jennifer Chandler, Chemist - HDR Inc.
Date Collected: August 22-30 2017

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Monthly sampling at approximately 54 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicate and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, and post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 64 locations for SW, including 2 field duplicate sample
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD sample documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package

ED_002764_00003042-00222

Data or Measurement Quality Objective	Yes	No	Comments
Complete data packages available?	X		Level IV
Specified methods used and detection limits met?	X		160.2, 351.4, 300.0, 353.2, 2320, 4500-CN3, 4500NH3 G, 1630, 1631E, 1632, 6010C, 6020A, 2540C, 2340B
Accuracy of data appropriate?	X		LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X		LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives.

ED_002764_00003042-00223

DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by USEPA Method 3SM 4500-NH3 G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10051815-10.4
Sample Data Package:	K1709094, K1709092, and K1709187
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	22-30 August 2017
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010); National Functional Guidelines for Organic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Jennifer Chandler, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

II. HOLDING TIMES
All holding time criteria were met, and no qualification was required.

III. SAMPLES ANALYZED
All planned samples were collected, and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS
TRIP BLANKS (TBs) YP-TB-61 and YP-TB-62

Metals: Arsenic (Total and Dissolved) and Copper (Dissolved) were detected in YP-TB-61. Sample results less than five times the TB concentration were qualified as estimated (J+).

Mercury: Mercury (Dissolved) was detected in YP-TB-61. Sample results less than five times the TB concentration were qualified as estimated (J+).

Methyl Mercury: Methyl Mercury was detected in YP-TB-61. Sample results less than five times the TB concentration were qualified as estimated (J+).

Arsenic III: Arsenic III was detected in YP-TB-61. Sample results less than five times the TB concentration were qualified as estimated (J+).

TKN: TKN was detected in YP-TB-61. Sample results less than five times the TB concentration were qualified as estimated (J+).

TDS: TDS was detected in YP-TB-61 and YP-TB-62. All sample results were non-detect; therefore, no qualification was required.

Nitrogen-N/N: Nitrogen was detected in YP-TB-61. All sample results were non-detect; therefore, no qualification was required.

METHOD BLANKS (MB)
All method blanks were reported as non-detected above the MRLs, with the exception listed below:

TDS: TDS was detected in the method blank for K1709187. All sample results were greater than five times the MBs concentration; therefore, no qualification was required.

INITIAL AND CONTINUING CALIBRATION BLANKS
Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)
Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)
Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Methyl Mercury: % Recoveries failed, in YP-AS-7 (MS 50%/ MSD 70%), YP-T-51 (MS 105%/ MSD 60%), and YP-SR-11 (MS 85%/ MSD 145%). % RPD recoveries were outside the criteria limit of 20% for the following samples: YP-AS-7 (22%), YP-T-51 (55%), YP-AS-2 (22%), and YP-T-29

(25%). Sample results has been qualified as estimated (UJ/J-/J+). The qualified results RLs are below the regulatory criterion and are fully usable.

Ammonia: % Recoveries failed, in YP-T-51 (MS 111%/ MSD 110%), YP-T-21 (MS 107%/ MSD 112%), YP-SR-11 (MS 83%/ MSD 89%), YP-YPP-01 (MS 91%/ MSD 89%), YP-T-15 (MS 86%/ MSD 93%), and YP-T-27 (MS 114%/ MSD 107%). Sample results has been qualified as estimated (J-/J+). The qualified results RLs are below the regulatory criterion and are fully usable.

VI. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES

Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

Field Duplicate Sample	Parent Sample
YP-D-118	YP-AS-7
YP-D-119	YP-T-43

All results were within control limits, with the exception of analysis listed below.

Metals: Multiple pairs of results were outside the control limits as shown below. The qualified results are fully usable.

Sample / FD	Analyte	RPD	Regulatory Criterion	Qualification
YP- and YP-D-118	Aluminum (T)	20.9 %	0.05 mg/L	J / J
	Lead (T)	24.0 %	0.0025 mg/L	J / J
	Phosphorus (T)	24.1 %	NL	J / J
	Thallium (T)	23.3 %	0.00024 mg/L	J / J
	Beryllium (D)	23.5 %	0.004 mg/L	J / J
	Mercury (T)	36.6 %	0.000012 mg/L	J / J
	Mercury (D)	20.0 %	0.000012 mg/L	J / J
	TKN	40.0 %	NL	J / J
YP-T-43 and YP-D-119	Arsenic III	184.6 %	NL	J / J

T = Total Metals
D = Dissolved Metals

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD, or less than the MRL for results less than five times the MRL, as suggested in the Functional Guidelines, were generally met except as noted below.

Metals: Copper results were outside control limits as shown in the table below. All qualified results were either well above or well below the regulatory criteria and are fully usable.

Sample / LD	Analyte	RPD	Regulatory Criterion	Qualification
YP-SR-11	Aluminum (Dissolved)	21 %	0.05 mg/L	J
	Ammonia	55 %	NL	J
YP_SEBS-1	Iron (Total)	33 %	0.3 mg/L	J

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met. No qualification was required.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All ICP analysis passed % R (recovery) limit criteria.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

Quarterly Data Usability Assessment

Name of Data Set: Midas Gold Golden Meadows Project, 4Q17
November 2017 SW Samples, K1712288, K1712374, K1712442
Prepared By: Lynn Lutz, Senior Chemist, HDR Inc.
Date: February 10, 2017

Data or Measurement Quality Objective	Yes	No	Comments
Planning documents available?	X		Draft QAPP-SWQSP
Project objectives identified?	X		The overall goal of the QAPP-SWQSP is to develop a surface water quality program to continue characterizing surface water quality conditions in the Golden Meadows Project study area. The collected data will be used to establish existing baseline conditions and provide a framework to evaluate long-term trends and water quality impacts from future mining activities. The QAPP-SWQSP outlines an approach that will support NEPA activities and environmental permitting.
Sample design described?	X		Quarterly sampling at approximately 43 locations with additional locations and analyses quarterly
QA/QC procedures defined?	X		Field duplicates and MS/MSD samples collected, lab internal method/QA procedures implemented (lab duplicates, serial dilution, post digestion spikes).
Field documents available for review?	X		Field notebooks pdf.
Sample site locations/description provided?	X		Figures (maps) of sampling locations and terrain in QAPP-SWQSP
Sample types and numbers defined?	X		Approximately 43 locations for SW
Field SOPs defined?	X		
Field calibrations recorded?	X		
QC samples documented?	X		FD samples documented in field notebook, blind to lab and blind on COC. MS/MSD samples specified on COC.
COC record documents?	X		Included in data package
Complete data packages available?	X		Level IV

ED_002764_00003042-00228

Data or Measurement Quality Objective	Yes	No	Comments
Specified methods used and detection limits met?	X	X	Metals in QAPP by 200.7, 200.8, lab used SW6010C, SW6020A.
Accuracy of data appropriate?	X	X	LCS, MS and MSD recoveries were generally within control limits.
Precision of data appropriate?	X	X	LCS/LCSD and MS/MSD RPDs were generally within control limits. Most field duplicate RPDs and lab duplicate RPDs were within control limits; for RPDs that were above control limits, sample results were generally well above or below the regulatory levels and fully usable.
Representativeness of data appropriate?	X		Data were collected at sites according to the QAPP-SWQSP.
Completeness of data appropriate?	X		There were no rejected results; data were 100% complete, meeting the project goal of 90%.
Comparability of data appropriate?	X		All samples were analyzed by the same methods throughout the quarter, and by the same lab as in previous quarters.
Sensitivity of methods appropriate?	X		MRLs were less than the regulatory criteria.
Do the data satisfy the project goals and meet the quality objectives?	X		All data were fully usable for project objectives, with the following cautions: -Total copper was detected in the trip blank. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. Some of the qualified results are near the regulatory criterion and should be used with caution. - The recovery for the MS spike of sample YP-SR-4 of dissolved nickel at 627% was above the control limits of 75-125%. Dissolved nickel in the parent sample has been qualified as non-detect estimated (UJ). Nickel was non-detect at 0.2 µg/L, well below the regulatory criterion of 52 µg/L. However, the spike at 25 µg/L, below the criterion, was

ED_002764_00003042-00229

Data or Measurement Quality Objective	Yes	No	Comments
			recovered at 157 µg/L, above the criterion. This dissolved nickel non-detect result should be used with caution. -The recovery for the MS spike of sample YP-T-22 of dissolved antimony at 139% was above the control limits of 75-125%. Dissolved antimony in the parent sample has been qualified as estimated (J). Antimony was detected at 7.2 µg/L, only slightly above the regulatory criterion of 5.6 µg/L. This dissolved antimony result should be used with caution as a result above the regulatory criterion. -The cyanide low standard of 0.01 mg/L was above the RL of 0.0027 mg/L. Non-detect results have been qualified as non-detect estimated (UJ), and detections less than the low standard have been qualified as estimated (J). The low standard is also above the regulatory criterion of 0.0052 mg/L. The qualified results should be used with caution, as they cannot be determined to be definitely below the criterion.

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DATA VALIDATION REPORT

TOTAL and DISSOLVED METALS by USEPA SW-846 Methods 6010C and 6020A
HARDNESS (CALCULATED) as $CaCO_3$ by Standard Method 2340B
TOTAL and DISSOLVED MERCURY by USEPA Method 1631E
TOTAL METHYL MERCURY by USEPA Method 1630
ARSENIC (III) by USEPA Method 1632 Revision A
ANIONS (CHLORIDE, FLUORIDE, SULFATE) by USEPA Method 300.0
AMMONIA as NITROGEN by Standard Method 4500 NH3-G
TOTAL KJELDAHL NITROGEN (TKN) by USEPA Method 351.4
NITRATE + NITRATE as NITROGEN by USEPA Method 353.2
TOTAL NITROGEN (CALCULATION) by USEPA Methods 351.4 and 353.2
TOTAL ALKALINITY as $CaCO_3$ by Standard Method 2320B
BICARBONATE as $CaCO_3$ by Standard Method 2320B
CARBONATE as $CaCO_3$ by Standard Method 2320B
TOTAL DISSOLVED SOLIDS by Standard Method 2540C
TOTAL SUSPENDED SOLIDS by USEPA Method 160.2
TOTAL CYANIDE by Standard Method SM4500-CN-E

Project:	Midas Gold - Golden Meadows
Project/Task Number:	10091372 Task 02
Sample Data Package:	K1712288, K1712374, K1712442
Laboratory:	ALS Environmental, Kelso, Washington (ALS)
Sample Matrix:	Surface Waters
Sampling Dates:	7 to 14 November 2017
Validation Guidelines:	Project QAPP *(Draft Quality Assurance Project Plan and Surface Water Quality Sampling Plan [QAPP-SWQSP] for the Golden Meadows Project Sampling and Analysis Plan, Version 1.0* [HDR, March 2012]); United States Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd edition* (SW-846); USEPA *Methods for the Chemical Evaluation of Water and Wastes*; *Standard Methods for the Examination of Water and Wastewater; National Functional Guidelines for Inorganic Superfund Data Review (USEPA, January 2010);* and professional judgment
Validation Level:	Stage 2BVM (100 % of data), 10% Stage 4
Data Reviewer:	Lynn Lutz, HDR

SUMMARY

One hundred percent of the data underwent Stage 2BVM level validation and ten percent underwent stage 4VM level validation.

Laboratory data were acceptable with qualification as noted below. No data were rejected. Completeness was 100%, which met the goal of 90% for the project.

I. SAMPLE RECEIPT / CHAIN OF CUSTODY

The chains of custody (COC) were filled out and signed. Samples were received at the correct temperature range (between 0°C and 6°C). No qualification was required.

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II. HOLDING TIMES

All holding time criteria were met and no qualification was required except as noted below.

TDS: Some TDS analyses in data package K1712288 were collected on 11/7/2017 and analyzed on 11/16/2017, two days past the seven day holding time, and these sample results have been qualified as estimated (J) or non-detect estimated (UJ). Qualified results were either well above or well below the regulatory criterion of 500 mg/L and are fully usable.

III. SAMPLES ANALYZED

All planned samples were collected and all scheduled analyses were performed. The correct analyte lists were reported. No qualification was required.

IV. BLANKS

TRIP BLANKS (YP-TB-63)

Target analytes were generally not detected in the trip blank (YP-TB-63) except as noted below.

Total Metals:

Dissolved antimony was detected in the trip blank. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+). The qualified results are well below the regulatory criterion and are fully usable.

Total antimony was detected in the trip blank. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. The qualified results are well below the regulatory criterion and are fully usable.

Total copper was detected in the trip blank. Associated sample results less than five times the blank concentrations have been qualified as estimated with a possible high bias (J+) in the associated samples. Some of the qualified results are near the regulatory criterion and should be used with caution.

Total calcium was detected in the trip blank. Associated sample results were well above the blank concentration and no qualification was required.

TDS: TDS was detected in the trip blank at 44 mg/L. Sample results less than five times this concentration have been qualified as estimated with a possible high bias (J+). The qualified results are well below the regulatory criterion and are fully usable.

METHOD BLANKS

Target analytes were not detected in method blanks and required no qualification except as noted below.

Total Metals: Total calcium was detected slightly above the method reporting limit (MRL) in one method blank. Results in the associated samples were well above the blank and no qualification was required.

INITIAL AND CONTINUING CALIBRATION BLANKS

Target analytes were not detected above the MRLs in the initial calibration blanks (ICBs) or continuing calibration blanks (CCBs).

V. LABORATORY CONTROL SAMPLES (LCS)

Recoveries and relative percent differences (RPDs) were within the laboratory's control limits.

VI. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

Recoveries and RPDs were generally within the laboratory's control limits except as noted below.

Metals: Only MS spikes were analyzed, per the method requirements.

The recovery for the MS spike of sample YP-SR-4 of dissolved nickel at 627% was above the control limits of 75-125%. Dissolved nickel in the parent sample has been qualified as non-detect estimated (UJ). Nickel was non-detect at 0.2 µg/L, well below the regulatory criterion of 52 µg/L. However, the spike at 25 µg/L, below the criterion, was recovered at 157 µg/L, above the criterion. This dissolved nickel non-detect result should be used with caution.

The recovery for the MS spike of sample YP-SR-4 of dissolved zinc at 152% was above the control limits of 75-125%. Dissolved zinc in the parent sample has been qualified as non-detect estimated (UJ). Zinc was non-detect at 2 µg/L, well below the regulatory criterion of 120 µg/L. The spike at 25 µg/L, below the criterion, was recovered at 38 µg/L, also below the criterion. This dissolved zinc non-detect result is usable as qualified.

The recovery for the MS spike of sample YP-T-7 of total antimony at 136% was above the control limits of 75-125%. Total antimony in the parent sample has been qualified as estimated (J). Antimony was detected at 0.863 µg/L, well below the regulatory criterion of 5.6 µg/L. This total antimony result is usable as qualified.

The recovery for the MS spike of sample YP-T-7 of total molybdenum at 130% was above the control limits of 75-125%. Total molybdenum in the parent sample has been qualified as estimated (J). Molybdenum was detected at 1.21 µg/L, well below the regulatory criterion of 600 µg/L. This total molybdenum result is usable as qualified.

The recovery for the MS spike of sample YP-T-22 of dissolved antimony at 139% was above the control limits of 75-125%. Dissolved antimony in the parent sample has been qualified as estimated (J). Antimony was detected at 7.2 µg/L, only slightly above the regulatory criterion of 5.6 µg/L. This dissolved antimony result should be used with caution as a result above the regulatory criterion.

The recovery for the MS spike of sample YP-T-22 of dissolved molybdenum at 126% was above the control limits of 75-125%. Dissolved molybdenum in the parent sample has been qualified as estimated (J). Molybdenum was detected at 0.98 µg/L, well below the regulatory criterion of 600 µg/L. This dissolved molybdenum result is usable as qualified.

VII. DILUTION TEST AND POST DIGESTION SPIKE (PDS)

A dilution test was performed for analytes detected at least 50 times the concentration of the MRL, and results agreed within ten percent. A post digestion spike (PDS) was performed on samples and the recoveries were between 80 and 120 percent except as noted below. These tests are applicable only to total and dissolved metals by SW6010C and SW6020A. All results were within control limits and no qualification was required.

VIII. FIELD DUPLICATES

Field duplicate (FD) samples were collected as shown in the table below. Control limits of 20% RPD (35% for As[III]), or less than the MRL for results less than five times the MRL, as stated in the QAPP, were used. Some results for analytes detected above the MRL were outside the control limits. Qualification was as discussed below.

ED_002764_00003042-00233

Field Duplicate Sample	Parent Sample
YP-D-121	YP-T-6

Total Metals: Total chromium results were outside control limits as shown in the table below. All qualified results were well below the regulatory criterion and are fully usable.

Sample / FD	Analyte	Sample / FD concentrations	RPD	Regulatory Criterion	Qualification
YP-T-6 / YP-D-121	Total Chromium	<0.2 / 0.22 µg/L	NA	100 µg/L	UJ / J

IX. LABORATORY DUPLICATES

Laboratory duplicate (LD) analyses were performed on some samples from this project. Control limits of 20% RPD (35% for As[III]) , or less than the MRL for results less than five times the MRL, as stated in the QAPP, were met and no qualification was required.

X. INSTRUMENT CALIBRATION

Instrument calibration requirements were met and no qualification was required except as noted below.

TKN: The low standard of 1 mg/L was above the RL of 0.2 mg/L. Non-detect results have been qualified as non-detect estimated (UJ), and detections less than the low standard have been qualified as estimated (J). There is no regulatory criterion listed in the QAPP for TKN, and qualified results are fully usable.

Cyanide: The low standard of 0.01 mg/L was above the RL of 0.0027 mg/L. Non-detect results have been qualified as non-detect estimated (UJ), and detections less than the low standard have been qualified as estimated (J).). The low standard is also above the regulatory criterion of 0.0052 mg/L. The qualified results should be used with caution, as they cannot be determined to be definitely below the criterion.

XI. INTERFERENCE CHECK SAMPLES

Interference check sample solutions ICSA and ICSAB were analyzed (methods 6010C and 6020A only).

Total and Dissolved Metals: All sample criteria was met. No qualification was required.

XII. SAMPLE REPORTING LIMITS

Reporting limits were less than or equal to the applicable regulatory criteria as listed in the project QAPP.

XIII. SAMPLE RESULTS / TRANSCRIPTION VERIFICATION

Transcription between the data package and the EDDs was verified. No results were reported below the MRLs, but as all MRLs were below regulatory criteria, this does not affect usability of the data.

Appendix B: Surface Water Quality Data Summary Statistics

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-46, south fork Meadow Creek												
Alkalinity as CaCO3	mg/L	11	0	0	12.9	28	21.4273	23	4.9049	25	26.5	27.7
Aluminum (Fume Or Dust), D	ug/L	8	0	0	7.9	20.6	12.4125	11.7	4.1954	16.68	18.64	20.208
Aluminum (Fume Or Dust), T	ug/L	8	0	0	15.7	58.2	30.4375	24.6	16.8929	56.24	57.22	58.004
Ammonia as Nitrogen	mg/L	0	11	1	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	11	0	0	0.15	0.25	0.2076	0.21	0.0344	0.24	0.245	0.249
Antimony, T	ug/L	11	0	0	0.15	0.25	0.2048	0.21	0.0305	0.23	0.24	0.248
Arsenic (III), T	ug/L	6	0	0	0.08	0.12	0.1	0.095	0.0167	0.12	0.12	0.12
Arsenic, D	ug/L	11	0	0	0.9	1.4	1.1609	1.2	0.1727	1.4	1.4	1.4
Arsenic, T	ug/L	11	0	0	0.9	1.7	1.3036	1.3	0.2428	1.6	1.65	1.69
Barium, D	ug/L	6	0	0	3.89	4.86	4.5583	4.695	0.3747	4.855	4.8575	4.8595
Barium, T	ug/L	6	0	0	4.23	5.12	4.71	4.69	0.3134	5.045	5.0825	5.1125
Beryllium, D	ug/L	0	6	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	0	6	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	11	0	0	12.9	28	21.4273	23	4.9049	25	26.5	27.7
Boron, D	ug/L	0	6	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	6	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	9	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	9	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	11	0	0	3800	7340	5820.9091	6520	1314.4083	7270	7305	7333
Calcium, T	ug/L	11	0	0	3770	7340	5825.4545	6370	1343.9744	7330	7335	7339
Carbonate as CaCO3	mg/L	0	11	100	15	15	15	15	0	15	15	15
Chloride	mg/L	0	11	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, D	ug/L	2	7	78	0.2	0.47	0.2522	0.2	0.1051	0.414	0.442	0.4644
Chromium, T	ug/L	0	9	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Cobalt, D	ug/L	1	5	83	0.02	0.023	0.0205	0.02	0.0012	0.0215	0.0222	0.0228
Cobalt, T	ug/L	4	2	33	0.02	0.024	0.0212	0.02	0.0018	0.0235	0.0238	0.024
Color	Pt-Co	6	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	11	0	0	0.03	0.071	0.0525	0.052	0.0116	0.064	0.0675	0.0703
Copper, D	ug/L	7	2	22	0.1	0.3	0.16	0.1	0.0762	0.236	0.268	0.2936
Copper, T	ug/L	3	6	67	0.1	0.2	0.1111	0.1	0.0333	0.12	0.16	0.192
Cyanide, T	mg/L	0	6	100	0.0047	0.0047	0.0047	0.0047	0	0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	11	0	0	8.47	9.55	8.9991	8.84	0.4259	9.54	9.545	9.549
Flow velocity	CFS	11	0	0	0.225	9.67	2.3598	0.6918	3.2474	7.2072	8.4386	9.4237
Fluoride	mg/L	0	11	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	11	0	0	11.4	131	28.5545	19.8	34.1989	22.5	76.75	120.15
Iron, D	ug/L	0	11	100	42	42	42	42	0	42	42	42
Iron, T	ug/L	10	1	10	27.1	93.9	52.3545	47.1	19.0899	67.1	80.5	91.22
Lead, D	ug/L	0	11	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	1	10	0.909	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Magnesium, D	ug/L	11	0	0	486	1020	800.2727	898	204.7032	999	1009.5	1017.9
Magnesium, T	ug/L	11	0	0	494	1020	802.8182	882	202.8338	1010	1015	1019
Manganese, D	ug/L	5	3	36	1	5.3	2.7125	2.95	1.6305	4.67	4.985	5.237
Manganese, T	ug/L	8	0	0	1.7	7.5	4.525	4.5	2.0436	7.01	7.255	7.451
Mercury, D	ng/L	8	3	27	0.6	1.2	0.9	1	0.2449	1.1	1.15	1.19
Mercury, T	ng/L	9	2	20	0.7	1.7	1.1	1	0.313	1.5	1.6	1.68
Methyl Mercury	ng/L	0	6	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-46, south fork Meadow Creek												
Molybdenum, D	ug/L	6	0	0	1.21	1.84	1.5983	1.65	0.2402	1.825	1.8325	1.8385
Molybdenum, T	ug/L	6	0	0	1.18	1.79	1.5867	1.665	0.2304	1.77	1.78	1.788
Nickel, D	ug/L	1	5	83	0.2	0.26	0.21	0.2	0.0245	0.23	0.245	0.257
Nickel, T	ug/L	0	6	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Nitrate+Nitrite as Nitrogen	mg/L	0	11	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	5	1	17	0.26	0.53	0.4167	0.43	0.0981	0.51	0.52	0.528
Nitrogen, Total Kjeldahl (TKN)	mg/L	4	2	33	0.26	0.53	0.4183	0.43	0.0913	0.495	0.5125	0.5265
pH	pH	11	0	0	6.09	7.32	6.8527	6.91	0.4292	7.27	7.295	7.315
Phosphorus, D	ug/L	0	11	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	11	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	11	0	0	386	641	513.0909	528	86.3741	612	626.5	638.1
Potassium, T	ug/L	11	0	0	393	608	501.9091	501	68.1402	584	596	605.6
Selenium, D	ug/L	0	9	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	9	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	6	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	6	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	11	0	0	1080	1850	1525.4545	1560	276.2739	1830	1840	1848
Sodium, T	ug/L	11	0	0	1090	1860	1514.5455	1540	269.0117	1820	1840	1856
Solids, Total Dissolved	mg/L	11	0	0	21	54	35.9091	37	10.2952	51	52.5	53.7
Solids, Total Suspended (TSS)	mg/L	0	11	100	5	5	5	5	0	5	5	5
Sulfate	mg/L	11	0	0	1.24	2.97	1.9873	2.13	0.5349	2.4	2.685	2.913
Temperature, Water	deg C	11	0	0	4.91	9.89	7.6145	7.81	1.6537	9.47	9.68	9.848
Thallium, D	ug/L	0	6	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	6	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	11	0	0	0.1	7	2.5	2.2	2.366	6.7	6.85	6.97
Vanadium (Fume Or Dust), D	ug/L	0	6	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	4	2	33	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Zinc, D	ug/L	2	9	81	0.6	2	1.8091	2	0.4527	2	2	2
Zinc, T	ug/L	0	11	100	2	2	2	2	0	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-45, north fork Meadow Creek												
Alkalinity as CaCO3	mg/L	18	0	0	22.6	65.2	46.3389	51.95	15.9112	64.3	65.03	65.166
Aluminum (Fume Or Dust), D	ug/L	14	0	0	4.5	36	14.7429	12.35	9.5177	26.88	31.125	35.025
Aluminum (Fume Or Dust), T	ug/L	14	0	0	11.1	240	48.5714	28.6	59.3029	72.09	132.75	218.55
Ammonia as Nitrogen	mg/L	0	18	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	18	0	0	0.15	0.28	0.1851	0.18	0.0283	0.203	0.2205	0.2681
Antimony, T	ug/L	18	0	0	0.17	0.28	0.1992	0.1965	0.0264	0.22	0.229	0.2698
Arsenic (III), T	ug/L	8	4	33	0.02	0.11	0.0517	0.05	0.0301	0.089	0.099	0.1078
Arsenic, D	ug/L	18	0	0	0.8	2.5	1.6067	1.65	0.6009	2.306	2.347	2.4694
Arsenic, T	ug/L	18	0	0	1	2.6	1.7006	1.75	0.5787	2.403	2.4385	2.5677
Barium, D	ug/L	12	0	0	2.69	3.82	3.365	3.54	0.4046	3.761	3.7925	3.8145
Barium, T	ug/L	12	0	0	3	4.9	3.755	3.7	0.481	4.217	4.5425	4.8285
Beryllium, D	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	11	92	0.02	0.03	0.0208	0.02	0.0029	0.02	0.0245	0.0289
Bicarbonate as CaCO3	mg/L	18	0	0	22.6	65.2	46.0944	49.75	15.8936	64.3	65.03	65.166
Boron, D	ug/L	0	12	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	12	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	16	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	16	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	18	0	0	6290	23400	15112.7778	16350	5950.1357	22530	22720	23264
Calcium, T	ug/L	18	0	0	6400	23400	15215.5556	16300	6018.3535	22760	22975	23315
Carbonate as CaCO3	mg/L	0	18	100	15	15	15	15	0	15	15	15
Chloride	mg/L	0	18	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, D	ug/L	3	13	81	0.2	0.3	0.2125	0.2	0.0342	0.25	0.3	0.3
Chromium, T	ug/L	4	12	75	0.2	0.4	0.2194	0.2	0.0554	0.255	0.3325	0.3865
Cobalt, D	ug/L	7	5	42	0.02	0.07	0.0268	0.02	0.0149	0.039	0.0535	0.0667
Cobalt, T	ug/L	9	3	25	0.02	0.09	0.0388	0.03	0.0219	0.0681	0.079	0.0878
Color	Pt-Co	11	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	18	0	0	0.053	0.143	0.0994	0.1085	0.0329	0.1357	0.1422	0.1428
Copper, D	ug/L	16	0	0	0.1	1.3	0.295	0.2	0.2898	0.45	0.7	1.18
Copper, T	ug/L	11	5	31	0.1	0.3	0.1469	0.1	0.0618	0.2	0.225	0.285
Cyanide, T	mg/L	0	12	100	0.0047	0.0047	0.0047	0.0047	0	0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	18	0	0	8.24	11.26	9.69	9.79	0.896	10.796	10.937	11.1954
Flow velocity	CFS	18	0	0	0.2371	19.0076	3.6353	0.7932	5.0118	8.4703	10.7655	17.3592
Fluoride	mg/L	0	18	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	18	0	0	19.3	65.5	42.9444	46	16.7815	64.27	64.99	65.398
Iron, D	ug/L	0	18	100	42	42	42	42	0	42	42	42
Iron, T	ug/L	12	6	33	20	371	61.7167	42	79.1256	73.36	121.695	321.139
Lead, D	ug/L	1	17	94	0.02	0.03	0.0206	0.02	0.0024	0.02	0.0215	0.0283
Lead, T	ug/L	6	12	67	0.02	0.12	0.0268	0.02	0.0235	0.0306	0.0452	0.105
Magnesium, D	ug/L	18	0	0	646	1800	1194.7778	1245	421.5989	1712	1749	1789.8
Magnesium, T	ug/L	18	0	0	650	1860	1205.5556	1275	425.3891	1750	1766.5	1841.3
Manganese, D	ug/L	0	14	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	10	4	29	1.1	17.2	2.9714	1.5	4.2245	3.96	8.75	15.51
Mercury, D	ng/L	14	4	22	0.5	2.7	1.2833	1.15	0.7664	2.29	2.53	2.666
Mercury, T	ng/L	16	2	11	0.6	5	1.8333	1.45	1.2049	3.33	3.64	4.728
Methyl Mercury	ng/L	0	12	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-45, north fork Meadow Creek												
Molybdenum, D	ug/L	12	0	0	0.26	0.97	0.6485	0.69	0.2599	0.908	0.937	0.9634
Molybdenum, T	ug/L	12	0	0	0.28	0.99	0.6645	0.73	0.253	0.9084	0.946	0.9812
Nickel, D	ug/L	8	4	33	0.2	0.5	0.2525	0.2	0.099	0.39	0.445	0.489
Nickel, T	ug/L	5	7	58	0.2	0.3	0.2233	0.2	0.0425	0.298	0.3	0.3
Nitrate+Nitrite as Nitrogen	mg/L	1	17	94	0.05	0.122	0.054	0.05	0.017	0.05	0.0608	0.1098
Nitrogen, Total as Nitrogen	mg/L	9	3	25	0.25	0.72	0.4475	0.455	0.1661	0.646	0.6815	0.7123
Nitrogen, Total Kjeldahl (TKN)	mg/L	9	3	25	0.2	0.72	0.4283	0.45	0.1767	0.616	0.665	0.709
pH	pH	18	0	0	6.81	8.19	7.5011	7.555	0.4326	8.063	8.1475	8.1815
Phosphorus, D	ug/L	0	18	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	18	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	18	0	0	496	960	714.2222	716	160.6851	898.6	956.6	959.32
Potassium, T	ug/L	18	0	0	477	999	729.1667	755	167.1854	963.1	978.6	994.92
Selenium, D	ug/L	0	16	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	16	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	18	0	0	1400	1930	1685.5556	1710	172.8046	1870	1879	1919.8
Sodium, T	ug/L	18	0	0	1380	2150	1683.8889	1700	201.4985	1892	1954.5	2110.9
Solids, Total Dissolved	mg/L	18	0	0	31.5	98	62.2111	58.5	21.0733	86.2	96.3	97.66
Solids, Total Suspended (TSS)	mg/L	1	17	94	5	8.5	5.1944	5	0.825	5	5.525	7.905
Sulfate	mg/L	18	0	0	1.47	4.46	3.0689	3.035	1.0895	4.401	4.4515	4.4583
Temperature, Water	deg C	18	0	0	0.52	11.18	5.6244	5.435	3.394	10.125	10.8485	11.1137
Thallium, D	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	18	0	0	0	11.2	2.25	1.75	2.5357	3.53	4.74	9.908
Vanadium (Fume Or Dust), D	ug/L	12	0	0	0.2	0.6	0.3925	0.4	0.1388	0.518	0.556	0.5912
Vanadium (Fume Or Dust), T	ug/L	12	0	0	0.3	0.64	0.4458	0.4	0.1064	0.591	0.618	0.6356
Zinc, D	ug/L	6	12	67	0.5	2	1.6167	2	0.5854	2	2	2
Zinc, T	ug/L	5	13	72	0.5	2	1.7167	2	0.5261	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-33, Meadow Creek above SODA												
Alkalinity as CaCO3	mg/L	42	0	0	16.5	48	31.6429	32.7	8.0834	40	41.95	47.18
Aluminum (Fume Or Dust), D	ug/L	27	0	0	5.7	53.7	14.7148	11.1	9.8279	21.7	26.78	47.2
Aluminum (Fume Or Dust), T	ug/L	27	0	0	10.9	356	57.3222	30.2	71.1578	102.44	154.6	308.94
Ammonia as Nitrogen	mg/L	2	40	95	0.05	0.122	0.0517	0.05	0.0111	0.05	0.05	0.0925
Antimony, D	ug/L	42	0	0	0.22	0.76	0.3196	0.28	0.1104	0.474	0.5396	0.6698
Antimony, T	ug/L	42	0	0	0.23	0.78	0.3254	0.27	0.1171	0.4592	0.5655	0.698
Arsenic (III), T	ug/L	20	3	13	0.02	0.1	0.045	0.04	0.0217	0.07	0.079	0.0956
Arsenic, D	ug/L	42	0	0	0.7	1.6	1.1598	1.2	0.241	1.4	1.496	1.6
Arsenic, T	ug/L	42	0	0	0.79	2.6	1.2605	1.3	0.2962	1.5	1.5	2.19
Barium, D	ug/L	23	0	0	2.79	4.99	4.0187	4.21	0.6277	4.846	4.925	4.9768
Barium, T	ug/L	23	0	0	3.26	7.21	4.46	4.29	0.763	5.028	5.13	6.7546
Beryllium, D	ug/L	0	23	1	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	22	96	0.02	0.03	0.0204	0.02	0.0021	0.02	0.02	0.0278
Bicarbonate as CaCO3	mg/L	42	0	0	16.5	48	31.5524	32.5	8.0106	39.9	41.9	47.18
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	4430	11500	8267.381	8935	2153.1452	10390	10895	11377
Calcium, T	ug/L	42	0	0	4630	11700	8289.5238	8885	2125.1593	10390	11085	11536
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	3	39	92	0.2	0.52	0.2079	0.2	0.0494	0.2	0.2	0.3929
Chromium, D	ug/L	4	34	86	0.2	0.57	0.2203	0.2	0.0738	0.2	0.4	0.5071
Chromium, T	ug/L	8	30	79	0.2	0.5	0.2316	0.2	0.0809	0.33	0.415	0.5
Cobalt, D	ug/L	9	14	61	0.02	0.043	0.024	0.02	0.0075	0.038	0.04	0.0423
Cobalt, T	ug/L	16	7	30	0.02	0.15	0.037	0.03	0.0291	0.058	0.078	0.1346
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.039	0.11	0.0699	0.072	0.0181	0.091	0.097	0.1076
Copper, D	ug/L	37	1	3	0.1	0.52	0.2258	0.2	0.0947	0.3	0.4	0.4756
Copper, T	ug/L	24	14	37	0.1	0.41	0.1495	0.1	0.0797	0.2	0.315	0.4063
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	8.03	13.83	10.3667	10.565	1.2992	11.557	12.1585	13.4077
Flow velocity	CFS	42	0	0	1.9	71	13.2582	3.8087	17.6088	40.8722	49.7697	63.4544
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	15	37.1	26.4	28.55	6.7973	33.29	35.43	36.731
Iron, D	ug/L	3	39	93	21	30.4	21.2952	21	1.4831	21	21.76	27.448
Iron, T	ug/L	36	6	14	20.1	497	65.9357	40.65	79.4627	112.9	138.3	379.33
Lead, D	ug/L	1	41	98	0.02	0.066	0.0211	0.02	0.0071	0.02	0.02	0.0471
Lead, T	ug/L	19	23	55	0.02	0.18	0.0309	0.02	0.0276	0.04	0.069	0.1431
Magnesium, D	ug/L	42	0	0	713	1910	1388.6905	1530	378.2568	1798	1876	1897.7
Magnesium, T	ug/L	42	0	0	779	1950	1398.5238	1520	366.4474	1778	1889	1929.5
Manganese, D	ug/L	13	14	52	1	2.5	1.1667	1.1	0.2842	1.24	1.44	2.24
Manganese, T	ug/L	26	1	4	1.1	23.7	4.0333	2.5	4.5384	6.66	9.93	20.424
Mercury, D	ng/L	28	13	32	0.5	2.4	1.222	1	0.484	1.9	2.2	2.32
Mercury, T	ng/L	32	10	24	0.6	4.8	1.569	1.15	0.9246	2.79	3.185	4.185
Methyl Mercury	ng/L	3	20	87	0.1	0.2	0.113	0.1	0.0344	0.18	0.2	0.2

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-33, Meadow Creek above SODA												
Molybdenum, D	ug/L	23	0	0	0.47	1.24	0.8853	0.95	0.2438	1.128	1.184	1.229
Molybdenum, T	ug/L	23	0	0	0.48	1.17	0.8808	0.99	0.229	1.108	1.128	1.1612
Nickel, D	ug/L	5	18	78	0.2	0.4	0.2183	0.2	0.0575	0.216	0.382	0.4
Nickel, T	ug/L	3	20	87	0.2	0.28	0.2035	0.2	0.0167	0.2	0.2	0.2624
Nitrate+Nitrite as Nitrogen	mg/L	9	33	79	0.05	0.08	0.052	0.05	0.0055	0.0559	0.0628	0.0734
Nitrogen, Total as Nitrogen	mg/L	17	6	26	0.25	1.39	0.477	0.43	0.2562	0.742	0.805	1.2624
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	5	22	0.2	1.37	0.4665	0.43	0.2587	0.732	0.805	1.2468
pH	pH	41	0	0	6.29	8.03	7.1861	7.16	0.3969	7.65	7.92	8.018
Phosphorus, D	ug/L	0	42	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	1	41	98	33.2	42	41.7905	42	1.3579	42	42	42
Potassium, D	ug/L	42	0	0	453	860	665.2143	678	101.6905	785.7	809.4	849.75
Potassium, T	ug/L	42	0	0	455	838	666.5	685.5	88.5144	769.2	793.2	832.26
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1310	2260	1823.0952	1910	265.3161	2060	2110	2214.9
Sodium, T	ug/L	42	0	0	1310	2170	1821.1905	1890	257.9488	2100	2110	2153.6
Solids, Total Dissolved	mg/L	41	1	2	10	97	43.8286	44	15.3845	61	67.85	85.52
Solids, Total Suspended (TSS)	mg/L	4	38	90	5	12.5	5.2619	5	1.1957	5	5.975	10.245
Sulfate	mg/L	42	0	0	1.35	13.1	2.7152	2.655	1.7655	3.177	3.4475	9.1599
Temperature, Water	deg C	42	0	0	-0.03	13.9	4.3838	2.775	4.4217	11.524	13.069	13.8467
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	42	0	0	0	8.2	2.3476	2.1	2.0227	5.5	6.38	7.913
Vanadium (Fume Or Dust), D	ug/L	15	8	35	0.2	0.3	0.2174	0.2	0.0358	0.292	0.3	0.3
Vanadium (Fume Or Dust), T	ug/L	20	3	13	0.2	0.8	0.277	0.22	0.1304	0.38	0.4	0.712
Zinc, D	ug/L	12	30	71	0.5	18.5	2.0976	2	2.6549	2	2	11.817
Zinc, T	ug/L	8	34	81	0.6	3.7	1.9071	2	0.4708	2	2	3.044

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-43, Meadow Creek above Keyway Marsh												
Alkalinity as CaCO3	mg/L	26	0	0	20.1	55	35.1038	38	9.4788	45	46.5	53
Aluminum (Fume Or Dust), D	ug/L	25	1	4	4.6	31.7	13.2885	10.7	7.4843	23.25	29.475	31.35
Aluminum (Fume Or Dust), T	ug/L	26	0	0	11.5	181	50.6192	31.25	43.9848	109	125.75	168.5
Ammonia as Nitrogen	mg/L	2	23	92	0.05	0.097	0.0527	0.05	0.0101	0.05	0.066	0.0905
Antimony, D	ug/L	26	0	0	2.04	9.21	3.9985	3.055	2.1785	7.685	8.7325	9.165
Antimony, T	ug/L	26	0	0	2.05	9.09	4.0115	3.095	2.144	7.65	8.57	9.0275
Arsenic (III), T	ug/L	22	0	0	0.21	5.1	1.8907	1.83	1.4391	3.472	4.164	4.911
Arsenic, D	ug/L	26	0	0	7.3	35.3	21.3885	22	8.1174	30.45	33.45	35
Arsenic, T	ug/L	26	0	0	8	41	23.15	24.15	9.4296	35.1	36.775	39.975
Barium, D	ug/L	22	0	0	3.02	5.65	4.6141	4.82	0.8043	5.375	5.494	5.6185
Barium, T	ug/L	22	0	0	3.43	5.75	4.9668	5.025	0.5683	5.572	5.7035	5.7416
Beryllium, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	21	96	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	26	0	0	20.1	53	35.0269	38	9.3176	45	46.5	51.5
Boron, D	ug/L	0	22	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	22	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	26	0	0	5420	13800	9993.4615	11200	2607.1593	12350	12925	13625
Calcium, T	ug/L	26	0	0	5600	13200	9905	11150	2478.2611	12150	12625	13075
Carbonate as CaCO3	mg/L	0	26	100	15	15	15	15	0	15	15	15
Chloride	mg/L	15	11	42	0.2	0.67	0.3581	0.365	0.1552	0.56	0.5925	0.6525
Chromium, D	ug/L	1	21	96	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, T	ug/L	5	17	77	0.2	0.4	0.2136	0.2	0.0468	0.2	0.295	0.379
Cobalt, D	ug/L	22	0	0	0.03	0.13	0.0748	0.07	0.0245	0.109	0.1214	0.1283
Cobalt, T	ug/L	22	0	0	0.05	0.14	0.0876	0.08	0.0243	0.1199	0.1295	0.1379
Color	Pt-Co	21	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	38	0	0	0.045	0.115	0.083	0.088	0.0179	0.1006	0.1063	0.1124
Copper, D	ug/L	22	0	0	0.1	0.53	0.2536	0.2	0.1308	0.454	0.498	0.5237
Copper, T	ug/L	20	2	9	0.1	0.3	0.1514	0.12	0.0589	0.209	0.2195	0.2832
Cyanide, T	mg/L	0	22	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	39	0	0	8.48	14.12	10.3792	10.25	1.2619	11.826	12.153	13.4512
Flow velocity	CFS	37	0	0	1.9742	73.9081	15.8403	4.891	19.5893	49.3541	54.6448	67.9019
Fluoride	mg/L	0	26	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	26	0	0	18.1	42.7	31.9269	35.95	8.1044	39.45	40.45	42.175
Iron, D	ug/L	22	4	15	23	93.1	51.5038	48.55	20.2209	86.7	90.575	92.7
Iron, T	ug/L	26	0	0	63.8	286	120.7769	111	44.2412	156.5	170	257.75
Lead, D	ug/L	1	25	96	0.02	0.025	0.0202	0.02	0.001	0.02	0.02	0.0238
Lead, T	ug/L	21	5	19	0.02	0.13	0.0427	0.035	0.0268	0.07	0.085	0.12
Magnesium, D	ug/L	26	0	0	919	2440	1745.6154	1965	493.4931	2215	2357.5	2427.5
Magnesium, T	ug/L	26	0	0	936	2360	1743.9231	1960	470.1056	2170	2292.5	2352.5
Manganese, D	ug/L	26	0	0	3.4	32.7	18.2269	20.6	9.2469	27.95	29.425	32
Manganese, T	ug/L	26	0	0	6.7	34.2	21.5615	23.35	8.4287	31.25	32.625	33.85
Mercury, D	ng/L	23	3	12	0.8	4.6	1.6808	1.3	0.9964	2.85	3.7	4.425
Mercury, T	ng/L	24	2	8	0.8	5	2.0346	1.7	1.115	3.75	4.05	4.775
Methyl Mercury	ng/L	1	21	96	0.04	0.1	0.0973	0.1	0.0128	0.1	0.1	0.1

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-43, Meadow Creek above Keyway Marsh												
Molybdenum, D	ug/L	22	0	0	0.51	1.24	0.9522	1.04	0.2432	1.199	1.238	1.24
Molybdenum, T	ug/L	22	0	0	0.5	1.24	0.9374	1.035	0.2333	1.157	1.217	1.2358
Nickel, D	ug/L	9	13	59	0.2	0.43	0.2173	0.2	0.0524	0.229	0.2965	0.4027
Nickel, T	ug/L	4	18	82	0.2	0.21	0.2005	0.2	0.0021	0.2	0.2	0.2079
Nitrate+Nitrite as Nitrogen	mg/L	3	23	89	0.05	0.059	0.0507	0.05	0.0022	0.0505	0.0555	0.0585
Nitrogen, Total as Nitrogen	mg/L	15	7	32	0.25	1.41	0.4527	0.39	0.2631	0.667	0.6985	1.2609
Nitrogen, Total Kjeldahl (TKN)	mg/L	16	6	27	0.2	1.4	0.4264	0.375	0.2762	0.667	0.6985	1.253
pH	pH	38	0	0	6.46	8.3	7.3032	7.3	0.4241	7.857	8.0775	8.2334
Phosphorus, D	ug/L	0	26	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	26	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	26	0	0	500	934	742.0385	763.5	111.8365	883	908	929
Potassium, T	ug/L	26	0	0	494	908	750.1538	778.5	103.1917	855.5	881.25	902.25
Selenium, D	ug/L	0	22	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	22	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	26	0	0	1460	2590	2084.2308	2195	334.1398	2415	2465	2560
Sodium, T	ug/L	26	0	0	1450	2510	2072.3077	2160	346.633	2425	2475	2505
Solids, Total Dissolved	mg/L	26	0	0	26	75	47.4308	48.5	14.0292	64.6	66.4	72.95
Solids, Total Suspended (TSS)	mg/L	1	25	96	5	8	5.1154	5	0.5883	5	5	7.25
Sulfate	mg/L	26	0	0	2.43	6.96	4.6754	4.705	1.2799	6.14	6.1975	6.77
Temperature, Water	deg C	39	0	0	-0.02	15.6	5.5756	4.13	5.2496	14.662	14.878	15.353
Thallium, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	39	0	0	0	12.2	2.4231	2.1	2.5221	3.94	8.15	10.832
Vanadium (Fume Or Dust), D	ug/L	13	9	41	0.2	0.3	0.2218	0.2	0.0414	0.3	0.3	0.3
Vanadium (Fume Or Dust), T	ug/L	20	2	9	0.2	0.4	0.2723	0.3	0.0707	0.393	0.4	0.4
Zinc, D	ug/L	8	18	69	0.5	2	1.6385	2	0.6007	2	2	2
Zinc, T	ug/L	6	20	77	0.5	2	1.6885	2	0.5908	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-27, Meadow Creek below Keyway Marsh												
Alkalinity as CaCO3	mg/L	42	0	0	20.7	58	38.1595	40.5	10.0923	47.92	49	54.72
Aluminum (Fume Or Dust), D	ug/L	27	0	0	4.2	25.3	12.3259	11	5.9421	20	21.95	24.546
Aluminum (Fume Or Dust), T	ug/L	27	0	0	10.2	197	51.2556	30.2	49.505	101.54	163.2	194.14
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.053	0.0501	0.05	0.0005	0.05	0.05	0.0518
Antimony, D	ug/L	42	0	0	2.04	16.9	6.1131	4.725	3.7992	11.09	15.325	16.326
Antimony, T	ug/L	42	0	0	2.09	16.9	6.1698	4.615	3.8093	10.98	15.03	16.777
Arsenic (III), T	ug/L	23	0	0	0.2	9.7	4.3307	4.5	2.9932	8.364	9.23	9.612
Arsenic, D	ug/L	42	0	0	11.8	60.7	34.2429	34.2	11.3054	45.6	51.815	57.748
Arsenic, T	ug/L	42	0	0	12.6	57.5	36.7643	37.35	11.7668	50.85	53.095	56.68
Barium, D	ug/L	23	0	0	3.27	6.68	5.3626	5.74	1.0741	6.326	6.439	6.6294
Barium, T	ug/L	23	0	0	3.62	6.68	5.7274	5.99	0.7686	6.442	6.495	6.6404
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	42	0	0	20.7	50	37.9452	40.5	9.7505	47.92	49	49.59
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	37	97	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	5700	15000	11373.0952	12700	3026.4077	14500	14595	14877
Calcium, T	ug/L	42	0	0	5620	14700	11372.381	12950	2974.0535	14390	14500	14618
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	35	7	17	0.25	2.35	1.2176	1.34	0.6041	1.927	2.0355	2.2557
Chromium, D	ug/L	5	33	87	0.2	0.6	0.2137	0.2	0.0664	0.2	0.232	0.489
Chromium, T	ug/L	11	27	71	0.2	0.3	0.2079	0.2	0.0273	0.2	0.3	0.3
Cobalt, D	ug/L	23	0	0	0.05	0.21	0.1191	0.12	0.0383	0.1592	0.169	0.2012
Cobalt, T	ug/L	23	0	0	0.09	0.21	0.1306	0.13	0.0325	0.17	0.1916	0.2065
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.047	0.136	0.0958	0.103	0.0245	0.119	0.125	0.132
Copper, D	ug/L	38	0	0	0.1	0.7	0.2429	0.2	0.1364	0.365	0.6	0.663
Copper, T	ug/L	34	4	11	0.1	0.4	0.175	0.2	0.0715	0.265	0.3	0.363
Cyanide, T	mg/L	2	21	91	0.0027	0.0105	0.0031	0.0027	0.0017	0.0027	0.0049	0.0093
Dissolved Oxygen	mg/L	42	0	0	7.85	13.58	10.2205	10.29	1.3004	11.763	11.9385	12.9281
Flow velocity	CFS	42	0	0	2.7824	76.4472	17.4292	5.7395	21.1548	53.5577	58.8684	70.1139
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	18.2	48	37.0476	42.2	9.8991	47.16	47.495	47.877
Iron, D	ug/L	36	6	14	20.4	124	62.6476	66.4	31.6289	103.59	109.75	123.18
Iron, T	ug/L	42	0	0	69	272	154.1262	145.5	52.4097	243.1	266.95	270.77
Lead, D	ug/L	2	40	95	0.02	0.041	0.021	0.02	0.0044	0.02	0.02	0.0406
Lead, T	ug/L	34	8	19	0.02	0.15	0.0473	0.04	0.0314	0.0695	0.1278	0.1459
Magnesium, D	ug/L	42	0	0	979	2920	2106.1905	2390	620.6394	2736	2819.5	2899.5
Magnesium, T	ug/L	42	0	0	1010	2850	2108.3333	2355	611.3357	2769	2809.5	2837.7
Manganese, D	ug/L	26	1	4	4.5	42.7	25.237	27.8	13.2405	39.66	40.27	42.076
Manganese, T	ug/L	27	0	0	8.4	56.9	30.263	32.8	12.9663	44.52	45.42	53.962
Mercury, D	ng/L	35	6	15	0.6	3.8	1.5244	1.3	0.721	2.5	2.9	3.52
Mercury, T	ng/L	41	1	2	1	11.8	2.581	2.15	1.9152	3.98	5.53	9.75
Methyl Mercury	ng/L	1	22	96	0.1	0.13	0.1013	0.1	0.0063	0.1	0.1	0.1234

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-27, Meadow Creek below Keyway Marsh												
Molybdenum, D	ug/L	23	0	0	0.52	1.26	0.9578	1.05	0.2287	1.188	1.199	1.2468
Molybdenum, T	ug/L	23	0	0	0.51	1.23	0.9575	1.02	0.2244	1.168	1.215	1.2278
Nickel, D	ug/L	9	14	61	0.2	0.65	0.2461	0.2	0.1053	0.356	0.397	0.595
Nickel, T	ug/L	9	14	61	0.2	0.3	0.217	0.2	0.0369	0.296	0.3	0.3
Nitrate+Nitrite as Nitrogen	mg/L	7	35	83	0.05	0.091	0.0525	0.05	0.0077	0.0569	0.0628	0.0848
Nitrogen, Total as Nitrogen	mg/L	19	4	17	0.27	2.14	0.5861	0.46	0.3969	0.802	1.217	1.9464
Nitrogen, Total Kjeldahl (TKN)	mg/L	19	4	17	0.25	2.12	0.5722	0.43	0.3971	0.794	1.217	1.9308
pH	pH	41	0	0	6.43	8.39	7.3244	7.29	0.3984	7.8	8.02	8.278
Phosphorus, D	ug/L	2	40	95	20	42	41.0429	42	4.3526	42	42	42
Phosphorus, T	ug/L	3	39	93	20	42	40.6286	42	5.0473	42	42	42
Potassium, D	ug/L	42	0	0	512	1080	870.619	902.5	162.65	1060	1069.5	1080
Potassium, T	ug/L	42	0	0	560	1060	867.1429	899.5	152.9496	1039	1049.5	1060
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1520	3120	2423.5714	2565	494.6042	2926	3095	3111.8
Sodium, T	ug/L	42	0	0	1520	3070	2408.5714	2570	486.6138	2898	2980	3049.5
Solids, Total Dissolved	mg/L	42	0	0	10.5	86	56.9405	56.15	17.6455	78.63	79.95	85.59
Solids, Total Suspended (TSS)	mg/L	3	39	93	5	8	5.1548	5	0.6485	5	5.475	8
Sulfate	mg/L	42	0	0	2.41	11.6	5.8576	5.9	1.927	7.877	8.2125	10.5873
Temperature, Water	deg C	42	0	0	0	16.44	4.9524	3.575	4.8773	12.515	14.41	16.0341
Thallium, D	ug/L	1	22	96	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	22	96	0.02	0.022	0.0201	0.02	0.0004	0.02	0.02	0.0216
Turbidity	NTU	42	0	0	0	11.6	2.3619	1.8	2.3553	4.49	5.455	10.534
Vanadium (Fume Or Dust), D	ug/L	12	11	48	0.2	0.3	0.2196	0.2	0.0381	0.298	0.3	0.3
Vanadium (Fume Or Dust), T	ug/L	21	2	9	0.2	0.5	0.2752	0.23	0.0913	0.4	0.4	0.478
Zinc, D	ug/L	15	27	64	0.5	2.8	1.6476	2	0.6074	2	2	2.513
Zinc, T	ug/L	9	33	79	0.5	2	1.7548	2	0.5124	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-29, Blowout Creek												
Alkalinity as CaCO3	mg/L	42	0	0	23.1	85.6	41.0333	42.9	11.5779	48.9	49.95	77.154
Aluminum (Fume Or Dust), D	ug/L	24	3	11	3	40.1	11.4593	8.5	9.465	19.76	33.24	39.658
Aluminum (Fume Or Dust), T	ug/L	27	0	0	18.3	2730	303.4074	55.1	710.9866	571.8	2092.7	2719.6
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.202	0.0536	0.05	0.0235	0.05	0.05	0.1397
Antimony, D	ug/L	42	0	0	0.42	1.63	0.9962	1.06	0.3387	1.439	1.4875	1.6054
Antimony, T	ug/L	42	0	0	0.42	1.54	0.9979	1.06	0.3311	1.438	1.497	1.5359
Arsenic (III), T	ug/L	22	1	4	0.02	0.22	0.109	0.11	0.0569	0.186	0.217	0.22
Arsenic, D	ug/L	42	0	0	3.5	8.7	6.2938	6.9	1.5674	8.28	8.59	8.7
Arsenic, T	ug/L	42	0	0	4	10.5	7.0333	7.3	1.454	8.59	8.7	10.131
Barium, D	ug/L	23	0	0	7.25	14.5	11.8378	12.8	2.5611	14.18	14.38	14.478
Barium, T	ug/L	23	0	0	9.18	59.4	17.7817	14.1	13.0909	17.9	54.51	59.202
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	5	18	78	0.02	0.23	0.0406	0.02	0.0604	0.054	0.213	0.23
Bicarbonate as CaCO3	mg/L	42	0	0	23.1	85.6	40.6024	42.9	11.0875	48	49.95	72.644
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	1	37	97	0.02	0.03	0.0203	0.02	0.0016	0.02	0.02	0.0263
Calcium, D	ug/L	42	0	0	5670	12700	9910	10750	2144.6894	11900	12290	12659
Calcium, T	ug/L	42	0	0	5950	12400	9987.1429	10700	1914.7314	11970	12195	12318
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	2	40	95	0.2	0.41	0.2057	0.2	0.0326	0.2	0.2	0.3362
Chromium, D	ug/L	4	34	90	0.2	0.7	0.2211	0.2	0.0875	0.2	0.315	0.589
Chromium, T	ug/L	17	21	55	0.2	2.9	0.4211	0.2	0.5846	0.63	1.635	2.715
Cobalt, D	ug/L	18	5	22	0.02	0.066	0.0304	0.03	0.0141	0.056	0.06	0.0647
Cobalt, T	ug/L	22	1	4	0.02	1.37	0.178	0.042	0.3677	0.272	1.181	1.3502
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.047	0.85	0.1005	0.087	0.1213	0.104	0.104	0.5528
Copper, D	ug/L	38	0	0	0.1	0.8	0.2724	0.2	0.1711	0.53	0.615	0.763
Copper, T	ug/L	37	1	3	0.1	1.7	0.2842	0.2	0.3718	0.43	1.175	1.663
Cyanide, T	mg/L	1	22	96	0.0027	0.0248	0.0037	0.0027	0.0046	0.0027	0.0027	0.0199
Dissolved Oxygen	mg/L	42	0	0	8.02	15.81	10.4674	10.41	1.4462	11.662	11.7655	14.8793
Flow velocity	CFS	42	0	0	0.7759	24.4451	5.492	2.0488	6.6772	15.9953	20.8226	23.5084
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	20.5	40.9	33.9714	36.15	5.9991	39.86	40.5	40.777
Iron, D	ug/L	20	22	52	20.4	86.3	26	21	12.485	31.32	41.99	77.977
Iron, T	ug/L	42	0	0	36.2	5470	506.9571	116.5	1188.402	889.1	2403.25	5437.2
Lead, D	ug/L	4	38	91	0.02	0.14	0.0231	0.02	0.0186	0.02	0.02	0.0957
Lead, T	ug/L	26	16	38	0.02	1.18	0.1131	0.026	0.2362	0.25	0.454	1.0898
Magnesium, D	ug/L	42	0	0	1200	2650	2087.8571	2275	462.14	2509	2568	2629.5
Magnesium, T	ug/L	42	0	0	1320	2760	2197.8571	2325	374.9962	2528	2644	2739.5
Manganese, D	ug/L	23	4	15	1.6	9.3	4.3222	3.6	1.9017	6.74	8.08	9.092
Manganese, T	ug/L	25	2	7	2.9	237	24.1037	8.3	52.2959	30.04	123.92	218.02
Mercury, D	ng/L	40	1	2	1	3.8	2.0146	1.8	0.6799	3	3	3.56
Mercury, T	ng/L	42	0	0	1.2	113	8.3738	3.2	17.9265	9.89	23.25	82.906
Methyl Mercury	ng/L	3	20	87	0.1	0.2	0.107	0.1	0.0229	0.108	0.146	0.189

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-29, Blowout Creek												
Molybdenum, D	ug/L	23	0	0	0.45	0.79	0.6742	0.7	0.108	0.778	0.78	0.7878
Molybdenum, T	ug/L	23	0	0	0.32	0.8	0.653	0.71	0.1324	0.75	0.786	0.7978
Nickel, D	ug/L	7	16	70	0.2	1.7	0.313	0.2	0.3187	0.48	0.518	1.4404
Nickel, T	ug/L	9	14	61	0.2	1.5	0.3322	0.2	0.3695	0.46	1.373	1.4934
Nitrate+Nitrite as Nitrogen	mg/L	3	39	93	0.05	0.071	0.0514	0.05	0.005	0.05	0.0661	0.0702
Nitrogen, Total as Nitrogen	mg/L	16	7	30	0.25	0.89	0.4704	0.46	0.1894	0.696	0.773	0.8658
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	5	22	0.2	0.82	0.4565	0.46	0.1916	0.696	0.755	0.8068
pH	pH	41	0	0	7.03	8.55	7.5966	7.58	0.3925	8.06	8.21	8.546
Phosphorus, D	ug/L	2	40	95	21.1	42	41.0881	42	4.1457	42	42	42
Phosphorus, T	ug/L	10	32	76	22.1	316	54.931	42	59.1489	47.8	87.16	313.54
Potassium, D	ug/L	42	0	0	494	822	685.4524	703.5	87.2513	767.4	805.85	817.08
Potassium, T	ug/L	42	0	0	531	2200	816.0476	728	338.7969	835.5	1472.5	2159
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	22	96	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1560	2500	2085.4762	2150	276.9098	2349	2436.5	2483.6
Sodium, T	ug/L	42	0	0	1590	2480	2092.1429	2170	247.2831	2340	2359.5	2455.4
Solids, Total Dissolved	mg/L	42	0	0	29	383	60.2976	51.25	52.8795	70.7	85.3	264.92
Solids, Total Suspended (TSS)	mg/L	11	31	74	5	134	14.1429	5	27.7043	27.05	57.975	129.49
Sulfate	mg/L	42	0	0	1.11	12.8	2.0748	1.895	1.7393	2.347	2.4555	8.5934
Temperature, Water	deg C	42	0	0	-0.03	15.17	5.2543	4.235	4.4885	11.228	13.1475	14.7354
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	4	19	83	0.02	0.07	0.0242	0.02	0.0127	0.0272	0.0542	0.0671
Turbidity	NTU	42	0	0	0	124	11.1169	3.65	22.8293	19.91	41.3	106.698
Vanadium (Fume Or Dust), D	ug/L	23	0	0	0.2	0.4	0.2861	0.3	0.0427	0.3	0.309	0.3802
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.3	7.2	1.0213	0.36	1.8269	1.52	5.74	6.98
Zinc, D	ug/L	14	28	67	0.5	2.7	1.7048	2	0.5742	2	2	2.618
Zinc, T	ug/L	15	27	64	0.7	9.9	2.2429	2	1.8575	2.27	4.865	9.9

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-22, Meadow Creek above EFSFSR												
Alkalinity as CaCO3	mg/L	42	0	0	21.9	65	39.4833	42.4	10.2948	48.9	50	59.26
Aluminum (Fume Or Dust), D	ug/L	26	1	4	3.6	57.7	12.9037	9.9	10.3618	19.98	22.23	48.548
Aluminum (Fume Or Dust), T	ug/L	27	0	0	11.9	1420	134.037	43.4	274.0798	229	386.5	1164.16
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.062	0.0503	0.05	0.0019	0.05	0.05	0.0571
Antimony, D	ug/L	42	0	0	2.4	35.8	8.2481	5.56	7.3316	14.3	26.13	32.069
Antimony, T	ug/L	42	0	0	2.47	38.2	8.3633	5.67	7.6072	14.49	24.7	33.444
Arsenic (III), T	ug/L	23	0	0	0.11	6.8	2.0059	2	1.4993	3.38	3.76	6.14
Arsenic, D	ug/L	42	0	0	13.6	56.8	33.8024	34.8	10.8159	47.06	48.26	54.873
Arsenic, T	ug/L	42	0	0	14.5	63.5	37.5095	36.95	12.2215	50.78	56.315	61.86
Barium, D	ug/L	23	0	0	4.37	8.97	7.4161	7.97	1.4982	8.804	8.901	8.9568
Barium, T	ug/L	23	0	0	5.15	30	9.3387	8.53	4.6195	9.746	10.348	25.688
Beryllium, D	ug/L	0	23	1	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	3	20	87	0.02	0.12	0.0252	0.02	0.0209	0.028	0.03	0.1002
Bicarbonate as CaCO3	mg/L	42	0	0	21.9	54	39.0643	42.4	9.6669	48	49.95	52.77
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	1	37	97	0.02	0.06	0.0211	0.02	0.0065	0.02	0.02	0.0452
Calcium, D	ug/L	42	0	0	5820	14400	11153.5714	12200	2771.1658	14000	14095	14359
Calcium, T	ug/L	42	0	0	5960	14400	11245.7143	12550	2731.001	13800	14095	14359
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	33	9	21	0.23	1.78	0.981	1.03	0.4484	1.53	1.733	1.78
Chromium, D	ug/L	4	34	90	0.2	1.3	0.2474	0.2	0.1885	0.23	0.5	1.004
Chromium, T	ug/L	16	22	58	0.2	1.6	0.2716	0.2	0.2357	0.4	0.5	1.193
Cobalt, D	ug/L	23	0	0	0.05	0.2	0.1059	0.11	0.0323	0.13	0.1417	0.1875
Cobalt, T	ug/L	23	0	0	0.087	0.76	0.1577	0.13	0.1351	0.187	0.217	0.6412
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.048	0.135	0.0941	0.101	0.0234	0.115	0.123	0.1334
Copper, D	ug/L	38	0	0	0.1	1	0.2713	0.2	0.1728	0.43	0.5135	0.8483
Copper, T	ug/L	35	3	8	0.1	0.9	0.2376	0.2	0.1937	0.5	0.56	0.9
Cyanide, T	mg/L	1	22	96	0.0027	0.0135	0.0032	0.0027	0.0023	0.0027	0.0027	0.0111
Dissolved Oxygen	mg/L	42	0	0	7.59	13.81	10.0883	10.345	1.4152	11.555	11.9425	13.0966
Flow velocity	CFS	42	0	0	3.912	87	22.6953	7.7179	27.5156	75.7237	84.7933	86.8386
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	19.5	47.4	37.1857	41.35	9.0935	46.45	47.075	47.359
Iron, D	ug/L	40	2	5	21	149	68.8595	63.8	34.3335	117	125.9	143.26
Iron, T	ug/L	42	0	0	113	2680	307.6429	180	411.1915	443.5	632.55	1995.3
Lead, D	ug/L	5	37	88	0.02	0.04	0.0211	0.02	0.0037	0.02	0.0288	0.0359
Lead, T	ug/L	36	6	14	0.02	0.48	0.0741	0.04	0.0932	0.189	0.2765	0.4144
Magnesium, D	ug/L	42	0	0	1050	3050	2154.7619	2385	599.1996	2747	2769	2968
Magnesium, T	ug/L	42	0	0	1130	2980	2212.1429	2430	567.3367	2783	2867.5	2963.6
Manganese, D	ug/L	27	0	0	5.7	39	22.6889	26.5	9.7827	32.18	34.47	38.064
Manganese, T	ug/L	27	0	0	10.6	80.5	31.5963	30.4	12.636	40.8	43.08	70.958
Mercury, D	ng/L	40	1	2	0.7	4	1.6837	1.5	0.7741	3	3	3.64
Mercury, T	ng/L	42	0	0	1.3	404	16.6071	2.65	62.7673	19.55	48.905	268.946
Methyl Mercury	ng/L	3	20	87	0.1	0.18	0.1074	0.1	0.0209	0.124	0.157	0.1756
Molybdenum, D	ug/L	23	0	0	0.52	1.17	0.8877	0.97	0.1982	1.07	1.097	1.1546

Meadow Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-22, Meadow Creek above EFSFSR												
Molybdenum, T	ug/L	23	0	0	0.49	1.08	0.8627	0.936	0.1914	1.04	1.058	1.0756
Nickel, D	ug/L	11	12	52	0.2	0.7	0.2635	0.2	0.1298	0.316	0.572	0.678
Nickel, T	ug/L	9	14	61	0.2	0.9	0.2496	0.2	0.1497	0.298	0.39	0.79
Nitrate+Nitrite as Nitrogen	mg/L	5	37	88	0.05	0.095	0.0522	0.05	0.0077	0.0581	0.061	0.0835
Nitrogen, Total as Nitrogen	mg/L	20	3	13	0.25	1.05	0.5352	0.5	0.2107	0.764	1.022	1.05
Nitrogen, Total Kjeldahl (TKN)	mg/L	21	2	9	0.22	1.04	0.5343	0.5	0.1877	0.734	0.965	1.029
pH	pH	41	0	0	6.4	8.33	7.3761	7.35	0.4596	8.16	8.21	8.294
Phosphorus, D	ug/L	1	41	98	23.7	42	41.5643	42	2.8238	42	42	42
Phosphorus, T	ug/L	5	37	88	21	102	43.2	42	10.6197	42	55.015	83.099
Potassium, D	ug/L	42	0	0	527	1100	841.2381	860.5	145.2867	1009	1029.5	1075.4
Potassium, T	ug/L	42	0	0	571	1470	884.0714	893.5	170.0405	1049	1079	1342.9
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1550	3120	2410	2550	469.5197	2886	2988	3074.9
Sodium, T	ug/L	42	0	0	1570	3040	2431.4286	2590	454.509	2925	2987	3019.5
Solids, Total Dissolved	mg/L	42	0	0	29	79	55.8024	57.4	12.7567	72.4	74.19	77.155
Solids, Total Suspended (TSS)	mg/L	9	33	77	5	73.5	8.1071	5	11.3543	11.15	17.45	55.87
Sulfate	mg/L	42	0	0	2.26	9.36	5.0805	5.1	1.6371	7.194	7.5775	8.7368
Temperature, Water	deg C	42	0	0	-0.01	17.35	6.1357	4.22	5.8209	16.221	17.0085	17.35
Thallium, D	ug/L	0	23	100	0.03	0.03	0.03	0.03	0	0.03	0.03	0.03
Thallium, T	ug/L	1	22	96	0.02	0.04	0.0209	0.02	0.0042	0.02	0.02	0.0356
Turbidity	NTU	42	0	0	0	70.2	5.5976	2.75	11.2064	8.98	13.44	51.75
Vanadium (Fume Or Dust), D	ug/L	17	6	26	0.2	0.31	0.2383	0.2	0.0487	0.3	0.3	0.3078
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.2	3.7	0.5209	0.3	0.7174	0.68	0.97	3.106
Zinc, D	ug/L	14	28	67	0.5	3.3	1.6452	2	0.6429	2	2	2.767
Zinc, T	ug/L	19	23	55	0.5	9.2	1.8719	2	1.4653	2	3.9	7.56

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-M-3, Settling pond on northeast corner of SODA												
Alkalinity as CaCO3	mg/L	22	0	0	23	46	28.9045	26.7	5.8973	37.49	38.955	44.53
Aluminum (Fume Or Dust), D	ug/L	21	1	5	3.6	571	42.4773	7.35	123.6357	29.73	171.575	488.68
Aluminum (Fume Or Dust), T	ug/L	22	0	0	20	12100	775.65	124	2555.0183	726.8	1565.95	9897.1
Ammonia as Nitrogen	mg/L	2	20	91	0.05	0.23	0.0615	0.05	0.0408	0.05	0.1203	0.2077
Antimony, D	ug/L	22	0	0	3.9	73.1	19.2109	12.75	19.4119	43.92	67.495	72.176
Antimony, T	ug/L	22	0	0	4.86	192	30.2305	16.65	41.0743	70.49	74.33	167.304
Arsenic (III), T	ug/L	22	0	0	0.609	252	20.8872	7.625	52.7397	21.95	47.675	209.37
Arsenic, D	ug/L	22	0	0	24.7	208	78.2227	68.35	46.3342	131.4	141.5	194.14
Arsenic, T	ug/L	22	0	0	32.5	583	125.9636	99.35	114.9952	208.5	233.9	509.92
Barium, D	ug/L	22	0	0	0.42	17.1	3.2586	2.25	3.4079	5.775	5.9675	14.7627
Barium, T	ug/L	22	0	0	1.69	194	21.4109	4.46	46.4321	33.79	118.575	179.09
Beryllium, D	ug/L	2	20	91	0.02	0.13	0.026	0.02	0.0237	0.02	0.0409	0.1115
Beryllium, T	ug/L	13	9	41	0.02	2.6	0.1747	0.027	0.5484	0.1572	0.3879	2.138
Bicarbonate as CaCO3	mg/L	21	1	5	15	46	26.3318	25.1	6.8569	32	35.325	43.795
Boron, D	ug/L	0	22	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	22	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	21	96	0.02	0.03	0.0205	0.02	0.0021	0.02	0.02	0.0279
Cadmium, T	ug/L	4	18	82	0.02	0.47	0.0424	0.02	0.0957	0.0292	0.049	0.3818
Calcium, D	ug/L	22	0	0	5380	23300	9347.7273	8255	4109.5301	12460	17060	22040
Calcium, T	ug/L	22	0	0	6590	23800	9833.1818	8410	4137.0663	13040	17375	22498
Carbonate as CaCO3	mg/L	1	21	96	15	24	15.4091	15	1.9188	15	15	22.11
Chloride	mg/L	14	8	36	0.2	1.05	0.4232	0.38	0.2279	0.62	0.6865	0.9744
Chromium, D	ug/L	8	14	64	0.2	1.2	0.2886	0.2	0.2204	0.4	0.495	1.053
Chromium, T	ug/L	13	9	41	0.2	24.9	1.6341	0.265	5.2463	1.345	3.2975	20.385
Cobalt, D	ug/L	22	0	0	0.104	1.74	0.3614	0.256	0.3394	0.5998	0.6481	1.5111
Cobalt, T	ug/L	22	0	0	0.107	23	1.6953	0.465	4.8096	1.449	3.227	18.8672
Color	Pt-Co	22	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	37	0	0	0.06	0.221	0.0973	0.086	0.0394	0.1342	0.203	0.216
Copper, D	ug/L	22	0	0	0.17	2	0.4641	0.3	0.438	1.117	1.1995	1.832
Copper, T	ug/L	22	0	0	0.17	35	2.4141	0.4	7.3532	1.997	4.66	28.658
Cyanide, Free	mg/L	0	1	100	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Cyanide, T	mg/L	11	11	50	0.0027	0.015	0.0051	0.0037	0.0034	0.0098	0.011	0.0142
Cyanide, Weak Acid Dissociable (WAD)	mg/L	0	1	100	0.0047	0.0047	0.0047	0.0047		0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	38	0	0	6.56	15.06	10.1653	10.475	1.7875	12.108	12.388	14.2349
Flow velocity	CFS	36	0	0	0.006	0.7456	0.112	0.0734	0.1344	0.1981	0.2716	0.6248
Fluoride	mg/L	0	22	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	22	0	0	20.3	76.2	31.9318	25.7	14.4994	54.84	57.245	72.231
Iron, D	ug/L	21	1	5	22.5	2720	241.7682	59.55	591.7551	373.7	960.35	2356.7
Iron, T	ug/L	22	0	0	80.4	40600	2917.4955	511	8593.9839	3408	7422	33676.3
Lead, D	ug/L	7	15	68	0.02	1.24	0.1091	0.02	0.2724	0.177	0.4655	1.0804
Lead, T	ug/L	21	1	5	0.02	24.9	1.5601	0.157	5.2774	1.183	3.651	20.4648
Magnesium, D	ug/L	22	0	0	731	4030	1435.4091	1170	816.7204	2119	3185	3864.1
Magnesium, T	ug/L	22	0	0	840	6060	1792.7273	1255	1253.3935	3166	4067	5650.5
Manganese, D	ug/L	20	2	9	1.1	73.2	10.6818	6.1	15.1472	19.4	23.215	62.742
Manganese, T	ug/L	22	0	0	5	341	36.4864	17.4	71.0044	49.73	87.94	288.269
Mercury, D	ng/L	22	0	0	1.4	152	11.4905	4.55	31.5331	11.12	13.88	123.02
Mercury, T	ng/L	22	0	0	4.3	6600	352.8782	24.1	1397.6411	232.7	320.05	5282.04

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-M-3, Settling pond on northeast corner of SODA												
Methyl Mercury	ng/L	17	5	23	0.1	12.5	1.0905	0.2	2.8405	1.32	5.77	11.135
Molybdenum, D	ug/L	22	0	0	0.11	1.06	0.3908	0.34	0.2108	0.599	0.781	1.0033
Molybdenum, T	ug/L	22	0	0	0.1	0.94	0.337	0.3185	0.2015	0.5214	0.758	0.9043
Nickel, D	ug/L	19	3	14	0.2	3.8	0.6591	0.4	0.8258	1.518	1.8755	3.3989
Nickel, T	ug/L	21	1	5	0.2	48	3.3164	0.65	10.0919	2.906	6.512	39.327
Nitrate+Nitrite as Nitrogen	mg/L	12	10	46	0.05	0.258	0.0959	0.0525	0.0661	0.1964	0.2255	0.2515
Nitrogen, Total as Nitrogen	mg/L	20	2	9	0.32	5.1	1.0291	0.64	1.0402	1.632	2.4955	4.5624
Nitrogen, Total Kjeldahl (TKN)	mg/L	20	2	9	0.32	4.84	0.9568	0.59	1.0069	1.469	2.458	4.3507
pH	pH	37	0	0	5.95	9.15	7.0343	6.77	0.761	8.188	8.83	9.1356
Phosphorus, D	ug/L	1	21	96	42	51	42.4091	42	1.9188	42	42	49.11
Phosphorus, T	ug/L	10	12	55	21.5	826	106.4273	42	177.2913	237.7	319.15	720.37
Potassium, D	ug/L	22	0	0	427	1860	886.1818	802.5	357.7043	1346	1598	1807.5
Potassium, T	ug/L	22	0	0	507	6500	1337.8636	973	1258.943	2119	2349.5	5630.6
Selenium, D	ug/L	0	22	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	22	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	2	20	91	0.02	0.057	0.023	0.02	0.0099	0.02	0.0485	0.0555
Silver, T	ug/L	9	13	59	0.02	1.04	0.0799	0.02	0.2162	0.0898	0.109	0.8447
Sodium, D	ug/L	22	0	0	3210	4440	3782.7273	3775	345.8486	4273	4356.5	4423.2
Sodium, T	ug/L	22	0	0	3120	4980	3899.0909	3805	459.2013	4640	4794	4942.2
Solids, Total Dissolved	mg/L	22	0	0	25	124	59.8955	57	20.6223	77.6	90.35	117.07
Solids, Total Suspended (TSS)	mg/L	12	10	46	5	1120	80.8182	5.5	239.5572	162.2	203.85	928.06
Sulfate	mg/L	22	0	0	4.44	36.4	10.8059	8.48	7.5639	17.47	23.875	33.838
Temperature, Water	deg C	38	0	0	-0.05	27.58	9.8368	10.31	7.5558	18.996	22.619	26.9584
Thallium, D	ug/L	2	20	91	0.02	0.07	0.0227	0.02	0.0108	0.02	0.0295	0.0616
Thallium, T	ug/L	9	13	59	0.02	1.44	0.0999	0.02	0.3017	0.0697	0.184	1.1775
Turbidity	NTU	38	0	0	0	5999	211.7105	6.9	986.9646	75.42	355.65	4260.37
Vanadium (Fume Or Dust), D	ug/L	21	1	5	0.2	3.4	0.695	0.36	0.8763	2.16	2.5945	3.2341
Vanadium (Fume Or Dust), T	ug/L	22	0	0	0.24	36.6	2.8223	0.6	7.6573	3.636	5.22	30.027
Zinc, D	ug/L	16	6	27	0.5	4.8	1.6809	1.3	1.1229	2	4.565	4.779
Zinc, T	ug/L	20	2	9	0.8	80.1	8.1591	2	18.243	13.6	39.465	71.847

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale
SODA spent ore disposal area

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-8, North Keyway Dam Seep												
Alkalinity as CaCO3	mg/L	21	0	0	57	150	127.2381	130	19.4985	143	145	149
Aluminum (Fume Or Dust), D	ug/L	9	12	57	2.1	12.8	4.5619	4	2.7279	7.2	11.4	12.52
Aluminum (Fume Or Dust), T	ug/L	18	3	14	2.1	1980	105.2095	4.6	429.8461	32.1	70.8	1598.16
Ammonia as Nitrogen	mg/L	20	1	5	0.05	0.235	0.1848	0.195	0.0467	0.224	0.23	0.234
Antimony, D	ug/L	21	0	0	68	391	301.9048	328	71.1631	364	386	390
Antimony, T	ug/L	21	0	0	72.4	3450	733.5905	453	731.9305	1480	1700	3100
Arsenic (III), T	ug/L	21	0	0	34.4	4160	2441.6381	2570	944.3213	3190	3290	3986
Arsenic, D	ug/L	21	0	0	283	2870	2230.619	2400	626.6499	2750	2860	2868
Arsenic, T	ug/L	21	0	0	365	67500	5975	2970	14128.5643	4260	4650	54930
Barium, D	ug/L	21	0	0	8.64	55.9	50.8876	53.7	9.9776	55.4	55.7	55.86
Barium, T	ug/L	21	0	0	9.73	1040	109.9681	60	213.9059	85.3	114	854.8
Beryllium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	6	15	71	0.02	1.67	0.1044	0.02	0.359	0.042	0.08	1.352
Bicarbonate as CaCO3	mg/L	21	0	0	57	160	127.7143	130	20.1919	143	145	157
Boron, D	ug/L	2	19	91	10.5	25.1	20.6952	21	2.5011	21	21	24.28
Boron, T	ug/L	4	17	81	21	32	21.9714	21	2.7681	22.5	28	31.2
Cadmium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	1	20	95	0.02	0.112	0.0244	0.02	0.0201	0.02	0.02	0.0936
Calcium, D	ug/L	21	0	0	23300	76600	62066.6667	63800	11454.7952	73800	75900	76460
Calcium, T	ug/L	21	0	0	23300	76400	63847.619	65900	10940.0923	74600	75000	76120
Carbonate as CaCO3	mg/L	0	21	100	15	15	15	15	0	15	15	15
Chloride	mg/L	21	0	0	3.17	64.4	36.9176	33	15.3157	60.7	63.3	64.18
Chromium, D	ug/L	0	21	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, T	ug/L	6	15	71	0.2	16.3	0.9781	0.2	3.5108	0.3	0.3	13.1
Cobalt, D	ug/L	21	0	0	0.498	3.49	2.588	2.57	0.6379	3.37	3.41	3.474
Cobalt, T	ug/L	21	0	0	0.526	10.6	3.0217	2.62	1.8421	3.39	3.51	9.182
Color	Pt-Co	21	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	36	0	0	0.201	0.682	0.5526	0.561	0.0896	0.653	0.6657	0.6813
Copper, D	ug/L	15	6	29	0.1	0.45	0.1924	0.2	0.096	0.3	0.31	0.422
Copper, T	ug/L	13	8	38	0.1	25.8	1.4086	0.2	5.5897	0.4	0.4	20.72
Cyanide, Free	mg/L	0	1	100	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Cyanide, T	mg/L	20	1	5	0.0047	0.0574	0.0217	0.0188	0.0109	0.0321	0.0386	0.0536
Cyanide, Weak Acid Dissociable (WAD)	mg/L	0	1	100	0.0047	0.0047	0.0047	0.0047		0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	37	0	0	0.53	8.6	1.457	1.01	1.4759	2.206	3.258	7.4228
Flow velocity	CFS	30	0	0	0.0003	0.0946	0.0114	0.0053	0.0187	0.0223	0.0394	0.0816
Fluoride	mg/L	0	21	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	21	0	0	78.5	260	217.7381	223	37.9347	257	257	259.4
Iron, D	ug/L	21	0	0	88	8040	6516.0952	6890	1795.4471	7810	7950	8022
Iron, T	ug/L	21	0	0	408	335000	25984.6667	9240	70917.2748	16800	19000	271800
Lead, D	ug/L	2	19	91	0.02	0.078	0.0232	0.02	0.0127	0.02	0.03	0.0684
Lead, T	ug/L	18	3	14	0.02	13.2	0.681	0.038	2.8688	0.15	0.16	10.592
Magnesium, D	ug/L	21	0	0	4930	17800	13928.0952	13900	2874.7341	17100	17200	17680
Magnesium, T	ug/L	21	0	0	4930	17900	14172.8571	14200	2681.4868	16800	17200	17760
Manganese, D	ug/L	21	0	0	48.4	1190	925.0667	949	236.2365	1130	1190	1190
Manganese, T	ug/L	21	0	0	50.9	3360	1074.2333	999	571.6785	1160	1190	2926
Mercury, D	ng/L	18	3	14	0.9	9	1.8767	1.31	1.7451	2.5	3.4	7.88
Mercury, T	ng/L	21	0	0	2.8	4080	205.8324	7.2	887.7571	34.9	36.5	3271.3

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-8, North Keyway Dam Seep												
Methyl Mercury	ng/L	3	18	86	0.1	5.9	0.3819	0.1	1.2645	0.12	0.2	4.76
Molybdenum, D	ug/L	21	0	0	1.3	5.32	4.2871	4.4	0.887	5.17	5.29	5.314
Molybdenum, T	ug/L	21	0	0	1.3	5.42	4.2995	4.44	0.9378	5.25	5.32	5.4
Nickel, D	ug/L	21	0	0	0.38	1.7	1.0519	0.9	0.3446	1.6	1.6	1.68
Nickel, T	ug/L	20	1	5	0.2	14.4	1.6948	1.15	2.9323	1.6	1.7	11.86
Nitrate+Nitrite as Nitrogen	mg/L	1	20	95	0.05	0.061	0.0505	0.05	0.0024	0.05	0.05	0.0588
Nitrogen, Total as Nitrogen	mg/L	20	1	5	0.4	5.05	0.969	0.67	0.9845	1.23	1.59	4.358
Nitrogen, Total Kjeldahl (TKN)	mg/L	20	1	5	0.4	5	0.9586	0.64	0.9772	1.23	1.59	4.318
pH	pH	36	0	0	6.53	7.39	7.0058	7.035	0.2052	7.24	7.2925	7.369
Phosphorus, D	ug/L	10	11	52	27.7	104	53.2667	42	19.5409	81	88.9	100.98
Phosphorus, T	ug/L	21	0	0	58	13700	1023.0476	245	2924.7853	1010	1420	11244
Potassium, D	ug/L	21	0	0	1600	7250	5554.2857	5600	1309.8991	6930	7070	7214
Potassium, T	ug/L	21	0	0	1610	7240	5739.0476	5810	1234.2362	7040	7200	7232
Selenium, D	ug/L	0	21	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	1	20	95	1	1.7	1.0333	1	0.1528	1	1	1.56
Silver, D	ug/L	2	19	91	0.02	0.03	0.0207	0.02	0.0023	0.02	0.024	0.0288
Silver, T	ug/L	3	18	86	0.02	0.835	0.0598	0.02	0.1777	0.02	0.04	0.676
Sodium, D	ug/L	21	0	0	3560	18200	13061.4286	12600	3453.8475	17000	17900	18140
Sodium, T	ug/L	21	0	0	3530	17800	13200.9524	12800	3398.6393	17400	17700	17780
Solids, Total Dissolved	mg/L	20	1	5	10	375	279.1429	297	81.8317	352	353	370.6
Solids, Total Suspended (TSS)	mg/L	20	1	5	5	169	38.4286	19	46.3285	85	158	166.8
Sulfate	mg/L	21	0	0	26.4	82.8	63.8524	64.1	12.2017	76.6	77.2	81.68
Temperature, Water	deg C	37	0	0	0.14	10.86	6.7938	6.97	1.8251	8.336	9.304	10.536
Thallium, D	ug/L	1	20	95	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	4	17	81	0.02	0.712	0.0548	0.02	0.1507	0.03	0.049	0.5794
Turbidity	NTU	37	0	0	0.3	201	17.0297	6.5	35.1093	31.28	68.16	155.28
Vanadium (Fume Or Dust), D	ug/L	1	20	95	0.2	0.28	0.2038	0.2	0.0175	0.2	0.2	0.264
Vanadium (Fume Or Dust), T	ug/L	11	10	48	0.2	23.1	1.3452	0.2	4.9855	0.49	0.5	18.58
Zinc, D	ug/L	19	2	10	0.6	2.3	1.2448	1	0.4989	2	2	2.24
Zinc, T	ug/L	19	2	10	0.6	51.4	3.719	1.4	10.9433	2.1	2.8	41.68

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-7, Middle Keyway Dam Seep												
Alkalinity as CaCO3	mg/L	20	0	0	141	198	159.45	159	10.8505	163.1	165.7	191.54
Aluminum (Fume Or Dust), D	ug/L	7	13	65	2.1	13.1	4.74	4	2.6021	6.46	10.725	12.625
Aluminum (Fume Or Dust), T	ug/L	17	3	15	2	195	49.515	14.9	64.6709	151.7	185.5	193.1
Ammonia as Nitrogen	mg/L	19	1	5	0.05	2.05	0.2667	0.186	0.4222	0.2282	0.321	1.7042
Antimony, D	ug/L	20	0	0	15.7	991	135.33	59.8	223.9397	355.7	410.55	874.91
Antimony, T	ug/L	20	0	0	9.19	2450	513.3795	206.5	635.8186	1046.3	1794.5	2318.9
Arsenic (III), T	ug/L	20	0	0	22.2	6890	3398.36	3580	2147.7831	5935	6367.5	6785.5
Arsenic, D	ug/L	20	0	0	485	4300	2197.45	2145	1135.2349	3637	3986.5	4237.3
Arsenic, T	ug/L	20	0	0	658	48600	12929.4	9740	12502.6847	25610	36250	46130
Barium, D	ug/L	20	0	0	12.8	68	39.555	41.5	12.9056	49.57	51.09	64.618
Barium, T	ug/L	20	0	0	18.7	692	159.46	114.05	159.5485	327.1	371.85	627.97
Beryllium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	13	7	35	0.02	0.44	0.115	0.04	0.1376	0.3747	0.3925	0.4305
Bicarbonate as CaCO3	mg/L	20	0	0	141	198	159.45	159	10.8505	163.1	165.7	191.54
Boron, D	ug/L	3	17	85	13.3	23	20.745	21	1.8115	21.06	21.67	22.734
Boron, T	ug/L	11	9	45	21	33.4	23.065	21.05	3.4661	25.78	31.12	32.944
Cadmium, D	ug/L	1	19	95	0.02	0.03	0.0205	0.02	0.0022	0.02	0.0205	0.0281
Cadmium, T	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	20	0	0	62700	107000	89915	93950	12601.181	103100	104150	106430
Calcium, T	ug/L	20	0	0	64500	119000	96935	102000	14532.8765	111100	112350	117670
Carbonate as CaCO3	mg/L	0	20	100	15	15	15	15	0	15	15	15
Chloride	mg/L	20	0	0	4.41	148	97.0605	112	42.1998	136	136.6	145.72
Chromium, D	ug/L	3	17	85	0.2	0.5	0.2285	0.2	0.079	0.283	0.405	0.481
Chromium, T	ug/L	15	5	25	0.2	6.6	1.2455	0.56	1.7256	3.35	4.795	6.239
Cobalt, D	ug/L	20	0	0	0.91	6.49	4.8955	5.34	1.5579	6.215	6.4425	6.4805
Cobalt, T	ug/L	20	0	0	0.99	6.95	5.1125	5.675	1.5143	6.489	6.589	6.8778
Color	Pt-Co	20	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	36	0	0	0.51	0.977	0.8264	0.853	0.1268	0.9565	0.9685	0.9746
Copper, D	ug/L	14	6	30	0.1	0.8	0.321	0.3	0.2238	0.61	0.705	0.781
Copper, T	ug/L	18	2	10	0.1	20.4	1.8005	0.485	4.4908	3.18	4.725	17.265
Cyanide, Free	mg/L	0	1	100	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Cyanide, T	mg/L	20	0	0	0.0064	0.0605	0.0246	0.0232	0.0117	0.0345	0.0393	0.0563
Cyanide, Weak Acid Dissociable (WAD)	mg/L	0	1	100	0.0047	0.0047	0.0047	0.0047		0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	36	0	0	0.93	8.7	3.1064	2.165	2.0882	5.935	8.01	8.4795
Flow velocity	CFS	3	0	0	0.0043	0.0125	0.0079	0.0069	0.0042	0.0114	0.0119	0.0124
Fluoride	mg/L	5	15	75	0.2	0.84	0.237	0.2	0.1425	0.223	0.2795	0.7279
Hardness as CaCO3	mg/L	20	0	0	225	406	346.35	364.5	52.6591	395.8	403.15	405.43
Iron, D	ug/L	20	0	0	23	8070	3479.715	3310	2712.2357	7684	7823	8020.6
Iron, T	ug/L	20	0	0	101	137000	43695.05	27800	43854.4682	122300	125600	134720
Lead, D	ug/L	2	18	90	0.02	0.62	0.0512	0.02	0.134	0.0224	0.0728	0.5106
Lead, T	ug/L	15	5	25	0.02	2.87	0.4055	0.07	0.6996	1.062	1.3405	2.5641
Magnesium, D	ug/L	20	0	0	15500	30800	24740	26000	4275.9302	29430	29755	30591
Magnesium, T	ug/L	20	0	0	15600	31400	25355	26800	4273.9696	29460	30070	31134
Manganese, D	ug/L	20	0	0	10.5	1510	1068.045	1215	467.5966	1441	1453	1498.6
Manganese, T	ug/L	20	0	0	60.7	3710	1516.93	1490	814.0437	2213	2484.5	3464.9
Mercury, D	ng/L	18	2	10	0.88	24.6	4.294	1.2	6.9354	8.95	22.985	24.277
Mercury, T	ng/L	19	1	5	1	616	117.26	37.55	186.0704	368.6	582.75	609.35

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-7, Middle Keyway Dam Seep												
Methyl Mercury	ng/L	10	10	50	0.1	0.6	0.174	0.1	0.1408	0.32	0.505	0.581
Molybdenum, D	ug/L	20	0	0	4.15	7.72	6.354	6.42	0.8063	7.183	7.492	7.6744
Molybdenum, T	ug/L	20	0	0	4.04	7.92	6.2545	6.265	1.0142	7.362	7.578	7.8516
Nickel, D	ug/L	20	0	0	0.2	1.6	0.7745	0.61	0.4734	1.5	1.505	1.581
Nickel, T	ug/L	19	1	5	0.2	3.24	1.2625	1.17	0.8773	2.54	2.917	3.1754
Nitrate+Nitrite as Nitrogen	mg/L	3	17	85	0.05	0.441	0.0809	0.05	0.0931	0.1231	0.2254	0.3979
Nitrogen, Total as Nitrogen	mg/L	20	0	0	0.38	5.48	1.5585	1.305	1.2363	2.993	3.3995	5.0639
Nitrogen, Total Kjeldahl (TKN)	mg/L	19	1	5	0.3	5.48	1.5155	1.14	1.2513	2.99	3.371	5.0582
pH	pH	36	0	0	6.5	7.58	7.08	7.08	0.2466	7.42	7.4725	7.5555
Phosphorus, D	ug/L	8	12	60	22.4	178	49.84	42	30.9656	51.29	68.655	156.131
Phosphorus, T	ug/L	20	0	0	59	6290	1938.05	1197.5	2015.3232	4852	5454	6122.8
Potassium, D	ug/L	20	0	0	5600	13400	10506.5	11150	2101.6517	12610	12735	13267
Potassium, T	ug/L	20	0	0	5890	13700	10804	11450	2082.6966	12800	12845	13529
Selenium, D	ug/L	0	20	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	1	19	95	1	1.3	1.015	1	0.0671	1	1.015	1.243
Silver, D	ug/L	1	19	95	0.02	0.03	0.0205	0.02	0.0022	0.02	0.0205	0.0281
Silver, T	ug/L	1	19	95	0.02	0.026	0.0203	0.02	0.0013	0.02	0.0203	0.0249
Sodium, D	ug/L	20	0	0	3070	31200	23269	25750	7961.705	30700	30725	31105
Sodium, T	ug/L	20	0	0	3160	32800	23485.5	26200	8028.7152	30070	31660	32572
Solids, Total Dissolved	mg/L	20	0	0	260	549	467.75	497.5	85.4652	546	546.15	548.43
Solids, Total Suspended (TSS)	mg/L	19	1	5	5	525	158.5	66.25	182.3731	484	520.25	524.05
Sulfate	mg/L	20	0	0	69.6	114	92.18	93.75	9.7957	100.16	107.35	112.67
Temperature, Water	deg C	36	0	0	1.73	16.8	8.2206	7.88	3.4674	12.84	13.7125	15.8375
Thallium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	5	15	75	0.02	0.07	0.025	0.02	0.0122	0.0391	0.0415	0.0643
Turbidity	NTU	36	0	0	0.7	306	43.8722	20.05	64.4762	126	145.75	267.5
Vanadium (Fume Or Dust), D	ug/L	0	20	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	15	5	25	0.2	6	1.4225	0.675	1.6933	4.169	4.765	5.753
Zinc, D	ug/L	15	5	25	0.5	1660	84.2805	1.4	370.8862	2	84.9	1344.98
Zinc, T	ug/L	19	1	5	0.9	24.9	8.299	3.55	8.3602	22.35	22.905	24.501

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-6, South Keyway Dam Seep												
Alkalinity as CaCO3	mg/L	20	0	0	26.8	212	171.19	181	36.8246	187.4	192.05	208.01
Aluminum (Fume Or Dust), D	ug/L	7	13	65	2.4	76.9	7.995	4	16.3859	6.08	17.145	64.949
Aluminum (Fume Or Dust), T	ug/L	20	0	0	4.2	265	54.915	31.65	64.3716	127.3	170.95	246.19
Ammonia as Nitrogen	mg/L	7	13	65	0.05	0.171	0.0685	0.05	0.0332	0.0998	0.1358	0.164
Antimony, D	ug/L	20	0	0	2.86	95.4	31.901	16.1	30.4566	82.86	85.71	93.462
Antimony, T	ug/L	20	0	0	4.64	229	51.372	37.15	51.4071	88.44	95.81	202.362
Arsenic (III), T	ug/L	20	0	0	1	7440	862.155	544	1624.5602	1368	1825.5	6317.1
Arsenic, D	ug/L	20	0	0	119	1700	484.95	365.5	399.0783	929.5	980.85	1556.17
Arsenic, T	ug/L	20	0	0	235	34400	5249.95	1580	9269.6603	11900	27560	33032
Barium, D	ug/L	20	0	0	17.4	61.5	38.55	38.5	14.2356	57.99	59.79	61.158
Barium, T	ug/L	20	0	0	21.4	492	91.695	59.9	118.9758	159.6	360.9	465.78
Beryllium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	5	15	75	0.02	0.243	0.0382	0.02	0.0541	0.04	0.1356	0.2215
Bicarbonate as CaCO3	mg/L	20	0	0	26.8	212	171.19	181	36.8246	187.4	192.05	208.01
Boron, D	ug/L	6	14	70	14.8	23	20.83	21	1.5013	21.44	21.86	22.772
Boron, T	ug/L	6	14	70	21	32.2	22.305	21	2.9491	25.57	28.21	31.402
Cadmium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	20	0	0	53700	94200	78200	80000	9639.1745	90570	92205	93801
Calcium, T	ug/L	20	0	0	60100	101000	81260	80200	10900.8643	96580	100050	100810
Carbonate as CaCO3	mg/L	0	20	100	15	15	15	15	0	15	15	15
Chloride	mg/L	20	0	0	12.9	72.5	34.06	35.25	14.6443	46.63	55.02	69.004
Chromium, D	ug/L	2	18	90	0.2	0.5	0.215	0.2	0.0671	0.2	0.215	0.443
Chromium, T	ug/L	12	8	40	0.2	1.3	0.3595	0.2	0.2792	0.701	0.825	1.205
Cobalt, D	ug/L	20	0	0	1.49	6.54	4.076	4.245	1.5985	5.841	6.483	6.5286
Cobalt, T	ug/L	20	0	0	1.75	7.56	4.4935	4.77	1.8166	6.541	7.199	7.4878
Color	Pt-Co	20	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	34	0	0	0.034	0.833	0.6103	0.6355	0.1558	0.7472	0.784	0.8205
Copper, D	ug/L	17	3	15	0.1	0.7	0.3155	0.3	0.1746	0.52	0.7	0.7
Copper, T	ug/L	20	0	0	0.2	1.8	0.5495	0.45	0.3531	0.811	0.9545	1.6309
Cyanide, Free	mg/L	0	1	100	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Cyanide, T	mg/L	19	1	5	0.0047	0.0315	0.015	0.0121	0.0079	0.0256	0.0275	0.0307
Cyanide, Weak Acid Dissociable (WAD)	mg/L	0	1	100	0.0047	0.0047	0.0047	0.0047		0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	35	0	0	1.32	10.99	5.026	4.92	2.5546	8.41	9.245	10.956
Flow velocity	CFS	3	0	0	0.0003	0.0109	0.0057	0.0059	0.0053	0.0099	0.0104	0.0108
Fluoride	mg/L	4	16	80	0.2	0.26	0.205	0.2	0.0157	0.204	0.241	0.2562
Hardness as CaCO3	mg/L	20	0	0	213	353	292.25	289.5	37.7581	349.3	352.05	352.81
Iron, D	ug/L	19	1	5	20	5880	1658.495	1095	1790.9938	4163	4873	5678.6
Iron, T	ug/L	20	0	0	394	168000	22280.8	7720	40699.1801	50410	95705	153541
Lead, D	ug/L	6	14	70	0.02	0.14	0.028	0.02	0.0269	0.031	0.045	0.121
Lead, T	ug/L	16	4	20	0.02	0.41	0.1253	0.075	0.1264	0.3011	0.41	0.41
Magnesium, D	ug/L	20	0	0	14500	27600	21395	21300	2677.2875	24010	24275	26935
Magnesium, T	ug/L	20	0	0	15400	26600	21725	21400	2722.784	25330	26505	26581
Manganese, D	ug/L	20	0	0	47.9	2250	1066.795	1130	726.432	1847	2012.5	2202.5
Manganese, T	ug/L	20	0	0	176	3310	1426.15	1460	884.0762	2253	2331.5	3114.3
Mercury, D	ng/L	19	1	5	1	19.6	8.844	8.05	4.8128	15.38	18.84	19.448
Mercury, T	ng/L	20	0	0	1.1	201	54.155	40.75	53.7807	127.3	167.75	194.35

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-6, South Keyway Dam Seep												
Methyl Mercury	ng/L	14	6	30	0.1	1	0.2965	0.265	0.2307	0.516	0.677	0.9354
Molybdenum, D	ug/L	20	0	0	2.41	4.92	3.5835	3.71	0.8215	4.807	4.8725	4.9105
Molybdenum, T	ug/L	20	0	0	2.23	5.32	3.77	3.62	0.9339	5.129	5.2155	5.2991
Nickel, D	ug/L	20	0	0	0.39	2.1	1.028	0.895	0.521	1.72	1.91	2.062
Nickel, T	ug/L	20	0	0	0.5	4.3	1.3995	1.325	0.8576	1.84	2.305	3.901
Nitrate+Nitrite as Nitrogen	mg/L	7	13	65	0.05	0.383	0.0956	0.05	0.0863	0.1862	0.2234	0.3511
Nitrogen, Total as Nitrogen	mg/L	20	0	0	0.55	3.36	1.2895	0.935	0.8664	2.761	3.1415	3.3163
Nitrogen, Total Kjeldahl (TKN)	mg/L	20	0	0	0.45	3.36	1.2205	0.865	0.8911	2.72	3.094	3.3068
pH	pH	34	0	0	6.75	7.96	7.2079	7.17	0.3014	7.718	7.838	7.9369
Phosphorus, D	ug/L	1	19	95	42	77.3	43.765	42	7.8933	42	43.765	70.593
Phosphorus, T	ug/L	18	2	10	20.1	2600	390.825	96.9	755.3124	896.2	2505	2581
Potassium, D	ug/L	20	0	0	4850	10700	7501.5	7900	1541.6508	8821	9778.5	10515.7
Potassium, T	ug/L	20	0	0	5000	10600	7680	7650	1577.9033	9334	9773.5	10434.7
Selenium, D	ug/L	0	20	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	20	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	1	19	95	0.02	0.04	0.021	0.02	0.0045	0.02	0.021	0.0362
Silver, T	ug/L	2	18	90	0.02	0.12	0.0265	0.02	0.023	0.023	0.0535	0.1067
Sodium, D	ug/L	20	0	0	7560	23000	15322	16750	3911.3218	18430	18915	22183
Sodium, T	ug/L	20	0	0	8250	22100	15498	16550	3846.5057	19450	20010	21682
Solids, Total Dissolved	mg/L	20	0	0	244	495	384.8	390	60.6575	461.2	473.15	490.63
Solids, Total Suspended (TSS)	mg/L	18	2	10	5	556	67.825	26	127.6458	134.9	257.7	496.34
Sulfate	mg/L	20	0	0	66.8	148	94.145	91.9	21.7145	117.6	141.35	146.67
Temperature, Water	deg C	35	0	0	0.03	19.83	6.9226	6.46	4.7097	12.154	13.573	18.062
Thallium, D	ug/L	4	16	80	0.02	0.05	0.0222	0.02	0.0069	0.0237	0.031	0.0462
Thallium, T	ug/L	5	15	75	0.02	0.13	0.0335	0.02	0.0292	0.071	0.0825	0.1205
Turbidity	NTU	35	0	0	1.6	582	78.7629	31.7	123.7536	167	305.1	532.36
Vanadium (Fume Or Dust), D	ug/L	2	18	90	0.2	0.3	0.205	0.2	0.0224	0.2	0.205	0.281
Vanadium (Fume Or Dust), T	ug/L	16	4	20	0.2	3.1	0.686	0.35	0.8705	1.476	3.062	3.0924
Zinc, D	ug/L	15	5	25	0.5	2.2	1.24	0.95	0.621	2	2.01	2.162
Zinc, T	ug/L	16	4	20	0.7	7.6	2.0195	1.65	1.5041	3.491	3.705	6.821

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-10, Keyway Marsh Outlet												
Alkalinity as CaCO3	mg/L	23	0	0	48	150	98.9913	100	26.0125	128	138.9	147.8
Aluminum (Fume Or Dust), D	ug/L	6	17	74	2.1	29.4	5.2261	4	5.4836	4.08	10.04	25.286
Aluminum (Fume Or Dust), T	ug/L	21	2	9	2.5	168	26.5652	9.3	40.1341	68.04	103.63	154.58
Ammonia as Nitrogen	mg/L	1	22	96	0.05	0.14	0.0539	0.05	0.0188	0.05	0.05	0.1202
Antimony, D	ug/L	23	0	0	11.5	139	45.087	41.5	29.3005	76.68	86.72	127.736
Antimony, T	ug/L	23	0	0	15.4	135	49.4174	46.2	26.8333	78.72	85.78	124.33
Arsenic (III), T	ug/L	23	0	0	0.24	227	12.5422	1.96	46.8135	7.2	7.371	178.6858
Arsenic, D	ug/L	23	0	0	27.2	151	75.0783	69.1	36.6081	117.4	146.9	150.78
Arsenic, T	ug/L	23	0	0	36.3	6540	415.4652	121	1338.8871	355.4	425.6	5196.02
Barium, D	ug/L	23	0	0	6.71	24.1	15.8187	16.9	4.7454	19.86	23.6	24.078
Barium, T	ug/L	23	0	0	7.11	119	22.4265	17.5	22.2057	30.26	38.44	101.444
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	22	96	0.02	0.05	0.0213	0.02	0.0063	0.02	0.02	0.0434
Bicarbonate as CaCO3	mg/L	23	0	0	48	150	98.9478	100	26.0186	128	138.9	147.8
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	23	0	0	19000	62600	45852.1739	48600	12590.9372	56940	60960	62336
Calcium, T	ug/L	23	0	0	19100	66100	46243.4783	48800	12849.4367	56060	62760	65528
Carbonate as CaCO3	mg/L	0	23	100	15	15	15	15	0	15	15	15
Chloride	mg/L	23	0	0	0.24	46.2	29.1765	33.6	14.6242	44.68	45.42	46.046
Chromium, D	ug/L	1	22	96	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, T	ug/L	4	19	83	0.2	0.6	0.2352	0.2	0.1039	0.28	0.489	0.5802
Cobalt, D	ug/L	23	0	0	0.489	2.38	1.5973	1.76	0.573	2.108	2.182	2.3382
Cobalt, T	ug/L	23	0	0	0.509	5.2	1.8269	1.88	0.9514	2.446	2.48	4.6016
Color	Pt-Co	22	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	40	0	0	0.154	0.554	0.3932	0.418	0.0964	0.5042	0.513	0.545
Copper, D	ug/L	23	0	0	0.2	0.7	0.3257	0.3	0.1205	0.432	0.521	0.6626
Copper, T	ug/L	23	0	0	0.1	1.85	0.3813	0.3	0.3744	0.646	0.97	1.663
Cyanide, T	mg/L	14	9	39	0.004	0.0228	0.0079	0.0048	0.0048	0.0143	0.0148	0.021
Dissolved Oxygen	mg/L	41	0	0	3.66	11.53	7.6241	7.76	1.6339	9.28	10.04	11.034
Flow velocity	CFS	38	0	0	0.0316	0.859	0.1851	0.1075	0.2	0.553	0.6085	0.7791
Fluoride	mg/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	23	0	0	64.7	228	160.7783	169	45.7379	198.6	219.8	226.68
Iron, D	ug/L	9	14	61	20.1	574	72.013	42	118.3999	49.46	233.6	503.6
Iron, T	ug/L	23	0	0	59.9	43500	2454.1	232	8981.8061	1998	3092	34636.2
Lead, D	ug/L	1	22	96	0.02	0.05	0.0213	0.02	0.0063	0.02	0.02	0.0434
Lead, T	ug/L	12	11	48	0.02	0.852	0.0949	0.028	0.184	0.256	0.318	0.735
Magnesium, D	ug/L	23	0	0	4120	14900	11075.2174	12000	3373.1788	14700	14790	14878
Magnesium, T	ug/L	23	0	0	4120	15400	11000.4348	11900	3355.5524	14420	15220	15378
Manganese, D	ug/L	23	0	0	8.5	287	75.5	53.8	72.3985	172.2	202.8	269.18
Manganese, T	ug/L	23	0	0	14.2	3470	334.4391	113	732.2157	677	1112.6	2959.6
Mercury, D	ng/L	23	0	0	0.7	11.1	2.3913	1.7	2.2324	4.54	4.78	9.714
Mercury, T	ng/L	23	0	0	1.4	27.8	7.7174	6.1	7.1699	17.86	21.79	26.568
Methyl Mercury	ng/L	5	18	78	0.1	0.2	0.1135	0.1	0.0343	0.182	0.2	0.2

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-10, Keyway Marsh Outlet												
Molybdenum, D	ug/L	23	0	0	0.77	2.71	1.5287	1.46	0.5086	2.294	2.382	2.6396
Molybdenum, T	ug/L	23	0	0	0.82	3.4	1.6142	1.5	0.6099	2.362	2.67	3.246
Nickel, D	ug/L	23	0	0	0.2	1.2	0.5452	0.5	0.2739	0.86	0.987	1.156
Nickel, T	ug/L	22	1	4	0.2	2.53	0.6735	0.6	0.5284	1.24	1.48	2.3034
Nitrate+Nitrite as Nitrogen	mg/L	2	21	91	0.05	0.294	0.0606	0.05	0.0509	0.05	0.05	0.2403
Nitrogen, Total as Nitrogen	mg/L	21	2	9	0.27	1.21	0.5848	0.56	0.2136	0.726	1.009	1.1726
Nitrogen, Total Kjeldahl (TKN)	mg/L	21	2	9	0.27	1.04	0.5657	0.55	0.1814	0.722	0.892	1.0114
pH	pH	40	0	0	6.65	7.99	7.2208	7.2	0.3428	7.685	7.7505	7.9744
Phosphorus, D	ug/L	1	22	96	21.5	42	41.1087	42	4.2745	42	42	42
Phosphorus, T	ug/L	4	19	83	42	899	83.8391	42	178.2724	81	93.71	721.944
Potassium, D	ug/L	23	0	0	1700	6240	4569.5652	4940	1367.5276	5974	6046	6198.2
Potassium, T	ug/L	23	0	0	1740	6380	4529.1304	4960	1342.8833	5920	5984	6294.2
Selenium, D	ug/L	0	23	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	23	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	22	96	0.02	0.038	0.0208	0.02	0.0038	0.02	0.02	0.034
Sodium, D	ug/L	23	0	0	4610	15800	11406.087	12400	3495.9753	15180	15300	15690
Sodium, T	ug/L	23	0	0	4670	16000	11304.3478	12100	3446.1663	15240	15660	15934
Solids, Total Dissolved	mg/L	23	0	0	103	316	219.8696	232	64.5279	294	306.1	314.02
Solids, Total Suspended (TSS)	mg/L	8	15	65	5	344	21.2391	5	70.4568	15.9	18	272.28
Sulfate	mg/L	23	0	0	13	64.7	39.3304	40.2	13.3362	52.56	63.13	64.612
Temperature, Water	deg C	41	0	0	-0.04	19.18	7.3693	6.46	6.6917	17.23	17.68	18.868
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	22	96	0.02	0.024	0.0202	0.02	0.0008	0.02	0.02	0.0231
Turbidity	NTU	41	0	0	1	108	18.5659	7	26.043	54.5	76.7	99.68
Vanadium (Fume Or Dust), D	ug/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	5	18	78	0.2	1.94	0.2974	0.2	0.3655	0.36	0.49	1.6232
Zinc, D	ug/L	11	12	52	0.5	2.2	1.4478	2	0.668	2	2	2.156
Zinc, T	ug/L	13	10	44	0.5	9.3	1.9261	2	1.7623	2.56	3.15	7.958

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-5, Smelter Flats Seep												
Alkalinity as CaCO3	mg/L	8	0	0	77.2	140	97.9	96.5	20.3068	116.2	128.1	137.62
Aluminum (Fume Or Dust), D	ug/L	8	0	0	2.9	13300	1669	6.55	4699.6366	4003.58	8651.79	12370.358
Aluminum (Fume Or Dust), T	ug/L	8	0	0	26.1	3360	547.1875	110.25	1142.6819	1260	2310	3150
Ammonia as Nitrogen	mg/L	0	8	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	8	0	0	38.5	5140	2437.3125	2320	1409.08	3530	4335	4979
Antimony, T	ug/L	8	0	0	37.9	4870	2252.2375	2220	1394.6759	3470	4170	4730
Arsenic (III), T	ug/L	8	0	0	2.3	213	41.275	16.9	70.8391	93.44	153.22	201.044
Arsenic, D	ug/L	8	0	0	817	5540	1652	1120	1584.5061	2712	4126	5257.2
Arsenic, T	ug/L	8	0	0	906	2950	1365.125	1125	672.9817	1998	2474	2854.8
Barium, D	ug/L	8	0	0	8.29	354	58.43	16.6	119.6361	125.31	239.655	331.131
Barium, T	ug/L	8	0	0	8.78	118	30.96	17.05	36.4522	58.92	88.46	112.092
Beryllium, D	ug/L	1	7	88	0.02	2.67	0.3512	0.02	0.9369	0.815	1.7425	2.4845
Beryllium, T	ug/L	5	3	36	0.02	0.79	0.1275	0.02	0.2685	0.286	0.538	0.7396
Bicarbonate as CaCO3	mg/L	8	0	0	77.2	140	95.9	88.5	20.7411	116.2	128.1	137.62
Boron, D	ug/L	6	2	25	20	45.9	26.7375	22.4	9.1201	35.89	40.895	44.899
Boron, T	ug/L	6	2	25	20	46.6	27.3	23.35	8.9236	36.03	41.315	45.543
Cadmium, D	ug/L	1	7	88	0.02	0.31	0.0563	0.02	0.1025	0.107	0.2085	0.2897
Cadmium, T	ug/L	2	6	75	0.02	0.1	0.0312	0.02	0.028	0.051	0.0755	0.0951
Calcium, D	ug/L	8	0	0	30200	74900	48000	44750	16198.148	67550	71225	74165
Calcium, T	ug/L	8	0	0	29900	75200	47612.5	43150	16131.4633	67010	71105	74381
Carbonate as CaCO3	mg/L	1	7	88	15	16	15.125	15	0.3536	15.3	15.65	15.93
Chloride	mg/L	8	0	0	0.26	6.84	1.585	0.55	2.2553	3.907	5.3735	6.5467
Chromium, D	ug/L	2	6	75	0.2	18	2.4375	0.2	6.2883	5.61	11.805	16.761
Chromium, T	ug/L	6	2	25	0.2	5.5	1	0.3	1.8252	2.07	3.785	5.157
Cobalt, D	ug/L	8	0	0	0.235	13	1.9769	0.33	4.4584	4.488	8.744	12.1488
Cobalt, T	ug/L	8	0	0	0.243	5.51	1.1579	0.375	1.7933	2.514	4.012	5.2104
Color	Pt-Co	8	0	0	0	10	1.25	0	3.5355	3	6.5	9.3
Conductivity	mS/cm	17	0	0	0.097	0.506	0.3305	0.326	0.103	0.4534	0.4836	0.5015
Copper, D	ug/L	8	0	0	1.3	57.5	11.0925	3.5	19.144	26.21	41.855	54.371
Copper, T	ug/L	8	0	0	1.44	26.6	7.7925	4	8.7828	18.13	22.365	25.753
Cyanide, T	mg/L	3	5	63	0.0047	0.0369	0.0098	0.0047	0.0112	0.0193	0.0281	0.0351
Dissolved Oxygen	mg/L	17	0	0	3.44	13.54	8.3065	8.44	2.5881	10.406	11.22	13.076
Flow velocity	CFS	14	0	0	0.0008	0.1908	0.0287	0.0121	0.0488	0.041	0.094	0.1714
Fluoride	mg/L	0	8	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	8	0	0	94.2	234	149.4	136.5	50.3357	209.5	221.75	231.55
Iron, D	ug/L	7	1	13	20	64900	8144.1375	36.35	22932.8352	19508.01	42204.005	60360.801
Iron, T	ug/L	8	0	0	104	20400	3015.75	427.5	7038.6581	7002	13701	19060.2
Lead, D	ug/L	3	5	63	0.02	38.7	4.8596	0.02	13.6736	11.6429	25.1714	35.9943
Lead, T	ug/L	8	0	0	0.05	10.6	1.6886	0.3395	3.615	3.817	7.2085	9.9217
Magnesium, D	ug/L	8	0	0	4790	11300	7888.75	8215	2765.4627	11090	11195	11279
Magnesium, T	ug/L	8	0	0	4750	11300	7411.25	7045	2478.1124	10250	10775	11195
Manganese, D	ug/L	8	0	0	7.1	2470	345.325	28.45	859.7189	842.5	1656.25	2307.25
Manganese, T	ug/L	8	0	0	9	1090	180.7875	35.45	370.107	434.8	762.4	1024.48
Mercury, D	ng/L	8	0	0	12.7	1050	151.8	20.7	363.114	350.28	700.14	980.028
Mercury, T	ng/L	8	0	0	24.1	11700	1527.925	63.15	4110.3975	3627.6	7663.8	10892.76
Methyl Mercury	ng/L	2	6	75	0.1	6.6	0.925	0.1	2.2933	2.12	4.36	6.152

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-5, Smelter Flats Seep												
Molybdenum, D	ug/L	8	0	0	0.937	4.23	1.8921	1.415	1.155	3.117	3.6735	4.1187
Molybdenum, T	ug/L	8	0	0	0.63	3.92	1.7561	1.42	1.0878	2.835	3.3775	3.8115
Nickel, D	ug/L	8	0	0	0.51	21.1	3.725	1.15	7.0523	8.01	14.555	19.791
Nickel, T	ug/L	8	0	0	0.44	8.4	2.3625	1.215	2.6122	4.641	6.5205	8.0241
Nitrate+Nitrite as Nitrogen	mg/L	3	5	63	0.05	0.279	0.0828	0.05	0.08	0.1404	0.2097	0.2651
Nitrogen, Total as Nitrogen	mg/L	8	0	0	0.28	1.31	0.7038	0.735	0.3255	0.995	1.1525	1.2785
Nitrogen, Total Kjeldahl (TKN)	mg/L	7	1	13	0.37	1.03	0.6625	0.71	0.2309	0.897	0.9635	1.0167
pH	pH	17	0	0	6.61	9.47	7.6112	7.39	0.7723	8.576	9.254	9.4268
Phosphorus, D	ug/L	8	0	0	76.6	2370	447.775	174	782.6438	972.1	1671.05	2230.21
Phosphorus, T	ug/L	8	0	0	85.3	1260	338.0625	201	390.8392	669.9	964.95	1200.99
Potassium, D	ug/L	8	0	0	2400	13000	6297.5	4830	4281.8379	11530	12265	12853
Potassium, T	ug/L	8	0	0	2430	13200	5783.75	4885	3927.7618	10827	12013.5	12962.7
Selenium, D	ug/L	8	0	0	1.3	8.2	2.7125	2	2.2611	4.35	6.275	7.815
Selenium, T	ug/L	8	0	0	1.2	3.4	2.0125	1.8	0.8008	2.91	3.155	3.351
Silver, D	ug/L	5	3	38	0.02	8.65	1.1046	0.02	3.0488	2.6349	5.6424	8.0485
Silver, T	ug/L	8	0	0	0.02	2.1	0.3474	0.069	0.7119	0.7987	1.4494	1.9699
Sodium, D	ug/L	8	0	0	5800	10700	7331.25	6295	1898.213	9552	10126	10585.2
Sodium, T	ug/L	8	0	0	5040	10700	7251.25	6410	2011.2074	9475	10087.5	10577.5
Solids, Total Dissolved	mg/L	8	0	0	139	334	206.875	170.5	77.8376	312.3	323.15	331.83
Solids, Total Suspended (TSS)	mg/L	4	4	50	5	131	23.1875	5.25	43.8683	53.3	92.15	123.23
Sulfate	mg/L	8	0	0	25	144	64.35	42.8	49.3731	142.6	143.3	143.86
Temperature, Water	deg C	17	0	0	0.82	27.32	11.4859	11.78	7.9656	21.026	22.616	26.3792
Thallium, D	ug/L	7	1	13	0.02	1.34	0.1906	0.0275	0.4645	0.43	0.885	1.249
Thallium, T	ug/L	7	1	13	0.02	0.35	0.078	0.037	0.1113	0.154	0.252	0.3304
Turbidity	NTU	17	0	0	1.9	97.2	26.6471	14	27.8619	65.88	76.56	93.072
Vanadium (Fume Or Dust), D	ug/L	8	0	0	0.5	30.8	4.4512	0.7	10.6478	9.94	20.37	28.714
Vanadium (Fume Or Dust), T	ug/L	8	0	0	0.7	10.7	2.255	1.05	3.4309	4.4	7.55	10.07
Zinc, D	ug/L	8	0	0	1.4	2460	311.6	2.55	868.0961	748.29	1604.145	2288.829
Zinc, T	ug/L	8	0	0	2.9	1380	178.7	5.35	485.4219	425.55	902.775	1284.555

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-23A, Heap Leach Seep												
Alkalinity as CaCO3	mg/L	25	0	0	31.8	114	65.056	63.2	18.5639	91.6	97.2	110.16
Aluminum (Fume Or Dust), D	ug/L	9	8	47	2.2	51.4	6.4941	4	11.5956	4.46	14.28	43.976
Aluminum (Fume Or Dust), T	ug/L	17	0	0	8.7	1210	259.2412	59.4	397.9158	854.4	1178	1203.6
Ammonia as Nitrogen	mg/L	7	18	72	0.05	0.172	0.0726	0.05	0.0417	0.1468	0.1544	0.1679
Antimony, D	ug/L	25	0	0	33	4940	1627.668	1070	1543.5926	4602	4822	4916
Antimony, T	ug/L	25	0	0	49.1	4920	1668.32	1130	1553.0369	4774	4790	4888.8
Arsenic (III), T	ug/L	13	0	0	1.04	2930	378.3315	19.6	887.4456	1346.6	2156	2775.2
Arsenic, D	ug/L	25	0	0	324	2450	956.32	700	649.8101	1988	2288	2426
Arsenic, T	ug/L	25	0	0	328	5130	1486.28	980	1207.3988	2846	3770	4846.8
Barium, D	ug/L	13	0	0	22.8	83.7	39.0385	34.8	16.1551	52.3	65.88	80.136
Barium, T	ug/L	13	0	0	23.7	113	60.1385	43.3	32.5264	105.4	108.8	112.16
Beryllium, D	ug/L	0	13	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	9	4	31	0.02	0.38	0.0965	0.025	0.1221	0.276	0.332	0.3704
Bicarbonate as CaCO3	mg/L	25	0	0	31.8	114	64.616	63.2	18.1225	87.72	97.2	110.16
Boron, D	ug/L	0	13	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	13	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	2	19	91	0.02	0.04	0.0219	0.02	0.006	0.02	0.04	0.04
Cadmium, T	ug/L	6	15	72	0.02	0.116	0.0346	0.02	0.0299	0.08	0.11	0.1148
Calcium, D	ug/L	25	0	0	9520	222000	57720.8	39900	49831.822	123800	143400	203760
Calcium, T	ug/L	25	0	0	10100	227000	57984	39600	50329.2715	126800	138000	205640
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	22	3	12	0.34	2.21	0.888	0.85	0.4944	1.582	1.866	2.1428
Chromium, D	ug/L	2	19	91	0.2	0.4	0.2095	0.2	0.0436	0.2	0.2	0.36
Chromium, T	ug/L	8	13	62	0.2	1.6	0.4419	0.2	0.4462	1.18	1.3	1.54
Cobalt, D	ug/L	13	0	0	0.15	2.4	0.8248	0.56	0.7118	1.854	2.13	2.346
Cobalt, T	ug/L	13	0	0	0.21	2.88	1.1865	0.97	0.8892	2.358	2.64	2.832
Color	Pt-Co	13	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	24	0	0	0.118	1.253	0.3825	0.2965	0.2535	0.6643	0.7601	1.1433
Copper, D	ug/L	21	0	0	0.2	5	1.4195	1.01	1.4568	4.1	4.5	4.9
Copper, T	ug/L	21	0	0	0.5	16.8	3.6576	1.9	4.4628	7.2	15.2	16.48
Cyanide, T	mg/L	7	6	46	0.0047	0.015	0.0068	0.0048	0.0032	0.0109	0.0129	0.0146
Dissolved Oxygen	mg/L	25	0	0	3.93	11.84	7.9216	8.01	1.9472	9.892	10.644	11.5952
Flow velocity	CFS	20	0	0	0.0003	0.1345	0.031	0.0192	0.0357	0.0845	0.0932	0.1262
Fluoride	mg/L	2	23	92	0.2	0.72	0.2212	0.2	0.1039	0.2	0.208	0.5976
Hardness as CaCO3	mg/L	25	0	0	32.8	661	182.328	115	154.9424	400.4	441.2	610.36
Iron, D	ug/L	14	11	44	21	6200	930.888	34.9	1595.3312	2966	3862	5669.6
Iron, T	ug/L	24	1	4	28	13400	3023.352	1130	3597.3409	7026	9362	12555.2
Lead, D	ug/L	9	16	64	0.02	0.12	0.034	0.02	0.0272	0.056	0.1	0.1176
Lead, T	ug/L	24	1	4	0.02	8.45	1.3526	0.44	2.324	4.456	7.196	8.2556
Magnesium, D	ug/L	25	0	0	1500	21500	6219.2	4460	4815.4854	10420	16940	20780
Magnesium, T	ug/L	25	0	0	1810	22700	6221.2	4660	4672.5344	10856	14480	20900
Manganese, D	ug/L	17	0	0	4.7	1880	312.6118	26.9	539.7422	1108	1272	1758.4
Manganese, T	ug/L	17	0	0	5.4	3720	541.5647	81.9	980.2544	1464	2280	3432
Mercury, D	ng/L	24	0	0	1.6	19.2	6.0292	4.85	4.352	9.28	16.885	18.947
Mercury, T	ng/L	25	0	0	6.9	405	76.512	19.3	122.8942	276	368.8	401.4
Methyl Mercury	ng/L	2	11	85	0.1	0.3	0.1231	0.1	0.0599	0.18	0.24	0.288

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-23A, Heap Leach Seep												
Molybdenum, D	ug/L	13	0	0	0.63	3.95	1.7701	1.59	1.0716	3.414	3.812	3.9224
Molybdenum, T	ug/L	13	0	0	0.57	4.24	1.7156	1.51	1.0556	2.688	3.334	4.0588
Nickel, D	ug/L	13	0	0	0.2	4.7	1.1462	0.62	1.2743	2.6	3.62	4.484
Nickel, T	ug/L	13	0	0	0.38	5.1	1.6192	0.9	1.4837	3.28	4.02	4.884
Nitrate+Nitrite as Nitrogen	mg/L	12	13	52	0.05	0.582	0.1903	0.05	0.1829	0.4842	0.545	0.5762
Nitrogen, Total as Nitrogen	mg/L	13	0	0	0.54	2.23	1.1292	1.12	0.4654	1.63	1.894	2.1628
Nitrogen, Total Kjeldahl (TKN)	mg/L	13	0	0	0.29	2.2	1.0223	0.98	0.4927	1.456	1.762	2.1124
pH	pH	24	0	0	6.52	7.88	7.0667	7.03	0.3961	7.617	7.6455	7.8271
Phosphorus, D	ug/L	19	6	24	40	101	56.868	51.3	18.0324	77.76	93.12	99.968
Phosphorus, T	ug/L	25	0	0	48.3	1400	210.604	123	280.3712	422.6	562.6	1203.68
Potassium, D	ug/L	25	0	0	1010	16500	3648	2310	3329.9662	7150	7302	14299.2
Potassium, T	ug/L	25	0	0	1100	17800	3908.4	2510	3556.5429	7376	7836	15433.6
Selenium, D	ug/L	15	6	29	1	14.2	3.119	1.8	3.3045	6.5	8.5	13.06
Selenium, T	ug/L	16	5	24	1	14.5	3.2238	1.8	3.4418	7.9	8.2	13.24
Silver, D	ug/L	2	11	85	0.02	0.05	0.0231	0.02	0.0085	0.028	0.038	0.0476
Silver, T	ug/L	4	9	69	0.02	0.29	0.0586	0.02	0.0803	0.142	0.212	0.2744
Sodium, D	ug/L	25	0	0	3020	16800	6877.6	5580	3380.6376	11460	12260	15744
Sodium, T	ug/L	25	0	0	3180	17400	6939.2	5540	3492.9297	11620	12340	16224
Solids, Total Dissolved	mg/L	25	0	0	53.5	1020	256.98	184	206.309	491.2	527.6	902.88
Solids, Total Suspended (TSS)	mg/L	16	9	36	5	265	31.508	9.5	55.8054	79.3	98.7	226.12
Sulfate	mg/L	25	0	0	5.14	614	116.0008	67	136.5931	283	312.2	541.76
Temperature, Water	deg C	25	0	0	0.43	13.83	6.5708	6.22	4.3336	12.204	13.032	13.6716
Thallium, D	ug/L	6	7	54	0.02	0.1	0.0344	0.02	0.0244	0.06	0.076	0.0952
Thallium, T	ug/L	10	3	23	0.02	0.399	0.1047	0.042	0.1259	0.304	0.3576	0.3907
Turbidity	NTU	25	0	0	1.41	77.3	14.2744	4.85	18.8862	37.02	47.02	70.604
Vanadium (Fume Or Dust), D	ug/L	10	3	23	0.2	0.51	0.3262	0.3	0.1049	0.424	0.462	0.5004
Vanadium (Fume Or Dust), T	ug/L	13	0	0	0.2	3.71	1.1215	0.5	1.145	2.88	3.344	3.6368
Zinc, D	ug/L	25	0	0	1.4	38.2	7.764	4.7	9.1539	15.48	29.96	37
Zinc, T	ug/L	25	0	0	2.1	55.3	13.9	9	14.4171	37.88	44.84	53.044

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-2, Meadow Creek Fault Seep												
Alkalinity as CaCO3	mg/L	7	0	0	21	53.9	33.3714	28	12.3284	47.18	50.54	53.228
Aluminum (Fume Or Dust), D	ug/L	7	0	0	3.7	276	66.0714	17.7	102.3072	186.6	231.3	267.06
Aluminum (Fume Or Dust), T	ug/L	7	0	0	49.2	1390	578.3143	710	456.2871	991	1190.5	1350.1
Ammonia as Nitrogen	mg/L	0	7	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	7	0	0	9.15	21.1	13.2643	10.5	4.4901	18.76	19.93	20.866
Antimony, T	ug/L	7	0	0	9.36	20.2	12.9129	10.7	4.2127	18.22	19.21	20.002
Arsenic (III), T	ug/L	7	0	0	1.7	17.7	6.29	4.6	5.3045	11.46	14.58	17.076
Arsenic, D	ug/L	7	0	0	671	1300	1024	1020	211.705	1258	1279	1295.8
Arsenic, T	ug/L	7	0	0	699	1560	1134.1429	1070	269.1471	1434	1497	1547.4
Barium, D	ug/L	7	0	0	4.05	93	34.5357	32.9	29.8092	62.64	77.82	89.964
Barium, T	ug/L	7	0	0	16.2	99.5	53.1	48.2	28.5783	83.9	91.7	97.94
Beryllium, D	ug/L	2	5	72	0.02	0.04	0.0257	0.02	0.0098	0.04	0.04	0.04
Beryllium, T	ug/L	7	0	0	0.03	0.262	0.1417	0.09	0.1016	0.2488	0.2554	0.2607
Bicarbonate as CaCO3	mg/L	7	0	0	21	53.9	33.3714	28	12.3284	47.18	50.54	53.228
Boron, D	ug/L	0	7	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	1	6	86	21	21.1	21.0143	21	0.0378	21.04	21.07	21.094
Cadmium, D	ug/L	0	7	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	7	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	7	0	0	7470	23900	14752.8571	11900	6045.2921	22280	23090	23738
Calcium, T	ug/L	7	0	0	7860	23000	14880	12300	5627.1485	21740	22370	22874
Carbonate as CaCO3	mg/L	0	7	100	15	15	15	15	0	15	15	15
Chloride	mg/L	7	0	0	0.4	2.5	1.2771	1.28	0.7539	2.152	2.326	2.4652
Chromium, D	ug/L	1	6	86	0.2	0.3	0.2143	0.2	0.0378	0.24	0.27	0.294
Chromium, T	ug/L	1	6	86	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Cobalt, D	ug/L	6	1	14	0.02	0.15	0.0611	0.038	0.0493	0.126	0.138	0.1476
Cobalt, T	ug/L	7	0	0	0.03	0.399	0.2013	0.19	0.1213	0.3336	0.3663	0.3925
Color	Pt-Co	8	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	18	0	0	0.09	0.279	0.1678	0.171	0.0584	0.2399	0.2535	0.2739
Copper, D	ug/L	7	0	0	0.2	0.4	0.2771	0.3	0.0706	0.34	0.37	0.394
Copper, T	ug/L	7	0	0	0.2	0.56	0.4086	0.5	0.15	0.524	0.542	0.5564
Cyanide, T	mg/L	0	7	100	0.0047	0.0047	0.0047	0.0047	0	0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	18	0	0	5.67	10.87	8.4028	8.51	1.5783	10.505	10.8275	10.8615
Flow velocity	CFS	19	0	0	0	0.0247	0.0026	0.0003	0.0057	0.005	0.0076	0.0213
Fluoride	mg/L	0	7	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	7	0	0	26.3	76.5	48.4	39.7	18.6103	71.22	73.86	75.972
Iron, D	ug/L	3	4	57	20	377	103.4286	20	141.9341	285.2	331.1	367.82
Iron, T	ug/L	7	0	0	84.5	2270	1149.9286	1100	827.4023	2072	2171	2250.2
Lead, D	ug/L	2	5	71	0.02	0.16	0.0471	0.02	0.0531	0.106	0.133	0.1546
Lead, T	ug/L	7	0	0	0.05	0.81	0.3956	0.35	0.2776	0.7194	0.7647	0.8009
Magnesium, D	ug/L	7	0	0	1460	4720	2688.5714	2080	1213.7329	4186	4453	4666.6
Magnesium, T	ug/L	7	0	0	1610	4650	2745.7143	2210	1134.1349	4134	4392	4598.4
Manganese, D	ug/L	6	1	14	2.3	90	17.7571	5	32.1167	44.46	67.23	85.446
Manganese, T	ug/L	7	0	0	9.3	133	38.1	30.4	43.2244	74.92	103.96	127.192
Mercury, D	ng/L	7	0	0	15.7	94.8	50.5286	45.1	26.1432	78.36	86.58	93.156
Mercury, T	ng/L	7	0	0	60.4	781	430.3571	491	302.4967	736.6	758.8	776.56
Methyl Mercury	ng/L	6	1	14	0.1	0.35	0.1829	0.2	0.0925	0.278	0.314	0.3428

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-2, Meadow Creek Fault Seep												
Molybdenum, D	ug/L	7	0	0	0.1	0.31	0.1869	0.16	0.0838	0.304	0.307	0.3094
Molybdenum, T	ug/L	7	0	0	0.08	0.35	0.1679	0.13	0.1025	0.302	0.326	0.3452
Nickel, D	ug/L	3	4	57	0.2	0.3	0.2429	0.2	0.0535	0.3	0.3	0.3
Nickel, T	ug/L	5	2	29	0.2	0.4	0.2771	0.3	0.0706	0.34	0.37	0.394
Nitrate+Nitrite as Nitrogen	mg/L	1	6	86	0.05	0.135	0.0621	0.05	0.0321	0.084	0.1095	0.1299
Nitrogen, Total as Nitrogen	mg/L	6	1	14	0.37	0.94	0.5714	0.56	0.1968	0.79	0.865	0.925
Nitrogen, Total Kjeldahl (TKN)	mg/L	6	1	14	0.36	0.8	0.55	0.56	0.158	0.734	0.767	0.7934
pH	pH	18	0	0	6.08	8.09	7.33	7.33	0.5377	8.016	8.039	8.0798
Phosphorus, D	ug/L	7	0	0	80.4	161	113.8571	122	28.8346	141.2	151.1	159.02
Phosphorus, T	ug/L	7	0	0	92.5	291	158.2286	147	69.9551	237.6	264.3	285.66
Potassium, D	ug/L	7	0	0	1040	2320	1471.4286	1370	401.0997	1828	2074	2270.8
Potassium, T	ug/L	7	0	0	1370	2630	1877.1429	1930	446.4943	2360	2495	2603
Selenium, D	ug/L	0	7	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	7	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	7	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	4	3	43	0.02	0.06	0.03	0.023	0.015	0.048	0.054	0.0588
Sodium, D	ug/L	7	0	0	1400	2750	2314.2857	2400	433.8916	2618	2684	2736.8
Sodium, T	ug/L	7	0	0	1440	2650	2332.8571	2450	412.2586	2638	2644	2648.8
Solids, Total Dissolved	mg/L	7	0	0	39	133	90.2857	90	30.9285	126.4	129.7	132.34
Solids, Total Suspended (TSS)	mg/L	5	2	29	5	54.5	25.8571	17	22.1147	52.4	53.45	54.29
Sulfate	mg/L	7	0	0	11.6	35.9	18.4429	17	8.0515	25.34	30.62	34.844
Temperature, Water	deg C	18	0	0	0.64	19.82	9.5783	9.275	5.6482	16.421	17.8055	19.4171
Thallium, D	ug/L	7	0	0	0.04	0.21	0.0913	0.07	0.0597	0.1614	0.1857	0.2051
Thallium, T	ug/L	7	0	0	0.057	0.391	0.1983	0.2	0.1236	0.3424	0.3667	0.3861
Turbidity	NTU	18	0	0	0.3	5999	389.0722	19.35	1402.4164	187.6	1173.55	5033.91
Vanadium (Fume Or Dust), D	ug/L	2	5	71	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	5	2	29	0.2	1.18	0.54	0.4	0.3767	1.012	1.096	1.1632
Zinc, D	ug/L	2	5	71	2	3.1	2.2571	2	0.4541	2.86	2.98	3.076
Zinc, T	ug/L	6	1	14	0.5	3.1	1.8857	2.1	0.999	2.98	3.04	3.088

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-7, Meadow Creek Mine Adit Seep												
Alkalinity as CaCO3	mg/L	11	0	0	38	412	324.1818	348	104.0085	408	410	411.6
Aluminum (Fume Or Dust), D	ug/L	7	4	36	2.6	1310	124.1909	4	393.309	14.1	662.05	1180.41
Aluminum (Fume Or Dust), T	ug/L	11	0	0	4.2	8530	1529.8455	190	3095.9451	6960	7745	8373
Ammonia as Nitrogen	mg/L	2	9	82	0.05	0.135	0.0587	0.05	0.0255	0.061	0.098	0.1276
Antimony, D	ug/L	11	0	0	6.21	56	18.4645	12.3	15.1351	32.3	44.15	53.63
Antimony, T	ug/L	11	0	0	11.4	270	130.8	85.9	104.3244	266	268	269.6
Arsenic (III), T	ug/L	11	0	0	26.5	20200	8562.9545	9470	6826.6833	17800	19000	19960
Arsenic, D	ug/L	11	0	0	217	11900	5927.7273	6620	4775.8043	11800	11850	11890
Arsenic, T	ug/L	11	0	0	1100	44800	15814.5455	13200	15160.3782	35600	40200	43880
Barium, D	ug/L	11	0	0	14.8	88.9	29.8364	23.1	21.1689	45.4	67.15	84.55
Barium, T	ug/L	11	0	0	24.6	492	138.2	47.7	169.4503	444	468	487.2
Beryllium, D	ug/L	6	5	46	0.02	0.501	0.0862	0.03	0.1422	0.14	0.3205	0.4649
Beryllium, T	ug/L	11	0	0	0.03	3.72	0.9529	0.259	1.3074	3.1	3.41	3.658
Bicarbonate as CaCO3	mg/L	11	0	0	38	412	324.1818	348	104.0085	408	410	411.6
Boron, D	ug/L	1	10	91	21	45	23.1818	21	7.2363	21	33	42.6
Boron, T	ug/L	1	10	91	21	56	24.1818	21	10.5529	21	38.5	52.5
Cadmium, D	ug/L	0	11	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	6	5	46	0.02	0.22	0.0504	0.03	0.0587	0.064	0.142	0.2044
Calcium, D	ug/L	11	0	0	13100	241000	191372.7273	213000	62445.882	234000	237500	240300
Calcium, T	ug/L	11	0	0	19400	256000	198763.6364	217000	64753.7995	241000	248500	254500
Carbonate as CaCO3	mg/L	0	11	100	15	15	15	15	0	15	15	15
Chloride	mg/L	7	4	36	0.4	1.24	0.5736	0.54	0.2396	0.64	0.94	1.18
Chromium, D	ug/L	2	9	88	0.2	0.3	0.2091	0.2	0.0302	0.2	0.25	0.29
Chromium, T	ug/L	5	6	55	0.2	3.2	0.5982	0.2	0.9436	1.48	2.34	3.028
Cobalt, D	ug/L	11	0	0	0.438	4.8	2.3744	2.59	1.3192	3.98	4.39	4.718
Cobalt, T	ug/L	11	0	0	0.58	6.65	3.6609	3.92	1.5935	5.14	5.895	6.499
Color	Pt-Co	11	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	20	0	0	0.109	1.52	1.2035	1.34	0.3903	1.483	1.5105	1.5181
Copper, D	ug/L	3	8	73	0.1	1	0.2236	0.1	0.2738	0.36	0.68	0.936
Copper, T	ug/L	10	1	9	0.1	7.8	1.6636	0.6	2.7087	6.37	7.085	7.657
Cyanide, T	mg/L	0	11	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	20	0	0	1.88	11.56	5.0705	4.335	2.6875	8.424	8.8715	11.0223
Flow velocity	CFS	20	0	0	0	0.0109	0.0029	0.0019	0.0032	0.0056	0.0109	0.0109
Fluoride	mg/L	10	1	9	0.2	1.02	0.7427	0.75	0.2135	0.9	0.96	1.008
Hardness as CaCO3	mg/L	11	0	0	68	878	688.9091	757	221.8903	823	850.5	872.5
Iron, D	ug/L	11	0	0	22.6	46600	21785.6909	17600	18103.4303	43800	45200	46320
Iron, T	ug/L	11	0	0	8200	135000	58500	45300	42661.2002	110000	122500	132500
Lead, D	ug/L	3	8	73	0.02	2.75	0.2691	0.02	0.8228	0.03	1.39	2.478
Lead, T	ug/L	11	0	0	0.065	20.5	3.8492	0.416	7.3823	16.8	18.65	20.13
Magnesium, D	ug/L	11	0	0	2800	55800	45872.7273	51200	14855.9813	54200	55000	55640
Magnesium, T	ug/L	11	0	0	4760	58100	46832.7273	52500	14749.3384	55600	56850	57850
Manganese, D	ug/L	11	0	0	73.3	2120	1609.3909	1700	558.7614	2100	2110	2118
Manganese, T	ug/L	11	0	0	592	2660	1852	1980	532.1579	2220	2440	2616
Mercury, D	ng/L	11	0	0	1.1	2470	227.6182	2.8	743.7179	8.9	1239.45	2223.89
Mercury, T	ng/L	11	0	0	7.1	5870	786.4455	253	1707.5644	746	3308	5357.6
Methyl Mercury	ng/L	9	2	18	0.1	1.6	0.4045	0.2	0.4548	0.8	1.2	1.52

Meadow Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-7, Meadow Creek Mine Adit Seep												
Molybdenum, D	ug/L	10	1	9	0.16	0.438	0.3407	0.36	0.0917	0.43	0.434	0.4372
Molybdenum, T	ug/L	10	1	9	0.12	1.25	0.4475	0.42	0.2869	0.49	0.87	1.174
Nickel, D	ug/L	11	0	0	0.46	5.3	2.6091	2.5	1.4708	4.18	4.74	5.188
Nickel, T	ug/L	11	0	0	1	6	3.5655	3.86	1.515	5.1	5.55	5.91
Nitrate+Nitrite as Nitrogen	mg/L	0	11	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	10	1	9	0.28	1.12	0.5555	0.48	0.2848	0.96	1.04	1.104
Nitrogen, Total Kjeldahl (TKN)	mg/L	9	2	18	0.29	1.12	0.5618	0.48	0.2737	0.96	1.04	1.104
pH	pH	20	0	0	6.74	7.85	7.1365	6.965	0.3559	7.59	7.6885	7.8177
Phosphorus, D	ug/L	3	8	73	42	553	119.5455	42	164.4338	305	429	528.2
Phosphorus, T	ug/L	9	2	18	40	5610	1674.4545	480	1995.58	4670	5140	5516
Potassium, D	ug/L	11	0	0	2990	5680	3530	3300	753.4587	3740	4710	5486
Potassium, T	ug/L	11	0	0	3110	11700	4544.5455	3610	2645.0798	7270	9485	11257
Selenium, D	ug/L	0	11	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	1	10	91	1	2.2	1.1091	1	0.3618	1	1.6	2.08
Silver, D	ug/L	1	10	91	0.02	0.065	0.0241	0.02	0.0136	0.02	0.0425	0.0605
Silver, T	ug/L	4	7	64	0.02	0.413	0.0766	0.02	0.1295	0.24	0.3265	0.3957
Sodium, D	ug/L	11	0	0	2050	9500	6770.9091	7020	1896.1406	8270	8885	9377
Sodium, T	ug/L	11	0	0	2340	9470	6906.3636	6980	1834.0789	8420	8945	9365
Solids, Total Dissolved	mg/L	11	0	0	109	1060	843	924	258.3931	1020	1040	1056
Solids, Total Suspended (TSS)	mg/L	11	0	0	21.5	1250	284.0455	90.5	435.4803	1060	1155	1231
Sulfate	mg/L	11	0	0	12.5	473	358.2273	379	127.5914	460	466.5	471.7
Temperature, Water	deg C	20	0	0	1.37	18.3	10.376	10.45	4.6357	17.835	18.072	18.2544
Thallium, D	ug/L	3	8	73	0.03	0.255	0.0537	0.03	0.0672	0.056	0.1555	0.2351
Thallium, T	ug/L	11	0	0	0.107	1.88	0.5733	0.22	0.5724	1.3	1.59	1.822
Turbidity	NTU	20	0	0	1.44	2000	295.562	39.3	628.9335	1177.4	2000	2000
Vanadium (Fume Or Dust), D	ug/L	1	10	91	0.2	1.34	0.3036	0.2	0.3437	0.2	0.77	1.226
Vanadium (Fume Or Dust), T	ug/L	6	5	46	0.2	15.5	2.5645	0.41	4.8859	8.2	11.85	14.77
Zinc, D	ug/L	10	1	9	0.5	6	2.4455	2.1	1.6573	4.9	5.45	5.89
Zinc, T	ug/L	11	0	0	1	49.7	13.4364	5.3	17.2117	44	46.85	49.13

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-8A, Sugar Creek, uppermost site												
Alkalinity as CaCO3	mg/L	35	0	0	23.4	73	46.54	49.5	12.2757	55	64.6	73
Aluminum (Fume Or Dust), D	ug/L	20	4	17	2.5	21.2	6.5167	4.45	4.8178	12.8	16.205	20.165
Aluminum (Fume Or Dust), T	ug/L	24	0	0	5	632	79.4333	13.85	150.2103	208.2	389.7	581.86
Ammonia as Nitrogen	mg/L	0	35	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	35	0	0	0.3	0.659	0.5101	0.52	0.0916	0.62	0.636	0.6559
Antimony, T	ug/L	35	0	0	0.35	0.66	0.5213	0.52	0.0804	0.626	0.633	0.6532
Arsenic (III), T	ug/L	21	0	0	0.06	0.19	0.1176	0.114	0.0316	0.16	0.16	0.184
Arsenic, D	ug/L	35	0	0	3.5	6.33	4.7003	4.67	0.6914	5.66	5.79	6.2178
Arsenic, T	ug/L	35	0	0	3.6	7.2	4.972	4.8	0.7422	5.96	6.012	6.8056
Barium, D	ug/L	21	0	0	3.44	11.7	8.9933	9.9	2.7865	11.7	11.7	11.7
Barium, T	ug/L	21	0	0	5.16	11.8	9.6229	9.77	1.8168	11.3	11.6	11.76
Beryllium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	5	16	76	0.02	0.11	0.0278	0.02	0.023	0.03	0.08	0.104
Bicarbonate as CaCO3	mg/L	35	0	0	23.4	73	45.9686	49.5	11.5984	55	58.2	68.92
Boron, D	ug/L	0	21	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	21	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	31	97	0.02	0.03	0.0203	0.02	0.0018	0.02	0.02	0.0269
Cadmium, T	ug/L	1	31	97	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	35	0	0	6440	17900	13525.7143	15300	3398.1312	16800	17290	17764
Calcium, T	ug/L	35	0	0	6460	17200	13520.8571	15000	3297.2371	16760	16930	17132
Carbonate as CaCO3	mg/L	1	34	97	15	16	15.0286	15	0.169	15	15	15.66
Chloride	mg/L	3	32	91	0.2	0.22	0.2011	0.2	0.0047	0.2	0.206	0.22
Chromium, D	ug/L	3	29	91	0.2	0.4	0.2063	0.2	0.0354	0.2	0.2	0.338
Chromium, T	ug/L	7	25	78	0.2	0.7	0.2406	0.2	0.1043	0.39	0.4	0.607
Cobalt, D	ug/L	8	13	62	0.02	0.06	0.0245	0.02	0.01	0.035	0.04	0.056
Cobalt, T	ug/L	14	7	33	0.02	0.25	0.0574	0.03	0.065	0.18	0.19	0.238
Color	Pt-Co	22	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	35	0	0	0.054	0.55	0.1115	0.106	0.0792	0.1202	0.128	0.4113
Copper, D	ug/L	31	1	3	0.1	0.6	0.2094	0.2	0.1263	0.395	0.418	0.5504
Copper, T	ug/L	21	11	34	0.1	0.8	0.1716	0.1	0.1506	0.3	0.445	0.707
Cyanide, T	mg/L	0	21	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	35	0	0	8.73	13.15	10.3651	10.38	1.0479	11.528	12.114	13.0786
Flow velocity	CFS	35	0	0	3.58	181	34.0645	10.0017	44.6777	93.0903	125.6606	165.8368
Fluoride	mg/L	2	33	94	0.2	0.32	0.2034	0.2	0.0203	0.2	0.2	0.2792
Hardness as CaCO3	mg/L	35	0	0	19.5	51.8	40.7029	45.3	9.7337	50.14	50.72	51.528
Iron, D	ug/L	0	35	100	21	21	21	21	0	21	21	21
Iron, T	ug/L	15	20	57	17.3	628	71.7829	21	133.4974	176.4	326.1	579.38
Lead, D	ug/L	0	35	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	15	20	57	0.02	0.78	0.0815	0.02	0.1626	0.186	0.366	0.7154
Magnesium, D	ug/L	35	0	0	690	2140	1669.4571	1800	406.8238	2088	2116	2136.6
Magnesium, T	ug/L	35	0	0	813	2180	1686.3714	1810	382.8442	2090	2106	2159.6
Manganese, D	ug/L	2	22	92	1.1	1.2	1.1042	1.1	0.0204	1.1	1.1	1.177
Manganese, T	ug/L	10	14	58	1	19.9	2.9542	1.1	4.9244	6.39	15.155	19.095
Mercury, D	ng/L	34	0	0	3.8	26.6	7.7265	7.2	3.8466	9.24	11.285	22.211
Mercury, T	ng/L	35	0	0	10.3	863	108.7571	36	195.4067	370.8	558.2	767.46
Methyl Mercury	ng/L	5	16	76	0.1	0.3	0.1257	0.1	0.0584	0.2	0.26	0.292

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-8A, Sugar Creek, uppermost site												
Molybdenum, D	ug/L	21	0	0	0.31	1.44	0.9624	1.1	0.3722	1.36	1.4	1.432
Molybdenum, T	ug/L	21	0	0	0.31	1.49	0.9495	1.04	0.3766	1.33	1.37	1.466
Nickel, D	ug/L	8	13	62	0.2	0.4	0.221	0.2	0.0504	0.28	0.3	0.38
Nickel, T	ug/L	9	12	57	0.2	0.5	0.2248	0.2	0.0687	0.27	0.3	0.46
Nitrate+Nitrite as Nitrogen	mg/L	0	35	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	14	7	33	0.25	11	1.0571	0.44	2.3734	0.74	3.39	9.478
Nitrogen, Total Kjeldahl (TKN)	mg/L	14	7	33	0.2	11	1.0376	0.44	2.3802	0.74	3.39	9.478
pH	pH	35	0	0	6.68	8.5	7.2843	7.24	0.4502	7.884	8.005	8.3674
Phosphorus, D	ug/L	0	35	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	35	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	35	0	0	439	793	597.1143	603	81.5539	689.6	705.8	764.78
Potassium, T	ug/L	35	0	0	491	844	628.6571	622	70.5503	710.2	743.9	810.68
Selenium, D	ug/L	0	32	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	32	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	2	19	90	0.02	0.04	0.021	0.02	0.0044	0.02	0.02	0.036
Sodium, D	ug/L	35	0	0	1460	2970	2320.8571	2520	448.2999	2736	2946	2966.6
Sodium, T	ug/L	35	0	0	1510	2990	2306.2857	2410	436.76	2758	2870	2973
Solids, Total Dissolved	mg/L	34	1	3	5	83	54.6143	57	16.5749	76.2	79.3	81.98
Solids, Total Suspended (TSS)	mg/L	5	30	86	5	22	6.0429	5	3.5134	6.5	12.3	20.13
Sulfate	mg/L	35	0	0	1.28	5.25	3.3034	3.62	1.264	4.696	4.762	5.0936
Temperature, Water	deg C	35	0	0	-0.02	12.96	4.218	3.88	3.5187	8.484	9.567	12.2562
Thallium, D	ug/L	5	16	76	0.02	0.028	0.0205	0.02	0.0018	0.02	0.022	0.0268
Thallium, T	ug/L	8	13	62	0.02	0.042	0.0233	0.02	0.0068	0.03	0.04	0.0416
Turbidity	NTU	35	0	0	0	19.2	2.9514	1.3	4.6371	9.16	12.03	18.69
Vanadium (Fume Or Dust), D	ug/L	5	16	76	0.2	0.3	0.2057	0.2	0.022	0.2	0.22	0.284
Vanadium (Fume Or Dust), T	ug/L	11	10	48	0.2	0.6	0.2443	0.2	0.1117	0.4	0.5	0.58
Zinc, D	ug/L	10	25	71	0.5	5	1.7714	2	0.8119	2	2	3.98
Zinc, T	ug/L	8	27	77	0.7	3.5	1.9771	2	0.5001	2.18	2.72	3.33

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-7, Sugar Creek above West End Creek												
Alkalinity as CaCO3	mg/L	42	0	0	23.8	75	49.5476	54.85	12.0465	58	62.8	74.139
Aluminum (Fume Or Dust), D	ug/L	24	3	11	2.1	280	17.2704	4.4	53.0187	16.74	31.77	217.028
Aluminum (Fume Or Dust), T	ug/L	27	0	0	5	728	105.9704	15.6	191.2482	357	558	702.52
Ammonia as Nitrogen	mg/L	0	42	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	42	0	0	0.39	1.34	0.8206	0.855	0.2356	1.1	1.296	1.3277
Antimony, T	ug/L	42	0	0	0.49	1.33	0.834	0.86	0.2226	1.087	1.2485	1.3218
Arsenic (III), T	ug/L	23	0	0	0.06	0.566	0.142	0.11	0.1013	0.19	0.226	0.4921
Arsenic, D	ug/L	42	0	0	3.9	7.63	5.8998	6.1	0.9502	6.8	7.19	7.6177
Arsenic, T	ug/L	42	0	0	4.4	10.1	6.3848	6.4	1.095	7.4	7.7955	9.239
Barium, D	ug/L	23	0	0	4.4	14.1	10.9322	12.1	3.1595	13.8	13.9	14.056
Barium, T	ug/L	23	0	0	6.11	14.3	11.787	12.4	2.0264	13.68	13.98	14.234
Beryllium, D	ug/L	1	22	96	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	5	18	78	0.02	0.12	0.0291	0.02	0.0241	0.046	0.077	0.1112
Bicarbonate as CaCO3	mg/L	42	0	0	23.8	72.9	49	54.2	11.3518	57.98	58	68.841
Boron, D	ug/L	1	22	96	21	93.5	24.1522	21	15.1173	21	21	77.55
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	6630	18100	14328.3333	15850	3418.37	17800	17800	18018
Calcium, T	ug/L	42	0	0	6920	17800	14205.4762	15900	3327.7196	17380	17600	17759
Carbonate as CaCO3	mg/L	1	41	98	15	18	15.0714	15	0.4629	15	15	16.77
Chloride	mg/L	5	37	88	0.2	0.98	0.2205	0.2	0.1202	0.209	0.22	0.6725
Chromium, D	ug/L	2	36	95	0.2	0.4	0.2053	0.2	0.0324	0.2	0.2	0.326
Chromium, T	ug/L	10	28	74	0.2	2	0.2908	0.2	0.3018	0.43	0.515	1.482
Cobalt, D	ug/L	9	14	61	0.02	0.1	0.0295	0.02	0.0195	0.0544	0.0598	0.0912
Cobalt, T	ug/L	14	9	39	0.02	0.28	0.0589	0.03	0.0691	0.158	0.207	0.2646
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	42	0	0	0.056	0.144	0.1032	0.11	0.0247	0.128	0.129	0.1399
Copper, D	ug/L	37	1	3	0.1	0.5	0.2268	0.2	0.0961	0.3	0.406	0.4778
Copper, T	ug/L	26	12	32	0.1	0.6	0.1642	0.1	0.113	0.295	0.4	0.526
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	8.64	12.25	10.4583	10.765	1.0454	11.66	11.9575	12.2213
Flow velocity	CFS	42	0	0	4.8086	201	32.8631	10.5811	45.2936	81.8588	137.4544	180.5985
Fluoride	mg/L	3	39	93	0.2	0.37	0.2057	0.2	0.0272	0.2	0.219	0.3208
Hardness as CaCO3	mg/L	42	0	0	21.3	55.4	43.781	48.7	10.3101	53.27	54.465	55.195
Iron, D	ug/L	3	39	93	10.6	46.7	21.6357	21	4.6372	21	21	40.837
Iron, T	ug/L	19	23	55	15.8	846	89.9619	21	156.2108	272.4	321.35	690.61
Lead, D	ug/L	6	36	86	0.02	0.26	0.0279	0.02	0.0376	0.02	0.0496	0.178
Lead, T	ug/L	20	22	52	0.02	0.84	0.0875	0.02	0.1614	0.2855	0.319	0.7252
Magnesium, D	ug/L	42	0	0	774	2790	2031.619	2240	539.4189	2508	2577	2769.5
Magnesium, T	ug/L	42	0	0	977	2670	2029.6905	2230	499.761	2496	2597	2653.6
Manganese, D	ug/L	3	24	89	1.1	2.4	1.163	1.1	0.2544	1.14	1.34	2.14
Manganese, T	ug/L	14	13	50	1	26.9	3.2815	1.1	5.6566	6.68	13.44	23.806
Mercury, D	ng/L	41	0	0	3.4	30.2	7.7585	7	4.182	10.1	13.2	23.48
Mercury, T	ng/L	42	0	0	8.1	3660	200.6714	35.35	621.5135	215.2	837.75	2885.1
Methyl Mercury	ng/L	8	15	65	0.1	0.25	0.12	0.1	0.0436	0.198	0.2	0.239

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-7, Sugar Creek above West End Creek												
Molybdenum, D	ug/L	23	0	0	0.34	1.36	0.9608	1.09	0.3464	1.296	1.318	1.3512
Molybdenum, T	ug/L	23	0	0	0.35	1.34	0.9458	1.08	0.3338	1.256	1.287	1.329
Nickel, D	ug/L	8	15	65	0.2	0.31	0.23	0.2	0.0466	0.3	0.3	0.3078
Nickel, T	ug/L	8	15	65	0.2	1.1	0.2639	0.2	0.1899	0.3	0.399	0.9482
Nitrate+Nitrite as Nitrogen	mg/L	1	41	98	0.05	0.058	0.0502	0.05	0.0012	0.05	0.05	0.0547
Nitrogen, Total as Nitrogen	mg/L	15	8	35	0.25	4.25	0.5626	0.41	0.8169	0.538	0.801	3.4976
Nitrogen, Total Kjeldahl (TKN)	mg/L	14	9	39	0.2	4.22	0.5335	0.41	0.8209	0.538	0.801	3.4742
pH	pH	42	0	0	6.54	8.62	7.4624	7.38	0.4476	8.08	8.1485	8.4355
Phosphorus, D	ug/L	0	42	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	42	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	42	0	0	433	858	679.7143	705	107.4372	797.7	803.95	844.06
Potassium, T	ug/L	42	0	0	506	996	716.0714	727.5	91.205	792.8	841.05	945.16
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1470	3080	2330.9524	2470	427.647	2757	2895.5	3043.1
Sodium, T	ug/L	42	0	0	1470	2880	2313.0952	2440	395.1874	2737	2779.5	2875.9
Solids, Total Dissolved	mg/L	42	0	0	18	113	60.1952	61	17.4657	81.8	87.7	103.57
Solids, Total Suspended (TSS)	mg/L	5	37	88	5	32.5	6.1786	5	4.7174	5.9	11.25	26.555
Sulfate	mg/L	42	0	0	1.34	12.9	3.7731	3.98	1.9031	4.868	5.102	9.7922
Temperature, Water	deg C	42	0	0	0.02	14.84	4.3421	3.625	4.079	10.135	10.9395	14.0487
Thallium, D	ug/L	2	21	91	0.02	0.05	0.0213	0.02	0.0063	0.02	0.02	0.0434
Thallium, T	ug/L	6	17	74	0.02	0.072	0.025	0.02	0.0122	0.0364	0.0443	0.0661
Turbidity	NTU	42	0	0	0	19.3	3.6667	2.25	4.5494	8.68	11.495	18.972
Vanadium (Fume Or Dust), D	ug/L	4	19	83	0.2	0.3	0.2087	0.2	0.0288	0.2	0.29	0.3
Vanadium (Fume Or Dust), T	ug/L	11	12	52	0.2	0.7	0.2604	0.2	0.1299	0.46	0.5	0.656
Zinc, D	ug/L	15	27	64	0.5	2	1.5405	2	0.639	2	2	2
Zinc, T	ug/L	11	31	74	0.5	2.6	1.7548	2	0.5114	2	2	2.354

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-37, Upper West End Creek												
Alkalinity as CaCO3	mg/L	22	0	0	105	148	123.0909	123.5	9.3141	131.8	133.9	145.06
Aluminum (Fume Or Dust), D	ug/L	5	9	64	2.3	9.9	4.0071	4	1.829	4	6.065	9.133
Aluminum (Fume Or Dust), T	ug/L	14	0	0	29.6	1200	320.2286	99.8	375.9839	806.9	971.2	1154.24
Ammonia as Nitrogen	mg/L	0	22	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	22	0	0	1.69	2.36	2.1032	2.16	0.1714	2.258	2.2885	2.3453
Antimony, T	ug/L	22	0	0	1.72	2.4	2.1377	2.15	0.1749	2.327	2.368	2.3937
Arsenic (III), T	ug/L	12	0	0	0.02	0.13	0.0608	0.06	0.0294	0.088	0.108	0.1256
Arsenic, D	ug/L	22	0	0	7.7	9.7	8.5232	8.55	0.5468	9.29	9.4995	9.6601
Arsenic, T	ug/L	22	0	0	8	10.5	9.0355	8.95	0.7393	10.078	10.195	10.437
Barium, D	ug/L	12	0	0	15.6	19.7	17.0917	16.65	1.2944	18.82	19.26	19.612
Barium, T	ug/L	12	0	0	16	21.5	18.6083	18.05	2.0075	21.14	21.335	21.467
Beryllium, D	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	3	9	75	0.02	0.04	0.0233	0.02	0.0065	0.03	0.0345	0.0389
Bicarbonate as CaCO3	mg/L	22	0	0	104	148	122.0455	123	9.5443	129.9	133.8	145.06
Boron, D	ug/L	0	12	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	12	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	22	0	0	27400	36300	31136.3636	31250	2125.9274	33890	34090	35838
Calcium, T	ug/L	22	0	0	27400	47100	32995.4545	31900	4198.1263	35150	41090	45903
Carbonate as CaCO3	mg/L	1	21	96	15	15.3	15.0136	15	0.064	15	15	15.237
Chloride	mg/L	0	22	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, D	ug/L	19	1	5	0.2	0.6	0.3265	0.3	0.1102	0.5	0.505	0.581
Chromium, T	ug/L	20	0	0	0.2	1.7	0.5555	0.4	0.3773	1.01	1.13	1.586
Cobalt, D	ug/L	4	8	67	0.02	0.03	0.0233	0.02	0.0049	0.03	0.03	0.03
Cobalt, T	ug/L	12	0	0	0.02	0.27	0.1005	0.045	0.0919	0.239	0.2535	0.2667
Color	Pt-Co	12	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	21	0	0	0.207	0.339	0.245	0.242	0.0268	0.264	0.268	0.3248
Copper, D	ug/L	15	5	25	0.1	0.3	0.1565	0.1	0.0751	0.3	0.3	0.3
Copper, T	ug/L	11	9	45	0.1	0.7	0.185	0.1	0.1531	0.31	0.415	0.643
Cyanide, T	mg/L	0	12	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	22	0	0	6.97	12.45	9.4805	9.605	1.1362	10.783	10.878	12.1203
Flow velocity	CFS	24	0	0	0.0028	0.6268	0.054	0.0168	0.1258	0.0922	0.1137	0.5097
Fluoride	mg/L	0	22	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	22	0	0	106	173	126.8636	123	14.5546	138.9	150.4	168.38
Iron, D	ug/L	1	21	96	11.6	42	40.6182	42	6.4813	42	42	42
Iron, T	ug/L	22	0	0	23.3	1330	279.6409	92	367.3585	797.4	1000.1	1262.8
Lead, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	20	2	9	0.02	0.51	0.1071	0.04	0.1341	0.287	0.3565	0.4785
Magnesium, D	ug/L	22	0	0	8790	11400	10355.9091	10500	706.7744	11380	11400	11400
Magnesium, T	ug/L	22	0	0	9280	13500	10866.8182	10600	1018.1561	12320	12495	13290
Manganese, D	ug/L	1	13	92	1	1.9	1.0643	1	0.2405	1	1.315	1.783
Manganese, T	ug/L	13	1	7	1.4	41.2	11.5714	4.3	12.8903	29.08	34.18	39.796
Mercury, D	ng/L	22	0	0	27.5	98.3	51.4955	46.5	18.3134	74.14	83.16	95.213
Mercury, T	ng/L	22	0	0	80.6	777	234.55	184	186.0841	481.5	675.85	757.68
Methyl Mercury	ng/L	2	10	83	0.1	0.3	0.1175	0.1	0.0575	0.109	0.1955	0.2791

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-37, Upper West End Creek												
Molybdenum, D	ug/L	12	0	0	0.06	0.124	0.1045	0.11	0.0171	0.12	0.1218	0.1236
Molybdenum, T	ug/L	12	0	0	0.09	0.13	0.1056	0.1	0.0108	0.119	0.1245	0.1289
Nickel, D	ug/L	5	7	58	0.2	1	0.3083	0.2	0.2275	0.39	0.67	0.934
Nickel, T	ug/L	7	5	42	0.2	0.48	0.2908	0.3	0.097	0.409	0.4415	0.4723
Nitrate+Nitrite as Nitrogen	mg/L	1	21	96	0.05	0.084	0.0515	0.05	0.0072	0.05	0.05	0.0769
Nitrogen, Total as Nitrogen	mg/L	10	2	17	0.28	0.84	0.5275	0.49	0.1624	0.705	0.7685	0.8257
Nitrogen, Total Kjeldahl (TKN)	mg/L	10	2	17	0.27	0.84	0.5167	0.475	0.1649	0.705	0.7685	0.8257
pH	pH	21	0	0	7.14	8.12	7.6105	7.57	0.3261	8.08	8.12	8.12
Phosphorus, D	ug/L	0	22	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	3	19	86	42	76.2	44.8909	42	8.4886	49.02	62.91	73.554
Potassium, D	ug/L	22	0	0	840	1280	1066.1364	1075	108.1464	1178	1218	1267.4
Potassium, T	ug/L	22	0	0	877	1380	1101.0455	1105	122.6344	1246	1278.5	1359
Selenium, D	ug/L	0	20	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	20	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	21	1	5	294	400	346.2727	347	26.3334	379	393.3	398.74
Sodium, T	ug/L	21	1	5	293	400	347.8182	350	29.0084	392.9	396.9	399.37
Solids, Total Dissolved	mg/L	22	0	0	103	173	125	119.5	18.782	147.3	167	171.95
Solids, Total Suspended (TSS)	mg/L	9	13	60	5	64	11.3409	5	15.3564	34.1	40.775	59.17
Sulfate	mg/L	22	0	0	0.61	0.96	0.8105	0.83	0.1142	0.94	0.959	0.96
Temperature, Water	deg C	22	0	0	0.14	13.3	6.0232	6.105	3.565	10.183	11.088	12.8443
Thallium, D	ug/L	0	12	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	3	9	75	0.02	0.03	0.0212	0.02	0.0031	0.0245	0.0272	0.0294
Turbidity	NTU	22	0	0	0	13.6	4.2864	2.7	3.9484	11.85	12.475	13.369
Vanadium (Fume Or Dust), D	ug/L	9	3	25	0.2	0.23	0.2025	0.2	0.0087	0.2	0.2135	0.2267
Vanadium (Fume Or Dust), T	ug/L	12	0	0	0.2	1.2	0.5533	0.32	0.3851	1.19	1.2	1.2
Zinc, D	ug/L	8	14	63	0.6	2	1.55	2	0.6147	2	2	2
Zinc, T	ug/L	9	13	59	0.6	2.3	1.6864	2	0.5497	2	2	2.237

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-49, Middle West End Creek												
Alkalinity as CaCO3	mg/L	8	0	0	116	141	127.875	129	8.8872	138.2	139.6	140.72
Aluminum (Fume Or Dust), D	ug/L	4	4	50	2	8.1	4.0375	4	1.7896	5.23	6.665	7.813
Aluminum (Fume Or Dust), T	ug/L	8	0	0	7.4	130	50.9125	24.55	51.5197	123	126.5	129.3
Ammonia as Nitrogen	mg/L	0	8	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	8	0	0	3.45	4.35	3.84	3.81	0.3021	4.182	4.266	4.3332
Antimony, T	ug/L	8	0	0	3.55	4.07	3.8062	3.895	0.2117	4.007	4.0385	4.0637
Arsenic (III), T	ug/L	8	0	0	0.0507	0.33	0.1058	0.078	0.0921	0.169	0.2495	0.3139
Arsenic, D	ug/L	8	0	0	16.8	18.7	17.6625	17.4	0.719	18.63	18.665	18.693
Arsenic, T	ug/L	8	0	0	16.9	20.1	18.3875	18.6	1.0343	19.33	19.715	20.023
Barium, D	ug/L	8	0	0	14.6	20.6	16.7625	16.3	1.8454	18.78	19.69	20.418
Barium, T	ug/L	8	0	0	14.5	21.9	17.0375	16.3	2.3219	19.73	20.815	21.683
Beryllium, D	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	8	0	0	115	141	126.875	127.5	8.6592	136.8	138.9	140.58
Boron, D	ug/L	0	8	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	8	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	8	0	0	29600	37400	33125	33000	3201.2274	37400	37400	37400
Calcium, T	ug/L	8	0	0	29300	39400	33425	32900	3776.5252	38560	38980	39316
Carbonate as CaCO3	mg/L	0	8	100	15	15	15	15	0	15	15	15
Chloride	mg/L	0	8	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, D	ug/L	8	0	0	0.22	0.4	0.2938	0.3	0.0521	0.33	0.365	0.393
Chromium, T	ug/L	7	1	13	0.2	0.4	0.2838	0.28	0.067	0.358	0.379	0.3958
Cobalt, D	ug/L	6	2	25	0.02	0.08	0.0349	0.0285	0.0202	0.0534	0.0667	0.0773
Cobalt, T	ug/L	6	2	25	0.02	0.11	0.0511	0.0405	0.0324	0.089	0.0995	0.1079
Color	Pt-Co	8	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	8	0	0	0.231	0.287	0.2556	0.2525	0.0204	0.2828	0.2849	0.2866
Copper, D	ug/L	8	0	0	0.16	0.6	0.2612	0.19	0.1573	0.46	0.53	0.586
Copper, T	ug/L	4	4	50	0.1	0.2	0.1325	0.11	0.044	0.2	0.2	0.2
Cyanide, T	mg/L	0	8	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	8	0	0	8.59	13.39	9.9162	9.785	1.539	11.164	12.277	13.1674
Flow velocity	CFS	8	0	0	0.3692	1.3698	0.6613	0.587	0.3329	0.98	1.1749	1.3308
Fluoride	mg/L	0	8	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	8	0	0	121	158	135.5	134.5	12.7055	151.7	154.85	157.37
Iron, D	ug/L	0	8	100	21	21	21	21	0	21	21	21
Iron, T	ug/L	4	4	50	23.1	217	74.7625	42	69.7579	170.1	193.55	212.31
Lead, D	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	3	5	63	0.02	0.06	0.0282	0.02	0.0146	0.046	0.053	0.0586
Magnesium, D	ug/L	8	0	0	11300	14100	12487.5	12400	880.6451	13470	13785	14037
Magnesium, T	ug/L	8	0	0	11500	14500	12612.5	12300	920.3066	13520	14010	14402
Manganese, D	ug/L	0	8	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	5	3	38	1.1	11.3	3.775	1.15	4.544	11.02	11.16	11.272
Mercury, D	ng/L	8	0	0	4.8	7	5.95	6.1	0.6928	6.58	6.79	6.958
Mercury, T	ng/L	8	0	0	6.9	29.5	11.8875	9	7.6887	20.05	24.775	28.555
Methyl Mercury	ng/L	0	8	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-49, Middle West End Creek												
Molybdenum, D	ug/L	8	0	0	0.797	1.12	0.9581	0.945	0.115	1.113	1.1165	1.1193
Molybdenum, T	ug/L	8	0	0	0.74	1.07	0.9316	0.91	0.1118	1.07	1.07	1.07
Nickel, D	ug/L	6	2	25	0.2	1	0.395	0.35	0.259	0.58	0.79	0.958
Nickel, T	ug/L	6	2	25	0.2	0.5	0.32	0.32	0.1025	0.43	0.465	0.493
Nitrate+Nitrite as Nitrogen	mg/L	8	0	0	0.188	0.373	0.2669	0.232	0.0765	0.3702	0.3716	0.3727
Nitrogen, Total as Nitrogen	mg/L	7	1	13	0.25	0.96	0.6537	0.66	0.2247	0.897	0.9285	0.9537
Nitrogen, Total Kjeldahl (TKN)	mg/L	7	1	13	0.2	0.75	0.4063	0.39	0.1893	0.61	0.68	0.736
pH	pH	8	0	0	7.86	8.63	8.3988	8.455	0.2569	8.63	8.63	8.63
Phosphorus, D	ug/L	0	8	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	8	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	8	0	0	1620	1920	1757.5	1720	110.8087	1892	1906	1917.2
Potassium, T	ug/L	8	0	0	1630	1980	1776.25	1760	104.189	1875	1927.5	1969.5
Selenium, D	ug/L	0	8	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	8	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	8	0	0	600	862	694.75	682.5	84.5674	778	820	853.6
Sodium, T	ug/L	8	0	0	630	888	702.25	681	81.2663	777.4	832.7	876.94
Solids, Total Dissolved	mg/L	8	0	0	109	158	134.125	138	17.3324	150.3	154.15	157.23
Solids, Total Suspended (TSS)	mg/L	1	7	88	5	61	12	5	19.799	21.8	41.4	57.08
Sulfate	mg/L	8	0	0	5.31	12	7.6888	6.44	2.5138	10.88	11.44	11.888
Temperature, Water	deg C	8	0	0	3.72	6.31	5.4238	5.53	0.888	6.303	6.3065	6.3093
Thallium, D	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	8	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	8	0	0	0	8.7	3.1875	2.5	3.4119	7.93	8.315	8.623
Vanadium (Fume Or Dust), D	ug/L	8	0	0	0.2	0.3	0.2712	0.28	0.0348	0.3	0.3	0.3
Vanadium (Fume Or Dust), T	ug/L	8	0	0	0.27	0.5	0.3362	0.305	0.0761	0.43	0.465	0.493
Zinc, D	ug/L	3	5	63	0.6	2	1.525	2	0.6585	2	2	2
Zinc, T	ug/L	4	4	50	0.8	7.8	2.3625	2	2.2526	3.74	5.77	7.394

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-6, Lower West End Creek												
Alkalinity as CaCO3	mg/L	41	0	0	39	154	122.0732	124	17.198	136	139	150
Aluminum (Fume Or Dust), D	ug/L	2	25	93	3	6.3	4.0481	4	0.4894	4	4	5.702
Aluminum (Fume Or Dust), T	ug/L	25	2	7	7.4	224	24.1222	11.6	41.7225	39.68	52.65	180.814
Ammonia as Nitrogen	mg/L	0	41	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	41	0	0	5.72	13	10.6222	10.8	1.1832	11.8	11.9	12.88
Antimony, T	ug/L	41	0	0	3.63	12.6	10.5278	10.8	1.365	11.6	11.7	12.52
Arsenic (III), T	ug/L	23	0	0	0.05	0.35	0.2173	0.22	0.0732	0.298	0.3351	0.3476
Arsenic, D	ug/L	41	0	0	45	97.3	79.5634	80.3	8.4785	88.3	90.7	94.98
Arsenic, T	ug/L	41	0	0	28.7	97.1	80.6098	81.2	10.5699	89	91.8	96.58
Barium, D	ug/L	23	0	0	15.2	22	17.9391	17.9	1.5634	19.5	19.95	21.56
Barium, T	ug/L	23	0	0	15.1	22.3	18.113	18.1	1.6557	20.06	20.2	21.838
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	41	0	0	39	154	119.7805	122	17.376	130	136	149.2
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	37	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	37	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	41	0	0	26900	60800	43573.1707	41800	5835.2817	53200	54300	59280
Calcium, T	ug/L	41	0	0	18300	60600	43334.1463	41900	6471.3449	52500	53400	58960
Carbonate as CaCO3	mg/L	3	38	93	13.8	42	15.6537	15	4.2247	15	15	31.6
Chloride	mg/L	8	33	81	0.2	0.26	0.2041	0.2	0.0126	0.21	0.23	0.252
Chromium, D	ug/L	19	18	49	0.2	0.9	0.2589	0.2	0.1358	0.332	0.44	0.792
Chromium, T	ug/L	21	16	43	0.2	0.8	0.2608	0.2	0.123	0.34	0.44	0.728
Cobalt, D	ug/L	14	9	39	0.02	0.12	0.0439	0.021	0.0298	0.08	0.089	0.1134
Cobalt, T	ug/L	19	4	17	0.02	0.13	0.0576	0.06	0.0329	0.098	0.1	0.1234
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.323	0.472	0.3605	0.349	0.0356	0.408	0.435	0.4608
Copper, D	ug/L	30	7	19	0.1	0.8	0.2397	0.2	0.1572	0.4	0.524	0.7352
Copper, T	ug/L	23	14	38	0.1	0.3	0.1384	0.1	0.0591	0.2	0.22	0.3
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	41	0	0	9.11	15.1	10.4844	10.36	0.9749	11.19	11.63	13.972
Flow velocity	CFS	41	0	0	0.1592	1.6771	0.5583	0.3976	0.3851	1.1776	1.3635	1.6196
Fluoride	mg/L	0	41	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	41	0	0	75.6	242	180.8439	176	25.4633	217	224	238.4
Iron, D	ug/L	0	41	100	21	21	21	21	0	21	21	21
Iron, T	ug/L	37	4	10	20	346	47.3829	33.5	52.9165	74.2	115	256.4
Lead, D	ug/L	5	36	88	0.02	0.041	0.0212	0.02	0.0047	0.02	0.03	0.0406
Lead, T	ug/L	5	36	88	0.02	0.09	0.0225	0.02	0.0113	0.02	0.03	0.07
Magnesium, D	ug/L	41	0	0	11100	23300	17802.439	17500	2015.3769	20600	21700	22860
Magnesium, T	ug/L	41	0	0	7260	22400	17647.8049	17400	2342.4981	20800	21900	22240
Manganese, D	ug/L	0	27	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	15	12	44	1	12.7	2.0148	1.1	2.3717	3.7	4.93	10.75
Mercury, D	ng/L	41	0	0	3	6.3	4.1	4	0.7503	5.1	5.3	6.06
Mercury, T	ng/L	41	0	0	5.4	18.1	7.7305	6.9	2.7772	10.5	13.9	17.34
Methyl Mercury	ng/L	1	22	96	0.03	0.1	0.097	0.1	0.0146	0.1	0.1	0.1

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-6, Lower West End Creek												
Molybdenum, D	ug/L	23	0	0	1.45	2.03	1.7452	1.77	0.1648	1.97	2.008	2.0256
Molybdenum, T	ug/L	23	0	0	1.4	2.02	1.7287	1.73	0.1596	1.922	1.957	2.0068
Nickel, D	ug/L	18	5	22	0.2	0.8	0.4335	0.4	0.2249	0.748	0.796	0.8
Nickel, T	ug/L	23	0	0	0.2	0.8	0.4543	0.5	0.208	0.7	0.7	0.778
Nitrate+Nitrite as Nitrogen	mg/L	41	0	0	0.147	0.77	0.4623	0.422	0.1218	0.672	0.684	0.7692
Nitrogen, Total as Nitrogen	mg/L	23	0	0	0.34	67.4	3.8187	0.91	13.8619	1.3	1.359	52.8712
Nitrogen, Total Kjeldahl (TKN)	mg/L	22	1	4	0.2	67	3.3713	0.46	13.8711	0.67	0.679	52.4096
pH	pH	41	0	0	7.58	9.25	8.422	8.41	0.4117	8.84	8.97	9.186
Phosphorus, D	ug/L	0	41	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	1	40	98	20	42	41.4634	42	3.4358	42	42	42
Potassium, D	ug/L	41	0	0	1150	2430	1942.6829	1920	216.5413	2270	2290	2406
Potassium, T	ug/L	41	0	0	768	2310	1923.8537	1920	247.0423	2250	2270	2298
Selenium, D	ug/L	0	37	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	1	36	97	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	41	0	0	626	1940	1113.3415	1090	201.9639	1320	1420	1776
Sodium, T	ug/L	41	0	0	410	1950	1094.6098	1070	218.3452	1290	1330	1810
Solids, Total Dissolved	mg/L	41	0	0	165	305	212	202	35.0007	267	290	301.8
Solids, Total Suspended (TSS)	mg/L	4	37	90	5	36.5	5.7927	5	4.918	5	5	24.3
Sulfate	mg/L	41	0	0	14.5	115	57.0366	52	17.9609	84.4	98.2	110.6
Temperature, Water	deg C	41	0	0	1.01	10.21	4.7576	4.87	2.2421	7.75	7.94	9.354
Thallium, D	ug/L	1	22	96	0.02	0.037	0.0207	0.02	0.0035	0.02	0.02	0.0333
Thallium, T	ug/L	1	22	96	0.02	0.076	0.0224	0.02	0.0117	0.02	0.02	0.0637
Turbidity	NTU	41	0	0	0	13.3	3.2854	2.7	2.4249	5.4	6.5	11.9
Vanadium (Fume Or Dust), D	ug/L	20	3	13	0.2	0.3	0.223	0.2	0.039	0.3	0.3	0.3
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.2	0.3	0.2591	0.27	0.0449	0.3	0.3	0.3
Zinc, D	ug/L	15	26	63	0.6	2.5	1.5634	2	0.6511	2	2	2.3
Zinc, T	ug/L	8	33	81	0.5	2	1.7878	2	0.4638	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-1, Sugar Creek above EFSFSR												
Alkalinity as CaCO3	mg/L	42	0	0	24.5	137	56.6238	60.45	18.6386	65.92	74.655	115.27
Aluminum (Fume Or Dust), D	ug/L	21	6	22	2	80.2	9.4037	4	15.8178	14.08	31.44	69.176
Aluminum (Fume Or Dust), T	ug/L	27	0	0	4.5	858	120.9963	15.8	233.9541	403	717.1	847.34
Ammonia as Nitrogen	mg/L	0	42	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	42	0	0	1.25	8.64	3.494	2.97	1.8075	6.329	6.741	8.0004
Antimony, T	ug/L	42	0	0	1.31	8.18	3.5038	2.955	1.7602	6.364	6.6855	7.5814
Arsenic (III), T	ug/L	23	0	0	0.1	1.39	0.4342	0.34	0.2974	0.728	0.883	1.2822
Arsenic, D	ug/L	42	0	0	6.5	22.4	12.9979	13.3	4.0402	17.67	19.285	21.129
Arsenic, T	ug/L	42	0	0	7	24.1	14.4119	14.1	4.0345	20.41	20.6	22.911
Barium, D	ug/L	23	0	0	5.11	14.5	11.3891	12.5	3.088	13.98	14.45	14.5
Barium, T	ug/L	23	0	0	6.56	15.1	12.4665	12.8	2.056	14.18	14.65	15.012
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	5	18	78	0.02	0.13	0.0299	0.02	0.0269	0.0474	0.086	0.1212
Bicarbonate as CaCO3	mg/L	42	0	0	24.5	135	55.981	60.3	17.9121	64.97	69.76	110.359
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	2	36	95	0.02	0.16	0.0246	0.02	0.0232	0.02	0.0249	0.1204
Calcium, D	ug/L	42	0	0	7780	21800	16515.7143	18350	4084.5331	20670	20990	21472
Calcium, T	ug/L	42	0	0	8130	22200	16543.5714	18450	3979.2528	20340	20595	21708
Carbonate as CaCO3	mg/L	1	41	98	15	19	15.0952	15	0.6172	15	15	17.36
Chloride	mg/L	5	37	88	0.2	0.25	0.2031	0.2	0.01	0.209	0.229	0.2418
Chromium, D	ug/L	2	36	95	0.2	0.3	0.2026	0.2	0.0162	0.2	0.2	0.263
Chromium, T	ug/L	7	31	82	0.2	0.6	0.2342	0.2	0.0966	0.33	0.5	0.563
Cobalt, D	ug/L	10	13	57	0.02	0.087	0.0299	0.02	0.0179	0.05	0.059	0.0811
Cobalt, T	ug/L	14	9	39	0.02	0.34	0.0713	0.03	0.0908	0.1968	0.291	0.3312
Color	Pt-Co	22	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	42	0	0	0.065	0.17	0.1246	0.1335	0.0301	0.1539	0.1628	0.1692
Copper, D	ug/L	38	0	0	0.1	8	0.4308	0.2	1.2679	0.393	0.46	5.336
Copper, T	ug/L	30	8	21	0.1	0.6	0.1758	0.1	0.1357	0.33	0.515	0.6
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	8.27	13.91	10.5033	10.67	1.3923	11.987	12.5365	13.8116
Flow velocity	CFS	42	0	0	4.2	213	36.0621	11.7374	49.5987	82.5063	151.75	191.27
Fluoride	mg/L	2	40	95	0.2	0.22	0.2007	0.2	0.0034	0.2	0.2	0.2159
Hardness as CaCO3	mg/L	42	0	0	26.2	74.8	54.1024	59.9	13.4632	66.63	67.385	72.381
Iron, D	ug/L	3	39	93	21.2	42	40.9667	42	4.3191	42	42	42
Iron, T	ug/L	21	21	50	12.3	987	113.2929	42	182.5118	338.9	423.45	809.88
Lead, D	ug/L	3	39	93	0.02	0.1	0.0224	0.02	0.0126	0.02	0.021	0.0754
Lead, T	ug/L	18	24	57	0.02	0.9	0.0939	0.02	0.1761	0.285	0.4435	0.7729
Magnesium, D	ug/L	42	0	0	1200	4690	3082.619	3410	917.2335	3967	4056.5	4521.9
Magnesium, T	ug/L	42	0	0	1440	4710	3113.3333	3445	869.7986	3949	3998	4443.5
Manganese, D	ug/L	3	24	89	1.1	4	1.263	1.1	0.5825	1.38	1.87	3.454
Manganese, T	ug/L	19	8	30	1	28	3.7889	1.3	6.3419	7.32	17.5	26.05
Mercury, D	ng/L	41	0	0	1.6	14.2	7.439	7	2.5538	9.8	12.4	14.12
Mercury, T	ng/L	42	0	0	9.6	2380	169.9738	29.25	432.971	197.1	1032.25	1933.1
Methyl Mercury	ng/L	8	15	65	0.03	0.64	0.1435	0.1	0.1283	0.196	0.38	0.5872
Molybdenum, D	ug/L	23	0	0	0.35	1.35	0.971	1.09	0.329	1.284	1.29	1.3368

Sugar Creek Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-1, Sugar Creek above EFSFSR												
Molybdenum, T	ug/L	23	0	0	0.36	1.33	0.9665	1.09	0.3267	1.27	1.279	1.319
Nickel, D	ug/L	11	12	52	0.2	0.5	0.2513	0.2	0.1018	0.444	0.498	0.5
Nickel, T	ug/L	12	11	48	0.2	0.5	0.2552	0.2	0.0964	0.398	0.472	0.4956
Nitrate+Nitrite as Nitrogen	mg/L	5	37	88	0.05	0.061	0.0506	0.05	0.0022	0.05	0.0549	0.0598
Nitrogen, Total as Nitrogen	mg/L	18	5	22	0.25	0.76	0.4509	0.44	0.1441	0.604	0.682	0.7446
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	5	22	0.2	0.74	0.4304	0.44	0.1555	0.596	0.672	0.7268
pH	pH	42	0	0	6.66	8.72	7.6193	7.555	0.493	8.236	8.3445	8.679
Phosphorus, D	ug/L	0	42	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	1	41	98	22.2	42	41.5286	42	3.0552	42	42	42
Potassium, D	ug/L	42	0	0	510	984	760.7143	788	126.2478	900.5	910.85	967.19
Potassium, T	ug/L	42	0	0	551	1120	812.7381	821.5	111.9301	911.1	939.6	1083.1
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1460	2780	2248.3333	2385	356.8966	2639	2680	2763.6
Sodium, T	ug/L	42	0	0	1460	2830	2260.2381	2370	360.132	2648	2737	2797.2
Solids, Total Dissolved	mg/L	42	0	0	32	1920	120.8571	75	285.295	109.2	116.7	1199.63
Solids, Total Suspended (TSS)	mg/L	6	36	86	5	33.5	6.9286	5	6.1857	9.15	19.15	32.065
Sulfate	mg/L	42	0	0	3.15	15.6	8.9081	9.565	3.0466	12.3	12.69	14.616
Temperature, Water	deg C	42	0	0	-0.02	14.56	5.3157	4.09	4.7507	12.188	13.511	14.2648
Thallium, D	ug/L	2	21	91	0.02	0.039	0.0208	0.02	0.004	0.02	0.02	0.0348
Thallium, T	ug/L	4	19	83	0.02	0.119	0.027	0.02	0.0215	0.038	0.0499	0.104
Turbidity	NTU	42	0	0	0	21.6	3.7381	2.2	5.2613	8.98	18.18	21.19
Vanadium (Fume Or Dust), D	ug/L	7	16	70	0.2	0.23	0.2013	0.2	0.0063	0.2	0.2	0.2234
Vanadium (Fume Or Dust), T	ug/L	13	10	44	0.2	0.9	0.2839	0.2	0.1791	0.46	0.68	0.856
Zinc, D	ug/L	17	25	60	0.6	7.6	1.7405	2	1.2443	2	2	6.534
Zinc, T	ug/L	12	30	71	0.5	2.7	1.7571	2	0.546	2	2	2.413

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-1, Bonanza Adit Seep												
Alkalinity as CaCO3	mg/L	20	0	0	82	225	144.15	138.5	41.8308	200.5	214.55	222.91
Aluminum (Fume Or Dust), D	ug/L	10	10	50	2.2	79.8	8.975	4	16.8729	10.53	15.105	66.861
Aluminum (Fume Or Dust), T	ug/L	20	0	0	9.8	1300	213.49	105	296.541	375.6	546.65	1149.33
Ammonia as Nitrogen	mg/L	0	20	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	20	0	0	33.4	354	201.12	191	79.8016	313.7	347.35	352.67
Antimony, T	ug/L	20	0	0	41.4	911	238.47	195.5	176.2712	349.5	381.85	805.17
Arsenic (III), T	ug/L	20	0	0	0.26	303	32.0356	1.8	71.8956	63.26	151	272.6
Arsenic, D	ug/L	20	0	0	29.5	112	58.51	54.05	22.3206	87.06	90.53	107.706
Arsenic, T	ug/L	20	0	0	41.6	2190	291.52	102.5	495.9135	666	784.95	1908.99
Barium, D	ug/L	20	0	0	45.3	139	76.86	72.3	22.072	103.6	110.5	133.3
Barium, T	ug/L	20	0	0	56.8	303	104.56	80.1	64.0865	158	250.75	292.55
Beryllium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	13	7	35	0.02	0.7	0.1069	0.035	0.157	0.204	0.263	0.6126
Bicarbonate as CaCO3	mg/L	20	0	0	82	225	144.15	138.5	41.8308	200.5	214.55	222.91
Boron, D	ug/L	4	16	80	20.2	26.6	21.525	21	1.6153	22.37	25.745	26.429
Boron, T	ug/L	4	16	80	21	36.1	22.54	21	4.1215	26.24	32.205	35.321
Cadmium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	5	15	75	0.02	0.14	0.0281	0.02	0.0278	0.0258	0.064	0.1248
Calcium, D	ug/L	20	0	0	22200	54500	38560	39650	8820.037	47030	52790	54158
Calcium, T	ug/L	20	0	0	23300	54500	39155	39650	9229.2142	49170	54310	54462
Carbonate as CaCO3	mg/L	0	20	100	15	15	15	15	0	15	15	15
Chloride	mg/L	19	1	5	0.37	1.17	0.6585	0.56	0.2514	0.998	1.075	1.151
Chromium, D	ug/L	3	17	85	0.2	0.4	0.219	0.2	0.0509	0.282	0.305	0.381
Chromium, T	ug/L	5	15	75	0.2	0.7	0.27	0.2	0.149	0.51	0.605	0.681
Cobalt, D	ug/L	18	2	10	0.02	0.862	0.1506	0.075	0.216	0.262	0.6511	0.8198
Cobalt, T	ug/L	20	0	0	0.02	9.47	0.933	0.266	2.1049	1.531	2.7915	8.1343
Color	Pt-Co	20	0	0	0	10	0.5	0	2.2361	0	0.5	8.1
Conductivity	mS/cm	33	0	0	0.165	0.453	0.3243	0.333	0.067	0.3896	0.404	0.4421
Copper, D	ug/L	20	0	0	0.2	0.8	0.38	0.35	0.1499	0.5	0.515	0.743
Copper, T	ug/L	20	0	0	0.1	5.2	0.916	0.485	1.196	1.73	3.015	4.763
Cyanide, T	mg/L	1	19	95	0.0027	0.0079	0.003	0.0027	0.0012	0.0027	0.003	0.0069
Dissolved Oxygen	mg/L	33	0	0	3.37	10.18	6.7039	6.56	1.6693	9.208	9.532	10.0072
Flow velocity	CFS	29	0	0	0.0002	0.0941	0.0097	0.0018	0.0238	0.0145	0.0668	0.0938
Fluoride	mg/L	2	18	90	0.2	0.3	0.2055	0.2	0.0224	0.201	0.2145	0.2829
Hardness as CaCO3	mg/L	20	0	0	87	220	151.15	152.5	37.7377	188.4	210.5	218.1
Iron, D	ug/L	10	10	50	21	496	70.65	22.7	112.3514	140.3	229.05	442.61
Iron, T	ug/L	20	0	0	53.1	30700	3660.105	867.5	7261.3052	10350	13505	27261
Lead, D	ug/L	2	18	90	0.02	0.06	0.0235	0.02	0.0109	0.023	0.0505	0.0581
Lead, T	ug/L	18	2	10	0.02	2.87	0.545	0.1535	0.84	1.391	2.756	2.8472
Magnesium, D	ug/L	20	0	0	6650	19900	12891.5	13350	3583.6269	16490	18285	19577
Magnesium, T	ug/L	20	0	0	7000	20400	12943	13300	3622.1687	16740	18120	19944
Manganese, D	ug/L	18	2	10	1	393	52.795	5.85	109.8897	114.88	339.8	382.36
Manganese, T	ug/L	20	0	0	2.7	2910	275.095	51.1	649.5655	516.9	823.8	2492.76
Mercury, D	ng/L	20	0	0	3	111	21.09	16.5	22.6659	27.93	38.325	96.465
Mercury, T	ng/L	20	0	0	23.4	3800	670.865	155.5	1073.857	1564	3420	3724
Methyl Mercury	ng/L	17	3	15	0.1	14.6	1.7475	0.4	3.4608	3.78	7.57	13.194

Sugar Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-1, Bonanza Adit Seep												
Molybdenum, D	ug/L	20	0	0	1.67	3.59	2.4425	2.385	0.5791	3.153	3.3715	3.5463
Molybdenum, T	ug/L	20	0	0	1.55	4.46	2.525	2.435	0.7269	3.303	3.472	4.2624
Nickel, D	ug/L	18	2	10	0.2	1.9	0.5155	0.425	0.3855	0.73	1.045	1.729
Nickel, T	ug/L	19	1	5	0.2	5.6	1.096	0.565	1.5027	2.38	4.935	5.467
Nitrate+Nitrite as Nitrogen	mg/L	0	20	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	17	3	15	0.18	2.47	0.846	0.525	0.7109	2.113	2.413	2.4586
Nitrogen, Total Kjeldahl (TKN)	mg/L	16	4	20	0.2	2.47	0.8365	0.525	0.7156	2.112	2.4035	2.4567
pH	pH	33	0	0	6.48	7.73	7.23	7.29	0.2642	7.486	7.62	7.7236
Phosphorus, D	ug/L	1	19	95	20.8	42	40.94	42	4.7405	42	42	42
Phosphorus, T	ug/L	12	8	40	42	1030	165.605	66.55	240.4784	408.3	493.25	922.65
Potassium, D	ug/L	20	0	0	1400	3640	2051	2035	546.5962	2562	2975	3507
Potassium, T	ug/L	20	0	0	1490	4010	2242.5	2125	628.4055	2997	3364	3880.8
Selenium, D	ug/L	0	20	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	20	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	19	95	0.02	0.06	0.022	0.02	0.0089	0.02	0.022	0.0524
Sodium, D	ug/L	20	0	0	3140	9690	6317	6170	2026.0906	8666	9538	9659.6
Sodium, T	ug/L	20	0	0	3120	9770	6275.5	6125	2027.1512	8495	9285.5	9673.1
Solids, Total Dissolved	mg/L	20	0	0	134	253	182.8	181.5	31.5988	216.8	225.45	247.49
Solids, Total Suspended (TSS)	mg/L	15	5	25	5	384	43.675	11.25	86.0071	85	125.6	332.32
Sulfate	mg/L	20	0	0	12.8	43.9	22.895	21.3	7.1923	29.33	31.17	41.354
Temperature, Water	deg C	33	0	0	0.11	24.85	8.4603	8.89	5.8452	14.72	15.752	22.05
Thallium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	6	14	70	0.02	0.07	0.0278	0.02	0.0157	0.043	0.07	0.07
Turbidity	NTU	33	0	0	1	914	67.2167	24.4	157.9071	108.2	159.6	682
Vanadium (Fume Or Dust), D	ug/L	0	20	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	7	13	65	0.2	1.5	0.3735	0.2	0.3949	0.6	1.5	1.5
Zinc, D	ug/L	10	10	50	0.6	2.2	1.485	2	0.6235	2	2.01	2.162
Zinc, T	ug/L	17	3	15	0.5	29.1	4.23	1.85	6.9779	9.13	17.225	26.725

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-2, Bailey Tunnel Outlet												
Alkalinity as CaCO3	mg/L	23	0	0	87.6	136	100.8	99	9.3348	107.4	108.9	130.06
Aluminum (Fume Or Dust), D	ug/L	15	8	35	2.1	12.1	4.7652	4	2.2394	7.78	8.07	11.22
Aluminum (Fume Or Dust), T	ug/L	23	0	0	5.5	135	22.8043	12.5	31.3181	42.64	92.51	126.772
Ammonia as Nitrogen	mg/L	1	22	96	0.05	0.065	0.0507	0.05	0.0031	0.05	0.05	0.0617
Antimony, D	ug/L	23	0	0	111	298	177.7391	166	61.4996	284	294.3	297.34
Antimony, T	ug/L	23	0	0	111	308	180.1739	170	63.2201	289.8	293.7	304.92
Arsenic (III), T	ug/L	23	0	0	1.24	10.1	2.9752	2.37	2.0379	4.494	7.41	9.572
Arsenic, D	ug/L	23	0	0	52.7	351	137.2913	104	85.0012	297.2	336	348.14
Arsenic, T	ug/L	23	0	0	141	794	279.5217	171	199.8599	634.8	684.4	770.46
Barium, D	ug/L	23	0	0	18.5	28.9	21.5522	20.7	2.9123	25.96	27.37	28.592
Barium, T	ug/L	23	0	0	18.5	28.8	22.1043	21.6	2.8919	26.22	28.13	28.69
Beryllium, D	ug/L	18	5	22	0.02	0.274	0.0711	0.066	0.0547	0.116	0.138	0.2445
Beryllium, T	ug/L	23	0	0	0.02	0.476	0.1184	0.092	0.1105	0.18	0.3916	0.4624
Bicarbonate as CaCO3	mg/L	23	0	0	87.6	136	100.8	99	9.3348	107.4	108.9	130.06
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	4	19	83	0.02	0.04	0.0217	0.02	0.0048	0.0264	0.0298	0.0378
Cadmium, T	ug/L	5	18	78	0.02	0.03	0.021	0.02	0.0029	0.0232	0.0294	0.03
Calcium, D	ug/L	23	0	0	61600	148000	93591.3043	93100	22829.2857	128200	132600	144700
Calcium, T	ug/L	23	0	0	61800	149000	93817.3913	93100	23074.3	128200	134400	145920
Carbonate as CaCO3	mg/L	0	23	100	15	15	15	15	0	15	15	15
Chloride	mg/L	20	3	13	0.4	0.75	0.553	0.57	0.0991	0.674	0.68	0.7346
Chromium, D	ug/L	1	22	96	0.2	0.4	0.2087	0.2	0.0417	0.2	0.2	0.356
Chromium, T	ug/L	2	21	91	0.2	0.8	0.2478	0.2	0.1592	0.2	0.65	0.778
Cobalt, D	ug/L	23	0	0	0.05	1.46	0.4438	0.401	0.2729	0.608	0.855	1.3324
Cobalt, T	ug/L	23	0	0	0.23	1.51	0.5353	0.44	0.3282	0.874	1.362	1.488
Color	Pt-Co	22	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.439	1.011	0.6422	0.638	0.1428	0.78	0.943	0.9846
Copper, D	ug/L	22	1	4	0.1	5	0.5748	0.34	0.9833	0.68	0.88	4.098
Copper, T	ug/L	23	0	0	0.2	2.07	0.5974	0.5	0.4102	0.8	1.322	1.9182
Cyanide, T	mg/L	1	22	96	0.0027	0.0055	0.0028	0.0027	0.0006	0.0027	0.0027	0.0049
Dissolved Oxygen	mg/L	41	0	0	6.8	10.93	9.2717	9.3	0.715	9.88	10.15	10.71
Flow velocity	CFS	41	0	0	0.0199	0.2228	0.0792	0.0652	0.0505	0.1362	0.1881	0.2139
Fluoride	mg/L	1	22	96	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	23	0	0	224	551	350.3913	348	88.1578	491.4	502.3	540.44
Iron, D	ug/L	8	15	65	30.8	136	56.2391	42	31.2627	116.84	130.3	134.9
Iron, T	ug/L	23	0	0	214	2060	441.6522	314	403.1205	854.2	931.2	1811.84
Lead, D	ug/L	3	20	87	0.02	0.04	0.0217	0.02	0.0048	0.0264	0.0298	0.0378
Lead, T	ug/L	8	15	65	0.02	0.12	0.0303	0.02	0.0236	0.0516	0.0682	0.109
Magnesium, D	ug/L	23	0	0	16700	43200	28126.087	27800	7418.1116	39700	42240	43046
Magnesium, T	ug/L	23	0	0	16800	43500	28221.7391	28100	7513.8633	40220	42120	43236
Manganese, D	ug/L	23	0	0	85.4	205	131.2522	131	33.7383	170.8	187.2	201.48
Manganese, T	ug/L	23	0	0	94.3	361	149.6652	136	54.8104	190.4	205.7	327.12
Mercury, D	ng/L	11	12	52	0.5	1.4	0.6435	0.5	0.266	1.06	1.28	1.378
Mercury, T	ng/L	21	2	9	0.6	6.5	1.4261	1.1	1.2151	1.78	2.88	5.73
Methyl Mercury	ng/L	3	20	9	0.1	0.11	0.1004	0.1	0.0021	0.1	0.1	0.1078

Sugar Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-2, Bailey Tunnel Outlet												
Molybdenum, D	ug/L	23	0	0	0.36	1.13	0.709	0.68	0.219	1.026	1.066	1.1168
Molybdenum, T	ug/L	23	0	0	0.366	1.13	0.7248	0.686	0.2228	1.048	1.077	1.119
Nickel, D	ug/L	22	1	4	0.2	3	0.98	0.8	0.6291	1.524	1.62	2.6986
Nickel, T	ug/L	23	0	0	0.28	2.1	0.9413	0.88	0.4712	1.4	1.58	1.99
Nitrate+Nitrite as Nitrogen	mg/L	20	3	13	0.05	0.1	0.0714	0.069	0.0161	0.0936	0.0949	0.0989
Nitrogen, Total as Nitrogen	mg/L	19	4	17	0.05	0.68	0.4622	0.5	0.1354	0.576	0.625	0.669
Nitrogen, Total Kjeldahl (TKN)	mg/L	17	6	26	0.2	0.61	0.383	0.44	0.1359	0.522	0.539	0.5946
pH	pH	41	0	0	6.38	7.65	7.2295	7.22	0.2517	7.53	7.6	7.642
Phosphorus, D	ug/L	0	23	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	3	20	87	22.3	42	40.4435	42	4.6062	42	42	42
Potassium, D	ug/L	23	0	0	1700	2610	2074.3478	2060	250.6868	2376	2524	2594.6
Potassium, T	ug/L	23	0	0	1710	2560	2074.3478	2090	248.0987	2388	2463	2540.2
Selenium, D	ug/L	0	23	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	23	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	1	22	96	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	22	96	0.02	0.07	0.0222	0.02	0.0104	0.02	0.02	0.059
Sodium, D	ug/L	23	0	0	2870	4550	3401.3043	3310	426.2767	3840	4330	4512.6
Sodium, T	ug/L	23	0	0	2840	4590	3398.2609	3280	447.4844	3838	4393	4559.2
Solids, Total Dissolved	mg/L	23	0	0	276	764	484.6522	473	129.668	673.8	706.1	751.9
Solids, Total Suspended (TSS)	mg/L	1	22	96	5	6.5	5.0652	5	0.3128	5	5	6.17
Sulfate	mg/L	23	0	0	128	445	255.0435	250	90.9633	400	440.4	444.78
Temperature, Water	deg C	41	0	0	4.25	10.52	6.2032	6.11	1.1475	7.22	7.61	9.4
Thallium, D	ug/L	4	19	83	0.02	0.04	0.0225	0.02	0.0066	0.0336	0.0397	0.04
Thallium, T	ug/L	4	19	83	0.02	0.04	0.0226	0.02	0.0061	0.0298	0.039	0.04
Turbidity	NTU	41	0	0	1.4	14.4	5.7878	4.9	3.2485	9.9	13.1	14.16
Vanadium (Fume Or Dust), D	ug/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Zinc, D	ug/L	23	0	0	0.9	26.8	9.5391	8.6	6.0648	18.64	21.1	25.568
Zinc, T	ug/L	23	0	0	3.4	26.6	10.4261	9.1	6.1663	20.9	22.08	25.61

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-HP-S1, Homestake Pit Seep												
Alkalinity as CaCO3	mg/L	18	0	0	40	374	103.6833	73	81.8643	172.2	204.85	340.17
Aluminum (Fume Or Dust), D	ug/L	12	6	33	2	536	48.7389	20	122.412	46.02	132.845	455.369
Aluminum (Fume Or Dust), T	ug/L	18	0	0	3.7	3770	307.9722	65.45	872.2819	326	997.3	3215.46
Ammonia as Nitrogen	mg/L	3	15	83	0.05	4.92	0.4464	0.05	1.2314	0.7515	2.659	4.4678
Antimony, D	ug/L	18	0	0	4.57	52.8	25.9161	25.4	13.6851	41.1	47.02	51.644
Antimony, T	ug/L	18	0	0	4.43	45.3	24.6006	25.3	11.9168	38.32	39.605	44.161
Arsenic (III), T	ug/L	18	0	0	0.084	952	112.2019	2.005	253.4262	403	580.55	877.71
Arsenic, D	ug/L	18	0	0	50.2	2690	336.8944	138.5	623.0383	620.6	1146.4	2381.28
Arsenic, T	ug/L	18	0	0	21.3	3740	498.0944	185.5	852.186	855.6	1378.7	3267.74
Barium, D	ug/L	18	0	0	9.31	69.5	22.6483	19.45	13.9012	34.74	40.43	63.686
Barium, T	ug/L	18	0	0	11.7	79.6	31.1778	24.7	19.968	59.99	76.2	78.92
Beryllium, D	ug/L	15	3	17	0.03	0.61	0.1743	0.1	0.1711	0.3857	0.5675	0.6015
Beryllium, T	ug/L	17	1	6	0.02	2.3	0.3579	0.175	0.5613	0.6532	1.45	2.13
Bicarbonate as CaCO3	mg/L	18	0	0	40	374	103.6833	73	81.8643	172.2	204.85	340.17
Boron, D	ug/L	2	16	89	21	38	22.1222	21	4.0335	21.96	26.27	35.654
Boron, T	ug/L	2	16	89	21	39.7	22.4	21	4.5804	22.95	29.33	37.626
Cadmium, D	ug/L	1	17	94	0.04	0.1	0.0967	0.1	0.0141	0.1	0.1	0.1
Cadmium, T	ug/L	2	16	89	0.05	0.1	0.095	0.1	0.0147	0.1	0.1	0.1
Calcium, D	ug/L	18	0	0	80400	459000	232633.3333	203000	126430.7157	404500	427550	452710
Calcium, T	ug/L	18	0	0	78500	432000	231972.2222	197000	126230.2369	414400	427750	431150
Carbonate as CaCO3	mg/L	0	18	100	15	15	15	15	0	15	15	15
Chloride	mg/L	15	3	17	0.31	3.21	1.0133	0.82	0.7734	1.989	2.309	3.0298
Chromium, D	ug/L	4	14	78	0.3	1	0.8833	1	0.255	1	1	1
Chromium, T	ug/L	6	12	67	0.2	4.6	1.0222	1	0.9416	1	1.54	3.988
Cobalt, D	ug/L	17	1	6	0.02	161	16.2562	1.33	43.7142	36.406	114.25	151.65
Cobalt, T	ug/L	18	0	0	0.17	158	17.4135	2.355	44.3149	42.38	123.15	151.03
Color	Pt-Co	17	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	31	0	0	0.069	4.16	1.5941	1.445	0.876	2.75	3.145	3.914
Copper, D	ug/L	16	2	11	0.1	5.5	0.9044	0.45	1.3192	2.04	3.035	5.007
Copper, T	ug/L	17	1	6	0.1	11.4	1.4533	0.55	2.704	3.17	5.535	10.227
Cyanide, T	mg/L	1	17	94	0.0047	0.0054	0.0047	0.0047	0.0002	0.0047	0.0048	0.0053
Dissolved Oxygen	mg/L	32	0	0	2.16	13.48	7.7953	8.115	3.3754	11.874	13.103	13.387
Flow velocity	CFS	13	0	0	0.0051	0.294	0.0613	0.0333	0.0806	0.1339	0.204	0.276
Fluoride	mg/L	9	9	50	0.23	1	0.665	0.81	0.3544	1	1	1
Hardness as CaCO3	mg/L	18	0	0	298	1940	902.2778	697.5	536.7394	1658	1795.5	1911.1
Iron, D	ug/L	11	7	39	21	91000	5836.5111	67.5	21411.4075	4819	23000	77400
Iron, T	ug/L	18	0	0	43.4	89300	6819.9444	491	21190.3931	9527	31840	77808
Lead, D	ug/L	4	14	78	0.02	0.34	0.1039	0.1	0.0632	0.1	0.136	0.2992
Lead, T	ug/L	10	8	44	0.021	2.12	0.2167	0.1	0.478	0.181	0.573	1.8106
Magnesium, D	ug/L	18	0	0	23400	212000	78050	55500	54750.7749	148900	172050	204010
Magnesium, T	ug/L	18	0	0	24700	213000	78533.3333	54600	55561.1798	150800	175600	205520
Manganese, D	ug/L	18	0	0	36.1	49600	6277.8667	465.5	14271.0382	23440	39145	47509
Manganese, T	ug/L	18	0	0	41.2	50200	6422.2722	566	14210.772	23900	37960	47752
Mercury, D	ng/L	18	0	0	1.9	24.9	5.5578	4	5.3292	8.46	12.235	22.367
Mercury, T	ng/L	18	0	0	3.9	370	35.29	11.05	84.711	40.9	106.925	317.385
Methyl Mercury	ng/L	12	6	33	0.07	3.6	0.9994	0.24	1.2489	3.26	3.43	3.566

Sugar Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-HP-S1, Homestake Pit Seep												
Molybdenum, D	ug/L	14	4	22	0.069	1.1	0.3037	0.25	0.3007	0.677	1.032	1.0864
Molybdenum, T	ug/L	14	4	22	0.073	1	0.2577	0.21	0.2245	0.448	0.626	0.9252
Nickel, D	ug/L	17	1	6	0.2	76.1	9.9383	3.55	18.6661	19.31	44.31	69.742
Nickel, T	ug/L	18	0	0	0.8	79.4	10.4756	3.255	19.7443	21.32	48.715	73.263
Nitrate+Nitrite as Nitrogen	mg/L	3	15	83	0.05	0.178	0.0629	0.05	0.0335	0.0983	0.1228	0.1669
Nitrogen, Total as Nitrogen	mg/L	18	0	0	0.26	72.2	5.7572	0.885	16.7399	7.181	17.9275	61.3455
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	0	0	0.26	72	5.7317	0.885	16.6949	7.148	17.804	61.1608
pH	pH	31	0	0	6.52	8.49	7.259	7.24	0.4769	7.77	8.06	8.439
Phosphorus, D	ug/L	5	13	72	30.8	145	51.5333	42	26.9024	80.93	93.575	134.715
Phosphorus, T	ug/L	11	7	39	23.4	472	117.1333	68.05	119.7919	273	332.6	444.12
Potassium, D	ug/L	17	1	6	200	20000	5508.8889	3495	5122.6405	11208	16430	19286
Potassium, T	ug/L	18	0	0	453	20200	5645.7222	3550	5137.8004	11390	16460	19452
Selenium, D	ug/L	0	18	100	5	5	5	5	0	5	5	5
Selenium, T	ug/L	0	18	100	5	5	5	5	0	5	5	5
Silver, D	ug/L	0	18	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Silver, T	ug/L	4	14	78	0.02	0.1	0.0833	0.1	0.0322	0.1	0.1	0.1
Sodium, D	ug/L	18	0	0	1500	18300	4208.3333	2290	4354.1275	8383	12435	17127
Sodium, T	ug/L	18	0	0	1550	18700	4218.3333	2305	4378.9271	8233	12070	17374
Solids, Total Dissolved	mg/L	18	0	0	61	2680	1205.1667	908.5	820.7553	2580	2595	2663
Solids, Total Suspended (TSS)	mg/L	9	9	50	5	987	68.7167	5	229.8591	44.4	214.35	832.47
Sulfate	mg/L	18	0	0	9.62	1700	740.9789	612.5	502.148	1592	1632	1686.4
Temperature, Water	deg C	32	0	0	-0.01	28.73	11.4778	9.38	9.7496	24.692	26.343	28.1844
Thallium, D	ug/L	7	11	61	0.02	0.22	0.0837	0.1	0.0477	0.1	0.118	0.1996
Thallium, T	ug/L	11	7	39	0.02	0.44	0.0881	0.075	0.0954	0.112	0.185	0.389
Turbidity	NTU	32	0	0	0	303	38.1812	17.25	60.4144	110.15	132.535	255.663
Vanadium (Fume Or Dust), D	ug/L	2	16	89	0.2	1.3	0.9722	1	0.2052	1	1.045	1.249
Vanadium (Fume Or Dust), T	ug/L	7	11	61	0.2	6.8	1.1222	1	1.4477	1	1.87	5.814
Zinc, D	ug/L	16	2	11	0.5	127	15.9611	6.95	29.067	29.53	48.97	111.394
Zinc, T	ug/L	17	1	6	1	139	20.1722	6.9	34.2957	47.14	81.625	127.525

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Sugar Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-1, Hillside Seep by Sugar Creek												
Alkalinity as CaCO3	mg/L	11	0	0	50	155	91.0909	79.6	32.1544	132	143.5	152.7
Aluminum (Fume Or Dust), D	ug/L	9	2	18	2	194	43.7727	3.3	72.1324	156	175	190.2
Aluminum (Fume Or Dust), T	ug/L	11	0	0	49.5	1310	473.8636	262	447.9001	1260	1285	1305
Ammonia as Nitrogen	mg/L	0	11	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	11	0	0	0.51	0.72	0.5505	0.53	0.0599	0.57	0.645	0.705
Antimony, T	ug/L	11	0	0	0.521	1.04	0.6919	0.65	0.1734	0.95	0.995	1.031
Arsenic (III), T	ug/L	11	0	0	0.08	0.31	0.1533	0.13	0.073	0.22	0.265	0.301
Arsenic, D	ug/L	11	0	0	36.2	55.9	41.9182	41.6	5.2937	44	49.95	54.71
Arsenic, T	ug/L	11	0	0	40.5	71.6	52.1455	46.2	12.0037	69.5	70.55	71.39
Barium, D	ug/L	11	0	0	44.1	110	77.5909	77.8	20.8068	107	108.5	109.7
Barium, T	ug/L	11	0	0	60.6	156	92.4364	81.5	32.1284	148	152	155.2
Beryllium, D	ug/L	2	9	82	0.02	0.05	0.0229	0.02	0.009	0.022	0.036	0.0472
Beryllium, T	ug/L	10	1	9	0.02	0.37	0.1304	0.06	0.1182	0.29	0.33	0.362
Bicarbonate as CaCO3	mg/L	11	0	0	50	155	91.0909	79.6	32.1544	132	143.5	152.7
Boron, D	ug/L	0	11	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	11	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	11	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	11	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	11	0	0	15400	43900	29554.5455	26800	9670.9217	42800	43350	43790
Calcium, T	ug/L	11	0	0	16000	45300	29836.3636	27300	9701.8836	43800	44550	45150
Carbonate as CaCO3	mg/L	0	11	100	15	15	15	15	0	15	15	15
Chloride	mg/L	4	7	64	0.24	1.22	0.47	0.4	0.2593	0.56	0.89	1.154
Chromium, D	ug/L	1	10	90	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, T	ug/L	4	7	64	0.2	0.5	0.2636	0.2	0.1206	0.5	0.5	0.5
Cobalt, D	ug/L	8	3	27	0.02	0.08	0.0393	0.04	0.0206	0.07	0.075	0.079
Cobalt, T	ug/L	10	1	9	0.02	0.36	0.132	0.1	0.1195	0.32	0.34	0.356
Color	Pt-Co	10	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	28	0	0	0.108	0.298	0.2172	0.231	0.06	0.2823	0.2843	0.2945
Copper, D	ug/L	11	0	0	0.1	0.5	0.28	0.2	0.1296	0.48	0.49	0.498
Copper, T	ug/L	11	0	0	0.1	1.3	0.5036	0.4	0.3895	1.1	1.2	1.28
Cyanide, T	mg/L	0	11	100	0.0047	0.0047	0.0047	0.0047	0	0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	28	0	0	6	11.59	9.0471	9.26	1.1176	10.069	10.3	11.2417
Flow velocity	CFS	28	0	0	0	0.0284	0.0035	0.001	0.0063	0.0072	0.0161	0.026
Fluoride	mg/L	0	11	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	11	0	0	49.3	141	92.5182	83.8	30.627	137	139	140.6
Iron, D	ug/L	3	8	73	20	277	56.7182	20	79.8466	123	200	261.6
Iron, T	ug/L	11	0	0	98.8	2240	847.3455	537	767.7561	2040	2140	2220
Lead, D	ug/L	3	8	73	0.02	0.08	0.0272	0.02	0.0179	0.03	0.055	0.075
Lead, T	ug/L	11	0	0	0.04	0.81	0.2643	0.13	0.2648	0.66	0.735	0.795
Magnesium, D	ug/L	11	0	0	2140	6460	4314.5455	3780	1534.7466	6440	6450	6458
Magnesium, T	ug/L	11	0	0	2270	6740	4375.4545	3820	1564.8154	6690	6715	6735
Manganese, D	ug/L	1	10	91	1.1	2.9	1.2636	1.1	0.5427	1.1	2	2.72
Manganese, T	ug/L	10	1	9	1.7	70.4	19.0182	7.5	22.0785	49	59.7	68.26
Mercury, D	ng/L	11	0	0	1	11.2	3.4182	2.3	3.086	7	9.1	10.78
Mercury, T	ng/L	11	0	0	5	159	36.6	22.7	43.1447	48.9	103.95	147.99
Methyl Mercury	ng/L	6	5	46	0.1	0.9	0.3009	0.1	0.2747	0.64	0.77	0.874

Sugar Creek Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-1, Hillside Seep by Sugar Creek												
Molybdenum, D	ug/L	10	1	9	0.073	0.2	0.1357	0.15	0.0466	0.19	0.195	0.199
Molybdenum, T	ug/L	10	1	9	0.06	0.2	0.1151	0.11	0.0484	0.2	0.2	0.2
Nickel, D	ug/L	5	6	55	0.2	0.5	0.2818	0.2	0.1079	0.4	0.45	0.49
Nickel, T	ug/L	6	5	46	0.2	0.8	0.3455	0.2	0.2162	0.6	0.7	0.78
Nitrate+Nitrite as Nitrogen	mg/L	2	9	82	0.05	0.111	0.0584	0.05	0.0198	0.081	0.096	0.108
Nitrogen, Total as Nitrogen	mg/L	11	0	0	0.46	2.66	0.9009	0.6	0.6849	1.74	2.2	2.568
Nitrogen, Total Kjeldahl (TKN)	mg/L	11	0	0	0.46	2.62	0.8782	0.58	0.6832	1.74	2.18	2.532
pH	pH	28	0	0	6.43	8.14	7.4664	7.55	0.3987	7.883	7.9875	8.113
Phosphorus, D	ug/L	1	10	91	26	42	40.5455	42	4.8242	42	42	42
Phosphorus, T	ug/L	7	4	36	34.3	146	63.9909	42.5	36.3249	120	133	143.4
Potassium, D	ug/L	11	0	0	984	1410	1176.7273	1160	143.9785	1360	1385	1405
Potassium, T	ug/L	11	0	0	1210	2040	1470.9091	1370	277.6132	1980	2010	2034
Selenium, D	ug/L	0	11	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	11	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	1	10	91	0.02	0.03	0.0209	0.02	0.003	0.02	0.025	0.029
Silver, T	ug/L	1	10	91	0.02	0.04	0.0218	0.02	0.006	0.02	0.03	0.038
Sodium, D	ug/L	11	0	0	2170	3920	3141.8182	2940	558.3156	3770	3845	3905
Sodium, T	ug/L	11	0	0	2200	3920	3116.3636	3030	551.2581	3750	3835	3903
Solids, Total Dissolved	mg/L	11	0	0	83	229	129.6818	119	42.7775	169	199	223
Solids, Total Suspended (TSS)	mg/L	8	3	27	5	116	41.2727	27.5	38.1303	85	100.5	112.9
Sulfate	mg/L	11	0	0	5.21	21.3	12.5555	10.7	5.1963	19.6	20.45	21.13
Temperature, Water	deg C	28	0	0	0.39	17.76	9.4607	8.985	4.3393	14.98	16.944	17.6115
Thallium, D	ug/L	0	11	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	10	91	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	28	0	0	3.8	846	93.1536	21.6	219.1777	174.12	657.4	840.06
Vanadium (Fume Or Dust), D	ug/L	1	10	91	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	8	3	27	0.2	1.3	0.5273	0.3	0.4027	1.2	1.25	1.29
Zinc, D	ug/L	5	6	55	0.6	3.3	1.6182	2	0.875	2	2.65	3.17
Zinc, T	ug/L	7	4	36	0.7	5.2	2.3455	2	1.3881	3.9	4.55	5.07

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-44, Fern Creek												
Alkalinity as CaCO3	mg/L	25	0	0	47.8	88	65.048	64	9.5565	78.6	87	88
Aluminum (Fume Or Dust), D	ug/L	7	12	63	2.1	16.4	4.4789	4	3.1834	4.9	9.29	14.978
Aluminum (Fume Or Dust), T	ug/L	18	1	5	3.6	22.1	9.2158	6	6.3124	19.5	20.12	21.704
Ammonia as Nitrogen	mg/L	4	21	84	0.05	0.092	0.0536	0.05	0.0113	0.0544	0.0832	0.0915
Antimony, D	ug/L	24	1	4	0.08	0.5	0.1287	0.1	0.084	0.182	0.1908	0.4258
Antimony, T	ug/L	24	1	4	0.08	0.5	0.1304	0.11	0.0827	0.1768	0.1896	0.4256
Arsenic (III), T	ug/L	17	0	0	0.03	0.09	0.0555	0.05	0.0181	0.08	0.082	0.0884
Arsenic, D	ug/L	25	0	0	2.9	4.67	3.8352	3.88	0.3942	4.2	4.44	4.6292
Arsenic, T	ug/L	25	0	0	3	5.8	3.986	3.9	0.5596	4.52	4.824	5.5792
Barium, D	ug/L	17	0	0	7.52	9.21	8.1882	8.11	0.4332	8.632	8.762	9.1204
Barium, T	ug/L	17	0	0	7.38	9.36	8.1876	8.1	0.5172	8.87	9.16	9.32
Beryllium, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	25	0	0	47.8	88	64.008	63	8.7256	68.6	84.2	88
Boron, D	ug/L	0	17	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	17	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	25	0	0	11300	20600	14568	14200	1952.2893	15340	19260	20504
Calcium, T	ug/L	25	0	0	11300	20700	14516	14300	1934.4853	15380	18860	20460
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	0	25	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, D	ug/L	2	21	91	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, T	ug/L	5	18	78	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Cobalt, D	ug/L	3	14	82	0.02	0.05	0.0241	0.02	0.01	0.038	0.05	0.05
Cobalt, T	ug/L	7	10	59	0.02	0.06	0.0254	0.02	0.0118	0.038	0.052	0.0584
Color	Pt-Co	16	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	25	0	0	0.1	0.162	0.1277	0.125	0.0146	0.1494	0.1582	0.1613
Copper, D	ug/L	19	4	17	0.1	1.8	0.2339	0.17	0.3528	0.24	0.475	1.514
Copper, T	ug/L	6	17	74	0.1	0.2	0.1043	0.1	0.0209	0.1	0.1	0.178
Cyanide, T	mg/L	0	17	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	25	0	0	7.31	11.68	9.714	9.55	0.8836	10.95	11.306	11.596
Flow velocity	CFS	25	0	0	0.0592	2.6503	0.5406	0.2232	0.6963	1.5397	2.1496	2.5438
Fluoride	mg/L	0	25	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	25	0	0	46.8	85.3	60.32	59.3	8.079	62.66	79.1	84.796
Iron, D	ug/L	0	25	100	42	42	42	42	0	42	42	42
Iron, T	ug/L	7	18	72	20.2	45	39.612	42	5.6485	42	42.08	44.304
Lead, D	ug/L	1	24	96	0.02	0.03	0.0204	0.02	0.002	0.02	0.02	0.0276
Lead, T	ug/L	1	24	96	0.02	0.03	0.0204	0.02	0.002	0.02	0.02	0.0276
Magnesium, D	ug/L	25	0	0	4570	8140	5836.4	5740	775.4455	6016	7700	8132.8
Magnesium, T	ug/L	25	0	0	4540	8260	5848.4	5790	802.4685	5996	7760	8245.6
Manganese, D	ug/L	0	19	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	9	10	53	1	4.2	1.6316	1.1	0.9546	2.88	4.02	4.164
Mercury, D	ng/L	25	0	0	5.7	11.4	7.7816	7.6	1.3401	9.24	10.12	11.136
Mercury, T	ng/L	25	0	0	11.4	54.6	20.444	16.9	9.4782	28.36	36	50.592
Methyl Mercury	ng/L	0	17	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	1	16	94	0.1	0.14	0.1024	0.1	0.0097	0.1	0.108	0.1336

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-44, Fern Creek												
Molybdenum, T	ug/L	2	15	88	0.05	0.06	0.0506	0.05	0.0024	0.05	0.052	0.0584
Nickel, D	ug/L	7	10	59	0.2	0.3	0.2124	0.2	0.0331	0.246	0.3	0.3
Nickel, T	ug/L	3	14	82	0.2	0.3	0.2118	0.2	0.0332	0.24	0.3	0.3
Nitrate+Nitrite as Nitrogen	mg/L	1	24	96	0.05	0.076	0.051	0.05	0.0052	0.05	0.05	0.0698
Nitrogen, Total as Nitrogen	mg/L	15	2	12	0.28	0.76	0.4771	0.48	0.1135	0.594	0.632	0.7344
Nitrogen, Total Kjeldahl (TKN)	mg/L	15	2	12	0.25	0.74	0.46	0.46	0.1114	0.574	0.612	0.7144
pH	pH	25	0	0	6.81	8.27	7.4444	7.37	0.4002	7.962	7.998	8.2052
Phosphorus, D	ug/L	0	25	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	25	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	25	0	0	456	772	618.48	630	74.9156	693.6	731.2	764.08
Potassium, T	ug/L	25	0	0	485	786	632.72	631	65.7169	693.6	747.6	780
Selenium, D	ug/L	0	23	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	23	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	25	0	0	466	645	575.72	577	43.9834	634.4	640	643.8
Sodium, T	ug/L	25	0	0	480	669	575.76	572	44.3239	632	644	663.24
Solids, Total Dissolved	mg/L	25	0	0	35.5	129	65.288	64	18.5985	85.6	88.8	119.4
Solids, Total Suspended (TSS)	mg/L	0	25	100	5	5	5	5	0	5	5	5
Sulfate	mg/L	25	0	0	0.75	2.36	1.2404	1.19	0.3586	1.388	2.128	2.3456
Temperature, Water	deg C	25	0	0	1.98	7.19	4.022	3.65	1.3212	5.672	6.124	6.9596
Thallium, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	25	0	0	0	6.2	2.08	2	1.4691	3.76	4.2	5.744
Vanadium (Fume Or Dust), D	ug/L	0	17	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	0	17	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Zinc, D	ug/L	8	17	69	0.5	4.5	1.736	2	0.8291	2	2	3.9
Zinc, T	ug/L	2	23	92	0.8	2	1.92	2	0.2828	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-14, EFSFSR above Fern Creek												
Alkalinity as CaCO3	mg/L	29	0	0	13	60	28.1552	30	10.1106	37	44	56.08
Aluminum (Fume Or Dust), D	ug/L	18	5	22	2.1	15	6.2522	4.3	4.259	14.06	14.5	14.89
Aluminum (Fume Or Dust), T	ug/L	22	1	4	4.5	178	36.4435	9.2	47.9982	109.9	121.3	165.68
Ammonia as Nitrogen	mg/L	2	27	93	0.05	0.124	0.0528	0.05	0.0138	0.05	0.0548	0.1055
Antimony, D	ug/L	27	2	7	0.05	0.119	0.0758	0.07	0.0226	0.11	0.1112	0.117
Antimony, T	ug/L	27	2	7	0.05	0.15	0.079	0.08	0.0231	0.1068	0.116	0.1416
Arsenic (III), T	ug/L	12	7	37	0.02	0.05	0.0289	0.03	0.0094	0.04	0.041	0.0482
Arsenic, D	ug/L	28	1	3	0.6	1.26	0.7628	0.7	0.1595	0.92	1.12	1.2432
Arsenic, T	ug/L	29	0	0	0.6	1.5	0.8031	0.76	0.2139	1.12	1.224	1.4272
Barium, D	ug/L	19	0	0	3.77	8.88	6.9584	7.62	1.8454	8.614	8.727	8.8494
Barium, T	ug/L	19	0	0	4.1	10.6	7.2605	7.56	1.6394	8.484	8.746	10.2292
Beryllium, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	18	95	0.02	0.03	0.0205	0.02	0.0023	0.02	0.021	0.0282
Bicarbonate as CaCO3	mg/L	29	0	0	13	55	27.7483	30	9.4115	37	41.6	51.36
Boron, D	ug/L	0	19	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	19	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	25	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	25	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	29	0	0	3360	9560	6754.1379	7620	1963.9438	8684	8776	9347.2
Calcium, T	ug/L	29	0	0	3330	9110	6752.069	7680	1949.0389	8498	8706	9014.8
Carbonate as CaCO3	mg/L	0	29	100	15	15	15	15	0	15	15	15
Chloride	mg/L	2	27	93	0.2	0.43	0.2086	0.2	0.0427	0.2	0.212	0.3712
Chromium, D	ug/L	1	24	96	0.2	0.3	0.204	0.2	0.02	0.2	0.2	0.276
Chromium, T	ug/L	3	22	88	0.2	0.6	0.22	0.2	0.0816	0.2	0.28	0.528
Cobalt, D	ug/L	2	17	90	0.02	0.04	0.0216	0.02	0.005	0.022	0.031	0.0382
Cobalt, T	ug/L	6	13	68	0.02	0.054	0.0249	0.02	0.0108	0.042	0.0504	0.0533
Color	Pt-Co	19	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	29	0	0	0.03	0.095	0.0593	0.062	0.0176	0.0802	0.0822	0.0916
Copper, D	ug/L	20	5	20	0.1	0.78	0.2128	0.17	0.1543	0.36	0.4	0.6888
Copper, T	ug/L	5	20	80	0.1	0.2	0.106	0.1	0.0208	0.112	0.128	0.1832
Cyanide, T	mg/L	0	19	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	29	0	0	8.68	12.9	10.3128	10.72	1.1147	11.25	11.486	12.5332
Flow velocity	CFS	29	0	0	0.4795	22.2487	4.5942	0.9129	6.827	16.2445	19.1545	21.4819
Fluoride	mg/L	0	29	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	29	0	0	10.2	28.1	20.7931	23.7	6.0264	26.3	26.94	27.82
Iron, D	ug/L	0	29	100	42	42	42	42	0	42	42	42
Iron, T	ug/L	11	18	62	20.4	242	55.7379	42	45.3816	81.7	139.4	223.52
Lead, D	ug/L	1	28	97	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	8	21	72	0.02	0.15	0.0335	0.02	0.0328	0.0552	0.1068	0.1466
Magnesium, D	ug/L	29	0	0	456	1360	955.7931	1090	286.6931	1252	1260	1332
Magnesium, T	ug/L	29	0	0	458	1290	956.5172	1090	280.9304	1228	1260	1281.6
Manganese, D	ug/L	2	21	91	1	2.3	1.1478	1.1	0.252	1.1	1.1	2.036
Manganese, T	ug/L	12	11	48	1	11.7	2.3391	1.1	2.7015	3.26	8.79	11.194
Mercury, D	ng/L	20	9	31	0.5	3.6	1.2079	0.7	0.9532	2.86	3.1	3.46
Mercury, T	ng/L	22	7	24	0.5	9	1.9476	0.8	2.164	4.8	6.44	8.44
Methyl Mercury	ng/L	0	19	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	19	0	0	0.33	1.11	0.7421	0.79	0.2324	1.022	1.074	1.1028

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-14, EFSFSR above Fern Creek												
Molybdenum, T	ug/L	19	0	0	0.34	1.1	0.7329	0.75	0.2282	1.036	1.1	1.1
Nickel, D	ug/L	2	17	90	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Nickel, T	ug/L	1	18	95	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Nitrate+Nitrite as Nitrogen	mg/L	0	29	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	15	4	21	0.25	0.81	0.4679	0.46	0.1576	0.654	0.72	0.792
Nitrogen, Total Kjeldahl (TKN)	mg/L	15	4	21	0.2	0.81	0.4516	0.46	0.1712	0.65	0.702	0.7884
pH	pH	29	0	0	6.05	8.16	6.9734	6.97	0.4372	7.386	7.62	8.048
Phosphorus, D	ug/L	0	29	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	29	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	29	0	0	444	703	590.5862	605	66.9384	689.4	695.2	701.6
Potassium, T	ug/L	29	0	0	423	652	580.5172	601	64.5903	642	647.4	651.72
Selenium, D	ug/L	0	25	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	25	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	29	0	0	1240	2280	1794.1379	1900	289.0936	2062	2082	2226.8
Sodium, T	ug/L	29	0	0	1250	2150	1780.6897	1910	286.8042	2034	2062	2127.6
Solids, Total Dissolved	mg/L	29	0	0	13	92	35.6828	35	14.1639	45.6	50.1	80.66
Solids, Total Suspended (TSS)	mg/L	0	29	100	5	5	5	5	0	5	5	5
Sulfate	mg/L	29	0	0	0.69	2.16	1.4014	1.42	0.4454	1.914	1.988	2.1152
Temperature, Water	deg C	29	0	0	-0.01	9.28	3.3093	2.25	3.3611	8.142	8.5	9.112
Thallium, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	29	0	0	0	5.8	1.7069	1.3	1.5278	3.6	4.12	5.352
Vanadium (Fume Or Dust), D	ug/L	0	19	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	2	17	90	0.2	0.3	0.2063	0.2	0.0231	0.204	0.228	0.2856
Zinc, D	ug/L	12	17	59	0.5	3.4	1.6138	2	0.7145	2	2	3.008
Zinc, T	ug/L	7	22	76	0.5	2	1.7345	2	0.517	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-13, EFSFSR above Rabbit Creek												
Alkalinity as CaCO3	mg/L	42	0	0	21.5	70	36.9524	39	10.1092	45.53	51.8	66.72
Aluminum (Fume Or Dust), D	ug/L	23	4	15	2.6	24.8	7.9556	5.3	6.1239	16.9	20.64	23.968
Aluminum (Fume Or Dust), T	ug/L	27	0	0	6.1	185	36.6185	15.2	43.1186	92.96	115.05	168.88
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.061	0.0503	0.05	0.0017	0.05	0.05	0.0565
Antimony, D	ug/L	39	3	7	0.09	0.5	0.1685	0.13	0.1027	0.2381	0.4905	0.5
Antimony, T	ug/L	39	3	7	0.1	0.5	0.1688	0.139	0.0997	0.229	0.488	0.5
Arsenic (III), T	ug/L	22	1	4	0.02	0.18	0.0734	0.07	0.0377	0.1	0.127	0.169
Arsenic, D	ug/L	42	0	0	1.9	5.9	4.2529	4.725	1.2846	5.39	5.595	5.818
Arsenic, T	ug/L	42	0	0	2	5.8	4.3679	4.85	1.2099	5.527	5.6	5.8
Barium, D	ug/L	23	0	0	5.58	10.5	8.847	9.5	1.6049	10.1	10.28	10.456
Barium, T	ug/L	23	0	0	6.12	10.6	9.2143	9.68	1.2009	10.1	10.19	10.512
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	22	98	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	42	0	0	21.5	58	36.3571	39	8.667	45.53	47.9	56.77
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	37	98	0.02	0.04	0.0205	0.02	0.0032	0.02	0.02	0.0326
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	5030	11200	8702.381	9350	1907.5368	10400	10975	11118
Calcium, T	ug/L	42	0	0	5190	10800	8700.4762	9485	1844.7155	10480	10500	10677
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	3	39	93	0.2	0.41	0.2052	0.2	0.0324	0.2	0.2	0.328
Chromium, D	ug/L	3	35	92	0.2	0.3	0.2053	0.2	0.0226	0.2	0.215	0.3
Chromium, T	ug/L	6	32	84	0.2	0.3	0.21	0.2	0.0297	0.224	0.3	0.3
Cobalt, D	ug/L	5	18	78	0.02	0.04	0.0223	0.02	0.006	0.0284	0.039	0.04
Cobalt, T	ug/L	8	15	65	0.02	0.07	0.0267	0.02	0.0126	0.04	0.049	0.0656
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	40	0	0	0.042	0.112	0.0762	0.0785	0.0178	0.0961	0.1033	0.1108
Copper, D	ug/L	34	4	11	0.1	0.7	0.2318	0.2	0.1424	0.4	0.43	0.663
Copper, T	ug/L	20	18	47	0.1	0.3	0.1245	0.1	0.0537	0.2	0.2235	0.3
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	41	0	0	6.99	13.39	10.292	10.34	1.1798	11.54	11.63	13.122
Flow velocity	CFS	42	0	0	2.0504	67	14.3313	5.0428	18.2588	48.7115	51.5425	62.0479
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	17.5	38.5	30.2905	34	7.0527	36.89	37.48	38.295
Iron, D	ug/L	1	41	98	22	42	41.5238	42	3.0861	42	42	42
Iron, T	ug/L	28	14	33	15.8	276	51.469	42	45.7749	95.64	115.45	228.44
Lead, D	ug/L	3	39	93	0.02	0.17	0.0243	0.02	0.0235	0.02	0.02	0.1204
Lead, T	ug/L	12	30	71	0.02	0.13	0.028	0.02	0.021	0.0472	0.069	0.1095
Magnesium, D	ug/L	42	0	0	1080	2850	2137.8571	2385	564.9241	2680	2730	2829.5
Magnesium, T	ug/L	42	0	0	1110	2880	2143.5714	2415	549.9748	2668	2727	2843.1
Manganese, D	ug/L	2	25	93	0.9	1.1	1.0926	1.1	0.0385	1.1	1.1	1.1
Manganese, T	ug/L	20	7	23	1.1	13.9	2.6778	2	2.5928	4.54	5.72	11.898
Mercury, D	ng/L	40	1	2	1	6.8	3.259	2.9	1.1819	4.6	5.5	6.8
Mercury, T	ng/L	42	0	0	1.8	29.2	7.1526	4.95	6.177	14.02	20.335	28.052
Methyl Mercury	ng/L	0	23	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	23	0	0	0.61	1.2	0.9424	0.97	0.1568	1.13	1.13	1.1846

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-13, EFSFSR above Rabbit Creek												
Molybdenum, T	ug/L	23	0	0	0.63	1.19	0.9467	0.972	0.1584	1.13	1.157	1.1834
Nickel, D	ug/L	1	22	96	0.2	0.3	0.2043	0.2	0.0209	0.2	0.2	0.278
Nickel, T	ug/L	1	22	96	0.2	0.25	0.2022	0.2	0.0104	0.2	0.2	0.239
Nitrate+Nitrite as Nitrogen	mg/L	0	42	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	20	3	13	0.29	1	0.55	0.5	0.1712	0.81	0.922	0.9846
Nitrogen, Total Kjeldahl (TKN)	mg/L	21	2	9	0.28	1	0.5409	0.5	0.1763	0.81	0.922	0.9846
pH	pH	40	0	0	6.41	8.32	7.33	7.305	0.4921	8.038	8.2105	8.281
Phosphorus, D	ug/L	0	42	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	2	40	95	21.5	42	41.0619	42	4.2498	42	42	42
Potassium, D	ug/L	42	0	0	503	801	654.3333	655.5	68.9693	739.2	757.45	791.98
Potassium, T	ug/L	42	0	0	493	817	654.9762	661.5	64.5137	726.5	734.8	783.79
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	22	96	0.02	0.03	0.0204	0.02	0.0021	0.02	0.02	0.0278
Sodium, D	ug/L	42	0	0	1210	1930	1607.8571	1645	164.5176	1750	1835.5	1921.8
Sodium, T	ug/L	42	0	0	1210	1900	1599.7619	1650	158.445	1748	1790	1854.9
Solids, Total Dissolved	mg/L	42	0	0	22.5	75	45.8119	44.6	12.3672	58.63	69.6	73.893
Solids, Total Suspended (TSS)	mg/L	0	42	100	5	5	5	5	0	5	5	5
Sulfate	mg/L	42	0	0	0.79	1.97	1.3993	1.425	0.3327	1.797	1.858	1.929
Temperature, Water	deg C	42	0	0	-0.02	10.97	3.7445	2.775	3.3265	8.548	8.8865	10.4985
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	41	0	0	0	7.5	1.7439	1.4	1.6799	3.2	5	6.66
Vanadium (Fume Or Dust), D	ug/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	3	20	87	0.2	0.4	0.213	0.2	0.0458	0.2	0.29	0.378
Zinc, D	ug/L	21	21	50	0.5	2	1.3943	1.885	0.6492	2	2	2
Zinc, T	ug/L	8	34	81	0.5	11.6	2.0571	2	1.5643	2	2	7.664

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-21, Rabbit Creek												
Alkalinity as CaCO3	mg/L	42	0	0	23.2	77	44.5976	48	10.7004	52.8	56.9	73.72
Aluminum (Fume Or Dust), D	ug/L	22	5	19	2	20.8	6.2222	4	5.0995	12.8	17.67	20.462
Aluminum (Fume Or Dust), T	ug/L	27	0	0	8.7	220	43.8407	18	57.7345	136.8	175.7	209.34
Ammonia as Nitrogen	mg/L	0	42	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	42	0	0	5.31	10.9	8.0262	7.95	1.5834	10.19	10.295	10.736
Antimony, T	ug/L	42	0	0	5.46	10.4	7.9869	7.955	1.5746	10.19	10.295	10.359
Arsenic (III), T	ug/L	23	0	0	0.07	0.29	0.1915	0.2	0.067	0.278	0.289	0.29
Arsenic, D	ug/L	42	0	0	35.2	67.9	52.1048	53.2	6.7617	59.3	60.2	64.784
Arsenic, T	ug/L	42	0	0	35.9	62.4	52.8595	54.55	6.3714	59.5	60.49	61.744
Barium, D	ug/L	23	0	0	5.45	8.9	7.3709	7.52	1.0083	8.454	8.489	8.8098
Barium, T	ug/L	23	0	0	5.77	9.22	7.8235	7.82	0.8244	8.792	8.932	9.1584
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	2	21	91	0.02	0.03	0.0206	0.02	0.0021	0.02	0.0227	0.0285
Bicarbonate as CaCO3	mg/L	42	0	0	23.2	64	43.7286	48	9.2476	50.9	54.9	61.13
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	37	97	0.02	0.03	0.0203	0.02	0.0016	0.02	0.02	0.0263
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	4860	11300	9135.7143	10000	1811.7141	10690	11185	11300
Calcium, T	ug/L	42	0	0	4950	11100	9095.7143	10000	1795.7241	10880	10900	11100
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	1	41	97	0.2	0.24	0.201	0.2	0.0062	0.2	0.2	0.2236
Chromium, D	ug/L	5	33	87	0.2	0.5	0.2132	0.2	0.0529	0.2	0.3	0.426
Chromium, T	ug/L	4	34	90	0.2	0.4	0.2079	0.2	0.0359	0.2	0.215	0.363
Cobalt, D	ug/L	3	20	87	0.02	0.04	0.0217	0.02	0.0049	0.028	0.03	0.0378
Cobalt, T	ug/L	11	12	52	0.02	0.07	0.0276	0.02	0.0137	0.048	0.0518	0.066
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.053	0.134	0.0948	0.099	0.02	0.114	0.122	0.1308
Copper, D	ug/L	38	0	0	0.1	1.1	0.2318	0.2	0.1755	0.321	0.415	0.878
Copper, T	ug/L	15	23	61	0.1	0.4	0.1366	0.1	0.0716	0.209	0.3	0.363
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	8.22	15.71	10.1852	10.235	1.4149	11.537	12.2535	14.8326
Flow velocity	CFS	42	0	0	0.216	4.4252	1.1408	0.7623	0.9905	2.5674	3.2852	4.0354
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	21.5	50.1	41.1857	45.5	8.3293	48.98	49.485	50.018
Iron, D	ug/L	1	41	98	34.5	42	41.8214	42	1.1573	42	42	42
Iron, T	ug/L	32	10	24	19	314	68.0571	41.4	77.6792	199.6	275.3	300.88
Lead, D	ug/L	5	37	88	0.02	0.04	0.021	0.02	0.0043	0.02	0.021	0.04
Lead, T	ug/L	14	28	67	0.02	0.13	0.0323	0.02	0.0278	0.079	0.0898	0.1259
Magnesium, D	ug/L	42	0	0	2150	5950	4511.9048	4910	973.6084	5327	5602.5	5814.7
Magnesium, T	ug/L	42	0	0	2230	5440	4493.3333	4945	944.5083	5358	5390	5435.9
Manganese, D	ug/L	0	27	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	23	4	15	1	9.6	2.563	2	1.8746	4.88	5.63	8.638
Mercury, D	ng/L	41	0	0	2.9	12.4	6.4334	6.21	1.8171	8.6	8.7	11.8
Mercury, T	ng/L	42	0	0	5.7	63.8	19.4119	15.2	14.1916	37.09	52.025	63.308
Methyl Mercury	ng/L	3	20	87	0.1	0.3	0.1091	0.1	0.0417	0.1	0.109	0.2582
Molybdenum, D	ug/L	23	0	0	0.62	1.33	1.093	1.15	0.2101	1.288	1.308	1.3256

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-21, Rabbit Creek												
Molybdenum, T	ug/L	23	0	0	0.676	1.35	1.099	1.2	0.2151	1.286	1.335	1.3478
Nickel, D	ug/L	6	17	74	0.2	0.51	0.2283	0.2	0.073	0.3	0.336	0.4726
Nickel, T	ug/L	1	22	96	0.2	0.3	0.2043	0.2	0.0209	0.2	0.2	0.278
Nitrate+Nitrite as Nitrogen	mg/L	2	40	95	0.05	1.65	0.0883	0.05	0.2469	0.05	0.05	0.9973
Nitrogen, Total as Nitrogen	mg/L	21	2	9	0.3	6.24	0.8243	0.48	1.2398	0.956	2.054	5.3446
Nitrogen, Total Kjeldahl (TKN)	mg/L	20	3	13	0.29	6.24	0.75	0.46	1.2062	0.726	0.983	5.0894
pH	pH	41	0	0	6.75	8.83	7.6029	7.49	0.5387	8.35	8.4	8.658
Phosphorus, D	ug/L	2	40	95	20.9	42	41.0571	42	4.2773	42	42	42
Phosphorus, T	ug/L	3	39	93	20.1	42	40.7048	42	4.8602	42	42	42
Potassium, D	ug/L	42	0	0	509	897	728.8095	731.5	94.0584	845.7	871.85	892.9
Potassium, T	ug/L	42	0	0	540	890	733.9286	742	80.7771	829.1	842.55	874.01
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	668	1140	861.5476	831	109.5272	1029	1059	1127.7
Sodium, T	ug/L	42	0	0	653	1100	843.4524	827.5	99.1324	1008	1029.5	1075.4
Solids, Total Dissolved	mg/L	42	0	0	14	81	49.0881	50.25	12.2678	63.63	66.66	75.67
Solids, Total Suspended (TSS)	mg/L	1	41	98	5	8	5.0714	5	0.4629	5	5	6.77
Sulfate	mg/L	42	0	0	1.17	3.08	2.1905	2.27	0.5511	2.778	2.9385	3.0677
Temperature, Water	deg C	42	0	0	0.02	11.48	4.5721	3.495	3.5023	9.604	10.026	11.2504
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	42	0	0	0	110	5.6929	2.5	16.8086	4.99	7.465	73.469
Vanadium (Fume Or Dust), D	ug/L	5	18	78	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	10	13	57	0.2	0.4	0.2257	0.2	0.0535	0.3	0.3	0.378
Zinc, D	ug/L	19	23	55	0.5	2	1.431	2	0.6653	2	2	2
Zinc, T	ug/L	8	34	81	0.5	3.4	1.8379	2	0.5246	2	2	2.826

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-11, EFSFSR above Meadow Creek												
Alkalinity as CaCO3	mg/L	42	0	0	22	70	38.2048	39.55	11.0982	49.6	63.5	68.36
Aluminum (Fume Or Dust), D	ug/L	23	4	15	2.2	16.8	6.6148	4.9	4.4186	14.64	14.77	16.28
Aluminum (Fume Or Dust), T	ug/L	27	0	0	7.7	190	41.3556	21.3	47.7665	108.42	145.8	180.38
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.095	0.0511	0.05	0.0069	0.05	0.05	0.0766
Antimony, D	ug/L	42	0	0	0.47	1.86	1.068	1.04	0.3499	1.509	1.5595	1.819
Antimony, T	ug/L	42	0	0	0.47	1.9	1.0843	1.065	0.3465	1.468	1.576	1.8467
Arsenic (III), T	ug/L	22	1	4	0.02	0.23	0.1027	0.09	0.0567	0.168	0.197	0.2234
Arsenic, D	ug/L	42	0	0	4.3	13.2	10.0393	11.05	2.6947	12.4	12.595	13.077
Arsenic, T	ug/L	42	0	0	4.7	13.2	10.3214	11.35	2.6047	12.88	12.995	13.118
Barium, D	ug/L	23	0	0	6.01	11.9	9.7552	10.3	1.8098	11.18	11.56	11.834
Barium, T	ug/L	23	0	0	6.5	11.7	10.2274	10.9	1.4311	11.38	11.67	11.7
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	22	98	0.02	0.03	0.0204	0.02	0.0021	0.02	0.02	0.0278
Bicarbonate as CaCO3	mg/L	42	0	0	21.6	64	37.4905	39.55	9.6545	49.3	53.9	61.54
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	1	22	96	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	37	98	0.02	0.03	0.0203	0.02	0.0016	0.02	0.02	0.0263
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	5150	11200	8779.7619	9475	1849.9472	10390	10400	11118
Calcium, T	ug/L	42	0	0	5290	11200	8771.1905	9420	1837.9737	10400	10600	11077
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	2	40	95	0.2	0.22	0.201	0.2	0.0043	0.2	0.2	0.22
Chromium, D	ug/L	3	35	92	0.2	0.3	0.2053	0.2	0.0226	0.2	0.215	0.3
Chromium, T	ug/L	4	34	90	0.2	0.8	0.2237	0.2	0.1025	0.2	0.315	0.652
Cobalt, D	ug/L	5	18	78	0.02	0.04	0.023	0.02	0.0063	0.03	0.039	0.04
Cobalt, T	ug/L	9	14	61	0.02	0.08	0.03	0.02	0.0173	0.056	0.069	0.0778
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.043	0.112	0.0783	0.08	0.0173	0.096	0.107	0.1108
Copper, D	ug/L	35	3	8	0.1	1	0.2058	0.135	0.1721	0.3	0.43	0.852
Copper, T	ug/L	20	18	47	0.1	0.3	0.125	0.1	0.0588	0.2	0.3	0.3
Cyanide, T	mg/L	2	21	91	0.0027	0.0085	0.0031	0.0027	0.0014	0.0027	0.0058	0.008
Dissolved Oxygen	mg/L	42	0	0	6.64	13.8	10.2288	10.46	1.3187	11.601	11.914	13.1891
Flow velocity	CFS	42	0	0	3.0465	80	16.4344	5.9345	20.7352	49.1759	57.86	78.36
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	18	40.1	31.2452	34.35	6.9467	37.65	38.385	39.772
Iron, D	ug/L	2	40	95	20.3	42	41.0095	42	4.4876	42	42	42
Iron, T	ug/L	27	15	36	19.1	297	57.7286	42	54.53	114.19	161.95	256.82
Lead, D	ug/L	3	39	93	0.02	0.05	0.0212	0.02	0.0055	0.02	0.02	0.0459
Lead, T	ug/L	18	24	57	0.02	0.33	0.0352	0.02	0.0495	0.05	0.0787	0.2357
Magnesium, D	ug/L	42	0	0	1100	3040	2260.7143	2530	585.9218	2759	2904.5	3007.2
Magnesium, T	ug/L	42	0	0	1150	2980	2268.8095	2520	580.4002	2740	2918.5	2971.8
Manganese, D	ug/L	3	24	89	1	1.1	1.0926	1.1	0.0267	1.1	1.1	1.1
Manganese, T	ug/L	24	3	11	1	14.6	3.2148	2.4	2.8769	5.02	8.3	13.274
Mercury, D	ng/L	41	0	0	1.6	5.7	3.04	2.8	0.8914	4.1	5	5.5
Mercury, T	ng/L	42	0	0	2.9	37	7.6421	5.15	6.5782	15	17.685	31.506
Methyl Mercury	ng/L	1	22	96	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	23	0	0	0.61	1.1	0.916	0.92	0.1485	1.088	1.099	1.1

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-11, EFSFSR above Meadow Creek												
Molybdenum, T	ug/L	23	0	0	0.61	1.1	0.9123	0.95	0.1488	1.064	1.097	1.1
Nickel, D	ug/L	2	21	91	0.2	0.8	0.2304	0.2	0.1259	0.2	0.29	0.69
Nickel, T	ug/L	1	22	96	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Nitrate+Nitrite as Nitrogen	mg/L	1	41	98	0.05	0.052	0.05	0.05	0.0003	0.05	0.05	0.0512
Nitrogen, Total as Nitrogen	mg/L	17	6	26	0.39	0.87	0.533	0.47	0.1423	0.806	0.847	0.8656
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	5	22	0.38	0.87	0.5174	0.47	0.1496	0.806	0.82	0.859
pH	pH	41	0	0	6.64	8.55	7.4624	7.41	0.4812	8.07	8.41	8.542
Phosphorus, D	ug/L	0	42	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	1	41	98	25.8	42	41.6143	42	2.4997	42	42	42
Potassium, D	ug/L	42	0	0	503	817	695.6905	716.5	84.8432	789.8	804.5	817
Potassium, T	ug/L	42	0	0	523	841	693.7619	699	78.2282	778.9	797.85	830.34
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1320	2160	1677.1429	1705	171.639	1848	1908.5	2061.6
Sodium, T	ug/L	42	0	0	1220	1880	1657.381	1710	159.5888	1818	1820	1863.6
Solids, Total Dissolved	mg/L	42	0	0	19	109	46.769	45.75	15.2461	61	65.775	96.7
Solids, Total Suspended (TSS)	mg/L	2	40	95	5	6.5	5.0357	5	0.2315	5	5	5.885
Sulfate	mg/L	42	0	0	0.88	2.31	1.6052	1.645	0.4131	2.079	2.176	2.2895
Temperature, Water	deg C	42	0	0	-0.03	11.79	4.3155	3.07	3.8081	9.979	10.7385	11.421
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	22	96	0.02	0.038	0.0208	0.02	0.0038	0.02	0.02	0.034
Turbidity	NTU	42	0	0	0	41.5	3.6262	2.05	6.5604	5.64	9.96	29.692
Vanadium (Fume Or Dust), D	ug/L	1	22	96	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	9	14	61	0.2	0.5	0.2274	0.2	0.075	0.286	0.39	0.478
Zinc, D	ug/L	23	19	45	0.5	6.1	1.4881	1.65	0.9718	2	2	4.419
Zinc, T	ug/L	12	30	71	0.6	2.2	1.694	2	0.5426	2	2	2.118

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-10, EFSFSR below Meadow Creek												
Alkalinity as CaCO3	mg/L	42	0	0	22.1	72	38.9595	41	11.3668	48.8	53.85	71.59
Aluminum (Fume Or Dust), D	ug/L	25	2	7	3	32.2	10.3333	7.8	6.6172	17.74	18.99	28.898
Aluminum (Fume Or Dust), T	ug/L	27	0	0	8.1	1050	97.9852	42.4	203.4187	151.4	307.6	866.96
Ammonia as Nitrogen	mg/L	2	40	95	0.05	0.084	0.051	0.05	0.0054	0.05	0.05	0.0742
Antimony, D	ug/L	42	0	0	3.93	47.1	12.634	9.46	9.6279	26.4	33.225	41.852
Antimony, T	ug/L	42	0	0	3.99	46.6	12.9814	9.955	9.4678	26.25	33.145	41.844
Arsenic (III), T	ug/L	23	0	0	0.24	2.43	1.2673	1.18	0.674	2.016	2.272	2.4014
Arsenic, D	ug/L	42	0	0	8.6	41.4	24.3357	25.55	7.4597	31.75	33.53	39.596
Arsenic, T	ug/L	42	0	0	10.1	48.7	26.3905	27.15	8.3991	33.88	35.815	45.707
Barium, D	ug/L	23	0	0	5.51	12.6	8.9391	9.32	1.8766	10.48	10.68	12.182
Barium, T	ug/L	23	0	0	6.01	22.4	10.0974	9.73	2.9347	10.9	11.08	19.914
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	2	21	91	0.02	0.082	0.0236	0.02	0.0134	0.02	0.038	0.0728
Bicarbonate as CaCO3	mg/L	42	0	0	22.1	62	38.4595	41	10.0804	47.9	53.85	61.59
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	5440	13600	10241.9048	11200	2445.0111	12490	12695	13354
Calcium, T	ug/L	42	0	0	5750	12600	10288.0952	11150	2399.5734	12490	12600	12600
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	30	12	29	0.2	1.13	0.6181	0.695	0.3092	0.978	1.019	1.1054
Chromium, D	ug/L	5	33	87	0.2	0.8	0.2342	0.2	0.1169	0.23	0.5	0.689
Chromium, T	ug/L	7	31	82	0.2	1.09	0.2339	0.2	0.1478	0.23	0.315	0.8347
Cobalt, D	ug/L	23	0	0	0.03	0.121	0.0704	0.063	0.0219	0.098	0.118	0.1208
Cobalt, T	ug/L	23	0	0	0.05	0.52	0.1063	0.08	0.0945	0.1308	0.1661	0.443
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.047	0.125	0.0887	0.095	0.0221	0.112	0.119	0.1242
Copper, D	ug/L	37	1	3	0.1	0.5	0.2379	0.2	0.1005	0.4	0.415	0.5
Copper, T	ug/L	34	4	11	0.1	1.4	0.2311	0.17	0.2422	0.43	0.612	1.1336
Cyanide, T	mg/L	1	22	96	0.0027	0.0066	0.0029	0.0027	0.0008	0.0027	0.0027	0.0057
Dissolved Oxygen	mg/L	42	0	0	6.38	11.85	10.0193	10.375	1.2929	11.488	11.5285	11.7311
Flow velocity	CFS	42	0	0	6.2335	169	40.7756	15.952	48.968	122.221	157.35	166.13
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	19.1	43.5	35.0357	38.2	8.2883	42.7	42.8	43.295
Iron, D	ug/L	36	6	14	20	84	39.3262	40.4	15.4485	57.79	63.355	77.03
Iron, T	ug/L	42	0	0	60.1	1690	187.0786	116.5	261.7401	263.5	495.6	1237.36
Lead, D	ug/L	3	39	93	0.02	0.058	0.0221	0.02	0.0078	0.02	0.039	0.0543
Lead, T	ug/L	36	6	14	0.02	0.59	0.077	0.04	0.1065	0.13	0.2514	0.4982
Magnesium, D	ug/L	42	0	0	1130	2990	2234.2857	2420	607.2374	2759	2937.5	2990
Magnesium, T	ug/L	42	0	0	1140	2920	2276.4286	2480	572.2392	2770	2849	2915.9
Manganese, D	ug/L	26	1	4	3.1	21	13.1	14.8	5.6429	19.24	19.93	20.792
Manganese, T	ug/L	27	0	0	6	40.8	18.6296	18.6	6.5211	23.3	27.19	37.628
Mercury, D	ng/L	40	1	2	1	5.7	2.5122	2.1	1.0612	3.7	4.9	5.42
Mercury, T	ng/L	42	0	0	2	31.5	6.2762	4.15	6.1979	9.89	13.62	31.049
Methyl Mercury	ng/L	3	20	87	0.1	0.17	0.103	0.1	0.0146	0.1	0.1	0.1546
Molybdenum, D	ug/L	23	0	0	0.61	1.08	0.8941	0.94	0.154	1.056	1.06	1.0756

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-10, EFSFSR below Meadow Creek												
Molybdenum, T	ug/L	23	0	0	0.6	1.1	0.8903	0.937	0.1581	1.052	1.087	1.0978
Nickel, D	ug/L	7	16	70	0.2	0.5	0.2243	0.2	0.0695	0.284	0.336	0.4648
Nickel, T	ug/L	5	18	78	0.2	0.64	0.2204	0.2	0.0917	0.2	0.227	0.5498
Nitrate+Nitrite as Nitrogen	mg/L	1	41	98	0.05	0.063	0.0503	0.05	0.002	0.05	0.05	0.0577
Nitrogen, Total as Nitrogen	mg/L	17	6	26	0.25	1.1	0.4865	0.5	0.2058	0.702	0.728	1.0186
Nitrogen, Total Kjeldahl (TKN)	mg/L	17	6	26	0.2	1.08	0.4674	0.49	0.2189	0.688	0.727	1.003
pH	pH	41	0	0	6.57	8.11	7.3732	7.37	0.3801	7.91	8.01	8.082
Phosphorus, D	ug/L	0	42	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	4	38	91	24.2	60	42.1786	42	4.0982	42	42.285	55.49
Potassium, D	ug/L	42	0	0	492	1090	783.3571	801	123.3693	936.4	960.45	1048.18
Potassium, T	ug/L	42	0	0	543	1240	822.6905	835.5	139.2556	961.7	1009	1194.9
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1320	2700	2121.6667	2220	351.2967	2460	2508.5	2622.1
Sodium, T	ug/L	42	0	0	1370	2530	2125.9524	2225	334.3728	2456	2507.5	2521.8
Solids, Total Dissolved	mg/L	42	0	0	20.5	101	52.2405	52.25	13.8904	65.85	68.9	91.16
Solids, Total Suspended (TSS)	mg/L	7	35	83	5	35	6.3095	5	5.0158	6.95	13.175	27.21
Sulfate	mg/L	42	0	0	1.82	6.87	4.105	4.085	1.4031	6.26	6.41	6.7183
Temperature, Water	deg C	42	0	0	-0.01	15.8	5.1795	3.7	4.8705	12.874	13.625	14.9554
Thallium, D	ug/L	1	22	96	0.02	0.026	0.0203	0.02	0.0013	0.02	0.02	0.0247
Thallium, T	ug/L	2	21	91	0.02	0.034	0.0207	0.02	0.0029	0.02	0.0209	0.0311
Turbidity	NTU	42	0	0	0	49.6	3.8786	2.2	7.8569	6.5	8.145	36.767
Vanadium (Fume Or Dust), D	ug/L	8	15	65	0.2	0.3	0.2104	0.2	0.0295	0.232	0.294	0.3
Vanadium (Fume Or Dust), T	ug/L	20	3	13	0.2	2.53	0.3926	0.3	0.4845	0.48	0.77	2.1494
Zinc, D	ug/L	24	18	43	0.5	2.5	1.3369	1.15	0.676	2	2	2.295
Zinc, T	ug/L	15	27	64	0.5	3.5	1.6933	2	0.6201	2	2	2.885

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-35, Garnet Creek												
Alkalinity as CaCO3	mg/L	37	0	0	24.6	107	51.1459	54	17.1016	59.78	88.76	101.96
Aluminum (Fume Or Dust), D	ug/L	20	5	20	2.1	18.7	5.896	4	4.2977	11.48	13.68	17.596
Aluminum (Fume Or Dust), T	ug/L	25	0	0	7	341	69.236	33	85.91	203.4	229.4	314.6
Ammonia as Nitrogen	mg/L	1	36	97	0.05	0.15	0.0527	0.05	0.0164	0.05	0.05	0.114
Antimony, D	ug/L	37	0	0	21.2	58.8	44.6568	49.6	12.5264	57.38	57.64	58.44
Antimony, T	ug/L	37	0	0	22.1	58.4	44.5324	49.5	12.0056	57.16	57.56	58.328
Arsenic (III), T	ug/L	21	0	0	0.19	0.91	0.485	0.47	0.1948	0.77	0.86	0.9
Arsenic, D	ug/L	37	0	0	65.8	221	165.1324	176	44.6678	214.4	215.6	219.92
Arsenic, T	ug/L	37	0	0	66.1	221	167	179	43.7626	215.2	219.2	220.64
Barium, D	ug/L	21	0	0	5.02	11.6	7.7605	7.32	1.5099	9.41	10.4	11.36
Barium, T	ug/L	21	0	0	5.26	12.7	8.4324	8.13	1.6194	10.5	11	12.36
Beryllium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	4	17	81	0.02	0.07	0.0239	0.02	0.0116	0.03	0.04	0.064
Bicarbonate as CaCO3	mg/L	37	0	0	24.6	107	50.7405	54	16.2379	59.78	79.94	100.052
Boron, D	ug/L	0	21	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	21	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	33	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	1	32	97	0.02	0.05	0.0209	0.02	0.0052	0.02	0.02	0.0404
Calcium, D	ug/L	37	0	0	7750	18900	14226.7568	15700	3127.476	17480	18080	18720
Calcium, T	ug/L	37	0	0	7940	18600	14293.2432	15600	3093.891	17980	18320	18528
Carbonate as CaCO3	mg/L	1	36	97	15	15	15	15	0	15	15	15
Chloride	mg/L	8	29	78	0.2	0.45	0.2311	0.2	0.0713	0.344	0.412	0.4392
Chromium, D	ug/L	5	28	85	0.2	0.8	0.2242	0.2	0.1091	0.2	0.28	0.672
Chromium, T	ug/L	5	28	85	0.2	0.4	0.2152	0.2	0.0508	0.2	0.34	0.4
Cobalt, D	ug/L	12	9	43	0.02	0.07	0.0323	0.029	0.0161	0.06	0.06	0.068
Cobalt, T	ug/L	18	3	14	0.02	0.22	0.0571	0.04	0.0497	0.1	0.15	0.206
Color	Pt-Co	22	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	36	0	0	0.063	0.166	0.1193	0.1275	0.0279	0.148	0.1522	0.1614
Copper, D	ug/L	32	1	3	0.1	0.7	0.2852	0.3	0.123	0.4	0.512	0.6456
Copper, T	ug/L	33	0	0	0.1	0.7	0.2715	0.2	0.1453	0.48	0.6	0.668
Cyanide, T	mg/L	1	20	95	0.0027	0.0412	0.0045	0.0027	0.0084	0.0027	0.0027	0.0335
Dissolved Oxygen	mg/L	37	0	0	7.16	11.69	9.6554	9.82	1.0856	10.84	11.088	11.6
Flow velocity	CFS	37	0	0	0.007	1.8806	0.2966	0.0781	0.4812	1.0944	1.439	1.7462
Fluoride	mg/L	0	37	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	37	0	0	28	64.1	49.8432	54.4	10.5965	61.88	63.04	63.92
Iron, D	ug/L	2	35	95	11.7	42	40.7189	42	5.6514	42	42	42
Iron, T	ug/L	30	7	19	22	591	91.0486	53.8	106.1019	163.6	288	489.12
Lead, D	ug/L	1	36	97	0.02	0.04	0.0205	0.02	0.0033	0.02	0.02	0.0328
Lead, T	ug/L	25	12	32	0.02	0.25	0.0461	0.03	0.0467	0.076	0.15	0.214
Magnesium, D	ug/L	37	0	0	1880	4360	3410.5405	3690	748.8656	4180	4234	4334.8
Magnesium, T	ug/L	37	0	0	1990	4310	3452.7027	3720	710.8158	4234	4274	4302.8
Manganese, D	ug/L	4	21	84	0.8	6.7	1.444	1.1	1.2705	1.16	3.68	6.124
Manganese, T	ug/L	23	2	8	1.5	27.7	5.032	2.9	5.731	9.06	14.54	24.82
Mercury, D	ng/L	36	0	0	1.7	7.9	3.5564	2.85	1.7285	6.25	7.225	7.69
Mercury, T	ng/L	37	0	0	2.8	37.6	8.8865	6.5	7.7983	17.6	27.04	34.72
Methyl Mercury	ng/L	2	19	91	0.1	0.11	0.1005	0.1	0.0022	0.1	0.1	0.108
Molybdenum, D	ug/L	21	0	0	0.58	1.61	1.235	1.37	0.3682	1.55	1.56	1.6

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-35, Garnet Creek												
Molybdenum, T	ug/L	21	0	0	0.53	1.6	1.2329	1.42	0.372	1.54	1.59	1.598
Nickel, D	ug/L	10	11	53	0.2	0.5	0.2343	0.2	0.0727	0.3	0.3	0.46
Nickel, T	ug/L	11	10	48	0.2	0.46	0.2433	0.2	0.0744	0.3	0.4	0.448
Nitrate+Nitrite as Nitrogen	mg/L	3	34	92	0.05	0.106	0.0534	0.05	0.0129	0.05	0.0716	0.106
Nitrogen, Total as Nitrogen	mg/L	15	6	29	0.25	9.68	0.9148	0.48	2.0207	0.98	0.99	7.942
Nitrogen, Total Kjeldahl (TKN)	mg/L	16	5	24	0.2	9.68	0.9024	0.48	2.024	0.98	0.99	7.942
pH	pH	36	0	0	6.86	8.19	7.4342	7.41	0.3632	7.89	8.0175	8.148
Phosphorus, D	ug/L	7	30	81	22.7	42	39.0676	42	6.3539	42	42	42
Phosphorus, T	ug/L	10	27	73	21.1	47.3	38.973	42	6.2459	42	42	45.392
Potassium, D	ug/L	37	0	0	671	1420	913.1351	920	152.9247	1070	1074	1301.2
Potassium, T	ug/L	37	0	0	674	1360	950.9189	955	144.4881	1104	1114	1277.2
Selenium, D	ug/L	0	33	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	33	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	20	95	0.02	0.03	0.0205	0.02	0.0022	0.02	0.02	0.028
Sodium, D	ug/L	37	0	0	1290	2220	1820.5405	1880	265.2038	2130	2160	2212.8
Sodium, T	ug/L	37	0	0	1290	2200	1832.973	1870	256.7193	2132	2172	2192.8
Solids, Total Dissolved	mg/L	37	0	0	19	115	68.5108	69.7	19.509	90.4	95	109.24
Solids, Total Suspended (TSS)	mg/L	5	32	87	5	21	5.8919	5	3.2192	5.2	11.9	19.02
Sulfate	mg/L	37	0	0	4.75	10.9	8.2108	8.63	1.7007	10.002	10.32	10.72
Temperature, Water	deg C	37	0	0	-0.01	14.87	6.4589	5.67	4.4568	12.534	13.624	14.4848
Thallium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	20	95	0.02	0.034	0.0207	0.02	0.0031	0.02	0.02	0.0312
Turbidity	NTU	37	0	0	0.1	27.9	4.7405	3.1	4.9485	8.92	12.1	22.932
Vanadium (Fume Or Dust), D	ug/L	0	21	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	6	15	71	0.2	0.4	0.22	0.2	0.051	0.3	0.3	0.38
Zinc, D	ug/L	20	17	46	0.5	2.2	1.4019	1.6	0.6392	2	2	2.128
Zinc, T	ug/L	16	21	57	0.5	2.6	1.5973	2	0.6283	2	2.06	2.492

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-15, Scout Creek												
Alkalinity as CaCO3	mg/L	42	0	0	32	70	46.4119	47.45	7.2946	54	55.95	64.916
Aluminum (Fume Or Dust), D	ug/L	21	6	22	2.7	21.1	5.4556	4	3.5296	7.62	8.29	17.824
Aluminum (Fume Or Dust), T	ug/L	27	0	0	18.2	195	52.6889	38	40.6549	97.46	126.8	179.14
Ammonia as Nitrogen	mg/L	0	42	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	42	0	0	32	58.4	45.2952	44.65	6.1535	52.16	54.015	57.17
Antimony, T	ug/L	42	0	0	32.2	58.9	45.2071	44.35	5.906	51.77	53.705	57.424
Arsenic (III), T	ug/L	23	0	0	0.22	0.86	0.477	0.4	0.2061	0.808	0.829	0.8534
Arsenic, D	ug/L	42	0	0	69.7	121	85.6	80.75	12.7735	101.9	109.7	118.13
Arsenic, T	ug/L	42	0	0	74.6	134	92.2143	87.65	14.1309	110	116.85	127.85
Barium, D	ug/L	23	0	0	7.37	11.3	9.0613	8.94	1.0171	10.28	11.02	11.256
Barium, T	ug/L	23	0	0	7.7	13.1	10.1165	9.63	1.4588	12.06	12.92	13.078
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	42	0	0	32	57.6	45.9524	47.25	6.348	53.9	54.95	56.944
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	8450	14600	12204.2857	12600	1576.998	13800	14485	14559
Calcium, T	ug/L	42	0	0	8500	15700	12306.9048	12700	1587.831	13890	14195	15249
Carbonate as CaCO3	mg/L	1	41	98	15	17	15.0476	15	0.3086	15	15	16.18
Chloride	mg/L	7	35	83	0.2	0.49	0.2212	0.2	0.0683	0.22	0.422	0.4777
Chromium, D	ug/L	6	32	84	0.2	0.6	0.2263	0.2	0.0921	0.23	0.345	0.6
Chromium, T	ug/L	7	31	82	0.2	0.5	0.2184	0.2	0.0563	0.3	0.3	0.426
Cobalt, D	ug/L	13	10	44	0.02	0.05	0.0245	0.02	0.0077	0.03	0.039	0.0478
Cobalt, T	ug/L	23	0	0	0.02	0.17	0.058	0.05	0.0301	0.0784	0.098	0.1546
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	40	0	0	0.073	0.145	0.1082	0.113	0.0165	0.1244	0.1312	0.1407
Copper, D	ug/L	36	2	5	0.1	0.7	0.2418	0.2	0.1089	0.306	0.403	0.5964
Copper, T	ug/L	36	2	5	0.1	0.4	0.1658	0.125	0.0828	0.3	0.3	0.363
Cyanide, T	mg/L	3	20	87	0.0027	0.136	0.0092	0.0027	0.0278	0.005	0.016	0.1098
Dissolved Oxygen	mg/L	42	0	0	7.93	11.52	9.8393	9.97	1.0526	11.075	11.2975	11.4913
Flow velocity	CFS	42	0	0	0.0098	0.9814	0.1649	0.0823	0.189	0.348	0.4887	0.8335
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	31.8	56.8	45.2405	47.15	5.8854	51.37	52.365	55.119
Iron, D	ug/L	6	36	86	20.4	49.1	40.0714	42	6.0006	42	42	46.189
Iron, T	ug/L	42	0	0	46.5	303	126.4262	118	59.9452	195.5	230.9	281.27
Lead, D	ug/L	0	42	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	27	15	36	0.02	0.09	0.031	0.0245	0.0169	0.05	0.0695	0.0859
Magnesium, D	ug/L	42	0	0	2360	4310	3492.1429	3680	490.6021	3939	4246	4293.6
Magnesium, T	ug/L	42	0	0	2350	4250	3524.2857	3705	486.2005	4008	4177	4241.8
Manganese, D	ug/L	16	11	41	1	10.7	2.1852	1.4	2.0412	4.06	4.86	9.244
Manganese, T	ug/L	27	0	0	3.9	72.8	16.2333	12.9	14.9647	26.4	42.91	66.768
Mercury, D	ng/L	31	10	24	0.6	3.5	1.4832	1.2	0.6852	2.4	2.9	3.34
Mercury, T	ng/L	41	1	2	1	11.9	3.5612	3	2.1423	5.79	5.99	10.711
Methyl Mercury	ng/L	5	18	78	0.1	0.17	0.1048	0.1	0.0165	0.1	0.136	0.1634
Molybdenum, D	ug/L	23	0	0	0.97	1.45	1.1522	1.12	0.1415	1.356	1.405	1.4412

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-15, Scout Creek												
Molybdenum, T	ug/L	23	0	0	0.93	1.43	1.1591	1.11	0.1411	1.394	1.419	1.4278
Nickel, D	ug/L	8	15	65	0.2	0.39	0.2204	0.2	0.0479	0.292	0.3	0.3702
Nickel, T	ug/L	6	17	74	0.2	0.4	0.213	0.2	0.0458	0.2	0.29	0.378
Nitrate+Nitrite as Nitrogen	mg/L	0	42	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	17	6	26	0.25	1.51	0.5035	0.48	0.2686	0.69	0.736	1.3406
Nitrogen, Total Kjeldahl (TKN)	mg/L	19	4	17	0.2	1.51	0.4909	0.48	0.28	0.69	0.736	1.3406
pH	pH	40	0	0	6.11	8.39	7.3	7.275	0.4576	7.795	7.8665	8.234
Phosphorus, D	ug/L	5	37	88	20.1	42	39.831	42	6.0776	42	42	42
Phosphorus, T	ug/L	9	33	79	20.1	42	38.8548	42	6.7959	42	42	42
Potassium, D	ug/L	42	0	0	830	1360	1062.381	1050	108.8351	1179	1219	1319
Potassium, T	ug/L	42	0	0	817	1290	1074.5476	1075	119.7726	1229	1230	1290
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1540	2110	1850.7143	1845	133.7889	2008	2059	2105.9
Sodium, T	ug/L	42	0	0	1530	2630	1867.381	1880	170.9237	2005	2049.5	2396.3
Solids, Total Dissolved	mg/L	41	1	2	10	97	63.619	67.25	14.8741	76.65	85.71	92.9
Solids, Total Suspended (TSS)	mg/L	7	35	83	5	21.5	6.1667	5	3.2809	8.9	13.325	18.835
Sulfate	mg/L	42	0	0	4.13	8.69	6.3052	5.945	1.321	8.008	8.068	8.4973
Temperature, Water	deg C	42	0	0	0.01	13.65	5.8693	5.16	4.4017	11.774	12.5475	13.3302
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	42	0	0	0	12	3.1738	2.8	2.2857	4.89	6.99	10.77
Vanadium (Fume Or Dust), D	ug/L	4	19	83	0.2	0.3	0.2048	0.2	0.0209	0.2	0.209	0.2802
Vanadium (Fume Or Dust), T	ug/L	13	10	44	0.2	0.5	0.2448	0.2	0.077	0.3	0.39	0.478
Zinc, D	ug/L	24	18	43	0.5	2.3	1.2893	1.05	0.6894	2	2	2.177
Zinc, T	ug/L	9	33	79	0.6	2.8	1.8238	2	0.4782	2	2	2.472

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-8, EFSFSR above Fiddle Creek												
Alkalinity as CaCO3	mg/L	42	0	0	20.4	86.8	42.4643	42.5	15.1357	57.5	75.6	84.012
Aluminum (Fume Or Dust), D	ug/L	26	1	4	3.1	25.6	10.0111	6.9	6.4785	19.38	20.34	24.326
Aluminum (Fume Or Dust), T	ug/L	27	0	0	11.2	597	92.3333	41.8	132.6031	171	349.9	552.02
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.053	0.0501	0.05	0.0005	0.05	0.05	0.0518
Antimony, D	ug/L	42	0	0	5.7	61.8	17.3964	12.45	12.6677	36.54	44.165	55.158
Antimony, T	ug/L	42	0	0	5.8	61.3	17.554	12.8	12.3367	36.79	39.845	55.109
Arsenic (III), T	ug/L	23	0	0	0.3	1.81	0.961	0.87	0.479	1.78	1.8	1.8078
Arsenic, D	ug/L	42	0	0	12.3	48.7	27.9452	26.8	8.4419	39.03	42.04	46.158
Arsenic, T	ug/L	42	0	0	13	57.7	30.119	29.9	9.3869	41.02	46.835	53.436
Barium, D	ug/L	23	0	0	5.5	12.4	9.9457	10.7	2.2451	12	12.27	12.378
Barium, T	ug/L	23	0	0	6.54	15.8	11.2048	11.6	1.9847	12.68	12.7	15.118
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	2	21	91	0.02	0.05	0.0224	0.02	0.008	0.02	0.0425	0.0489
Bicarbonate as CaCO3	mg/L	42	0	0	20.4	86.8	41.8929	42.5	14.2103	55.7	64.65	84.012
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	37	97	0.02	0.27	0.0266	0.02	0.0406	0.02	0.02	0.1775
Cadmium, T	ug/L	1	37	97	0.02	0.021	0.02	0.02	0.0002	0.02	0.02	0.0206
Calcium, D	ug/L	42	0	0	5740	14700	11337.8571	12300	2887.9645	14100	14590	14659
Calcium, T	ug/L	42	0	0	5950	15100	11361.1905	12350	2849.9861	13990	14395	14977
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	33	9	21	0.21	1.17	0.72	0.755	0.2725	1.079	1.099	1.1577
Chromium, D	ug/L	4	34	90	0.2	0.5	0.2211	0.2	0.0664	0.23	0.4	0.463
Chromium, T	ug/L	12	26	68	0.2	0.68	0.2547	0.2	0.1111	0.4	0.5	0.6134
Cobalt, D	ug/L	23	0	0	0.04	0.22	0.1026	0.1	0.0406	0.138	0.158	0.2068
Cobalt, T	ug/L	23	0	0	0.07	0.3	0.1368	0.13	0.0528	0.208	0.21	0.2802
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.049	0.137	0.099	0.106	0.0247	0.125	0.131	0.1358
Copper, D	ug/L	38	0	0	0.1	2.6	0.3084	0.2	0.3956	0.4	0.43	1.86
Copper, T	ug/L	35	3	8	0.1	0.7	0.1971	0.17	0.143	0.36	0.506	0.6408
Cyanide, T	mg/L	1	22	96	0.0027	0.0104	0.003	0.0027	0.0016	0.0027	0.0027	0.0087
Dissolved Oxygen	mg/L	42	0	0	6.36	11.88	10.2414	10.55	1.2907	11.509	11.6265	11.8677
Flow velocity	CFS	42	0	0	5.877	195	43.4883	16.4775	54.303	128.5372	168.706	186.2636
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	19.9	51.8	38.7333	42.3	9.9397	48.22	50.525	51.513
Iron, D	ug/L	36	6	14	20	59	34.5119	32.95	11.5564	49.07	51.285	57.155
Iron, T	ug/L	42	0	0	36.3	855	181.9714	114.5	182.6352	335.1	600.1	820.56
Lead, D	ug/L	5	37	88	0.02	0.06	0.022	0.02	0.0071	0.0254	0.03	0.0518
Lead, T	ug/L	35	7	17	0.02	0.46	0.0682	0.045	0.0774	0.139	0.15	0.3686
Magnesium, D	ug/L	42	0	0	1180	3610	2518.8095	2725	733.0398	3239	3309	3495.2
Magnesium, T	ug/L	42	0	0	1210	3570	2545.7143	2785	706.6104	3270	3413.5	3529
Manganese, D	ug/L	26	1	4	3.6	18.9	11.3333	12.5	4.3331	15.92	16.1	18.172
Manganese, T	ug/L	27	0	0	8.3	36.3	18.0037	17.3	6.3327	24.6	30.53	35.26
Mercury, D	ng/L	40	1	2	1	5	2.4829	2.1	0.9957	4.1	4.5	4.96
Mercury, T	ng/L	42	0	0	1.6	20.1	6.1905	4.25	4.8958	14.88	17.635	20.059
Methyl Mercury	ng/L	0	23	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	23	0	0	0.55	1.05	0.8677	0.91	0.1511	1.026	1.039	1.0478

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-8, EFSFSR above Fiddle Creek												
Molybdenum, T	ug/L	23	0	0	0.562	1.09	0.8709	0.92	0.153	1.01	1.055	1.0834
Nickel, D	ug/L	9	14	61	0.2	0.3	0.2096	0.2	0.0274	0.218	0.283	0.2978
Nickel, T	ug/L	9	14	61	0.2	0.4	0.2243	0.2	0.0532	0.3	0.318	0.3824
Nitrate+Nitrite as Nitrogen	mg/L	7	35	83	0.05	0.08	0.0522	0.05	0.0058	0.0589	0.062	0.0738
Nitrogen, Total as Nitrogen	mg/L	20	3	13	0.25	2.94	0.6413	0.56	0.5315	0.746	1.03	2.5264
Nitrogen, Total Kjeldahl (TKN)	mg/L	20	3	13	0.2	2.9	0.6209	0.56	0.5317	0.744	1.03	2.4952
pH	pH	41	0	0	6.6	8.49	7.4178	7.45	0.4264	7.86	8.1	8.374
Phosphorus, D	ug/L	0	42	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	5	37	88	24.4	57.3	41.3762	42	4.8814	42	42	53.077
Potassium, D	ug/L	42	0	0	527	1090	822.7381	848	140.4528	990.7	1038	1077.7
Potassium, T	ug/L	42	0	0	545	1270	849.5	878	135.6903	988.5	999.5	1188
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	2	21	91	0.02	0.024	0.0202	0.02	0.0008	0.02	0.02	0.0231
Sodium, D	ug/L	42	0	0	1410	2990	2348.0952	2490	459.5822	2839	2947	2985.9
Sodium, T	ug/L	42	0	0	1430	3000	2345.4762	2515	442.3783	2837	2919.5	2971.3
Solids, Total Dissolved	mg/L	42	0	0	24	96	59.4143	61	14.5296	72.87	82.775	94.36
Solids, Total Suspended (TSS)	mg/L	8	34	81	5	26.5	6.3333	5	4.4948	7.95	9.975	25.68
Sulfate	mg/L	41	1	2	0.2	17.5	6.704	6.855	3.128	9.519	10.095	14.507
Temperature, Water	deg C	42	0	0	-0.02	16.18	5.0352	4.54	4.6487	10.682	13.7125	15.7823
Thallium, D	ug/L	1	22	96	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	22	96	0.02	0.046	0.0211	0.02	0.0054	0.02	0.02	0.0403
Turbidity	NTU	42	0	0	0	23.8	3.2881	2.35	4.0611	6.47	8.645	18.675
Vanadium (Fume Or Dust), D	ug/L	13	10	44	0.2	0.23	0.2022	0.2	0.0074	0.2	0.218	0.2278
Vanadium (Fume Or Dust), T	ug/L	20	3	13	0.2	1.47	0.3713	0.3	0.3064	0.5	1.04	1.3886
Zinc, D	ug/L	21	21	50	0.5	2.7	1.4262	2	0.6739	2	2	2.413
Zinc, T	ug/L	18	24	57	0.5	7.3	1.7571	2	1.0474	2	2	5.168

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-12, upper Fiddle Creek												
Alkalinity as CaCO3	mg/L	30	0	0	7.8	29	18.6467	21.5	5.8126	24	24	27.55
Aluminum (Fume Or Dust), D	ug/L	22	0	0	5.8	38	16.6591	11.45	10.6259	33.21	37.315	37.895
Aluminum (Fume Or Dust), T	ug/L	22	0	0	13	259	46.6045	26.1	54.0183	85.93	104.09	226.66
Ammonia as Nitrogen	mg/L	1	29	97	0.05	0.064	0.0505	0.05	0.0026	0.05	0.05	0.0599
Antimony, D	ug/L	30	0	0	0.074	0.27	0.128	0.12	0.044	0.1773	0.2075	0.2584
Antimony, T	ug/L	30	0	0	0.077	0.31	0.141	0.12	0.0643	0.218	0.2955	0.3071
Arsenic (III), T	ug/L	3	17	85	0.02	0.03	0.0205	0.02	0.0022	0.02	0.0205	0.0281
Arsenic, D	ug/L	1	29	97	0.5	0.7	0.5067	0.5	0.0365	0.5	0.5	0.642
Arsenic, T	ug/L	1	29	97	0.5	0.7	0.5067	0.5	0.0365	0.5	0.5	0.642
Barium, D	ug/L	20	0	0	5.54	11	9.1345	9.48	1.6911	10.7	10.715	10.943
Barium, T	ug/L	20	0	0	6.1	11.5	9.7755	10.105	1.3592	11.04	11.405	11.481
Beryllium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	2	18	90	0.02	0.04	0.021	0.02	0.0045	0.02	0.021	0.0362
Bicarbonate as CaCO3	mg/L	30	0	0	7.8	29	18.6467	21.5	5.8126	24	24	27.55
Boron, D	ug/L	0	20	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	20	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	28	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	28	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	30	0	0	2290	6260	4318.3333	4705	1178.8688	5572	6006.5	6242.6
Calcium, T	ug/L	30	0	0	2310	6280	4315.6667	4745	1171.3938	5672	5912	6204.6
Carbonate as CaCO3	mg/L	0	30	100	15	15	15	15	0	15	15	15
Chloride	mg/L	1	29	97	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, D	ug/L	2	26	93	0.2	1.6	0.2571	0.2	0.2659	0.2	0.33	1.276
Chromium, T	ug/L	2	26	93	0.2	0.5	0.2214	0.2	0.0787	0.2	0.395	0.5
Cobalt, D	ug/L	2	18	99	0.02	0.04	0.021	0.02	0.0045	0.02	0.021	0.0362
Cobalt, T	ug/L	6	14	70	0.02	0.08	0.0255	0.02	0.0139	0.031	0.042	0.0724
Color	Pt-Co	20	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	29	0	0	0.023	0.3	0.0531	0.045	0.0488	0.0642	0.0668	0.235
Copper, D	ug/L	25	3	11	0.1	0.7	0.2221	0.2	0.1259	0.3	0.43	0.646
Copper, T	ug/L	10	18	64	0.1	0.3	0.1154	0.1	0.0448	0.151	0.2	0.273
Cyanide, T	mg/L	1	19	95	0.0027	0.0125	0.0032	0.0027	0.0022	0.0027	0.0032	0.0106
Dissolved Oxygen	mg/L	30	0	0	7.91	11.82	10.128	10.305	1.0579	11.395	11.5795	11.762
Flow velocity	CFS	30	0	0	0.1462	19.0429	3.8432	0.9615	5.2785	10.0136	15.4735	18.7024
Fluoride	mg/L	0	30	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	30	0	0	6.9	18.7	12.9687	14.25	3.4825	17.11	17.695	18.526
Iron, D	ug/L	5	25	83	12.8	26.5	21.0333	21	1.9293	21.05	22.985	25.833
Iron, T	ug/L	17	13	43	21	330	46.5067	26.1	57.765	76.57	97.35	264.75
Lead, D	ug/L	1	29	97	0.02	0.19	0.0257	0.02	0.031	0.02	0.02	0.1407
Lead, T	ug/L	4	26	87	0.02	0.12	0.0247	0.02	0.0185	0.03	0.0355	0.0968
Magnesium, D	ug/L	30	0	0	279	751	528.1333	574	137.9282	676.7	736.25	748.68
Magnesium, T	ug/L	30	0	0	286	745	533.4	578.5	136.7113	666.2	740.55	743.84
Manganese, D	ug/L	1	21	96	1	1.1	1.0955	1.1	0.0213	1.1	1.1	1.1
Manganese, T	ug/L	12	10	46	1	19.5	2.5636	1.1	4.0156	5	5.96	16.665
Mercury, D	ng/L	28	2	7	1	4.4	1.9767	1.85	0.9755	3.15	3.93	4.342
Mercury, T	ng/L	30	0	0	1.3	7.6	2.63	2.05	1.5141	4.29	5.595	7.136
Methyl Mercury	ng/L	3	17	85	0.1	0.18	0.1085	0.1	0.0246	0.117	0.18	0.18
Molybdenum, D	ug/L	18	2	10	0.05	0.16	0.0942	0.0995	0.0287	0.12	0.122	0.1524

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-12, upper Fiddle Creek												
Molybdenum, T	ug/L	18	2	10	0.05	0.13	0.0921	0.095	0.0243	0.112	0.13	0.13
Nickel, D	ug/L	1	19	95	0.2	0.3	0.205	0.2	0.0224	0.2	0.205	0.281
Nickel, T	ug/L	1	19	95	0.2	0.26	0.203	0.2	0.0134	0.2	0.203	0.2486
Nitrate+Nitrite as Nitrogen	mg/L	0	30	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	16	4	20	0.25	0.88	0.473	0.435	0.1916	0.75	0.7565	0.8553
Nitrogen, Total Kjeldahl (TKN)	mg/L	16	4	20	0.2	0.85	0.4565	0.435	0.2013	0.741	0.755	0.831
pH	pH	29	0	0	6.21	7.87	6.9045	6.87	0.4182	7.388	7.594	7.8252
Phosphorus, D	ug/L	0	30	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	2	28	93	23.9	42	41.35	42	3.3057	42	42	42
Potassium, D	ug/L	30	0	0	264	569	466.3667	468	73.4187	553.5	567.55	568.71
Potassium, T	ug/L	30	0	0	335	596	475.6	486	81.2118	553.8	576.6	591.94
Selenium, D	ug/L	0	28	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	28	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	19	95	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	30	0	0	1270	2730	1957	2035	414.0561	2384	2557.5	2712.6
Sodium, T	ug/L	30	0	0	1280	2690	1957.6667	2055	424.9842	2462	2575.5	2658.1
Solids, Total Dissolved	mg/L	30	0	0	11	51	30.25	30.75	10.3879	44.6	46.6	49.985
Solids, Total Suspended (TSS)	mg/L	2	28	93	5	9	5.1333	5	0.7303	5	5	7.84
Sulfate	mg/L	30	0	0	0.59	2	1.1703	1.175	0.3554	1.59	1.6285	1.9014
Temperature, Water	deg C	30	0	0	0.01	11.34	4.8473	3.8	3.607	9.633	9.8195	10.9369
Thallium, D	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	20	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	30	0	0	0	11.8	2.9267	1.95	2.9081	7.11	8.63	11.22
Vanadium (Fume Or Dust), D	ug/L	0	20	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	7	13	65	0.2	0.5	0.225	0.2	0.0716	0.3	0.31	0.462
Zinc, D	ug/L	16	14	47	0.5	2	1.35	1.2	0.6361	2	2	2
Zinc, T	ug/L	4	26	87	0.9	5.8	2.0833	2	0.7598	2	2.385	4.901

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-11, lower Fiddle Creek												
Alkalinity as CaCO3	mg/L	42	0	0	9.4	66.1	24.8952	24.25	11.0127	30.9	35	63.599
Aluminum (Fume Or Dust), D	ug/L	27	0	0	4.4	45.6	16.6926	10.4	12.5045	33.58	43.25	45.184
Aluminum (Fume Or Dust), T	ug/L	27	0	0	11	528	78.0667	20.7	135.4642	142.82	428.3	526.18
Ammonia as Nitrogen	mg/L	0	42	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	42	0	0	0.23	1.09	0.5615	0.53	0.2024	0.866	0.9389	1.0531
Antimony, T	ug/L	42	0	0	0.23	1.21	0.5748	0.52	0.2221	0.859	0.9787	1.1649
Arsenic (III), T	ug/L	21	2	9	0.02	0.12	0.0594	0.06	0.0302	0.1062	0.11	0.1178
Arsenic, D	ug/L	42	0	0	0.5	2.88	1.6295	1.65	0.5299	2.19	2.68	2.8062
Arsenic, T	ug/L	42	0	0	0.6	3.9	1.7883	1.75	0.6657	2.5	2.8	3.5966
Barium, D	ug/L	23	0	0	6.55	15.7	12.577	13.6	2.9066	15.48	15.5	15.656
Barium, T	ug/L	23	0	0	7.32	19.4	13.5774	14.4	3.0471	16.44	18.22	19.18
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	22	96	0.02	0.07	0.0222	0.02	0.0104	0.02	0.02	0.059
Bicarbonate as CaCO3	mg/L	42	0	0	9.4	66.1	24.7762	24.25	10.6448	30.9	35	61.549
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	3	35	92	0.02	0.04	0.0207	0.02	0.0034	0.02	0.021	0.0352
Calcium, D	ug/L	42	0	0	2500	7970	5603.0952	6090	1600.0922	7167	7622.5	7937.2
Calcium, T	ug/L	42	0	0	2530	7960	5637.1429	6060	1600.3662	7170	7755	7886.2
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	5	37	88	0.2	0.89	0.2179	0.2	0.1063	0.209	0.2195	0.6153
Chromium, D	ug/L	3	35	92	0.2	2	0.25	0.2	0.292	0.2	0.215	1.371
Chromium, T	ug/L	2	36	95	0.2	0.3	0.2026	0.2	0.0162	0.2	0.2	0.263
Cobalt, D	ug/L	7	16	70	0.02	0.04	0.0218	0.02	0.0051	0.028	0.0318	0.0382
Cobalt, T	ug/L	9	14	61	0.02	0.17	0.032	0.02	0.0347	0.03	0.0957	0.1553
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.025	0.079	0.0532	0.054	0.0134	0.07	0.072	0.0762
Copper, D	ug/L	37	1	3	0.1	0.6	0.2153	0.2	0.1048	0.3	0.3725	0.563
Copper, T	ug/L	21	17	45	0.1	0.5	0.1347	0.1	0.0744	0.2	0.2	0.389
Cyanide, Free	mg/L	0	1	100	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Cyanide, T	mg/L	1	22	96	0.0027	0.0128	0.0031	0.0027	0.0021	0.0027	0.0027	0.0106
Cyanide, Weak Acid Dissociable (WAD)	mg/L	0	1	100	0.0047	0.0047	0.0047	0.0047		0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	42	0	0	6.15	14.39	10.4531	10.8	1.418	11.666	11.953	13.6479
Flow velocity	CFS	42	0	0	0.2183	20.572	3.4909	0.8776	4.9952	11.1681	13.0778	18.2173
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	7.6	24.1	17.1321	18.4	4.8389	21.78	23.565	23.936
Iron, D	ug/L	8	34	81	13.5	40.2	22.4429	21	4.5846	28.05	30.58	39.093
Iron, T	ug/L	37	5	12	21	773	73.4952	34.55	125.248	139.21	204.95	587.68
Lead, D	ug/L	1	41	98	0.02	0.03	0.0202	0.02	0.0015	0.02	0.02	0.0259
Lead, T	ug/L	11	31	74	0.02	0.28	0.0307	0.02	0.0409	0.049	0.0586	0.1898
Magnesium, D	ug/L	42	0	0	308	1040	731.0476	788.5	210.9922	967.8	982.4	1021.55
Magnesium, T	ug/L	42	0	0	320	1040	742.619	809.5	206.7256	951.6	1008.25	1031.8
Manganese, D	ug/L	2	25	93	1.1	1.6	1.1222	1.1	0.0974	1.1	1.17	1.496
Manganese, T	ug/L	20	7	26	1.1	45.9	3.7444	1.9	8.5125	4.82	5.42	35.422
Mercury, D	ng/L	37	4	10	0.8	4.2	1.8878	1.6	0.9649	3.3	3.7	4.16
Mercury, T	ng/L	41	1	2	1	13.9	3.4095	2.4	2.7971	7.28	9.305	12.26

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-11, lower Fiddle Creek												
Methyl Mercury	ng/L	3	20	87	0.1	0.35	0.1126	0.1	0.0524	0.1	0.136	0.3038
Molybdenum, D	ug/L	22	1	4	0.05	0.16	0.1148	0.12	0.0297	0.148	0.15	0.1578
Molybdenum, T	ug/L	22	1	4	0.05	0.16	0.112	0.12	0.0329	0.1486	0.15	0.1578
Nickel, D	ug/L	3	20	87	0.2	0.38	0.2096	0.2	0.0381	0.2	0.236	0.3492
Nickel, T	ug/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Nitrate+Nitrite as Nitrogen	mg/L	6	36	86	0.05	0.082	0.0522	0.05	0.0067	0.0582	0.0649	0.0783
Nitrogen, Total as Nitrogen	mg/L	18	5	22	0.23	4.88	0.6387	0.43	0.9409	0.698	0.898	4.0088
Nitrogen, Total Kjeldahl (TKN)	mg/L	19	4	17	0.2	4.88	0.6248	0.43	0.9437	0.69	0.862	4
pH	pH	41	0	0	6.3	7.87	7.1651	7.18	0.4017	7.68	7.77	7.846
Phosphorus, D	ug/L	1	41	98	23.6	42	41.5619	42	2.8392	42	42	42
Phosphorus, T	ug/L	2	40	95	23.5	74.1	42.3238	42	5.7769	42	42	60.939
Potassium, D	ug/L	42	0	0	318	720	539.7143	566.5	93.4063	624	647.1	698.68
Potassium, T	ug/L	42	0	0	293	779	552.4762	570.5	97.058	667.5	698.8	759.32
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1310	2970	2191.1905	2335	459.3325	2659	2746	2924.9
Sodium, T	ug/L	42	0	0	1330	3000	2190.7143	2350	460.712	2667	2719.5	2954.9
Solids, Total Dissolved	mg/L	42	0	0	8	59	36.4786	38	10.074	48.85	50.475	56.13
Solids, Total Suspended (TSS)	mg/L	1	41	98	5	34	5.6905	5	4.4748	5	5	22.11
Sulfate	mg/L	42	0	0	0.67	2.53	1.7107	1.85	0.5248	2.259	2.463	2.5054
Temperature, Water	deg C	42	0	0	-0.01	11.92	4.1636	2.805	3.8251	10.089	10.565	11.5264
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	22	96	0.02	0.064	0.0219	0.02	0.0092	0.02	0.02	0.0543
Turbidity	NTU	42	0	0	0	13.1	2.7595	2.15	2.7481	5.01	7.975	12.649
Vanadium (Fume Or Dust), D	ug/L	1	22	96	0.2	0.3	0.2043	0.2	0.0209	0.2	0.2	0.278
Vanadium (Fume Or Dust), T	ug/L	5	18	78	0.2	0.9	0.2391	0.2	0.1469	0.28	0.3	0.768
Zinc, D	ug/L	14	28	67	0.5	2	1.6	2	0.6012	2	2	2
Zinc, T	ug/L	8	34	81	0.6	2.2	1.8214	2	0.4583	2	2	2.118

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-6, EFSFSR above Yellow Pine Pit												
Alkalinity as CaCO3	mg/L	42	0	0	21.5	70	40.6167	42.85	11.4375	49.9	56.8	67.13
Aluminum (Fume Or Dust), D	ug/L	26	1	4	2.6	41	10.5407	6.5	8.4467	19.62	21.34	36.06
Aluminum (Fume Or Dust), T	ug/L	27	0	0	10.6	926	101.4815	35.5	178.8918	199.6	248.2	754.92
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	42	0	0	6.37	46.9	19.6571	16.2	10.4334	37.07	39.995	45.424
Antimony, T	ug/L	42	0	0	6.38	47.3	20.0657	16.9	10.4368	38.04	40.4	45.701
Arsenic (III), T	ug/L	23	0	0	0.05	96	4.7271	0.516	19.9005	1.266	1.66	75.254
Arsenic, D	ug/L	42	0	0	12.6	41.4	30.2405	32.2	8.2559	39.29	39.88	41.154
Arsenic, T	ug/L	42	0	0	13	45.6	32.4095	34.55	8.721	42.27	44.44	45.559
Barium, D	ug/L	23	0	0	5.33	12.6	10.1435	10.9	2.3403	12.36	12.49	12.578
Barium, T	ug/L	23	0	0	7.55	20	11.7048	11.7	2.2866	12.9	13.08	18.482
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	3	20	87	0.02	0.09	0.0235	0.02	0.0147	0.02	0.029	0.0768
Bicarbonate as CaCO3	mg/L	42	0	0	21.5	57	39.8548	42.85	10.1243	48.93	52.9	55.77
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	5660	14500	11284.5238	12400	2994.9935	14290	14495	14500
Calcium, T	ug/L	42	0	0	5700	14600	11297.619	12400	2901.0098	14200	14300	14518
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	33	9	21	0.23	1.07	0.675	0.72	0.2357	0.966	1.0275	1.07
Chromium, D	ug/L	4	34	90	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, T	ug/L	13	25	66	0.2	1	0.2737	0.2	0.1655	0.43	0.53	0.889
Cobalt, D	ug/L	23	0	0	0.04	0.18	0.093	0.09	0.0353	0.136	0.14	0.1712
Cobalt, T	ug/L	23	0	0	0.071	0.44	0.1308	0.12	0.0743	0.1748	0.189	0.385
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.047	0.144	0.0978	0.105	0.0245	0.122	0.124	0.1388
Copper, D	ug/L	38	0	0	0.1	0.5	0.2305	0.2	0.0999	0.358	0.415	0.5
Copper, T	ug/L	33	5	13	0.1	0.8	0.2092	0.2	0.1457	0.337	0.5	0.689
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	6.46	12.31	10.3814	10.735	1.3065	11.774	11.8585	12.2034
Flow velocity	CFS	42	0	0	7.9971	216	50.8493	19.2337	60.8678	141.6544	199.1882	213.2002
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	19.2	50.1	38.5786	42.15	10.1017	48.38	48.7	49.895
Iron, D	ug/L	30	12	29	22	54.3	35.7643	36.8	8.1508	42	43.94	54.177
Iron, T	ug/L	42	0	0	48.6	1900	178.7214	108	284.7944	300.4	352.65	1277.62
Lead, D	ug/L	2	40	95	0.02	0.03	0.0203	0.02	0.0015	0.02	0.02	0.0263
Lead, T	ug/L	36	6	14	0.02	0.38	0.0666	0.045	0.0703	0.128	0.2065	0.3267
Magnesium, D	ug/L	42	0	0	1120	3570	2506.9048	2785	754.9043	3256	3327	3488
Magnesium, T	ug/L	42	0	0	1170	3420	2533.0952	2775	712.1575	3249	3316.5	3391.3
Manganese, D	ug/L	26	1	4	3.5	15.4	8.5852	8.2	3.0722	12.04	12.89	14.802
Manganese, T	ug/L	27	0	0	8.8	46.8	15.5889	13.9	7.2235	20.52	21.07	40.118
Mercury, D	ng/L	41	0	0	1.4	4.7	2.3951	2.1	0.9192	4.1	4.3	4.66
Mercury, T	ng/L	42	0	0	1.9	24.7	5.8024	3.65	5.4014	12.53	16.66	24.659
Methyl Mercury	ng/L	2	21	91	0.1	0.2	0.1043	0.1	0.0209	0.1	0.1	0.178
Molybdenum, D	ug/L	23	0	0	0.49	0.97	0.7957	0.84	0.1518	0.938	0.967	0.97

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-6, EFSFSR above Yellow Pine Pit												
Molybdenum, T	ug/L	23	0	0	0.46	0.97	0.8011	0.86	0.15	0.94	0.958	0.9678
Nickel, D	ug/L	6	17	74	0.2	1.11	0.2483	0.2	0.19	0.28	0.3	0.9318
Nickel, T	ug/L	9	14	61	0.2	0.7	0.2357	0.2	0.1063	0.296	0.3	0.612
Nitrate+Nitrite as Nitrogen	mg/L	7	35	83	0.05	0.066	0.0514	0.05	0.0038	0.0573	0.061	0.0644
Nitrogen, Total as Nitrogen	mg/L	20	3	13	0.25	1.86	0.6291	0.57	0.3661	0.874	1.377	1.7654
Nitrogen, Total Kjeldahl (TKN)	mg/L	20	3	13	0.2	1.86	0.613	0.55	0.371	0.864	1.34	1.7566
pH	pH	41	0	0	6.36	8.53	7.3529	7.38	0.429	7.78	7.89	8.302
Phosphorus, D	ug/L	1	41	98	22.5	42	41.5357	42	3.0089	42	42	42
Phosphorus, T	ug/L	5	37	88	20	56.4	41.1071	42	5.3405	42	42	50.824
Potassium, D	ug/L	42	0	0	500	1060	828.7143	874.5	143.9211	968.6	1038.5	1051.8
Potassium, T	ug/L	42	0	0	530	1090	859.119	894.5	131.0254	999.5	1057	1085.9
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1410	2980	2322.1429	2485	455.9607	2799	2916	2971.8
Sodium, T	ug/L	42	0	0	1400	2950	2318.3333	2460	438.0774	2802	2869	2941.8
Solids, Total Dissolved	mg/L	42	0	0	25.5	99	56.9952	56	14.7611	72.9	75.95	93.26
Solids, Total Suspended (TSS)	mg/L	8	34	81	5	43	6.2976	5	5.9726	5.95	7.975	30.905
Sulfate	mg/L	42	0	0	2.33	10.1	6.3757	6.665	2.3248	9.064	9.536	9.9606
Temperature, Water	deg C	42	0	0	-0.02	17.77	4.4788	3.2	4.3272	10.303	11.5935	15.6134
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	22	96	0.02	0.03	0.0204	0.02	0.0021	0.02	0.02	0.0278
Turbidity	NTU	42	0	0	0	53.3	6.0976	2.95	11.3563	7.97	29.32	51.988
Vanadium (Fume Or Dust), D	ug/L	7	16	70	0.2	0.22	0.2009	0.2	0.0042	0.2	0.2	0.2156
Vanadium (Fume Or Dust), T	ug/L	20	3	13	0.2	2.2	0.3757	0.25	0.4159	0.54	0.595	1.848
Zinc, D	ug/L	20	22	52	0.5	3	1.5214	2	0.7397	2	2.475	2.877
Zinc, T	ug/L	14	28	67	0.6	4.9	1.8357	2	0.772	2	2.57	4.367

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-42, upper Midnight Creek												
Alkalinity as CaCO3	mg/L	25	0	0	32.6	135	83.232	92.8	22.1114	96.6	97	125.88
Aluminum (Fume Or Dust), D	ug/L	5	11	69	2.1	9.7	4.2625	4	1.553	4.5	6.1	8.98
Aluminum (Fume Or Dust), T	ug/L	16	0	0	5.3	344	37.9375	11.25	82.9676	50.55	127.25	300.65
Ammonia as Nitrogen	mg/L	0	25	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	25	0	0	37.1	70.9	55.736	57.3	9.451	66.62	68.62	70.42
Antimony, T	ug/L	25	0	0	37.9	70.3	55.676	56.5	9.0621	65.94	67.9	69.796
Arsenic (III), T	ug/L	14	0	0	0.1	0.201	0.1556	0.16	0.0315	0.197	0.2004	0.2009
Arsenic, D	ug/L	25	0	0	41.4	61.4	52.084	52.6	4.8951	57.98	60.18	61.16
Arsenic, T	ug/L	25	0	0	41.1	62.7	53.1	53.3	5.2326	60.74	61.66	62.484
Barium, D	ug/L	14	0	0	2.83	7.01	5.6593	6.28	1.3371	6.907	7.0035	7.0087
Barium, T	ug/L	14	0	0	3.8	7.29	5.9107	6.18	1.0219	7.059	7.1925	7.2705
Beryllium, D	ug/L	0	14	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	13	93	0.02	0.03	0.0207	0.02	0.0027	0.02	0.0235	0.0287
Bicarbonate as CaCO3	mg/L	25	0	0	32.6	135	82.828	91.3	22.0137	96.6	97	125.88
Boron, D	ug/L	0	14	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	14	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	25	0	0	8760	25600	21406.4	23800	4862.9063	25200	25480	25576
Calcium, T	ug/L	25	0	0	9010	25600	21460.4	23800	4733.704	25200	25480	25576
Carbonate as CaCO3	mg/L	1	24	96	10.1	15	14.804	15	0.98	15	15	15
Chloride	mg/L	0	25	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, D	ug/L	8	15	65	0.2	0.8	0.2652	0.2	0.1496	0.38	0.58	0.756
Chromium, T	ug/L	7	16	70	0.2	0.6	0.2522	0.2	0.1039	0.3	0.48	0.578
Cobalt, D	ug/L	5	9	64	0.02	0.03	0.0221	0.02	0.0043	0.03	0.03	0.03
Cobalt, T	ug/L	7	7	50	0.02	0.19	0.038	0.021	0.0447	0.047	0.099	0.1718
Color	Pt-Co	15	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	24	0	0	0.083	0.203	0.1675	0.182	0.033	0.1972	0.199	0.2021
Copper, D	ug/L	18	5	22	0.1	0.4	0.1917	0.2	0.1029	0.3	0.39	0.4
Copper, T	ug/L	9	14	61	0.1	0.6	0.1457	0.1	0.1074	0.2	0.2	0.512
Cyanide, T	mg/L	0	14	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	25	0	0	6.83	11.18	9.8176	9.85	0.8185	10.506	10.814	11.1104
Flow velocity	CFS	25	0	0	0.1231	4.0498	1.0933	0.6554	1.1011	2.5456	3.3792	3.9387
Fluoride	mg/L	0	25	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	25	0	0	33.2	97.8	79.996	89.6	18.1622	93.78	94.38	96.984
Iron, D	ug/L	1	24	96	24.9	42	41.316	42	3.42	42	42	42
Iron, T	ug/L	9	16	64	15.2	466	57.916	42	85.4816	51.28	62.4	369.448
Lead, D	ug/L	2	23	92	0.02	0.03	0.0204	0.02	0.002	0.02	0.02	0.0276
Lead, T	ug/L	2	23	0.92	0.02	0.1	0.0236	0.02	0.016	0.02	0.028	0.0832
Magnesium, D	ug/L	25	0	92	2410	8140	6428.4	7150	1608.0078	7606	7698	8039.2
Magnesium, T	ug/L	25	0	0	2600	8210	6420.4	7180	1556.2735	7566	7642	8078
Manganese, D	ug/L	0	16	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	6	10	63	1.1	19.4	2.55	1.1	4.5587	3.15	7.925	17.105
Mercury, D	ng/L	25	0	0	4.5	10.7	7.224	7.1	1.7737	9.5	10.22	10.628
Mercury, T	ng/L	25	0	0	7.9	168	28.892	21.7	30.5083	34.44	53.24	141.48
Methyl Mercury	ng/L	2	12	86	0.1	0.14	0.1036	0.1	0.0108	0.107	0.1205	0.1361
Molybdenum, D	ug/L	14	0	0	0.41	0.92	0.7764	0.805	0.1605	0.8922	0.907	0.9174

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-42, upper Midnight Creek												
Molybdenum, T	ug/L	14	0	0	0.39	0.99	0.7785	0.823	0.1712	0.897	0.9315	0.9783
Nickel, D	ug/L	4	10	71	0.2	0.4	0.2279	0.2	0.0603	0.297	0.335	0.387
Nickel, T	ug/L	5	9	64	0.2	0.68	0.2486	0.2	0.1293	0.3	0.433	0.6306
Nitrate+Nitrite as Nitrogen	mg/L	0	25	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	9	5	36	0.31	0.6	0.4521	0.45	0.0726	0.554	0.5935	0.5987
Nitrogen, Total Kjeldahl (TKN)	mg/L	8	6	43	0.31	0.59	0.4307	0.4	0.0753	0.554	0.59	0.59
pH	pH	24	0	0	6.96	8.53	7.7821	7.805	0.4614	8.341	8.3585	8.4909
Phosphorus, D	ug/L	0	25	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	25	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	25	0	0	930	1520	1194.28	1210	131.7053	1310	1342	1479.2
Potassium, T	ug/L	25	0	0	973	1370	1193.32	1200	109.6611	1340	1368	1370
Selenium, D	ug/L	0	23	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	23	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	14	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	14	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	25	0	0	472	620	563.76	577	46.5647	614	615.6	619.04
Sodium, T	ug/L	25	0	0	474	624	559.52	577	44.5329	602	606.8	619.92
Solids, Total Dissolved	mg/L	25	0	0	35	139	89.188	87	22.1982	109	110.6	132.28
Solids, Total Suspended (TSS)	mg/L	1	24	96	5	17	5.48	5	2.4	5	5	14.12
Sulfate	mg/L	25	0	0	1.35	4.62	3.3424	3.67	0.7927	4.034	4.09	4.4952
Temperature, Water	deg C	25	0	0	2.62	9.83	4.802	5.14	1.8142	6.456	6.836	9.134
Thallium, D	ug/L	0	14	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	14	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	25	0	0	0	7	2.024	1.7	1.7084	3.92	4.4	6.4
Vanadium (Fume Or Dust), D	ug/L	0	14	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	1	13	93	0.2	0.5	0.2214	0.2	0.0802	0.2	0.305	0.461
Zinc, D	ug/L	15	10	40	0.5	2.1	1.312	1.2	0.671	2	2	2.076
Zinc, T	ug/L	2	23	92	0.7	2	1.9	2	0.3464	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-10, lower Midnight Creek												
Alkalinity as CaCO3	mg/L	40	0	0	50	134	90.4625	96	16.9085	102.1	113.05	126.2
Aluminum (Fume Or Dust), D	ug/L	13	12	48	2.2	13.1	4.288	4	2.2683	6.48	7.76	11.828
Aluminum (Fume Or Dust), T	ug/L	25	0	0	7.5	189	39.392	17.4	50.2499	106.12	163	185.64
Ammonia as Nitrogen	mg/L	0	40	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	40	0	0	31.8	56.2	46.6425	47.1	5.0971	52.35	53.885	55.927
Antimony, T	ug/L	40	0	0	31.6	55.5	46.06	47.25	4.8344	51.03	52.135	54.447
Arsenic (III), T	ug/L	21	0	0	0.03	4.54	0.4679	0.25	0.9381	0.42	0.45	3.722
Arsenic, D	ug/L	40	0	0	59.9	120	92.1725	92.7	15.3472	110.5	115.05	118.44
Arsenic, T	ug/L	40	0	0	59.6	124	92.455	92.75	15.5473	111.4	117.1	122.05
Barium, D	ug/L	21	0	0	5.1	10.6	8.5848	9.1	1.4856	9.72	9.98	10.476
Barium, T	ug/L	21	0	0	5.5	10.3	8.7257	9.29	1.2564	9.8	9.93	10.226
Beryllium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	20	95	0.02	0.03	0.0205	0.02	0.0022	0.02	0.02	0.028
Bicarbonate as CaCO3	mg/L	40	0	0	50	134	89.1475	95.35	16.4194	102	103.5	125.81
Boron, D	ug/L	0	21	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	21	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	36	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	2	34	94	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	40	0	0	15500	30700	25317.5	26900	3828.2276	28430	29000	30037
Calcium, T	ug/L	40	0	0	15800	30500	25265	26600	3674.4126	28330	28715	29915
Carbonate as CaCO3	mg/L	2	38	95	10.5	33	15.3375	15	2.9513	15	15	25.98
Chloride	mg/L	6	34	85	0.2	45.8	1.3435	0.2	7.2094	0.22	0.241	28.0394
Chromium, D	ug/L	7	29	81	0.2	0.4	0.2056	0.2	0.0333	0.2	0.2	0.33
Chromium, T	ug/L	11	25	69	0.2	0.8	0.2589	0.2	0.144	0.45	0.55	0.765
Cobalt, D	ug/L	9	12	57	0.02	0.1	0.031	0.02	0.02	0.05	0.06	0.092
Cobalt, T	ug/L	14	7	33	0.02	0.11	0.044	0.04	0.0279	0.07	0.1	0.108
Color	Pt-Co	22	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	39	0	0	0.14	0.246	0.1997	0.211	0.027	0.2212	0.2262	0.2392
Copper, D	ug/L	32	4	11	0.1	0.46	0.2219	0.2	0.0926	0.31	0.4	0.439
Copper, T	ug/L	24	12	33	0.1	0.4	0.1622	0.115	0.079	0.3	0.3	0.365
Cyanide, T	mg/L	1	20	95	0.0027	0.011	0.0031	0.0027	0.0018	0.0027	0.0027	0.0093
Dissolved Oxygen	mg/L	40	0	0	8.69	11.7	10.4067	10.745	0.8177	11.192	11.503	11.6454
Flow velocity	CFS	40	0	0	0.1476	3.3459	0.8456	0.4165	0.8491	2.1856	2.5966	3.0634
Fluoride	mg/L	0	40	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	40	0	0	59.8	115	97.0575	103	14.8202	110	112.05	114.22
Iron, D	ug/L	0	40	100	21	21	21	21	0	21	21	21
Iron, T	ug/L	29	11	28	21	304	45.7625	27.4	52.4701	82.28	145.25	243.94
Lead, D	ug/L	1	39	98	0.02	0.028	0.0202	0.02	0.0013	0.02	0.02	0.0249
Lead, T	ug/L	9	31	78	0.02	0.13	0.028	0.02	0.0226	0.041	0.0805	0.1144
Magnesium, D	ug/L	40	0	0	4790	9930	8285.5	8865	1458.422	9557	9842	9910.5
Magnesium, T	ug/L	40	0	0	4930	10100	8258.75	8735	1407.269	9478	9601	9912.8
Manganese, D	ug/L	0	25	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	14	11	44	1	10.7	2.004	1.1	2.0949	3.94	4.66	9.26
Mercury, D	ng/L	39	0	0	1.7	8.9	3.9051	3.6	1.5793	5.68	6.48	8.254
Mercury, T	ng/L	40	0	0	2.5	44.7	10.8325	9.45	7.8219	18.34	25.485	37.836
Methyl Mercury	ng/L	0	21	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	21	0	0	0.6	1.33	1.0257	1.06	0.1744	1.18	1.19	1.302

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-10, lower Midnight Creek												
Molybdenum, T	ug/L	21	0	0	0.65	1.22	1.0084	1.02	0.1508	1.15	1.16	1.208
Nickel, D	ug/L	10	11	52	0.2	1.24	0.309	0.2	0.236	0.5	0.5	1.092
Nickel, T	ug/L	11	10	48	0.2	0.5	0.2752	0.2	0.1071	0.48	0.5	0.5
Nitrate+Nitrite as Nitrogen	mg/L	39	1	3	0.05	0.652	0.2674	0.2415	0.1252	0.4661	0.4904	0.5923
Nitrogen, Total as Nitrogen	mg/L	18	3	14	0.4	1.61	0.7148	0.72	0.2767	0.87	1.09	1.506
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	3	14	0.23	1.11	0.5195	0.45	0.2168	0.81	0.88	1.064
pH	pH	39	0	0	7.1	9.05	8.0623	8.1	0.5466	8.648	8.878	9.012
Phosphorus, D	ug/L	0	40	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	1	39	98	22.3	42	41.5075	42	3.1148	42	42	42
Potassium, D	ug/L	40	0	0	1150	1730	1527.75	1555	125.6876	1651	1700.5	1722.2
Potassium, T	ug/L	40	0	0	1160	1770	1526	1560	126.7098	1671	1700.5	1746.6
Selenium, D	ug/L	0	36	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	36	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	2	19	91	0.02	0.022	0.0201	0.02	0.0004	0.02	0.02	0.0216
Sodium, D	ug/L	40	0	0	581	1190	788.425	781.5	119.4635	950.3	969.05	1111.61
Sodium, T	ug/L	40	0	0	588	980	771.9	778.5	94.2824	897.7	936.2	971.81
Solids, Total Dissolved	mg/L	40	0	0	74	245	111.6	107	28.104	131.4	142.6	216.92
Solids, Total Suspended (TSS)	mg/L	3	37	93	5	35.5	5.875	5	4.846	5	5.675	25.165
Sulfate	mg/L	40	0	0	5.73	53.8	13.1262	12.85	7.0565	14.71	15.56	39.331
Temperature, Water	deg C	40	0	0	0.21	11.42	4.4338	3.845	2.9463	8.031	9.361	10.8467
Thallium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	40	0	0	0	10.7	3.285	2.1	2.9372	7.64	8.695	10.622
Vanadium (Fume Or Dust), D	ug/L	0	21	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	4	17	81	0.2	0.4	0.219	0.2	0.0512	0.3	0.3	0.38
Zinc, D	ug/L	20	20	50	0.5	4.1	1.475	2	0.7896	2	2.01	3.359
Zinc, T	ug/L	14	26	65	0.5	2	1.6075	2	0.5976	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-41, upper Hennessy Creek												
Alkalinity as CaCO3	mg/L	42	0	0	9.4	53	21.3762	22.1	7.6967	24.91	32.9	46.03
Aluminum (Fume Or Dust), D	ug/L	24	3	11	4.3	120	14.3	7	22.2428	22.3	29.7	97.146
Aluminum (Fume Or Dust), T	ug/L	27	0	0	11.7	274	71.1741	38	82.2165	246.8	252.4	268.54
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	42	0	0	0.26	1.07	0.5091	0.49	0.15	0.659	0.7095	0.947
Antimony, T	ug/L	42	0	0	0.28	1.45	0.5538	0.505	0.2099	0.758	0.808	1.2819
Arsenic (III), T	ug/L	23	0	0	0.03	0.82	0.3328	0.33	0.2217	0.61	0.685	0.7914
Arsenic, D	ug/L	42	0	0	0.8	3.3	2.2305	2.4	0.6379	2.9	3.095	3.259
Arsenic, T	ug/L	42	0	0	0.9	6.6	2.5507	2.7	0.961	3.29	3.495	5.411
Barium, D	ug/L	23	0	0	9.31	19.4	15.757	16.8	3.2923	18.86	19.08	19.334
Barium, T	ug/L	23	0	0	11.4	22.5	17.2783	17.5	2.634	19.56	20.32	22.038
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	3	20	87	0.02	0.03	0.0209	0.02	0.0029	0.02	0.029	0.03
Bicarbonate as CaCO3	mg/L	42	0	0	9.4	52	21.3524	22.1	7.5974	24.91	32.9	45.44
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	37	97	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	2430	5970	4472.1429	4845	1110.0506	5706	5820	5908.5
Calcium, T	ug/L	42	0	0	2390	5940	4477.381	4810	1071.3385	5636	5717	5874.4
Carbonate as CaCO3	mg/L	0	42	100	15	15	15	15	0	15	15	15
Chloride	mg/L	5	37	88	0.2	0.27	0.2043	0.2	0.0152	0.2	0.2385	0.2659
Chromium, D	ug/L	2	36	95	0.2	0.41	0.2082	0.2	0.0373	0.2	0.215	0.3693
Chromium, T	ug/L	6	32	84	0.2	0.6	0.2132	0.2	0.0665	0.2	0.215	0.489
Cobalt, D	ug/L	11	12	52	0.02	0.04	0.0236	0.02	0.0063	0.03	0.039	0.04
Cobalt, T	ug/L	21	2	9	0.02	0.1	0.036	0.03	0.0198	0.056	0.078	0.0956
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	40	0	0	0.025	0.075	0.0472	0.0475	0.0118	0.0613	0.0673	0.0742
Copper, D	ug/L	27	11	29	0.1	3.8	0.2787	0.115	0.6075	0.312	0.49	2.764
Copper, T	ug/L	18	20	53	0.1	0.3	0.1239	0.1	0.0469	0.2	0.2	0.263
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	7.8	15.49	10.3257	10.48	1.3839	11.409	12.0325	14.2969
Flow velocity	CFS	42	0	0	0.1485	7.3692	1.333	0.4029	1.8973	4.0902	5.1941	7.294
Fluoride	mg/L	0	42	10	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	7.14	17.9	13.5476	14.6	3.2442	17.19	17.39	17.777
Iron, D	ug/L	33	9	21	20.2	110	44.869	42.45	15.5387	57.51	61.48	99.053
Iron, T	ug/L	42	0	0	58.9	460	145.2881	113	95.3781	279.3	345.3	452.62
Lead, D	ug/L	2	40	95	0.02	0.048	0.0209	0.02	0.0046	0.02	0.02	0.0406
Lead, T	ug/L	32	10	24	0.02	0.31	0.0544	0.03	0.0629	0.148	0.18	0.269
Magnesium, D	ug/L	42	0	0	280	776	565.9286	604.5	150.5653	747.8	770.5	775.18
Magnesium, T	ug/L	42	0	0	288	775	575.381	615	141.9043	752.6	756	772.13
Manganese, D	ug/L	26	1	4	1	10	6.2037	6.6	3.1096	9.74	9.87	9.974
Manganese, T	ug/L	26	1	4	4.8	47.5	12.4519	11.6	8.4085	18.44	23.25	41.39
Mercury, D	ng/L	40	1	2	0.8	4.2	1.9341	1.6	0.8938	3.3	4	4.16
Mercury, T	ng/L	42	0	0	1.4	12.6	4.0452	2.75	2.9555	8.4	9.925	12.477
Methyl Mercury	ng/L	2	21	91	0.1	0.2	0.1074	0.1	0.0249	0.1	0.163	0.1934
Molybdenum, D	ug/L	18	5	22	0.05	0.13	0.0939	0.1	0.018	0.11	0.119	0.1278

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-41, upper Hennessy Creek												
Molybdenum, T	ug/L	23	0	0	0.05	0.13	0.0866	0.09	0.0211	0.1132	0.1194	0.1278
Nickel, D	ug/L	3	20	87	0.2	0.29	0.2061	0.2	0.0197	0.216	0.229	0.2768
Nickel, T	ug/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Nitrate+Nitrite as Nitrogen	mg/L	22	20	48	0.05	0.221	0.0782	0.0525	0.0416	0.1292	0.1615	0.2062
Nitrogen, Total as Nitrogen	mg/L	17	6	26	0.18	0.74	0.4287	0.42	0.1618	0.616	0.656	0.7224
Nitrogen, Total Kjeldahl (TKN)	mg/L	16	7	30	0.2	0.62	0.3748	0.42	0.1448	0.538	0.603	0.6178
pH	pH	40	0	0	6.14	7.85	7.0472	7.08	0.3568	7.486	7.561	7.7447
Phosphorus, D	ug/L	8	34	81	20.4	42	38.9071	42	6.6976	42	42	42
Phosphorus, T	ug/L	15	27	64	21.3	58.1	40.1524	42	6.7158	43.62	49.215	55.763
Potassium, D	ug/L	42	0	0	377	731	579.4048	596.5	74.1176	655.6	660.8	706.81
Potassium, T	ug/L	42	0	0	401	813	594.4048	614	78.6741	673.6	711.75	774.46
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	22	96	0.02	0.03	0.0204	0.02	0.0021	0.02	0.02	0.0278
Sodium, D	ug/L	42	0	0	1600	2870	2439.2857	2530	343.038	2788	2848.5	2865.9
Sodium, T	ug/L	42	0	0	1640	2890	2426.1905	2520	328.3287	2779	2810	2877.7
Solids, Total Dissolved	mg/L	42	0	0	5.5	56.5	33.6262	33.5	8.4705	42.5	46.85	52.605
Solids, Total Suspended (TSS)	mg/L	5	37	88	5	15.5	5.4048	5	1.7643	5	6.9	13.04
Sulfate	mg/L	42	0	0	0.72	12.8	1.6395	1.365	1.7961	1.87	1.8995	8.413
Temperature, Water	deg C	42	0	0	0.11	13.21	4.5726	3.205	3.9885	10.146	11.7165	12.7877
Thallium, D	ug/L	1	22	96	0.02	0.028	0.0203	0.02	0.0017	0.02	0.02	0.0262
Thallium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	42	0	0	0	10.6	3.2333	2.95	2.415	5.68	7.715	10.436
Vanadium (Fume Or Dust), D	ug/L	8	15	65	0.2	0.3	0.2057	0.2	0.0215	0.2	0.227	0.2846
Vanadium (Fume Or Dust), T	ug/L	13	10	44	0.2	0.5	0.2622	0.2	0.1025	0.462	0.5	0.5
Zinc, D	ug/L	18	24	57	0.5	2	1.5167	2	0.6164	2	2	2
Zinc, T	ug/L	16	26	62	0.5	2	1.6024	2	0.5719	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-4, EFSFSR below Yellow Pine Pit												
Alkalinity as CaCO3	mg/L	42	0	0	22.1	83	42.5571	46	12.5003	53	55	72.75
Aluminum (Fume Or Dust), D	ug/L	27	0	0	2.5	33.9	12.6852	7.2	8.9983	24.64	27.44	32.392
Aluminum (Fume Or Dust), T	ug/L	27	0	0	6.2	369	71.337	29	83.3502	168.6	202.7	326.62
Ammonia as Nitrogen	mg/L	2	40	95	0.05	0.191	0.0542	0.05	0.0223	0.05	0.05	0.1475
Antimony, D	ug/L	42	0	0	10.4	62	31.1881	30.25	12.6399	50.65	53.48	59.13
Antimony, T	ug/L	42	0	0	10.2	62.2	31.7143	30.7	12.6762	50.82	54.7	59.699
Arsenic (III), T	ug/L	23	0	0	1	14.1	6.357	6.3	3.7363	10.24	10.84	13.396
Arsenic, D	ug/L	42	0	0	20.8	105	62.0881	65.1	23.2591	89.13	100.695	103.77
Arsenic, T	ug/L	42	0	0	22	116	70.4071	73.9	25.7722	101.8	108.7	115.59
Barium, D	ug/L	23	0	0	5.65	13.3	10.7865	11.8	2.4357	12.76	12.89	13.212
Barium, T	ug/L	23	0	0	7.51	13.9	11.7604	12	1.7537	13.44	13.77	13.878
Beryllium, D	ug/L	2	21	91	0.02	0.03	0.0205	0.02	0.0021	0.02	0.0209	0.028
Beryllium, T	ug/L	4	19	83	0.02	0.05	0.0233	0.02	0.0087	0.029	0.048	0.05
Bicarbonate as CaCO3	mg/L	42	0	0	22.1	68	42.081	46	11.3474	53	54.9	62.67
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	5900	16100	12583.8095	13900	3458.5475	15800	15995	16059
Calcium, T	ug/L	42	0	0	6140	16200	12612.381	13950	3384.0701	15800	15900	16118
Carbonate as CaCO3	mg/L	1	41	98	15	16	15.0238	15	0.1543	15	15	15.59
Chloride	mg/L	32	10	24	0.2	1.05	0.6174	0.68	0.2848	0.978	0.9895	1.0418
Chromium, D	ug/L	4	34	90	0.2	0.4	0.2158	0.2	0.0495	0.23	0.315	0.4
Chromium, T	ug/L	10	28	74	0.2	0.5	0.2316	0.2	0.0809	0.33	0.415	0.5
Cobalt, D	ug/L	23	0	0	0.05	0.21	0.1103	0.11	0.0455	0.1716	0.1977	0.2078
Cobalt, T	ug/L	23	0	0	0.08	0.23	0.1362	0.12	0.0395	0.1974	0.218	0.2278
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.051	0.7	0.1223	0.119	0.0964	0.133	0.139	0.4772
Copper, D	ug/L	38	0	0	0.1	0.55	0.2621	0.24	0.1111	0.4	0.415	0.5315
Copper, T	ug/L	37	1	3	0.1	0.6	0.2161	0.2	0.1309	0.4	0.43	0.6
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	5.41	12.45	10.2757	10.705	1.4707	11.66	11.87	12.4049
Flow velocity	CFS	42	0	0	7.6734	227	52.1511	17.0453	66.2313	181.8	204.2	220.85
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	20.8	55.6	43.331	47.55	11.8924	54.38	54.595	55.559
Iron, D	ug/L	39	3	7	23.7	187	62.6381	60.8	29.7004	90.84	98.675	152.15
Iron, T	ug/L	42	0	0	74	760	229.8714	188.5	135.6579	377.8	497	689.89
Lead, D	ug/L	2	40	95	0.02	0.03	0.0202	0.02	0.0015	0.02	0.02	0.0259
Lead, T	ug/L	38	4	10	0.02	0.26	0.0628	0.0425	0.0577	0.1234	0.2085	0.2477
Magnesium, D	ug/L	42	0	0	1260	3960	2857.1429	3120	858.7946	3629	3649.5	3894.4
Magnesium, T	ug/L	42	0	0	1300	3940	2876.6667	3125	843.051	3688	3700	3874.4
Manganese, D	ug/L	27	0	0	5.7	50.6	20.463	19.1	11.907	37.28	38.59	47.61
Manganese, T	ug/L	27	0	0	12.3	59.5	29.3185	27.2	11.337	42.86	45.12	55.886
Mercury, D	ng/L	41	0	0	1.3	4.5	2.3951	2.1	0.9335	3.8	4	4.38
Mercury, T	ng/L	42	0	0	2	32.7	6.1786	3.5	6.2915	10.66	13.07	30.814
Methyl Mercury	ng/L	1	22	96	0.1	0.11	0.1004	0.1	0.0021	0.1	0.1	0.1078
Molybdenum, D	ug/L	23	0	0	0.52	1.06	0.8174	0.87	0.1611	0.974	0.989	1.0446

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-4, EFSFSR below Yellow Pine Pit												
Molybdenum, T	ug/L	23	0	0	0.51	1.05	0.8101	0.86	0.1601	0.95	1.031	1.0478
Nickel, D	ug/L	10	13	57	0.2	0.41	0.2313	0.2	0.064	0.3	0.39	0.4078
Nickel, T	ug/L	9	14	61	0.2	0.4	0.227	0.2	0.0532	0.3	0.3	0.378
Nitrate+Nitrite as Nitrogen	mg/L	3	39	93	0.05	0.061	0.0507	0.05	0.0025	0.05	0.0566	0.0606
Nitrogen, Total as Nitrogen	mg/L	18	5	22	0.25	1.52	0.5591	0.54	0.2738	0.756	0.778	1.3572
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	5	22	0.2	1.49	0.5409	0.5	0.2814	0.74	0.776	1.3338
pH	pH	41	0	0	6.06	8.51	7.4227	7.4	0.5136	8.16	8.32	8.474
Phosphorus, D	ug/L	1	41	98	25.5	42	41.6071	42	2.546	42	42	42
Phosphorus, T	ug/L	3	39	93	20	42	41.2024	42	3.6137	42	42	42
Potassium, D	ug/L	42	0	0	521	1110	880.9524	932	152.5097	1019	1020	1089.5
Potassium, T	ug/L	42	0	0	554	1200	909.0238	949.5	146.55	1050	1060	1142.6
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	2	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1370	2900	2291.1905	2450	443.166	2715	2768	2879.5
Sodium, T	ug/L	42	0	0	1440	2850	2282.619	2445	432.0403	2679	2804	2841.8
Solids, Total Dissolved	mg/L	42	0	0	35.5	142	65.6381	66	19.8174	82.6	97.6	124.78
Solids, Total Suspended (TSS)	mg/L	4	38	91	5	21.5	5.7738	5	2.9367	5	10.325	18.22
Sulfate	mg/L	42	0	0	3.04	14.7	8.7852	9.03	3.5633	13.98	14.57	14.7
Temperature, Water	deg C	42	0	0	-0.03	16.77	5.7545	4.355	5.2134	13.81	14.4595	16.2985
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	42	0	0	0	40.5	5.2833	3.15	7.4753	7.94	16.48	35.006
Vanadium (Fume Or Dust), D	ug/L	12	11	48	0.2	0.3	0.2043	0.2	0.0209	0.2	0.2	0.278
Vanadium (Fume Or Dust), T	ug/L	17	6	26	0.2	0.9	0.3039	0.3	0.1509	0.4	0.436	0.7988
Zinc, D	ug/L	25	17	41	0.5	2.4	1.3405	1.25	0.6371	2	2	2.236
Zinc, T	ug/L	18	24	57	0.5	2.4	1.6674	2	0.5221	2	2	2.277

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-48, lower Hennessy Creek												
Alkalinity as CaCO3	mg/L	23	0	0	11.7	54	21.5609	22	8.898	24	33	49.6
Aluminum (Fume Or Dust), D	ug/L	20	1	5	4.3	34.2	10.4286	10	6.5536	15.9	17.2	30.8
Aluminum (Fume Or Dust), T	ug/L	21	0	0	25.9	1570	156.6524	74.6	328.3722	141	271	1310.2
Ammonia as Nitrogen	mg/L	1	22	96	0.05	0.074	0.051	0.05	0.005	0.05	0.05	0.0687
Antimony, D	ug/L	23	0	0	12.2	46.6	26.113	25.9	9.2273	37.6	42.72	45.852
Antimony, T	ug/L	23	0	0	13.8	71.9	27.9826	27.1	12.4171	38.36	43.13	65.674
Arsenic (III), T	ug/L	17	0	0	0.13	0.744	0.3895	0.39	0.1385	0.5076	0.6288	0.721
Arsenic, D	ug/L	23	0	0	7.76	61.4	25.3461	18.9	17.9697	54.18	60.28	61.29
Arsenic, T	ug/L	23	0	0	10.1	107	31.2826	21.2	24.6957	61.86	73.58	99.916
Barium, D	ug/L	17	0	0	10.3	20	15.7353	16.4	2.632	17.9	18.32	19.664
Barium, T	ug/L	17	0	0	11.8	20.7	17.4059	17.5	2.2171	19.88	20.38	20.636
Beryllium, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	2	15	88	0.02	0.04	0.0214	0.02	0.0049	0.0212	0.0264	0.0373
Bicarbonate as CaCO3	mg/L	23	0	0	11.7	51	21.4304	22	8.4094	24	33	47.26
Boron, D	ug/L	0	17	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	17	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	1	18	95	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	23	0	0	2910	10300	5350	5490	1580.3135	6712	7225	9635.6
Calcium, T	ug/L	23	0	0	2880	10700	5433.4783	5550	1648.9518	6858	7311	9965.2
Carbonate as CaCO3	mg/L	0	23	100	15	15	15	15	0	15	15	15
Chloride	mg/L	7	16	70	0.2	1.01	0.2439	0.2	0.1693	0.236	0.321	0.8604
Chromium, D	ug/L	1	18	95	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, T	ug/L	1	18	95	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Cobalt, D	ug/L	6	11	65	0.02	0.045	0.0222	0.02	0.0064	0.0258	0.033	0.0426
Cobalt, T	ug/L	16	1	6	0.02	0.11	0.0508	0.04	0.0276	0.09	0.094	0.1068
Color	Pt-Co	17	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	23	0	0	0.03	0.096	0.0551	0.053	0.015	0.0636	0.0892	0.0951
Copper, D	ug/L	19	0	0	0.1	0.5	0.2332	0.2	0.1302	0.422	0.437	0.4874
Copper, T	ug/L	19	0	0	0.1	0.4	0.1758	0.2	0.0735	0.222	0.247	0.3694
Cyanide, T	mg/L	0	18	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Cyanide, Weak Acid Dissociable (WAD)	mg/L	0	1	100	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Dissolved Oxygen	mg/L	23	0	0	8.59	12.38	10.4543	10.74	1.097	11.626	11.706	12.2326
Flow velocity	CFS	23	0	0	0.0925	5.0909	0.9837	0.2701	1.3265	2.8607	3.0503	4.6463
Fluoride	mg/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	23	0	0	9.55	40.5	18.5848	18	6.24	22.98	26.16	37.42
Iron, D	ug/L	5	18	78	22.3	57	39.9957	42	7.2207	42	42	53.7
Iron, T	ug/L	23	0	0	62	2440	245.2087	120	486.7942	341.2	418.7	1996.92
Lead, D	ug/L	4	19	83	0.02	0.046	0.0212	0.02	0.0054	0.02	0.0209	0.0405
Lead, T	ug/L	21	2	9	0.02	0.93	0.0971	0.05	0.1853	0.098	0.19	0.7694
Magnesium, D	ug/L	23	0	0	552	2880	1167.1304	1030	467.462	1390	1912	2679.8
Magnesium, T	ug/L	23	0	0	574	3350	1219.0435	1090	543.4278	1434	1917	3046.4
Manganese, D	ug/L	13	8	38	1	8.8	1.7476	1.3	1.694	2	3.3	7.7
Manganese, T	ug/L	21	0	0	2.9	88.4	10.6952	5.9	18.3447	12.7	22.9	75.3
Mercury, D	ng/L	22	1	4	1	4.6	1.9609	1.7	0.8167	2.78	2.8	4.204
Mercury, T	ng/L	23	0	0	1.3	64.3	7.1957	4	12.697	8.08	12.91	53.102
Methyl Mercury	ng/L	0	17	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-48, lower Hennessy Creek												
Molybdenum, D	ug/L	16	1	6	0.05	0.12	0.0871	0.09	0.0218	0.114	0.12	0.12
Molybdenum, T	ug/L	17	0	0	0.06	0.112	0.0862	0.086	0.0176	0.11	0.1104	0.1117
Nickel, D	ug/L	3	14	82	0.2	0.26	0.2059	0.2	0.017	0.216	0.244	0.2568
Nickel, T	ug/L	0	17	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Nitrate+Nitrite as Nitrogen	mg/L	9	14	61	0.05	0.179	0.0693	0.05	0.0339	0.1174	0.1234	0.1669
Nitrogen, Total as Nitrogen	mg/L	13	4	24	0.25	0.92	0.5024	0.49	0.2196	0.774	0.808	0.8976
Nitrogen, Total Kjeldahl (TKN)	mg/L	14	3	18	0.2	0.92	0.4518	0.42	0.2115	0.654	0.712	0.8784
pH	pH	23	0	0	6.24	8.5	7.0952	7.09	0.5467	7.626	7.884	8.3702
Phosphorus, D	ug/L	0	23	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	2	21	91	42	103	44.6609	42	12.7176	42	42.18	89.624
Potassium, D	ug/L	23	0	0	397	764	571.9565	557	97.2511	684.6	740.4	760.04
Potassium, T	ug/L	23	0	0	453	1380	621.4348	600	180.5557	683.8	715.7	1234.58
Selenium, D	ug/L	0	19	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	19	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	23	0	0	1640	2880	2391.7391	2500	339.1386	2764	2870	2880
Sodium, T	ug/L	23	0	0	1650	2930	2405.2174	2490	353.616	2768	2878	2921.2
Solids, Total Dissolved	mg/L	23	0	0	23.5	80	38.4609	35.5	12.7397	50.62	59.62	75.71
Solids, Total Suspended (TSS)	mg/L	5	18	78	5	61.5	8.9783	5	12.2535	14.3	22.7	53.14
Sulfate	mg/L	23	0	0	2.39	23.7	6.2013	5.33	4.2896	8.124	11.177	21.016
Temperature, Water	deg C	23	0	0	0.57	11.34	4.7513	3.92	3.8508	10.3	10.838	11.241
Thallium, D	ug/L	1	16	94	0.02	0.024	0.0202	0.02	0.001	0.02	0.0208	0.0234
Thallium, T	ug/L	1	16	94	0.02	0.051	0.0218	0.02	0.0075	0.02	0.0262	0.046
Turbidity	NTU	23	0	0	0	63.2	9.2783	3.2	16.552	31.62	47.08	59.878
Vanadium (Fume Or Dust), D	ug/L	4	13	77	0.2	0.22	0.2012	0.2	0.0049	0.2	0.204	0.2168
Vanadium (Fume Or Dust), T	ug/L	14	3	18	0.2	0.6	0.2829	0.29	0.0953	0.32	0.4	0.56
Zinc, D	ug/L	18	5	22	1	17.7	4.5826	2.3	4.5824	10.42	14.56	17.106
Zinc, T	ug/L	20	3	13	0.8	18.1	5.3391	3.2	5.1658	14.16	15.34	17.506

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-2, EFSFSR below Sugar Creek												
Alkalinity as CaCO3	mg/L	42	0	0	16.3	90	47.3595	50	15.3721	57	62	89.344
Aluminum (Fume Or Dust), D	ug/L	24	3	11	2.2	111	15.0481	6	21.6337	31.98	36.94	92.15
Aluminum (Fume Or Dust), T	ug/L	27	0	0	4.8	476	85.0704	20.4	114.7153	242.6	299.5	435.18
Ammonia as Nitrogen	mg/L	1	41	98	0.05	0.09	0.051	0.05	0.0062	0.05	0.05	0.0736
Antimony, D	ug/L	42	0	0	6.79	38.2	22.0669	22.3	8.1496	34.1	35.09	37.503
Antimony, T	ug/L	42	0	0	6.82	38.8	22.2071	21.85	8.013	34.01	34.395	37.857
Arsenic (III), T	ug/L	23	0	0	0.35	7.01	2.7735	2.8	1.7201	4.798	5.568	6.7108
Arsenic, D	ug/L	42	0	0	14.7	71.1	43.981	47.05	15.7458	60.3	67.495	69.829
Arsenic, T	ug/L	42	0	0	15.6	76.2	49.3262	52.2	17.3492	67.64	73.195	75.626
Barium, D	ug/L	23	0	0	5.83	15.4	11.2904	12.2	2.7367	13.66	13.8	15.048
Barium, T	ug/L	23	0	0	7.53	14.7	12.1004	12.6	1.8485	14.1	14.38	14.634
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	6	17	74	0.02	0.05	0.0239	0.02	0.008	0.034	0.0395	0.0478
Bicarbonate as CaCO3	mg/L	42	0	0	23.5	88.4	47.6929	50	13.6253	57	62	82.496
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	1	37	97	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	7120	20300	14226.1905	15750	3576.0149	17850	18000	19398
Calcium, T	ug/L	42	0	0	7220	19300	14224.2857	15650	3513.4794	17370	17975	18849
Carbonate as CaCO3	mg/L	1	41	98	15	16	15.0238	15	0.1543	15	15	15.59
Chloride	mg/L	29	13	31	0.23	0.81	0.5126	0.48	0.1475	0.719	0.7695	0.8059
Chromium, D	ug/L	5	33	87	0.2	0.6	0.2105	0.2	0.0649	0.2	0.2	0.452
Chromium, T	ug/L	11	27	71	0.2	1.2	0.25	0.2	0.1736	0.3	0.5	0.941
Cobalt, D	ug/L	23	0	0	0.03	0.17	0.0727	0.06	0.0345	0.11	0.1334	0.1625
Cobalt, T	ug/L	23	0	0	0.06	0.19	0.0979	0.09	0.0339	0.1452	0.1499	0.1812
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.059	0.162	0.1154	0.124	0.028	0.142	0.147	0.1588
Copper, D	ug/L	38	0	0	0.1	0.6	0.2358	0.2	0.1128	0.4	0.415	0.563
Copper, T	ug/L	35	3	8	0.1	0.5	0.1947	0.2	0.1091	0.365	0.4	0.463
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	5.55	13.67	10.2902	10.495	1.5538	11.826	12.125	13.0755
Flow velocity	CFS	42	0	0	8.9688	407	90.7109	33.4077	114.5729	275	337.9215	395.6615
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	24	67.3	47.8762	52.5	12.1892	58.9	60.715	64.799
Iron, D	ug/L	34	8	19	21	160	40.7762	33.9	26.1607	61.91	84.81	135.81
Iron, T	ug/L	42	0	0	64.7	582	168.869	120.5	115.443	333.9	378.2	512.71
Lead, D	ug/L	3	39	93	0.02	0.042	0.021	0.02	0.0045	0.02	0.02	0.0412
Lead, T	ug/L	31	11	26	0.02	0.27	0.0658	0.04	0.0681	0.184	0.2385	0.2577
Magnesium, D	ug/L	42	0	0	1370	4940	2980.7143	3350	870.3949	3773	3818.5	4509.5
Magnesium, T	ug/L	42	0	0	1400	4660	2996.4286	3300	848.2516	3760	3809.5	4368.9
Manganese, D	ug/L	26	1	4	3.4	25.8	11.2519	9.7	6.5032	20.54	22.85	25.15
Manganese, T	ug/L	27	0	0	7.6	34.5	17.1444	15.8	6.4843	26.66	28.84	33.044
Mercury, D	ng/L	41	0	0	1.7	29.5	5.8341	5	4.5004	7.6	10	23.86
Mercury, T	ng/L	42	0	0	3.1	395	42.8286	18.9	70.271	102.43	140.6	318.74
Methyl Mercury	ng/L	5	18	78	0.1	0.15	0.1043	0.1	0.012	0.11	0.128	0.1456
Molybdenum, D	ug/L	23	0	0	0.48	1.11	0.8621	0.95	0.2099	1.078	1.099	1.1078

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SR-2, EFSFSR below Sugar Creek												
Molybdenum, T	ug/L	23	0	0	0.47	1.07	0.8567	0.925	0.2085	1.048	1.059	1.0678
Nickel, D	ug/L	12	11	48	0.2	0.5	0.243	0.2	0.0828	0.3	0.435	0.489
Nickel, T	ug/L	7	16	70	0.2	0.4	0.22	0.2	0.0497	0.292	0.3	0.378
Nitrate+Nitrite as Nitrogen	mg/L	4	38	91	0.05	0.114	0.0526	0.05	0.0108	0.05	0.0608	0.0992
Nitrogen, Total as Nitrogen	mg/L	19	4	17	0.25	34.8	2.0152	0.5	7.1503	0.982	1.027	27.3706
Nitrogen, Total Kjeldahl (TKN)	mg/L	19	4	17	0.2	34.8	1.9939	0.47	7.155	0.918	0.992	27.364
pH	pH	41	0	0	6.63	8.62	7.5846	7.64	0.4668	8.1	8.22	8.612
Phosphorus, D	ug/L	0	42	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	2	40	95	26.2	42	41.2857	42	3.2379	42	42	42
Potassium, D	ug/L	42	0	0	534	1070	843.5238	875.5	139.3526	996.6	1000	1070
Potassium, T	ug/L	42	0	0	535	1060	880.3333	902.5	127.1607	1019	1039	1051.8
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	42	0	0	1410	3050	2301.1905	2440	397.8798	2650	2719	2972.1
Sodium, T	ug/L	42	0	0	1420	2880	2291.9048	2410	397.2419	2668	2776	2847.2
Solids, Total Dissolved	mg/L	42	0	0	34.5	137	66.869	66	19.4397	86.8	88	124.7
Solids, Total Suspended (TSS)	mg/L	6	36	86	5	12	5.4286	5	1.3862	6.35	7.475	11.18
Sulfate	mg/L	42	0	0	3.33	17.3	9.2233	9.83	3.3127	12.29	13.09	16.111
Temperature, Water	deg C	42	0	0	-0.02	17.41	5.884	4.305	5.2015	12.95	14.6835	16.4547
Thallium, D	ug/L	1	22	96	0.02	0.033	0.0206	0.02	0.0027	0.02	0.02	0.0301
Thallium, T	ug/L	1	22	96	0.02	0.047	0.0212	0.02	0.0056	0.02	0.02	0.0411
Turbidity	NTU	42	0	0	0	109	6.4762	2.75	16.9454	9.81	14.45	75.544
Vanadium (Fume Or Dust), D	ug/L	6	17	74	0.2	0.21	0.2009	0.2	0.0029	0.2	0.209	0.21
Vanadium (Fume Or Dust), T	ug/L	16	7	30	0.2	0.7	0.2852	0.28	0.1165	0.4	0.436	0.6428
Zinc, D	ug/L	27	15	36	0.5	2.8	1.2614	1	0.6671	2	2	2.472
Zinc, T	ug/L	20	22	52	0.5	5.2	1.6064	2	0.8052	2	2	3.888

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-40, Salt Creek												
Alkalinity as CaCO3	mg/L	42	0	0	24.5	92	59.6333	64.15	13.8318	72.91	73	84.21
Aluminum (Fume Or Dust), D	ug/L	17	10	37	2.2	19.6	5.5407	4	4.6786	11.5	17.56	19.444
Aluminum (Fume Or Dust), T	ug/L	27	0	0	9	305	66.0481	23.4	84.4498	171.8	261	301.36
Ammonia as Nitrogen	mg/L	0	42	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	41	1	2	0.05	0.2	0.1015	0.09	0.033	0.159	0.1695	0.1877
Antimony, T	ug/L	41	1	2	0.056	0.2	0.1057	0.09	0.0328	0.159	0.16	0.1877
Arsenic (III), T	ug/L	22	1	4	0.02	0.09	0.0565	0.054	0.0206	0.08	0.089	0.09
Arsenic, D	ug/L	42	0	0	1.8	3.63	2.6948	2.62	0.4651	3.38	3.59	3.6177
Arsenic, T	ug/L	42	0	0	2.1	3.72	2.8514	2.9	0.4109	3.4	3.595	3.7118
Barium, D	ug/L	23	0	0	9.48	16.7	13.9787	14.8	2.264	15.98	16.36	16.634
Barium, T	ug/L	23	0	0	11.1	16.7	14.613	15.1	1.5627	16.1	16.55	16.678
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	22	96	0.02	0.03	0.0204	0.02	0.0021	0.02	0.02	0.0278
Bicarbonate as CaCO3	mg/L	42	0	0	24.5	76	59.0857	64.05	13.025	72.91	73	74.77
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	38	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	42	0	0	9340	21200	16352.619	17750	3288.5797	19250	20355	21077
Calcium, T	ug/L	42	0	0	9670	21200	16444.5238	17650	3173.1712	19640	19990	20872
Carbonate as CaCO3	mg/L	1	41	98	15	17	15.0476	15	0.3086	15	15	16.18
Chloride	mg/L	9	33	79	0.2	0.49	0.2231	0.2	0.0599	0.288	0.328	0.4572
Chromium, D	ug/L	7	31	82	0.2	0.4	0.2158	0.2	0.0495	0.23	0.315	0.4
Chromium, T	ug/L	13	25	66	0.2	0.6	0.2505	0.2	0.0977	0.33	0.5	0.563
Cobalt, D	ug/L	14	9	39	0.02	0.07	0.0295	0.02	0.0147	0.0494	0.059	0.0678
Cobalt, T	ug/L	17	6	26	0.02	0.18	0.0511	0.04	0.0412	0.106	0.128	0.169
Color	Pt-Co	24	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.078	0.163	0.1274	0.136	0.0238	0.149	0.153	0.1602
Copper, D	ug/L	37	1	3	0.1	0.8	0.2763	0.295	0.1364	0.4	0.415	0.689
Copper, T	ug/L	37	1	3	0.1	0.6	0.2289	0.2	0.1259	0.351	0.515	0.6
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	42	0	0	8.36	14.54	10.3771	10.605	1.3261	11.687	11.966	13.515
Flow velocity	CFS	42	0	0	0.7952	13.5442	3.3658	1.4519	3.7154	9.7484	12.444	13.4763
Fluoride	mg/L	0	42	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	42	0	0	33.4	71.7	55.9762	60.3	10.6512	66.16	67.555	70.306
Iron, D	ug/L	1	41	98	20.6	42	41.4905	42	3.3021	42	42	42
Iron, T	ug/L	38	4	10	20	603	91.0095	42	121.8261	234.8	297.1	538.22
Lead, D	ug/L	3	39	93	0.02	0.05	0.0207	0.02	0.0046	0.02	0.02	0.0377
Lead, T	ug/L	12	30	71	0.02	0.14	0.0308	0.02	0.0252	0.059	0.0695	0.1277
Magnesium, D	ug/L	42	0	0	2100	4450	3598.8095	3920	695.9191	4260	4346	4421.3
Magnesium, T	ug/L	42	0	0	2250	4530	3627.381	3900	667.3905	4208	4248.5	4435.7
Manganese, D	ug/L	0	27	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	18	9	33	1	16.4	2.8	1.4	3.4058	6.26	8.29	14.424
Mercury, D	ng/L	19	22	54	0.5	2.4	0.8195	0.5	0.4961	1.5	1.7	2.28
Mercury, T	ng/L	29	13	31	0.5	6	1.4024	1	1.0475	2.68	3.18	5.016
Methyl Mercury	ng/L	1	22	96	0.1	0.13	0.1013	0.1	0.0063	0.1	0.1	0.1234
Molybdenum, D	ug/L	23	0	0	0.43	0.87	0.7163	0.79	0.1442	0.8516	0.8646	0.8691

EFSFSR Surface Water Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-40, Salt Creek												
Molybdenum, T	ug/L	23	0	0	0.44	0.88	0.7163	0.79	0.1472	0.8392	0.849	0.8734
Nickel, D	ug/L	14	9	39	0.2	1.2	0.3035	0.2	0.2694	0.38	1.012	1.1736
Nickel, T	ug/L	13	10	44	0.2	0.5	0.2548	0.2	0.0818	0.364	0.398	0.478
Nitrate+Nitrite as Nitrogen	mg/L	6	36	86	0.05	0.114	0.0532	0.05	0.0112	0.0581	0.0686	0.1001
Nitrogen, Total as Nitrogen	mg/L	19	4	17	0.25	3.29	0.6157	0.49	0.6121	0.782	0.98	2.7862
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	5	22	0.2	3.24	0.5948	0.48	0.6108	0.782	0.953	2.7406
pH	pH	41	0	0	6.73	8.64	7.7398	7.73	0.4567	8.28	8.36	8.592
Phosphorus, D	ug/L	1	41	98	21.6	42	41.5143	42	3.1478	42	42	42
Phosphorus, T	ug/L	1	41	98	34.1	42	41.8119	42	1.219	42	42	42
Potassium, D	ug/L	42	0	0	1000	1710	1347.8571	1400	177.4554	1510	1570	1669
Potassium, T	ug/L	42	0	0	1020	1740	1364.5238	1385	160.0336	1530	1578	1678.5
Selenium, D	ug/L	0	38	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	38	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	1	22	96	0.02	0.03	0.0204	0.02	0.0021	0.02	0.02	0.0278
Silver, T	ug/L	1	22	96	0.02	0.04	0.0209	0.02	0.0042	0.02	0.02	0.0356
Sodium, D	ug/L	42	0	0	1610	2580	2119.2857	2095	226.3538	2398	2448.5	2534.9
Sodium, T	ug/L	42	0	0	1560	2490	2116.9048	2140	229.384	2405	2468.5	2485.9
Solids, Total Dissolved	mg/L	41	1	2	10	113	71.931	72	18.3452	91.27	94.85	110.95
Solids, Total Suspended (TSS)	mg/L	5	37	88	5	15.5	5.3929	5	1.6767	5.45	6.95	12.22
Sulfate	mg/L	42	0	0	2.22	14.8	4.455	4.265	1.983	5.726	5.9155	11.1592
Temperature, Water	deg C	42	0	0	0.03	14.15	5.7443	4.76	4.4921	11.883	12.652	14.1049
Thallium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	42	0	0	0	17	3.3429	2.3	3.3265	6.7	9.305	14.704
Vanadium (Fume Or Dust), D	ug/L	14	9	39	0.2	0.4	0.2461	0.2	0.0624	0.308	0.346	0.389
Vanadium (Fume Or Dust), T	ug/L	20	3	13	0.2	0.7	0.33	0.3	0.1332	0.5	0.5	0.656
Zinc, D	ug/L	17	25	60	0.5	2.7	1.4905	2	0.7067	2	2	2.413
Zinc, T	ug/L	10	32	76	0.5	6.9	1.8619	2	0.95	2	2	4.891

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-3, Garnet Pit seep												
Alkalinity as CaCO3	mg/L	17	0	0	15	101	62.1882	70.9	21.9352	75.4	83.4	97.48
Aluminum (Fume Or Dust), D	ug/L	11	6	35	2.2	28.9	6.5118	4	6.7562	13.66	18.1	26.74
Aluminum (Fume Or Dust), T	ug/L	17	0	0	12.2	258	88.9588	72.2	68.3926	182.6	226	251.6
Ammonia as Nitrogen	mg/L	1	16	94	0.05	0.062	0.0507	0.05	0.0029	0.05	0.0524	0.0601
Antimony, D	ug/L	17	0	0	8.3	32.6	23.9371	29.1	9.1634	32.14	32.28	32.536
Antimony, T	ug/L	17	0	0	9.19	32.1	23.9641	29.1	8.6283	31.34	31.78	32.036
Arsenic (III), T	ug/L	17	0	0	0.05	0.76	0.3795	0.38	0.2077	0.654	0.704	0.7488
Arsenic, D	ug/L	17	0	0	17	225	147.4588	195	78.1419	215.6	221.8	224.36
Arsenic, T	ug/L	17	0	0	18.7	245	155.4	201	81.8088	229	232.2	242.44
Barium, D	ug/L	17	0	0	1.9	9.29	7.3224	8.26	2.5476	9.168	9.226	9.2772
Barium, T	ug/L	17	0	0	2.28	12	8.0882	8.82	2.7728	10.11	10.8	11.76
Beryllium, D	ug/L	11	6	35	0.02	0.11	0.0345	0.02	0.0297	0.0882	0.094	0.1068
Beryllium, T	ug/L	17	0	0	0.03	0.28	0.0899	0.06	0.0758	0.196	0.256	0.2752
Bicarbonate as CaCO3	mg/L	17	0	0	15	101	62.1882	70.9	21.9352	75.4	83.4	97.48
Boron, D	ug/L	0	17	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	17	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	17	0	0	3460	22900	17815.2941	20800	6618.1135	22740	22820	22884
Calcium, T	ug/L	17	0	0	3470	23300	17917.0588	21300	6713.4378	22740	23140	23268
Carbonate as CaCO3	mg/L	0	17	100	15	15	15	15	0	15	15	15
Chloride	mg/L	4	13	77	0.2	0.25	0.2076	0.2	0.0152	0.23	0.234	0.2468
Chromium, D	ug/L	5	12	71	0.2	0.9	0.2471	0.2	0.17	0.24	0.42	0.804
Chromium, T	ug/L	4	13	77	0.2	0.3	0.2176	0.2	0.0393	0.3	0.3	0.3
Cobalt, D	ug/L	5	12	71	0.02	0.06	0.0241	0.02	0.01	0.03	0.036	0.0552
Cobalt, T	ug/L	13	4	24	0.02	0.16	0.0458	0.03	0.0358	0.084	0.104	0.1488
Color	Pt-Co	16	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	26	0	0	0.073	0.659	0.1698	0.159	0.1026	0.172	0.177	0.5387
Copper, D	ug/L	17	0	0	0.1	0.82	0.3465	0.2	0.2406	0.74	0.804	0.8168
Copper, T	ug/L	17	0	0	0.2	1.5	0.5	0.3	0.3589	0.928	1.076	1.4152
Cyanide, T	mg/L	0	17	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	27	0	0	5.98	9.96	8	7.84	0.8601	9.068	9.741	9.9366
Flow velocity	CFS	27	0	0	0.0043	0.2298	0.0454	0.0175	0.054	0.1006	0.1488	0.2141
Fluoride	mg/L	0	17	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	17	0	0	11.7	71.9	56.1588	65.7	20.1994	70.02	71.5	71.82
Iron, D	ug/L	2	15	88	21	30.8	21.6	21	2.3728	21.16	23.28	29.296
Iron, T	ug/L	17	0	0	31	647	161.1765	128	141.9689	237.8	327.8	583.16
Lead, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	13	4	24	0.02	0.14	0.0488	0.04	0.0307	0.074	0.092	0.1304
Magnesium, D	ug/L	17	0	0	722	3890	2727.1176	3010	853.2359	3200	3338	3779.6
Magnesium, T	ug/L	17	0	0	744	3940	2777.7059	3070	876.2661	3322	3460	3844
Manganese, D	ug/L	7	10	59	1	1.8	1.2	1.1	0.2449	1.56	1.8	1.8
Manganese, T	ug/L	15	2	12	2	65.1	12.7118	7.7	15.0416	22.32	31.98	58.476
Mercury, D	ng/L	16	1	6	0.6	8.4	2.5412	1.2	2.4549	6.32	7.6	8.24
Mercury, T	ng/L	17	0	0	1.7	67	16.6882	14.6	14.7389	24.86	34.2	60.44
Methyl Mercury	ng/L	3	14	82	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	16	1	6	0.05	2.71	1.6389	2.28	1.0695	2.544	2.606	2.6892

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-3, Garnet Pit seep												
Molybdenum, T	ug/L	16	1	6	0.05	2.64	1.6097	2.25	1.0513	2.528	2.608	2.6336
Nickel, D	ug/L	7	10	59	0.2	0.8	0.2576	0.2	0.1491	0.332	0.464	0.7328
Nickel, T	ug/L	6	11	65	0.2	0.4	0.2494	0.2	0.0791	0.4	0.4	0.4
Nitrate+Nitrite as Nitrogen	mg/L	12	5	29	0.05	0.244	0.1051	0.094	0.057	0.1736	0.2064	0.2365
Nitrogen, Total as Nitrogen	mg/L	14	3	18	0.25	2.57	0.7229	0.65	0.5418	0.994	1.338	2.3236
Nitrogen, Total Kjeldahl (TKN)	mg/L	14	3	18	0.2	2.54	0.6394	0.47	0.54	0.878	1.22	2.276
pH	pH	26	0	0	6.29	7.63	6.9458	6.945	0.2811	7.225	7.385	7.58
Phosphorus, D	ug/L	5	12	71	22.1	42	39.3706	42	6.161	42	42	42
Phosphorus, T	ug/L	12	5	29	24.8	119	52.4059	43.7	20.1231	64.28	77.96	110.792
Potassium, D	ug/L	17	0	0	604	1330	1040.0588	1080	194.5336	1250	1290	1322
Potassium, T	ug/L	17	0	0	600	1320	1064.2353	1080	210.575	1314	1320	1320
Selenium, D	ug/L	0	17	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	17	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	17	0	0	1770	3190	2691.1765	3010	543.2527	3158	3174	3186.8
Sodium, T	ug/L	17	0	0	1780	3510	2686.4706	2870	555.8995	3166	3254	3458.8
Solids, Total Dissolved	mg/L	17	0	0	35	117	81.1176	86	21.7154	104.6	113.8	116.36
Solids, Total Suspended (TSS)	mg/L	9	8	47	5	88	16.3235	5	23.6286	49.9	59.2	82.24
Sulfate	mg/L	17	0	0	0.86	6.14	4.2965	5.49	2.0114	5.842	5.916	6.0952
Temperature, Water	deg C	27	0	0	3.22	10.95	6.5881	6.67	1.531	8.306	8.675	10.3936
Thallium, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	27	0	0	0.3	32.5	7.1481	5.4	6.2247	12.38	12.64	27.352
Vanadium (Fume Or Dust), D	ug/L	7	10	59	0.2	0.3	0.2088	0.2	0.0255	0.222	0.252	0.2904
Vanadium (Fume Or Dust), T	ug/L	14	3	18	0.2	0.6	0.2806	0.22	0.1082	0.4	0.44	0.568
Zinc, D	ug/L	10	7	41	0.6	2.8	1.4529	2	0.76	2.12	2.4	2.72
Zinc, T	ug/L	10	7	41	0.6	2.1	1.4294	1.8	0.6253	2	2.02	2.084

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-6, DMEA adit seep												
Alkalinity as CaCO3	mg/L	21	0	0	99	153	137	143	16.0686	149	151	152.6
Aluminum (Fume Or Dust), D	ug/L	6	15	71	2.4	5.3	3.8857	4	0.6521	4	4.9	5.22
Aluminum (Fume Or Dust), T	ug/L	20	1	5	2.6	233	22.6238	6.2	50.5234	31.6	68.2	200.04
Ammonia as Nitrogen	mg/L	0	21	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	21	0	0	14	26.7	22.181	23.2	3.6418	26.1	26.1	26.58
Antimony, T	ug/L	21	0	0	14.8	27	22.2381	23.4	3.7094	26	26.1	26.82
Arsenic (III), T	ug/L	21	0	0	0.29	1.5	0.6234	0.49	0.3419	1.06	1.3	1.46
Arsenic, D	ug/L	21	0	0	195	326	239.0476	227	40.9786	296	326	326
Arsenic, T	ug/L	21	0	0	192	314	243.5714	244	37.681	299	299	311
Barium, D	ug/L	21	0	0	29.1	44.5	38.7429	40	4.5212	43.6	43.7	44.34
Barium, T	ug/L	21	0	0	27.2	49.3	39.2857	39.9	5.446	44.6	47.3	48.9
Beryllium, D	ug/L	1	20	95	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	8	13	62	0.02	0.184	0.0326	0.02	0.0363	0.05	0.06	0.1592
Bicarbonate as CaCO3	mg/L	21	0	0	99	153	137	143	16.0686	149	151	152.6
Boron, D	ug/L	0	21	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	21	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	3	18	86	0.02	0.031	0.021	0.02	0.0032	0.02	0.03	0.0308
Calcium, D	ug/L	21	0	0	37800	53300	48109.5238	49300	4278.6569	52600	52800	53200
Calcium, T	ug/L	21	0	0	37700	53000	47971.4286	49000	4353.0613	52000	52700	52940
Carbonate as CaCO3	mg/L	0	21	100	15	15	15	15	0	15	15	15
Chloride	mg/L	10	11	52	0.25	0.47	0.3662	0.4	0.0616	0.4	0.41	0.458
Chromium, D	ug/L	3	18	86	0.2	0.5	0.2238	0.2	0.0768	0.2	0.4	0.48
Chromium, T	ug/L	1	20	95	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Cobalt, D	ug/L	10	11	52	0.02	0.16	0.0457	0.02	0.038	0.09	0.11	0.15
Cobalt, T	ug/L	11	10	48	0.02	0.218	0.0592	0.03	0.0617	0.16	0.2	0.2144
Color	Pt-Co	21	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	37	0	0	0.134	0.437	0.3499	0.367	0.0503	0.3844	0.3966	0.4233
Copper, D	ug/L	21	0	0	0.2	0.6	0.3562	0.37	0.113	0.5	0.5	0.58
Copper, T	ug/L	21	0	0	0.13	3.83	0.6905	0.5	0.8465	1	2.2	3.504
Cyanide, T	mg/L	0	21	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	37	0	0	6.82	9.64	8.5719	8.61	0.5461	9.086	9.314	9.5284
Flow velocity	CFS	37	0	0	0.0005	0.0207	0.0057	0.004	0.0051	0.0127	0.0165	0.0203
Fluoride	mg/L	12	9	43	0.2	0.27	0.2229	0.21	0.0249	0.25	0.26	0.268
Hardness as CaCO3	mg/L	21	0	0	126	188	167.7619	172	17.2305	186	187	187.8
Iron, D	ug/L	4	17	81	21	31.2	22.4048	21	3.1471	27	30	30.96
Iron, T	ug/L	13	8	38	21	923	91.981	29	196.2609	123	214	781.2
Lead, D	ug/L	2	19	91	0.02	0.03	0.0205	0.02	0.0022	0.02	0.02	0.028
Lead, T	ug/L	14	7	33	0.02	1.3	0.1655	0.03	0.3562	0.22	1.14	1.268
Magnesium, D	ug/L	21	0	0	7830	13800	11731.9048	12300	1547.8457	13000	13700	13780
Magnesium, T	ug/L	21	0	0	7850	14000	11678.0952	12000	1596.8833	13200	13600	13920
Manganese, D	ug/L	6	15	71	1.1	12.4	2.0143	1.1	2.6714	2.4	6.6	11.24
Manganese, T	ug/L	20	1	5	1.1	118	15.1238	3.1	30.1838	30.7	86.1	111.62
Mercury, D	ng/L	19	2	10	0.6	2.6	1.2095	1.1	0.4312	1.7	1.8	2.44
Mercury, T	ng/L	21	0	0	1.1	34.8	4.8619	3.4	7.1491	6.9	7.7	29.38
Methyl Mercury	ng/L	5	16	76	0.1	0.2	0.1143	0.1	0.0322	0.15	0.2	0.2
Molybdenum, D	ug/L	21	0	0	3.4	4.27	3.9048	3.94	0.1972	4.13	4.17	4.25

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-6, DMEA adit seep												
Molybdenum, T	ug/L	21	0	0	3.48	4.31	3.8676	3.85	0.2151	4.07	4.29	4.306
Nickel, D	ug/L	12	9	43	0.2	0.8	0.3881	0.3	0.2084	0.7	0.7	0.78
Nickel, T	ug/L	10	11	52	0.2	0.9	0.391	0.2	0.2386	0.8	0.8	0.88
Nitrate+Nitrite as Nitrogen	mg/L	1	20	95	0.05	0.058	0.0504	0.05	0.0017	0.05	0.05	0.0564
Nitrogen, Total as Nitrogen	mg/L	16	5	24	0.25	7.88	0.9224	0.47	1.6269	1.14	1.42	6.588
Nitrogen, Total Kjeldahl (TKN)	mg/L	16	5	24	0.2	7.88	0.9048	0.46	1.6332	1.11	1.42	6.588
pH	pH	37	0	0	6.67	8.28	7.2762	7.25	0.3196	7.662	7.782	8.1036
Phosphorus, D	ug/L	0	21	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	1	20	95	42	53	42.5238	42	2.4004	42	42	50.8
Potassium, D	ug/L	21	0	0	990	1560	1301.9048	1340	136.9532	1440	1480	1544
Potassium, T	ug/L	21	0	0	930	1610	1321.4286	1350	158.6596	1490	1560	1600
Selenium, D	ug/L	0	21	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	21	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	3	18	86	0.02	0.031	0.0211	0.02	0.0032	0.022	0.03	0.0308
Sodium, D	ug/L	21	0	0	3220	6530	4853.3333	4790	790.717	5950	6020	6428
Sodium, T	ug/L	21	0	0	3200	6430	4807.619	4790	773.6789	5620	5970	6338
Solids, Total Dissolved	mg/L	21	0	0	34	245	196.7619	206	42.6414	226	226	241.2
Solids, Total Suspended (TSS)	mg/L	1	20	95	5	15	5.4762	5	2.1822	5	5	13
Sulfate	mg/L	21	0	0	34.3	51.8	42.5429	42.8	4.0438	46.8	48.3	51.1
Temperature, Water	deg C	37	0	0	4.22	11.76	7.6151	6.95	1.7952	10.01	10.856	11.5152
Thallium, D	ug/L	1	20	95	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	3	18	86	0.02	0.032	0.0206	0.02	0.0026	0.02	0.02	0.0296
Turbidity	NTU	37	0	0	0.2	45.9	5.0838	2.8	8.1968	11.16	15.56	36.792
Vanadium (Fume Or Dust), D	ug/L	0	21	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	1	20	95	0.2	0.21	0.2005	0.2	0.0022	0.2	0.2	0.208
Zinc, D	ug/L	20	1	5	1.8	9.9	3.8333	3	2.1299	6.1	8.7	9.66
Zinc, T	ug/L	20	1	5	1.7	11.5	4.7	4.1	2.9774	9.7	10.1	11.22

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-17, DMEA waste rock seep												
Alkalinity as CaCO3	mg/L	23	0	0	37	137	95.6783	106	28.5761	116.8	120.6	133.48
Aluminum (Fume Or Dust), D	ug/L	12	11	48	2	25.8	6.1609	4	6.3691	13.64	22.49	25.25
Aluminum (Fume Or Dust), T	ug/L	22	1	4	3.6	5960	597.1478	29.3	1392.235	1734	2964	5328.6
Ammonia as Nitrogen	mg/L	1	22	96	0.05	0.063	0.0506	0.05	0.0027	0.05	0.05	0.0601
Antimony, D	ug/L	23	0	0	11	56.3	26.7	24.6	10.6887	37.62	45.82	54.188
Antimony, T	ug/L	23	0	0	16.1	164	36.7826	29.9	29.7584	52.98	57.59	140.658
Arsenic (III), T	ug/L	23	0	0	0.3	1090	51.4698	1.4	226.6086	8.576	44.528	860.87
Arsenic, D	ug/L	23	0	0	44.4	247	180.0174	190	41.6038	212.8	219.3	241.06
Arsenic, T	ug/L	23	0	0	156	18800	1402.7391	231	3892.6486	2748	3205	15374.6
Barium, D	ug/L	23	0	0	13	63.3	33.0261	35.4	11.5002	42.96	46.66	59.714
Barium, T	ug/L	23	0	0	13.4	1330	117.3913	37.7	274.6612	194.4	322	1111.1
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	9	14	61	0.02	6.83	0.5235	0.02	1.4718	1.016	2.146	5.8268
Bicarbonate as CaCO3	mg/L	23	0	0	37	137	95.3739	106	28.6209	116.8	120.6	133.48
Boron, D	ug/L	0	23	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	23	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	5	18	78	0.02	0.89	0.0754	0.02	0.1842	0.0996	0.2224	0.7461
Calcium, D	ug/L	23	0	0	19000	52200	37660.8696	42000	9945.2016	46340	48020	51320
Calcium, T	ug/L	23	0	0	18900	103000	41269.5652	42200	17497.3358	52460	61490	94068
Carbonate as CaCO3	mg/L	0	23	100	15	15	15	15	0	15	15	15
Chloride	mg/L	12	11	48	0.2	0.68	0.3157	0.23	0.1471	0.512	0.574	0.658
Chromium, D	ug/L	1	22	96	0.2	0.6	0.2174	0.2	0.0834	0.2	0.2	0.512
Chromium, T	ug/L	7	16	70	0.2	3.3	0.4757	0.2	0.6967	1.06	1.425	2.893
Cobalt, D	ug/L	14	9	39	0.02	0.21	0.0523	0.04	0.0467	0.088	0.144	0.1968
Cobalt, T	ug/L	19	4	17	0.02	36.9	2.1782	0.119	7.6799	2.508	5.429	30.0426
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	41	0	0	0.171	0.401	0.2941	0.304	0.0607	0.359	0.371	0.3942
Copper, D	ug/L	22	1	4	0.1	0.79	0.2891	0.3	0.1322	0.394	0.4	0.7042
Copper, T	ug/L	23	0	0	0.17	28.5	2.7061	0.3	6.3129	6.63	11.3	24.826
Cyanide, T	mg/L	0	23	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	41	0	0	6.4	11.67	9.0932	9.43	1.3478	10.49	11	11.61
Flow velocity	CFS	35	0	0	0.0004	0.117	0.0166	0.0071	0.026	0.0315	0.0725	0.112
Fluoride	mg/L	0	23	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	23	0	0	66.6	327	143.9609	149	56.0678	183.6	213	302.58
Iron, D	ug/L	6	17	74	21	558	53.6391	21	114.4884	66.8	158	471.98
Iron, T	ug/L	20	3	13	21	110000	8026.1348	273	23473.1266	21660	27010	91806
Lead, D	ug/L	3	20	87	0.02	0.11	0.0267	0.02	0.0217	0.0256	0.072	0.1027
Lead, T	ug/L	14	9	39	0.02	7.12	0.6958	0.03	1.6167	2.168	2.913	6.2092
Magnesium, D	ug/L	23	0	0	4680	12900	9461.3043	10600	2606.9946	11980	12090	12724
Magnesium, T	ug/L	23	0	0	4640	16900	9920.8696	10600	3208.7904	12760	14510	16416
Manganese, D	ug/L	13	10	44	1.1	78.7	7.6391	1.9	16.1398	10.44	18.42	65.632
Manganese, T	ug/L	21	2	9	1	23100	1304.2391	24.1	4818.8376	1439.6	3421	18814.4
Mercury, D	ng/L	22	1	4	0.8	7	2.3565	2	1.3882	3.74	4.62	6.494
Mercury, T	ng/L	23	0	0	1.9	632	99.8913	8	188.5089	402.6	532	612.86
Methyl Mercury	ng/L	10	13	57	0.1	4.3	0.5887	0.1	1.1256	2.38	2.88	3.992
Molybdenum, D	ug/L	23	0	0	1.47	2.68	2.1074	2.11	0.321	2.506	2.582	2.6602

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-T-17, DMEA waste rock seep												
Molybdenum, T	ug/L	23	0	0	1.44	9.19	2.4757	2.14	1.5188	2.776	3.089	7.8546
Nickel, D	ug/L	12	11	48	0.2	0.7	0.3422	0.27	0.1672	0.6	0.6	0.678
Nickel, T	ug/L	16	7	30	0.2	18.7	1.5539	0.4	3.9175	2.272	5.198	15.7982
Nitrate+Nitrite as Nitrogen	mg/L	1	22	96	0.05	0.293	0.0606	0.05	0.0507	0.05	0.05	0.2395
Nitrogen, Total as Nitrogen	mg/L	19	4	17	0.31	4.6	1.1283	0.62	1.1974	2.418	4.096	4.5296
Nitrogen, Total Kjeldahl (TKN)	mg/L	18	5	22	0.2	4.58	1.083	0.62	1.22	2.408	4.096	4.514
pH	pH	41	0	0	6.38	8.43	7.2898	7.26	0.3842	7.77	7.9	8.218
Phosphorus, D	ug/L	0	23	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	9	14	61	25.2	4120	348.3261	42	888.2467	825.6	1361.4	3523.8
Potassium, D	ug/L	23	0	0	929	2130	1535.6087	1610	343.7876	1908	1955	2092.6
Potassium, T	ug/L	23	0	0	930	5400	1850.6522	1710	960.9208	2804	3147	4909.4
Selenium, D	ug/L	0	23	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	1	22	96	1	1.3	1.013	1	0.0626	1	1	1.234
Silver, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	4	19	83	0.02	0.53	0.0573	0.02	0.1137	0.0902	0.2236	0.4658
Sodium, D	ug/L	23	0	0	2230	5290	3917.8261	3890	825.194	4918	5092	5250.4
Sodium, T	ug/L	23	0	0	2180	5280	3923.913	3950	837.0877	4822	4912	5200.8
Solids, Total Dissolved	mg/L	23	0	0	97	232	171	186	39.0571	213.4	214.9	228.26
Solids, Total Suspended (TSS)	mg/L	10	13	57	5	1010	131.8478	5	278.6247	582	735.4	951.48
Sulfate	mg/L	23	0	0	26.1	68.1	47.3565	51.1	10.7549	57.72	60.87	66.582
Temperature, Water	deg C	41	0	0	0.28	14.97	6.0761	5.24	4.0171	11.06	12.51	14.454
Thallium, D	ug/L	1	22	96	0.02	0.028	0.0203	0.02	0.0017	0.02	0.02	0.0262
Thallium, T	ug/L	7	16	70	0.02	1.76	0.1386	0.02	0.3701	0.2568	0.4555	1.4775
Turbidity	NTU	41	0	0	0	446	29.0122	3.3	80.8694	77.9	140	361.6
Vanadium (Fume Or Dust), D	ug/L	2	21	91	0.2	0.21	0.2004	0.2	0.0021	0.2	0.2	0.2078
Vanadium (Fume Or Dust), T	ug/L	11	12	52	0.2	28.4	2.2661	0.2	6.0345	6.056	7.097	23.7206
Zinc, D	ug/L	15	8	35	0.5	2.7	1.3522	1	0.7102	2	2.36	2.634
Zinc, T	ug/L	16	7	30	0.5	362	25.5435	2	76.1734	53.4	79.25	300.312

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-9, old haul road seep												
Alkalinity as CaCO3	mg/L	16	0	0	60	150	104.4312	112.5	23.6492	127	135.75	147.15
Aluminum (Fume Or Dust), D	ug/L	12	4	25	2	80.9	15.2625	4	25.5815	49.3	78.725	80.465
Aluminum (Fume Or Dust), T	ug/L	16	0	0	32.8	37900	3112.0562	138	9507.3835	5035	15812.5	33482.5
Ammonia as Nitrogen	mg/L	1	15	94	0.05	0.175	0.0578	0.05	0.0313	0.05	0.0812	0.1562
Antimony, D	ug/L	16	0	0	79.2	100	89.6813	89.1	5.6173	97.05	100	100
Antimony, T	ug/L	16	0	0	73.9	123	90.5875	88.4	10.2105	96.55	104.475	119.295
Arsenic (III), T	ug/L	16	0	0	0.25	43	3.9605	0.468	10.779	6.7	19.525	38.305
Arsenic, D	ug/L	16	0	0	86.9	149	135.6812	139	14.8351	147	148.25	148.85
Arsenic, T	ug/L	16	0	0	134	1320	233.875	147.5	295.0789	272	607.5	1177.5
Barium, D	ug/L	16	0	0	3.65	8.8	6.2306	6.34	1.4567	7.6	8.005	8.641
Barium, T	ug/L	16	0	0	4.18	261	25.8988	7.585	63.6568	32.6	103.125	229.425
Beryllium, D	ug/L	0	16	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	6	10	63	0.02	3.66	0.3009	0.02	0.9119	0.4275	1.4438	3.2168
Bicarbonate as CaCO3	mg/L	16	0	0	60	150	104.4312	112.5	23.6492	127	135.75	147.15
Boron, D	ug/L	0	16	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	1	15	94	21	22.6	21.1	21	0.4	21	21.4	22.36
Cadmium, D	ug/L	0	16	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	2	14	88	0.02	0.34	0.0435	0.02	0.0803	0.048	0.142	0.3004
Calcium, D	ug/L	16	0	0	14800	32300	25075	27350	5182.4705	30150	31100	32060
Calcium, T	ug/L	16	0	0	14800	47600	26250	27450	7467.5297	30300	34625	45005
Carbonate as CaCO3	mg/L	0	16	100	15	15	15	15	0	15	15	15
Chloride	mg/L	5	11	69	0.2	0.84	0.3338	0.2	0.2341	0.715	0.8325	0.8385
Chromium, D	ug/L	5	11	69	0.2	0.8	0.25	0.2	0.1506	0.3	0.425	0.725
Chromium, T	ug/L	11	5	31	0.2	62.5	5.0956	0.265	15.6157	7.6	25.075	55.015
Cobalt, D	ug/L	13	3	0.188	0.02	0.14	0.0439	0.035	0.032	0.08	0.095	0.131
Cobalt, T	ug/L	16	0	0	0.04	15.4	1.2911	0.075	3.8627	2.095	6.535	13.627
Color	Pt-Co	14	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	25	0	0	0.138	0.27	0.2188	0.226	0.0326	0.252	0.2604	0.2681
Copper, D	ug/L	16	0	0	0.3	0.71	0.4844	0.5	0.1298	0.65	0.7025	0.7085
Copper, T	ug/L	16	0	0	0.3	55	4.7244	0.6	13.6569	6.75	21.925	48.385
Cyanide, Free	mg/L	0	1	100	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Cyanide, T	mg/L	2	14	88	0.0027	0.0322	0.0052	0.0027	0.0076	0.0077	0.0176	0.0293
Cyanide, Weak Acid Dissociable (WAD)	mg/L	0	1	100	0.0047	0.0047	0.0047	0.0047		0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	26	0	0	5.53	10	8.5662	8.55	1.0733	9.89	9.9075	9.9775
Flow velocity	CFS	24	0	0	0.0008	0.0059	0.0023	0.002	0.0013	0.004	0.0051	0.0058
Fluoride	mg/L	0	16	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	16	0	0	58.2	274	110.9625	111.5	47.8242	120	158.5	250.9
Iron, D	ug/L	3	13	81	42	110	50.8125	42	22.2867	78.5	106.25	109.25
Iron, T	ug/L	16	0	0	41.2	57300	4379.2125	191.5	14253.4434	5125	20392.5	49918.5
Lead, D	ug/L	3	13	81	0.02	0.04	0.0219	0.02	0.0054	0.025	0.0325	0.0385
Lead, T	ug/L	12	4	25	0.02	11.2	0.9522	0.0445	2.8233	1.71	4.96	9.952
Magnesium, D	ug/L	16	0	0	5150	11000	9030	9980	1815.9369	10650	10925	10985
Magnesium, T	ug/L	16	0	0	5150	37700	11046.25	10250	7380.9998	11700	18800	33920
Manganese, D	ug/L	7	9	56	1.1	19.6	2.7062	1.1	4.5822	3.4	7.525	17.185
Manganese, T	ug/L	11	5	31	1	555	48.6875	3.4	140.2965	87.8	255.75	495.15
Mercury, D	ng/L	16	0	0	1	4.8	2.3875	2	1.2664	4.3	4.575	4.755
Mercury, T	ng/L	16	0	0	1.7	306	32.8438	8.2	76.9327	60.25	156	276

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-S-9, old haul road seep												
Methyl Mercury	ng/L	3	13	81	0.1	1.73	0.2206	0.1	0.4094	0.25	0.7325	1.5305
Molybdenum, D	ug/L	16	0	0	1.13	1.61	1.3363	1.33	0.1462	1.51	1.5575	1.5995
Molybdenum, T	ug/L	16	0	0	0.445	2.28	1.2784	1.29	0.3685	1.45	1.6575	2.1555
Nickel, D	ug/L	10	6	38	0.2	0.5	0.2981	0.235	0.1193	0.475	0.5	0.5
Nickel, T	ug/L	13	3	19	0.2	40.2	3.4306	0.335	10.011	5.18	16.32	35.424
Nitrate+Nitrite as Nitrogen	mg/L	0	16	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	15	1	6	0.25	1.45	0.6344	0.515	0.3262	1.01	1.2025	1.4005
Nitrogen, Total Kjeldahl (TKN)	mg/L	15	1	6	0.2	1.45	0.6262	0.515	0.3323	1.01	1.2025	1.4005
pH	pH	25	0	0	6.63	7.61	7.1992	7.17	0.2473	7.522	7.598	7.61
Phosphorus, D	ug/L	0	16	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	4	12	75	23.9	2010	176.6438	42	490.7529	144.2	659.25	1739.85
Potassium, D	ug/L	16	0	0	2200	4040	3293.125	3310	519.6501	3870	3950	4022
Potassium, T	ug/L	16	0	0	2200	19100	4381.875	3580	3961.5859	4140	8052.5	16890.5
Selenium, D	ug/L	0	16	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	16	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	16	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	6	10	63	0.02	2.33	0.2318	0.02	0.6082	0.5225	1.319	2.1278
Sodium, D	ug/L	16	0	0	735	992	874.375	862.5	79.7395	965.5	973.25	988.25
Sodium, T	ug/L	16	0	0	700	1440	904.5625	873	159.3081	972	1089.75	1369.95
Solids, Total Dissolved	mg/L	16	0	0	42	135	105.7625	111	24.1052	133.5	135	135
Solids, Total Suspended (TSS)	mg/L	8	8	50	5	278	53.0938	8.5	88.46	195	240.5	270.5
Sulfate	mg/L	16	0	0	2.22	5.87	3.7719	3.715	0.9045	4.59	4.925	5.681
Temperature, Water	deg C	26	0	0	2.92	17.84	10.4665	10.195	4.498	15.49	16.03	17.425
Thallium, D	ug/L	0	16	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	3	13	81	0.02	0.5	0.0576	0.02	0.1212	0.081	0.224	0.4448
Turbidity	NTU	26	0	0	0	88.2	11.8077	4.45	18.7214	25.8	41.1	77.15
Vanadium (Fume Or Dust), D	ug/L	16	0	0	0.2	0.5	0.3763	0.4	0.0792	0.465	0.5	0.5
Vanadium (Fume Or Dust), T	ug/L	16	0	0	0.3	55.4	4.7794	0.55	13.7781	7.15	22.475	48.815
Zinc, D	ug/L	5	11	69	0.6	2	1.6438	2	0.5645	2	2	2
Zinc, T	ug/L	6	10	63	0.8	60.2	6.1938	2	14.712	8.1	25.325	53.225

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-M-4, Fiddle Creek Pond												
Alkalinity as CaCO3	mg/L	19	0	0	11.5	48	31.9211	38	11.174	40	40.8	46.56
Aluminum (Fume Or Dust), D	ug/L	18	1	5	2.8	30.1	10.9368	6.5	8.8806	23	23.71	28.822
Aluminum (Fume Or Dust), T	ug/L	19	0	0	9.4	2390	259.0105	66.8	541.2356	457.6	750.2	2062.04
Ammonia as Nitrogen	mg/L	1	18	95	0.05	1.3	0.1158	0.05	0.2868	0.05	0.175	1.075
Antimony, D	ug/L	19	0	0	0.09	0.22	0.1376	0.12	0.0383	0.1846	0.2047	0.2169
Antimony, T	ug/L	19	0	0	0.09	0.44	0.1816	0.15	0.1002	0.3028	0.413	0.4346
Arsenic (III), T	ug/L	12	7	37	0.02	0.05	0.0292	0.024	0.0109	0.042	0.05	0.05
Arsenic, D	ug/L	1	18	95	0.5	0.7	0.5105	0.5	0.0459	0.5	0.52	0.664
Arsenic, T	ug/L	6	13	68	0.5	1.1	0.5732	0.5	0.1521	0.72	0.83	1.046
Barium, D	ug/L	19	0	0	5.82	23.4	17.0263	19.9	5.9118	22.36	22.68	23.256
Barium, T	ug/L	19	0	0	8.14	69.3	21.9947	20.9	13.1724	29.24	35.91	62.622
Beryllium, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	6	13	68	0.02	0.26	0.0389	0.02	0.0552	0.0534	0.0863	0.2253
Bicarbonate as CaCO3	mg/L	19	0	0	11.5	48	31.9211	38	11.174	40	40.8	46.56
Boron, D	ug/L	0	19	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	19	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	2	17	90	0.02	0.04	0.0211	0.02	0.0046	0.02	0.022	0.0364
Calcium, D	ug/L	19	0	0	2970	11300	8482.6316	10100	3192.6197	11040	11210	11282
Calcium, T	ug/L	19	0	0	2880	12300	8560	10100	3187.1129	11200	11670	12174
Carbonate as CaCO3	mg/L	0	19	100	15	15	15	15	0	15	15	15
Chloride	mg/L	5	14	74	0.2	0.29	0.2147	0.2	0.0282	0.254	0.272	0.2864
Chromium, D	ug/L	0	19	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Chromium, T	ug/L	4	15	80	0.2	0.9	0.2479	0.2	0.1613	0.302	0.369	0.7938
Cobalt, D	ug/L	4	15	80	0.02	0.04	0.0226	0.02	0.0056	0.03	0.031	0.0382
Cobalt, T	ug/L	10	9	47	0.02	0.47	0.0647	0.02	0.1036	0.113	0.1595	0.4079
Color	Pt-Co	16	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	27	0	0	0.042	0.11	0.0797	0.084	0.0212	0.1056	0.1087	0.1097
Copper, D	ug/L	16	3	16	0.1	0.5	0.22	0.2	0.1277	0.42	0.5	0.5
Copper, T	ug/L	13	6	32	0.1	1.1	0.2174	0.13	0.2324	0.384	0.47	0.974
Cyanide, Free	mg/L	0	1	100	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Cyanide, T	mg/L	0	19	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Cyanide, Weak Acid Dissociable (WAD)	mg/L	0	1	100	0.0047	0.0047	0.0047	0.0047		0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	27	0	0	8.7	11.6	9.887	9.93	0.7278	10.762	10.845	11.4076
Fluoride	mg/L	0	19	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	19	0	0	8.76	37.9	25.5474	30.1	9.467	33.32	34.93	37.306
Iron, D	ug/L	4	15	80	21	48.4	22.7737	21	6.2682	23.68	26.44	44.008
Iron, T	ug/L	15	4	21	26	2490	269.6316	64.1	563.0693	529	768.3	2145.66
Lead, D	ug/L	2	17	90	0.02	0.03	0.0205	0.02	0.0023	0.02	0.021	0.0282
Lead, T	ug/L	13	6	32	0.02	1.56	0.169	0.04	0.3546	0.324	0.498	1.3476
Magnesium, D	ug/L	19	0	0	369	1290	964.4211	1160	340.834	1240	1245	1281
Magnesium, T	ug/L	19	0	0	384	1730	1011.6842	1170	373.632	1290	1406	1665.2
Manganese, D	ug/L	7	12	63	1.1	6.8	1.8105	1.1	1.4655	3.24	4.1	6.26
Manganese, T	ug/L	15	4	21	1	40.1	6.1947	2.3	9.3908	11.7	21.74	36.428
Mercury, D	ng/L	17	2	11	0.5	3.4	1.4211	1.1	0.9355	2.78	3.13	3.346
Mercury, T	ng/L	19	0	0	0.8	38.4	5.7211	2.9	8.476	10.32	15.36	33.792
Methyl Mercury	ng/L	9	10	53	0.1	1.5	0.2695	0.1	0.3677	0.52	1.05	1.41

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-M-4, Fiddle Creek Pond												
Molybdenum, D	ug/L	19	0	0	0.05	0.25	0.1646	0.19	0.0657	0.24	0.241	0.2482
Molybdenum, T	ug/L	19	0	0	0.05	0.24	0.1658	0.19	0.0624	0.2214	0.2283	0.2377
Nickel, D	ug/L	3	16	84	0.2	0.4	0.2153	0.2	0.0493	0.218	0.301	0.3802
Nickel, T	ug/L	2	17	90	0.2	0.6	0.2221	0.2	0.0916	0.204	0.258	0.5316
Nitrate+Nitrite as Nitrogen	mg/L	13	6	32	0.05	0.091	0.0593	0.056	0.0115	0.0752	0.0811	0.089
Nitrogen, Total as Nitrogen	mg/L	17	2	11	0.26	1.82	0.6568	0.56	0.3615	0.958	1.181	1.6922
Nitrogen, Total Kjeldahl (TKN)	mg/L	16	3	16	0.21	1.8	0.6168	0.5	0.3561	0.896	1.116	1.6632
pH	pH	27	0	0	6.12	7.85	6.7919	6.77	0.4483	7.384	7.495	7.7694
Phosphorus, D	ug/L	0	19	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	4	15	79	42	240	54.3842	42	45.3189	54.24	83.4	208.68
Potassium, D	ug/L	19	0	0	389	770	617.2632	650	120.509	738.2	749.3	765.86
Potassium, T	ug/L	19	0	0	360	1340	681.2105	676	206.299	808.2	923.3	1256.66
Selenium, D	ug/L	0	19	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	19	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	19	0	0	1500	3610	2744.2105	3040	701.9205	3380	3583	3604.6
Sodium, T	ug/L	19	0	0	1500	3580	2741.0526	3070	695.3728	3436	3508	3565.6
Solids, Total Dissolved	mg/L	19	0	0	19	65.3	45.8579	46	14.0457	61.2	62.33	64.706
Solids, Total Suspended (TSS)	mg/L	8	11	58	5	140	20.4211	5	38.6908	39.2	120.2	136.04
Sulfate	mg/L	19	0	0	0.87	3.53	2.5005	2.96	0.9446	3.384	3.413	3.5066
Temperature, Water	deg C	27	0	0	1.05	13.02	6.1133	5.49	3.5536	10.73	12.011	12.8302
Thallium, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	18	95	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	27	0	0	0	37.5	5.537	2.2	9.3792	16.9	27.25	35.654
Vanadium (Fume Or Dust), D	ug/L	6	13	68	0.2	0.24	0.2026	0.2	0.0093	0.202	0.213	0.2346
Vanadium (Fume Or Dust), T	ug/L	13	6	32	0.2	2.3	0.4363	0.3	0.4871	0.714	0.923	2.0246
Zinc, D	ug/L	9	10	53	0.6	2	1.5	2	0.5888	2	2	2
Zinc, T	ug/L	8	11	58	0.5	8.5	2.0526	2	1.6399	2	2.65	7.33

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-5, North Tunnel adit												
Alkalinity as CaCO3	mg/L	1	0	0	22.9	22.9	22.9	22.9		22.9	22.9	22.9
Aluminum (Fume Or Dust), D	ug/L	1	0	0	7.2	7.2	7.2	7.2		7.2	7.2	7.2
Aluminum (Fume Or Dust), T	ug/L	1	0	0	71.5	71.5	71.5	71.5		71.5	71.5	71.5
Ammonia as Nitrogen	mg/L	0	1	100	0.05	0.05	0.05	0.05		0.05	0.05	0.05
Antimony, D	ug/L	1	0	0	1.2	1.2	1.2	1.2		1.2	1.2	1.2
Antimony, T	ug/L	1	0	0	1.2	1.2	1.2	1.2		1.2	1.2	1.2
Arsenic (III), T	ug/L	1	0	0	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Arsenic, D	ug/L	1	0	0	0.8	0.8	0.8	0.8		0.8	0.8	0.8
Arsenic, T	ug/L	1	0	0	1	1	1	1		1	1	1
Barium, D	ug/L	1	0	0	19.9	19.9	19.9	19.9		19.9	19.9	19.9
Barium, T	ug/L	1	0	0	22.7	22.7	22.7	22.7		22.7	22.7	22.7
Beryllium, D	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Beryllium, T	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	1	0	0	22.9	22.9	22.9	22.9		22.9	22.9	22.9
Boron, D	ug/L	0	1	100	50	50	50	50		50	50	50
Boron, T	ug/L	0	1	100	50	50	50	50		50	50	50
Cadmium, D	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Cadmium, T	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Calcium, D	ug/L	1	0	0	6260	6260	6260	6260		6260	6260	6260
Calcium, T	ug/L	1	0	0	6060	6060	6060	6060		6060	6060	6060
Carbonate as CaCO3	mg/L	0	1	100	9	9	9	9		9	9	9
Chloride	mg/L	0	1	100	0.4	0.4	0.4	0.4		0.4	0.4	0.4
Chromium, D	ug/L	0	1	100	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Chromium, T	ug/L	0	1	100	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Cobalt, D	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Cobalt, T	ug/L	1	0	0	0.03	0.03	0.03	0.03		0.03	0.03	0.03
Color	Pt-Co	1	0	0	0	0	0	0		0	0	0
Copper, D	ug/L	1	0	0	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Copper, T	ug/L	1	0	0	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Cyanide, T	mg/L	0	1	100	0.0047	0.0047	0.0047	0.0047		0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	1	0	0	10.54	10.54	10.54	10.54		10.54	10.54	10.54
Flow velocity	CFS	1	0	0	0.0631	0.0631	0.0631	0.0631		0.0631	0.0631	0.0631
Fluoride	mg/L	0	1	100	0.4	0.4	0.4	0.4		0.4	0.4	0.4
Hardness as CaCO3	mg/L	1	0	0	18.9	18.9	18.9	18.9		18.9	18.9	18.9
Iron, D	ug/L	0	1	100	20	20	20	20		20	20	20
Iron, T	ug/L	1	0	0	85.2	85.2	85.2	85.2		85.2	85.2	85.2
Lead, D	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Lead, T	ug/L	1	0	0	0.03	0.03	0.03	0.03		0.03	0.03	0.03
Magnesium, D	ug/L	1	0	0	947	947	947	947		947	947	947
Magnesium, T	ug/L	1	0	0	922	922	922	922		922	922	922
Manganese, D	ug/L	0	1	100	5	5	5	5		5	5	5
Manganese, T	ug/L	0	1	100	5	5	5	5		5	5	5
Mercury, D	ng/L	1	0	0	4	4	4	4		4	4	4
Mercury, T	ng/L	1	0	0	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Methyl Mercury	ng/L	0	1	100	0.1	0.1	0.1	0.1		0.1	0.1	0.1
Molybdenum, D	ug/L	1	0	0	0.07	0.07	0.07	0.07		0.07	0.07	0.07

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-5, North Tunnel adit												
Molybdenum, T	ug/L	0	1	100	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Nickel, D	ug/L	0	1	100	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Nickel, T	ug/L	0	1	100	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Nitrate+Nitrite as Nitrogen	mg/L	1	0	0	0.054	0.054	0.054	0.054		0.054	0.054	0.054
Nitrogen, Total as Nitrogen	mg/L	1	0	0	0.72	0.72	0.72	0.72		0.72	0.72	0.72
Nitrogen, Total Kjeldahl (TKN)	mg/L	1	0	0	0.67	0.67	0.67	0.67		0.67	0.67	0.67
Phosphorus, D	ug/L	0	1	100	20	20	20	20		20	20	20
Phosphorus, T	ug/L	0	1	100	20	20	20	20		20	20	20
Potassium, D	ug/L	1	0	0	623	623	623	623		623	623	623
Potassium, T	ug/L	1	0	0	642	642	642	642		642	642	642
Selenium, D	ug/L	0	1	100	1	1	1	1		1	1	1
Selenium, T	ug/L	0	1	100	1	1	1	1		1	1	1
Silver, D	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Silver, T	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Sodium, D	ug/L	1	0	0	2270	2270	2270	2270		2270	2270	2270
Sodium, T	ug/L	1	0	0	2180	2180	2180	2180		2180	2180	2180
Solids, Total Dissolved	mg/L	1	0	0	44.5	44.5	44.5	44.5		44.5	44.5	44.5
Solids, Total Suspended (TSS)	mg/L	0	1	100	5	5	5	5		5	5	5
Sulfate	mg/L	1	0	0	2.42	2.42	2.42	2.42		2.42	2.42	2.42
Temperature, Water	deg C	1	0	0	4.95	4.95	4.95	4.95		4.95	4.95	4.95
Thallium, D	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Thallium, T	ug/L	0	1	100	0.02	0.02	0.02	0.02		0.02	0.02	0.02
Turbidity	NTU	1	0	0	6.2	6.2	6.2	6.2		6.2	6.2	6.2
Vanadium (Fume Or Dust), D	ug/L	0	1	100	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	1	0	0	0.2	0.2	0.2	0.2		0.2	0.2	0.2
Zinc, D	ug/L	1	0	0	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Zinc, T	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-3, Monday Tunnel adit seep												
Alkalinity as CaCO3	mg/L	22	0	0	25	163	92.4227	98.85	39.6523	134.4	138.8	157.96
Aluminum (Fume Or Dust), D	ug/L	10	12	55	2	376	22.1864	4	79.1536	15.36	19.79	301.24
Aluminum (Fume Or Dust), T	ug/L	22	0	0	4.5	2600	362.9136	59.8	655.8483	1354.1	1468.5	2362.7
Ammonia as Nitrogen	mg/L	2	20	91	0.05	0.304	0.065	0.05	0.0558	0.05	0.1232	0.2668
Antimony, D	ug/L	22	0	0	0.2	3.9	1.2622	0.903	1.0645	2.4	2.904	3.6963
Antimony, T	ug/L	22	0	0	0.45	40.2	6.9582	2.565	11.1628	13.538	38.415	40.095
Arsenic (III), T	ug/L	22	0	0	1.1	2430	257.3273	6.35	630.3884	602.9	1770.1	2304
Arsenic, D	ug/L	22	0	0	13.2	101	36.9227	23.2	27.1358	63.3	94.085	99.887
Arsenic, T	ug/L	22	0	0	16.6	19600	1918.0864	109	4717.8059	4780	11083	17878
Barium, D	ug/L	22	0	0	51.5	147	111.7909	126.5	34.6361	145.6	146	146.79
Barium, T	ug/L	22	0	0	55.7	1780	300.9773	138	456.9195	624.9	1467.1	1723.3
Beryllium, D	ug/L	1	21	96	0.02	0.03	0.0205	0.02	0.0021	0.02	0.02	0.0279
Beryllium, T	ug/L	8	14	64	0.02	1.04	0.108	0.02	0.2375	0.1735	0.522	0.935
Bicarbonate as CaCO3	mg/L	22	0	0	25	163	91.3318	98.35	38.9215	134.1	138.8	157.96
Boron, D	ug/L	0	22	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	22	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	21	96	0.02	0.03	0.0205	0.02	0.0021	0.02	0.02	0.0279
Cadmium, T	ug/L	6	16	73	0.02	0.778	0.0767	0.02	0.1684	0.206	0.239	0.665
Calcium, D	ug/L	22	0	0	6930	29800	19611.3636	21700	7234.1856	26280	28390	29527
Calcium, T	ug/L	22	0	0	6930	38400	21050	21800	8895.0034	30970	33670	37434
Carbonate as CaCO3	mg/L	1	21	96	15	24	15.4091	15	1.9188	15	15	22.11
Chloride	mg/L	11	11	50	0.31	2.27	0.6632	0.4	0.5538	1.365	1.8165	2.1797
Chromium, D	ug/L	1	21	96	0.2	0.3	0.2045	0.2	0.0213	0.2	0.2	0.279
Chromium, T	ug/L	11	11	50	0.2	11.3	1.0223	0.2	2.3776	1.95	2.19	9.389
Cobalt, D	ug/L	19	3	14	0.02	0.91	0.287	0.175	0.291	0.7087	0.8722	0.9037
Cobalt, T	ug/L	21	1	5	0.02	28.1	3.0698	0.4305	6.8064	8.795	16.1385	25.664
Color	Pt-Co	23	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	36	0	0	0.089	0.81	0.2143	0.211	0.116	0.2705	0.28	0.6266
Copper, D	ug/L	19	3	14	0.1	0.5	0.2318	0.2	0.1445	0.457	0.46	0.4916
Copper, T	ug/L	18	4	18	0.1	45.1	2.935	0.3	9.5639	4.92	6.34	36.973
Cyanide, T	mg/L	0	22	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	38	0	0	2.62	9.52	4.965	4.755	1.5094	6.627	6.9025	8.5987
Flow velocity	CFS	37	0	0	0.0001	0.0359	0.0071	0.002	0.01	0.0258	0.0294	0.0341
Fluoride	mg/L	0	22	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	22	0	0	26.2	143	81.6955	83	34.9399	123.2	129.7	140.27
Iron, D	ug/L	13	9	41	20	841	198.6591	34.75	242.1469	491.2	597.5	791.02
Iron, T	ug/L	22	0	0	21	289000	33037.7955	1630	79080.6342	84570	240100	280390
Lead, D	ug/L	2	20	91	0.02	0.119	0.0254	0.02	0.0213	0.02	0.039	0.1024
Lead, T	ug/L	17	5	23	0.02	13.4	1.07	0.1	2.8753	2.558	2.841	11.1845
Magnesium, D	ug/L	22	0	0	1850	11200	6733.1818	6935	2865.1159	9968	10475	11053
Magnesium, T	ug/L	22	0	0	2160	11300	7053.1818	6955	3102.3499	10960	11095	11258
Manganese, D	ug/L	22	0	0	6.7	975	248.0818	102.55	296.0825	662	855.35	951.9
Manganese, T	ug/L	22	0	0	8.3	16200	1642.6136	234.5	3606.8119	4240	5549	13976.1
Mercury, D	ng/L	22	0	0	0.9	21	2.3091	1.35	4.1919	1.8	2.655	17.157
Mercury, T	ng/L	22	0	0	1.9	882	119.4727	10.5	227.2225	317.2	593.8	824.46
Methyl Mercury	ng/L	17	5	23	0.1	17.4	2.1127	0.3	4.5173	8.162	11.46	16.182
Molybdenum, D	ug/L	16	6	27	0.05	0.17	0.0811	0.0775	0.0297	0.11	0.11	0.1574

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-3, Monday Tunnel adit seep												
Molybdenum, T	ug/L	18	4	18	0.05	1.14	0.1476	0.085	0.2277	0.1791	0.237	0.951
Nickel, D	ug/L	12	10	46	0.2	2.09	0.3564	0.2	0.401	0.5	0.5	1.7561
Nickel, T	ug/L	12	10	46	0.2	4.61	0.7332	0.25	1.0886	2.18	2.585	4.1879
Nitrate+Nitrite as Nitrogen	mg/L	7	15	68	0.05	0.287	0.0935	0.05	0.0782	0.2068	0.2755	0.2853
Nitrogen, Total as Nitrogen	mg/L	16	6	27	0.25	5.53	0.8291	0.545	1.113	1.406	1.5735	4.7005
Nitrogen, Total Kjeldahl (TKN)	mg/L	16	6	27	0.2	5.5	0.7645	0.445	1.1202	1.331	1.57	4.6768
pH	pH	37	0	0	6.04	7.87	6.9922	6.95	0.4201	7.488	7.678	7.8268
Phosphorus, D	ug/L	1	21	96	42	46	42.1818	42	0.8528	42	42	45.16
Phosphorus, T	ug/L	12	10	46	35.6	4350	462.1273	45.55	1108.8799	813.5	3120.75	4116.9
Potassium, D	ug/L	22	0	0	785	1310	1112	1140	153.7088	1295	1309.5	1310
Potassium, T	ug/L	22	0	0	829	3850	1500.9091	1300	774.3582	2076	3353.5	3759.7
Selenium, D	ug/L	0	22	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	22	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	6	16	73	0.02	0.13	0.0368	0.02	0.0343	0.0942	0.1208	0.1283
Sodium, D	ug/L	22	0	0	3570	8620	6102.2727	6275	1609.3948	7953	8009	8491.9
Sodium, T	ug/L	22	0	0	3510	8410	6073.1818	6250	1587.6469	7739	8139	8357.5
Solids, Total Dissolved	mg/L	22	0	0	45	134	97.65	102.5	26.4897	124.9	125.95	132.32
Solids, Total Suspended (TSS)	mg/L	11	11	50	5	1320	160.0682	7.5	344.9132	645.5	861.35	1225.5
Sulfate	mg/L	22	0	0	2.39	6.09	3.2391	2.765	1.1359	5.468	6.012	6.0774
Temperature, Water	deg C	38	0	0	0.67	10.27	5.9671	6.095	2.1504	8.065	9.208	10.0406
Thallium, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	5	17	77	0.02	0.091	0.025	0.02	0.0162	0.029	0.049	0.0824
Turbidity	NTU	38	0	0	1.1	2000	90.5763	13.25	322.2991	124.7	159.85	1350.28
Vanadium (Fume Or Dust), D	ug/L	1	21	96	0.2	0.72	0.2236	0.2	0.1109	0.2	0.2	0.6108
Vanadium (Fume Or Dust), T	ug/L	16	6	27	0.2	20.2	2.5668	0.4	5.4305	5.14	16.795	19.612
Zinc, D	ug/L	21	1	5	0.8	8.1	2.5818	2	1.7786	4.93	5.57	7.575
Zinc, T	ug/L	21	1	5	0.9	479	49.3818	5.35	112.2167	181.33	209.2	422.51

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-4, Cinnabar Tunnel adit seep												
Alkalinity as CaCO3	mg/L	22	0	0	76.6	118	106.0364	108.5	9.5048	113.9	114	117.16
Aluminum (Fume Or Dust), D	ug/L	6	16	73	2	5.5	3.6864	4	0.8311	4	4	5.185
Aluminum (Fume Or Dust), T	ug/L	21	1	5	2	69.8	10.0409	5.2	14.8158	17.38	30.345	61.652
Ammonia as Nitrogen	mg/L	1	21	96	0.05	0.087	0.0517	0.05	0.0079	0.05	0.05	0.0792
Antimony, D	ug/L	22	0	0	42.8	56.3	49.7773	50.15	3.6733	54.7	54.89	56.006
Antimony, T	ug/L	22	0	0	43.4	54.6	49.3818	49.35	3.0398	53.03	54.24	54.537
Arsenic (III), T	ug/L	22	0	0	0.06	0.26	0.1425	0.15	0.0465	0.18	0.1895	0.2453
Arsenic, D	ug/L	22	0	0	82.3	127	109.9909	110.5	12.0505	121.9	124.85	126.58
Arsenic, T	ug/L	22	0	0	82.5	126	109.8727	111.5	11.7642	121	121.95	125.16
Barium, D	ug/L	22	0	0	6.3	13.8	9.825	9.685	1.5298	11	11.095	13.233
Barium, T	ug/L	22	0	0	6.4	11.4	9.6977	9.61	1.2818	11	11.19	11.358
Beryllium, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	22	0	0	76.6	118	105.9455	108.5	9.4646	113.9	114	117.16
Boron, D	ug/L	0	22	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	22	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	22	0	0	23200	34900	31168.1818	31450	2525.939	33490	33880	34690
Calcium, T	ug/L	22	0	0	23500	34500	31250	31750	2361.7487	33180	33770	34353
Carbonate as CaCO3	mg/L	0	22	100	15	15	15	15	0	15	15	15
Chloride	mg/L	9	13	59	0.2	0.43	0.3414	0.4	0.0839	0.4	0.4	0.4237
Chromium, D	ug/L	2	20	91	0.2	0.4	0.2091	0.2	0.0426	0.2	0.2	0.358
Chromium, T	ug/L	4	18	82	0.2	1	0.2455	0.2	0.1738	0.2	0.39	0.874
Cobalt, D	ug/L	9	13	59	0.02	0.11	0.0341	0.02	0.0244	0.069	0.0795	0.1037
Cobalt, T	ug/L	10	12	55	0.02	0.12	0.0368	0.02	0.027	0.079	0.08	0.1116
Color	Pt-Co	22	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	38	0	0	0.185	0.305	0.2364	0.238	0.0233	0.2595	0.2646	0.2935
Copper, D	ug/L	22	0	0	0.1	1.71	0.2923	0.2	0.3298	0.39	0.4285	1.4412
Copper, T	ug/L	19	3	14	0.1	0.2	0.1436	0.11	0.0488	0.2	0.2	0.2
Cyanide, T	mg/L	0	22	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	39	0	0	6.67	10.82	9.5877	9.67	0.9249	10.64	10.781	10.8086
Flow velocity	CFS	39	0	0	0.0105	0.3672	0.0955	0.0612	0.0844	0.2264	0.2859	0.3407
Fluoride	mg/L	0	22	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	22	0	0	84.9	125	114.1227	116.5	8.8987	121.8	122.95	124.58
Iron, D	ug/L	0	22	100	21	21	21	21	0	21	21	21
Iron, T	ug/L	3	19	86	21	88.8	25.1045	21	14.6137	29.64	33.735	77.271
Lead, D	ug/L	1	21	96	0.02	0.36	0.0355	0.02	0.0725	0.02	0.02	0.2886
Lead, T	ug/L	2	20	91	0.02	0.03	0.0205	0.02	0.0021	0.02	0.02	0.0279
Magnesium, D	ug/L	22	0	0	6260	9760	8715.4545	9010	841.0466	9479	9518	9709.6
Magnesium, T	ug/L	22	0	0	6360	9680	8769.0909	9035	800.5885	9406	9638	9673.7
Manganese, D	ug/L	0	22	100	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Manganese, T	ug/L	1	21	96	1.1	1.1	1.1	1.1	0	1.1	1.1	1.1
Mercury, D	ng/L	20	2	9	0.7	2.1	1.2682	1.1	0.3847	1.79	1.895	2.058
Mercury, T	ng/L	22	0	0	1.2	10.4	2.8273	2.3	1.9669	4.39	5.165	9.308
Methyl Mercury	ng/L	0	22	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	22	0	0	0.85	1.1	1.0168	1.035	0.0703	1.099	1.1	1.1

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-AS-4, Cinnabar Tunnel adit seep												
Molybdenum, T	ug/L	22	0	0	0.88	1.13	1.0072	1.01	0.0599	1.077	1.0895	1.1216
Nickel, D	ug/L	10	12	55	0.2	0.6	0.2768	0.2	0.1109	0.4	0.4	0.558
Nickel, T	ug/L	10	12	55	0.2	0.5	0.2682	0.2	0.1086	0.49	0.5	0.5
Nitrate+Nitrite as Nitrogen	mg/L	22	0	0	0.063	0.382	0.2094	0.198	0.0818	0.3389	0.3525	0.3759
Nitrogen, Total as Nitrogen	mg/L	17	5	23	0.25	1.23	0.655	0.645	0.2881	0.995	1.0665	1.1964
Nitrogen, Total Kjeldahl (TKN)	mg/L	15	7	32	0.2	1.17	0.4691	0.465	0.2612	0.738	0.9205	1.1196
pH	pH	38	0	0	6.51	8.07	7.3687	7.37	0.3262	7.706	7.804	8.0219
Phosphorus, D	ug/L	0	22	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	22	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	22	0	0	1340	1890	1595	1610	127.0077	1746	1769	1864.8
Potassium, T	ug/L	22	0	0	1400	1920	1603.6364	1615	128.2314	1728	1787	1892.7
Selenium, D	ug/L	0	22	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	22	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	21	96	0.02	0.03	0.0205	0.02	0.0021	0.02	0.02	0.0279
Sodium, D	ug/L	22	0	0	794	1190	959	960	94.1185	1040	1078	1166.9
Sodium, T	ug/L	22	0	0	810	1150	958.7727	992	93.3875	1030	1115.5	1143.7
Solids, Total Dissolved	mg/L	22	0	0	107	222	130.5455	129	23.2619	145.3	146	206.04
Solids, Total Suspended (TSS)	mg/L	0	22	100	5	5	5	5	0	5	5	5
Sulfate	mg/L	22	0	0	9.34	16.2	12.4891	12.7	1.8295	14.5	15.07	15.969
Temperature, Water	deg C	39	0	0	2.27	9.08	5.1674	5.08	1.549	7.044	7.241	8.3846
Thallium, D	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	22	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	39	0	0	0	4.9	1.7359	1.6	1.0886	3.1	3.64	4.558
Vanadium (Fume Or Dust), D	ug/L	1	21	96	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	1	21	96	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Zinc, D	ug/L	12	10	46	0.5	10.1	1.8136	2	1.9752	2	2.57	8.525
Zinc, T	ug/L	6	16	73	0.5	2	1.6545	2	0.5926	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SEBS-2, south Bradley waste rock seep												
Alkalinity as CaCO3	mg/L	15	0	0	90.2	122	108.9467	109	8.4659	119.2	122	122
Aluminum (Fume Or Dust), D	ug/L	2	13	87	2.2	4	3.8467	4	0.4734	4	4	4
Aluminum (Fume Or Dust), T	ug/L	15	0	0	3.8	25.7	8.5467	6.7	5.9907	15.68	18.77	24.314
Ammonia as Nitrogen	mg/L	1	14	93	0.05	0.088	0.0525	0.05	0.0098	0.05	0.0614	0.0827
Antimony, D	ug/L	15	0	0	51.1	59.7	55.5333	55.5	2.4532	58.54	59	59.56
Antimony, T	ug/L	15	0	0	52.3	60.1	55.7267	55.3	2.2128	58.36	59.33	59.946
Arsenic (III), T	ug/L	15	0	0	0.17	1.74	0.687	0.61	0.342	0.876	1.152	1.6224
Arsenic, D	ug/L	15	0	0	118	162	138.3333	137	11.3683	149	152.9	160.18
Arsenic, T	ug/L	15	0	0	124	169	141.4	140	11.9331	154	159.9	167.18
Barium, D	ug/L	15	0	0	10.4	14.7	12.74	12.9	1.276	14.4	14.49	14.658
Barium, T	ug/L	15	0	0	10.8	15.9	13.1333	13	1.5267	15.32	15.83	15.886
Beryllium, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	15	0	0	90.2	122	108.9467	109	8.4659	119.2	122	122
Boron, D	ug/L	0	15	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	15	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	1	14	93	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	15	0	0	31100	40200	34526.6667	34400	2443.7871	36600	37680	39696
Calcium, T	ug/L	15	0	0	30800	39800	34586.6667	34500	2375.1291	37020	37910	39422
Carbonate as CaCO3	mg/L	0	15	100	15	15	15	15	0	15	15	15
Chloride	mg/L	4	11	73	0.2	0.4	0.3573	0.4	0.0748	0.4	0.4	0.4
Chromium, D	ug/L	2	13	87	0.2	0.5	0.2267	0.2	0.0799	0.26	0.36	0.472
Chromium, T	ug/L	3	12	80	0.2	1.2	0.28	0.2	0.2569	0.3	0.57	1.074
Cobalt, D	ug/L	4	11	73	0.02	0.04	0.0247	0.02	0.0083	0.04	0.04	0.04
Cobalt, T	ug/L	8	7	47	0.02	0.05	0.0311	0.02	0.0141	0.05	0.05	0.05
Color	Pt-Co	15	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	25	0	0	0.213	0.319	0.2534	0.252	0.0252	0.2782	0.2998	0.3156
Copper, D	ug/L	12	3	20	0.1	0.3	0.1807	0.2	0.0769	0.296	0.3	0.3
Copper, T	ug/L	9	6	40	0.1	0.2	0.118	0.1	0.0359	0.18	0.2	0.2
Cyanide, T	mg/L	0	15	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	26	0	0	6.55	10.58	9.5019	9.695	0.8833	10.23	10.425	10.55
Flow velocity	CFS	26	0	0	0.0213	0.5392	0.2713	0.2661	0.1521	0.4715	0.5128	0.5359
Fluoride	mg/L	1	14	93	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	15	0	0	113	146	126	127	8.6106	133	136.9	144.18
Iron, D	ug/L	0	15	100	21	21	21	21	0	21	21	21
Iron, T	ug/L	11	4	27	20	72.8	30.9333	25.9	15.1103	49.8	58.94	70.028
Lead, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	3	12	80	0.02	0.04	0.0219	0.02	0.0053	0.0244	0.0302	0.038
Magnesium, D	ug/L	15	0	0	8520	11600	9690	9650	755.3145	10320	10760	11432
Magnesium, T	ug/L	15	0	0	8830	11400	9616	9730	684.2598	10120	10560	11232
Manganese, D	ug/L	3	12	80	1.1	2	1.2667	1.1	0.3457	1.9	1.93	1.986
Manganese, T	ug/L	8	7	47	1	6.4	1.9467	1	1.6453	4.2	5.14	6.148
Mercury, D	ng/L	11	4	27	0.5	1.6	0.966	1	0.2941	1.28	1.46	1.572
Mercury, T	ng/L	15	0	0	1.1	4.9	2.1207	1.9	1.0187	3.1	3.78	4.676
Methyl Mercury	ng/L	1	14	93	0.1	0.11	0.1007	0.1	0.0026	0.1	0.103	0.1086
Molybdenum, D	ug/L	15	0	0	0.78	1.13	0.982	1.01	0.0933	1.062	1.088	1.1216

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SEBS-2, south Bradley waste rock seep												
Molybdenum, T	ug/L	15	0	0	0.88	1.12	0.9865	0.993	0.0669	1.056	1.078	1.1116
Nickel, D	ug/L	5	10	67	0.2	0.4	0.2467	0.2	0.0834	0.4	0.4	0.4
Nickel, T	ug/L	4	11	73	0.2	0.7	0.26	0.2	0.1352	0.36	0.49	0.658
Nitrate+Nitrite as Nitrogen	mg/L	13	2	13	0.05	0.272	0.1369	0.131	0.0682	0.2202	0.2461	0.2668
Nitrogen, Total as Nitrogen	mg/L	13	2	13	0.33	0.85	0.572	0.58	0.1551	0.764	0.829	0.8458
Nitrogen, Total Kjeldahl (TKN)	mg/L	12	3	20	0.28	0.69	0.454	0.42	0.1135	0.574	0.62	0.676
pH	pH	25	0	0	6.38	8	7.3868	7.37	0.3638	7.788	7.88	7.976
Phosphorus, D	ug/L	0	15	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	0	15	100	42	42	42	42	0	42	42	42
Potassium, D	ug/L	15	0	0	1510	1910	1670.6667	1660	118.3498	1796	1847	1897.4
Potassium, T	ug/L	15	0	0	1520	1800	1650	1610	100.3565	1766	1779	1795.8
Selenium, D	ug/L	0	15	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	15	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	15	0	0	885	1200	1056.4667	1050	80.0392	1142	1165	1193
Sodium, T	ug/L	15	0	0	879	1160	1043.9333	1050	74.9642	1138	1153	1158.6
Solids, Total Dissolved	mg/L	15	0	0	104	196	146.1333	144	21.8006	167.4	177.1	192.22
Solids, Total Suspended (TSS)	mg/L	0	15	100	5	5	5	5	0	5	5	5
Sulfate	mg/L	15	0	0	13.7	39.7	20.7067	19.6	7.1711	28.2	33.19	38.398
Temperature, Water	deg C	26	0	0	4.45	12.4	6.6412	6.405	1.7406	8.3	9.3275	11.7125
Thallium, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	26	0	0	0.1	8	2.5423	2.2	1.9559	5.05	7.05	7.875
Vanadium (Fume Or Dust), D	ug/L	1	14	93	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	1	14	93	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Zinc, D	ug/L	5	10	67	0.5	2	1.6133	2	0.6357	2	2	2
Zinc, T	ug/L	4	11	73	0.5	2	1.68	2	0.5809	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
mS/cm millisiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SEBS-1, north Bradley waste rock seep												
Alkalinity as CaCO3	mg/L	15	0	0	154	175	167.0667	167	6.2731	174	174.3	174.86
Aluminum (Fume Or Dust), D	ug/L	4	11	73	2.3	5.5	3.9067	4	0.6573	4	4.45	5.29
Aluminum (Fume Or Dust), T	ug/L	14	1	7	4	90.6	26.38	17.7	23.9568	56.28	74.36	87.352
Ammonia as Nitrogen	mg/L	1	14	93	0.05	0.06	0.0507	0.05	0.0026	0.05	0.053	0.0586
Antimony, D	ug/L	15	0	0	10.9	22.4	17.8933	19	3.2677	20.96	21.56	22.232
Antimony, T	ug/L	15	0	0	12.1	22	17.9133	18.9	2.9014	20.48	21.16	21.832
Arsenic (III), T	ug/L	15	0	0	0.13	3.9	1.3495	0.99	1.057	2.82	3.48	3.816
Arsenic, D	ug/L	15	0	0	84.2	125	99.4333	97.5	10.5022	109.6	114.5	122.9
Arsenic, T	ug/L	15	0	0	90.6	201	122.0067	108	31.4955	162.2	180	196.8
Barium, D	ug/L	15	0	0	117	162	138.2	139	12.0012	149.6	153.6	160.32
Barium, T	ug/L	15	0	0	117	157	141.7333	143	12.4927	155	155.6	156.72
Beryllium, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	14	93	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	15	0	0	154	175	167.0667	167	6.2731	174	174.3	174.86
Boron, D	ug/L	0	15	100	21	21	21	21	0	21	21	21
Boron, T	ug/L	0	15	100	21	21	21	21	0	21	21	21
Cadmium, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Cadmium, T	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Calcium, D	ug/L	15	0	0	50900	61300	55493.3333	55100	2859.9367	58960	59830	61006
Calcium, T	ug/L	15	0	0	50800	59200	54993.3333	53800	2881.5836	58880	59060	59172
Carbonate as CaCO3	mg/L	0	15	100	15	15	15	15	0	15	15	15
Chloride	mg/L	12	3	20	0.37	0.75	0.4493	0.43	0.093	0.506	0.596	0.7192
Chromium, D	ug/L	7	8	53	0.2	0.6	0.254	0.2	0.1243	0.42	0.53	0.586
Chromium, T	ug/L	11	4	27	0.2	0.4	0.2347	0.2	0.0612	0.3	0.33	0.386
Cobalt, D	ug/L	6	9	60	0.02	0.06	0.028	0.02	0.0142	0.05	0.053	0.0586
Cobalt, T	ug/L	14	1	7	0.02	0.14	0.0487	0.05	0.0326	0.076	0.098	0.1316
Color	Pt-Co	15	0	0	0	0	0	0	0	0	0	0
Conductivity	mS/cm	25	0	0	0.399	0.483	0.44	0.445	0.0246	0.4726	0.4762	0.4816
Copper, D	ug/L	11	4	27	0.1	0.5	0.1993	0.2	0.1237	0.36	0.43	0.486
Copper, T	ug/L	10	5	33	0.1	0.2	0.1347	0.1	0.0481	0.2	0.2	0.2
Cyanide, T	mg/L	0	15	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	26	0	0	5.47	10.11	8.5335	8.61	0.8521	9.355	9.615	9.9925
Flow velocity	CFS	26	0	0	0.006	0.0843	0.0329	0.0278	0.0198	0.0551	0.0633	0.0796
Fluoride	mg/L	0	15	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Hardness as CaCO3	mg/L	15	0	0	210	241	222.6667	218	11.4247	238.6	239.6	240.72
Iron, D	ug/L	2	13	87	23	53.8	41.52	42	5.9569	42	45.54	52.148
Iron, T	ug/L	14	1	7	21	805	192.0333	119	208.4736	395.8	564.2	756.84
Lead, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Lead, T	ug/L	6	9	60	0.02	0.06	0.0263	0.02	0.0123	0.042	0.053	0.0586
Magnesium, D	ug/L	15	0	0	19300	23300	20986.6667	20800	1174.0447	22540	22880	23216
Magnesium, T	ug/L	15	0	0	19000	22800	20686.6667	20500	1093.4001	21980	22310	22702
Manganese, D	ug/L	11	4	27	1	18.1	3.7467	2.7	4.4423	7.06	11.52	16.784
Manganese, T	ug/L	15	0	0	1.7	38.6	10.5667	6.8	9.2024	17.94	25.51	35.982
Mercury, D	ng/L	4	11	73	0.3	1.5	0.56	0.5	0.2667	0.56	0.87	1.374
Mercury, T	ng/L	15	0	0	0.5	8.2	2.468	1.5	2.1905	4.88	6.1	7.78
Methyl Mercury	ng/L	1	14	93	0.1	0.15	0.1033	0.1	0.0129	0.1	0.115	0.143
Molybdenum, D	ug/L	15	0	0	0.7	1.21	1.0051	1.04	0.1519	1.156	1.189	1.2058

EFSFSR Adit Seep and Seep Sites												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
YP-SEBS-1, north Bradley waste rock seep												
Molybdenum, T	ug/L	15	0	0	0.74	1.13	0.9981	1.02	0.1104	1.106	1.13	1.13
Nickel, D	ug/L	7	8	53	0.2	0.6	0.32	0.2	0.1656	0.56	0.6	0.6
Nickel, T	ug/L	5	10	67	0.2	0.6	0.28	0.2	0.1424	0.5	0.53	0.586
Nitrate+Nitrite as Nitrogen	mg/L	15	0	0	0.085	0.363	0.2164	0.236	0.0703	0.2672	0.2979	0.35
Nitrogen, Total as Nitrogen	mg/L	13	2	13	0.4	0.9	0.666	0.71	0.1513	0.818	0.851	0.8902
Nitrogen, Total Kjeldahl (TKN)	mg/L	13	2	13	0.31	0.66	0.48	0.45	0.1021	0.626	0.639	0.6558
pH	pH	25	0	0	6.56	7.82	7.3032	7.28	0.2502	7.62	7.648	7.7792
Phosphorus, D	ug/L	0	15	100	42	42	42	42	0	42	42	42
Phosphorus, T	ug/L	2	13	87	20.7	42	40	42	5.7903	42	42	42
Potassium, D	ug/L	15	0	0	1680	2110	1892	1890	107.451	2016	2061	2100.2
Potassium, T	ug/L	15	0	0	1710	2120	1879.3333	1860	110.8066	2006	2043	2104.6
Selenium, D	ug/L	0	15	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	15	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	1	14	93	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Sodium, D	ug/L	15	0	0	2350	3380	2762	2760	301.8562	3116	3212	3346.4
Sodium, T	ug/L	15	0	0	2290	3100	2726.6667	2680	279.1484	3092	3100	3100
Solids, Total Dissolved	mg/L	15	0	0	218	300	264.4	259	23.886	297.8	299.3	299.86
Solids, Total Suspended (TSS)	mg/L	3	12	80	5	16	6.6	5	3.5817	12	14.6	15.72
Sulfate	mg/L	15	0	0	49.6	86.5	62.5933	60.9	10.5379	75.74	79.08	85.016
Temperature, Water	deg C	26	0	0	4.93	9.25	7.3438	7.235	1.1213	8.71	8.8825	9.17
Thallium, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Turbidity	NTU	26	0	0	0.3	25.2	5.1731	3.7	5.9121	10.5	18.1	23.95
Vanadium (Fume Or Dust), D	ug/L	0	15	100	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	4	11	73	0.2	0.4	0.2267	0.2	0.0594	0.3	0.33	0.386
Zinc, D	ug/L	7	8	53	0.5	2	1.4867	2	0.614	2	2	2
Zinc, T	ug/L	5	10	67	0.5	2	1.52	2	0.7033	2	2	2

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter

mS/cm micro Siemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen
Pt-Co Platinum-Cobalt Scale

Appendix C. Groundwater Quality Data Summary Statistics

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A01, upper Meadow Creek Valley												
Alkalinity as CaCO3	mg/L	21	0	0	28	119	60.7095	64	18.3655	69	70	109.2
Aluminum (Fume Or Dust), D	ug/L	21	0	0	1.3	39.1	7.1	2.9	9.88	15.2	29.8	37.24
Aluminum (Fume Or Dust), T	ug/L	21	0	0	3.6	719	81.1524	17	162.9028	211	285	632.2
Ammonia as Nitrogen	mg/L	6	15	71	0.02	0.083	0.0471	0.05	0.0128	0.05	0.05	0.0764
Antimony, D	ug/L	21	0	0	0.943	3.18	2.0006	1.99	0.5688	2.57	2.63	3.07
Antimony, T	ug/L	21	0	0	0.916	2.69	1.9727	1.95	0.5184	2.62	2.66	2.684
Arsenic (III), T	ug/L	21	0	0	0.008	0.293	0.0369	0.023	0.0597	0.041	0.051	0.2446
Arsenic, D	ug/L	21	0	0	4.7	9.3	6.3343	6.24	1.0313	7.17	7.57	8.954
Arsenic, T	ug/L	21	0	0	5	10.8	6.5952	6.4	1.1614	7.23	7.79	10.198
Barium, D	ug/L	21	0	0	0.988	3.48	2.0418	1.98	0.5922	2.73	2.73	3.33
Barium, T	ug/L	21	0	0	1.35	11.5	2.7867	2.35	2.1142	3.04	4.62	10.124
Beryllium, D	ug/L	4	17	81	0.002	0.02	0.0171	0.02	0.0062	0.02	0.02	0.02
Beryllium, T	ug/L	7	14	67	0.005	0.209	0.0287	0.02	0.0417	0.026	0.036	0.1744
Bicarbonate as CaCO3	mg/L	21	0	0	28	119	60.281	64	18.2671	67	70	109.2
Boron, D	ug/L	18	3	14	4.1	21	8.1762	6	5.5361	21	21	21
Boron, T	ug/L	19	2	10	4.6	20	8.5619	6.5	4.6217	13.4	20	20
Cadmium, D	ug/L	7	14	67	0.005	0.02	0.0158	0.02	0.0062	0.02	0.02	0.02
Cadmium, T	ug/L	9	12	57	0.005	0.045	0.0168	0.02	0.0089	0.02	0.02	0.04
Calcium, D	ug/L	21	0	0	8450	22700	17985.7143	19800	4521.7293	21700	22600	22680
Calcium, T	ug/L	21	0	0	8410	22700	18297.619	20500	4384.7553	21700	21800	22520
Carbonate as CaCO3	mg/L	1	20	95	9	15	14.7143	15	1.3093	15	15	15
Chloride	mg/L	21	0	0	0.18	0.55	0.3195	0.28	0.1111	0.48	0.54	0.548
Chromium, D	ug/L	21	0	0	0.13	0.43	0.281	0.29	0.0782	0.37	0.39	0.422
Chromium, T	ug/L	21	0	0	0.15	1.39	0.4205	0.37	0.2604	0.58	0.66	1.244
Cobalt, D	ug/L	21	0	0	0.009	0.826	0.1191	0.043	0.2036	0.419	0.462	0.7532
Cobalt, T	ug/L	21	0	0	0.007	0.597	0.0704	0.035	0.1272	0.131	0.149	0.5074
Conductivity	uS/cm	21	0	0	39.72	140.51	83.629	81.78	25.0576	121.98	126.7	137.748
Copper, D	ug/L	21	0	0	0.06	0.63	0.1967	0.16	0.136	0.33	0.4	0.584
Copper, T	ug/L	21	0	0	0.08	1.51	0.2795	0.15	0.3554	0.64	0.98	1.404
Cyanide, T	mg/L	4	17	81	0.0009	0.006	0.0026	0.0027	0.001	0.0027	0.0027	0.0053
Dissolved Oxygen	mg/L	21	0	0	7.83	9.83	9.031	9.02	0.4818	9.55	9.62	9.788
Fluoride	mg/L	17	4	19	0.03	0.2	0.0905	0.07	0.0613	0.2	0.2	0.2
Hardness as CaCO3	mg/L	21	0	0	23.8	63.8	52.0238	59	12.4641	61.8	62.1	63.46
Iron, D	ug/L	9	12	57	3.3	41.9	18.0429	21	8.4257	21	24.8	38.48
Iron, T	ug/L	20	1	5	6.6	1540	143.2571	28.4	337.3524	346	413	1314.6
Lead, D	ug/L	14	7	33	0.004	0.02	0.0126	0.011	0.0057	0.02	0.02	0.02
Lead, T	ug/L	18	3	14	0.007	2.09	0.132	0.02	0.4502	0.08	0.178	1.7076
Magnesium, D	ug/L	21	0	0	668	2170	1479.1905	1560	379.7227	1850	1910	2118
Magnesium, T	ug/L	21	0	0	683	2150	1542.3333	1670	391.5208	2000	2000	2120
Manganese, D	ug/L	17	4	19	0.07	4.1	0.8633	0.3	1.0133	1.8	2.5	3.78
Manganese, T	ug/L	19	2	10	0.13	65.5	4.5752	1.1	14.0983	6.6	7.8	53.96
Mercury, D	ng/L	20	1	5	0.17	2.09	0.5571	0.47	0.4077	0.85	0.92	1.856

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A01, upper Meadow Creek Valley												
Mercury, T	ng/L	20	1	5	0.32	5.16	1.0095	0.55	1.1024	1.95	2.53	4.634
Methyl Mercury	ng/L	0	21	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	21	0	0	0.74	1.84	1.2432	1.24	0.2832	1.66	1.66	1.804
Molybdenum, T	ug/L	21	0	0	0.713	1.8	1.2445	1.27	0.26	1.55	1.63	1.766
Nickel, D	ug/L	21	0	0	0.04	0.55	0.2086	0.17	0.1478	0.48	0.5	0.54
Nickel, T	ug/L	20	1	5	0.05	1.22	0.2638	0.2	0.2443	0.41	0.44	1.064
Nitrate+Nitrite as Nitrogen	mg/L	19	2	10	0.035	0.162	0.0817	0.072	0.0352	0.13	0.141	0.1578
Nitrogen, Total as Nitrogen	mg/L	20	1	5	0.31	1.32	0.5257	0.48	0.207	0.61	0.63	1.182
Nitrogen, Total Kjeldahl (TKN)	mg/L	21	0	0	0.27	1.24	0.4443	0.42	0.2	0.53	0.53	1.098
Oxidation-Reduction potential	volts	20	0	0	-0.148	0.254	0.0798	0.0984	0.1006	0.1567	0.1676	0.2367
pH	pH	21	0	0	7.3	7.92	7.5362	7.56	0.1726	7.76	7.86	7.908
Phosphorus, D	ug/L	16	5	24	3.1	110	20.5857	9	25.5456	42	42	96.4
Phosphorus, T	ug/L	18	3	14	3.5	259	27.6143	11.3	54.6369	42	42	215.6
Potassium, D	ug/L	21	0	0	498	896	771.4762	795	110.3561	873	890	894.8
Potassium, T	ug/L	21	0	0	520	1140	817.9048	825	118.1795	912	913	1094.6
Selenium, D	ug/L	0	21	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	21	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	3	18	86	0.005	0.02	0.0181	0.02	0.0048	0.02	0.02	0.02
Silver, T	ug/L	7	14	67	0.002	0.104	0.0203	0.02	0.0202	0.02	0.02	0.0872
Sodium, D	ug/L	21	0	0	1330	6490	2720.4762	2630	981.5624	3130	3520	5896
Sodium, T	ug/L	21	0	0	1930	7530	2826.1905	2640	1191.3374	2950	4340	6892
Solids, Total Dissolved	mg/L	21	0	0	40	126	75.6952	80	18.7362	94	97	120.2
Sulfate	mg/L	21	0	0	2.79	5.05	3.9067	3.9	0.479	4.55	4.64	4.968
Temperature, Water	deg C	21	0	0	5.39	9.2	6.2876	5.99	0.8856	7.16	7.85	8.93
Thallium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	5	16	76	0.003	0.021	0.0175	0.02	0.0056	0.02	0.02	0.0208
Turbidity	NTU	20	0	0	0	666.4	37.2325	1.215	148.3473	16.51	69.61	547.042
Turbidity	NTU	3	0	0	0.08	0.22	0.1633	0.19	0.0737	0.214	0.217	0.2194
Vanadium (Fume Or Dust), D	ug/L	21	0	0	0.23	0.39	0.3097	0.31	0.0382	0.34	0.39	0.39
Vanadium (Fume Or Dust), T	ug/L	21	0	0	0.29	1.05	0.417	0.34	0.1912	0.6	0.82	1.004
Zinc, D	ug/L	20	1	5	0.19	1.8	0.6481	0.5	0.4611	1.5	1.66	1.772
Zinc, T	ug/L	20	1	5	0.18	6.7	0.859	0.49	1.3808	1.32	1.36	5.632

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B01, upper Meadow Creek Valley												
Alkalinity as CaCO3	mg/L	22	0	0	63	88	66.4682	65	5.7852	67.9	78.07	86.026
Aluminum (Fume Or Dust), D	ug/L	22	0	0	3.5	181	21.2727	7.95	41.8683	32.22	103.355	165.46
Aluminum (Fume Or Dust), T	ug/L	22	0	0	6.8	1660	102.0955	15.65	351.1608	49.79	223.87	1360.33
Ammonia as Nitrogen	mg/L	5	17	77	0.024	0.05	0.0465	0.05	0.0086	0.05	0.05	0.05
Antimony, D	ug/L	22	0	0	2.05	14.3	4.5418	4	2.2724	4.799	5.484	12.4562
Antimony, T	ug/L	22	0	0	3.47	12.6	4.5145	4.065	1.8728	4.695	5.6405	11.1489
Arsenic (III), T	ug/L	22	0	0	0.039	7.82	0.458	0.081	1.6483	0.1755	0.5694	6.3017
Arsenic, D	ug/L	22	0	0	6.8	19.6	13.6409	13.45	2.2819	15.29	16.155	18.886
Arsenic, T	ug/L	22	0	0	11.8	32.8	14.6318	13.6	4.259	16.13	16.295	29.335
Barium, D	ug/L	22	0	0	1.81	8.28	3.8727	3.535	1.3284	4.978	6.1805	7.8516
Barium, T	ug/L	22	0	0	3.04	21.5	4.7227	3.605	3.88	5.121	7.2585	18.5327
Beryllium, D	ug/L	2	20	91	0.014	0.053	0.0212	0.02	0.0072	0.02	0.02	0.0461
Beryllium, T	ug/L	5	17	77	0.003	0.562	0.0442	0.02	0.1158	0.02	0.0418	0.453
Bicarbonate as CaCO3	mg/L	22	0	0	57.8	78.6	65.2091	65	3.6507	67.9	68	76.374
Boron, D	ug/L	21	1	5	2	20	8.7227	7.8	3.7542	12.79	16.515	19.307
Boron, T	ug/L	22	0	0	6.8	17	9.9227	9.05	2.7191	13.89	14.38	16.454
Cadmium, D	ug/L	11	11	50	0.007	0.048	0.0175	0.02	0.0088	0.02	0.0257	0.0434
Cadmium, T	ug/L	15	7	32	0.005	0.039	0.0161	0.0155	0.0081	0.0245	0.0278	0.0367
Calcium, D	ug/L	22	0	0	7500	21100	18681.8182	19450	2903.4686	20590	20790	21037
Calcium, T	ug/L	22	0	0	17100	21200	19331.8182	19250	1033.8953	20590	20600	21074
Carbonate as CaCO3	mg/L	2	20	91	6.6	20	14.8455	15	2.1273	15	15	18.95
Chloride	mg/L	22	0	0	0.27	0.79	0.4118	0.355	0.1366	0.563	0.7315	0.7795
Chromium, D	ug/L	22	0	0	0.13	0.52	0.2127	0.185	0.0883	0.313	0.339	0.4822
Chromium, T	ug/L	22	0	0	0.13	3.43	0.4055	0.225	0.6904	0.512	0.7675	2.8735
Cobalt, D	ug/L	20	2	9	0.003	1.67	0.164	0.043	0.3497	0.2859	0.3004	1.3825
Cobalt, T	ug/L	18	4	18	0.007	0.73	0.0579	0.0205	0.1508	0.0512	0.0653	0.5906
Conductivity	uS/cm	22	0	0	86.28	151.17	107.1032	93.99	22.5468	136.648	143.208	149.5677
Copper, D	ug/L	22	0	0	0.04	0.53	0.1645	0.12	0.1373	0.401	0.4675	0.5174
Copper, T	ug/L	22	0	0	0.07	4.43	0.3418	0.135	0.9157	0.302	0.3385	3.5711
Cyanide, T	mg/L	3	19	86	0.0015	0.0047	0.0043	0.0047	0.001	0.0047	0.0047	0.0047
Dissolved Oxygen	mg/L	22	0	0	2.11	8.49	4.0459	4.445	1.429	4.982	5.142	7.7886
Fluoride	mg/L	22	0	0	0.15	0.31	0.2323	0.23	0.0451	0.289	0.309	0.31
Hardness as CaCO3	mg/L	22	0	0	51.5	61.4	56.7	56.7	2.664	59.69	60.46	61.211
Iron, D	ug/L	14	8	36	4.4	323	29.3909	13.9	66.6904	21	58.43	267.854
Iron, T	ug/L	20	2	9	6.5	3380	184.1136	19.6	715.3201	62	222.65	2718.71
Lead, D	ug/L	14	8	36	0.003	0.288	0.0267	0.017	0.0589	0.0254	0.0288	0.2336
Lead, T	ug/L	22	0	0	0.007	2.93	0.1613	0.015	0.6194	0.0881	0.1547	2.3479
Magnesium, D	ug/L	22	0	0	760	2120	1895.9091	1950	272.6354	2094	2109.5	2117.9
Magnesium, T	ug/L	22	0	0	1830	3790	2046.8182	1955	400.742	2117	2177	3451.9
Manganese, D	ug/L	19	3	14	0.09	12.2	1.2977	0.69	2.4863	1.73	2.275	10.121
Manganese, T	ug/L	22	0	0	0.4	78.2	5.5632	1.2	16.3346	5.68	5.985	63.038
Mercury, D	ng/L	21	1	5	0.2	3.05	0.5923	0.4	0.7306	0.641	2.474	2.9492

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B01, upper Meadow Creek Valley												
Mercury, T	ng/L	22	0	0	0.21	20.5	1.5632	0.595	4.2507	0.95	2.2515	16.6822
Methyl Mercury	ng/L	1	21	96	0.1	0.12	0.1009	0.1	0.0043	0.1	0.1	0.1158
Molybdenum, D	ug/L	22	0	0	2.8	9.67	6.2959	6.085	1.3603	7.723	8.074	9.3382
Molybdenum, T	ug/L	22	0	0	5.04	8.75	6.3968	6.095	0.9908	7.726	7.931	8.5799
Nickel, D	ug/L	21	1	5	0.05	0.98	0.2055	0.17	0.2015	0.258	0.507	0.8834
Nickel, T	ug/L	18	4	18	0.04	3.89	0.3486	0.19	0.7953	0.342	0.35	3.1466
Nitrate+Nitrite as Nitrogen	mg/L	21	1	5	0.024	0.079	0.0459	0.0405	0.0155	0.0729	0.0778	0.0788
Nitrogen, Total as Nitrogen	mg/L	20	2	9	0.24	2.04	0.5927	0.46	0.4226	0.777	1.5305	1.9413
Nitrogen, Total Kjeldahl (TKN)	mg/L	22	0	0	0.21	1.98	0.5482	0.41	0.4164	0.737	1.462	1.8792
Oxidation-Reduction potential	volts	21	0	0	-0.224	0.202	0.0295	0.045	0.1065	0.125	0.132	0.188
pH	pH	22	0	0	8.31	8.98	8.6068	8.605	0.1647	8.779	8.9035	8.9653
Phosphorus, D	ug/L	17	5	23	3.1	99.5	18.8318	7.5	23.6861	42	42	87.425
Phosphorus, T	ug/L	18	4	18	3.2	112	20.2318	7.4	26.3133	42	54.255	100.009
Potassium, D	ug/L	22	0	0	271	836	671.5909	669	102.9931	749.4	762.35	820.67
Potassium, T	ug/L	22	0	0	580	1440	713.7727	690	168.1196	739.7	769.45	1299.51
Selenium, D	ug/L	0	22	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	22	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	3	19	86	0.006	0.02	0.0183	0.02	0.0044	0.02	0.02	0.02
Silver, T	ug/L	9	13	59	0.004	0.156	0.0225	0.02	0.0306	0.0209	0.0248	0.1285
Sodium, D	ug/L	22	0	0	2320	24500	7280	6705	4021.6983	7631	8439.5	21135.8
Sodium, T	ug/L	22	0	0	5560	25100	7481.8182	6775	4001.1696	7610	8294	21578.3
Solids, Total Dissolved	mg/L	22	0	0	62	142	87.3273	84.5	15.1941	97.6	103.7	134.02
Sulfate	mg/L	22	0	0	6.95	20.5	8.4955	7.985	2.7617	8.947	9.493	18.1942
Temperature, Water	deg C	22	0	0	5.22	7.79	6.7836	6.86	0.6086	7.363	7.5695	7.7459
Thallium, D	ug/L	4	18	82	0.003	0.02	0.0175	0.02	0.0055	0.02	0.02	0.02
Thallium, T	ug/L	6	16	73	0.002	0.09	0.0206	0.02	0.017	0.02	0.0295	0.0774
Turbidity	NTU	21	0	0	0	131.6	11.0005	0.76	28.5947	19.18	22.7	109.82
Turbidity	NTU	3	0	0	0.09	0.27	0.1867	0.2	0.0907	0.256	0.263	0.2686
Vanadium (Fume Or Dust), D	ug/L	22	0	0	0.17	0.54	0.3286	0.32	0.0638	0.3863	0.3899	0.5085
Vanadium (Fume Or Dust), T	ug/L	22	0	0	0.3	1.13	0.3756	0.33	0.1729	0.4069	0.4613	0.9901
Zinc, D	ug/L	21	1	5	0.22	3.82	0.7964	0.545	0.7826	1.418	1.687	3.3748
Zinc, T	ug/L	21	1	5	0.24	15.3	1.3818	0.65	3.138	1.533	1.76	12.4587

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A02, Meadow Creek Valley on SODA												
Alkalinity as CaCO3	mg/L	24	0	0	126	159	137.4167	136.5	7.4596	147	147.85	156.47
Aluminum (Fume Or Dust), D	ug/L	24	0	0	2.4	23.9	4.7083	3.7	4.4052	5.25	10.035	20.887
Aluminum (Fume Or Dust), T	ug/L	24	0	0	3	197	35.0417	19	43.853	61.23	113.15	179.75
Ammonia as Nitrogen	mg/L	10	14	58	0.021	0.074	0.0433	0.05	0.013	0.05	0.05	0.0685
Antimony, D	ug/L	24	0	0	0.047	0.198	0.0898	0.081	0.0294	0.1097	0.1185	0.1801
Antimony, T	ug/L	24	0	0	0.048	0.242	0.0879	0.08	0.0386	0.1128	0.1276	0.2162
Arsenic (III), T	ug/L	24	0	0	0.384	4.74	2.891	2.92	1.1939	4.505	4.6905	4.7331
Arsenic, D	ug/L	24	0	0	4.8	6.06	5.4621	5.495	0.2744	5.694	5.7425	5.9887
Arsenic, T	ug/L	24	0	0	4.9	6.32	5.5375	5.495	0.3607	5.973	6.221	6.3062
Barium, D	ug/L	24	0	0	17.9	23.2	20.525	20.3	1.1372	21.98	22.1	22.947
Barium, T	ug/L	24	0	0	19.4	23.6	21.0292	20.9	1.1578	22.94	23.3	23.531
Beryllium, D	ug/L	16	8	33	0.005	0.02	0.0123	0.01	0.0058	0.02	0.02	0.02
Beryllium, T	ug/L	18	6	25	0.008	0.021	0.0125	0.01	0.0052	0.02	0.02	0.0208
Bicarbonate as CaCO3	mg/L	24	0	0	126	159	137.4167	136.5	7.4596	147	147.85	156.47
Boron, D	ug/L	21	3	13	3.5	21	7.65	5	5.6924	19.44	21	21
Boron, T	ug/L	23	1	4	4.9	21	8.525	6.25	4.6966	14.93	18.815	20.632
Cadmium, D	ug/L	23	1	4	0.007	0.033	0.0139	0.012	0.0054	0.0187	0.0198	0.03
Cadmium, T	ug/L	23	1	4	0.009	0.081	0.0215	0.017	0.0145	0.0284	0.0332	0.0702
Calcium, D	ug/L	24	0	0	27200	34100	30525	30350	1675.2028	33070	33525	33985
Calcium, T	ug/L	24	0	0	27900	33700	30787.5	30750	1550.4032	33290	33670	33700
Carbonate as CaCO3	mg/L	0	24	100	15	15	15	15	0	15	15	15
Chloride	mg/L	24	0	0	5.98	8.43	7.4088	7.445	0.5305	8.018	8.064	8.3472
Chromium, D	ug/L	24	0	0	0.06	0.9	0.2642	0.19	0.2084	0.38	0.788	0.8908
Chromium, T	ug/L	24	0	0	0.12	1.43	0.3996	0.335	0.2949	0.711	0.903	1.315
Cobalt, D	ug/L	24	0	0	0.854	1.25	0.988	0.9925	0.0816	1.057	1.077	1.2109
Cobalt, T	ug/L	24	0	0	0.804	1.08	0.9759	0.9835	0.0698	1.05	1.0585	1.0754
Conductivity	uS/cm	24	0	0	178.7	355.77	220.6079	189.94	56.2099	311.022	316.131	346.6758
Copper, D	ug/L	24	0	0	0.12	2.28	0.3433	0.24	0.4261	0.392	0.6225	1.9074
Copper, T	ug/L	24	0	0	0.13	3.38	0.6637	0.395	0.6938	1.123	1.724	3.0212
Cyanide, T	mg/L	13	11	46	0.001	0.0061	0.0022	0.0027	0.0011	0.0027	0.0028	0.0053
Dissolved Oxygen	mg/L	24	0	0	0	0.87	0.0588	0	0.1797	0.13	0.1555	0.7067
Fluoride	mg/L	19	5	21	0.03	0.2	0.0938	0.06	0.0657	0.2	0.2	0.2
Hardness as CaCO3	mg/L	24	0	0	101	121	110.4583	109.5	5.7255	120.1	121	121
Iron, D	ug/L	24	0	0	1960	3300	2656.6667	2655	323.5626	2986	3222.5	3290.8
Iron, T	ug/L	24	0	0	2010	3620	2743.75	2740	371.212	3242	3328	3555.6
Lead, D	ug/L	22	2	8	0.005	0.542	0.0498	0.0185	0.1107	0.069	0.1618	0.4578
Lead, T	ug/L	22	2	8	0.008	0.561	0.0785	0.041	0.1194	0.1525	0.2654	0.4971
Magnesium, D	ug/L	24	0	0	7310	9060	8054.1667	7985	528.0968	8794	8851	9014
Magnesium, T	ug/L	24	0	0	7490	8990	8135	8075	513.4707	8840	8959	8987.7
Manganese, D	ug/L	24	0	0	2440	2980	2651.25	2645	141.83	2843	2904	2963.9
Manganese, T	ug/L	24	0	0	2490	3000	2664.1667	2665	137.1104	2860	2932.5	2986.2
Mercury, D	ng/L	23	0	0	3.8	47.1	8.7835	7.78	8.7485	10.88	12.25	39.466

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A02, Meadow Creek Valley on SODA												
Mercury, T	ng/L	24	0	0	7.22	93.5	19.8112	14.05	17.568	31.42	33.52	79.746
Methyl Mercury	ng/L	23	1	4	0.04	0.28	0.1388	0.14	0.0472	0.187	0.19	0.2593
Molybdenum, D	ug/L	24	0	0	1.96	2.66	2.3496	2.37	0.2029	2.609	2.6555	2.66
Molybdenum, T	ug/L	24	0	0	2.01	2.71	2.365	2.39	0.2072	2.657	2.6685	2.7008
Nickel, D	ug/L	24	0	0	0.56	1.3	0.8229	0.745	0.223	1.127	1.2405	1.2908
Nickel, T	ug/L	24	0	0	0.53	1.37	0.8608	0.785	0.238	1.263	1.2985	1.3539
Nitrate+Nitrite as Nitrogen	mg/L	5	19	79	0.013	0.05	0.0458	0.05	0.0096	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	23	1	4	0.27	1.02	0.4796	0.465	0.1583	0.614	0.7135	0.9533
Nitrogen, Total Kjeldahl (TKN)	mg/L	24	0	0	0.27	0.99	0.4679	0.445	0.1584	0.614	0.7135	0.9302
Oxidation-Reduction potential	volts	22	0	0	-0.401	0.061	-0.0656	-0.0285	0.1146	0.0044	0.0173	0.052
pH	pH	24	0	0	6.57	7.11	6.9046	6.925	0.1362	7.041	7.0925	7.1077
Phosphorus, D	ug/L	24	0	0	23.1	48	31.7708	31.6	5.3743	36.97	37.85	45.7
Phosphorus, T	mg/L	1	0	0	0.037	0.037	0.037	0.037		0.037	0.037	0.037
Phosphorus, T	ug/L	24	0	0	13.2	63.9	35.3167	32.9	9.8179	46.94	54.42	61.899
Potassium, D	ug/L	24	0	0	1380	1580	1485	1485	57.104	1560	1577	1580
Potassium, T	ug/L	24	0	0	1340	1630	1510.8333	1515	69.6523	1584	1615.5	1627.7
Selenium, D	ug/L	0	24	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	24	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	4	20	83	0.005	0.034	0.019	0.02	0.0055	0.02	0.02	0.0308
Silver, T	ug/L	6	18	75	0.003	0.02	0.017	0.02	0.0056	0.02	0.02	0.02
Sodium, D	ug/L	24	0	0	14200	16800	15466.6667	15350	627.394	16270	16555	16754
Sodium, T	ug/L	24	0	0	13800	18000	15520.8333	15350	908.4048	16400	16485	17655
Solids, Total Dissolved	mg/L	24	0	0	138	200	169.9583	173	16.549	185	194.35	199.08
Sulfate	mg/L	24	0	0	3.53	5.58	4.6875	4.685	0.5247	5.33	5.53	5.5754
Temperature, Water	deg C	24	0	0	5.82	8.6	7.2896	7.175	0.6742	8.291	8.454	8.5678
Thallium, D	ug/L	11	13	54	0.002	0.02	0.0128	0.02	0.0082	0.02	0.02	0.02
Thallium, T	ug/L	15	9	38	0.003	0.02	0.0107	0.007	0.0076	0.02	0.02	0.02
Turbidity	NTU	23	0	0	0	95.21	6.5516	0.93	19.7889	11.854	16.005	77.8498
Turbidity	NTU	3	0	0	1.4	2.22	1.7233	1.55	0.4366	2.086	2.153	2.2066
Vanadium (Fume Or Dust), D	ug/L	24	0	0	0.35	0.56	0.4622	0.465	0.0475	0.517	0.52	0.5508
Vanadium (Fume Or Dust), T	ug/L	24	0	0	0.38	1.02	0.5304	0.51	0.1268	0.642	0.677	0.9418
Zinc, D	ug/L	24	0	0	0.4	4.7	1.34	0.925	1.1858	2.691	4.321	4.6701
Zinc, T	ug/L	24	0	0	0.3	4.9	1.6979	1.255	1.2735	3.59	4.403	4.8126

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B02, Meadow Creek Valley north of SODA												
Alkalinity as CaCO3	mg/L	24	0	0	23	53	40.4292	41	8.0603	48	49.7	52.31
Aluminum (Fume Or Dust), D	ug/L	24	0	0	2.7	214	62.3333	42.85	54.3528	107	172.45	207.1
Aluminum (Fume Or Dust), T	ug/L	24	0	0	76.2	6440	1287.55	911.5	1454.7892	2947	3031	5658
Ammonia as Nitrogen	mg/L	5	19	79	0.024	0.081	0.0488	0.05	0.0111	0.05	0.061	0.0769
Antimony, D	ug/L	24	0	0	0.568	2.76	1.4888	1.43	0.6065	2.28	2.412	2.6841
Antimony, T	ug/L	24	0	0	0.447	2.65	1.3657	1.245	0.6127	2.277	2.544	2.6339
Arsenic (III), T	ug/L	24	0	0	0.005	0.278	0.0401	0.025	0.0584	0.0646	0.138	0.2483
Arsenic, D	ug/L	23	1	4	0.21	0.7	0.4379	0.475	0.1309	0.591	0.651	0.6908
Arsenic, T	ug/L	24	0	0	0.22	5.1	1.1958	1.02	1.0807	1.971	3.035	4.663
Barium, D	ug/L	24	0	0	1.47	6.83	3.035	2.795	1.273	4.728	5.298	6.4942
Barium, T	ug/L	24	0	0	2.21	85.5	16.1358	12	18.4263	29.29	48.81	77.772
Beryllium, D	ug/L	23	1	4	0.008	0.052	0.0205	0.0165	0.0128	0.0431	0.0508	0.0518
Beryllium, T	ug/L	24	0	0	0.018	1.17	0.2549	0.1955	0.2482	0.4803	0.605	1.0446
Bicarbonate as CaCO3	mg/L	24	0	0	23	53	40.4292	41	8.0603	48	49.7	52.31
Boron, D	ug/L	19	5	21	3.4	21	9.1333	6.45	6.4748	21	21	21
Boron, T	ug/L	22	2	8	4.8	27.1	10.2583	7.5	5.895	19.44	21	25.697
Cadmium, D	ug/L	16	8	33	0.007	0.033	0.0192	0.02	0.0072	0.0281	0.0324	0.033
Cadmium, T	ug/L	19	5	21	0.007	0.055	0.0252	0.0205	0.0132	0.0414	0.0496	0.0541
Calcium, D	ug/L	24	0	0	5500	16200	10700	11200	2566.1916	13100	13610	15625
Calcium, T	ug/L	24	0	0	5830	15900	11467.0833	11700	2737.9356	14780	15155	15739
Carbonate as CaCO3	mg/L	0	24	100	15	15	15	15	0	15	15	15
Chloride	mg/L	24	0	0	0.18	0.46	0.2775	0.255	0.0701	0.387	0.39	0.4439
Chromium, D	ug/L	23	1	4	0.07	0.6	0.2008	0.18	0.1224	0.332	0.3755	0.5494
Chromium, T	ug/L	24	0	0	0.12	6.87	1.45	0.98	1.5396	2.991	3.8255	6.1984
Cobalt, D	ug/L	24	0	0	0.016	2.11	0.3239	0.153	0.4648	0.8072	0.939	1.8439
Cobalt, T	ug/L	24	0	0	0.031	2.48	0.5222	0.2775	0.7067	1.4956	2.371	2.4777
Conductivity	uS/cm	24	0	0	41.59	98.39	59.6583	58.06	13.1056	73.075	77.843	93.8498
Copper, D	ug/L	24	0	0	0.15	1.05	0.3687	0.305	0.2275	0.694	0.832	1.004
Copper, T	ug/L	24	0	0	0.26	4.41	1.1396	0.835	1.0402	1.823	3.563	4.2835
Cyanide, T	mg/L	3	21	88	0.001	0.0028	0.0026	0.0027	0.0005	0.0027	0.0027	0.0028
Dissolved Oxygen	mg/L	24	0	0	4.84	9.5	6.795	6.555	1.2558	8.559	8.9415	9.385
Fluoride	mg/L	22	2	8	0.03	0.2	0.0758	0.07	0.0438	0.122	0.191	0.2
Hardness as CaCO3	mg/L	24	0	0	17.8	54.3	35.4167	35.2	9.0718	45.69	48.2	52.966
Iron, D	ug/L	21	3	13	8	203	66.65	44.55	53.6158	122.2	190.3	202.77
Iron, T	ug/L	24	0	0	74	12300	1955.8333	1130	2756.0037	4376	6888.5	11145.4
Lead, D	ug/L	24	0	0	0.008	0.19	0.0603	0.039	0.0534	0.1464	0.1824	0.1888
Lead, T	ug/L	24	0	0	0.069	4.02	1.201	0.875	1.0409	2.147	3.374	3.9211
Magnesium, D	ug/L	24	0	0	662	1540	1205.25	1235	229.0039	1477	1480	1526.2
Magnesium, T	ug/L	24	0	0	789	3940	1649.25	1585	667.8036	2219	2670	3661.7
Manganese, D	ug/L	24	0	0	0.6	57	13.2383	8.745	13.7969	24.9	40.545	53.826
Manganese, T	ug/L	24	0	0	2.6	416	68.6679	50	91.9319	94.13	244.51	382.65
Mercury, D	ng/L	23	0	0	0.4	4.52	1.4174	1.2	0.9656	2.65	2.859	4.1592

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B02, Meadow Creek Valley north of SODA												
Mercury, T	ng/L	24	0	0	1.05	97.4	16.7825	8.53	22.7703	49.29	51.255	86.797
Methyl Mercury	ng/L	5	19	79	0.03	0.48	0.1071	0.1	0.0825	0.1	0.1	0.3926
Molybdenum, D	ug/L	24	0	0	0.109	1.52	0.3325	0.275	0.283	0.486	0.5712	1.3043
Molybdenum, T	ug/L	24	0	0	0.095	0.9	0.265	0.205	0.1802	0.4672	0.5432	0.8195
Nickel, D	ug/L	24	0	0	0.07	1.33	0.4067	0.245	0.3614	1.02	1.187	1.2978
Nickel, T	ug/L	24	0	0	0.07	3.57	0.9725	0.755	0.8962	2.213	2.658	3.3699
Nitrate+Nitrite as Nitrogen	mg/L	23	1	4	0.05	0.731	0.177	0.1575	0.1286	0.219	0.2432	0.6197
Nitrogen, Total as Nitrogen	mg/L	24	0	0	0.25	1.7	0.7538	0.665	0.2797	1.03	1.1195	1.5689
Nitrogen, Total Kjeldahl (TKN)	mg/L	24	0	0	0.19	1.56	0.5779	0.51	0.275	0.763	1.0195	1.445
Oxidation-Reduction potential	volts	22	0	0	-0.085	0.211	0.1162	0.1285	0.0735	0.195	0.2056	0.21
pH	pH	23	0	0	6.29	7.14	6.7074	6.71	0.236	7	7.118	7.1378
Phosphorus, D	ug/L	20	4	17	4.4	40	15.6458	9.65	11.9469	40	40	40
Phosphorus, T	mg/L	1	0	0	0.061	0.061	0.061	0.061		0.061	0.061	0.061
Phosphorus, T	ug/L	24	0	0	9.8	170	39.3	26.75	39.5093	70.3	132.995	163.79
Potassium, D	ug/L	24	0	0	458	832	579.25	561	88.3414	688.2	708.8	803.94
Potassium, T	ug/L	24	0	0	510	3750	1154.2083	996	716.9559	1700	2431.5	3474
Selenium, D	ug/L	1	23	96	0.3	1	0.9708	1	0.1429	1	1	1
Selenium, T	ug/L	3	21	88	0.3	1	0.925	1	0.2048	1	1	1
Silver, D	ug/L	5	19	79	0.004	0.02	0.0172	0.02	0.0058	0.02	0.02	0.02
Silver, T	ug/L	20	4	17	0.004	0.078	0.0251	0.02	0.0188	0.0435	0.0637	0.0755
Sodium, D	ug/L	24	0	0	2490	6360	3992.9167	4025	747.439	4637	4861.5	6021.9
Sodium, T	ug/L	24	0	0	2500	6610	4196.25	4150	898.3696	4988	5790.5	6453.6
Solids, Total Dissolved	mg/L	24	0	0	22	97	62.6333	66.5	16.9839	79.4	88.5	95.39
Sulfate	mg/L	24	0	0	1.42	4.74	2.6367	2.545	0.702	3.394	3.549	4.4709
Temperature, Water	deg C	24	0	0	6.45	8.7	7.6688	7.61	0.6205	8.411	8.6285	8.6908
Thallium, D	ug/L	7	17	71	0.0019	0.02	0.0157	0.02	0.007	0.02	0.02	0.02
Thallium, T	ug/L	21	3	13	0.003	0.161	0.0284	0.02	0.034	0.049	0.0873	0.1454
Turbidity	NTU	23	0	0	0	246	43.8707	27.69	57.8056	111.56	125.54	219.82
Turbidity	NTU	3	0	0	0.96	3.52	1.9467	1.36	1.3771	3.088	3.304	3.4768
Vanadium (Fume Or Dust), D	ug/L	24	0	0	0.14	0.35	0.2135	0.215	0.0418	0.247	0.2585	0.3293
Vanadium (Fume Or Dust), T	ug/L	24	0	0	0.24	9.69	1.794	1.07	2.2297	4.346	5.9025	8.8689
Zinc, D	ug/L	24	0	0	0.4	4.4	1.38	1.29	0.8465	1.945	2.589	4.009
Zinc, T	ug/L	24	0	0	0.5	24.3	5.5942	5.495	5.4271	10.432	15.32	22.414

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A03, Blowout Creek Hillside												
Alkalinity as CaCO3	mg/L	21	0	0	139	182	158.8095	157	14.8749	178	179	181.4
Aluminum (Fume Or Dust), D	ug/L	21	0	0	1.3	50.1	11.9857	7.4	12.1247	26.4	32.3	46.54
Aluminum (Fume Or Dust), T	ug/L	21	0	0	4.8	1540	741.5714	842	523.4688	1420	1420	1516
Ammonia as Nitrogen	mg/L	11	10	48	0.022	0.05	0.0429	0.05	0.0094	0.05	0.05	0.05
Antimony, D	ug/L	21	0	0	0.021	3.26	0.9355	0.861	0.8203	2.29	2.31	3.07
Antimony, T	ug/L	21	0	0	0.044	3.7	1.4576	1.65	1.0175	2.32	3.26	3.612
Arsenic (III), T	ug/L	21	0	0	0.421	6.54	3.0556	3.46	1.8248	4.62	6.03	6.438
Arsenic, D	ug/L	21	0	0	0.49	12.2	3.239	3	2.5794	5.8	5.81	10.922
Arsenic, T	ug/L	21	0	0	0.83	14.5	7.6571	9.04	4.5022	12.3	12.9	14.18
Barium, D	ug/L	21	0	0	88.1	303	149.3	120	63.4997	276	285	299.4
Barium, T	ug/L	21	0	0	114	305	223	230	57.3725	277	284	300.8
Beryllium, D	ug/L	5	16	76	0.006	0.02	0.0173	0.02	0.0051	0.02	0.02	0.02
Beryllium, T	ug/L	19	2	10	0.009	0.815	0.3734	0.356	0.2857	0.676	0.778	0.8076
Bicarbonate as CaCO3	mg/L	21	0	0	126	177	150.4286	148	17.3855	176	176	176.8
Boron, D	ug/L	21	0	0	28	40.4	35.3952	35.5	3.5006	39.5	39.5	40.22
Boron, T	ug/L	21	0	0	30	60.5	41.5	42	7.3602	51.6	51.9	58.78
Cadmium, D	ug/L	15	6	29	0.007	0.02	0.0131	0.011	0.0047	0.02	0.02	0.02
Cadmium, T	ug/L	18	3	14	0.008	0.098	0.0502	0.054	0.0272	0.084	0.088	0.096
Calcium, D	ug/L	21	0	0	19300	32600	25961.9048	27300	5393.0952	32400	32500	32580
Calcium, T	ug/L	21	0	0	20600	35000	27271.4286	28400	5792.6801	34200	34900	34980
Carbonate as CaCO3	mg/L	11	10	48	4	44	15.2095	15	7.9625	18	21	39.4
Chloride	mg/L	21	0	0	0.33	1.08	0.6267	0.59	0.2683	1.07	1.08	1.08
Chromium, D	ug/L	18	3	14	0.06	0.43	0.1595	0.15	0.0785	0.2	0.22	0.388
Chromium, T	ug/L	21	0	0	0.06	7.95	3.3371	3.24	2.7538	6.84	7.28	7.816
Cobalt, D	ug/L	20	1	5	0.017	2.34	0.386	0.255	0.5057	0.68	0.962	2.0644
Cobalt, T	ug/L	21	0	0	0.009	3.72	1.8128	1.73	1.3938	3.48	3.51	3.678
Conductivity	uS/cm	21	0	0	55.08	370.66	243.6857	263.3	62.405	289.18	293.88	355.304
Copper, D	ug/L	20	1	5	0.03	0.59	0.181	0.15	0.1416	0.39	0.42	0.556
Copper, T	ug/L	21	0	0	0.05	5.73	2.7429	2.99	2.0823	5.29	5.71	5.726
Cyanide, T	mg/L	6	15	71	0.0011	0.0033	0.0025	0.0027	0.0005	0.0027	0.0027	0.0032
Dissolved Oxygen	mg/L	21	0	0	0	10.85	3.9314	4.01	3.1397	7.59	7.77	10.234
Fluoride	mg/L	21	0	0	0.11	0.43	0.3076	0.31	0.0739	0.41	0.41	0.426
Hardness as CaCO3	mg/L	21	0	0	97.6	153	121.4571	120	21.3679	148	151	152.6
Iron, D	ug/L	19	2	10	4.3	257	66.0857	23	80.0848	195	224	250.4
Iron, T	ug/L	21	0	0	188	8160	3838.619	4160	2964.4149	7480	8040	8136
Lead, D	ug/L	20	1	5	0.008	0.116	0.0324	0.023	0.0296	0.083	0.094	0.1116
Lead, T	ug/L	21	0	0	0.017	4.38	2.1694	2.15	1.712	4.19	4.35	4.374
Magnesium, D	ug/L	21	0	0	10100	14700	12276.1905	12000	1649.8196	14500	14600	14680
Magnesium, T	ug/L	21	0	0	10800	15900	12966.6667	12300	1808.9592	15500	15700	15860
Manganese, D	ug/L	21	0	0	39	164	82.0905	69.8	41.5694	138	146	160.4
Manganese, T	ug/L	21	0	0	41.8	237	133.7524	143	63.5996	210	210	231.6
Mercury, D	ng/L	20	0	0	0.43	73.1	12.222	3.575	18.3852	34.96	37.38	65.956

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A03, Blowout Creek Hillside												
Mercury, T	ng/L	21	0	0	30.8	658	242.781	200	174.6288	487	512	628.8
Methyl Mercury	ng/L	21	0	0	0.07	22.2	6.1643	0.96	7.8821	18	20.3	21.82
Molybdenum, D	ug/L	21	0	0	3	18.5	10.5571	8.22	4.7361	18	18.3	18.46
Molybdenum, T	ug/L	21	0	0	3.16	19.7	10.5133	8.37	4.5742	17.6	17.7	19.3
Nickel, D	ug/L	21	0	0	0.04	2.03	0.609	0.54	0.4343	0.95	0.98	1.82
Nickel, T	ug/L	21	0	0	0.09	4.01	2.099	2.52	1.361	3.63	3.87	3.982
Nitrate+Nitrite as Nitrogen	mg/L	6	15	71	0.018	0.051	0.0452	0.05	0.0102	0.05	0.05	0.0508
Nitrogen, Total as Nitrogen	mg/L	21	0	0	0.2	1.89	0.6552	0.62	0.3294	0.87	0.92	1.696
Nitrogen, Total Kjeldahl (TKN)	mg/L	21	0	0	0.2	1.87	0.6429	0.59	0.3287	0.87	0.92	1.68
Oxidation-Reduction potential	volts	20	0	0	-0.31	0.744	-0.0602	-0.1245	0.2581	0.1317	0.3906	0.6733
pH	pH	20	0	0	7.7	9.15	8.5365	8.59	0.3971	9.012	9.036	9.1272
Phosphorus, D	ug/L	16	5	24	3.6	77.7	22.6238	16.6	18.6036	42	42	70.56
Phosphorus, T	ug/L	21	0	0	14	232	96.6238	82.7	71.3223	190	201	225.8
Potassium, D	ug/L	21	0	0	1490	1950	1794.2857	1830	128.5524	1920	1950	1950
Potassium, T	ug/L	21	0	0	1500	4700	2825.7143	2900	884.3109	3900	4160	4592
Selenium, D	ug/L	0	21	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	2	19	91	0.3	1	0.9381	1	0.1962	1	1	1
Silver, D	ug/L	2	19	91	0.006	0.058	0.0211	0.02	0.009	0.02	0.02	0.0504
Silver, T	ug/L	17	4	19	0.004	0.077	0.0347	0.032	0.02	0.058	0.059	0.0734
Sodium, D	ug/L	21	0	0	20200	33800	27300	28600	4130.6174	31400	31900	33420
Sodium, T	ug/L	21	0	0	20300	33500	27752.381	29000	4189.1072	32300	32500	33300
Solids, Total Dissolved	mg/L	21	0	0	121	235	186.0476	191	38.6464	226	234	234.8
Sulfate	mg/L	21	0	0	1.7	42	20.1467	8.21	15.8902	40.1	40.8	41.76
Temperature, Water	deg C	21	0	0	-4.89	12.33	7.6252	7.76	3.4786	10.79	10.79	12.022
Thallium, D	ug/L	3	18	86	0.005	0.02	0.0184	0.02	0.0041	0.02	0.02	0.02
Thallium, T	ug/L	17	4	19	0.011	0.126	0.06	0.064	0.0415	0.112	0.119	0.1246
Turbidity	NTU	21	0	0	1.91	363.4	113.5533	89.8	107.0731	243.4	295.5	349.82
Turbidity	NTU	3	0	0	0.82	2.53	1.6867	1.71	0.8552	2.366	2.448	2.5136
Vanadium (Fume Or Dust), D	ug/L	18	3	14	0.03	0.21	0.1067	0.1	0.0583	0.2	0.2	0.208
Vanadium (Fume Or Dust), T	ug/L	21	0	0	0.03	3.56	1.3099	1.21	1.1126	2.66	2.92	3.432
Zinc, D	ug/L	21	0	0	0.29	3.95	1.3548	0.9	1.0794	2.8	3.7	3.9
Zinc, T	ug/L	21	0	0	1.2	88.5	34.9352	36.2	29.1167	82.9	84	87.6

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B03, Blowout Creek Hillside												
Alkalinity as CaCO3	mg/L	21	0	0	123	190	172.381	174	12.4558	177	187	189.4
Aluminum (Fume Or Dust), D	ug/L	21	0	0	4	20.9	8.1333	7.5	4.0828	12.1	15.8	19.88
Aluminum (Fume Or Dust), T	ug/L	21	0	0	5.3	20500	1169.581	117	4444.1657	390	1720	16744
Ammonia as Nitrogen	mg/L	13	8	38	0.022	0.096	0.0492	0.05	0.0191	0.074	0.078	0.0924
Antimony, D	ug/L	21	0	0	0.048	2.96	0.9448	0.865	0.7334	1.59	1.84	2.736
Antimony, T	ug/L	21	0	0	0.066	2.1	1.1146	1.04	0.7261	2.05	2.1	2.1
Arsenic (III), T	ug/L	21	0	0	0.3	168	19.0538	12.9	34.4199	16.9	18.4	138.08
Arsenic, D	ug/L	21	0	0	1.2	17.9	14.6948	15.9	4.2189	17.3	17.7	17.86
Arsenic, T	ug/L	21	0	0	4.8	58.4	18.219	17.4	9.7251	18.6	18.7	50.46
Barium, D	ug/L	21	0	0	20.4	756	633.1143	683	165.6429	722	728	750.4
Barium, T	ug/L	21	0	0	92.5	1430	727.0714	724	214.6017	773	792	1302.4
Beryllium, D	ug/L	0	21	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	17	4	19	0.008	3.89	0.2407	0.033	0.8427	0.093	0.507	3.2134
Bicarbonate as CaCO3	mg/L	21	0	0	123	182	164.7619	168	12.5096	174	176	180.8
Boron, D	ug/L	21	0	0	27.5	75.2	67.4048	68.3	9.7296	73.8	75	75.16
Boron, T	ug/L	21	0	0	42	100	71.1333	70.8	10.0101	78.1	80.9	96.18
Cadmium, D	ug/L	12	9	43	0.006	0.022	0.0147	0.02	0.0063	0.02	0.022	0.022
Cadmium, T	ug/L	14	7	33	0.014	0.48	0.051	0.03	0.0988	0.044	0.051	0.3942
Calcium, D	ug/L	21	0	0	9980	18000	11008.5714	10700	1634.9137	11100	11300	16660
Calcium, T	ug/L	21	0	0	9980	46400	13032.381	10900	8041.5433	11500	22100	41540
Carbonate as CaCO3	mg/L	13	8	38	4	48	13.2667	14	8.9866	15	15	41.4
Chloride	mg/L	21	0	0	0.35	1.29	0.5138	0.45	0.2147	0.71	0.84	1.2
Chromium, D	ug/L	19	2	10	0.04	0.45	0.1381	0.12	0.0901	0.2	0.24	0.408
Chromium, T	ug/L	19	2	10	0.14	176	12.0419	1.09	39.5764	3.18	58	152.4
Cobalt, D	ug/L	20	1	5	0.004	1.38	0.3881	0.217	0.4003	0.836	1.11	1.326
Cobalt, T	ug/L	20	1	5	0.004	14.3	0.9864	0.165	3.1373	0.435	3.47	12.134
Conductivity	uS/cm	21	0	0	144.5	395.1	256.7981	235.74	60.3608	338.76	347.97	385.674
Copper, D	ug/L	21	0	0	0.11	2.61	0.3186	0.21	0.5276	0.28	0.31	2.15
Copper, T	ug/L	21	0	0	0.07	110	7.6429	1.24	24.1931	2.41	28.2	93.64
Cyanide, T	mg/L	3	18	86	0.0027	0.0054	0.0029	0.0027	0.0007	0.0035	0.0043	0.0052
Dissolved Oxygen	mg/L	21	0	0	0	10.61	3.4319	3.61	2.7688	6.08	7.1	9.908
Fluoride	mg/L	21	0	0	0.08	0.95	0.7433	0.78	0.1904	0.88	0.89	0.938
Hardness as CaCO3	mg/L	21	0	0	36.3	169	47.919	40.2	29.1079	42.5	79.6	151.12
Iron, D	ug/L	20	1	5	7.3	66.5	33.481	32	12.5677	44	47.5	62.7
Iron, T	ug/L	21	0	0	50	84700	5335.5095	596	18526.8825	1650	16700	71100
Lead, D	ug/L	18	3	14	0.006	0.047	0.0279	0.028	0.012	0.044	0.046	0.0468
Lead, T	ug/L	21	0	0	0.007	49.9	3.0137	0.403	10.8284	1.14	6.44	41.208
Magnesium, D	ug/L	21	0	0	2760	4970	3190	3140	438.9191	3320	3330	4642
Magnesium, T	ug/L	21	0	0	2760	13000	3738.0952	3210	2215.9369	3370	5940	11588
Manganese, D	ug/L	21	0	0	7.4	55.1	15.7586	11.4	13.1114	19.5	53.4	54.76
Manganese, T	ug/L	21	0	0	7.5	1450	94.8067	15.7	314.4766	35.6	242	1208.4
Mercury, D	ng/L	20	1	5	0.09	3.64	0.51	0.34	0.7314	0.55	0.76	3.064

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B03, Blowout Creek Hillside												
Mercury, T	ng/L	21	0	0	0.13	1980	119.8614	10.6	431.0262	71.2	298	1643.6
Methyl Mercury	ng/L	14	7	33	0.03	0.26	0.1148	0.1	0.0537	0.18	0.2	0.248
Molybdenum, D	ug/L	21	0	0	0.81	29	3.8995	2.68	5.9414	3.14	8.45	24.89
Molybdenum, T	ug/L	21	0	0	1.51	36.6	4.6876	2.76	7.8212	2.95	15	32.28
Nickel, D	ug/L	21	0	0	0.05	1.36	0.3971	0.34	0.3042	0.69	0.83	1.254
Nickel, T	ug/L	21	0	0	0.06	75.6	7.0952	1	19.966	1.91	57.4	71.96
Nitrate+Nitrite as Nitrogen	mg/L	6	15	71	0.013	0.148	0.0495	0.05	0.0253	0.05	0.05	0.1284
Nitrogen, Total as Nitrogen	mg/L	20	1	5	0.27	64	3.6957	0.54	13.823	1.32	1.85	51.57
Nitrogen, Total Kjeldahl (TKN)	mg/L	21	0	0	0.27	64	3.6852	0.53	13.8249	1.28	1.84	51.568
Oxidation-Reduction potential	volts	20	0	0	-0.309	0.34	-0.1141	-0.146	0.1644	0.0649	0.1291	0.2978
pH	pH	20	0	0	7.64	9.35	8.608	8.695	0.472	9.133	9.1695	9.3139
Phosphorus, D	ug/L	12	9	43	3.1	42	22.4333	11.4	17.5863	42	42	42
Phosphorus, T	ug/L	21	0	0	5.3	893	63.381	17	191.242	47.3	105	735.4
Potassium, D	ug/L	21	0	0	1050	1290	1211.4286	1240	71.224	1280	1290	1290
Potassium, T	ug/L	21	0	0	1050	7600	1652.381	1300	1406.5628	1460	2800	6640
Selenium, D	ug/L	1	20	95	0.4	1	0.9714	1	0.1309	1	1	1
Selenium, T	ug/L	3	18	86	0.6	5	1.1619	1	0.8846	1	1	4.2
Silver, D	ug/L	4	17	81	0.002	0.048	0.0191	0.02	0.0086	0.02	0.02	0.0424
Silver, T	ug/L	16	5	24	0.003	0.9	0.0661	0.02	0.1926	0.081	0.104	0.7408
Sodium, D	ug/L	21	0	0	58300	66700	63657.1429	63900	2604.529	66400	66600	66680
Sodium, T	ug/L	21	0	0	58700	70100	63790.4762	62900	2716.9661	66800	67100	69500
Solids, Total Dissolved	mg/L	21	0	0	150	246	189.7619	193	22.2034	215	216	240
Sulfate	mg/L	21	0	0	1.23	69.9	6.5257	2.83	14.6489	6.09	10.4	58
Temperature, Water	deg C	21	0	0	-4.87	17.64	8.8186	9.66	4.1297	11.29	12.35	16.582
Thallium, D	ug/L	1	20	95	0.003	0.02	0.0192	0.02	0.0037	0.02	0.02	0.02
Thallium, T	ug/L	12	9	43	0.002	0.324	0.0293	0.02	0.068	0.02	0.035	0.2662
Turbidity	NTU	21	0	0	0	220.5	32.5208	14.1	53.9917	106.55	126.3	201.66
Turbidity	NTU	3	0	0	1.33	4.5	2.6467	2.11	1.6517	4.022	4.261	4.4522
Vanadium (Fume Or Dust), D	ug/L	15	6	29	0.03	0.2	0.1093	0.08	0.0635	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	21	0	0	0.02	19.5	1.2964	0.21	4.2564	0.574	4.03	16.406
Zinc, D	ug/L	21	0	0	0.5	3.43	1.45	1.3	0.7219	2.42	2.5	3.244
Zinc, T	ug/L	21	0	0	1.6	490	59.1667	40.2	102.3157	74.5	106	413.2

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A04, Meadow Creek valley in Smelter Flats												
Alkalinity as CaCO3	mg/L	25	0	0	47	90	56.156	55	8.2449	61.26	64.98	84.096
Aluminum (Fume Or Dust), D	ug/L	25	0	0	1.7	16.7	7.16	5.1	4.9309	15.2	15.64	16.46
Aluminum (Fume Or Dust), T	ug/L	25	0	0	9.1	1090	186.964	80.4	286.8686	507.8	884.2	1057.36
Ammonia as Nitrogen	mg/L	16	9	36	0.025	0.132	0.0497	0.05	0.0213	0.0646	0.0658	0.1162
Antimony, D	ug/L	25	0	0	0.728	2.41	1.3105	1.22	0.4167	1.884	1.976	2.3092
Antimony, T	ug/L	25	0	0	0.76	2.48	1.3404	1.25	0.4522	2.008	2.148	2.408
Arsenic (III), T	ug/L	25	0	0	2.36	4050	1132.8944	772	989.6034	2668	3188	3860.4
Arsenic, D	ug/L	25	0	0	858	3820	1784.64	1540	869.7791	3182	3658	3808
Arsenic, T	ug/L	25	0	0	839	9710	2127.52	1640	1787.6264	3246	4182	8435.6
Barium, D	ug/L	25	0	0	6.71	17.1	10.2448	9.54	2.1903	12.6	13.64	16.332
Barium, T	ug/L	25	0	0	8.97	44.3	14.2224	12.3	7.1976	18.98	22.98	39.308
Beryllium, D	ug/L	10	15	60	0.003	0.02	0.0148	0.02	0.007	0.02	0.02	0.02
Beryllium, T	ug/L	22	3	12	0.006	0.078	0.0201	0.016	0.0171	0.0424	0.0528	0.0722
Bicarbonate as CaCO3	mg/L	25	0	0	47	90	56.156	55	8.2449	61.26	64.98	84.096
Boron, D	ug/L	25	0	0	4.9	20.1	11.18	10.9	3.4125	15.8	17.72	19.596
Boron, T	ug/L	25	0	0	5.3	20	12.044	11	3.647	16.98	18.54	19.736
Cadmium, D	ug/L	25	0	0	0.009	0.03	0.0154	0.016	0.0047	0.0186	0.023	0.0286
Cadmium, T	ug/L	25	0	0	0.009	0.057	0.0205	0.02	0.0093	0.0268	0.028	0.05
Calcium, D	ug/L	25	0	0	13500	27000	18292	17500	3681.1366	23080	25600	26808
Calcium, T	ug/L	25	0	0	13500	26600	18208	16900	3581.1916	22840	25480	26480
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	25	0	0	0.37	0.75	0.5324	0.52	0.093	0.636	0.716	0.7452
Chromium, D	ug/L	22	3	12	0.04	0.41	0.1632	0.17	0.0937	0.246	0.306	0.3884
Chromium, T	ug/L	24	1	4	0.08	1.78	0.4932	0.37	0.4575	1.034	1.47	1.7296
Cobalt, D	ug/L	25	0	0	0.401	1.4	0.7394	0.685	0.2447	1.008	1.14	1.3448
Cobalt, T	ug/L	25	0	0	0.389	1.53	0.7835	0.682	0.3059	1.186	1.418	1.5108
Conductivity	uS/cm	25	0	0	73.19	208.95	114.1696	106.4	35.8084	162.378	191.838	206.1636
Copper, D	ug/L	25	0	0	0.29	1.02	0.4984	0.4	0.1967	0.784	0.836	0.9768
Copper, T	ug/L	25	0	0	0.29	2.18	0.782	0.59	0.505	1.48	1.776	2.0984
Cyanide, T	mg/L	5	20	80	0.0011	0.0046	0.0026	0.0027	0.0007	0.0027	0.0027	0.0041
Dissolved Oxygen	mg/L	25	0	0	0	2.1	0.1404	0.01	0.4205	0.178	0.406	1.7064
Fluoride	mg/L	24	1	4	0.05	0.2	0.0848	0.08	0.0368	0.128	0.164	0.1928
Hardness as CaCO3	mg/L	25	0	0	44	87.4	59.308	55.9	11.3067	74.06	80.86	86.224
Iron, D	ug/L	25	0	0	10.4	1910	480.748	393	471.7025	1128	1352	1787.6
Iron, T	ug/L	25	0	0	274	12300	1346.6	917	2325.4411	1508	2136	9890.4
Lead, D	ug/L	15	10	4	0.002	0.241	0.0287	0.023	0.0472	0.03	0.0668	0.2014
Lead, T	ug/L	25	0	0	0.007	0.51	0.0717	0.023	0.1188	0.1552	0.3236	0.4745
Magnesium, D	ug/L	25	0	0	2480	5060	3312.4	3210	604.3749	4070	4218	4863.2
Magnesium, T	ug/L	25	0	0	2520	5090	3363.2	3240	606.5594	4148	4196	4876.4
Manganese, D	ug/L	25	0	0	708	1770	1108.48	1020	303.9213	1590	1642	1741.2
Manganese, T	ug/L	25	0	0	722	1850	1114.28	1020	309.3901	1576	1668	1811.6
Mercury, D	ng/L	24	0	0	6.64	60.7	26.1846	25.55	13.6686	41.12	51.55	58.975

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A04, Meadow Creek valley in Smelter Flats												
Mercury, T	ng/L	25	0	0	16.3	367	80.184	52.2	94.0907	178.6	320.2	361.72
Methyl Mercury	ng/L	25	0	0	0.04	0.51	0.2596	0.26	0.119	0.398	0.45	0.498
Molybdenum, D	ug/L	25	0	0	0.44	2.07	1.0483	0.93	0.4352	1.698	1.874	2.0292
Molybdenum, T	ug/L	25	0	0	0.468	2.1	1.0802	0.95	0.4538	1.784	1.88	2.052
Nickel, D	ug/L	25	0	0	0.33	1.35	0.6452	0.58	0.2409	0.852	1.124	1.3116
Nickel, T	ug/L	25	0	0	0.3	2.08	0.8464	0.7	0.4472	1.444	1.668	1.9888
Nitrate+Nitrite as Nitrogen	mg/L	19	6	24	0.015	0.164	0.0462	0.043	0.0291	0.0596	0.0816	0.1453
Nitrogen, Total as Nitrogen	mg/L	24	1	4	0.22	0.78	0.5076	0.49	0.1336	0.688	0.7	0.7608
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.18	0.77	0.4764	0.48	0.1306	0.626	0.69	0.7532
Oxidation-Reduction potential	volts	24	0	0	-0.351	0.378	0.0279	0.044	0.1354	0.137	0.157	0.3279
pH	pH	25	0	0	6.39	7.1	6.6456	6.61	0.1873	6.878	6.97	7.0736
Phosphorus, D	ug/L	25	0	0	17.7	104	64.488	64.6	18.8784	81.36	85.52	99.776
Phosphorus, T	mg/L	1	0	0	0.324	0.324	0.324	0.324		0.324	0.324	0.324
Phosphorus, T	ug/L	25	0	0	24	582	106.76	87	103.2056	130.4	156.8	481.2
Potassium, D	ug/L	25	0	0	1030	1580	1219.2	1210	122.1652	1362	1370	1529.6
Potassium, T	ug/L	25	0	0	1050	1710	1288	1280	181.7049	1500	1644	1702.8
Selenium, D	ug/L	3	22	88	0.2	1	0.912	1	0.2438	1	1	1
Selenium, T	ug/L	2	23	92	0.1	1	0.932	1	0.2358	1	1	1
Silver, D	ug/L	3	22	88	0.003	0.02	0.0181	0.02	0.0053	0.02	0.02	0.02
Silver, T	ug/L	6	19	76	0.002	0.02	0.0171	0.02	0.0056	0.02	0.02	0.02
Sodium, D	ug/L	25	0	0	4700	6030	5314.4	5340	418.6196	5910	5990	6022.8
Sodium, T	ug/L	25	0	0	4680	6100	5297.6	5250	387.3121	5782	5850	6042.4
Solids, Total Dissolved	mg/L	25	0	0	78	144	103.552	99	15.3698	119.8	126.6	140.16
Sulfate	mg/L	25	0	0	8.29	45.2	18.3196	14.7	8.7118	29.7	31.58	41.984
Temperature, Water	deg C	25	0	0	7.08	11.74	7.78	7.46	1.0425	8.368	9.884	11.3824
Thallium, D	ug/L	1	24	96	0.02	0.021	0.02	0.02	0.0002	0.02	0.02	0.0208
Thallium, T	ug/L	10	15	60	0.002	0.021	0.0153	0.02	0.0067	0.02	0.02	0.0208
Turbidity	NTU	25	0	0	0	101.7	15.1552	7.77	22.7034	40.21	52.63	89.94
Turbidity	NTU	3	0	0	3.83	21.3	10.6533	6.83	9.3415	18.406	19.853	21.0106
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.36	0.857	0.5262	0.48	0.1496	0.792	0.834	0.8529
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.39	2.53	0.8802	0.69	0.5712	1.716	2.032	2.4292
Zinc, D	ug/L	25	0	0	0.3	1.74	0.8416	0.8	0.3527	1.3	1.372	1.656
Zinc, T	ug/L	25	0	0	0.49	3.7	1.384	1.13	0.9613	2.922	3.39	3.6328

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B04, Meadow Creek valley in Smelter Flats												
Alkalinity as CaCO3	mg/L	25	0	0	158	199	175.84	176	9.8221	187.2	188.8	196.6
Aluminum (Fume Or Dust), D	ug/L	25	0	0	8.2	181	41.756	28	39.0736	81.08	93.56	160.24
Aluminum (Fume Or Dust), T	ug/L	25	0	0	9.2	3150	189.312	32.7	625.2399	111.4	445.8	2520.96
Ammonia as Nitrogen	mg/L	12	13	52	0.022	0.074	0.0427	0.05	0.0132	0.05	0.0556	0.0699
Antimony, D	ug/L	25	0	0	0.252	3.69	0.6593	0.496	0.6574	0.8528	0.9468	3.0343
Antimony, T	ug/L	25	0	0	0.246	1.65	0.6016	0.563	0.3235	0.8992	1.1972	1.5588
Arsenic (III), T	ug/L	25	0	0	0.016	899	73.5746	13.3	213.9212	22.9	524.06	839
Arsenic, D	ug/L	25	0	0	10.2	939	84.78	25	207.7068	64.08	461.24	847.56
Arsenic, T	ug/L	25	0	0	14.2	958	84.976	21.2	211.9241	53.42	464.5	864.16
Barium, D	ug/L	25	0	0	290	863	647.52	663	125.1626	771.2	810.8	852.68
Barium, T	ug/L	25	0	0	506	1130	700.72	678	134.1937	858.2	909.4	1079.12
Beryllium, D	ug/L	0	25	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	9	16	64	0.002	0.222	0.0325	0.02	0.0498	0.0278	0.141	0.209
Bicarbonate as CaCO3	mg/L	25	0	0	111	173	151.32	153	15.4992	170.6	171	172.52
Boron, D	ug/L	25	0	0	35	64	51.924	53	5.409	55.5	59.46	63.136
Boron, T	ug/L	25	0	0	48	70	56.124	54.8	5.6817	64.66	67.38	69.424
Cadmium, D	ug/L	6	19	76	0.005	0.022	0.018	0.02	0.0051	0.02	0.0208	0.0218
Cadmium, T	ug/L	17	8	32	0.005	0.074	0.0164	0.011	0.0142	0.02	0.0344	0.0654
Calcium, D	ug/L	25	0	0	3070	38100	7715.6	5630	6823.6098	11780	13380	32220
Calcium, T	ug/L	25	0	0	4580	14300	7196.4	5940	2925.702	12140	13580	14156
Carbonate as CaCO3	mg/L	24	1	4	3	70.6	25.128	22.7	16.9389	49.26	56.02	67.336
Chloride	mg/L	25	0	0	0.21	0.42	0.2684	0.27	0.0481	0.31	0.326	0.3984
Chromium, D	ug/L	22	3	12	0.05	4.7	0.4556	0.22	0.9071	0.644	0.856	3.7832
Chromium, T	ug/L	24	1	4	0.04	1.61	0.5084	0.29	0.4841	1.252	1.528	1.6028
Cobalt, D	ug/L	25	0	0	0.049	0.518	0.1734	0.143	0.1134	0.2852	0.3116	0.47
Cobalt, T	ug/L	25	0	0	0.049	0.529	0.1597	0.121	0.1302	0.3304	0.4808	0.5225
Conductivity	uS/cm	25	0	0	141.28	491.06	268.5016	249.1	70.2162	352.518	364.97	461.384
Copper, D	ug/L	25	0	0	0.09	0.59	0.216	0.18	0.1256	0.334	0.51	0.5804
Copper, T	ug/L	25	0	0	0.1	2.4	0.3888	0.26	0.4454	0.546	0.698	1.9992
Cyanide, T	mg/L	5	20	80	0.0011	0.0077	0.003	0.0027	0.0015	0.0037	0.007	0.0077
Dissolved Oxygen	mg/L	24	0	0	0	1.84	0.3946	0.08	0.576	1.285	1.602	1.7963
Fluoride	mg/L	25	0	0	0.56	0.88	0.6908	0.71	0.073	0.762	0.77	0.8536
Hardness as CaCO3	mg/L	25	0	0	17.9	46.1	25.52	22.5	7.8593	37.64	42.32	45.332
Iron, D	ug/L	20	5	20	5.2	196	24.724	12.5	42.145	24	102	178
Iron, T	ug/L	25	0	0	6	808	111.764	26	194.1146	223.6	538.8	761.68
Lead, D	ug/L	25	0	0	0.005	0.086	0.0253	0.015	0.0248	0.063	0.0766	0.0843
Lead, T	ug/L	25	0	0	0.007	0.683	0.1056	0.055	0.1513	0.2644	0.3608	0.6103
Magnesium, D	ug/L	25	0	0	744	2870	1744.56	1720	334.8754	1988	2040	2673.2
Magnesium, T	ug/L	25	0	0	1550	2880	1834.4	1790	252.9341	1998	2058	2685.6
Manganese, D	ug/L	24	1	4	0.6	628	49.6636	11.4	130.7354	51.54	219.22	539.92
Manganese, T	ug/L	25	0	0	4.7	641	53.164	14.3	132.5934	46.54	222.98	551
Mercury, D	ng/L	22	2	8	0.15	2.53	0.5925	0.415	0.5427	1.196	1.5565	2.3161

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B04, Meadow Creek valley in Smelter Flats												
Mercury, T	ng/L	25	0	0	0.19	43	4.414	1	8.8789	11.64	12.6	35.704
Methyl Mercury	ng/L	6	19	76	0.04	0.22	0.0992	0.1	0.0328	0.1	0.132	0.2008
Molybdenum, D	ug/L	25	0	0	2.82	5.96	3.6588	3.64	0.5579	3.91	3.97	5.4848
Molybdenum, T	ug/L	25	0	0	3	5.08	3.7012	3.67	0.4639	4.086	4.662	5.008
Nickel, D	ug/L	24	1	4	0.05	0.64	0.2628	0.21	0.1738	0.556	0.576	0.6256
Nickel, T	ug/L	23	2	8	0.03	1.44	0.37	0.21	0.3752	0.806	1.138	1.3872
Nitrate+Nitrite as Nitrogen	mg/L	12	13	52	0.02	0.061	0.0434	0.05	0.0106	0.05	0.05	0.0584
Nitrogen, Total as Nitrogen	mg/L	24	1	4	0.27	1.47	0.4848	0.44	0.2409	0.678	0.73	1.2948
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.26	1.47	0.4636	0.4	0.2439	0.652	0.724	1.2948
Oxidation-Reduction potential	volts	23	0	0	-0.589	0.16	-0.1276	-0.148	0.1672	0.056	0.1237	0.1536
pH	pH	25	0	0	6.17	10.03	8.9352	9.01	0.7868	9.544	9.852	10.0036
Phosphorus, D	ug/L	19	6	24	3.2	40	17.436	10	14.4616	40	40	40
Phosphorus, T	mg/L	1	0	0	0.141	0.141	0.141	0.141		0.141	0.141	0.141
Phosphorus, T	ug/L	23	2	8	4.3	41.2	16.764	10.3	12.0011	37.2	40	40.912
Potassium, D	ug/L	25	0	0	730	7130	1217.52	942	1243.6216	1348	1444	5766.8
Potassium, T	ug/L	25	0	0	770	2630	1100.2	975	448.3246	1378	2194	2567.6
Selenium, D	ug/L	1	24	96	0.3	1	0.972	1	0.14	1	1	1
Selenium, T	ug/L	0	25	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	2	23	92	0.005	0.02	0.0188	0.02	0.0042	0.02	0.02	0.02
Silver, T	ug/L	8	17	68	0.006	0.02	0.0164	0.02	0.0056	0.02	0.02	0.02
Sodium, D	ug/L	25	0	0	61500	78400	71844	73000	4879.556	77560	77880	78280
Sodium, T	ug/L	25	0	0	61300	81100	72936	73200	4141.1432	76660	79660	80908
Solids, Total Dissolved	mg/L	25	0	0	133	225	186.2	188	19.9854	206	213.6	222.6
Sulfate	mg/L	25	0	0	3.78	19.9	5.77	4.86	3.1879	6.616	9.248	17.4856
Temperature, Water	deg C	25	0	0	7.09	17.02	10.2088	10.13	2.2474	12.346	13.01	16.0768
Thallium, D	ug/L	4	21	84	0.002	0.02	0.0176	0.02	0.0057	0.02	0.02	0.02
Thallium, T	ug/L	7	18	72	0.002	0.02	0.0161	0.02	0.0066	0.02	0.02	0.02
Turbidity	NTU	25	0	0	0	2271	103.5656	1.86	452.3561	39.264	112.172	1756.92
Turbidity	NTU	3	0	0	0.19	0.41	0.27	0.21	0.1217	0.37	0.39	0.406
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.02	1.07	0.312	0.23	0.2575	0.708	0.7856	1.0045
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.04	1.09	0.337	0.21	0.2818	0.756	0.872	1.0444
Zinc, D	ug/L	25	0	0	0.28	2.6	0.8172	0.67	0.5149	1.456	1.592	2.36
Zinc, T	ug/L	25	0	0	0.3	3.7	1.2268	0.89	0.8597	2.456	2.66	3.46

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A05, Meadow Creek valley near middle of airstrip												
Alkalinity as CaCO3	mg/L	25	0	0	81.2	131	101.452	101	10.7485	111	112.6	126.68
Aluminum (Fume Or Dust), D	ug/L	25	0	0	2.2	24.5	4.528	3	5.1622	4.32	15.36	22.964
Aluminum (Fume Or Dust), T	ug/L	25	0	0	2.5	745	36.368	3.4	147.8799	19.84	37.72	576.232
Ammonia as Nitrogen	mg/L	23	2	8	0.026	0.107	0.0574	0.051	0.0222	0.0834	0.0942	0.1044
Antimony, D	ug/L	25	0	0	37.8	534	123.584	110	100.0102	207.4	223.4	460.08
Antimony, T	ug/L	25	0	0	38.3	578	125.68	109	107.542	209.8	225	493.52
Arsenic (III), T	ug/L	25	0	0	2.21	772	124.686	37.1	200.2542	429.2	502.8	707.68
Arsenic, D	ug/L	25	0	0	51.5	2840	1849.66	1800	549.0636	2470	2670	2806.4
Arsenic, T	ug/L	25	0	0	148	2990	1865.52	1770	552.7463	2464	2696	2927.6
Barium, D	ug/L	25	0	0	19.4	46.6	32.828	32.8	6.7197	42.92	44.4	46.12
Barium, T	ug/L	25	0	0	22.7	45.1	33.28	33.3	5.8494	41.68	43.92	44.932
Beryllium, D	ug/L	24	1	4	0.007	0.023	0.0135	0.013	0.0038	0.0186	0.0198	0.0223
Beryllium, T	ug/L	24	1	4	0.007	0.186	0.0198	0.012	0.0348	0.0178	0.0198	0.1462
Bicarbonate as CaCO3	mg/L	25	0	0	81.2	131	101.452	101	10.7485	111	112.6	126.68
Boron, D	ug/L	25	0	0	17.9	30.4	22.892	22.6	3.0574	26.3	29.14	30.232
Boron, T	ug/L	25	0	0	12.5	31.4	23.184	23.1	4.1241	28.22	30.34	31.184
Cadmium, D	ug/L	25	0	0	0.018	0.052	0.0343	0.034	0.0075	0.0426	0.0454	0.0506
Cadmium, T	ug/L	25	0	0	0.018	0.049	0.0354	0.035	0.0065	0.042	0.0452	0.0483
Calcium, D	ug/L	25	0	0	68500	97300	83372	83200	7444.4901	92780	95940	97132
Calcium, T	ug/L	25	0	0	68900	97900	83240	83700	7016.5281	90680	95880	97660
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	25	0	0	3.99	39	9.906	8.06	7.1101	16.7	17.22	33.792
Chromium, D	ug/L	22	3	12	0.05	0.24	0.1344	0.14	0.0635	0.206	0.226	0.2376
Chromium, T	ug/L	22	3	12	0.04	0.82	0.184	0.15	0.1571	0.276	0.352	0.712
Cobalt, D	ug/L	25	0	0	0.841	5.55	1.8963	1.83	0.9012	2.454	2.606	4.8492
Cobalt, T	ug/L	25	0	0	0.838	5.27	1.8843	1.86	0.8575	2.376	2.54	4.6244
Conductivity	uS/cm	25	0	0	327.29	689.21	453.096	412.22	104.8195	624.004	669.952	686.1788
Copper, D	ug/L	25	0	0	1.04	2.65	1.3344	1.28	0.3105	1.534	1.558	2.3884
Copper, T	ug/L	25	0	0	0.98	2.13	1.3052	1.23	0.2429	1.532	1.612	2.01
Cyanide, T	mg/L	25	0	0	0.0009	0.0106	0.0039	0.0035	0.0022	0.0063	0.0068	0.0097
Dissolved Oxygen	mg/L	25	0	0	0	4.6	0.2556	0	0.9159	0.29	0.538	3.6376
Fluoride	mg/L	25	0	0	0.08	0.27	0.1388	0.13	0.0363	0.16	0.168	0.246
Hardness as CaCO3	mg/L	25	0	0	244	340	292.04	290	22.7568	315.6	335.6	340
Iron, D	ug/L	23	2	8	3.9	510	126.58	60.1	154.9181	378	382	479.28
Iron, T	ug/L	24	1	4	4.3	1420	187.144	66.1	301.1958	404.6	487	1200.4
Lead, D	ug/L	15	10	40	0.003	0.269	0.0262	0.02	0.0517	0.0258	0.049	0.2174
Lead, T	ug/L	14	11	44	0.002	1.58	0.0868	0.02	0.3149	0.0266	0.211	1.2622
Magnesium, D	ug/L	25	0	0	17600	24200	20564	20600	1890.5202	23260	23820	24128
Magnesium, T	ug/L	25	0	0	17500	26300	20444	20100	2040.2369	22860	23780	25724
Manganese, D	ug/L	25	0	0	422	3020	2232.48	2310	542.5791	2840	2992	3017.6
Manganese, T	ug/L	25	0	0	414	2980	2222.56	2320	548.4133	2870	2938	2970.4
Mercury, D	ng/L	23	0	0	35.9	126	66.9913	65.6	24.1472	97.74	113.7	123.58

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A05, Meadow Creek valley near middle of airstrip												
Mercury, T	ng/L	24	0	0	38.6	131	78.5792	80.55	23.8697	99.53	118.85	128.93
Methyl Mercury	ng/L	21	4	16	0.03	0.2	0.086	0.09	0.0419	0.146	0.15	0.188
Molybdenum, D	ug/L	25	0	0	0.598	1.97	1.5111	1.52	0.2852	1.838	1.938	1.9676
Molybdenum, T	ug/L	25	0	0	0.61	2.05	1.5384	1.52	0.2981	1.88	1.98	2.038
Nickel, D	ug/L	25	0	0	1.66	3.25	2.328	2.23	0.4532	2.916	2.98	3.1876
Nickel, T	ug/L	25	0	0	1.57	3.55	2.3244	2.28	0.4832	2.888	3.132	3.4588
Nitrate+Nitrite as Nitrogen	mg/L	9	16	64	0.017	0.761	0.129	0.05	0.1924	0.2882	0.6178	0.744
Nitrogen, Total as Nitrogen	mg/L	25	0	0	0.39	1.32	0.6764	0.56	0.2819	1.122	1.25	1.3056
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.37	1.21	0.576	0.52	0.1869	0.776	0.884	1.138
Oxidation-Reduction potential	volts	23	0	0	-0.537	0.241	0.0343	0.083	0.173	0.1636	0.2031	0.2335
pH	pH	25	0	0	5.77	10.13	6.6396	6.43	0.8341	7.046	7.818	9.614
Phosphorus, D	ug/L	24	1	4	20	103	42.272	39.4	16.1575	57.24	61.88	93.304
Phosphorus, T	mg/L	1	0	0	0.22	0.22	0.22	0.22		0.22	0.22	0.22
Phosphorus, T	ug/L	25	0	0	28.7	106	42.776	41.5	15.615	55.82	58.86	94.72
Potassium, D	ug/L	25	0	0	2360	3360	2765.2	2750	253.0501	3092	3276	3350.4
Potassium, T	ug/L	25	0	0	2400	3770	2758	2690	300	3072	3268	3657.2
Selenium, D	ug/L	17	8	32	0.2	1.2	0.716	0.7	0.3064	1	1	1.152
Selenium, T	ug/L	18	7	28	0.3	1	0.684	0.8	0.2838	1	1	1
Silver, D	ug/L	2	23	92	0.002	0.02	0.019	0.02	0.0038	0.02	0.02	0.02
Silver, T	ug/L	4	21	84	0.006	0.02	0.0189	0.02	0.0034	0.02	0.02	0.02
Sodium, D	ug/L	25	0	0	12400	18500	15332	15300	1663.0093	17380	18060	18428
Sodium, T	ug/L	25	0	0	12100	18400	15164	14800	1654.2571	17360	17400	18160
Solids, Total Dissolved	mg/L	25	0	0	117	564	433.4	443	80.0635	503.4	521.4	553.92
Sulfate	mg/L	25	0	0	160	265	212.08	217	24.9147	233	252.6	263.08
Temperature, Water	deg C	25	0	0	4.75	9.22	7.1448	7.21	1.2808	8.706	9.018	9.1816
Thallium, D	ug/L	3	22	88	0.004	0.021	0.0188	0.02	0.0042	0.02	0.02	0.0208
Thallium, T	ug/L	7	18	72	0.0009	0.038	0.017	0.02	0.0081	0.02	0.02	0.0337
Turbidity	NTU	24	0	0	0	38.8	1.8792	0	7.8966	1.305	2.8935	30.6005
Turbidity	NTU	3	0	0	0.49	0.55	0.5233	0.53	0.0306	0.546	0.548	0.5496
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.1	1.19	0.7498	0.75	0.2062	0.976	1.07	1.1636
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.58	1.36	0.8081	0.77	0.1844	1.06	1.116	1.3024
Zinc, D	ug/L	25	0	0	0.53	6	1.676	1.4	1.1686	2.324	3.96	5.592
Zinc, T	ug/L	25	0	0	0.74	7.2	1.5492	1.3	1.269	2.212	2.532	6.0936

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B05, Meadow Creek valley near middle of airstrip												
Alkalinity as CaCO3	mg/L	25	0	0	147	216	179.2	181	15.6392	199.8	202.6	212.88
Aluminum (Fume Or Dust), D	ug/L	25	0	0	1.4	238	19.528	4.7	47.7575	42.64	52.68	193.624
Aluminum (Fume Or Dust), T	ug/L	25	0	0	2.5	3190	306.332	31.2	855.6241	372.4	2545.2	3161.2
Ammonia as Nitrogen	mg/L	10	15	60	0.025	0.072	0.0477	0.05	0.0107	0.0562	0.0622	0.0698
Antimony, D	ug/L	25	0	0	19.5	336	97.884	73.4	83.0687	216.8	272.4	323.76
Antimony, T	ug/L	25	0	0	12.3	335	100.524	78.6	81.5431	202.2	279	325.4
Arsenic (III), T	ug/L	25	0	0	0.94	825	83.8576	4.69	212.5298	118	612.4	802.68
Arsenic, D	ug/L	25	0	0	177	902	382.76	291	222.6741	844	845.6	888.56
Arsenic, T	ug/L	25	0	0	144	857	394.4	311	208.0531	799.4	827.8	850.52
Barium, D	ug/L	25	0	0	32.5	76.5	46	41.2	10.9299	58.9	68.66	75.012
Barium, T	ug/L	25	0	0	35.3	77.4	49.572	43.5	13.3787	72.3	73.58	76.488
Beryllium, D	ug/L	7	18	72	0.004	0.02	0.0172	0.02	0.0052	0.02	0.02	0.02
Beryllium, T	ug/L	22	3	12	0.005	0.819	0.0825	0.016	0.2159	0.0846	0.6382	0.8082
Bicarbonate as CaCO3	mg/L	25	0	0	147	203	178.04	181	13.7583	194.8	200.4	202.52
Boron, D	ug/L	25	0	0	14.5	23	17.728	17	2.2722	20.56	21.72	22.76
Boron, T	ug/L	25	0	0	13.6	26	18.7	17.5	3.5707	23.88	24.8	25.76
Cadmium, D	ug/L	19	6	24	0.006	0.062	0.0178	0.016	0.0129	0.0272	0.0436	0.0584
Cadmium, T	ug/L	18	7	28	0.005	0.077	0.0246	0.02	0.0212	0.0636	0.0692	0.0753
Calcium, D	ug/L	25	0	0	23000	92600	65576	71700	20384.2112	87440	91280	92480
Calcium, T	ug/L	25	0	0	26700	94500	69068	72400	16427.8402	87860	88380	93060
Carbonate as CaCO3	mg/L	1	24	96	15	29	15.56	15	2.8	15	15	25.64
Chloride	mg/L	25	0	0	1.34	3.7	1.988	1.73	0.6434	2.926	3.126	3.5704
Chromium, D	ug/L	24	1	4	0.04	1.58	0.284	0.18	0.3674	0.516	1.124	1.5032
Chromium, T	ug/L	24	1	4	0.06	2.98	0.7224	0.41	0.847	2.138	2.506	2.8744
Cobalt, D	ug/L	25	0	0	0.318	2.64	0.7797	0.634	0.484	1.17	1.47	2.376
Cobalt, T	ug/L	25	0	0	0.299	2.85	0.8842	0.743	0.5407	1.446	1.718	2.5908
Conductivity	uS/cm	25	0	0	384.9	758.04	493.3396	454.8	97.2862	644.478	670.754	738.5904
Copper, D	ug/L	25	0	0	0.1	5.68	1.2108	0.72	1.3591	3.186	3.726	5.2216
Copper, T	ug/L	25	0	0	0.34	5.69	1.6016	0.89	1.4635	4.002	4.266	5.3588
Cyanide, T	mg/L	13	12	48	0.0011	0.0049	0.0036	0.0047	0.0015	0.0047	0.0047	0.0049
Dissolved Oxygen	mg/L	25	0	0	0	5.96	2.1036	2.5	1.8589	4.482	4.514	5.6144
Fluoride	mg/L	25	0	0	0.2	1.83	0.8836	0.79	0.475	1.73	1.774	1.818
Hardness as CaCO3	mg/L	25	0	0	102	329	240.96	258	55.5131	305.6	308.8	324.2
Iron, D	ug/L	24	1	4	4.9	193	46.504	23	49.3297	120	130.8	178.12
Iron, T	ug/L	25	0	0	14.2	4150	413.796	143	938.2278	547.4	2274.6	3797.2
Lead, D	ug/L	25	0	0	0.005	0.435	0.111	0.06	0.1185	0.2714	0.3462	0.418
Lead, T	ug/L	25	0	0	0.012	15.6	1.4424	0.208	4.024	1.1064	11.382	15.192
Magnesium, D	ug/L	25	0	0	6130	22500	15879.6	17100	4866.1633	20940	21380	22236
Magnesium, T	ug/L	25	0	0	8570	22600	16624.8	17400	3637.8108	20820	21620	22384
Manganese, D	ug/L	25	0	0	12.3	169	69.076	52.9	46.3454	144.2	159	167.08
Manganese, T	ug/L	25	0	0	18	242	85.236	78.1	57.3257	149	195.8	233.36
Mercury, D	ng/L	24	0	0	0.46	2.85	1.4017	1.305	0.707	2.424	2.6095	2.7971

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B05, Meadow Creek valley near middle of airstrip												
Mercury, T	ng/L	25	0	0	1.03	61.1	6.7884	2.92	12.7704	10.56	26.9	53.78
Methyl Mercury	ng/L	2	23	92	0.08	0.62	0.12	0.1	0.1042	0.1	0.1	0.4952
Molybdenum, D	ug/L	25	0	0	1.46	12.4	4.918	3.62	3.4522	11.12	11.76	12.28
Molybdenum, T	ug/L	25	0	0	1.64	11.8	4.5032	3.72	2.7546	8.36	10.916	11.68
Nickel, D	ug/L	25	0	0	0.36	5.58	1.3164	1.07	1.2184	1.62	4.048	5.3568
Nickel, T	ug/L	25	0	0	0.28	49.3	3.534	1.34	9.6729	3.226	7.514	39.5176
Nitrate+Nitrite as Nitrogen	mg/L	20	5	20	0.05	1.05	0.233	0.142	0.2652	0.5884	0.8464	1.0075
Nitrogen, Total as Nitrogen	mg/L	24	0	0	0.14	4.57	0.8962	0.655	0.8585	1.403	1.532	3.8754
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.14	4.56	0.6696	0.5	0.8332	0.696	1.1	3.7536
Oxidation-Reduction potential	volts	23	0	0	-0.17	0.321	0.039	0.071	0.1184	0.1656	0.1941	0.2935
pH	pH	25	0	0	6.25	7.77	7.0728	7.13	0.3146	7.38	7.468	7.7028
Phosphorus, D	ug/L	25	0	0	8.3	628	52.592	23.1	120.7055	54.44	62.12	492.616
Phosphorus, T	mg/L	1	0	0	0.157	0.157	0.157	0.157		0.157	0.157	0.157
Phosphorus, T	ug/L	25	0	0	15.7	103	39.02	30.6	22.9341	70.06	81.22	98.296
Potassium, D	ug/L	25	0	0	1660	3410	2245.6	2270	405.3916	2576	3004	3333.2
Potassium, T	ug/L	25	0	0	1670	3420	2301.2	2280	357.1568	2654	2922	3309.6
Selenium, D	ug/L	9	16	64	0.4	1	0.828	1	0.2441	1	1	1
Selenium, T	ug/L	9	16	64	0.3	1	0.868	1	0.2286	1	1	1
Silver, D	ug/L	2	23	92	0.006	0.02	0.0189	0.02	0.0039	0.02	0.02	0.02
Silver, T	ug/L	11	14	56	0.008	0.221	0.03	0.02	0.041	0.0398	0.0514	0.1809
Sodium, D	ug/L	25	0	0	19000	133000	50780	38100	33058.7356	109880	124400	131320
Sodium, T	ug/L	25	0	0	22800	123000	46544	36500	26480.0409	75480	111400	122280
Solids, Total Dissolved	mg/L	25	0	0	118	501	414.6	421	72.2057	473.4	487.8	498.6
Sulfate	mg/L	25	0	0	111	194	152.04	151	19.012	172.6	177.8	190.4
Temperature, Water	deg C	25	0	0	6.06	11.84	9.2592	9.31	1.3824	10.856	11.584	11.8088
Thallium, D	ug/L	13	12	48	0.002	0.088	0.0177	0.02	0.0161	0.02	0.0208	0.0719
Thallium, T	ug/L	17	8	32	0.002	0.075	0.0168	0.0168	0.0187	0.02	0.0624	0.0745
Turbidity	NTU	24	0	0	0	589.4	41.5786	5.035	120.377	58.245	121.086	484.06
Turbidity	NTU	3	0	0	0.21	0.3	0.2567	0.26	0.0451	0.292	0.296	0.2992
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.242	0.67	0.465	0.49	0.1296	0.618	0.644	0.6652
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.31	2.2	0.6372	0.56	0.3885	0.6976	1.3192	2.0248
Zinc, D	ug/L	25	0	0	0.31	34.4	11.5456	8.25	11.0213	23.52	31.68	34.208
Zinc, T	ug/L	25	0	0	1.3	116	19.0256	14.4	23.9172	35.12	44.76	99.368

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
Gestrin Well, Meadow Creek valley near middle of airstrip												
1,1,1,2-Tetrachloroethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,1,1-Trichloroethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,1,2,2-Tetrachloroethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,1,2-Trichloroethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,1-Dichloroethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,1-Dichloropropene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,2,3-Trichlorobenzene	ug/L	0	1	100	2	2	2	2		2	2	2
1,2,3-Trichloropropane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,2,4-Trichlorobenzene	ug/L	0	1	100	2	2	2	2		2	2	2
1,2,4-Trimethylbenzene	ug/L	0	1	100	2	2	2	2		2	2	2
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0	1	100	2	2	2	2		2	2	2
1,2-Dibromoethane (EDB)	ug/L	0	1	100	2	2	2	2		2	2	2
1,2-Dichlorobenzene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,2-Dichloroethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,2-Dichloropropane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,3,5-Trimethylbenzene	ug/L	0	1	100	2	2	2	2		2	2	2
1,3-Dichlorobenzene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,3-Dichloropropane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
1,4-Dichlorobenzene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
2,2-Dichloropropane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
2-Butanone	ug/L	0	1	100	20	20	20	20		20	20	20
2-Chlorotoluene	ug/L	0	1	100	2	2	2	2		2	2	2
2-Hexanone	ug/L	0	1	100	20	20	20	20		20	20	20
4-Chlorotoluene	ug/L	0	1	100	2	2	2	2		2	2	2
4-Isopropyltoluene	ug/L	0	1	100	2	2	2	2		2	2	2
4-Methyl-2-Pentanone	ug/L	0	1	100	20	20	20	20		20	20	20
Acetone	ug/L	0	1	100	20	20	20	20		20	20	20
Alkalinity as CaCO3	mg/L	20	0	0	99	123	109.35	108	5.2643	114.2	116.35	121.67
Aluminum (Fume Or Dust), D	ug/L	20	0	0	0.9	131	8.24	1.55	28.9046	2.98	10.065	106.813
Aluminum (Fume Or Dust), T	ug/L	20	0	0	1.8	62.7	12.23	5.45	15.5464	33.3	40.755	58.311
Ammonia as Nitrogen	mg/L	6	14	70	0.021	0.079	0.047	0.05	0.0146	0.052	0.0704	0.0773
Antimony, D	ug/L	21	0	0	2.01	2.49	2.2529	2.27	0.1281	2.39	2.44	2.48
Antimony, T	ug/L	21	0	0	2.11	3.36	2.5505	2.48	0.3219	2.85	3.24	3.336
Arsenic (III), T	ug/L	21	0	0	0.149	922	127.5128	48.6	223.2008	281	562	850
Arsenic, D	ug/L	21	0	0	3.09	152	32.2324	20.4	35.2759	61.5	80.4	137.68
Arsenic, T	ug/L	21	0	0	3.8	782	187.7048	107	220.177	568	673	760.2
Barium, D	ug/L	20	0	0	32	43.7	39.13	39.55	3.4995	43.03	43.32	43.624
Barium, T	ug/L	20	0	0	34.5	51	42.09	42.55	3.9981	46.24	46.82	50.164
Benzene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Benzene, 1-methylethyl	ug/L	0	1	100	2	2	2	2		2	2	2
Beryllium, D	ug/L	1	19	95	0.006	0.02	0.0193	0.02	0.0031	0.02	0.02	0.02
Beryllium, T	ug/L	6	14	70	0.006	0.02	0.0163	0.02	0.006	0.02	0.02	0.02

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
Gestrin Well, Meadow Creek valley near middle of airstrip												
Bicarbonate as CaCO3	mg/L	20	0	0	99	123	109.35	108	5.2643	114.2	116.35	121.67
Boron, D	ug/L	20	0	0	11.3	55.9	16.26	13.45	9.6223	19.62	21.605	49.041
Boron, T	ug/L	20	0	0	10.9	25.3	14.685	13.3	3.5216	19.28	20.265	24.293
Bromobenzene	ug/L	0	1	100	2	2	2	2		2	2	2
Bromodichloromethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Bromoform	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Bromomethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Cadmium, D	ug/L	4	16	80	0.005	0.022	0.0189	0.02	0.0036	0.02	0.0201	0.0216
Cadmium, T	ug/L	2	18	90	0.005	0.02	0.0189	0.02	0.0036	0.02	0.02	0.02
Calcium, D	ug/L	20	0	0	37300	46900	43350	44500	3093.8819	46450	46900	46900
Calcium, T	ug/L	20	0	0	37200	46900	43620	44850	3057.7942	46540	46900	46900
Carbon Disulfide	ug/L	1	0	0	0.08	0.08	0.08	0.08		0.08	0.08	0.08
Carbon Tetrachloride	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Carbonate as CaCO3	mg/L	0	20	100	15	15	15	15	0	15	15	15
CFC-12	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Chloride	mg/L	20	0	0	0.97	2.6	1.346	1.23	0.3945	1.761	1.8115	2.4423
Chlorobenzene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Chlorobromomethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Chlorodibromomethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Chloroethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Chloroform	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Chloromethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Chromium, D	ug/L	20	0	0	0.03	0.34	0.1865	0.185	0.0915	0.31	0.3115	0.3343
Chromium, T	ug/L	20	0	0	0.11	0.59	0.3275	0.31	0.106	0.425	0.476	0.5672
Cis-1,2-Dichloroethene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Cis-1,3-Dichloropropene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Cobalt, D	ug/L	20	0	0	0.224	1.87	0.4291	0.3245	0.3546	0.4784	0.7053	1.6371
Cobalt, T	ug/L	20	0	0	0.2	0.646	0.3479	0.3315	0.1088	0.4633	0.5006	0.6169
Conductivity	uS/cm	19	0	0	214.5	559.69	278.8763	239.77	86.2172	350.854	421.792	532.1104
Copper, D	ug/L	20	0	0	0.07	0.63	0.227	0.19	0.1436	0.406	0.4685	0.5977
Copper, T	ug/L	20	0	0	0.09	1.51	0.378	0.205	0.396	0.965	1.035	1.415
Cyanide, T	mg/L	3	18	86	0.0011	0.0027	0.0026	0.0027	0.0004	0.0027	0.0027	0.0027
Dibromofluorobenzene	%	1	0	0	90	90	90	90		90	90	90
Dibromomethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Dichloromethane	ug/L	0	1	100	2	2	2	2		2	2	2
Dissolved Oxygen	mg/L	19	0	0	0.56	6.56	2.3968	1.61	1.6721	4.9	5.138	6.2756
Ethylbenzene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Fluoride	mg/L	10	10	50	0.02	0.2	0.134	0.19	0.0767	0.2	0.2	0.2
Hardness as CaCO3	mg/L	20	0	0	129	166	152.8	157	11.1478	164.2	166	166
Hexachlorobutadiene	ug/L	0	1	100	2	2	2	2		2	2	2
Iron, D	ug/L	20	0	0	56.3	2690	757.935	552	708.6982	1676	1778	2507.6
Iron, T	ug/L	20	0	0	424	14900	3938.85	2455	4182.7691	10630	13665	14653

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
Gestrin Well, Meadow Creek valley near middle of airstrip												
Lead, D	ug/L	17	3	15	0.004	0.455	0.0828	0.02	0.1357	0.1979	0.4493	0.4539
Lead, T	ug/L	20	0	0	0.006	0.791	0.1511	0.064	0.2053	0.3564	0.544	0.7416
m,p-Xylenes	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Magnesium, D	ug/L	20	0	0	8700	11600	10628	10900	842.7062	11410	11505	11581
Magnesium, T	ug/L	20	0	0	8690	12200	10652	10850	915.2198	11900	11915	12143
Manganese, D	ug/L	20	0	0	8.2	209	88.305	61.65	67.1262	192.5	197.6	206.72
Manganese, T	ug/L	20	0	0	15	313	108.2	77.25	80.7561	217.9	238.9	298.18
Mercury, D	ng/L	20	0	0	0.25	1.22	0.519	0.45	0.2583	0.737	1.0775	1.1915
Mercury, T	ng/L	20	0	0	0.39	4.64	1.6435	1.125	1.1469	3.222	3.7375	4.4595
Methyl Mercury	ng/L	5	15	75	0.04	0.17	0.093	0.1	0.0281	0.1	0.1035	0.1567
Molybdenum, D	ug/L	20	0	0	0.283	0.42	0.3412	0.335	0.0314	0.372	0.3915	0.4143
Molybdenum, T	ug/L	20	0	0	0.273	0.42	0.3446	0.332	0.044	0.4073	0.4105	0.4181
Naphthalene	ug/L	0	1	100	2	2	2	2		2	2	2
n-Butylbenzene	ug/L	0	1	100	2	2	2	2		2	2	2
Nickel, D	ug/L	20	0	0	0.09	0.57	0.333	0.36	0.1706	0.524	0.5605	0.5681
Nickel, T	ug/L	20	0	0	0.09	0.58	0.3	0.225	0.1766	0.534	0.5705	0.5781
Nitrate+Nitrite as Nitrogen	mg/L	19	1	5	0.05	0.253	0.1436	0.136	0.0485	0.2252	0.2368	0.2498
Nitrogen, Total as Nitrogen	mg/L	20	0	0	0.31	1.82	0.728	0.66	0.3382	0.853	1.44	1.744
Nitrogen, Total Kjeldahl (TKN)	mg/L	20	0	0	0.19	1.69	0.583	0.515	0.3412	0.679	1.3195	1.6159
n-Propylbenzene	ug/L	0	1	100	2	2	2	2		2	2	2
Oil and Grease, Total (HEM)	mg/L	0	1	100	10	10	10	10		10	10	10
Oxidation-Reduction potential	volts	18	0	0	-0.239	0.151	-0.0171	0.0018	0.1024	0.0753	0.123	0.1454
O-Xylene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
P-Bromofluorobenzene	%	1	0	0	96	96	96	96		96	96	96
pH	pH	19	0	0	6.83	7.9	7.2511	7.12	0.3053	7.706	7.819	7.8838
Phosphorus, D	ug/L	15	5	25	3.6	40	18.01	10.5	14.9329	40	40	40
Phosphorus, T	ug/L	19	1	5	5.9	115	33.29	23.8	27.4022	71.16	79.85	107.97
Potassium, D	ug/L	20	0	0	1350	1720	1555	1560	91.6802	1671	1682	1712.4
Potassium, T	ug/L	20	0	0	1340	1800	1559.5	1545	103.2868	1685	1733.5	1786.7
sec-Butylbenzene	ug/L	0	1	100	2	2	2	2		2	2	2
Selenium, D	ug/L	1	19	95	0.2	1	0.96	1	0.1789	1	1	1
Selenium, T	ug/L	2	18	90	0.2	1	0.92	1	0.2462	1	1	1
Silver, D	ug/L	2	18	90	0.008	0.178	0.0273	0.02	0.0356	0.02	0.0279	0.148
Silver, T	ug/L	3	17	85	0.002	0.02	0.018	0.02	0.0051	0.02	0.02	0.02
Sodium, D	ug/L	20	0	0	9090	11200	10309.5	10300	524.2887	10830	11105	11181
Sodium, T	ug/L	20	0	0	9040	12000	10278	10200	606.6613	10750	11240	11848
Solids, Total Dissolved	mg/L	20	0	0	191	238	220.5	221.5	14.3215	237	237.05	237.81
Styrene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Sulfate	mg/L	20	0	0	50.1	76.5	62.81	61.75	8.017	71.79	72.795	75.759
Temperature, Water	deg C	19	0	0	6.5	15.25	8.2111	7.06	2.5814	12.264	14.089	15.0178
tert-Butylbenzene	ug/L	0	1	100	2	2	2	2		2	2	2
Tetrachloroethene	ug/L	1	0	0	0.1	0.1	0.1	0.1		0.1	0.1	0.1

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
Gestrin Well, Meadow Creek valley near middle of airstrip												
Thallium, D	ug/L	2	18	90	0.005	0.02	0.0185	0.02	0.0046	0.02	0.02	0.02
Thallium, T	ug/L	3	17	85	0.003	0.022	0.0187	0.02	0.0046	0.02	0.0201	0.0216
Toluene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Toluene-D8	%	1	0	0	100	100	100	100		100	100	100
Trans-1,2-Dichloroethene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Trans-1,3-Dichloropropene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Trichloroethylene	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Trichlorofluoromethane	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Turbidity	NTU	18	0	0	2.234	81.8	29.4876	22.185	22.1562	57.704	61.723	77.7846
Turbidity	NTU	3	0	0	21.4	49.4	30.8667	21.8	16.0516	43.88	46.64	48.848
Vanadium (Fume Or Dust), D	ug/L	20	0	0	0.11	0.32	0.242	0.255	0.054	0.282	0.301	0.3162
Vanadium (Fume Or Dust), T	ug/L	20	0	0	0.25	1.39	0.5012	0.415	0.3062	0.758	1.2855	1.3691
Vinyl Chloride	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Vinylidene Chloride	ug/L	0	1	100	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Zinc, D	ug/L	20	0	0	13.7	382	61.805	32.25	79.9175	91.79	120.75	329.75
Zinc, T	ug/L	20	0	0	19.9	774	147.23	89.9	172.1949	288.2	365.5	692.3

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
uS/cm microsiemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A07, Meadow Creek valley near EFSFSR												
Alkalinity as CaCO3	mg/L	25	0	0	22.6	98	61.952	60	19.9966	87.8	90.6	96.32
Aluminum (Fume Or Dust), D	ug/L	25	0	0	3.4	68.5	29.116	26.1	14.9322	45.34	62.9	68.044
Aluminum (Fume Or Dust), T	ug/L	25	0	0	7.5	4130	352.552	111	805.8754	488.2	554.6	3274.88
Ammonia as Nitrogen	mg/L	20	5	20	0.023	0.077	0.0504	0.05	0.0144	0.0672	0.0704	0.0756
Antimony, D	ug/L	25	0	0	48.8	1580	986.072	928	355.7594	1472	1544	1575.2
Antimony, T	ug/L	25	0	0	48.6	1680	1001.544	966	389.0739	1566	1630	1670.4
Arsenic (III), T	ug/L	25	0	0	0.353	116	19.5072	4.05	34.9008	86.68	93.72	111.032
Arsenic, D	ug/L	25	0	0	21	2470	224.912	91	479.5386	321	407.4	1978.96
Arsenic, T	ug/L	25	0	0	29.2	2510	414.224	283	497.907	835.8	912.2	2127.44
Barium, D	ug/L	25	0	0	13.9	30	17.86	17.2	3.6351	21.02	24.46	28.872
Barium, T	ug/L	25	0	0	14.3	46.5	21.504	19.6	6.8644	27.74	30.18	42.708
Beryllium, D	ug/L	25	0	0	0.012	0.071	0.0278	0.024	0.0138	0.0426	0.0582	0.0688
Beryllium, T	ug/L	25	0	0	0.018	0.306	0.0742	0.042	0.0687	0.1294	0.2126	0.2885
Bicarbonate as CaCO3	mg/L	25	0	0	22.6	98	61.952	60	19.9966	87.8	90.6	96.32
Boron, D	ug/L	25	0	0	6.2	19.8	10.744	10.1	2.8027	13.44	14.16	18.48
Boron, T	ug/L	25	0	0	8	21.3	11.572	11.1	2.6804	13.2	14.8	19.836
Cadmium, D	ug/L	25	0	0	0.018	0.101	0.0375	0.034	0.0174	0.0488	0.0676	0.094
Cadmium, T	ug/L	25	0	0	0.019	0.083	0.0388	0.038	0.0145	0.0452	0.0708	0.0816
Calcium, D	ug/L	25	0	0	43700	118000	74740	71600	18345.7079	99560	104800	115120
Calcium, T	ug/L	25	0	0	43900	116000	74544	71500	17726.4181	98680	103880	113360
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	25	0	0	0.82	7.19	2.638	2.15	1.5556	4.456	5.64	6.8732
Chromium, D	ug/L	22	3	12	0.04	0.66	0.186	0.15	0.1586	0.392	0.504	0.6288
Chromium, T	ug/L	23	2	8	0.04	2.26	0.4156	0.23	0.5819	0.768	1.988	2.2552
Cobalt, D	ug/L	25	0	0	1.6	5.83	3.4812	3.67	1.1045	4.762	4.974	5.6308
Cobalt, T	ug/L	25	0	0	1.56	5.79	3.4984	3.63	1.2204	4.99	5.578	5.7708
Conductivity	uS/cm	25	0	0	35.14	1034	449.7016	386.4	210.952	724.172	878.62	1005.8864
Copper, D	ug/L	25	0	0	0.6	2.26	1.2512	1.26	0.4674	1.904	2.072	2.2192
Copper, T	ug/L	25	0	0	0.72	3.18	1.8316	1.76	0.5778	2.546	2.694	3.0696
Cyanide, T	mg/L	25	0	0	0.0025	0.062	0.0173	0.0089	0.0164	0.0422	0.0471	0.0586
Dissolved Oxygen	mg/L	25	0	0	0	1.4	0.316	0.09	0.4207	0.852	1.108	1.3424
Fluoride	mg/L	25	0	0	0.08	0.28	0.154	0.13	0.058	0.236	0.248	0.2728
Hardness as CaCO3	mg/L	25	0	0	181	498	312.36	305	78.8167	426.6	448.6	487.44
Iron, D	ug/L	25	0	0	9	2410	567.544	312	619.1214	1424	1604	2220.4
Iron, T	ug/L	25	0	0	68.3	4000	1450.972	1100	1046.8496	2998	3098	3786.4
Lead, D	ug/L	25	0	0	0.005	0.332	0.036	0.013	0.0665	0.0624	0.1056	0.2802
Lead, T	ug/L	25	0	0	0.007	2.14	0.4384	0.238	0.4961	1.0068	1.068	1.8832
Magnesium, D	ug/L	25	0	0	16600	51600	30648	29800	9050.8803	44100	46900	50568
Magnesium, T	ug/L	25	0	0	16600	50500	30668	29700	8884.4771	43920	46120	49564
Manganese, D	ug/L	25	0	0	78.6	2720	408.092	331	501.8012	501.6	574.4	2209.28
Manganese, T	ug/L	25	0	0	81	2780	412.776	320	513.8799	512.6	573.8	2253.92
Mercury, D	ng/L	24	0	0	3.27	28	10.5829	10.7	5.7214	15.34	17.355	25.631
Mercury, T	ng/L	25	0	0	13.8	92.2	33.68	26.9	18.8018	53.1	67.66	86.944
Methyl Mercury	ng/L	16	9	36	0.03	0.15	0.0732	0.06	0.0305	0.1	0.1	0.138
Molybdenum, D	ug/L	25	0	0	0.399	4.04	1.9994	1.88	1.0545	3.282	3.702	3.9776
Molybdenum, T	ug/L	25	0	0	0.32	4.9	2.1116	1.84	1.2057	3.708	3.9	4.6648

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A07, Meadow Creek valley near EFSFSR												
Nickel, D	ug/L	25	0	0	0.62	2.89	1.52	1.55	0.5533	2.168	2.404	2.7844
Nickel, T	ug/L	25	0	0	0.64	3.48	1.6288	1.47	0.7011	2.616	3.008	3.372
Nitrate+Nitrite as Nitrogen	mg/L	18	7	28	0.037	0.718	0.1948	0.126	0.1921	0.4806	0.489	0.6633
Nitrogen, Total as Nitrogen	mg/L	24	1	4	0.26	2.06	0.8164	0.65	0.4552	1.384	1.432	1.9112
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.22	2.06	0.6432	0.49	0.3828	0.988	1.256	1.88
Oxidation-Reduction potential	volts	23	0	0	-0.198	0.2	0.0822	0.101	0.0902	0.1666	0.179	0.1956
pH	pH	25	0	0	4.96	6.55	6.0896	6.17	0.3159	6.362	6.394	6.514
Phosphorus, D	ug/L	11	14	56	3	43.4	27.816	40	15.7089	40	40	42.584
Phosphorus, T	ug/L	21	4	16	8.9	119	29.696	25	22.7437	45.9	50.94	102.872
Potassium, D	ug/L	25	0	0	2750	4470	3519.6	3440	480.6114	4188	4404	4458
Potassium, T	ug/L	25	0	0	2780	4360	3580	3570	410.1016	4184	4288	4343.2
Selenium, D	ug/L	20	5	20	0.4	1.4	0.748	0.7	0.2845	1	1.24	1.376
Selenium, T	ug/L	23	2	8	0.3	1.3	0.716	0.6	0.2954	1.16	1.2	1.276
Silver, D	ug/L	1	24	96	0.003	0.02	0.0193	0.02	0.0034	0.02	0.02	0.02
Silver, T	ug/L	17	8	32	0.003	0.072	0.0153	0.014	0.0135	0.02	0.0208	0.0598
Sodium, D	ug/L	25	0	0	4620	16300	8726	8150	3249.105	13480	14400	15868
Sodium, T	ug/L	25	0	0	4840	16100	8581.6	7840	3173.4979	13500	13780	15548
Solids, Total Dissolved	mg/L	25	0	0	283	732	462.44	440	98.8585	582.8	623.2	706.8
Sulfate	mg/L	25	0	0	170	418	257	244	64.8479	341.2	377.2	410.08
Temperature, Water	deg C	25	0	0	5.97	8.24	6.6848	6.61	0.6136	7.47	7.806	8.1488
Thallium, D	ug/L	24	1	4	0.007	0.023	0.0164	0.016	0.0036	0.0206	0.021	0.0225
Thallium, T	ug/L	24	1	4	0.014	0.046	0.0211	0.019	0.0067	0.0266	0.0294	0.0422
Turbidity	NTU	25	0	0	1.89	294.2	25.7332	9.35	57.3525	37.74	43.696	234.4256
Turbidity	NTU	3	0	0	1.87	3.13	2.4	2.2	0.6534	2.944	3.037	3.1114
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.05	0.87	0.1536	0.13	0.1542	0.186	0.198	0.7092
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.065	3.12	0.5683	0.4	0.5858	0.83	1.066	2.64
Zinc, D	ug/L	25	0	0	1.6	7.2	4.0896	3.9	1.1629	5.506	5.542	6.804
Zinc, T	ug/L	25	0	0	1.8	8.85	4.774	4.7	1.6133	6.98	7.38	8.502

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
uS/cm micro siemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B07, Meadow Creek valley near EFSFSR												
Alkalinity as CaCO3	mg/L	25	0	0	198	226	213.8	213	6.8191	222	222.8	225.28
Aluminum (Fume Or Dust), D	ug/L	25	0	0	2.3	3930	322.304	28.2	819.7289	713	1278.6	3322.8
Aluminum (Fume Or Dust), T	ug/L	25	0	0	5	7100	975.48	123	1718.8572	2798	4246	6483.2
Ammonia as Nitrogen	mg/L	17	8	32	0.022	0.058	0.0382	0.04	0.0117	0.05	0.05	0.0561
Antimony, D	ug/L	25	0	0	0.41	1.95	1.0492	0.922	0.534	1.826	1.926	1.95
Antimony, T	ug/L	25	0	0	0.302	2.52	1.092	0.969	0.6439	1.806	2.042	2.4168
Arsenic (III), T	ug/L	25	0	0	1.81	266	154.2324	161	65.5704	234.6	258.2	265.04
Arsenic, D	ug/L	25	0	0	189	301	247.88	249	20.5656	266.6	267.8	293.08
Arsenic, T	ug/L	25	0	0	116	291	240.64	249	34.5385	269.6	272.4	286.68
Barium, D	ug/L	25	0	0	11.4	26.6	19.216	19.2	2.8801	21.68	24.04	26.096
Barium, T	ug/L	25	0	0	17.2	41.6	22.696	20.6	6.0209	28.22	37.5	41.12
Beryllium, D	ug/L	25	0	0	0.009	0.69	0.0716	0.027	0.1485	0.0806	0.3306	0.6175
Beryllium, T	ug/L	25	0	0	0.014	2.65	0.355	0.059	0.7429	1.0108	2.388	2.6452
Bicarbonate as CaCO3	mg/L	25	0	0	196	222	210.32	211	8.0142	219.6	220	221.52
Boron, D	ug/L	25	0	0	26	40.9	31.316	30.7	2.9381	33.76	34.56	39.412
Boron, T	ug/L	25	0	0	28	41.1	33.468	33	4.1434	40.36	40.84	41.052
Cadmium, D	ug/L	20	5	20	0.005	0.05	0.0168	0.014	0.0098	0.0254	0.0346	0.0466
Cadmium, T	ug/L	23	2	8	0.005	0.167	0.032	0.017	0.0414	0.0652	0.1364	0.1632
Calcium, D	ug/L	25	0	0	12400	16400	14420	14400	845.5767	15300	16020	16352
Calcium, T	ug/L	25	0	0	13000	25600	15840	14800	3119.6955	19540	23620	25312
Carbonate as CaCO3	mg/L	7	18	72	4	29	13.976	15	4.5732	15	15	25.64
Chloride	mg/L	25	0	0	1.26	6.36	1.89	1.57	1.1829	2.12	4.48	6.0408
Chromium, D	ug/L	22	3	12	0.03	5.94	0.6292	0.2	1.2055	1.17	1.95	5.0232
Chromium, T	ug/L	24	1	4	0.03	7.23	1.0792	0.39	1.6763	3.284	3.832	6.4308
Cobalt, D	ug/L	25	0	0	0.042	3.72	0.4738	0.184	0.7848	0.7	1.7408	3.3072
Cobalt, T	ug/L	25	0	0	0.074	3.85	0.6872	0.312	1.0079	1.632	3.256	3.79
Conductivity	uS/cm	25	0	0	316.93	721.62	493.9316	466.2	99.4861	657.642	680.474	712.0584
Copper, D	ug/L	25	0	0	0.04	4.64	0.794	0.27	1.0748	2.162	2.35	4.1
Copper, T	ug/L	25	0	0	0.05	15.7	2.5068	1.01	4.0846	6.128	12.96	15.34
Cyanide, T	mg/L	3	22	88	0.0024	0.0665	0.0053	0.0027	0.0128	0.0027	0.0031	0.0513
Dissolved Oxygen	mg/L	25	0	0	0	0.95	0.0916	0	0.2348	0.298	0.614	0.8828
Fluoride	mg/L	25	0	0	2.88	3.49	3.1984	3.16	0.152	3.408	3.468	3.4876
Hardness as CaCO3	mg/L	25	0	0	46.2	98.1	57.152	53.6	12.1058	69.56	85.28	95.724
Iron, D	ug/L	25	0	0	12.1	5560	440.428	95.4	1154.3016	568.6	1895.8	4758.4
Iron, T	ug/L	25	0	0	31	17700	1976.78	287	4300.6479	5178	11618	16500
Lead, D	ug/L	25	0	0	0.004	3.29	0.2679	0.038	0.7034	0.3438	1.3386	2.8772
Lead, T	ug/L	25	0	0	0.012	12.1	1.5876	0.366	3.4034	4.456	10.92	12.1
Magnesium, D	ug/L	25	0	0	3050	4380	3760	3920	360.1736	4076	4120	4320
Magnesium, T	ug/L	25	0	0	3270	8280	4273.2	4050	1076.0488	5044	6412	7891.2
Manganese, D	ug/L	25	0	0	5.8	71.1	22.888	16	16.704	44.88	61.68	69.444
Manganese, T	ug/L	25	0	0	8.6	115	34.896	18.6	29.8565	77.62	89.26	109.456
Mercury, D	ng/L	19	5	21	0.12	28.6	2.0054	0.48	5.8102	2.845	5.5795	23.3974

Meadow Creek Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B07, Meadow Creek valley near EFSFSR												
Mercury, T	ng/L	24	1	4	0.13	83.1	10.1392	1.63	22.4574	26.26	69.82	81.948
Methyl Mercury	ng/L	2	23	92	0.03	0.1	0.0948	0.1	0.0181	0.1	0.1	0.1
Molybdenum, D	ug/L	25	0	0	7.5	15.2	12.11	12.4	1.3879	12.96	13.56	14.84
Molybdenum, T	ug/L	25	0	0	2.06	14.8	11.1232	12	3.1586	13.3	13.3	14.44
Nickel, D	ug/L	24	1	4	0.09	4.16	0.5912	0.29	0.84	1.078	1.714	3.6032
Nickel, T	ug/L	25	0	0	0.12	11.1	1.8504	0.5	2.9454	5.16	8.972	10.8072
Nitrate+Nitrite as Nitrogen	mg/L	4	21	84	0.014	0.05	0.0459	0.05	0.0103	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	24	0	0	0.26	1.03	0.5404	0.515	0.1831	0.728	0.927	1.0139
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.26	1.03	0.5376	0.55	0.1802	0.716	0.916	1.0132
Oxidation-Reduction potential	volts	23	0	0	-0.48	0.312	-0.118	-0.086	0.1737	0.0552	0.0969	0.2654
pH	pH	25	0	0	7.36	8.6	8.1916	8.23	0.2775	8.48	8.584	8.6
Phosphorus, D	ug/L	25	0	0	5.2	128	17.164	9.5	24.6191	18.6	43.24	109.112
Phosphorus, T	ug/L	25	0	0	8.3	485	62.34	19	120.1893	157.68	349.4	460.04
Potassium, D	ug/L	25	0	0	834	1480	1037.52	983	169.7037	1262	1338	1448.8
Potassium, T	ug/L	25	0	0	820	2150	1158.4	980	345.1344	1594	1898	2102
Selenium, D	ug/L	4	21	84	0.3	1	0.936	1	0.1823	1	1	1
Selenium, T	ug/L	8	17	68	0.4	1	0.872	1	0.2189	1	1	1
Silver, D	ug/L	6	19	76	0.004	0.02	0.0175	0.02	0.0049	0.02	0.02	0.02
Silver, T	ug/L	13	12	48	0.005	0.064	0.0198	0.02	0.013	0.0276	0.0452	0.0604
Sodium, D	ug/L	25	0	0	117000	147000	133240	132000	7383.9917	143000	145400	146760
Sodium, T	ug/L	25	0	0	123000	142000	133960	134000	5318.8345	140000	140800	141760
Solids, Total Dissolved	mg/L	25	0	0	366	565	414.88	406	44.0675	464.8	492	547.96
Sulfate	mg/L	25	0	0	97.3	135	112.052	109	9.314	122.8	125.6	132.84
Temperature, Water	deg C	25	0	0	5.68	16.34	9.6596	9.29	2.5192	11.96	15.036	16.2104
Thallium, D	ug/L	12	13	52	0.004	0.035	0.0169	0.02	0.0066	0.02	0.02	0.0314
Thallium, T	ug/L	17	8	32	0.005	0.152	0.0278	0.018	0.037	0.0564	0.1208	0.1472
Turbidity	NTU	24	0	0	0	817	130.0438	41.8	195.6457	334.14	437.76	733.418
Turbidity	NTU	3	0	0	0.26	0.83	0.5733	0.63	0.2892	0.79	0.81	0.826
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.05	9.22	1.0141	0.31	1.9278	2.068	3.652	7.9648
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.11	19.3	2.6818	0.6	4.8424	7.5	13.808	18.244
Zinc, D	ug/L	25	0	0	0.4	21.2	6.928	1.6	7.021	15.8	19.04	20.792
Zinc, T	ug/L	25	0	0	0.4	59.4	12.9208	9.8	13.6395	26.78	34.38	53.808

Sugar Creek Valley Well												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B20, lower west end dump												
Alkalinity as CaCO3	mg/L	15	0	0	137	172	159.8667	168	13.4953	171	171.3	171.86
Aluminum (Fume Or Dust), D	ug/L	15	0	0	1.8	5	2.7133	2.6	0.7577	3.3	3.95	4.79
Aluminum (Fume Or Dust), T	ug/L	15	0	0	1.9	56.1	6.76	2.8	13.7255	6.54	22.36	49.352
Ammonia as Nitrogen	mg/L	4	11	73	0.022	0.05	0.0447	0.05	0.0095	0.05	0.05	0.05
Antimony, D	ug/L	15	0	0	3.12	96.6	20.8547	15.2	21.6327	25.86	47.67	86.814
Antimony, T	ug/L	15	0	0	6.45	101	21.37	15.2	22.6062	26.08	48.64	90.528
Arsenic (III), T	ug/L	15	0	0	144	411	273.9333	286	58.2856	317	349.4	398.68
Arsenic, D	ug/L	15	0	0	248	365	308	296	32.6453	356.6	362.2	364.44
Arsenic, T	ug/L	15	0	0	281	370	308.4667	299	26.9467	340.8	350.4	366.08
Barium, D	ug/L	15	0	0	40.4	54.5	49.1	50.7	4.9957	53.84	54.15	54.43
Barium, T	ug/L	15	0	0	41.5	77.1	50.92	50.9	8.7181	55.06	62.4	74.16
Beryllium, D	ug/L	2	13	87	0.003	0.02	0.0179	0.02	0.0055	0.02	0.02	0.02
Beryllium, T	ug/L	1	14	93	0.003	0.02	0.0189	0.02	0.0044	0.02	0.02	0.02
Bicarbonate as CaCO3	mg/L	15	0	0	137	172	159.1333	166	13.3837	171	171.3	171.86
Boron, D	ug/L	14	1	7	4.3	20	6.6733	5	4.1871	10.24	14.68	18.936
Boron, T	ug/L	13	2	13	2.5	20	7.9933	6	5.3538	16.76	20	20
Cadmium, D	ug/L	5	10	67	0.005	0.02	0.0155	0.02	0.0066	0.02	0.02	0.02
Cadmium, T	ug/L	5	10	67	0.006	0.02	0.0169	0.02	0.0055	0.02	0.02	0.02
Calcium, D	ug/L	15	0	0	27200	41200	35993.3333	39100	5061.4039	39660	40150	40990
Calcium, T	ug/L	15	0	0	27200	42500	36140	37900	5294.4445	40400	41030	42206
Carbonate as CaCO3	mg/L	2	13	87	3.1	15	13.7267	15	3.4757	15	15	15
Chloride	mg/L	15	0	0	0.2	0.37	0.2793	0.29	0.0476	0.316	0.335	0.363
Chromium, D	ug/L	11	4	27	0.05	0.99	0.2773	0.2	0.2644	0.62	0.871	0.9662
Chromium, T	ug/L	13	2	13	0.08	2.66	0.336	0.17	0.6462	0.286	1.029	2.3338
Cobalt, D	ug/L	15	0	0	0.107	0.224	0.1466	0.158	0.035	0.1818	0.1995	0.2191
Cobalt, T	ug/L	15	0	0	0.101	0.35	0.1436	0.132	0.0619	0.175	0.2331	0.3266
Conductivity	uS/cm	15	0	0	249.95	309.25	272.076	265.15	19.676	303.732	306.163	308.6326
Copper, D	ug/L	15	0	0	0.05	2.93	0.4773	0.19	0.762	1.128	1.817	2.7074
Copper, T	ug/L	15	0	0	0.1	93.3	7.064	0.49	23.881	3.252	30.874	80.8148
Cyanide, T	mg/L	2	13	87	0.0024	0.0052	0.0046	0.0047	0.0006	0.0047	0.0048	0.0051
Dissolved Oxygen	mg/L	15	0	0	0	4.89	2.822	3.66	1.8502	4.388	4.645	4.841
Fluoride	mg/L	14	1	7	0.04	0.2	0.1093	0.09	0.0552	0.186	0.193	0.1986
Hardness as CaCO3	mg/L	15	0	0	149	235	192.6667	202	26.8612	211.6	218.9	231.78
Iron, D	ug/L	15	0	0	4.6	79.2	43.0067	34	25.4888	72.04	74.44	78.248
Iron, T	ug/L	15	0	0	21.4	112	63.82	57.5	29.6118	104.12	108.5	111.3
Lead, D	ug/L	13	2	13	0.003	0.088	0.0389	0.028	0.0262	0.0718	0.0775	0.0859
Lead, T	ug/L	14	1	7	0.02	2.67	0.3269	0.099	0.6647	0.4666	1.1937	2.3747
Magnesium, D	ug/L	15	0	0	19200	27500	24640	26000	2965.7088	27260	27360	27472
Magnesium, T	ug/L	15	0	0	19400	31200	24826.6667	26000	3399.888	26760	28120	30584
Manganese, D	ug/L	15	0	0	8	17.3	10.7467	10.3	2.325	12.9	14.22	16.684
Manganese, T	ug/L	15	0	0	8.3	19.4	10.728	9.9	2.8589	13.42	15.41	18.602
Mercury, D	ng/L	10	5	33	0.06	2.55	0.4153	0.22	0.6198	0.5	1.115	2.263

Sugar Creek Valley Well												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B20, lower west end dump												
Mercury, T	ng/L	9	6	40	0.06	3.75	0.574	0.5	0.8977	0.56	1.545	3.309
Methyl Mercury	ng/L	0	15	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	15	0	0	3.64	11.1	4.6467	3.92	1.9195	5.882	7.719	10.4238
Molybdenum, T	ug/L	15	0	0	3.66	12.1	4.728	4.03	2.1607	5.898	8.173	11.3146
Nickel, D	ug/L	15	0	0	0.46	2.27	0.962	0.87	0.4714	1.484	1.731	2.1622
Nickel, T	ug/L	15	0	0	0.45	4.5	1.06	0.86	0.9897	1.366	2.449	4.0898
Nitrate+Nitrite as Nitrogen	mg/L	0	15	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Nitrogen, Total as Nitrogen	mg/L	13	2	13	0.3	1.48	0.5727	0.45	0.3515	1.07	1.389	1.4618
Nitrogen, Total Kjeldahl (TKN)	mg/L	15	0	0	0.3	1.48	0.5693	0.44	0.3528	1.07	1.389	1.4618
Oxidation-Reduction potential	volts	14	0	0	-0.176	0.027	-0.0593	-0.0585	0.0616	0.0094	0.016	0.0248
pH	pH	15	0	0	7.57	9.13	8.116	8.16	0.3488	8.282	8.542	9.0124
Phosphorus, D	ug/L	9	6	40	3.2	42	24.0133	19.6	16.1262	42	42	42
Phosphorus, T	ug/L	7	8	53	3.1	42	28.4267	42	16.5822	42	42	42
Potassium, D	ug/L	15	0	0	2810	3590	3120.6667	3040	236.6573	3456	3499	3571.8
Potassium, T	ug/L	15	0	0	2810	3460	3118.6667	3090	220.7088	3410	3439	3455.8
Selenium, D	ug/L	0	15	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	15	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	3	12	80	0.003	0.02	0.0169	0.02	0.0065	0.02	0.02	0.02
Silver, T	ug/L	3	12	80	0.005	0.02	0.0173	0.02	0.0056	0.02	0.02	0.02
Sodium, D	ug/L	15	0	0	1840	6360	2576.6667	2000	1193.3726	3542	4519	5991.8
Sodium, T	ug/L	15	0	0	1850	6070	2592.6667	2090	1154.8313	3742	4754	5806.8
Solids, Total Dissolved	mg/L	15	0	0	147	232	205.1333	214	26.6106	226.8	229.2	231.44
Sulfate	mg/L	15	0	0	22.4	50.8	39.2533	41.5	10.2863	48.46	49.89	50.618
Temperature, Water	deg C	15	0	0	4.98	9.23	8.414	8.77	1.0718	9.122	9.16	9.216
Thallium, D	ug/L	0	15	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Thallium, T	ug/L	1	14	93	0.003	0.02	0.0189	0.02	0.0044	0.02	0.02	0.02
Turbidity	NTU	14	0	0	0	60.65	7.1137	1.496	16.1107	14.244	31.3675	54.7935
Turbidity	NTU	2	0	0	0.31	0.37	0.34	0.34	0.0424	0.364	0.367	0.3694
Vanadium (Fume Or Dust), D	ug/L	10	5	33	0.02	0.34	0.1212	0.088	0.0951	0.2	0.242	0.3204
Vanadium (Fume Or Dust), T	ug/L	8	7	47	0.03	0.2	0.1307	0.15	0.0727	0.2	0.2	0.2
Zinc, D	ug/L	15	0	0	0.5	95.1	31.222	27.3	26.8484	55.68	67.73	89.626
Zinc, T	ug/L	15	0	0	0.7	119	39.33	34.4	33.6919	79.54	99.47	115.094

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A08, EFSFSR valley near town site												
Alkalinity as CaCO3	mg/L	23	0	0	66	82	71.6174	72	3.5929	74.8	75	80.46
Aluminum (Fume Or Dust), D	ug/L	23	0	0	1	38	7.0478	4	8.4549	13.82	21.32	34.502
Aluminum (Fume Or Dust), T	ug/L	23	0	0	2.1	624	119.8478	63.6	153.4761	271.4	430.3	584.84
Ammonia as Nitrogen	mg/L	5	18	78	0.022	0.05	0.0456	0.05	0.0094	0.05	0.05	0.05
Antimony, D	ug/L	23	0	0	13.6	19.6	15.2391	14.9	1.2954	16.4	16.49	18.918
Antimony, T	ug/L	23	0	0	13.5	19.1	15.4	15	1.2958	16.7	17.15	18.682
Arsenic (III), T	ug/L	23	0	0	0.02	0.082	0.0442	0.039	0.0158	0.0632	0.0703	0.0796
Arsenic, D	ug/L	23	0	0	16.6	22.6	19.2435	19.5	1.3721	20.46	21.67	22.424
Arsenic, T	ug/L	23	0	0	16.8	27.6	20.5826	20.2	2.5912	22.92	26.16	27.358
Barium, D	ug/L	23	0	0	41.7	51.2	44.9043	44.9	2.1008	46.88	47.26	50.342
Barium, T	ug/L	23	0	0	42.5	62.1	47.6652	46.7	4.5554	53.56	54.71	60.494
Beryllium, D	ug/L	1	22	96	0.003	0.02	0.0193	0.02	0.0035	0.02	0.02	0.02
Beryllium, T	ug/L	14	9	39	0.003	0.067	0.0217	0.02	0.0152	0.0422	0.0522	0.0639
Bicarbonate as CaCO3	mg/L	23	0	0	66	82	71.6174	72	3.5929	74.8	75	80.46
Boron, D	ug/L	23	0	0	3.5	9.9	6.6565	6.8	1.5093	8.1	8.64	9.636
Boron, T	ug/L	23	0	0	4.9	13	7.0783	6.5	1.8983	9.52	10.53	12.472
Cadmium, D	ug/L	8	15	65	0.005	0.02	0.0153	0.02	0.0066	0.02	0.02	0.02
Cadmium, T	ug/L	5	18	78	0.005	0.025	0.0191	0.02	0.0042	0.02	0.0236	0.0248
Calcium, D	ug/L	23	0	0	17300	20500	19052.1739	19200	987.591	20300	20390	20478
Calcium, T	ug/L	23	0	0	17000	20400	18956.5217	18900	935.0868	20000	20180	20356
Carbonate as CaCO3	mg/L	0	23	100	15	15	15	15	0	15	15	15
Chloride	mg/L	23	0	0	0.31	1.47	0.4152	0.34	0.2436	0.488	0.644	1.2918
Chromium, D	ug/L	23	0	0	0.08	0.54	0.2517	0.22	0.1129	0.384	0.49	0.5312
Chromium, T	ug/L	23	0	0	0.12	2.73	0.503	0.39	0.5252	0.696	0.763	2.2988
Cobalt, D	ug/L	23	0	0	0.005	0.29	0.0665	0.031	0.0773	0.1678	0.2222	0.2764
Cobalt, T	ug/L	23	0	0	0.008	0.251	0.0697	0.044	0.0704	0.144	0.2397	0.2508
Conductivity	uS/cm	23	0	0	43.73	159.44	110.337	99.5	28.1244	155.508	158.408	159.242
Copper, D	ug/L	23	0	0	0.08	5.48	0.6091	0.27	1.2208	0.914	2.794	4.9322
Copper, T	ug/L	23	0	0	0.08	8.73	0.8496	0.25	1.9075	1.184	3.789	7.7048
Cyanide, T	mg/L	1	22	96	0.0012	0.0027	0.0026	0.0027	0.0003	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	23	0	0	4.22	7.48	5.023	4.95	0.6565	5.442	5.666	7.0862
Fluoride	mg/L	20	3	13	0.04	0.2	0.0891	0.07	0.0498	0.186	0.2	0.2
Hardness as CaCO3	mg/L	23	0	0	62.4	74.7	69.3739	69.6	3.4392	72.98	73.63	74.48
Iron, D	ug/L	18	5	22	3	50	14.5565	11.8	10.8511	22.92	28.71	45.446
Iron, T	ug/L	19	4	17	5	1310	220.5435	112	296.6194	482.4	695.6	1179.32
Lead, D	ug/L	20	3	13	0.002	0.088	0.0186	0.01	0.0226	0.0526	0.069	0.084
Lead, T	ug/L	21	2	9	0.006	0.24	0.0821	0.054	0.0743	0.1874	0.2162	0.2354
Magnesium, D	ug/L	23	0	0	4840	5850	5316.9565	5330	290.0225	5666	5817	5845.6
Magnesium, T	ug/L	23	0	0	4840	5870	5352.1739	5370	288.6325	5650	5758	5848
Manganese, D	ug/L	18	5	22	0.11	1.9	0.9943	1	0.4461	1.6	1.78	1.878
Manganese, T	ug/L	19	4	17	0.07	18.8	4.363	2.63	4.3931	9.44	11.52	17.238
Mercury, D	ng/L	23	0	0	0.28	2.06	0.7583	0.58	0.4378	1.376	1.492	1.9368

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A08, EFSFSR valley near town site												
Mercury, T	ng/L	23	0	0	0.36	46.6	7.0222	3.4	10.1864	16.32	20.24	40.88
Methyl Mercury	ng/L	2	21	91	0.05	0.23	0.1035	0.1	0.0295	0.1	0.1	0.2014
Molybdenum, D	ug/L	23	0	0	0.7	1.07	0.8571	0.85	0.1051	0.9936	1.0087	1.0568
Molybdenum, T	ug/L	23	0	0	0.644	1.36	0.8653	0.86	0.1558	0.996	1.063	1.2962
Nickel, D	ug/L	23	0	0	0.05	0.76	0.2735	0.27	0.1669	0.468	0.498	0.7028
Nickel, T	ug/L	21	2	9	0.05	2.91	0.4248	0.31	0.5642	0.572	0.635	2.4106
Nitrate+Nitrite as Nitrogen	mg/L	23	0	0	0.063	0.458	0.1919	0.175	0.0798	0.2584	0.3014	0.4246
Nitrogen, Total as Nitrogen	mg/L	22	1	4	0.27	1.79	0.7117	0.65	0.3018	0.956	1.014	1.6206
Nitrogen, Total Kjeldahl (TKN)	mg/L	23	0	0	0.13	1.65	0.5304	0.47	0.2873	0.714	0.756	1.4542
Oxidation-Reduction potential	volts	22	0	0	-0.12	0.2	0.1004	0.1185	0.0737	0.1565	0.1741	0.1948
pH	pH	22	0	0	6.8	7.54	7.0695	7.05	0.1793	7.248	7.3545	7.5022
Phosphorus, D	ug/L	19	4	17	3.6	42	14.2652	6.7	14.1498	42	42	42
Phosphorus, T	ug/L	22	1	4	4.7	189	20.4565	10.7	37.5636	25.2	38.55	156.22
Potassium, D	ug/L	23	0	0	1350	1750	1583.913	1570	80.4385	1680	1735	1747.8
Potassium, T	ug/L	23	0	0	1390	2340	1660	1640	171.3052	1740	1758	2212.4
Selenium, D	ug/L	1	22	96	0.3	1	0.9696	1	0.146	1	1	1
Selenium, T	ug/L	0	23	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	2	21	91	0.007	0.22	0.0281	0.02	0.0419	0.02	0.02	0.176
Silver, T	ug/L	7	16	70	0.002	0.036	0.0173	0.02	0.0074	0.02	0.02	0.0325
Sodium, D	ug/L	23	0	0	2960	4090	3594.3478	3570	223.6642	3844	3923	4054.8
Sodium, T	ug/L	23	0	0	3020	4540	3640.4348	3580	285.1551	3880	4015	4427.8
Solids, Total Dissolved	mg/L	23	0	0	74	120	95.1348	97	10.731	105.8	107.8	117.36
Sulfate	mg/L	23	0	0	7.08	19.5	9.0652	8.16	2.6906	11.71	12.93	18.07
Temperature, Water	deg C	22	0	0	5.24	8.64	6.5882	6.47	0.9342	7.76	8.2255	8.5581
Thallium, D	ug/L	1	22	96	0.007	0.02	0.0194	0.02	0.0027	0.02	0.02	0.02
Thallium, T	ug/L	9	14	61	0.004	0.023	0.016	0.02	0.0063	0.02	0.02	0.0223
Turbidity	NTU	22	0	0	0	329.66	26.3827	5.415	70.3772	36.109	83.233	278.4179
Turbidity	NTU	3	0	0	0.13	0.35	0.26	0.3	0.1153	0.34	0.345	0.349
Vanadium (Fume Or Dust), D	ug/L	23	0	0	0.33	0.461	0.4017	0.4	0.0324	0.446	0.45	0.4586
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.38	1.75	0.6474	0.57	0.3313	0.968	1.315	1.662
Zinc, D	ug/L	23	0	0	0.18	3.8	1.0283	0.7	0.8722	2.154	2.453	3.5096
Zinc, T	ug/L	21	2	9	0.09	4.5	1.487	1.28	1.2524	3.16	4.236	4.4648

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A09, EFSFSR valley near Garnet Creek												
Alkalinity as CaCO3	mg/L	25	0	0	43	105	57.1	56.3	12.5116	64.6	73	97.8
Aluminum (Fume Or Dust), D	ug/L	25	0	0	1.4	51.2	9.724	4.8	12.504	27.14	35.98	47.912
Aluminum (Fume Or Dust), T	ug/L	25	0	0	3.7	6920	436.468	46.6	1384.4256	677.2	1223.6	5576
Ammonia as Nitrogen	mg/L	1	24	96	0.041	0.05	0.0496	0.05	0.0018	0.05	0.05	0.05
Antimony, D	ug/L	25	0	0	35.9	50.5	44.052	45	4.14	48.6	49.08	50.164
Antimony, T	ug/L	25	0	0	35.6	49.4	44.024	45	4.3577	49.02	49.26	49.376
Arsenic (III), T	ug/L	25	0	0	0.022	0.477	0.1391	0.127	0.0851	0.1974	0.235	0.4211
Arsenic, D	ug/L	25	0	0	58.9	83.1	72.36	72.2	6.3967	79.7	79.94	82.356
Arsenic, T	ug/L	25	0	0	60.8	172	78.952	73.4	20.8357	85.88	96.28	154.432
Barium, D	ug/L	25	0	0	30.1	48	39.108	40.4	5.1216	45.06	47.54	47.976
Barium, T	ug/L	25	0	0	30	177	47.64	42.4	28.0924	51.84	63.76	150.504
Beryllium, D	ug/L	8	17	68	0.004	0.02	0.0159	0.02	0.0062	0.02	0.02	0.02
Beryllium, T	ug/L	20	5	20	0.006	0.526	0.0398	0.015	0.1031	0.034	0.0896	0.4245
Bicarbonate as CaCO3	mg/L	25	0	0	43	105	57.1	56.3	12.5116	64.6	73	97.8
Boron, D	ug/L	24	1	4	3.4	21	9.504	8.2	4.4009	15.56	19.04	20.664
Boron, T	ug/L	24	1	4	5	20	10.416	10.5	3.8781	14.54	18.58	19.856
Cadmium, D	ug/L	10	15	60	0.005	0.077	0.0188	0.02	0.0132	0.02	0.02	0.0633
Cadmium, T	ug/L	14	11	44	0.006	0.046	0.017	0.02	0.0084	0.0218	0.0262	0.0414
Calcium, D	ug/L	25	0	0	12100	19300	15948	16100	1624.8385	17920	18160	19036
Calcium, T	ug/L	25	0	0	12700	19600	16132	16300	1638.78	17940	18340	19312
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	25	0	0	0.24	5.16	1.1124	0.57	1.2893	2.754	3.862	4.9104
Chromium, D	ug/L	23	2	8	0.07	0.4	0.1596	0.14	0.0801	0.256	0.304	0.3784
Chromium, T	ug/L	24	1	4	0.04	4.76	0.5224	0.28	0.923	0.752	1.148	3.9152
Cobalt, D	ug/L	25	0	0	0.018	0.267	0.0813	0.038	0.0795	0.219	0.2518	0.2636
Cobalt, T	ug/L	25	0	0	0.013	2.86	0.1982	0.05	0.5632	0.21	0.4092	2.2828
Conductivity	uS/cm	25	0	0	0.53	133.5	80.324	81.39	30.8766	120.56	128.464	132.7152
Copper, D	ug/L	25	0	0	0.21	1.25	0.4796	0.34	0.3173	1.048	1.192	1.238
Copper, T	ug/L	25	0	0	0.21	4.76	0.8128	0.46	0.9551	1.566	1.93	4.0976
Cyanide, T	mg/L	3	22	88	0.0013	0.0037	0.0026	0.0027	0.0004	0.0027	0.0027	0.0035
Dissolved Oxygen	mg/L	25	0	0	2.35	9.18	5.3888	4.71	2.0934	8.14	8.444	9.0144
Fluoride	mg/L	22	3	12	0.02	0.2	0.0684	0.05	0.0572	0.192	0.2	0.2
Hardness as CaCO3	mg/L	25	0	0	44.6	69.9	57.168	57.6	6.4398	65.52	67.8	69.468
Iron, D	ug/L	14	11	44	3.9	94	21.852	21	18.8715	27.98	56.7	86.584
Iron, T	ug/L	22	3	12	6	13300	789.4	93.5	2649.9758	762.6	2012.2	10660
Lead, D	ug/L	21	4	16	0.003	0.096	0.0191	0.014	0.0194	0.0326	0.045	0.0845
Lead, T	ug/L	24	1	4	0.005	2.36	0.163	0.032	0.4651	0.1864	0.3256	1.8793
Magnesium, D	ug/L	25	0	0	2970	4570	3874	3910	391.4609	4380	4456	4546
Magnesium, T	ug/L	25	0	0	3140	6920	4103.6	3990	740.1739	4602	4938	6461.6
Manganese, D	ug/L	19	6	24	0.1	4.5	0.8252	0.6	0.8533	1.16	1.44	3.78
Manganese, T	ug/L	21	4	16	0.09	261	15.668	2.2	51.7836	13.22	35.06	208.032
Mercury, D	ng/L	24	0	0	0.85	2.59	1.3867	1.315	0.4379	1.99	2.127	2.4842

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A09, EFSFSR valley near Garnet Creek												
Mercury, T	ng/L	25	0	0	1.07	615	36.9628	3.75	122.3163	65.3	74.18	485.448
Methyl Mercury	ng/L	2	23	92	0.04	0.1	0.0968	0.1	0.0125	0.1	0.1	0.1
Molybdenum, D	ug/L	25	0	0	0.924	1.66	1.2182	1.22	0.1609	1.41	1.41	1.6
Molybdenum, T	ug/L	25	0	0	0.643	1.68	1.1772	1.21	0.2024	1.384	1.424	1.62
Nickel, D	ug/L	25	0	0	0.08	1.03	0.3344	0.3	0.2054	0.502	0.69	0.958
Nickel, T	ug/L	25	0	0	0.09	3.31	0.5484	0.36	0.6585	1.022	1.326	2.8468
Nitrate+Nitrite as Nitrogen	mg/L	13	12	48	0.019	0.171	0.0571	0.05	0.0379	0.1214	0.1326	0.1624
Nitrogen, Total as Nitrogen	mg/L	23	2	8	0.23	0.89	0.4792	0.45	0.1534	0.654	0.734	0.8564
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.21	0.87	0.438	0.42	0.1457	0.59	0.698	0.834
Oxidation-Reduction potential	volts	23	0	0	-0.128	0.262	0.0951	0.115	0.103	0.1904	0.2353	0.2572
pH	pH	24	0	0	6.3	7.22	6.7042	6.66	0.1859	6.877	7.016	7.1786
Phosphorus, D	ug/L	25	0	0	7.7	47	18.592	17	7.1299	22.2	27.8	42.68
Phosphorus, T	mg/L	1	0	0	0.049	0.049	0.049	0.049		0.049	0.049	0.049
Phosphorus, T	ug/L	25	0	0	8.4	261	34.264	21.9	48.1872	38.32	50.96	211.248
Potassium, D	ug/L	25	0	0	850	1360	1116.32	1100	135.5433	1276	1304	1348
Potassium, T	ug/L	25	0	0	920	4930	1362.64	1240	777.409	1496	1828	4205.2
Selenium, D	ug/L	1	24	96	0.1	1	0.964	1	0.18	1	1	1
Selenium, T	ug/L	2	23	92	0.3	1	0.948	1	0.1806	1	1	1
Silver, D	ug/L	1	24	96	0.004	0.02	0.0194	0.02	0.0032	0.02	0.02	0.02
Silver, T	ug/L	5	20	80	0.006	0.094	0.0235	0.02	0.0171	0.0218	0.051	0.0854
Sodium, D	ug/L	25	0	0	1600	2960	2284	2200	345.169	2800	2932	2955.2
Sodium, T	ug/L	25	0	0	1790	3110	2318.8	2220	367.2116	2816	2940	3071.6
Solids, Total Dissolved	mg/L	25	0	0	36	134	75.324	77	18.5006	87.6	93.6	124.64
Sulfate	mg/L	25	0	0	5.79	9.97	8.0068	8.22	1.2214	9.542	9.69	9.9052
Temperature, Water	deg C	25	0	0	2.86	8.95	5.946	5.48	2.1991	8.704	8.84	8.926
Thallium, D	ug/L	5	20	80	0.0009	0.02	0.0172	0.02	0.0062	0.02	0.02	0.02
Thallium, T	ug/L	9	16	64	0.002	0.156	0.0224	0.02	0.0288	0.02	0.0326	0.1271
Turbidity	NTU	24	0	0	0	103.62	11.9796	2.255	24.6095	23.555	64.3915	96.1496
Turbidity	NTU	3	0	0	0.11	0.32	0.2	0.17	0.1082	0.29	0.305	0.317
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.19	0.35	0.2659	0.28	0.0415	0.3116	0.32	0.3428
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.2	12.4	1.0061	0.35	2.4148	0.972	2.08	9.988
Zinc, D	ug/L	25	0	0	0.2	6.8	1.3312	0.8	1.7304	3.352	5.6	6.584
Zinc, T	ug/L	23	2	8	0.1	21.4	2.5844	0.7	4.3856	5.008	7.612	18.2056

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B09, EFSFSR valley near Garnet Creek												
Alkalinity as CaCO3	mg/L	25	0	0	96	117	100.732	100	4.4458	104.6	105	114.12
Aluminum (Fume Or Dust), D	ug/L	25	0	0	2.1	161	9.7	3.2	31.5393	5.36	5.72	123.752
Aluminum (Fume Or Dust), T	ug/L	25	0	0	6.3	110	18.384	9.9	21.8833	35	44.8	94.784
Ammonia as Nitrogen	mg/L	2	23	92	0.025	0.05	0.0486	0.05	0.0053	0.05	0.05	0.05
Antimony, D	ug/L	25	0	0	8.07	9.73	8.7344	8.76	0.3995	9.17	9.382	9.658
Antimony, T	ug/L	25	0	0	8.05	10.5	8.9368	8.82	0.4991	9.59	9.714	10.3128
Arsenic (III), T	ug/L	25	0	0	0.009	3.42	0.4242	0.126	0.8539	0.6166	2.5246	3.3144
Arsenic, D	ug/L	25	0	0	15.8	19	17.28	17.2	0.7911	18.16	18.2	18.808
Arsenic, T	ug/L	25	0	0	16	19.6	17.616	17.4	0.9379	18.9	19.06	19.48
Barium, D	ug/L	25	0	0	30	37.5	32.896	32.8	1.5558	34.46	35.06	36.948
Barium, T	ug/L	25	0	0	30.1	36.8	33.544	33.4	1.7282	35.72	36.44	36.752
Beryllium, D	ug/L	2	23	92	0.002	0.02	0.0187	0.02	0.0045	0.02	0.02	0.02
Beryllium, T	ug/L	5	20	80	0.005	0.024	0.0181	0.02	0.005	0.02	0.02	0.023
Bicarbonate as CaCO3	mg/L	25	0	0	94	105	99.596	98.7	3.2212	104	104.8	105
Boron, D	ug/L	25	0	0	2.2	53	8.748	7	9.4443	9.98	12.58	43.4
Boron, T	ug/L	24	1	4	4.3	20	7.956	7	3.4544	10.76	15.12	19.04
Cadmium, D	ug/L	4	21	84	0.007	0.021	0.0187	0.02	0.0038	0.02	0.02	0.0208
Cadmium, T	ug/L	14	11	44	0.007	0.063	0.0197	0.02	0.0125	0.032	0.0428	0.0584
Calcium, D	ug/L	25	0	0	26700	30900	28768	28600	1171.0821	30300	30740	30876
Calcium, T	ug/L	25	0	0	26600	31600	28928	28800	1178.4594	30520	30760	31408
Carbonate as CaCO3	mg/L	2	23	92	5.2	22	14.888	15	2.4557	15	15	20.32
Chloride	mg/L	25	0	0	0.58	1.1	0.7328	0.71	0.1215	0.866	0.918	1.0592
Chromium, D	ug/L	23	2	8	0.05	0.44	0.1612	0.13	0.087	0.272	0.28	0.4016
Chromium, T	ug/L	23	2	8	0.06	1.05	0.2992	0.2	0.2995	0.912	0.928	1.0212
Cobalt, D	ug/L	25	0	0	0.026	0.468	0.1297	0.087	0.1105	0.2826	0.2882	0.425
Cobalt, T	ug/L	25	0	0	0.028	1.23	0.143	0.073	0.2419	0.2002	0.3886	1.0382
Conductivity	uS/cm	25	0	0	135.6	254.2	166.374	147.9	38.5605	234.464	245.708	252.8104
Copper, D	ug/L	25	0	0	0.05	0.9	0.1796	0.12	0.1833	0.392	0.424	0.7872
Copper, T	ug/L	25	0	0	0.05	2.41	0.4068	0.18	0.5566	1.07	1.502	2.2156
Cyanide, T	mg/L	3	22	88	0.0015	0.0036	0.0027	0.0027	0.0003	0.0027	0.0027	0.0034
Dissolved Oxygen	mg/L	25	0	0	0.63	8.26	1.1348	0.83	1.4913	0.992	1.28	6.6016
Fluoride	mg/L	25	0	0	0.07	0.48	0.1184	0.11	0.0785	0.136	0.148	0.4008
Hardness as CaCO3	mg/L	25	0	0	89.4	106	97.688	97.7	3.8126	102.6	103.8	105.52
Iron, D	ug/L	13	12	48	3.6	31.8	17.016	21	7.7052	22.56	28.08	31.176
Iron, T	ug/L	24	1	4	5	485	56.408	23.4	98.7559	115.2	168.8	412.28
Lead, D	ug/L	13	12	48	0.002	0.147	0.0255	0.02	0.0291	0.0434	0.0642	0.1283
Lead, T	ug/L	25	0	0	0.006	0.341	0.0707	0.036	0.0915	0.1636	0.3036	0.3403
Magnesium, D	ug/L	25	0	0	5710	6680	6116.8	6140	231.2416	6366	6522	6648.8
Magnesium, T	ug/L	25	0	0	5570	6680	6170.8	6180	247.385	6458	6526	6646.4
Manganese, D	ug/L	25	0	0	1.67	44.3	10.1152	5.3	10.2548	23.62	28.66	40.652
Manganese, T	ug/L	25	0	0	6.3	75.3	22.5376	14.9	17.9569	48.98	50.58	69.444
Mercury, D	ng/L	24	0	0	0.73	2.73	1.3317	1.2	0.5443	2.168	2.278	2.6288

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B09, EFSFSR valley near Garnet Creek												
Mercury, T	ng/L	25	0	0	1.27	51.4	7.2892	3.75	10.0556	14.24	15.16	42.736
Methyl Mercury	ng/L	6	18	75	0.03	0.22	0.0942	0.1	0.0353	0.1	0.1	0.1924
Molybdenum, D	ug/L	25	0	0	0.672	1.29	0.8387	0.81	0.1405	1.006	1.042	1.2324
Molybdenum, T	ug/L	25	0	0	0.63	1.27	0.8232	0.83	0.158	1.0288	1.076	1.2244
Nickel, D	ug/L	24	1	4	0.05	0.64	0.2748	0.27	0.1591	0.452	0.564	0.628
Nickel, T	ug/L	24	1	4	0.05	1.17	0.3152	0.28	0.2631	0.562	0.794	1.0932
Nitrate+Nitrite as Nitrogen	mg/L	24	1	4	0.034	0.218	0.1226	0.126	0.0502	0.177	0.2002	0.2151
Nitrogen, Total as Nitrogen	mg/L	25	0	0	0.31	1.51	0.6644	0.6	0.3048	1.044	1.244	1.4548
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.24	1.4	0.5384	0.44	0.2956	0.918	1.082	1.3328
Oxidation-Reduction potential	volts	23	0	0	-0.331	0.2	-0.0305	-0.021	0.1285	0.1116	0.1443	0.1885
pH	pH	24	0	0	7.25	8.3	8.0075	8.025	0.2224	8.263	8.2985	8.3
Phosphorus, D	ug/L	15	10	4	3	42	21.756	16	17.315	42	42	42
Phosphorus, T	mg/L	1	0	0	0.006	0.006	0.006	0.006		0.006	0.006	0.006
Phosphorus, T	ug/L	18	7	28	3.6	40	17.748	11.3	14.7224	40	40	40
Potassium, D	ug/L	25	0	0	2280	2630	2500.8	2520	75.8244	2588	2616	2627.6
Potassium, T	ug/L	25	0	0	2330	2730	2513.6	2510	93	2618	2638	2708.4
Selenium, D	ug/L	1	24	96	0.3	1	0.972	1	0.14	1	1	1
Selenium, T	ug/L	1	24	96	0.2	1	0.968	1	0.16	1	1	1
Silver, D	ug/L	1	24	96	0.004	0.02	0.0194	0.02	0.0032	0.02	0.02	0.02
Silver, T	ug/L	4	21	84	0.005	0.055	0.0221	0.02	0.0093	0.023	0.0426	0.0531
Sodium, D	ug/L	25	0	0	7540	9170	8175.6	8000	479.5056	9058	9118	9158
Sodium, T	ug/L	25	0	0	7580	9600	8231.2	8010	513.6172	8938	9166	9506.4
Solids, Total Dissolved	mg/L	25	0	0	108	284	136.08	130	33.5086	147.6	157.6	254.24
Sulfate	mg/L	25	0	0	17.7	21.8	19.368	18.8	1.2619	21.34	21.58	21.752
Temperature, Water	deg C	25	0	0	5.13	8.11	6.5812	6.57	0.6421	7.312	7.428	7.9468
Thallium, D	ug/L	3	22	88	0.0038	0.02	0.0183	0.02	0.0048	0.02	0.02	0.02
Thallium, T	ug/L	7	18	72	0.003	0.039	0.0184	0.02	0.0068	0.02	0.02	0.0344
Turbidity	NTU	24	0	0	0	134.19	7.3277	0.402	27.2006	7.959	11.7995	106.1599
Turbidity	NTU	3	0	0	0.16	0.27	0.2167	0.22	0.0551	0.26	0.265	0.269
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.67	0.95	0.8368	0.84	0.0828	0.93	0.93	0.9452
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.73	1.25	0.9117	0.91	0.1046	1.006	1.034	1.1996
Zinc, D	ug/L	23	2	8	0.12	3.5	0.8084	0.5	0.7556	1.6	1.88	3.116
Zinc, T	ug/L	25	0	0	0.14	6.13	1.2384	0.7	1.3555	2.64	3.76	5.6188

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A10, EFSFSR valley between shop and camp												
Alkalinity as CaCO3	mg/L	25	0	0	37	80	52.312	52	8.371	56.12	63.72	76.544
Aluminum (Fume Or Dust), D	ug/L	25	0	0	1.2	29.1	6.368	4.6	6.8766	12.24	22.48	27.996
Aluminum (Fume Or Dust), T	ug/L	25	0	0	3.7	569	94.348	21.6	152.9746	334.4	428	536.84
Ammonia as Nitrogen	mg/L	3	22	88	0.035	0.096	0.0511	0.05	0.0098	0.05	0.05	0.085
Antimony, D	ug/L	25	0	0	70.1	94.7	82.484	82.7	5.9231	89.12	93.2	94.46
Antimony, T	ug/L	25	0	0	69	93.5	81.984	82.4	5.8533	89.46	90.38	92.78
Arsenic (III), T	ug/L	25	0	0	0.036	0.485	0.1623	0.141	0.0958	0.271	0.309	0.4444
Arsenic, D	ug/L	25	0	0	44.8	105	82.232	83.2	14.2477	96.2	98.24	103.464
Arsenic, T	ug/L	25	0	0	63.5	104	85.984	85.1	10.9532	100.52	101.8	103.52
Barium, D	ug/L	25	0	0	44.1	75.9	60.988	61.1	7.9768	69.92	71.24	74.844
Barium, T	ug/L	25	0	0	46.6	75.3	62.632	62.8	7.9505	73.06	74.1	75.036
Beryllium, D	ug/L	5	20	80	0.002	0.02	0.017	0.02	0.0062	0.02	0.02	0.02
Beryllium, T	ug/L	19	6	24	0.003	0.096	0.0219	0.018	0.0231	0.0416	0.0792	0.0938
Bicarbonate as CaCO3	mg/L	25	0	0	37	80	52.312	52	8.371	56.12	63.72	76.544
Boron, D	ug/L	24	1	4	4	21	7.34	6.1	4.387	13.24	17.72	20.28
Boron, T	ug/L	23	2	8	2.8	21	9.188	7	5.0903	17.86	20.7	21
Cadmium, D	ug/L	14	11	44	0.005	0.02	0.0139	0.016	0.0063	0.02	0.02	0.02
Cadmium, T	ug/L	13	12	48	0.006	0.026	0.0155	0.02	0.0066	0.02	0.0232	0.0255
Calcium, D	ug/L	25	0	0	9560	16200	13594.4	14000	1727.6045	15360	15400	16008
Calcium, T	ug/L	25	0	0	1	15900	13104.04	14100	3241.035	15400	15640	15852
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	25	0	0	0.2	0.51	0.3324	0.33	0.0956	0.466	0.478	0.5028
Chromium, D	ug/L	25	0	0	0.05	0.88	0.196	0.18	0.1538	0.246	0.266	0.7336
Chromium, T	ug/L	25	0	0	0.06	0.95	0.3452	0.31	0.2442	0.736	0.856	0.9308
Cobalt, D	ug/L	25	0	0	0.015	1.41	0.147	0.07	0.2841	0.2194	0.4586	1.195
Cobalt, T	ug/L	25	0	0	0.012	0.379	0.0993	0.044	0.1131	0.282	0.3516	0.3749
Conductivity	uS/cm	25	0	0	55.43	132.17	83.1716	81.31	17.9491	108.082	111.862	127.4972
Copper, D	ug/L	25	0	0	0.14	0.63	0.2904	0.26	0.1394	0.49	0.602	0.6276
Copper, T	ug/L	25	0	0	0.12	1.19	0.3796	0.23	0.2938	0.83	1.002	1.1468
Cyanide, T	mg/L	4	21	84	0.0013	0.0032	0.0026	0.0027	0.0003	0.0027	0.0027	0.0031
Dissolved Oxygen	mg/L	25	0	0	5.76	11.26	7.7588	7.37	1.3702	9.456	10.024	10.9936
Fluoride	mg/L	22	3	12	0.02	0.2	0.0728	0.05	0.0551	0.188	0.2	0.2
Hardness as CaCO3	mg/L	25	0	0	0.002	59.4	48.9281	51.8	12.186	57.62	58.74	59.304
Iron, D	ug/L	17	8	32	4	76.9	20.072	18.3	16.9713	34.48	56.68	73.156
Iron, T	ug/L	24	1	4	5	1190	193.108	40.8	312.5214	704.4	794	1097.36
Lead, D	ug/L	19	6	24	0.004	0.106	0.0259	0.02	0.0273	0.0634	0.0902	0.1036
Lead, T	ug/L	23	2	8	0.004	0.802	0.1185	0.047	0.1859	0.2814	0.4774	0.7331
Magnesium, D	ug/L	25	0	0	2820	4910	4036.4	4220	538.5465	4652	4784	4883.6
Magnesium, T	ug/L	24	1	4	5.3	4950	3937.812	4190	1000.4321	4778	4806	4916.4
Manganese, D	ug/L	22	3	12	0.07	24.4	3.4804	1	6.0882	10.1	17.02	23.032
Manganese, T	ug/L	22	3	12	0.08	32.2	6.2672	2.2	9.4542	21.86	27.7	31.456
Mercury, D	ng/L	23	1	4	0.29	2.89	0.9687	0.94	0.5253	1.341	1.588	2.6002

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A10, EFSFSR valley between shop and camp												
Mercury, T	ng/L	25	0	0	0.44	21.4	4.2112	1.77	6.1787	13.984	19.66	21.016
Methyl Mercury	ng/L	3	22	88	0.05	0.11	0.0968	0.1	0.0128	0.1	0.1	0.1076
Molybdenum, D	ug/L	25	0	0	1.03	1.8	1.3996	1.4	0.1764	1.606	1.674	1.7736
Molybdenum, T	ug/L	25	0	0	1.06	1.63	1.3612	1.32	0.1503	1.588	1.6	1.6228
Nickel, D	ug/L	25	0	0	0.15	1.99	0.4992	0.35	0.4077	0.884	1.26	1.8316
Nickel, T	ug/L	25	0	0	0.16	2.1	0.608	0.41	0.5215	1.272	1.82	2.0616
Nitrate+Nitrite as Nitrogen	mg/L	21	4	16	0.021	0.156	0.054	0.049	0.0262	0.0794	0.0854	0.1392
Nitrogen, Total as Nitrogen	mg/L	24	1	4	0.23	1.25	0.5392	0.49	0.234	0.86	0.912	1.1708
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.2	1.2	0.4908	0.44	0.232	0.826	0.874	1.1232
Oxidation-Reduction potential	volts	23	0	0	-0.143	0.267	0.0959	0.121	0.11	0.1996	0.2488	0.2641
pH	pH	24	0	0	6.16	7.93	6.7617	6.7	0.3492	7.082	7.236	7.7759
Phosphorus, D	ug/L	24	1	4	7.6	319	30.544	16.4	61.119	34	57.6	257.32
Phosphorus, T	ug/L	23	2	8	12	261	30.34	18.6	48.6567	37.6	42	208.44
Potassium, D	ug/L	25	0	0	1230	2480	1666.8	1660	274.2067	1990	2150	2408
Potassium, T	ug/L	24	1	4	210	2560	1674.8	1670	442.6824	2096	2464	2552.8
Selenium, D	ug/L	0	25	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	25	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	3	22	88	0.003	0.02	0.0182	0.02	0.005	0.02	0.02	0.02
Silver, T	ug/L	12	13	52	0.006	0.238	0.0246	0.02	0.0448	0.02	0.02	0.1857
Sodium, D	ug/L	25	0	0	1800	4580	2491.2	2350	620.3448	3148	3832	4421.6
Sodium, T	ug/L	24	1	4	210	4630	2401.2	2300	776.4144	3022	3898	4490.8
Solids, Total Dissolved	mg/L	25	0	0	44	88	66.436	64	12.1831	82.6	84.6	87.28
Sulfate	mg/L	25	0	0	5.11	11.1	8.3148	8.63	1.4116	9.798	9.89	10.8096
Temperature, Water	deg C	24	0	0	4.27	7.97	5.9983	6.07	1.1213	7.55	7.874	7.9562
Thallium, D	ug/L	7	18	72	0.002	0.02	0.0156	0.02	0.0076	0.02	0.02	0.02
Thallium, T	ug/L	11	14	56	0.003	0.02	0.015	0.02	0.0063	0.02	0.02	0.02
Turbidity	NTU	24	0	0	0	267.1	19.4156	1.685	56.3369	35.908	83.0045	226.4889
Turbidity	NTU	3	0	0	0.16	0.24	0.1933	0.18	0.0416	0.228	0.234	0.2388
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.218	0.61	0.3211	0.31	0.0719	0.362	0.418	0.5668
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.29	1.04	0.4864	0.38	0.2294	0.9126	0.9754	1.028
Zinc, D	ug/L	24	1	4	0.2	3.2	0.8984	0.53	0.7704	2.15	2.37	3.008
Zinc, T	ug/L	23	2	8	0.2	4.17	1.0532	0.5	1.0475	2.24	3.152	3.9708

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B10, EFSFSR valley between shop and camp												
Alkalinity as CaCO3	mg/L	25	0	0	56.8	150	118.448	120	18.6938	135.2	140	147.84
Aluminum (Fume Or Dust), D	ug/L	25	0	0	1.3	6820	488.54	56.5	1410.8586	794.8	2086	5759.2
Aluminum (Fume Or Dust), T	ug/L	25	0	0	5.9	25000	7675.204	4390	8170.6241	17680	22920	24760
Ammonia as Nitrogen	mg/L	17	8	32	0.026	0.106	0.0467	0.05	0.0168	0.059	0.0662	0.0969
Antimony, D	ug/L	25	0	0	19.1	1500	204.228	113	309.4317	358.6	675.8	1319.52
Antimony, T	ug/L	25	0	0	13.3	1550	149.924	38.1	320.5952	305.8	545.8	1323.2
Arsenic (III), T	ug/L	25	0	0	25.7	1200	318.108	226	256.5762	612.2	765.8	1102.32
Arsenic, D	ug/L	25	0	0	253	975	560.84	621	198.891	757	773	927.24
Arsenic, T	ug/L	25	0	0	245	1140	624.28	671	226.3586	910.8	965.6	1098.72
Barium, D	ug/L	25	0	0	9.89	171	41.8476	40.6	30.6464	55.86	59.94	144.408
Barium, T	ug/L	25	0	0	33.4	697	249.356	168	220.8594	600.8	642.4	685.48
Beryllium, D	ug/L	13	12	48	0.018	2.42	0.1492	0.02	0.4788	0.238	0.2588	1.9016
Beryllium, T	ug/L	22	3	12	0.006	11	2.9808	2.31	3.141	6.646	7.65	10.2368
Bicarbonate as CaCO3	mg/L	25	0	0	44.6	146	114.6	119	20.3993	132.6	134.6	143.36
Boron, D	ug/L	23	2	8	4.8	20.5	9.76	8	4.9177	19.4	20	20.38
Boron, T	ug/L	25	0	0	6	87.2	17.892	14.1	15.6479	21.32	32.72	74.744
Cadmium, D	ug/L	21	4	16	0.006	0.141	0.0238	0.02	0.0256	0.029	0.0338	0.1156
Cadmium, T	ug/L	25	0	0	0.011	0.655	0.2178	0.13	0.1952	0.4588	0.4944	0.6185
Calcium, D	ug/L	25	0	0	9290	38600	19894	21300	6346.0447	23400	28280	36416
Calcium, T	ug/L	25	0	0	21600	82300	42916	38400	19698.5972	70320	76480	81172
Carbonate as CaCO3	mg/L	8	17	68	4	31	13.768	15	5.1365	15	15	27.16
Chloride	mg/L	25	0	0	0.36	1.51	0.7008	0.61	0.3286	1.144	1.328	1.474
Chromium, D	ug/L	22	3	12	0.04	1.79	0.2792	0.2	0.3688	0.43	0.866	1.5932
Chromium, T	ug/L	22	3	12	0.11	6.27	2.39	1.8	1.9868	5.402	5.974	6.2292
Cobalt, D	ug/L	25	0	0	0.067	7.42	1.3281	0.762	1.6385	3.036	3.492	6.5032
Cobalt, T	ug/L	25	0	0	0.071	14.3	4.7716	3.39	4.5688	11.324	12.38	13.844
Conductivity	uS/cm	25	0	0	167.1	23887	1194.4916	232.78	4728.0882	375.4	414.544	18253.8472
Copper, D	ug/L	24	1	4	0.05	3.05	0.3624	0.23	0.577	0.47	0.554	2.4548
Copper, T	ug/L	25	0	0	0.05	15.1	4.9852	4.2	4.6775	11.42	13.9	14.956
Cyanide, T	mg/L	4	21	84	0.0013	0.0102	0.0028	0.0027	0.0016	0.0027	0.0027	0.0084
Dissolved Oxygen	mg/L	25	0	0	0	1.87	0.2124	0.01	0.4384	0.546	1.05	1.6996
Fluoride	mg/L	25	0	0	0.08	0.8	0.2928	0.25	0.1856	0.436	0.656	0.7784
Hardness as CaCO3	mg/L	25	0	0	86	397	189.216	162	98.2688	319.8	350.2	387.16
Iron, D	ug/L	21	4	16	5	9630	557.88	55.4	1910.0339	856	903.2	7536.24
Iron, T	ug/L	24	1	4	21	44400	13405.028	10200	14179.0182	32700	38740	43320
Lead, D	ug/L	25	0	0	0.008	29.8	1.9146	0.224	5.9432	3.77	4.258	23.6704
Lead, T	ug/L	25	0	0	0.033	184	50.4942	37.3	54.5396	121	134.6	172.96
Magnesium, D	ug/L	25	0	0	3350	19300	7717.2	7310	3323.1279	9944	10080	17092
Magnesium, T	ug/L	25	0	0	2970	46600	19920	16200	12072.8777	35040	38600	44848
Manganese, D	ug/L	24	1	4	0.6	266	33.156	22.3	51.0792	45.9	63.42	218.192
Manganese, T	ug/L	25	0	0	2.2	1520	508.76	447	509.2447	1220	1440	1512.8
Mercury, D	ng/L	21	3	13	0.09	12.9	1.4558	0.51	2.8125	2.423	6.3125	11.5246

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B10, EFSFSR valley between shop and camp												
Mercury, T	ng/L	24	1	4	0.08	84.7	24.6608	15.5	26.1101	56	71.16	82.18
Methyl Mercury	ng/L	7	18	72	0.03	0.1	0.0884	0.1	0.0215	0.1	0.1	0.1
Molybdenum, D	ug/L	25	0	0	2.35	24.8	9.922	10.1	5.002	14.74	19.62	23.792
Molybdenum, T	ug/L	25	0	0	1.27	24.6	6.3884	2.36	6.4437	14.1	18.66	23.424
Nickel, D	ug/L	25	0	0	0.2	6.99	0.9812	0.67	1.2956	1.298	1.39	5.6484
Nickel, T	ug/L	25	0	0	0.25	36.2	9.4676	6.78	9.5966	21.5	23.82	33.344
Nitrate+Nitrite as Nitrogen	mg/L	18	7	28	0.02	1.08	0.2226	0.134	0.2708	0.6028	0.7616	1.0042
Nitrogen, Total as Nitrogen	mg/L	25	0	0	0.19	8.94	1.0332	0.66	1.6787	1.318	1.446	7.1472
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.18	8.56	0.8236	0.46	1.6272	0.802	1.19	6.8104
Oxidation-Reduction potential	volts	23	0	0	-0.555	0.261	-0.0758	0.024	0.2172	0.12	0.156	0.2388
pH	pH	24	0	0	7.91	10.51	8.6025	8.52	0.5451	9.029	9.2795	10.2363
Phosphorus, D	ug/L	22	3	12	3.9	356	32.34	14	68.9456	44.2	53.88	283.904
Phosphorus, T	ug/L	25	0	0	8.9	1740	615.964	440	643.0639	1652	1708	1732.8
Potassium, D	ug/L	25	0	0	1530	3730	2338.8	2300	595.2823	2970	3450	3686.8
Potassium, T	ug/L	25	0	0	1480	12500	5380	4710	3662.7107	10520	12120	12500
Selenium, D	ug/L	3	22	88	0.4	1	0.944	1	0.1609	1	1	1
Selenium, T	ug/L	10	15	60	0.5	7.8	1.42	1	1.397	1.92	2.44	6.528
Silver, D	ug/L	8	17	68	0.005	0.094	0.0194	0.02	0.0166	0.02	0.02	0.0762
Silver, T	ug/L	22	3	12	0.002	0.538	0.1561	0.11	0.1508	0.3202	0.3926	0.507
Sodium, D	ug/L	25	0	0	18000	120000	48968	29500	33184.6064	94280	112720	119280
Sodium, T	ug/L	25	0	0	18600	131000	56096	41700	39047.1988	115800	121000	128840
Solids, Total Dissolved	mg/L	25	0	0	111	800	262.28	200	150.959	406	443.2	716.24
Sulfate	mg/L	25	0	0	23.8	181	72.22	50.8	49.1436	134	160.8	177.64
Temperature, Water	deg C	25	0	0	5.46	9.93	7.136	6.91	0.9419	8.248	8.44	9.582
Thallium, D	ug/L	21	4	16	0.007	0.19	0.031	0.021	0.036	0.0518	0.0566	0.1581
Thallium, T	ug/L	24	1	4	0.008	1.02	0.3101	0.233	0.3197	0.7768	0.8284	0.9763
Turbidity	NTU	25	0	0	0	2944	911.3596	231	1139.9854	2674.12	2751.24	2902.36
Turbidity	NTU	3	0	0	0.53	1.29	0.7867	0.54	0.4359	1.14	1.215	1.275
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.06	4.72	0.7131	0.45	1.0142	1.106	2.546	4.2808
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.11	30.7	9.3384	5.08	9.8135	23.3	25.22	29.428
Zinc, D	ug/L	25	0	0	0.19	53.8	4.0636	0.98	10.5716	6.7	7.196	42.6208
Zinc, T	ug/L	25	0	0	0.4	244	77.984	59.8	79.4843	186.8	204.8	235.12

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A12, EFSFSR valley near Scout prospect												
Alkalinity as CaCO3	mg/L	23	0	0	74	100	82.7826	81.2	5.8976	89.76	94.52	98.9
Aluminum (Fume Or Dust), D	ug/L	23	0	0	1.3	183	10.6174	2.4	37.6085	5.94	6.28	144.126
Aluminum (Fume Or Dust), T	ug/L	23	0	0	3.5	1790	202.6043	18.7	491.1629	429	1532.3	1759.2
Ammonia as Nitrogen	mg/L	5	18	78	0.022	0.05	0.0464	0.05	0.0081	0.05	0.05	0.05
Antimony, D	ug/L	23	0	0	104	122	112.6087	111	5.2548	120	120	121.56
Antimony, T	ug/L	23	0	0	103	136	114.0435	111	8.4395	122.8	132	135.34
Arsenic (III), T	ug/L	23	0	0	0.076	1.21	0.3229	0.288	0.2152	0.4352	0.4505	1.043
Arsenic, D	ug/L	23	0	0	124	199	170.0435	171	13.5193	182.2	183	195.48
Arsenic, T	ug/L	23	0	0	129	228	175.8261	176	19.8647	193.2	214.8	225.58
Barium, D	ug/L	23	0	0	17.5	27.1	19.2696	18.8	2.0502	21.14	21.2	25.802
Barium, T	ug/L	23	0	0	17.4	52.3	22.6522	19.4	9.0858	32.82	44.44	50.804
Beryllium, D	ug/L	1	22	96	0.018	0.02	0.0199	0.02	0.0004	0.02	0.02	0.02
Beryllium, T	ug/L	7	16	70	0.005	0.156	0.034	0.02	0.0428	0.0976	0.1449	0.1542
Bicarbonate as CaCO3	mg/L	23	0	0	74	95	82.5217	81.2	5.1919	89.76	93.62	94.78
Boron, D	ug/L	23	0	0	3.3	11.4	5.8478	5.6	1.6874	7.64	8.34	10.74
Boron, T	ug/L	23	0	0	4	15.9	7.7652	7.4	2.9317	11.12	14.56	15.68
Cadmium, D	ug/L	13	10	44	0.006	0.075	0.0193	0.02	0.0139	0.025	0.0277	0.0647
Cadmium, T	ug/L	18	5	22	0.006	0.302	0.0284	0.012	0.0602	0.0336	0.036	0.2435
Calcium, D	ug/L	23	0	0	21100	27100	23317.3913	23200	1347.608	24660	25600	26792
Calcium, T	ug/L	23	0	0	21300	27100	23473.913	23200	1411.7099	24700	26050	26902
Carbonate as CaCO3	mg/L	1	22	96	6	15	14.6087	15	1.8766	15	15	15
Chloride	mg/L	23	0	0	0.26	0.57	0.3543	0.32	0.0887	0.504	0.528	0.5612
Chromium, D	ug/L	23	0	0	0.13	0.73	0.3009	0.23	0.1559	0.462	0.632	0.7124
Chromium, T	ug/L	23	0	0	0.14	2.76	0.68	0.36	0.7669	2.12	2.409	2.683
Cobalt, D	ug/L	22	1	4	0.008	1.42	0.1379	0.039	0.2953	0.2864	0.3717	1.1908
Cobalt, T	ug/L	23	0	0	0.008	1.69	0.2026	0.041	0.4201	0.8038	0.9737	1.5327
Conductivity	uS/cm	23	0	0	103.9	178.93	128.6422	113.5	27.7341	171.984	178.221	178.8838
Copper, D	ug/L	23	0	0	0.07	2.14	0.4565	0.28	0.4905	1.042	1.303	1.9618
Copper, T	ug/L	23	0	0	0.12	46.5	3.1196	0.52	9.5606	4.542	4.977	37.3656
Cyanide, T	mg/L	4	19	83	0.0011	0.008	0.0028	0.0027	0.0012	0.0027	0.0029	0.0069
Dissolved Oxygen	mg/L	23	0	0	5.73	9.83	8.2417	8.36	0.821	9.062	9.197	9.6936
Fluoride	mg/L	23	0	0	0.05	0.12	0.0748	0.07	0.0219	0.11	0.11	0.1178
Hardness as CaCO3	mg/L	23	0	0	72.4	92.7	80.3957	80.4	4.8053	84.26	88.72	91.93
Iron, D	ug/L	11	12	52	5	178	23.6087	21	34.5911	21	36.3	147.2
Iron, T	ug/L	22	1	4	5	3370	396.1435	45	913.3085	1345	2679	3244.6
Lead, D	ug/L	19	4	17	0.005	0.263	0.0389	0.02	0.0602	0.0834	0.1483	0.2392
Lead, T	ug/L	23	0	0	0.014	5.16	0.6207	0.061	1.3095	1.896	3.421	4.8124
Magnesium, D	ug/L	23	0	0	4600	5930	5167.8261	5150	302.2786	5532	5649	5870.6
Magnesium, T	ug/L	23	0	0	4620	6090	5294.7826	5250	375.4497	5840	5868	6041.6
Manganese, D	ug/L	21	2	8	0.1	96.6	5.907	0.9	19.9808	6.38	12.47	78.23
Manganese, T	ug/L	21	2	8	0.2	149	15.3596	2.4	33.9595	48.06	67.14	131.246
Mercury, D	ng/L	22	1	8	0.26	11.5	1.4348	0.56	2.7912	1.61	8.013	10.8884

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A12, EFSFSR valley near Scout prospect												
Mercury, T	ng/L	23	0	0	0.3	114	10.4652	1.11	27.2917	10.26	68.17	105.332
Methyl Mercury	ng/L	0	23	100	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	23	0	0	1.84	3.8	2.2104	2.14	0.3825	2.348	2.503	3.5184
Molybdenum, T	ug/L	23	0	0	1.63	4.54	2.2052	2.11	0.5433	2.354	2.387	4.067
Nickel, D	ug/L	22	1	4	0.04	2.7	0.4604	0.33	0.5273	0.742	0.799	2.282
Nickel, T	ug/L	22	1	4	0.04	5.68	0.783	0.38	1.1839	1.752	1.967	4.866
Nitrate+Nitrite as Nitrogen	mg/L	22	1	4	0.038	0.148	0.108	0.114	0.0283	0.1368	0.1433	0.1471
Nitrogen, Total as Nitrogen	mg/L	23	0	0	0.38	2.56	0.7213	0.61	0.4578	1.092	1.217	2.2674
Nitrogen, Total Kjeldahl (TKN)	mg/L	23	0	0	0.23	2.45	0.6143	0.47	0.4579	0.978	1.107	2.1574
Oxidation-Reduction potential	volts	22	0	0	-0.194	0.225	0.062	0.0876	0.1035	0.1472	0.1908	0.2183
pH	pH	23	0	0	6.73	7.93	7.4152	7.41	0.2511	7.656	7.895	7.9278
Phosphorus, D	ug/L	23	0	0	17.2	85	28.787	23.4	14.2801	42.2	45.8	76.42
Phosphorus, T	ug/L	23	0	0	18.4	98.8	38.6652	25.4	24.2517	65.88	94.86	98.624
Potassium, D	ug/L	23	0	0	1320	1650	1472.6087	1490	79.385	1564	1570	1632.4
Potassium, T	ug/L	23	0	0	1320	2560	1585.6522	1530	311.6645	1766	2393	2538
Selenium, D	ug/L	0	23	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	1	22	96	0.3	1	0.9696	1	0.146	1	1	1
Silver, D	ug/L	2	21	91	0.004	0.02	0.019	0.02	0.0036	0.02	0.02	0.02
Silver, T	ug/L	13	10	44	0.003	0.407	0.0376	0.02	0.0833	0.072	0.0868	0.3366
Sodium, D	ug/L	23	0	0	2170	6670	3243.913	3130	833.0106	3532	3675	6014.4
Sodium, T	ug/L	23	0	0	2200	8170	3317.8261	3180	1127.1967	3642	3759	7202
Solids, Total Dissolved	mg/L	23	0	0	89	179	106.1696	104	17.9348	113.8	119.4	166.02
Sulfate	mg/L	23	0	0	5.49	15.3	7.93	7.86	1.7913	8.366	8.884	13.9008
Temperature, Water	deg C	23	0	0	4.99	8.5	6.5257	6.41	0.7924	7.578	7.804	8.3504
Thallium, D	ug/L	3	20	87	0.005	0.02	0.0183	0.02	0.0045	0.02	0.02	0.02
Thallium, T	ug/L	6	17	74	0.005	0.064	0.0217	0.02	0.0125	0.02	0.0497	0.0616
Turbidity	NTU	22	0	0	0	116.7	16.1785	3.98	30.3996	59.872	76.639	108.4386
Turbidity	NTU	3	0	0	0.13	0.52	0.31	0.28	0.1967	0.472	0.496	0.5152
Vanadium (Fume Or Dust), D	ug/L	23	0	0	0.28	0.507	0.3203	0.31	0.0488	0.34	0.394	0.4835
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.28	4.15	0.6954	0.34	1.0189	0.84	3.347	4.0334
Zinc, D	ug/L	23	0	0	1	116	11.6478	2.4	24.5766	19.2	37.83	99.258
Zinc, T	ug/L	23	0	0	0.6	193	17.8935	3.6	40.5153	38.66	51.66	162.112

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B12, EFSFSR valley near Scout prospect												
Alkalinity as CaCO3	mg/L	23	0	0	89	122	101.3043	103	8.1488	106	115.9	120.9
Aluminum (Fume Or Dust), D	ug/L	23	0	0	1.8	28.9	6.213	3.8	6.3538	14.14	15.83	26.062
Aluminum (Fume Or Dust), T	ug/L	23	0	0	3.4	826	66.2087	7.1	186.0953	94.24	377.5	733.82
Ammonia as Nitrogen	mg/L	4	19	83	0.024	0.076	0.0501	0.05	0.0081	0.05	0.0572	0.072
Antimony, D	ug/L	23	0	0	94.2	133	108.6565	105	11.9762	129	131.8	132.78
Antimony, T	ug/L	23	0	0	89.2	134	107.4391	104	13.6296	129.6	132.7	133.78
Arsenic (III), T	ug/L	23	0	0	0.033	11.1	2.9047	1.84	3.2398	8.484	10.857	11.078
Arsenic, D	ug/L	23	0	0	333	497	373.7826	368	36.0252	402.8	426.4	482.04
Arsenic, T	ug/L	23	0	0	331	497	374.9565	367	35.6632	405.2	414.2	478.96
Barium, D	ug/L	23	0	0	9.31	13.7	11.6617	11.5	1.1597	13.44	13.68	13.7
Barium, T	ug/L	23	0	0	9.51	29.3	13.0657	11.8	4.3105	13.84	21.73	27.826
Beryllium, D	ug/L	3	20	87	0.002	0.02	0.0184	0.02	0.0045	0.02	0.02	0.02
Beryllium, T	ug/L	5	18	78	0.004	0.219	0.0353	0.02	0.051	0.0464	0.1556	0.2076
Bicarbonate as CaCO3	mg/L	23	0	0	89	117	100.2826	102	6.7366	105.8	106	114.58
Boron, D	ug/L	21	2	9	5	21	7.7478	6.4	4.384	9.62	19.88	21
Boron, T	ug/L	23	0	0	4.4	15.3	8.8783	8.1	3.2895	14.04	14.94	15.234
Cadmium, D	ug/L	17	6	26	0.005	0.029	0.016	0.018	0.006	0.02	0.0218	0.0275
Cadmium, T	ug/L	18	5	22	0.007	0.028	0.0164	0.017	0.0052	0.0208	0.0237	0.0271
Calcium, D	ug/L	23	0	0	24500	31400	28504.3478	28700	1741.3365	30440	30590	31224
Calcium, T	ug/L	23	0	0	25200	31500	28791.3043	29600	1778.6392	30440	30590	31302
Carbonate as CaCO3	mg/L	1	22	96	15	20	15.2174	15	1.0426	15	15	18.9
Chloride	mg/L	23	0	0	0.23	0.84	0.3565	0.33	0.1169	0.422	0.448	0.7542
Chromium, D	ug/L	22	1	4	0.04	0.45	0.157	0.13	0.0933	0.232	0.321	0.4236
Chromium, T	ug/L	23	0	0	0.05	1.76	0.3126	0.22	0.3741	0.46	0.966	1.5972
Cobalt, D	ug/L	20	3	13	0.011	1.11	0.129	0.059	0.239	0.2194	0.4709	0.9754
Cobalt, T	ug/L	21	2	9	0.005	0.552	0.0853	0.03	0.1416	0.2622	0.4077	0.523
Conductivity	uS/cm	23	0	0	137.3	221.67	161.3709	147.2	26.0756	198.586	201.837	217.3536
Copper, D	ug/L	23	0	0	0.17	0.8	0.347	0.3	0.1627	0.606	0.629	0.7626
Copper, T	ug/L	23	0	0	0.21	8.57	1.1913	0.63	1.955	1.38	5.279	7.9408
Cyanide, T	mg/L	4	19	83	0.0011	0.0049	0.0026	0.0027	0.0007	0.0027	0.0027	0.0044
Dissolved Oxygen	mg/L	23	0	0	1.18	4.61	2.2957	1.73	1.1173	4.092	4.411	4.5726
Fluoride	mg/L	23	0	0	0.08	0.16	0.1104	0.1	0.0225	0.14	0.14	0.1556
Hardness as CaCO3	mg/L	23	0	0	84.7	108	98.787	102	6.7022	104.8	106.8	107.78
Iron, D	ug/L	17	6	26	3	66.5	13.8609	10.4	13.9726	21	27.84	58.162
Iron, T	ug/L	20	3	13	3.3	1450	152.9217	21	384.5135	276.06	1157.4	1406
Lead, D	ug/L	17	6	26	0.003	0.119	0.024	0.011	0.0296	0.0714	0.0806	0.1106
Lead, T	ug/L	23	0	0	0.006	4.39	0.343	0.042	1.0063	0.2544	2.1525	3.9434
Magnesium, D	ug/L	23	0	0	5170	7060	6435.2174	6600	520.1125	6946	7049	7060
Magnesium, T	ug/L	23	0	0	5300	7380	6504.7826	6640	558.0638	6992	7153	7333.8
Manganese, D	ug/L	20	3	13	0.1	25.1	4.3513	1.1	7.4465	14.84	23.3	24.88
Manganese, T	ug/L	21	2	9	0.4	140	14.5287	1.2	34.6423	25.28	93.44	131.42
Mercury, D	ng/L	22	1	4	0.08	1.11	0.4378	0.35	0.2984	0.972	1.034	1.0946

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B12, EFSFSR valley near Scout prospect												
Mercury, T	ng/L	23	0	0	0.25	18.7	2.62	0.84	4.8196	5.388	14.876	18.084
Methyl Mercury	ng/L	1	22	96	0.04	0.1	0.0974	0.1	0.0125	0.1	0.1	0.1
Molybdenum, D	ug/L	23	0	0	8.07	24.8	15.04	15.2	3.9618	19.18	19.49	23.634
Molybdenum, T	ug/L	23	0	0	8.14	24.9	15.0017	15.3	3.9364	19.24	20.13	23.866
Nickel, D	ug/L	23	0	0	0.11	1.21	0.5087	0.42	0.337	1.064	1.19	1.2078
Nickel, T	ug/L	22	1	4	0.1	2.38	0.64	0.47	0.5596	1.27	1.779	2.259
Nitrate+Nitrite as Nitrogen	mg/L	23	0	0	0.043	0.099	0.069	0.073	0.0184	0.0898	0.0972	0.0988
Nitrogen, Total as Nitrogen	mg/L	23	0	0	0.39	1.95	0.6487	0.55	0.3263	0.78	1.05	1.7586
Nitrogen, Total Kjeldahl (TKN)	mg/L	23	0	0	0.33	1.87	0.5783	0.49	0.3227	0.72	0.963	1.6764
Oxidation-Reduction potential	volts	22	0	0	-0.319	0.121	-0.0067	0.049	0.1246	0.0876	0.0956	0.1158
pH	pH	23	0	0	7.41	8.48	8.0165	8.07	0.3034	8.342	8.459	8.4778
Phosphorus, D	ug/L	23	0	0	7.7	35.2	14.4391	13	6.6486	23.2	25.26	33.044
Phosphorus, T	ug/L	23	0	0	5.8	180	24.2261	13.4	35.7447	37.54	48.32	151.246
Potassium, D	ug/L	23	0	0	1350	1990	1581.7391	1580	153.5534	1686	1897	1974.6
Potassium, T	ug/L	23	0	0	1340	2150	1625.2174	1580	224.0915	2022	2095	2139
Selenium, D	ug/L	0	23	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	23	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	14	9	39	0.002	0.036	0.0184	0.02	0.0092	0.0322	0.033	0.0353
Silver, T	ug/L	23	0	0	0.006	4.24	0.2773	0.023	0.9033	0.2232	1.1752	3.5888
Sodium, D	ug/L	23	0	0	3160	23800	6344.3478	5470	4377.5791	7118	13226	21622
Sodium, T	ug/L	23	0	0	3190	23200	6370.8696	5610	4234.9701	7128	13136	21132
Solids, Total Dissolved	mg/L	23	0	0	66	153	122.5652	119	16.9272	140.6	146.4	151.68
Sulfate	mg/L	23	0	0	7.88	21.3	13.9296	14.3	2.7831	15.84	17.61	20.53
Temperature, Water	deg C	23	0	0	5.01	8.29	6.8743	6.91	0.8125	7.83	8.023	8.235
Thallium, D	ug/L	8	15	65	0.003	0.02	0.0148	0.02	0.0074	0.02	0.02	0.02
Thallium, T	ug/L	13	10	44	0.003	0.038	0.0146	0.02	0.0091	0.02	0.0254	0.0354
Turbidity	NTU	23	0	0	0	130.9	14.0444	0.1915	37.4182	45.15	116.141	129.14
Turbidity	NTU	3	0	0	0.15	0.26	0.1967	0.18	0.0569	0.244	0.252	0.2584
Vanadium (Fume Or Dust), D	ug/L	14	9	39	0.04	0.2	0.1153	0.08	0.0708	0.2	0.2	0.2
Vanadium (Fume Or Dust), T	ug/L	17	6	26	0.03	0.55	0.1372	0.094	0.1247	0.2	0.3719	0.515
Zinc, D	ug/L	23	0	0	0.5	4.4	1.5317	1	1.1641	3.522	4.331	4.3978
Zinc, T	ug/L	23	0	0	0.6	15.2	2.3965	1.2	3.5867	3.098	10.66	14.386

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A13, EFSFSR valley between Garnet and Midnight Creeks												
Alkalinity as CaCO3	mg/L	2	0	0	170	227	198.5	198.5	40.3051	221.3	224.15	226.43
Aluminum (Fume Or Dust), D	ug/L	2	0	0	2.1	4.3	3.2	3.2	1.5556	4.08	4.19	4.278
Aluminum (Fume Or Dust), T	ug/L	2	0	0	6.5	81.2	43.85	43.85	52.8209	73.73	77.465	80.453
Ammonia as Nitrogen	mg/L	0	2	100	0.05	0.05	0.05	0.05	0	0.05	0.05	0.05
Antimony, D	ug/L	2	0	0	10.5	15.3	12.9	12.9	3.3941	14.82	15.06	15.252
Antimony, T	ug/L	2	0	0	9.45	10.4	9.925	9.925	0.6718	10.305	10.3525	10.3905
Arsenic (III), T	ug/L	2	0	0	0.076	13.3	6.688	6.688	9.3508	11.9776	12.6388	13.1678
Arsenic, D	ug/L	2	0	0	5.04	7.4	6.22	6.22	1.6688	7.164	7.282	7.3764
Arsenic, T	ug/L	2	0	0	4.45	7.64	6.045	6.045	2.2557	7.321	7.4805	7.6081
Barium, D	ug/L	2	0	0	29.8	30.3	30.05	30.05	0.3536	30.25	30.275	30.295
Barium, T	ug/L	2	0	0	30.4	34	32.2	32.2	2.5456	33.64	33.82	33.964
Beryllium, D	ug/L	0	2	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	1	1	50	0.014	0.02	0.017	0.017	0.0042	0.0194	0.0197	0.0199
Bicarbonate as CaCO3	mg/L	2	0	0	170	227	198.5	198.5	40.3051	221.3	224.15	226.43
Boron, D	ug/L	2	0	0	11	13.2	12.1	12.1	1.5556	12.98	13.09	13.178
Boron, T	ug/L	2	0	0	13	17.5	15.25	15.25	3.182	17.05	17.275	17.455
Cadmium, D	ug/L	2	0	0	0.042	0.546	0.294	0.294	0.3564	0.4956	0.5208	0.541
Cadmium, T	ug/L	2	0	0	0.037	1.11	0.5735	0.5735	0.7587	1.0027	1.0563	1.0993
Calcium, D	ug/L	2	0	0	35000	48800	41900	41900	9758.0736	47420	48110	48662
Calcium, T	ug/L	2	0	0	35700	55300	45500	45500	13859.2929	53340	54320	55104
Carbonate as CaCO3	mg/L	0	2	100	15	15	15	15	0	15	15	15
Chloride	mg/L	2	0	0	1.89	3.35	2.62	2.62	1.0324	3.204	3.277	3.3354
Chromium, D	ug/L	2	0	0	0.22	0.45	0.335	0.335	0.1626	0.427	0.4385	0.4477
Chromium, T	ug/L	2	0	0	0.8	1.07	0.935	0.935	0.1909	1.043	1.0565	1.0673
Cobalt, D	ug/L	2	0	0	0.284	1.24	0.762	0.762	0.676	1.1444	1.1922	1.2304
Cobalt, T	ug/L	2	0	0	0.314	1.03	0.672	0.672	0.5063	0.9584	0.9942	1.0228
Conductivity	uS/cm	2	0	0	382.25	386	384.125	384.125	2.6517	385.625	385.8125	385.9625
Copper, D	ug/L	2	0	0	2.24	2.55	2.395	2.395	0.2192	2.519	2.5345	2.5469
Copper, T	ug/L	2	0	0	4.15	4.5	4.325	4.325	0.2475	4.465	4.4825	4.4965
Cyanide, T	mg/L	0	2	100	0.0027	0.0027	0.0027	0.0027	0	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	1	0	0	8.39	8.39	8.39	8.39		8.39	8.39	8.39
Fluoride	mg/L	2	0	0	0.1	0.17	0.135	0.135	0.0495	0.163	0.1665	0.1693
Hardness as CaCO3	mg/L	2	0	0	135	215	175	175	56.5685	207	211	214.2
Iron, D	ug/L	2	0	0	13.9	56	34.95	34.95	29.7692	51.79	53.895	55.579
Iron, T	ug/L	2	0	0	60.4	344	202.2	202.2	200.5355	315.64	329.82	341.164
Lead, D	ug/L	2	0	0	0.014	0.096	0.055	0.055	0.058	0.0878	0.0919	0.0952
Lead, T	ug/L	2	0	0	0.036	0.494	0.265	0.265	0.3239	0.4482	0.4711	0.4894
Magnesium, D	ug/L	2	0	0	10800	17100	13950	13950	4454.7727	16470	16785	17037
Magnesium, T	ug/L	2	0	0	11100	18700	14900	14900	5374.0115	17940	18320	18624
Manganese, D	ug/L	2	0	0	146	367	256.5	256.5	156.2706	344.9	355.95	364.79
Manganese, T	ug/L	2	0	0	130	379	254.5	254.5	176.0696	354.1	366.55	376.51
Mercury, D	ng/L	2	0	0	2.14	2.46	2.3	2.3	0.2263	2.428	2.444	2.4568

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A13, EFSFSR valley between Garnet and Midnight Creeks												
Mercury, T	ng/L	2	0	0	3.74	4.19	3.965	3.965	0.3182	4.145	4.1675	4.1855
Methyl Mercury	ng/L	1	1	50	0.1	0.19	0.145	0.145	0.0636	0.181	0.1855	0.1891
Molybdenum, D	ug/L	2	0	0	12.2	13	12.6	12.6	0.5657	12.92	12.96	12.992
Molybdenum, T	ug/L	2	0	0	13.3	13.3	13.3	13.3	0	13.3	13.3	13.3
Nickel, D	ug/L	2	0	0	11.1	25.7	18.4	18.4	10.3238	24.24	24.97	25.554
Nickel, T	ug/L	2	0	0	11.9	27	19.45	19.45	10.6773	25.49	26.245	26.849
Nitrate+Nitrite as Nitrogen	mg/L	2	0	0	0.515	0.555	0.535	0.535	0.0283	0.551	0.553	0.5546
Nitrogen, Total as Nitrogen	mg/L	2	0	0	2.89	12.3	7.595	7.595	6.6539	11.359	11.8295	12.2059
Nitrogen, Total Kjeldahl (TKN)	mg/L	2	0	0	2.33	11.8	7.065	7.065	6.6963	10.853	11.3265	11.7053
Oxidation-Reduction potential	volts	1	0	0	0.096	0.096	0.096	0.096		0.096	0.096	0.096
pH	pH	2	0	0	7.62	7.69	7.655	7.655	0.0495	7.683	7.6865	7.6893
Phosphorus, D	ug/L	2	0	0	5	11	8	8	4.2426	10.4	10.7	10.94
Phosphorus, T	ug/L	2	0	0	6.9	18	12.45	12.45	7.8489	16.89	17.445	17.889
Potassium, D	ug/L	2	0	0	2050	2880	2465	2465	586.8986	2797	2838.5	2871.7
Potassium, T	ug/L	2	0	0	2170	3190	2680	2680	721.2489	3088	3139	3179.8
Selenium, D	ug/L	1	1	50	0.6	1	0.8	0.8	0.2828	0.96	0.98	0.996
Selenium, T	ug/L	1	1	50	0.4	1	0.7	0.7	0.4243	0.94	0.97	0.994
Silver, D	ug/L	2	0	0	0.007	0.008	0.0075	0.0075	0.0007	0.0079	0.008	0.008
Silver, T	ug/L	2	0	0	0.019	0.044	0.0315	0.0315	0.0177	0.0415	0.0428	0.0438
Sodium, D	ug/L	2	0	0	29900	55000	42450	42450	17748.3802	52490	53745	54749
Sodium, T	ug/L	2	0	0	30500	59800	45150	45150	20718.2287	56870	58335	59507
Solids, Total Dissolved	mg/L	2	0	0	297	394	345.5	345.5	68.5894	384.3	389.15	393.03
Sulfate	mg/L	2	0	0	34.2	102	68.1	68.1	47.9418	95.22	98.61	101.322
Temperature, Water	deg C	2	0	0	6.78	8.68	7.73	7.73	1.3435	8.49	8.585	8.661
Thallium, D	ug/L	2	0	0	0.008	0.016	0.012	0.012	0.0057	0.0152	0.0156	0.0159
Thallium, T	ug/L	2	0	0	0.013	0.017	0.015	0.015	0.0028	0.0166	0.0168	0.017
Turbidity	NTU	2	0	0	0.5	1.52	1.01	1.01	0.7212	1.418	1.469	1.5098
Turbidity	NTU	1	0	0	1.03	1.03	1.03	1.03		1.03	1.03	1.03
Vanadium (Fume Or Dust), D	ug/L	2	0	0	0.12	0.25	0.185	0.185	0.0919	0.237	0.2435	0.2487
Vanadium (Fume Or Dust), T	ug/L	2	0	0	0.16	0.43	0.295	0.295	0.1909	0.403	0.4165	0.4273
Zinc, D	ug/L	2	0	0	10.9	12.9	11.9	11.9	1.4142	12.7	12.8	12.88
Zinc, T	ug/L	2	0	0	13	18	15.5	15.5	3.5355	17.5	17.75	17.95

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B13, EFSFSR valley between Garnet and Midnight Creeks												
Alkalinity as CaCO3	mg/L	23	0	0	116	161	137.1739	140	11.2519	147.6	152.5	159.24
Aluminum (Fume Or Dust), D	ug/L	23	0	0	1.6	559	65.9652	8.8	153.1936	307.58	396	523.58
Aluminum (Fume Or Dust), T	ug/L	23	0	0	4.1	6000	1416.687	423	2114.3537	5328	5841	5975.8
Ammonia as Nitrogen	mg/L	8	15	65	0.025	0.097	0.0493	0.05	0.0132	0.05	0.0635	0.09
Antimony, D	ug/L	23	0	0	15.6	62.3	30.0696	26.3	13.6442	54.58	58.08	61.42
Antimony, T	ug/L	23	0	0	7.9	62.3	27.413	22.7	15.2845	55.04	58.49	61.508
Arsenic (III), T	ug/L	23	0	0	0.213	90.5	28.6623	26.9	21.2847	51.92	57.31	83.328
Arsenic, D	ug/L	23	0	0	97.7	330	242.4652	243	58.1622	308.4	318	327.58
Arsenic, T	ug/L	23	0	0	194	350	286.7391	307	50.5733	339.6	346.4	349.34
Barium, D	ug/L	23	0	0	7.53	29	24.3361	25.2	4.2082	27.38	27.67	28.714
Barium, T	ug/L	23	0	0	22.8	220	62.3043	34.2	57.0021	159.8	173.9	210.1
Beryllium, D	ug/L	7	16	70	0.002	0.145	0.0303	0.02	0.0363	0.0832	0.1116	0.138
Beryllium, T	ug/L	20	3	13	0.019	2.5	0.4824	0.121	0.7792	1.672	2.387	2.4912
Bicarbonate as CaCO3	mg/L	23	0	0	116	152	135.913	139	9.9449	145.8	147.8	151.12
Boron, D	ug/L	23	0	0	7	22.5	14.8913	15.8	3.683	17.88	18.36	21.598
Boron, T	ug/L	23	0	0	9	47.8	19.3261	17.7	8.344	27.2	30.1	43.972
Cadmium, D	ug/L	18	5	22	0.005	0.129	0.0203	0.017	0.0247	0.0236	0.0321	0.1079
Cadmium, T	ug/L	22	1	4	0.007	0.314	0.0652	0.029	0.0827	0.1898	0.2305	0.2966
Calcium, D	ug/L	23	0	0	21600	29500	27439.1304	27800	1850.243	29040	29370	29478
Calcium, T	ug/L	23	0	0	26600	43700	31443.4783	29500	5484.5921	42580	43550	43678
Carbonate as CaCO3	mg/L	1	22	96	15	26	15.4783	15	2.2937	15	15	23.58
Chloride	mg/L	23	0	0	0.34	1.33	0.4791	0.43	0.2052	0.54	0.72	1.2002
Chromium, D	ug/L	21	2	9	0.02	1.16	0.2483	0.18	0.2885	0.44	0.935	1.1226
Chromium, T	ug/L	23	0	0	0.04	18.9	4.1578	1.42	5.5814	12.08	14.29	17.932
Cobalt, D	ug/L	22	1	4	0.005	3.53	0.683	0.32	0.8772	1.826	2.13	3.2286
Cobalt, T	ug/L	23	0	0	0.008	6.24	1.1966	0.367	1.7583	3.142	5.139	6.0464
Conductivity	uS/cm	23	0	0	255.63	371.1	293.5461	286.45	31.8049	339.238	349.083	366.4844
Copper, D	ug/L	23	0	0	0.03	2.41	0.6583	0.27	0.6872	1.46	2.03	2.3396
Copper, T	ug/L	23	0	0	1.01	40.4	10.9122	6.14	11.824	30.64	33.27	38.882
Cyanide, T	mg/L	3	20	87	0.0017	0.0193	0.0033	0.0027	0.0035	0.0027	0.0027	0.0156
Dissolved Oxygen	mg/L	23	0	0	0.04	2.63	1.4365	1.7	0.8755	2.418	2.575	2.6212
Fluoride	mg/L	23	0	0	0.29	0.95	0.663	0.73	0.1845	0.828	0.857	0.9302
Hardness as CaCO3	mg/L	23	0	0	98.8	164	119.687	113	18.7679	156.8	159.9	163.12
Iron, D	ug/L	20	3	13	5.8	1060	170.7826	21.8	312.2138	512.4	990.5	1055.6
Iron, T	ug/L	23	0	0	6	16400	2954.6957	639	4817.1257	10788	13080	15718
Lead, D	ug/L	23	0	0	0.013	1.9	0.2511	0.05	0.5399	1.008	1.598	1.8428
Lead, T	ug/L	23	0	0	0.078	34.5	6.5933	1.82	10.2721	22.84	29.49	33.554
Magnesium, D	ug/L	23	0	0	6250	9930	8906.087	9120	864.7266	9656	9897	9927.8
Magnesium, T	ug/L	23	0	0	7680	13400	9984.7826	9940	1315.4877	12060	12470	13202
Manganese, D	ug/L	21	2	9	0.4	485	148.9522	135	135.086	374	419.1	470.92
Manganese, T	ug/L	23	0	0	0.2	1330	335.1783	135	429.3409	1126	1184	1299.2
Mercury, D	ng/L	22	1	4	0.09	4.14	0.5939	0.29	0.908	1.02	2.207	3.7418

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B13, EFSFSR valley between Garnet and Midnight Creeks												
Mercury, T	ng/L	23	0	0	0.2	322	39.34	4.05	90.6436	111.5	282.7	317.38
Methyl Mercury	ng/L	10	13	57	0.03	1.02	0.1283	0.1	0.1969	0.116	0.156	0.8308
Molybdenum, D	ug/L	23	0	0	2.89	14.7	5.7843	4.87	3.0153	8.89	13.257	14.48
Molybdenum, T	ug/L	23	0	0	2.95	10.7	5.0948	4.78	1.8605	7.344	8.212	10.172
Nickel, D	ug/L	23	0	0	0.15	4.27	1.4457	1.2	0.9762	2.726	2.856	3.9598
Nickel, T	ug/L	23	0	0	0.2	19.1	4.4352	1.44	5.2681	11.44	12.32	17.626
Nitrate+Nitrite as Nitrogen	mg/L	14	9	39	0.021	0.121	0.0507	0.05	0.0219	0.0696	0.0918	0.1151
Nitrogen, Total as Nitrogen	mg/L	22	1	4	0.15	1.4	0.6665	0.61	0.3463	1.258	1.361	1.3934
Nitrogen, Total Kjeldahl (TKN)	mg/L	23	0	0	0.14	1.36	0.6361	0.59	0.3371	1.174	1.333	1.3578
Oxidation-Reduction potential	volts	22	0	0	-0.48	1.174	0.0098	-0.0165	0.3182	0.1346	0.4058	1.0157
pH	pH	23	0	0	1	8.22	7.5191	7.93	1.4721	8.21	8.219	8.22
Phosphorus, D	ug/L	21	2	9	3	42.2	17.6261	10.4	13.3064	40	41.17	42.002
Phosphorus, T	ug/L	23	0	0	13.4	535	110.0696	27	157.5814	392.2	412.4	508.38
Potassium, D	ug/L	23	0	0	933	2180	1869.2609	1880	247.7495	2120	2157	2175.6
Potassium, T	ug/L	23	0	0	1920	5690	2775.2174	2180	1273.67	5200	5564	5670.2
Selenium, D	ug/L	1	22	96	0.4	1	0.9739	1	0.1251	1	1	1
Selenium, T	ug/L	4	19	83	0.5	1.8	1.0348	1	0.2124	1.16	1.29	1.69
Silver, D	ug/L	5	18	78	0.003	0.163	0.033	0.02	0.0369	0.0672	0.1145	0.1533
Silver, T	ug/L	20	3	13	0.013	10.1	1.0584	0.094	2.3077	3.554	3.607	8.6722
Sodium, D	ug/L	23	0	0	17100	73600	45360.8696	47600	14300.1824	57740	66390	72214
Sodium, T	ug/L	23	0	0	17100	68700	44860.8696	48600	13624.8016	56620	62210	67402
Solids, Total Dissolved	mg/L	23	0	0	151	281	233.3043	244	34.9928	269.6	275.5	279.9
Sulfate	mg/L	23	0	0	25.8	107	63.3435	66.8	18.8773	79.78	83.86	101.984
Temperature, Water	deg C	23	0	0	-5.18	11.3	7.6687	8.3	3.1307	9.676	10.168	11.0602
Thallium, D	ug/L	16	7	30	0.003	0.033	0.0147	0.012	0.0072	0.02	0.0245	0.0312
Thallium, T	ug/L	22	1	4	0.006	0.196	0.0596	0.039	0.0568	0.1562	0.1888	0.1949
Turbidity	NTU	23	0	0	0	2944.1	252.1357	15.1	651.6117	455.02	1200.03	2578.218
Turbidity	NTU	3	0	0	0.22	0.56	0.3933	0.4	0.1701	0.528	0.544	0.5568
Vanadium (Fume Or Dust), D	ug/L	23	0	0	0.06	0.504	0.1496	0.13	0.0944	0.196	0.308	0.4635
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.13	4.81	1.0961	0.32	1.4518	3.536	4.246	4.7
Zinc, D	ug/L	23	0	0	1.64	103	15.8309	6.25	25.8077	21.22	80.72	99.524
Zinc, T	ug/L	23	0	0	5.2	176	45.653	21	50.8067	129.8	134.7	166.98

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A15, EFSFSR valley near Fiddle Creek												
Alkalinity as CaCO3	mg/L	23	0	0	23	32	25.8478	25	2.4777	29.68	30.91	31.78
Aluminum (Fume Or Dust), D	ug/L	23	0	0	1.2	20.9	4.7087	2.2	5.3848	13.08	15.29	19.712
Aluminum (Fume Or Dust), T	ug/L	23	0	0	2.7	1100	125.1522	11	312.532	254.2	1008.7	1097.8
Ammonia as Nitrogen	mg/L	4	19	83	0.031	0.058	0.0489	0.05	0.0052	0.05	0.05	0.0562
Antimony, D	ug/L	23	0	0	3.38	4.84	4.0622	4.16	0.3312	4.356	4.369	4.7366
Antimony, T	ug/L	23	0	0	3.51	4.72	4.12	4.19	0.3756	4.542	4.685	4.7156
Arsenic (III), T	ug/L	23	0	0	0.017	0.495	0.1387	0.14	0.0942	0.1938	0.2287	0.4371
Arsenic, D	ug/L	23	0	0	76.7	106	87.2565	86.3	6.1854	91.98	95.6	103.8
Arsenic, T	ug/L	23	0	0	77.8	104	88.2565	86.5	7.0205	96.28	99.63	103.12
Barium, D	ug/L	23	0	0	15	18.8	16.9522	16.9	1.2098	18.56	18.69	18.778
Barium, T	ug/L	23	0	0	15.1	59	20.8565	17.1	11.4993	21.74	51.33	58.032
Beryllium, D	ug/L	3	20	87	0.003	0.02	0.0182	0.02	0.0051	0.02	0.02	0.02
Beryllium, T	ug/L	6	17	74	0.002	0.08	0.0224	0.02	0.0172	0.02	0.0632	0.0774
Bicarbonate as CaCO3	mg/L	23	0	0	23	32	25.8478	25	2.4777	29.68	30.91	31.78
Boron, D	ug/L	17	6	26	2	21	9.3435	5.2	7.3377	21	21	21
Boron, T	ug/L	21	2	9	2	20	6.8522	5.9	4.6206	10.32	19.05	20
Cadmium, D	ug/L	5	18	78	0.009	0.032	0.0189	0.02	0.0047	0.02	0.02	0.0294
Cadmium, T	ug/L	7	16	70	0.005	0.033	0.018	0.02	0.0062	0.02	0.0209	0.0304
Calcium, D	ug/L	23	0	0	4570	6000	5179.1304	5080	369.3473	5734	5924	5986.8
Calcium, T	ug/L	23	0	0	4480	6090	5243.4783	5230	409.0744	5910	6006	6072.4
Carbonate as CaCO3	mg/L	0	23	100	15	15	15	15	0	15	15	15
Chloride	mg/L	23	0	0	0.32	0.53	0.4135	0.41	0.055	0.47	0.488	0.5212
Chromium, D	ug/L	22	1	4	0.07	0.2	0.1343	0.13	0.0386	0.188	0.199	0.2
Chromium, T	ug/L	23	0	0	0.05	2.74	0.347	0.16	0.5817	0.602	1.2	2.4144
Cobalt, D	ug/L	20	3	13	0.003	0.554	0.0595	0.02	0.1191	0.1536	0.1999	0.4768
Cobalt, T	ug/L	20	3	13	0.004	1.56	0.1122	0.018	0.3396	0.057	0.561	1.3525
Conductivity	uS/cm	23	0	0	30.12	74.65	40.8952	36.12	11.5042	54.682	56.323	70.6482
Copper, D	ug/L	21	2	9	0.06	0.45	0.1352	0.1	0.0899	0.196	0.299	0.4192
Copper, T	ug/L	22	1	4	0.03	0.79	0.1613	0.09	0.1859	0.318	0.565	0.746
Cyanide, T	mg/L	3	20	87	0.001	0.0027	0.0025	0.0027	0.0005	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	23	0	0	8.91	10.88	9.4578	9.3	0.4058	9.814	9.847	10.6534
Fluoride	mg/L	21	2	9	0.04	0.2	0.07	0.05	0.0474	0.138	0.195	0.2
Hardness as CaCO3	mg/L	23	0	0	15.1	22.1	18.2	17.9	1.7855	20.86	20.9	21.836
Iron, D	ug/L	13	10	44	4	50.7	15.8043	20.3	10.2878	21	21	44.166
Iron, T	ug/L	21	2	8	3.3	2800	260.6391	21	716.9059	251.4	2014.7	2670.2
Lead, D	ug/L	13	10	44	0.003	0.02	0.0135	0.012	0.0065	0.02	0.02	0.02
Lead, T	ug/L	20	3	13	0.004	0.294	0.044	0.02	0.0795	0.0606	0.2656	0.2927
Magnesium, D	ug/L	23	0	0	994	1380	1162.7826	1160	95.174	1312	1330	1369
Magnesium, T	ug/L	23	0	0	947	1930	1230.3043	1160	218.2354	1396	1670	1879.4
Manganese, D	ug/L	18	5	22	0.1	3.8	0.8139	0.5	0.8389	1.18	2.37	3.514
Manganese, T	ug/L	21	2	8	0.1	44.4	4.3843	0.7	11.3123	4.14	32.1	42.376
Mercury, D	ng/L	23	0	0	0.2	3.52	0.7796	0.44	0.8744	1.312	3.04	3.4562

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A15, EFSFSR valley near Fiddle Creek												
Mercury, T	ng/L	23	0	0	0.33	52.3	5.0357	1.01	12.3794	5.41	30.874	48.208
Methyl Mercury	ng/L	1	22	96	0.07	0.1	0.0987	0.1	0.0063	0.1	0.1	0.1
Molybdenum, D	ug/L	23	0	0	0.106	1.24	0.2468	0.171	0.2353	0.392	0.4315	1.0629
Molybdenum, T	ug/L	23	0	0	0.11	0.542	0.2005	0.17	0.0924	0.2752	0.3429	0.4998
Nickel, D	ug/L	20	3	13	0.04	0.81	0.1643	0.12	0.1564	0.248	0.323	0.7044
Nickel, T	ug/L	19	4	17	0.05	2.42	0.2757	0.16	0.4922	0.25	0.781	2.0724
Nitrate+Nitrite as Nitrogen	mg/L	22	1	4	0.05	0.105	0.0747	0.073	0.0129	0.0902	0.091	0.1019
Nitrogen, Total as Nitrogen	mg/L	21	1	5	0.31	0.83	0.5191	0.5	0.1488	0.749	0.817	0.8279
Nitrogen, Total Kjeldahl (TKN)	mg/L	23	0	0	0.24	0.75	0.4561	0.44	0.139	0.654	0.715	0.7434
Oxidation-Reduction potential	volts	22	0	0	-0.16	0.379	0.0753	0.0986	0.1153	0.1569	0.1659	0.3343
pH	pH	23	0	0	6.65	8.27	7.1391	7.02	0.4267	7.818	7.931	8.1974
Phosphorus, D	ug/L	23	0	0	21.7	137	37.087	32.1	22.203	40.1	41.9	116.1
Phosphorus, T	ug/L	23	0	0	20.1	106	38.9696	32	18.4209	49.48	75.07	99.818
Potassium, D	ug/L	23	0	0	760	992	907.6522	921	63.1525	975.2	989.5	991.78
Potassium, T	ug/L	23	0	0	770	2060	1007	944	290.4719	1058	1646	1983
Selenium, D	ug/L	0	23	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	23	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	2	21	91	0.007	0.02	0.0193	0.02	0.0027	0.02	0.02	0.02
Silver, T	ug/L	6	17	74	0.003	0.112	0.0227	0.02	0.0201	0.02	0.0308	0.0944
Sodium, D	ug/L	23	0	0	3010	4090	3585.6522	3620	223.1149	3822	3967	4065.8
Sodium, T	ug/L	23	0	0	3040	4120	3596.5217	3610	248.168	3868	3969	4089.2
Solids, Total Dissolved	mg/L	23	0	0	28	216	57.5087	46.2	42.8324	64.3	151.65	203.9
Sulfate	mg/L	23	0	0	1.95	3.18	2.3787	2.32	0.2871	2.796	2.892	3.1184
Temperature, Water	deg C	23	0	0	4.9	6.46	5.5317	5.44	0.4281	6.256	6.391	6.4468
Thallium, D	ug/L	3	20	87	0.006	0.044	0.0199	0.02	0.0065	0.02	0.02	0.0387
Thallium, T	ug/L	5	18	78	0.002	0.034	0.0192	0.02	0.0067	0.02	0.0308	0.0336
Turbidity	NTU	23	0	0	0	106.55	11.5061	2.19	24.5106	24.242	54.059	95.726
Turbidity	NTU	3	0	0	0.12	0.23	0.1767	0.18	0.0551	0.22	0.225	0.229
Vanadium (Fume Or Dust), D	ug/L	23	0	0	0.38	0.51	0.4363	0.43	0.0372	0.4892	0.49	0.5056
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.4	2.8	0.6755	0.45	0.6477	0.73	2.432	2.7604
Zinc, D	ug/L	21	2	9	0.13	1.58	0.6952	0.5	0.4284	1.264	1.336	1.5272
Zinc, T	ug/L	19	4	17	0.2	9.1	1.7661	1.24	2.1616	4.424	5.798	8.396

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B15, EFSFSR valley near Fiddle Creek												
Alkalinity as CaCO3	mg/L	23	0	0	55.5	116	81.0217	81	11.8038	87.8	96.1	111.82
Aluminum (Fume Or Dust), D	ug/L	23	0	0	1.8	2910	282.3087	64.1	607.3622	535.8	743	2437.66
Aluminum (Fume Or Dust), T	ug/L	23	0	0	6	64200	4100.2652	1020	13247.9461	2972	8399	52056
Ammonia as Nitrogen	mg/L	9	14	61	0.022	0.064	0.0447	0.05	0.0113	0.05	0.0545	0.062
Antimony, D	ug/L	23	0	0	3.02	52.4	10.5161	8.09	9.7989	15.22	16.95	44.634
Antimony, T	ug/L	23	0	0	2.44	46.8	8.8491	5.74	9.311	14.92	17.82	40.486
Arsenic (III), T	ug/L	23	0	0	20.1	292	143.8739	156	72.4999	223.2	231.2	278.8
Arsenic, D	ug/L	23	0	0	173	428	329.1739	341	64.471	402	409.9	424.04
Arsenic, T	ug/L	23	0	0	172	722	339.4348	338	109.8507	414.2	435.7	659.52
Barium, D	ug/L	23	0	0	17	54.8	40.5	41.8	8.7898	47.74	52.04	54.294
Barium, T	ug/L	23	0	0	40.4	810	89.213	48.7	158.3281	81.8	126.31	660.62
Beryllium, D	ug/L	18	5	22	0.004	0.697	0.0594	0.02	0.1414	0.079	0.1026	0.5668
Beryllium, T	ug/L	20	3	13	0.008	9.58	0.8371	0.142	2.0252	1.57	2.78	8.1104
Bicarbonate as CaCO3	mg/L	23	0	0	55.5	102	80.0261	81	10.2217	87.8	96.1	100.9
Boron, D	ug/L	23	0	0	12.2	32.1	24.2826	24.9	4.8935	30.16	30.2	31.682
Boron, T	ug/L	23	0	0	14.5	62.2	27.6304	27	8.6958	31.18	31.93	55.556
Cadmium, D	ug/L	17	6	26	0.005	0.045	0.0156	0.013	0.0088	0.0224	0.0239	0.0404
Cadmium, T	ug/L	19	4	17	0.017	1.3	0.1312	0.036	0.2985	0.1476	0.7136	1.1845
Calcium, D	ug/L	23	0	0	10100	17500	15091.3043	15700	1909.2866	16780	17340	17478
Calcium, T	ug/L	23	0	0	13800	63500	19421.7391	17000	9942.2403	20600	25380	55228
Carbonate as CaCO3	mg/L	2	21	91	6.9	15	14.6043	15	1.6924	15	15	15
Chloride	mg/L	23	0	0	0.44	2.41	0.9696	0.8	0.5258	1.746	2.031	2.333
Chromium, D	ug/L	19	4	17	0.06	1.21	0.273	0.2	0.2554	0.492	0.635	1.0868
Chromium, T	ug/L	19	4	17	0.09	13	1.59	0.61	2.7614	2.21	5.235	11.3654
Cobalt, D	ug/L	23	0	0	0.07	8.28	0.7939	0.231	1.7267	1.794	2	6.9006
Cobalt, T	ug/L	23	0	0	0.082	16.9	1.469	0.419	3.5237	1.748	4.567	14.2556
Conductivity	uS/cm	23	0	0	118.4	307	166.7765	141.8	49.7561	222.514	253.52	295.9648
Copper, D	ug/L	23	0	0	0.04	4.33	0.4583	0.23	0.8698	0.714	0.759	3.5446
Copper, T	ug/L	23	0	0	0.06	50.7	4.8561	1.18	10.7902	8.308	17.169	43.528
Cyanide, T	mg/L	2	21	91	0.0011	0.0027	0.0026	0.0027	0.0004	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	23	0	0	0	4.64	0.807	0.31	1.3732	2.934	4.179	4.5608
Fluoride	mg/L	23	0	0	0.3	0.9	0.5965	0.6	0.1391	0.72	0.819	0.8846
Hardness as CaCO3	mg/L	23	0	0	43.9	135	59.213	53.4	19.2578	70.32	87.48	124.946
Iron, D	ug/L	21	2	9	3	5870	494.2391	112	1213.1175	774.2	1225.8	4858
Iron, T	ug/L	23	0	0	12	108000	8133.6087	1280	22426.988	15480	19290	88552
Lead, D	ug/L	22	1	4	0.005	2.9	0.2432	0.072	0.5956	0.3806	0.4845	2.3709
Lead, T	ug/L	23	0	0	0.012	50.5	4.4549	0.77	10.6683	8.058	14.819	42.8
Magnesium, D	ug/L	23	0	0	1670	2560	2254.7826	2270	225.063	2490	2518	2551.2
Magnesium, T	ug/L	23	0	0	2230	27100	4036.9565	2630	5117.5859	4840	5900	22455.8
Manganese, D	ug/L	23	0	0	5.7	84.2	15.5078	10.1	16.1857	24.92	26.19	71.44
Manganese, T	ug/L	23	0	0	7.9	1390	100.3957	32.7	284.2914	108.8	178.3	1125.12
Mercury, D	ng/L	22	1	4	0.1	48.1	4.35	0.56	10.3258	11.686	14.45	40.73

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-B15, EFSFSR valley near Fiddle Creek												
Mercury, T	ng/L	23	0	0	0.17	1340	75.3478	4.57	277.2464	75.1	115.12	1071.38
Methyl Mercury	ng/L	2	21	91	0.03	0.1	0.0948	0.1	0.0175	0.1	0.1	0.1
Molybdenum, D	ug/L	23	0	0	2.02	7.57	4.8326	4.92	1.3148	6.11	6.279	7.2884
Molybdenum, T	ug/L	23	0	0	0.411	7.5	3.7072	3.97	2.2293	6.8	7.283	7.4604
Nickel, D	ug/L	23	0	0	0.07	3.96	0.5591	0.38	0.7813	0.82	0.921	3.2934
Nickel, T	ug/L	23	0	0	0.09	33.4	3.4109	0.97	7.1039	5.034	12.044	28.868
Nitrate+Nitrite as Nitrogen	mg/L	6	17	74	0.012	0.064	0.0436	0.05	0.0144	0.05	0.05	0.0609
Nitrogen, Total as Nitrogen	mg/L	20	2	9	0.19	1.39	0.5336	0.475	0.2374	0.755	0.7985	1.2661
Nitrogen, Total Kjeldahl (TKN)	mg/L	23	0	0	0.18	1.38	0.5139	0.46	0.2341	0.692	0.773	1.248
Oxidation-Reduction potential	volts	22	0	0	-0.508	0.289	-0.0688	-0.018	0.1809	0.066	0.1211	0.2544
pH	pH	23	0	0	8.02	9.29	8.4904	8.46	0.2787	8.734	8.803	9.1844
Phosphorus, D	ug/L	19	4	17	3	104	23.187	17.9	22.7632	40	48.91	92.098
Phosphorus, T	ug/L	22	1	4	6.9	1620	150.3261	40	335.5807	267	396	1353.36
Potassium, D	ug/L	23	0	0	691	2350	941.7391	857	344.6406	1180	1235	2105.8
Potassium, T	ug/L	23	0	0	727	16800	1894.6522	1050	3300.4281	2566	2702	13700.2
Selenium, D	ug/L	4	19	83	0.4	1	0.9304	1	0.169	1	1	1
Selenium, T	ug/L	7	16	70	0.4	1.1	0.9348	1	0.1748	1	1.09	1.1
Silver, D	ug/L	10	13	57	0.005	0.023	0.0156	0.02	0.0063	0.02	0.02	0.0223
Silver, T	ug/L	16	7	30	0.006	0.379	0.0348	0.02	0.0758	0.0338	0.0538	0.3079
Sodium, D	ug/L	23	0	0	22500	51400	27956.5217	26900	5810.2438	31060	34380	47726
Sodium, T	ug/L	23	0	0	22600	54100	27765.2174	26700	6254.7152	31320	32700	49414
Solids, Total Dissolved	mg/L	23	0	0	110	735	183.087	141	127.1809	214.4	278.1	636
Sulfate	mg/L	23	0	0	18.9	53.8	26.6913	25.3	7.7586	32.98	38.85	50.654
Temperature, Water	deg C	23	0	0	5.04	8.62	7.2074	7.54	0.9051	7.942	8.346	8.5694
Thallium, D	ug/L	13	10	44	0.002	0.07	0.0155	0.02	0.0139	0.02	0.0209	0.0592
Thallium, T	ug/L	19	4	17	0.003	1.26	0.0931	0.02	0.2598	0.098	0.2341	1.0376
Turbidity	NTU	23	0	0	0	2705	200.4683	24.17	561.5906	355.6	484.01	2219.02
Turbidity	NTU	3	0	0	0.24	0.29	0.26	0.25	0.0265	0.282	0.286	0.2892
Vanadium (Fume Or Dust), D	ug/L	23	0	0	0.15	7.99	1.0305	0.57	1.5997	1.736	1.769	6.6216
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.34	65.6	6.4652	1.93	13.947	8.65	23.105	56.602
Zinc, D	ug/L	23	0	0	0.2	14.1	1.6961	1.21	2.7756	2.1	2.37	11.526
Zinc, T	ug/L	23	0	0	0.2	153	13.527	5.2	31.8523	15.66	41.37	129.064

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A14, EFSFSR valley near Midnight Creek												
Alkalinity as CaCO3	mg/L	23	0	0	65	139	119.9565	122	13.2955	126.8	132.4	137.68
Aluminum (Fume Or Dust), D	ug/L	23	0	0	1.5	46.3	5.4087	2.4	9.3584	9.78	12.67	38.952
Aluminum (Fume Or Dust), T	ug/L	23	0	0	1.8	1580	161.3	26.5	383.4146	247.2	1007.2	1472.2
Ammonia as Nitrogen	mg/L	6	17	74	0.022	0.059	0.0463	0.05	0.0093	0.05	0.05	0.057
Antimony, D	ug/L	23	0	0	38	44.6	42.187	41.7	1.7571	44.3	44.39	44.556
Antimony, T	ug/L	23	0	0	35.5	45.5	41.5261	41.4	2.273	44.32	44.95	45.39
Arsenic (III), T	ug/L	23	0	0	0.297	2.09	0.7946	0.639	0.5057	1.684	1.75	2.0152
Arsenic, D	ug/L	23	0	0	317	383	355.7826	359	16.6268	375.6	381.4	382.78
Arsenic, T	ug/L	23	0	0	312	401	360.7826	361	20.1313	384.8	393.2	399.46
Barium, D	ug/L	23	0	0	14.6	18.7	16.6261	16.6	1.1706	18.24	18.57	18.678
Barium, T	ug/L	23	0	0	15.2	46	19.6174	17.1	7.2438	23.76	34.76	43.778
Beryllium, D	ug/L	0	23	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Beryllium, T	ug/L	7	16	70	0.006	0.202	0.0313	0.02	0.0411	0.0412	0.0919	0.1789
Bicarbonate as CaCO3	mg/L	23	0	0	65	133	118.9565	122	12.6472	126	126.9	131.68
Boron, D	ug/L	23	0	0	4.6	16.3	6.8565	6	2.9631	7.8	14.47	16.058
Boron, T	ug/L	23	0	0	3	13	7	6.5	2.3289	10.58	11.9	12.78
Cadmium, D	ug/L	11	12	52	0.005	0.03	0.016	0.02	0.0069	0.02	0.0236	0.0287
Cadmium, T	ug/L	12	11	48	0.006	0.025	0.017	0.02	0.0058	0.0216	0.0247	0.025
Calcium, D	ug/L	23	0	0	28300	34600	32082.6087	32000	1423.0736	33960	34190	34512
Calcium, T	ug/L	23	0	0	28900	34900	32330.4348	32400	1411.1358	33940	34450	34812
Carbonate as CaCO3	mg/L	1	22	96	15	23	15.3478	15	1.6681	15	15	21.24
Chloride	mg/L	23	0	0	0.36	1.06	0.4839	0.45	0.1545	0.632	0.75	0.994
Chromium, D	ug/L	23	0	0	0.15	0.61	0.2691	0.23	0.1247	0.424	0.557	0.6012
Chromium, T	ug/L	23	0	0	0.15	3.67	0.8026	0.52	0.8574	1.876	2.328	3.384
Cobalt, D	ug/L	22	1	4	0.009	3.72	0.2678	0.058	0.7716	0.2026	0.7773	3.0866
Cobalt, T	ug/L	22	1	4	0.006	0.901	0.1443	0.064	0.2155	0.3444	0.6015	0.8407
Conductivity	uS/cm	23	0	0	153.2	263.16	186.807	163.55	40.6849	256.304	261.124	262.775
Copper, D	ug/L	23	0	0	0.09	0.79	0.3296	0.28	0.1915	0.614	0.629	0.7548
Copper, T	ug/L	23	0	0	0.1	7.59	1.1778	0.52	1.7384	2.274	4.359	6.9278
Cyanide, T	mg/L	2	21	91	0.0017	0.0154	0.0032	0.0027	0.0027	0.0027	0.0027	0.0126
Dissolved Oxygen	mg/L	23	0	0	6.96	9.54	8.1704	8.15	0.6417	8.878	8.964	9.4146
Fluoride	mg/L	21	2	9	0.04	0.2	0.08	0.06	0.0445	0.13	0.193	0.2
Hardness as CaCO3	mg/L	23	0	0	111	133	125.2174	125	5.2997	130.8	131	132.56
Iron, D	ug/L	15	8	35	3.1	148	20.0609	20	29.3215	23.32	35.15	123.448
Iron, T	ug/L	22	1	4	4	4180	442.4565	94.1	953.9786	930	2106	3751
Lead, D	ug/L	15	8	35	0.005	0.145	0.0266	0.02	0.0339	0.0484	0.1043	0.1373
Lead, T	ug/L	20	3	13	0.017	2.54	0.3379	0.076	0.7149	0.7418	2.349	2.5356
Magnesium, D	ug/L	23	0	0	9100	11500	10697.3913	10700	559.482	11280	11300	11456
Magnesium, T	ug/L	23	0	0	9520	11700	10790.4348	10800	546.3888	11400	11490	11656
Manganese, D	ug/L	18	5	22	0.2	25.9	4.3561	1.1	6.753	14.52	16.83	23.942
Manganese, T	ug/L	20	3	13	0.3	125	16.2448	5.1	30.0484	46.16	75.47	114.66
Mercury, D	ng/L	23	0	0	0.08	8.57	0.69	0.22	1.7448	1.05	1.259	6.964

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A14, EFSFSR valley near Midnight Creek												
Mercury, T	ng/L	23	0	0	0.06	57.1	5.0674	1.14	13.1308	5.566	29.759	51.666
Methyl Mercury	ng/L	4	19	83	0.05	0.56	0.1152	0.1	0.0979	0.1	0.1	0.4588
Molybdenum, D	ug/L	23	0	0	2.39	5.53	3.0735	2.87	0.6096	3.492	3.545	5.0944
Molybdenum, T	ug/L	23	0	0	2.63	5.67	3.0622	2.85	0.6221	3.35	3.666	5.2366
Nickel, D	ug/L	23	0	0	0.06	2.08	0.4861	0.41	0.4204	0.806	0.984	1.8424
Nickel, T	ug/L	23	0	0	0.05	2.62	0.7317	0.55	0.6966	1.466	2.483	2.6134
Nitrate+Nitrite as Nitrogen	mg/L	23	0	0	0.233	0.431	0.3422	0.343	0.0532	0.4086	0.418	0.4284
Nitrogen, Total as Nitrogen	mg/L	23	0	0	0.358	1.4	0.8817	0.89	0.2664	1.288	1.366	1.3934
Nitrogen, Total Kjeldahl (TKN)	mg/L	22	1	4	0.2	1.06	0.5565	0.52	0.226	0.916	0.996	1.0468
Oxidation-Reduction potential	volts	22	0	0	-0.204	0.761	0.0888	0.076	0.1843	0.1576	0.2948	0.6646
pH	pH	23	0	0	6.54	8.2	7.6522	7.72	0.4178	7.998	8.171	8.1978
Phosphorus, D	ug/L	23	0	0	11.4	35	19.3	18.8	4.9471	24.52	25.89	33.02
Phosphorus, T	ug/L	23	0	0	11	95.8	26.3913	19.1	19.0292	41.84	60.26	88.408
Potassium, D	ug/L	23	0	0	1540	1870	1738.6957	1750	85.5625	1856	1860	1867.8
Potassium, T	ug/L	23	0	0	1630	2820	1840.4348	1770	256.3641	1888	2332	2723.2
Selenium, D	ug/L	8	15	65	0.2	1	0.7652	1	0.3352	1	1	1
Selenium, T	ug/L	10	13	57	0.2	1	0.7348	1	0.3352	1	1	1
Silver, D	ug/L	5	18	78	0.003	0.023	0.0181	0.02	0.005	0.02	0.02	0.0223
Silver, T	ug/L	15	8	35	0.003	0.482	0.0526	0.02	0.1043	0.123	0.194	0.42
Sodium, D	ug/L	23	0	0	2030	19600	4216.5217	2910	4000.5677	7034	11371	17884
Sodium, T	ug/L	23	0	0	2000	19800	4225.2174	2930	4019.2999	7086	11198	17996
Solids, Total Dissolved	mg/L	23	0	0	118	193	146.087	146	17.4014	165.2	175.9	189.48
Sulfate	mg/L	23	0	0	9.89	20.9	12.1126	11.4	2.2864	13.96	15.74	19.8
Temperature, Water	deg C	23	0	0	4.42	8.09	6.1543	6.02	0.9462	7.774	7.994	8.0724
Thallium, D	ug/L	3	20	87	0.003	0.02	0.0184	0.02	0.0043	0.02	0.02	0.02
Thallium, T	ug/L	6	17	74	0.002	0.044	0.0191	0.02	0.0078	0.02	0.0245	0.0398
Turbidity	NTU	22	0	0	0	165	19.4808	2.105	40.4753	57.51	94.4455	150.5709
Turbidity	NTU	3	0	0	0.07	0.22	0.1267	0.09	0.0814	0.194	0.207	0.2174
Vanadium (Fume Or Dust), D	ug/L	23	0	0	0.178	0.29	0.2152	0.21	0.0282	0.256	0.269	0.2856
Vanadium (Fume Or Dust), T	ug/L	23	0	0	0.19	2.61	0.4672	0.28	0.5724	0.586	1.679	2.4318
Zinc, D	ug/L	23	0	0	0.3	6.94	1.2387	0.87	1.411	2.092	2.879	6.0622
Zinc, T	ug/L	23	0	0	0.1	12.9	2.4387	1	3.3253	4.74	10.465	12.504

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A17, EFSFSR valley near upper Hennessy Creek												
Alkalinity as CaCO3	mg/L	25	0	0	22	45	24.544	23.9	4.3553	24.6	26.52	40.656
Aluminum (Fume Or Dust), D	ug/L	25	0	0	2	91	14.068	10	17.4844	20.12	31.84	77.392
Aluminum (Fume Or Dust), T	ug/L	25	0	0	24.3	3080	271.016	105	601.5143	428.2	486.6	2459.84
Ammonia as Nitrogen	mg/L	8	17	68	0.022	0.05	0.0441	0.05	0.0102	0.05	0.05	0.05
Antimony, D	ug/L	25	0	0	1.04	1.64	1.1956	1.15	0.1364	1.342	1.426	1.592
Antimony, T	ug/L	25	0	0	1.1	3.49	1.5768	1.41	0.5584	2.146	2.674	3.322
Arsenic (III), T	ug/L	25	0	0	0.006	0.185	0.047	0.026	0.0452	0.1168	0.1244	0.1708
Arsenic, D	ug/L	25	0	0	2.9	4.47	3.5508	3.53	0.3057	3.882	3.994	4.3572
Arsenic, T	ug/L	25	0	0	3.4	10.1	5.0492	4.3	1.7807	7.276	9.056	9.956
Barium, D	ug/L	25	0	0	17.1	21.7	18.396	18.2	1.0147	19.64	19.88	21.268
Barium, T	ug/L	25	0	0	18.2	36.4	22.416	20.3	4.6891	28.74	30.66	35.128
Beryllium, D	ug/L	20	5	20	0.006	0.026	0.0117	0.009	0.0056	0.02	0.02	0.0246
Beryllium, T	ug/L	24	1	4	0.008	0.109	0.0288	0.02	0.0254	0.0592	0.0808	0.1035
Bicarbonate as CaCO3	mg/L	25	0	0	22	45	24.544	23.9	4.3553	24.6	26.52	40.656
Boron, D	ug/L	17	8	32	3	21	10.512	6.6	7.4105	21	21	21
Boron, T	ug/L	22	3	12	3	21	7.472	6.1	5.2134	15.56	21	21
Cadmium, D	ug/L	17	8	32	0.005	0.02	0.0138	0.012	0.0053	0.02	0.02	0.02
Cadmium, T	ug/L	16	9	36	0.005	0.032	0.0171	0.02	0.0077	0.0268	0.0296	0.0315
Calcium, D	ug/L	25	0	0	4180	5270	4526	4520	213.9704	4732	4772	5152.4
Calcium, T	ug/L	25	0	0	4320	5630	4620.8	4590	243.2064	4754	4786	5428.4
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	25	0	0	0.15	1.55	0.272	0.2	0.2739	0.342	0.374	1.2692
Chromium, D	ug/L	25	0	0	0.06	0.63	0.2316	0.19	0.1448	0.414	0.562	0.6204
Chromium, T	ug/L	25	0	0	0.17	3.76	1.0168	0.56	0.9381	2.294	2.458	3.4552
Cobalt, D	ug/L	25	0	0	0.005	0.716	0.1628	0.058	0.2056	0.4446	0.6714	0.7146
Cobalt, T	ug/L	25	0	0	0.012	0.539	0.1645	0.091	0.1717	0.4912	0.524	0.5361
Conductivity	uS/cm	25	0	0	26.63	58.79	36.3144	31.96	9.1579	49.086	53.11	57.6668
Copper, D	ug/L	25	0	0	0.05	2.39	0.3984	0.18	0.6028	1.32	1.684	2.2268
Copper, T	ug/L	25	0	0	0.06	2.82	0.6816	0.34	0.7867	1.894	2.502	2.76
Cyanide, T	mg/L	2	23	92	0.002	0.0037	0.0027	0.0027	0.0002	0.0027	0.0027	0.0035
Dissolved Oxygen	mg/L	25	0	0	7.38	10.3	8.3108	8.32	0.6099	8.826	9.002	9.9976
Fluoride	mg/L	22	3	12	0.04	0.2	0.0772	0.06	0.0511	0.18	0.2	0.2
Hardness as CaCO3	mg/L	25	0	0	14.6	19	15.596	15.5	0.8493	16.12	16.44	18.4
Iron, D	ug/L	24	1	4	4	171	21.58	13.3	32.7325	33.94	45.26	141.48
Iron, T	ug/L	25	0	0	28	1660	377.172	228	425.1888	984	1126	1532.8
Lead, D	ug/L	24	1	4	0.005	0.081	0.017	0.012	0.017	0.0324	0.0488	0.0738
Lead, T	ug/L	25	0	0	0.019	0.812	0.1869	0.119	0.1998	0.4088	0.6344	0.7818
Magnesium, D	ug/L	25	0	0	887	1050	926.6	917	34.4057	954.6	963	1029.6
Magnesium, T	ug/L	25	0	0	892	1270	987.24	964	83.0579	1070	1138	1241.2
Manganese, D	ug/L	25	0	0	0.5	28	5.1568	0.9	8.7262	20.88	24.16	27.088
Manganese, T	ug/L	25	0	0	0.9	50.7	9.6336	3.2	13.4255	32.28	35.64	47.124
Mercury, D	ng/L	22	1	4	0.07	4.16	1.2426	0.93	0.9643	2.424	3.332	3.995

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A17, EFSFSR valley near upper Hennessy Creek												
Mercury, T	ng/L	24	0	0	0.36	126	21.9104	9.53	31.5433	53.55	93.415	120.02
Methyl Mercury	ng/L	6	19	76	0.03	0.24	0.0952	0.1	0.0377	0.1	0.1	0.2064
Molybdenum, D	ug/L	25	0	0	0.238	2.79	0.6936	0.475	0.5984	1.43	1.71	2.5356
Molybdenum, T	ug/L	25	0	0	0.224	2.29	0.7305	0.629	0.5569	1.55	1.926	2.2132
Nickel, D	ug/L	25	0	0	0.1	1.31	0.3644	0.25	0.2891	0.754	0.898	1.2164
Nickel, T	ug/L	25	0	0	0.09	1.9	0.6132	0.36	0.5162	1.3	1.46	1.804
Nitrate+Nitrite as Nitrogen	mg/L	25	0	0	0.05	0.163	0.08	0.073	0.0271	0.1042	0.1398	0.1594
Nitrogen, Total as Nitrogen	mg/L	23	2	8	0.26	1.04	0.5272	0.48	0.1718	0.74	0.868	1.004
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.15	0.97	0.4444	0.4	0.1788	0.662	0.794	0.934
Oxidation-Reduction potential	volts	23	0	0	-0.129	0.278	0.1143	0.13	0.0915	0.2002	0.2299	0.2681
pH	pH	25	0	0	6.2	8.06	6.8716	6.71	0.4685	7.506	7.85	8.0264
Phosphorus, D	ug/L	25	0	0	12.9	62.2	22.204	20	9.7995	30.16	32	54.952
Phosphorus, T	ug/L	25	0	0	14.6	80.9	32.988	31	13.4548	44.28	52.28	74.42
Potassium, D	ug/L	25	0	0	400	634	511.44	508	57.903	568.8	587.6	623.92
Potassium, T	ug/L	25	0	0	450	1080	625.92	564	169.5376	905.8	939	1047.6
Selenium, D	ug/L	0	25	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	1	24	96	0.2	1	0.968	1	0.16	1	1	1
Silver, D	ug/L	0	25	1	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	8	17	68	0.006	0.02	0.0163	0.02	0.0059	0.02	0.02	0.02
Sodium, D	ug/L	25	0	0	3690	4330	4016	4020	161.09	4194	4250	4313.2
Sodium, T	ug/L	25	0	0	3730	4570	4065.6	4050	207.6873	4294	4398	4534
Solids, Total Dissolved	mg/L	25	0	0	18	171	51.06	45	27.5668	65.6	70.4	147.12
Sulfate	mg/L	25	0	0	1.53	2.59	1.8476	1.83	0.2493	2.08	2.264	2.5228
Temperature, Water	deg C	25	0	0	5.27	7.43	6.4568	6.45	0.5809	7.278	7.406	7.43
Thallium, D	ug/L	4	21	84	0.0016	0.02	0.0184	0.02	0.0043	0.02	0.02	0.02
Thallium, T	ug/L	12	13	52	0.002	0.02	0.0144	0.02	0.0067	0.02	0.02	0.02
Turbidity	NTU	24	0	0	0.11	32.51	11.4893	6.57	10.8175	29.735	31.372	32.2593
Turbidity	NTU	3	0	0	0.71	0.88	0.7833	0.76	0.0874	0.856	0.868	0.8776
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.24	0.377	0.2815	0.27	0.0343	0.326	0.354	0.3729
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.31	1.74	0.6245	0.45	0.3878	1.176	1.392	1.668
Zinc, D	ug/L	25	0	0	0.4	3.14	1.0492	0.81	0.7208	1.96	2.56	3.0344
Zinc, T	ug/L	25	0	0	0.3	6.2	1.7504	1.21	1.3299	3.198	3.834	5.6624

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
SRK-GM-04S, EFSFSR valley south of USFS tailings repository												
Alkalinity as CaCO3	mg/L	19	0	0	25	50	32.2474	31	5.6082	34.54	45.23	49.046
Aluminum (Fume Or Dust), D	ug/L	19	0	0	2.3	31.4	12.5053	12.4	8.0424	22.3	25.73	30.266
Aluminum (Fume Or Dust), T	ug/L	19	0	0	7.2	4140	1102.2579	975	1137.9638	2416	3366	3985.2
Ammonia as Nitrogen	mg/L	5	14	74	0.026	0.066	0.048	0.05	0.009	0.0512	0.057	0.0642
Antimony, D	ug/L	19	0	0	3.32	8.99	5.1289	4.5	1.7493	7.808	8.891	8.9702
Antimony, T	ug/L	19	0	0	3.58	7.97	5.0368	4.67	1.1751	6.57	7.07	7.79
Arsenic (III), T	ug/L	19	0	0	0.018	0.41	0.1334	0.084	0.1148	0.3002	0.3371	0.3954
Arsenic, D	ug/L	19	0	0	3.78	8.95	5.7311	5.6	1.2434	6.952	7.483	8.6566
Arsenic, T	ug/L	19	0	0	5.87	19.9	11.4484	11.9	3.9724	16.04	17.29	19.378
Barium, D	ug/L	19	0	0	21.4	34.6	29.7368	30.2	3.9805	34.12	34.24	34.528
Barium, T	ug/L	19	0	0	29.4	157	66.1474	58.5	36.0114	100.68	151.6	155.92
Beryllium, D	ug/L	4	15	79	0.006	0.02	0.0172	0.02	0.0056	0.02	0.02	0.02
Beryllium, T	ug/L	16	3	16	0.006	0.419	0.1107	0.082	0.1118	0.2292	0.3497	0.4051
Bicarbonate as CaCO3	mg/L	19	0	0	25	50	32.2474	31	5.6082	34.54	45.23	49.046
Boron, D	ug/L	15	4	21	2.3	21	8.4579	5.5	6.7811	21	21	21
Boron, T	ug/L	18	1	5	3	21	7.0789	5.8	3.8369	9.18	11.37	19.074
Cadmium, D	ug/L	18	1	5	0.007	0.147	0.0277	0.018	0.0307	0.0428	0.0597	0.1295
Cadmium, T	ug/L	19	0	0	0.006	0.092	0.0342	0.028	0.0246	0.0626	0.0893	0.0915
Calcium, D	ug/L	19	0	0	7730	9880	8747.8947	8700	684.5889	9690	9709	9845.8
Calcium, T	ug/L	19	0	0	7960	14300	9415.2632	8950	1672.7701	10760	13130	14066
Carbonate as CaCO3	mg/L	0	19	100	15	15	15	15	0	15	15	15
Chloride	mg/L	19	0	0	0.5	1.04	0.6984	0.69	0.1368	0.82	1.022	1.0364
Chromium, D	ug/L	19	0	0	0.07	0.54	0.2253	0.19	0.1304	0.392	0.45	0.522
Chromium, T	ug/L	19	0	0	0.07	29.1	5.4311	3.73	7.1419	12.84	16.41	26.562
Cobalt, D	ug/L	19	0	0	0.009	0.441	0.1716	0.145	0.1509	0.3482	0.423	0.4374
Cobalt, T	ug/L	19	0	0	0.017	2.3	0.8679	0.846	0.7439	1.852	2.264	2.2928
Conductivity	uS/cm	19	0	0	49.11	82.85	62.8195	59.33	12.2385	79.812	81.995	82.679
Copper, D	ug/L	19	0	0	0.07	8.53	1.0589	0.51	2.0347	1.6	4.777	7.7794
Copper, T	ug/L	19	0	0	0.09	18.5	3.7342	2.36	4.575	8.556	11.66	17.132
Cyanide, T	mg/L	2	17	90	0.0011	0.0043	0.0027	0.0027	0.0005	0.0027	0.0029	0.004
Dissolved Oxygen	mg/L	19	0	0	7.14	10.58	9.1184	9.08	0.987	10.36	10.49	10.562
Fluoride	mg/L	16	3	16	0.04	0.2	0.0837	0.06	0.0594	0.2	0.2	0.2
Hardness as CaCO3	mg/L	19	0	0	26	53.5	32.1474	31	6.8514	37.18	45.58	51.916
Iron, D	ug/L	18	1	5	3.6	44.9	20.1789	20.7	14.1477	44.06	44.36	44.792
Iron, T	ug/L	19	0	0	11	11500	2587.3684	2410	2878.3515	5832	7270	10654
Lead, D	ug/L	19	0	0	0.009	0.245	0.0385	0.024	0.0527	0.0532	0.0911	0.2142
Lead, T	ug/L	19	0	0	0.015	5.88	1.671	1.17	1.6746	3.518	5.367	5.7774
Magnesium, D	ug/L	19	0	0	1480	1750	1626.8421	1650	96.8993	1722	1732	1746.4
Magnesium, T	ug/L	19	0	0	1470	4310	2097.8947	1990	665.5539	2694	3122	4072.4
Manganese, D	ug/L	19	0	0	0.2	12.2	3.6863	2.8	3.6926	10.18	11.75	12.11
Manganese, T	ug/L	19	0	0	0.5	256	76.4821	77.3	71.0568	166.8	185.8	241.96
Mercury, D	ng/L	18	1	5	0.36	2.97	1.0863	0.83	0.735	2.364	2.475	2.871

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
SRK-GM-04S, EFSFSR valley south of USFS tailings repository												
Mercury, T	ng/L	19	0	0	0.66	57.5	19.5947	16.3	17.1657	40.22	51.02	56.204
Methyl Mercury	ng/L	4	15	79	0.03	0.29	0.1042	0.1	0.0485	0.1	0.119	0.2558
Molybdenum, D	ug/L	19	0	0	0.432	3.24	1.0651	0.84	0.6896	1.686	1.863	2.9646
Molybdenum, T	ug/L	19	0	0	0.393	6.07	1.6974	1.11	1.5028	3.518	4.378	5.7316
Nickel, D	ug/L	19	0	0	0.05	6.22	1.2521	0.69	1.4997	2.678	3.565	5.689
Nickel, T	ug/L	19	0	0	0.06	25.2	4.0563	2.43	5.9376	8.62	13.05	22.77
Nitrate+Nitrite as Nitrogen	mg/L	19	0	0	0.167	0.323	0.2298	0.225	0.0437	0.2942	0.305	0.3194
Nitrogen, Total as Nitrogen	mg/L	19	0	0	0.52	1.07	0.73	0.69	0.1645	0.966	1.034	1.0628
Nitrogen, Total Kjeldahl (TKN)	mg/L	19	0	0	0.29	0.84	0.5005	0.47	0.1614	0.742	0.831	0.8382
Oxidation-Reduction potential	volts	18	0	0	-0.18	0.254	0.0893	0.1195	0.1158	0.1792	0.2106	0.2453
pH	pH	19	0	0	6.09	7.77	7.1247	7.13	0.4443	7.634	7.77	7.77
Phosphorus, D	ug/L	16	3	16	4.6	114	23.7105	13.7	26.1224	41.6	51	101.4
Phosphorus, T	ug/L	19	0	0	17	442	96.8211	55.7	101.5509	176.2	271.9	407.98
Potassium, D	ug/L	19	0	0	740	1590	963.7368	914	207.2183	1214	1266	1525.2
Potassium, T	ug/L	19	0	0	690	4760	1767.3684	1700	1014.1709	2872	3572	4522.4
Selenium, D	ug/L	0	19	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	2	17	90	0.35	1.2	0.9763	1	0.1584	1	1.02	1.164
Silver, D	ug/L	0	19	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	13	6	32	0.006	0.035	0.0181	0.019	0.0074	0.0274	0.0296	0.0339
Sodium, D	ug/L	19	0	0	3600	5360	4347.8947	4240	479.277	5052	5342	5356.4
Sodium, T	ug/L	19	0	0	3820	8540	4668.4211	4410	1062.0539	5512	6038	8039.6
Solids, Total Dissolved	mg/L	19	0	0	40	74	59.4316	61	9.2736	71.2	72.2	73.64
Sulfate	mg/L	19	0	0	6.53	13.5	7.9374	7.5	1.607	9.156	10.26	12.852
Temperature, Water	deg C	19	0	0	5.24	8.16	6.7153	6.49	0.8912	8.096	8.16	8.16
Thallium, D	ug/L	4	15	79	0.002	0.02	0.0166	0.02	0.0068	0.02	0.02	0.02
Thallium, T	ug/L	17	2	11	0.004	0.136	0.0338	0.026	0.0313	0.0596	0.091	0.127
Turbidity	NTU	19	0	0	0	2271	245.8984	112	515.0706	498.72	732.9	1963.38
Turbidity	NTU	3	0	0	0.2	0.76	0.4267	0.32	0.2948	0.672	0.716	0.7512
Vanadium (Fume Or Dust), D	ug/L	19	0	0	0.06	0.14	0.1068	0.11	0.0211	0.132	0.14	0.14
Vanadium (Fume Or Dust), T	ug/L	19	0	0	0.11	7.55	1.7679	1.46	1.8266	3.22	4.661	6.9722
Zinc, D	ug/L	19	0	0	0.48	6.7	2.1232	1.45	1.5986	3.628	4.72	6.304
Zinc, T	ug/L	19	0	0	0.3	19.8	6.3716	6.27	5.0892	11.16	15.12	18.864

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
SRK-GM-03S, EFSFSR valley north of USFS tailings repository												
Alkalinity as CaCO3	mg/L	17	0	0	41	47	44.2353	45	1.821	46	46.2	46.84
Aluminum (Fume Or Dust), D	ug/L	17	0	0	1	5.4	3.2471	2.9	1.4799	5.34	5.4	5.4
Aluminum (Fume Or Dust), T	ug/L	17	0	0	6.6	317	48.3118	25	72.711	71.1	124.12	278.424
Ammonia as Nitrogen	mg/L	2	15	88	0.041	0.05	0.0491	0.05	0.0027	0.05	0.05	0.05
Antimony, D	ug/L	17	0	0	1.46	1.74	1.5971	1.6	0.0839	1.694	1.708	1.7336
Antimony, T	ug/L	17	0	0	1.51	3.34	1.84	1.72	0.4214	2.016	2.324	3.1368
Arsenic (III), T	ug/L	17	0	0	0.01	1.16	0.1218	0.028	0.2766	0.2278	0.4464	1.0173
Arsenic, D	ug/L	17	0	0	7.5	9.52	8.1624	7.99	0.6184	9.016	9.304	9.4768
Arsenic, T	ug/L	17	0	0	7.9	21.7	9.7535	8.71	3.229	10.62	12.98	19.956
Barium, D	ug/L	17	0	0	42.5	48.9	45.0059	44.2	1.9405	47.58	47.94	48.708
Barium, T	ug/L	17	0	0	43.7	60.2	47	46.3	3.9536	49.66	52.2	58.6
Beryllium, D	ug/L	2	15	88	0.003	0.02	0.0183	0.02	0.0049	0.02	0.02	0.02
Beryllium, T	ug/L	11	6	35	0.004	0.045	0.0146	0.012	0.0099	0.02	0.025	0.041
Bicarbonate as CaCO3	mg/L	17	0	0	41	47	44.2353	45	1.821	46	46.2	46.84
Boron, D	ug/L	13	4	24	2.6	21	9.3235	7	7.0082	21	21	21
Boron, T	ug/L	14	3	18	4	21	8.7059	6	6.2191	21	21	21
Cadmium, D	ug/L	3	14	82	0.008	0.02	0.0182	0.02	0.0041	0.02	0.02	0.02
Cadmium, T	ug/L	7	10	59	0.007	0.02	0.0168	0.02	0.0048	0.02	0.02	0.02
Calcium, D	ug/L	17	0	0	12400	14300	13211.7647	13000	568.8611	13880	14060	14252
Calcium, T	ug/L	17	0	0	12300	14300	13217.6471	13300	570.3456	13940	14300	14300
Carbonate as CaCO3	mg/L	0	17	100	15	15	15	15	0	15	15	15
Chloride	mg/L	17	0	0	0.22	0.42	0.3106	0.3	0.0668	0.414	0.42	0.42
Chromium, D	ug/L	17	0	0	0.07	0.84	0.1947	0.15	0.1824	0.312	0.48	0.768
Chromium, T	ug/L	17	0	0	0.1	0.81	0.2418	0.21	0.1719	0.374	0.562	0.7604
Cobalt, D	ug/L	15	2	12	0.005	0.087	0.0319	0.021	0.0229	0.0614	0.079	0.0854
Cobalt, T	ug/L	17	0	0	0.009	0.286	0.0492	0.032	0.0638	0.0676	0.1156	0.2519
Conductivity	uS/cm	17	0	0	67.51	111.07	84.5012	72.93	16.5431	106.68	110.174	110.8908
Copper, D	ug/L	17	0	0	0.04	4.27	0.7282	0.18	1.3269	2.588	3.966	4.2092
Copper, T	ug/L	17	0	0	0.06	5.31	0.77	0.16	1.486	2.748	3.75	4.998
Cyanide, T	mg/L	1	16	94	0.0015	0.0027	0.0026	0.0027	0.0003	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	17	0	0	6.64	7.87	7.3482	7.33	0.379	7.778	7.83	7.862
Fluoride	mg/L	14	3	18	0.04	0.2	0.09	0.06	0.0608	0.2	0.2	0.2
Hardness as CaCO3	mg/L	17	0	0	40.3	47.8	43.7765	43.9	1.9247	45.98	47.16	47.672
Iron, D	ug/L	8	9	53	4	21	14.9235	21	7.0586	21	21	21
Iron, T	ug/L	17	0	0	5	899	114.4529	54	207.6277	151.8	304.6	780.12
Lead, D	ug/L	12	5	29	0.002	0.078	0.0185	0.01	0.0216	0.0388	0.0692	0.0762
Lead, T	ug/L	17	0	0	0.006	0.293	0.0591	0.047	0.0685	0.1114	0.1626	0.2669
Magnesium, D	ug/L	17	0	0	2370	2780	2594.7059	2580	114.7343	2752	2772	2778.4
Magnesium, T	ug/L	17	0	0	2320	2930	2617.0588	2600	130.5644	2734	2778	2899.6
Manganese, D	ug/L	16	1	6	0.2	2.4	0.8094	0.6	0.5707	1.418	1.816	2.2832
Manganese, T	ug/L	17	0	0	0.5	56.7	6.6441	2.69	13.3202	10.02	22.86	49.932
Mercury, D	ng/L	17	0	0	0.42	1.65	0.7312	0.65	0.3092	1.038	1.17	1.554

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
SRK-GM-03S, EFSFSR valley north of USFS tailings repository												
Mercury, T	ng/L	17	0	0	0.59	18.8	4.83	3.04	4.6651	9.856	11.76	17.392
Methyl Mercury	ng/L	1	16	94	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1
Molybdenum, D	ug/L	17	0	0	0.392	0.96	0.592	0.6	0.1449	0.7284	0.7968	0.9274
Molybdenum, T	ug/L	17	0	0	0.408	0.99	0.6048	0.649	0.1563	0.7292	0.79	0.95
Nickel, D	ug/L	17	0	0	0.07	0.56	0.2618	0.25	0.1466	0.462	0.496	0.5472
Nickel, T	ug/L	17	0	0	0.08	0.72	0.2906	0.27	0.1771	0.486	0.6	0.696
Nitrate+Nitrite as Nitrogen	mg/L	17	0	0	0.087	0.135	0.1114	0.111	0.0148	0.132	0.1326	0.1345
Nitrogen, Total as Nitrogen	mg/L	16	1	6	0.4	1.11	0.6553	0.62	0.1956	0.918	1.038	1.0956
Nitrogen, Total Kjeldahl (TKN)	mg/L	17	0	0	0.27	1	0.5435	0.51	0.1954	0.804	0.92	0.984
Oxidation-Reduction potential	volts	16	0	0	-0.163	0.264	0.0974	0.1288	0.1119	0.179	0.2047	0.2522
pH	pH	17	0	0	6.28	7.33	6.9471	7.01	0.2747	7.198	7.282	7.3204
Phosphorus, D	ug/L	17	0	0	7.7	47.3	17.0588	15.4	8.7956	21	26.26	43.092
Phosphorus, T	ug/L	16	1	6	10.5	88.8	24.1882	17.1	18.4459	35.28	51.36	81.312
Potassium, D	ug/L	17	0	0	670	891	794.8824	802	64.6083	876.2	880.6	888.92
Potassium, T	ug/L	17	0	0	690	1060	825.2941	822	84.2806	901	932.8	1034.56
Selenium, D	ug/L	0	17	100	1	1	1	1	0	1	1	1
Selenium, T	ug/L	0	17	100	1	1	1	1	0	1	1	1
Silver, D	ug/L	0	17	100	0.02	0.02	0.02	0.02	0	0.02	0.02	0.02
Silver, T	ug/L	4	13	77	0.005	0.02	0.0169	0.02	0.0058	0.02	0.02	0.02
Sodium, D	ug/L	17	0	0	4180	5150	4675.8824	4650	261.3919	4980	5062	5132.4
Sodium, T	ug/L	17	0	0	4190	5540	4711.7647	4630	332.1377	5084	5204	5472.8
Solids, Total Dissolved	mg/L	17	0	0	58	95	80.1824	80	9.112	93.8	95	95
Sulfate	mg/L	17	0	0	8.6	13.6	12.1494	12.6	1.4909	13.54	13.6	13.6
Temperature, Water	deg C	17	0	0	5.17	7.48	6.3629	6.42	0.5507	6.986	7.2	7.424
Thallium, D	ug/L	3	14	82	0.002	0.02	0.0179	0.02	0.0052	0.02	0.02	0.02
Thallium, T	ug/L	9	8	47	0.003	0.02	0.0132	0.013	0.0072	0.02	0.02	0.02
Turbidity	NTU	17	0	0	0	216.7	16.6971	3.33	51.75	14.876	55.572	184.4744
Turbidity	NTU	3	0	0	0.18	0.41	0.2833	0.26	0.1168	0.38	0.395	0.407
Vanadium (Fume Or Dust), D	ug/L	17	0	0	0.13	0.27	0.1624	0.16	0.0342	0.194	0.214	0.2588
Vanadium (Fume Or Dust), T	ug/L	17	0	0	0.15	0.88	0.2512	0.2	0.1688	0.292	0.424	0.7888
Zinc, D	ug/L	17	0	0	0.18	4.8	0.9876	0.8	1.1082	1.72	2.48	4.336
Zinc, T	ug/L	16	1	6	0.2	4.2	1.2471	0.6	1.2355	2.96	3.64	4.088

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A19, EFSFSR valley near lower Hennessy Creek												
Alkalinity as CaCO3	mg/L	25	0	0	16.9	29	22.628	23	2.7124	24.7	24.94	28.04
Aluminum (Fume Or Dust), D	ug/L	25	0	0	1.4	17.5	8.188	7	4.6606	14.98	16.46	17.332
Aluminum (Fume Or Dust), T	ug/L	25	0	0	65	1890	519.596	329	483.5007	1126	1430	1794
Ammonia as Nitrogen	mg/L	7	18	72	0.021	0.05	0.0451	0.05	0.0098	0.05	0.05	0.05
Antimony, D	ug/L	25	0	0	3.88	23.4	9.7576	7.84	4.7001	14.76	19.44	22.68
Antimony, T	ug/L	25	0	0	4.17	23	9.7712	8.63	4.3343	14.62	17.7	21.872
Arsenic (III), T	ug/L	25	0	0	4.24	28.2	12.7984	12.6	6.0045	20.56	26.32	27.96
Arsenic, D	ug/L	25	0	0	3020	7490	4584.8	4310	1040.9536	5784	6028	7151.6
Arsenic, T	ug/L	25	0	0	3150	7520	4628.8	4290	1041.9386	5922	6006	7160
Barium, D	ug/L	25	0	0	32.7	73.3	45.184	41.5	11.4961	66	70.28	72.796
Barium, T	ug/L	25	0	0	36.1	87.7	55.804	51.3	16.0105	81.26	85.3	87.172
Beryllium, D	ug/L	21	4	16	0.005	0.02	0.0119	0.01	0.0047	0.02	0.02	0.02
Beryllium, T	ug/L	25	0	0	0.013	0.176	0.0584	0.044	0.0465	0.1246	0.1502	0.1712
Bicarbonate as CaCO3	mg/L	25	0	0	16.9	29	22.628	23	2.7124	24.7	24.94	28.04
Boron, D	ug/L	25	0	0	3.4	20.3	9.348	8.5	4.4509	15.8	18.92	20.084
Boron, T	ug/L	25	0	0	3.1	21.1	10.192	9.1	4.3071	15.18	19.3	20.908
Cadmium, D	ug/L	18	7	28	0.006	0.032	0.0144	0.012	0.007	0.0218	0.0246	0.0303
Cadmium, T	ug/L	21	4	16	0.008	0.032	0.0149	0.013	0.006	0.0212	0.0228	0.0298
Calcium, D	ug/L	25	0	0	23100	60100	36112	32900	9284.1855	51220	52740	58420
Calcium, T	ug/L	25	0	0	23400	61400	36104	33300	9366.8511	49980	53740	59744
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	25	0	0	0.37	1.8	0.7068	0.64	0.2735	0.918	0.938	1.5936
Chromium, D	ug/L	25	0	0	0.07	1.88	0.2792	0.17	0.362	0.448	0.556	1.568
Chromium, T	ug/L	25	0	0	0.28	7.43	2.0068	1.39	1.8443	4.514	5.626	7.0268
Cobalt, D	ug/L	25	0	0	0.009	0.577	0.1212	0.076	0.1437	0.2508	0.458	0.559
Cobalt, T	ug/L	25	0	0	0.037	1.14	0.3242	0.196	0.2804	0.7408	0.8568	1.0752
Conductivity	uS/cm	25	0	0	122.3	457.52	202.1832	176	74.9563	266.672	315.992	426.3992
Copper, D	ug/L	25	0	0	0.09	18.7	1.0996	0.33	3.6761	0.788	1.104	14.488
Copper, T	ug/L	25	0	0	0.15	1.32	0.6956	0.6	0.3664	1.236	1.256	1.3056
Cyanide, T	mg/L	3	22	88	0.0012	0.0027	0.0026	0.0027	0.0004	0.0027	0.0027	0.0027
Dissolved Oxygen	mg/L	25	0	0	8.81	10.16	9.2316	9.18	0.3246	9.688	9.732	10.0592
Fluoride	mg/L	9	16	64	0.03	5	3.2124	5	2.4326	5	5	5
Hardness as CaCO3	mg/L	25	0	0	81	211	124.188	114	32.2353	171.6	184.8	205.24
Iron, D	ug/L	20	5	20	6	114	25.876	21	24.7311	49.12	77.92	106.344
Iron, T	ug/L	25	0	0	133	4880	1203.2	667	1254.1486	2830	3966	4712
Lead, D	ug/L	23	2	8	0.003	0.526	0.0349	0.013	0.1028	0.031	0.043	0.4106
Lead, T	ug/L	25	0	0	0.047	0.619	0.214	0.175	0.1589	0.3696	0.5664	0.6178
Magnesium, D	ug/L	25	0	0	5320	13400	7955.6	7200	2089.2245	11140	11780	13016
Magnesium, T	ug/L	25	0	0	5500	14100	8275.2	7720	2201.0606	11760	12320	13692
Manganese, D	ug/L	24	1	4	0.2	23.9	2.3036	0.8	4.6637	3.52	5	19.436
Manganese, T	ug/L	25	0	0	2	70.1	17.2488	12	17.428	40.2	53.2	66.548
Mercury, D	ng/L	24	0	0	0.55	6.44	1.8842	1.21	1.6079	3.797	5.837	6.3779
Mercury, T	ng/L	25	0	0	2.56	157	19.2428	9.09	32.1681	27.42	64.42	136.936
Methyl Mercury	ng/L	3	22	88	0.04	0.1	0.0948	0.1	0.0156	0.1	0.1	0.1
Molybdenum, D	ug/L	25	0	0	0.17	1.1	0.3241	0.246	0.2181	0.61	0.71	1.0088
Molybdenum, T	ug/L	25	0	0	0.214	2.08	0.5418	0.399	0.4033	0.812	1.208	1.8928

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A19, EFSFSR valley near lower Hennessy Creek												
Nickel, D	ug/L	25	0	0	0.12	2.13	0.636	0.59	0.4395	1.018	1.242	1.9284
Nickel, T	ug/L	25	0	0	0.19	4.21	1.2072	1.01	0.8928	2.026	3.05	3.97
Nitrate+Nitrite as Nitrogen	mg/L	25	0	0	0.075	0.797	0.3858	0.352	0.1521	0.6326	0.6986	0.7742
Nitrogen, Total as Nitrogen	mg/L	25	0	0	0.53	18.5	1.634	0.83	3.5226	1.384	1.432	14.4056
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.28	18.2	1.2468	0.5	3.536	0.862	1.03	14.0864
Oxidation-Reduction potential	volts	23	0	0	-0.121	0.314	0.1229	0.145	0.1168	0.2212	0.2818	0.3083
pH	pH	25	0	0	5.87	6.75	6.3776	6.41	0.2331	6.596	6.696	6.7428
Phosphorus, D	ug/L	25	0	0	230	410	317.4	309	41.225	367.6	376.8	402.56
Phosphorus, T	ug/L	25	0	0	241	629	359.84	339	85.4799	436	544	613.4
Potassium, D	ug/L	25	0	0	1120	1890	1392.8	1350	204.8479	1666	1706	1846.8
Potassium, T	ug/L	25	0	0	1240	2600	1651.6	1590	317.2365	1956	2280	2542.4
Selenium, D	ug/L	25	0	0	0.8	3.3	1.5092	1.3	0.7175	2.68	3.16	3.276
Selenium, T	ug/L	25	0	0	0.7	3.2	1.4964	1.2	0.6893	2.66	2.9	3.128
Silver, D	ug/L	3	22	88	0.003	0.023	0.0188	0.02	0.0045	0.02	0.02	0.0223
Silver, T	ug/L	25	0	0	0.004	0.115	0.028	0.022	0.0257	0.0592	0.0804	0.1071
Sodium, D	ug/L	25	0	0	3390	4190	3749.6	3730	178.5469	3970	4038	4156.4
Sodium, T	ug/L	25	0	0	3470	4280	3815.2	3800	196.7681	4114	4146	4248.8
Solids, Total Dissolved	mg/L	25	0	0	115	344	203.12	193	57.7028	288.8	301.6	334.4
Sulfate	mg/L	25	0	0	58.4	194	100.156	86.1	34.1349	148.4	158.4	185.84
Temperature, Water	deg C	25	0	0	4.46	7.65	5.5844	5.29	0.879	6.784	7.144	7.5492
Thallium, D	ug/L	3	22	88	0.011	0.02	0.0192	0.02	0.0023	0.02	0.02	0.02
Thallium, T	ug/L	17	8	32	0.005	0.032	0.0144	0.013	0.0068	0.02	0.02	0.0291
Turbidity	NTU	24	0	0	1.06	323	32.4267	9.82	71.5706	45.972	160.114	289.926
Turbidity	NTU	3	0	0	0.37	1.44	0.9	0.89	0.5351	1.33	1.385	1.429
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.58	0.92	0.723	0.7	0.0779	0.81	0.818	0.896
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.77	6.29	1.9868	1.27	1.4085	4.122	4.326	5.8196
Zinc, D	ug/L	25	0	0	0.27	6.77	1.3332	1.14	1.3153	2.26	2.54	5.7692
Zinc, T	ug/L	25	0	0	0.7	7.48	2.6844	2.1	1.8371	5.532	6.26	7.1968

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
uS/cm micro siemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A18, EFSFSR valley near Homestake Road												
Alkalinity as CaCO3	mg/L	25	0	0	16	42	26.32	26	6.3942	34.16	37.12	40.896
Aluminum (Fume Or Dust), D	ug/L	25	0	0	10	128	33.584	25.6	28.0028	69.38	75.62	115.52
Aluminum (Fume Or Dust), T	ug/L	25	0	0	41.9	16800	2977.724	1040	4071.1965	8560	9504	15055.2
Ammonia as Nitrogen	mg/L	6	19	76	0.022	0.05	0.0453	0.05	0.0094	0.05	0.05	0.05
Antimony, D	ug/L	25	0	0	27.2	346	186.096	171	90.5835	325.6	336	344.08
Antimony, T	ug/L	25	0	0	36.8	345	192.572	180	87.9287	324.2	337.4	343.8
Arsenic (III), T	ug/L	25	0	0	0.08	12.5	3.1284	2.01	3.547	7.864	11.244	12.356
Arsenic, D	ug/L	25	0	0	16.1	66.7	32.724	31.1	10.8974	44.18	48.38	62.548
Arsenic, T	ug/L	25	0	0	32.8	774	189.028	130	172.9832	356.8	498.8	715.68
Barium, D	ug/L	25	0	0	13.3	19.8	16.82	16.8	2.0463	19.56	19.76	19.8
Barium, T	ug/L	25	0	0	13.6	246	64.66	38	62.2889	146.2	204.2	238.08
Beryllium, D	ug/L	25	0	0	0.034	0.489	0.1558	0.115	0.1118	0.3188	0.3728	0.4631
Beryllium, T	ug/L	25	0	0	0.113	1.63	0.4793	0.362	0.3602	0.7712	1.1744	1.5436
Bicarbonate as CaCO3	mg/L	25	0	0	16	42	26.32	26	6.3942	34.16	37.12	40.896
Boron, D	ug/L	25	0	0	4.2	17.6	7.976	8	2.9199	10.96	12.96	16.568
Boron, T	ug/L	25	0	0	3.9	19	10.132	10.2	3.8548	15.38	16.86	18.568
Cadmium, D	ug/L	23	2	8	0.006	0.155	0.0227	0.017	0.0293	0.0308	0.0456	0.1296
Cadmium, T	ug/L	23	2	8	0.006	0.042	0.0198	0.02	0.0091	0.0318	0.0362	0.0408
Calcium, D	ug/L	25	0	0	64900	129000	83924	77700	14651.174	101440	111200	125160
Calcium, T	ug/L	25	0	0	65900	128000	84016	81100	13743.4736	100280	106000	122960
Carbonate as CaCO3	mg/L	0	25	100	15	15	15	15	0	15	15	15
Chloride	mg/L	25	0	0	0.54	41	5.4904	2.68	8.2245	12.2	13.8	34.52
Chromium, D	ug/L	23	2	8	0.03	0.9	0.1856	0.14	0.18	0.284	0.484	0.8088
Chromium, T	ug/L	25	0	0	0.06	14.2	2.984	1.51	3.8158	7.494	11.31	13.72
Cobalt, D	ug/L	25	0	0	0.01	0.789	0.2647	0.126	0.272	0.76	0.7684	0.7842
Cobalt, T	ug/L	25	0	0	0.02	5.59	1.3706	0.655	1.6043	3.548	5.116	5.5468
Conductivity	uS/cm	25	0	0	315.6	650.27	442.542	410.7	97.7848	593.1	605.592	640.0916
Copper, D	ug/L	25	0	0	0.1	2.55	0.5776	0.36	0.6379	1.032	2.224	2.5356
Copper, T	ug/L	25	0	0	0.14	7.64	2.1904	1.02	2.2163	4.97	6.598	7.4816
Cyanide, T	mg/L	3	22	88	0.0011	0.0031	0.0026	0.0027	0.0003	0.0027	0.0027	0.003
Dissolved Oxygen	mg/L	25	0	0	3.76	8.87	5.6192	5.12	1.4303	7.89	8.506	8.7836
Fluoride	mg/L	25	0	0	0.08	0.2	0.15	0.16	0.0372	0.2	0.2	0.2
Hardness as CaCO3	mg/L	25	0	0	243	453	305.8	298	46.6011	362	384.4	437.4
Iron, D	ug/L	21	4	16	3.2	85.7	24.628	19.3	21.0299	47.38	75.22	84.476
Iron, T	ug/L	25	0	0	45	24500	4924.52	1720	6774.5047	14060	20220	23828
Lead, D	ug/L	21	4	16	0.002	0.05	0.0146	0.013	0.0105	0.0228	0.0288	0.0452
Lead, T	ug/L	25	0	0	0.032	4.16	0.9676	0.469	1.1055	2.154	3.442	4.0424
Magnesium, D	ug/L	25	0	0	18100	32200	22252	21600	3382.4449	27300	28060	31216
Magnesium, T	ug/L	25	0	0	18600	32500	23344	22100	3514.2662	28300	29300	31780
Manganese, D	ug/L	25	0	0	1.6	147	26.9648	9	36.5045	64.64	96.64	136.68
Manganese, T	ug/L	25	0	0	2	458	116.584	60.8	129.4633	258.4	419.6	457.52
Mercury, D	ng/L	23	0	0	1.21	5.18	2.8283	2.34	1.1238	4.232	4.406	5.0128
Mercury, T	ng/L	24	0	0	3.17	677	161.1338	74.8	203.7971	525.3	599.35	660.21
Methyl Mercury	ng/L	11	14	56	0.03	0.3	0.0844	0.1	0.054	0.1	0.1	0.252
Molybdenum, D	ug/L	22	3	12	0.01	0.23	0.0863	0.074	0.0552	0.1692	0.196	0.2228
Molybdenum, T	ug/L	23	2	8	0.02	0.37	0.1378	0.14	0.088	0.274	0.298	0.3532

EFSFSR Valley Wells												
Constituent	Unit	Detects	Non-detects	% Non-detects	Min	Max	Mean	Median	Standard Deviation	90-Percentile	95-Percentile	99-Percentile
MWH-A18, EFSFSR valley near Homestake Road												
Nickel, D	ug/L	25	0	0	1.02	4.86	1.7744	1.49	0.8793	2.568	3.472	4.5672
Nickel, T	ug/L	25	0	0	1.05	9.4	3.2412	2.44	2.2392	5.542	8.002	9.208
Nitrate+Nitrite as Nitrogen	mg/L	25	0	0	0.067	0.634	0.3239	0.339	0.1262	0.4426	0.5218	0.6114
Nitrogen, Total as Nitrogen	mg/L	25	0	0	0.45	1.67	0.866	0.89	0.2468	1.088	1.132	1.5428
Nitrogen, Total Kjeldahl (TKN)	mg/L	25	0	0	0.28	1.04	0.5416	0.53	0.1631	0.722	0.822	0.992
Oxidation-Reduction potential	volts	23	0	0	-0.132	0.312	0.1221	0.145	0.1258	0.227	0.2731	0.3045
pH	pH	25	0	0	5.76	7.22	6.2264	6.19	0.281	6.386	6.646	7.0976
Phosphorus, D	ug/L	18	7	28	3.8	40	19.52	11	14.0152	40	40	40
Phosphorus, T	ug/L	25	0	0	14	563	125.372	80.9	133.3615	228	384.8	529.4
Potassium, D	ug/L	25	0	0	1610	2310	2014.8	2010	164.0152	2220	2288	2307.6
Potassium, T	ug/L	25	0	0	1680	9620	3248.8	2410	1846.5177	4916	7028	9108.8
Selenium, D	ug/L	10	15	60	0.2	1	0.7476	1	0.3246	1	1	1
Selenium, T	ug/L	12	13	52	0.2	1	0.7352	1	0.3049	1	1	1
Silver, D	ug/L	2	23	92	0.004	0.02	0.0188	0.02	0.0042	0.02	0.02	0.02
Silver, T	ug/L	23	2	8	0.011	0.304	0.096	0.059	0.0878	0.2172	0.2772	0.3002
Sodium, D	ug/L	25	0	0	3080	8480	4616.4	4330	1020.3222	5200	6204	7992.8
Sodium, T	ug/L	25	0	0	3080	9350	4818.4	4460	1296.4846	5738	7566	9011.6
Solids, Total Dissolved	mg/L	25	0	0	197	639	449.88	450	85.0609	561.2	580	624.84
Sulfate	mg/L	25	0	0	204	392	266.92	259	44.3207	320.2	334.6	378.8
Temperature, Water	deg C	25	0	0	2.97	10.25	6.802	6.95	1.9389	9.216	9.856	10.19
Thallium, D	ug/L	16	9	36	0.002	0.02	0.0114	0.009	0.0077	0.02	0.02	0.02
Thallium, T	ug/L	23	2	8	0.002	0.338	0.0671	0.031	0.0813	0.1696	0.218	0.3109
Turbidity	NTU	24	0	0	1.86	560.7	111.0792	35.49	160.7379	306.31	511.43	557.02
Turbidity	NTU	3	0	0	1.46	2.11	1.8367	1.94	0.3371	2.076	2.093	2.1066
Vanadium (Fume Or Dust), D	ug/L	25	0	0	0.06	0.18	0.1214	0.12	0.0305	0.156	0.16	0.1752
Vanadium (Fume Or Dust), T	ug/L	25	0	0	0.12	22.3	4.7984	1.73	6.3922	13.02	19.82	22.06
Zinc, D	ug/L	25	0	0	1.84	22.6	5.3848	3.6	5.0677	10.872	16.6	21.328
Zinc, T	ug/L	25	0	0	2.92	35.2	13.4132	11	9.7827	28.72	30.88	34.192

Notes:

% Percent
D Dissolved
T Total
$CaCO_3$ calcium carbonate
deg C degree Celsius
EFSFSR East Fork South Fork Salmon River
ug/L micrograms per Liter
mg/L milligrams per Liter
uS/cm micro siemens per centimeter
ng/L nanogram/Liter
NTU Nephelometric Turbidity Unit
pH Potential of Hydrogen