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Red Dog Mine  
4<sup>th</sup> Quarter and Annual Report 2013 for State of Alaska  
Waste Management Permit No. 0132-BA002  
Reclamation Plan Approval F20099958  
February 28, 2014

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## **Introduction**

This report has been prepared to fulfill the quarterly reporting requirements of Red Dog Mine's obligations under the State of Alaska Waste Management Permit No. 0132-BA002 and the Red Dog Mine Reclamation Plan Approval F20099958.

This report covers the time period from January 1, 2013 through December 31, 2013, including quarterly data from October 1, 2013 through December 31, 2013

The report addresses mine water management, waste rock management, tailings management, inert solid waste landfills, mining and milling activities, reclamation activities and wildlife interactions which occur throughout the reporting period.

When appropriate updated plans will be provided with the report and recommendations will be made to modify reporting requirements or the underlying permit conditions.

## **Biomonitoring Program**

### ***Annual Biomonitoring Report***

Al Ott and Bill Morris of the Alaska Department of Fish and Game prepared a draft biomonitoring report that has been reviewed and commented on by Red Dog. The report has not been finalized as of the date of this report. Once the final biomonitoring report for 2013 has been finalized, Red Dog will provide the final report to the Large Mine Permitting Team.

### ***Annual Summary of Biomonitoring Water Quality Sampling***

Results of monthly samples of Biomonitoring water quality for the period can be found in attached electronic file, *Red Dog Biomonitoring Water Quality Analyses 2013.xlsx*, and in [APPENDIX A, Biomonitoring Water Quality Sample Results for 2013](#)

Biomonitoring water quality is analyzed using Water Quality Profile I from Table 2-7 of the Red Dog Mine Waste Management, Reclamation and Closure Monitoring Plan. The electronic file has a pivot chart with filters to allow the charting of any Profile I analyte for any biomonitoring station.

No unusual trends in the biomonitoring water chemistry were noted during the year other than the seasonal increase in metals due to decreasing water flows and increases or decreases related to freshet.

### ***Annual Data Report***

The annual data report for the Long-Term Permafrost and Groundwater Monitoring Program is currently being prepared. Once the report has been completed a copy of the report will be submitted to DEC and DNR.

## Mine Water Management

### Mine water flows

Table 1. Water Management Flows, shows the cumulative flows for each month in the reporting period and total flows for the 2013 calendar year.

**Table 1. Water Management Flows**

Location	Flow in gallons			
	Oct-13	Nov-13	Dec-13	Total 2013
<b>Bon's Creek Total Flow</b>	10,060,000	11,060,000	10,930,000	156,713,000
<b>Mine Water Collection Sump Total Flow</b>	14,840,000	6,818,000	3,655,000	312,711,300
<b>Main Dam Seepage Pumpback</b>	35,680,000	36,170,000	37,390,000	527,930,000
<b>Reclaim Flow to Mill</b>	135,600,000 <sup>1</sup>	265,700,000 <sup>1</sup>	263,500,000 <sup>1</sup>	2,327,580,000 <sup>1</sup>
<b>WTP #1 Influent from Reclaim</b>	3,180,000	0	0	330,131,000
<b>WTP #1 Influent from Mine Water Collection</b>	0	0	0	0
<b>WTP #1 Influent from MWD</b>	13,157,000	1,071,000	1,442,000	26,498,000
<b>WTP #1 Clarifier Underflow Sludge To Tails</b>	420,000	265,000	285,000	7,605,000
<b>WTP #1 Effluent to Sand filter/Discharge</b>	0	0	0	0
<b>WTP #2 Influent from Reclaim</b>	0	0	0	1,867,580,000
<b>WTP #2 Sludge Discharge To Tails</b>	0	0	0	99,356,000
<b>Sand Filter Effluent Discharged to Red Dog Ck</b>	0	0	0	1,294,689,000
<b>WTP #3 Influent from MWD</b>	5,053,000	0	0	46,484,000
<b>WTP #3 Influent from Mine Water Collection</b>	0	0	0	0
<b>WTP #3 Total Effluent</b>	5,053,000	0	0	46,484,000
<b>MWD to Pit</b>	0	5,988,000	4,772,000	22,254,000
<b>Treated Water to Pit</b>	0	0	0	132,091,000
<b>East Overburden Sump</b>	852,000	536,000	732,000	12,975,000
<b>West Overburden Sump</b>	2,908,000	2,261,000	1,678,000	16,522,000
<b>Natural Gas Water</b>	0	0	0	0

Notes to Table 1: 1. The flow meter for the reclaim water to the mill is currently bypassed because of operational requirements. As a result, the reported flows are significantly more than reported. The monthly flow of Reclaim Water to the Mill is usually 290,000,000 to 300,000,000 gallons per month. A plan is being developed to replace or move the flow meter.

There were no unusual, non-seasonal changes in flows in the quarter.

### Mine water quality

Results of monthly samples of mine water quality for the period can be found in attached electronic file, Red Dog Mine Water Quality Analyses 2013.xlsx, and in [APPENDIX B, Mine Water Quality Sample Results for 4<sup>th</sup> Quarter 2013](#). Mine water quality is analyzed using Water Quality Profile II from Table 2-7 of the Red Dog Mine Waste Management, Reclamation and Closure Monitoring Plan.

Seasonal changes in concentrations in mine water quality occur because of flushing of metals from waste stockpiles in the spring, rain events, drought periods and low flows in winter. Spring time flushing generally causes an increase in the very soluble metals. Rain events can have effects similar to spring time flushing depending on the magnitude of the event. Drought periods often cause the concentrations of metals in the



streams to increase because of a reduction in dilution. Trending charts of any Profile II analyte and location can be plotted from the pivot chart tab of the electronic file.

### ***Mine Water and Load Balance***

A mine water balance is maintained at the Mine in GoldSim, a computer simulation program. An electronic copy of the 2013 GoldSim water balance is presented in an electronic file. Viewing the file requires GoldSim Player. The GoldSim Player is free and can be downloaded from <http://www.goldsim.com/Web/Downloads/>. A summary of annual flows and their loads for several chemical parameters are presented in an electronic file, Red Dog Mine 2013 Water and Mass Balance Estimates.xlsx.

The largest source of total dissolved solids (TDS) in the tailings impoundment water continues to be the Main Waste Stockpile. Red Dog has two major efforts underway to reduce the TDS entering the pond from the Main Waste Stockpile, our cover system plans for the Main Waste Stockpile and an investigation into improved methods of intercepting flows from the Main Waste Stockpile for treatment prior to the flow entering the tailings impoundment. See the attached 2013 TDS Management Plan Progress Report & Updated Management Plan for NPDES Permit AK-003865-2 in [Appendix C Red Dog 2013 TDS Management Plan](#).

### ***Visual inspections of mine water systems***

No unusual conditions were identified during visual inspections of mine water system during the quarter

### ***Reagents Consumed in Water Treatment in 2012***

Red Dog Mine Reclamation Plan Approval F20099958 requires the following be provided in the annual report.

- Total volume of water treated in WTP#2; - 1.9 billion gal
- Total quantity of flocculent used in WTP#2; - can't be separated from WTP1
- Total quantity of lime used in WTP#2; - can't be tracked separately from the other WTPs.
- Total quantity of sodium sulfide used in WTP#2; - can't be separated from WTP1
- Quantity of any other chemicals used in significant quantities in WTP#2; - none.
- Total quantity of flocculent used in WTP#3; - none.
- Total quantity of lime used in WTP#3; and, - can't be tracked separately from the other WTPs.
- Quantity of any other chemicals used in significant quantities in WTP#3. – none

Total lime used throughout season for WTP1, WTP2, and WTP3 = 13,004 metric tonnes. Total flocculent used throughout the season was 75.6 metric tonnes for WTP1 and WTP2, most of which is for WTP2. Total sodium sulfide used for the season was 690 metric tonnes, most of which was used for WTP2.

### ***Fish weir inspections***

The Fish Weir was not inspected during the quarter.

## **Waste Rock Management**

### ***Quantities, placement locations and analysis of waste rock***

As per Red Dog Mine Waste Management, Reclamation and Closure Monitoring Plan, Section 2.4 Waste Rock Management, the management of waste rock including quantities, locations and analysis of waste rock are reported in [Appendix D Waste Rock Production Summary Fourth Quarter 2013](#).

### ***Results of waste rock geochemical monitoring***

Other than blast hole analyses, no additional geochemical monitoring was conducted on waste rock materials during the reporting period.

### ***Visual inspections of waste rock facilities***

Weekly waste stockpile inspections for Quarter 4, 2013 began on October 1, 2013 and ended on December 31, 2013. Dig face inspections were carried out on waste shots to confirm waste characteristics and suitability for designated stockpile locations. Phase III (PH3) is a Construction Waste Stockpile. The primary

waste storage sites have been the Main Pit Stockpile, (MPD2, MPD3, MPD4) the Main Waste Dump, (MWD, LAN) the North Oxide Dump (OXN) and the Coffe Dam (CFD, BDM). For Quarter 4 of 2013, a total of 2,279,935 tonnes of waste were hauled from the Aqqaluk pit.

#### *Main Waste Stockpile*

1,335 tonnes of "Other Waste" were taken to the Main Waste Stockpile (MWD). Material taken to the Main Waste Stockpile was from the Ikalukrok and mixed formations.

#### *Main Pit Stockpile*

292,543, tonnes of "Most Reactive Waste" and 1,788,907, tonnes of "Other Waste" have been taken to the Main Pit Stockpile (MPD2, MPD3 and MPD4). Material taken to the Main Pit Stockpile was from the Ikalukrok, Siksikpuk and mixed formations.

#### *Landfill Stockpile*

3,916 tonnes of "Other Waste" was used to cover the landfill (LAN). The material was from the Ikalukrok formation.

#### *Oxide North*

110,182 tonnes of "Other Waste" was hauled to the Oxide North Dump (OXN). This material was from Ikalukrok, Siksikpuk and mixed formations.

#### *Coffe Dam*

36,591 tonnes of "Other Waste" was hauled to the Coffe Dam (CFD). This material was from the Ikalukrok and mixed formations.

#### *Back Dam*

63,813 tonnes of "Other Waste" was hauled to the Back Dam (BDM). The material was from the Ikalukrok and Siksikpuk formations.

#### *Incinerator*

3,738 tonnes of "Other Waste" was hauled to the incinerator (INC) and used to build a ramp, this material was from the Ikalukrok formation.

#### *Portable Crusher*

37,294 tonnes of "Other Waste" was hauled to the portable crusher (PCP). This material was from the Ikalukrok and mixed formations.

#### *Phase III*

6,052 tonnes of "Construction Waste" was hauled to the Phase III (PH3) stockpile; it was from the Ikalukrok formation.

#### *Powerhouse*

445 tonnes of "Other Waste" was hauled to the power house (PWR) for construction. It was from the Ikalukrok formation.

#### *New Shifter's Pad*

5,429 tonnes of "Other Waste" was hauled to the new shifters pad area (SHP). It was from the Ikalukrok and Siksikpuk formations.

### ***Significant activities in waste rock management***

No significant activities occurred in waste management during the quarter

## Tailings Management

### ***Quantities and analysis of tailings***

Table 2 shows the tonnes of tailings produced and the lead, zinc and iron content of the produced tailings during the reporting period.

**Table 2. Tailings Produced During the Reporting Period**

		Analysis		
Month	Dry Tonnes Tailings	%Pb	%Zn	%Fe
Oct-2013	237,816	0.7	2.5	3.3
Nov-2013	225,564	1.1	3.1	3.1
Dec-2013	224,114	1	3.2	3.8
Jan-Dec 2013	2,693,637	0.9	2.9	3.3

### ***Tailings pond elevation***

Table 3 shows the surveyed Tailings Pond water levels for the reporting period. During the period the crest of the tailings dam was 970 feet above Mean Sea Level (MSL) and the allowable freeboard of the tailings dam was 5 feet below the crest of the tailings dam. The pond level is not supposed to be higher than 5 feet below the crest of the tailings dam which for this reporting period is 965 feet MSL.

**Table 3. Tailings Pond Water Elevation**

Survey Date	Pond Level Feet above MSL
03-Oct	962.11
10-Oct	962.25
17-Oct	962.45
25-Oct	962.69
31-Oct	963.07
07-Nov	963.20
15-Nov	963.56
22-Nov	963.64
28-Nov	963.65
05-Dec	963.84
12-Dec	964.07
19-Dec	964.16
26-Dec	964.29

### ***Visual inspections of tailings facilities***

No unusual conditions or findings were observed during the reporting period.

### ***Significant activities in tailings management***

There were no significant activities in tailings management during the reporting period.

### **Inert Solid Waste Landfills**

Red Dog operates two inert solid waste disposal areas at the mine site. One facility is located on the Main Waste Stockpile and is the primary inert solid waste disposal area. The second site is located just south of the incinerators along the shore of the tailings pond. Only incinerator waste is deposited at this location.

#### ***Quantities of inert solid waste***

Approximately 22,000 cubic yards of material as determined by survey volume was placed in the Main Waste Stockpile inert solid waste landfill at the mine.

#### ***Visual inspections of the inert solid waste landfills***

There were no significant activities or changes to inert solid waste landfills during the reporting period. No conditions were observed at the landfills during the monthly inspections that were unusual or required corrective action. Some Red Fox activity was noticed in the vicinity of the mine landfill. Foxes were hazed or trapped and relocated as necessary.

#### ***Significant activities in inert solid waste landfills***

There were no significant changes to inert solid waste landfill operations or locations during the report period.

### **Mining and Milling Activities**

#### ***Mining Activities***

Table 4 shows the tonnes of ore hauled to mill feed stockpiles each month during the reporting period.

**Table 4: Ore Mined During the Reporting Period**

<b>Date</b>	<b>Ore Mined, tonnes</b>
Oct-2013	317,973
Nov-2013	261,144
Dec-2013	319,545
Jan-Dec 2013	3,716,502

#### ***Milling Activities***

Table 5 shows the tonnes of ore fed to mill grinding each month during the reporting period.

**Table 5: Ore Milled During the Reporting Period**

<b>Date</b>	<b>Ore Milled, tonnes</b>
Oct-2013	341,078
Nov-2013	313,941
Dec-2013	329,638
Jan-Dec 2013	3,852,807

#### ***Significant activities in Mining and Milling***

There were no significant activities in mining and milling during the quarter.

### **Reclamation Activities**

#### ***Significant activities in Mining and Milling***

There were no significant activities in mining and milling during the quarter. The updated 2013 Mine Plan is included in [Appendix E Red Dog One Year Mine Plan 2013](#).

## Reclamation Activities

### ***Area Disturbed and Reclaimed***

In the calendar year 2013 an additional 6.4 acres were disturbed within the mine air permit boundary. The areas are listed in Table 2. Area Disturbed in 2013. A Map showing the disturbed areas is included in [Appendix F 2013 Red Dog Mine Disturbance Map](#).

**Table 2. Area Disturbed in 2013**

<b>Disturbed Area</b>	<b>Acres</b>
Aqqaluk	6.4
Tailings Abutment	0.5
Total 2013 Disturbance	6.9

### ***Reclamation Research***

O'Kane Consultants Inc. and Teck continued monitoring the Oxide Stockpile Cover System. Upon completion of the 2013 report, Teck will submit the report to DEC and DNR. All indications are that the cover system is performing as designed.

## Wildlife

### ***Wildlife interactions***

There were a total of six wildlife interactions during the quarter. Five interactions involved Red Foxes that were trapped and released outside of the mine boundary or hazed. The sixth incident was porcupine that wandered into the mine area and was relocated away from the mine.

## Financial Assurance

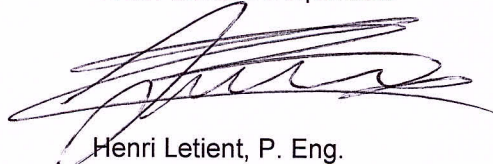
Teck does not feel that the changes from the 2007 mine plan to the current mine plan require substantive changes to the financial assurance for this year. Teck will be updating and revising expected mine closure costs as part of the renewal process for the Reclamation Plan Authorization.

## Closing

Please accept this as the 4<sup>th</sup> Quarter 2013 and 2013 Annual Report for State of Alaska Waste Management Permit No. 0132-BA002 and Reclamation Plan Approval F20099958. If there are any questions, please contact Chris Menefee at (907) 754-5138 or myself at (907) 754-5127.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate and complete.

Sincerely,  
Teck Alaska Incorporated



Henri Letient, P. Eng.  
General Manager

Cc Tim Pilon, ADEC, Fairbanks  
Pete McGee, ADEC, Fairbanks  
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Stephanie Lovell, ADNR/DMLW, Fairbanks  
Jack DiMarchi, ADNR, Anchorage  
Al Ott, ADF&G, Fairbanks

## Appendix A, Biomonitoring Water Quality Sample Results for 2013

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons 220	Alkalinity (As CaCO3)	5/27/2013	43000	µg/L	01_051213_01	
Bons 220	Aluminum	5/27/2013	20	µg/L	01_051213_01	
Bons 220	Bicarbonate (As CaCO3)	5/27/2013	43000	µg/L	01_051213_01	
Bons 220	Cadmium	5/27/2013	0.2	µg/L	01_051213_01	Analyte detected between MDL and ML
Bons 220	Calcium	5/27/2013	12200	µg/L	01_051213_01	
Bons 220	Carbonate (AS CaCO3)	5/27/2013	< 2000	µg/L	01_051213_01	Undetected
Bons 220	Chloride	5/27/2013	1960	µg/L	01_051213_01	Analyte detected between MDL and ML
Bons 220	Conductivity, Field	5/27/2013	56.1	uS/cm	01_051213_01	
Bons 220	Iron	5/27/2013	30	µg/L	01_051213_01	Analyte detected between MDL and ML
Bons 220	Lead	5/27/2013	5.2	µg/L	01_051213_01	
Bons 220	Magnesium	5/27/2013	6000	µg/L	01_051213_01	
Bons 220	pH, Field	5/27/2013	7.35	pH Units	01_051213_01	
Bons 220	Potassium	5/27/2013	800	µg/L	01_051213_01	Analyte detected between MDL and ML
Bons 220	Selenium	5/27/2013	< 1	µg/L	01_051213_01	Undetected
Bons 220	Sodium	5/27/2013	800	µg/L	01_051213_01	Analyte detected between MDL and ML
Bons 220	Sulfate	5/27/2013	8630	µg/L	01_051213_01	
Bons 220	Temperature, Field	5/27/2013	0	°C	01_051213_01	
Bons 220	Total Dissolved Solids	5/27/2013	60000	µg/L	01_051213_01	
Bons 220	Total Suspended Solids	5/27/2013	< 5000	µg/L	01_051213_01	Undetected
Bons 220	Zinc	5/27/2013	27	µg/L	01_051213_01	
Bons 220	Alkalinity (As CaCO3)	5/31/2013	11000	µg/L	01_052613_01	Analyte detected between MDL and ML
Bons 220	Aluminum	5/31/2013	167	µg/L	01_052613_01	
Bons 220	Bicarbonate (As CaCO3)	5/31/2013	11000	µg/L	01_052613_01	Analyte detected between MDL and ML
Bons 220	Cadmium	5/31/2013	0.7	µg/L	01_052613_01	
Bons 220	Calcium	5/31/2013	5800	µg/L	01_052613_01	
Bons 220	Carbonate (AS CaCO3)	5/31/2013	< 2000	µg/L	01_052613_01	Undetected



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons 220	Chloride	5/31/2013	1950	µg/L	01_052613_01	Analyte detected between MDL and ML
Bons 220	Conductivity, Field	5/31/2013	23.0	µS/cm	01_052613_01	
Bons 220	Iron	5/31/2013	270	µg/L	01_052613_01	
Bons 220	Lead	5/31/2013	22.7	µg/L	01_052613_01	
Bons 220	Magnesium	5/31/2013	2500	µg/L	01_052613_01	
Bons 220	pH, Field	5/31/2013	7.45	pH Units	01_052613_01	
Bons 220	Potassium	5/31/2013	800	µg/L	01_052613_01	Analyte detected between MDL and ML
Bons 220	Selenium	5/31/2013	< 1	µg/L	01_052613_01	Undetected
Bons 220	Sodium	5/31/2013	600	µg/L	01_052613_01	Analyte detected between MDL and ML
Bons 220	Sulfate	5/31/2013	6910	µg/L	01_052613_01	
Bons 220	Temperature, Field	5/31/2013	0	°C	01_052613_01	
Bons 220	Total Dissolved Solids	5/31/2013	30000	µg/L	01_052613_01	
Bons 220	Total Suspended Solids	5/31/2013	< 5000	µg/L	01_052613_01	Undetected
Bons 220	Zinc	5/31/2013	82	µg/L	01_052613_01	
Bons 220	Alkalinity (As CaCO3)	6/7/2013	23000	µg/L	01_060913_01	
Bons 220	Aluminum	6/7/2013	135	µg/L	01_060913_01	
Bons 220	Bicarbonate (As CaCO3)	6/7/2013	23000	µg/L	01_060913_01	
Bons 220	Cadmium	6/7/2013	0.3	µg/L	01_060913_01	Analyte detected between MDL and ML
Bons 220	Calcium	6/7/2013	7500	µg/L	01_060913_01	
Bons 220	Carbonate (AS CaCO3)	6/7/2013	< 2000	µg/L	01_060913_01	Undetected
Bons 220	Chloride	6/7/2013	1300	µg/L	01_060913_01	Analyte detected between MDL and ML
Bons 220	Conductivity, Field	6/7/2013	39.1	µS/cm	01_060913_01	
Bons 220	Iron	6/7/2013	300	µg/L	01_060913_01	
Bons 220	Lead	6/7/2013	6.2	µg/L	01_060913_01	
Bons 220	Magnesium	6/7/2013	3500	µg/L	01_060913_01	
Bons 220	pH, Field	6/7/2013	7.46	pH Units	01_060913_01	
Bons 220	Potassium	6/7/2013	700	µg/L	01_060913_01	Analyte detected between MDL and ML
Bons 220	Selenium	6/7/2013	< 1	µg/L	01_060913_01	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons 220	Sodium	6/7/2013	600	µg/L	01_060913_01	Analyte detected between MDL and ML
Bons 220	Sulfate	6/7/2013	8660	µg/L	01_060913_01	
Bons 220	Temperature, Field	6/7/2013	1.1	°C	01_060913_01	
Bons 220	Total Dissolved Solids	6/7/2013	40000	µg/L	01_060913_01	
Bons 220	Total Suspended Solids	6/7/2013	< 5000	µg/L	01_060913_01	Undetected
Bons 220	Zinc	6/7/2013	58	µg/L	01_060913_01	
Bons 220	Alkalinity (As CaCO3)	6/20/2013	50000	µg/L	01_062313_01	
Bons 220	Aluminum	6/20/2013	505	µg/L	01_062313_01	
Bons 220	Bicarbonate (As CaCO3)	6/20/2013	50000	µg/L	01_062313_01	
Bons 220	Cadmium	6/20/2013	< 0.1	µg/L	01_062313_01	Undetected
Bons 220	Calcium	6/20/2013	12700	µg/L	01_062313_01	
Bons 220	Carbonate (AS CaCO3)	6/20/2013	< 2000	µg/L	01_062313_01	Undetected
Bons 220	Chloride	6/20/2013	5830	µg/L	01_062313_01	
Bons 220	Conductivity, Field	6/20/2013	79.4	uS/cm	01_062313_01	
Bons 220	Iron	6/20/2013	1030	µg/L	01_062313_01	
Bons 220	Lead	6/20/2013	4.2	µg/L	01_062313_01	
Bons 220	Magnesium	6/20/2013	6200	µg/L	01_062313_01	
Bons 220	pH, Field	6/20/2013	7.39	pH Units	01_062313_01	
Bons 220	Potassium	6/20/2013	800	µg/L	01_062313_01	Analyte detected between MDL and ML
Bons 220	Selenium	6/20/2013	< 1	µg/L	01_062313_01	Undetected
Bons 220	Sodium	6/20/2013	1100	µg/L	01_062313_01	Analyte detected between MDL and ML
Bons 220	Sulfate	6/20/2013	19300	µg/L	01_062313_01	
Bons 220	Temperature, Field	6/20/2013	6.3	°C	01_062313_01	
Bons 220	Total Dissolved Solids	6/20/2013	80000	µg/L	01_062313_01	
Bons 220	Total Suspended Solids	6/20/2013	< 5000	µg/L	01_062313_01	Undetected
Bons 220	Zinc	6/20/2013	20	µg/L	01_062313_01	
Bons 220	Alkalinity (As CaCO3)	7/5/2013	58000	µg/L	01_071413_01	
Bons 220	Aluminum	7/5/2013	254	µg/L	01_071413_01	
Bons 220	Bicarbonate (As CaCO3)	7/5/2013	58000	µg/L	01_071413_01	
Bons 220	Cadmium	7/5/2013	< 0.1	µg/L	01_071413_01	Undetected
Bons 220	Calcium	7/5/2013	20500	µg/L	01_071413_01	
Bons 220	Carbonate (AS CaCO3)	7/5/2013	< 2000	µg/L	01_071413_01	Undetected
Bons 220	Chloride	7/5/2013	3890	µg/L	01_071413_01	
Bons 220	Conductivity, Field	7/5/2013	127.5	uS/cm	01_071413_01	
Bons 220	Iron	7/5/2013	470	µg/L	01_071413_01	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons 220	Lead	7/5/2013	2.2	µg/L	01_071413_01	
Bons 220	Magnesium	7/5/2013	9700	µg/L	01_071413_01	
Bons 220	pH, Field	7/5/2013	7.68	pH Units	01_071413_01	
Bons 220	Potassium	7/5/2013	500	µg/L	01_071413_01	Analyte detected between MDL and ML
Bons 220	Selenium	7/5/2013	< 1	µg/L	01_071413_01	Undetected
Bons 220	Sodium	7/5/2013	1900	µg/L	01_071413_01	Analyte detected between MDL and ML
Bons 220	Sulfate	7/5/2013	32000	µg/L	01_071413_01	
Bons 220	Temperature, Field	7/5/2013	7.9	°C	01_071413_01	
Bons 220	Total Dissolved Solids	7/5/2013	130000	µg/L	01_071413_01	
Bons 220	Total Suspended Solids	7/5/2013	< 5000	µg/L	01_071413_01	Undetected
Bons 220	Zinc	7/5/2013	22	µg/L	01_071413_01	
Bons 220	Alkalinity (As CaCO3)	7/29/2013	86000	µg/L	01_072813_01	
Bons 220	Aluminum	7/29/2013	58	µg/L	01_072813_01	
Bons 220	Bicarbonate (As CaCO3)	7/29/2013	86000	µg/L	01_072813_01	
Bons 220	Cadmium	7/29/2013	< 0.1	µg/L	01_072813_01	Undetected
Bons 220	Calcium	7/29/2013	31400	µg/L	01_072813_01	
Bons 220	Carbonate (AS CaCO3)	7/29/2013	< 2000	µg/L	01_072813_01	Undetected
Bons 220	Chloride	7/29/2013	4510	µg/L	01_072813_01	
Bons 220	Conductivity, Field	7/29/2013	195.2	uS/cm	01_072813_01	
Bons 220	Iron	7/29/2013	50	µg/L	01_072813_01	
Bons 220	Lead	7/29/2013	0.6	µg/L	01_072813_01	
Bons 220	Magnesium	7/29/2013	15100	µg/L	01_072813_01	
Bons 220	pH, Field	7/29/2013	8	pH Units	01_072813_01	
Bons 220	Potassium	7/29/2013	300	µg/L	01_072813_01	Analyte detected between MDL and ML
Bons 220	Selenium	7/29/2013	1.0	µg/L	01_072813_01	Analyte detected between MDL and ML
Bons 220	Sodium	7/29/2013	2600	µg/L	01_072813_01	
Bons 220	Sulfate	7/29/2013	53800	µg/L	01_072813_01	
Bons 220	Temperature, Field	7/29/2013	8.5	°C	01_072813_01	
Bons 220	Total Dissolved Solids	7/29/2013	174000	µg/L	01_072813_01	
Bons 220	Total Suspended Solids	7/29/2013	< 5000	µg/L	01_072813_01	Undetected
Bons 220	Zinc	7/29/2013	21	µg/L	01_072813_01	
Bons 220	Alkalinity (As CaCO3)	8/9/2013	82000	µg/L	01_081113_01	
Bons 220	Aluminum	8/9/2013	190	µg/L	01_081113_01	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons 220	Bicarbonate (As CaCO3)	8/9/2013	82000	µg/L	01_081113_01	
Bons 220	Cadmium	8/9/2013	< 0.1	µg/L	01_081113_01	Undetected
Bons 220	Calcium	8/9/2013	28200	µg/L	01_081113_01	
Bons 220	Carbonate (AS CaCO3)	8/9/2013	< 2000	µg/L	01_081113_01	Undetected
Bons 220	Chloride	8/9/2013	3850	µg/L	01_081113_01	
Bons 220	Conductivity, Field	8/9/2013	172.6	uS/cm	01_081113_01	
Bons 220	Iron	8/9/2013	260	µg/L	01_081113_01	
Bons 220	Lead	8/9/2013	2.0	µg/L	01_081113_01	
Bons 220	Magnesium	8/9/2013	13600	µg/L	01_081113_01	
Bons 220	pH, Field	8/9/2013	7.92	pH Units	01_081113_01	
Bons 220	Potassium	8/9/2013	300	µg/L	01_081113_01	Analyte detected between MDL and ML
Bons 220	Selenium	8/9/2013	1.5	µg/L	01_081113_01	Analyte detected between MDL and ML
Bons 220	Sodium	8/9/2013	2100	µg/L	01_081113_01	
Bons 220	Sulfate	8/9/2013	44100	µg/L	01_081113_01	
Bons 220	Temperature, Field	8/9/2013	7.9	°C	01_081113_01	
Bons 220	Total Dissolved Solids	8/9/2013	152000	µg/L	01_081113_01	
Bons 220	Total Suspended Solids	8/9/2013	< 5000	µg/L	01_081113_01	Undetected
Bons 220	Zinc	8/9/2013	31	µg/L	01_081113_01	
Bons 220	Alkalinity (As CaCO3)	8/23/2013	99000	µg/L	01_082513_01	
Bons 220	Aluminum	8/23/2013	61	µg/L	01_082513_01	
Bons 220	Bicarbonate (As CaCO3)	8/23/2013	97000	µg/L	01_082513_01	
Bons 220	Cadmium	8/23/2013	< 0.1	µg/L	01_082513_01	Undetected
Bons 220	Calcium	8/23/2013	33200	µg/L	01_082513_01	
Bons 220	Carbonate (AS CaCO3)	8/23/2013	< 2000	µg/L	01_082513_01	Undetected
Bons 220	Chloride	8/23/2013	3800	µg/L	01_082513_01	
Bons 220	Conductivity, Field	8/23/2013	187.7	uS/cm	01_082513_01	
Bons 220	Iron	8/23/2013	50	µg/L	01_082513_01	
Bons 220	Lead	8/23/2013	0.5	µg/L	01_082513_01	
Bons 220	Magnesium	8/23/2013	16200	µg/L	01_082513_01	
Bons 220	pH, Field	8/23/2013	7.85	pH Units	01_082513_01	
Bons 220	Potassium	8/23/2013	300	µg/L	01_082513_01	Analyte detected between MDL and ML
Bons 220	Selenium	8/23/2013	< 1	µg/L	01_082513_01	Undetected
Bons 220	Sodium	8/23/2013	2400	µg/L	01_082513_01	
Bons 220	Sulfate	8/23/2013	47900	µg/L	01_082513_01	
Bons 220	Temperature, Field	8/23/2013	6.1	°C	01_082513_01	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons 220	Total Dissolved Solids	8/23/2013	174000	µg/L	01_082513_01	
Bons 220	Total Suspended Solids	8/23/2013	< 5000	µg/L	01_082513_01	Undetected
Bons 220	Zinc	8/23/2013	26	µg/L	01_082513_01	
Bons 220	Alkalinity (As CaCO3)	9/12/2013	101000	µg/L	01_090813_01	
Bons 220	Aluminum	9/12/2013	15	µg/L	01_090813_01	
Bons 220	Bicarbonate (As CaCO3)	9/12/2013	101000	µg/L	01_090813_01	
Bons 220	Cadmium	9/12/2013	< 0.1	µg/L	01_090813_01	Undetected
Bons 220	Calcium	9/12/2013	36300	µg/L	01_090813_01	
Bons 220	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_01	Undetected
Bons 220	Chloride	9/12/2013	4700	µg/L	01_090813_01	
Bons 220	Conductivity, Field	9/12/2013	204.0	uS/cm	01_090813_01	
Bons 220	Iron	9/12/2013	30	µg/L	01_090813_01	Analyte detected between MDL and ML
Bons 220	Lead	9/12/2013	0.4	µg/L	01_090813_01	Analyte detected between MDL and ML
Bons 220	Magnesium	9/12/2013	17800	µg/L	01_090813_01	
Bons 220	pH, Field	9/12/2013	8.02	pH Units	01_090813_01	
Bons 220	Potassium	9/12/2013	400	µg/L	01_090813_01	Analyte detected between MDL and ML
Bons 220	Selenium	9/12/2013	< 1	µg/L	01_090813_01	Undetected
Bons 220	Sodium	9/12/2013	3100	µg/L	01_090813_01	
Bons 220	Sulfate	9/12/2013	57300	µg/L	01_090813_01	
Bons 220	Temperature, Field	9/12/2013	5.2	°C	01_090813_01	
Bons 220	Total Dissolved Solids	9/12/2013	180000	µg/L	01_090813_01	
Bons 220	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_01	Undetected
Bons 220	Zinc	9/12/2013	27	µg/L	01_090813_01	
Bons 220	Alkalinity (As CaCO3)	9/27/2013	99000	µg/L	01_092213_01	
Bons 220	Aluminum	9/27/2013	10	µg/L	01_092213_01	
Bons 220	Bicarbonate (As CaCO3)	9/27/2013	99000	µg/L	01_092213_01	
Bons 220	Cadmium	9/27/2013	< 0.1	µg/L	01_092213_01	Undetected
Bons 220	Calcium	9/27/2013	38000	µg/L	01_092213_01	
Bons 220	Carbonate (AS CaCO3)	9/27/2013	< 2000	µg/L	01_092213_01	Undetected
Bons 220	Chloride	9/27/2013	3350	µg/L	01_092213_01	
Bons 220	Conductivity, Field	9/27/2013	191.7	uS/cm	01_092213_01	
Bons 220	Iron	9/27/2013	30	µg/L	01_092213_01	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons 220	Lead	9/27/2013	0.2	µg/L	01_092213_01	Analyte detected between MDL and ML
Bons 220	Magnesium	9/27/2013	18600	µg/L	01_092213_01	
Bons 220	pH, Field	9/27/2013	8.06	pH Units	01_092213_01	
Bons 220	Potassium	9/27/2013	400	µg/L	01_092213_01	Analyte detected between MDL and ML
Bons 220	Selenium	9/27/2013	1.6	µg/L	01_092213_01	Analyte detected between MDL and ML
Bons 220	Sodium	9/27/2013	2900	µg/L	01_092213_01	
Bons 220	Sulfate	9/27/2013	37800	µg/L	01_092213_01	
Bons 220	Temperature, Field	9/27/2013	1.4	°C	01_092213_01	
Bons 220	Total Dissolved Solids	9/27/2013	204000	µg/L	01_092213_01	
Bons 220	Total Suspended Solids	9/27/2013	< 5000	µg/L	01_092213_01	Undetected
Bons 220	Zinc	9/27/2013	27	µg/L	01_092213_01	
Bons 220	Alkalinity (As CaCO3)	10/7/2013	116000	µg/L	01_101313_01	
Bons 220	Aluminum	10/7/2013	14	µg/L	01_101313_01	
Bons 220	Bicarbonate (As CaCO3)	10/7/2013	115000	µg/L	01_101313_01	
Bons 220	Cadmium	10/7/2013	< 0.2	µg/L	01_101313_01	Undetected
Bons 220	Calcium	10/7/2013	39800	µg/L	01_101313_01	
Bons 220	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_01	Undetected
Bons 220	Chloride	10/7/2013	4980	µg/L	01_101313_01	
Bons 220	Conductivity, Field	10/7/2013	195.9	uS/cm	01_101313_01	
Bons 220	Iron	10/7/2013	< 20	µg/L	01_101313_01	Undetected
Bons 220	Lead	10/7/2013	0.2	µg/L	01_101313_01	Analyte detected between MDL and ML
Bons 220	Magnesium	10/7/2013	19400	µg/L	01_101313_01	
Bons 220	pH, Field	10/7/2013	7.56	pH Units	01_101313_01	
Bons 220	Potassium	10/7/2013	400	µg/L	01_101313_01	Analyte detected between MDL and ML
Bons 220	Selenium	10/7/2013	< 1	µg/L	01_101313_01	Undetected
Bons 220	Sodium	10/7/2013	2900	µg/L	01_101313_01	
Bons 220	Sulfate	10/7/2013	57800	µg/L	01_101313_01	
Bons 220	Temperature, Field	10/7/2013	1.8	°C	01_101313_01	
Bons 220	Total Dissolved Solids	10/7/2013	206000	µg/L	01_101313_01	
Bons 220	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_01	Undetected
Bons 220	Zinc	10/7/2013	26	µg/L	01_101313_01	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons 220	Alkalinity (As CaCO3)	10/11/2013	131000	µg/L	01_102713_01	
Bons 220	Aluminum	10/11/2013	10	µg/L	01_102713_01	
Bons 220	Bicarbonate (As CaCO3)	10/11/2013	130000	µg/L	01_102713_01	
Bons 220	Cadmium	10/11/2013	< 0.1	µg/L	01_102713_01	Undetected
Bons 220	Calcium	10/11/2013	41000	µg/L	01_102713_01	
Bons 220	Carbonate (AS CaCO3)	10/11/2013	< 2000	µg/L	01_102713_01	Undetected
Bons 220	Chloride	10/11/2013	5030	µg/L	01_102713_01	
Bons 220	Conductivity, Field	10/11/2013	198.2	uS/cm	01_102713_01	
Bons 220	Iron	10/11/2013	< 20	µg/L	01_102713_01	Undetected
Bons 220	Lead	10/11/2013	0.3	µg/L	01_102713_01	Analyte detected between MDL and ML
Bons 220	Magnesium	10/11/2013	20200	µg/L	01_102713_01	
Bons 220	pH, Field	10/11/2013	8.03	pH Units	01_102713_01	
Bons 220	Potassium	10/11/2013	400	µg/L	01_102713_01	Analyte detected between MDL and ML
Bons 220	Selenium	10/11/2013	1.5	µg/L	01_102713_01	Analyte detected between MDL and ML
Bons 220	Sodium	10/11/2013	3100	µg/L	01_102713_01	
Bons 220	Sulfate	10/11/2013	58200	µg/L	01_102713_01	
Bons 220	Temperature, Field	10/11/2013	1.4	°C	01_102713_01	
Bons 220	Total Dissolved Solids	10/11/2013	192000	µg/L	01_102713_01	
Bons 220	Total Suspended Solids	10/11/2013	< 5000	µg/L	01_102713_01	Undetected
Bons 220	Zinc	10/11/2013	24	µg/L	01_102713_01	
Bons Reservoir	Alkalinity (As CaCO3)	5/30/2013	27000	µg/L	01_051213_02	
Bons Reservoir	Aluminum	5/30/2013	283	µg/L	01_051213_02	
Bons Reservoir	Bicarbonate (As CaCO3)	5/30/2013	27000	µg/L	01_051213_02	
Bons Reservoir	Cadmium	5/30/2013	1.0	µg/L	01_051213_02	
Bons Reservoir	Calcium	5/30/2013	6600	µg/L	01_051213_02	
Bons Reservoir	Carbonate (AS CaCO3)	5/30/2013	< 2000	µg/L	01_051213_02	Undetected
Bons Reservoir	Chloride	5/30/2013	2530	µg/L	01_051213_02	
Bons Reservoir	Conductivity, Field	5/30/2013	34.2	uS/cm	01_051213_02	
Bons Reservoir	Iron	5/30/2013	490	µg/L	01_051213_02	
Bons Reservoir	Lead	5/30/2013	38.0	µg/L	01_051213_02	
Bons Reservoir	Magnesium	5/30/2013	2900	µg/L	01_051213_02	
Bons Reservoir	pH, Field	5/30/2013	6.77	pH Units	01_051213_02	
Bons Reservoir	Potassium	5/30/2013	1000	µg/L	01_051213_02	Analyte detected between MDL and ML



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons Reservoir	Selenium	5/30/2013	< 1	µg/L	01_051213_02	Undetected
Bons Reservoir	Sodium	5/30/2013	700	µg/L	01_051213_02	Analyte detected between MDL and ML
Bons Reservoir	Sulfate	5/30/2013	7900	µg/L	01_051213_02	
Bons Reservoir	Temperature, Field	5/30/2013	1.4	°C	01_051213_02	
Bons Reservoir	Total Dissolved Solids	5/30/2013	40000	µg/L	01_051213_02	
Bons Reservoir	Total Suspended Solids	5/30/2013	10000	µg/L	01_051213_02	Analyte detected between MDL and ML
Bons Reservoir	Zinc	5/30/2013	102	µg/L	01_051213_02	
Bons Reservoir	Alkalinity (As CaCO3)	5/31/2013	13000	µg/L	01_052613_02	Analyte detected between MDL and ML
Bons Reservoir	Aluminum	5/31/2013	168	µg/L	01_052613_02	
Bons Reservoir	Bicarbonate (As CaCO3)	5/31/2013	13000	µg/L	01_052613_02	Analyte detected between MDL and ML
Bons Reservoir	Cadmium	5/31/2013	0.7	µg/L	01_052613_02	
Bons Reservoir	Calcium	5/31/2013	5200	µg/L	01_052613_02	
Bons Reservoir	Carbonate (AS CaCO3)	5/31/2013	< 2000	µg/L	01_052613_02	Undetected
Bons Reservoir	Chloride	5/31/2013	1840	µg/L	01_052613_02	Analyte detected between MDL and ML
Bons Reservoir	Conductivity, Field	5/31/2013	27.7	uS/cm	01_052613_02	
Bons Reservoir	Iron	5/31/2013	240	µg/L	01_052613_02	
Bons Reservoir	Lead	5/31/2013	22.4	µg/L	01_052613_02	
Bons Reservoir	Magnesium	5/31/2013	2200	µg/L	01_052613_02	
Bons Reservoir	pH, Field	5/31/2013	7.36	pH Units	01_052613_02	
Bons Reservoir	Potassium	5/31/2013	800	µg/L	01_052613_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	5/31/2013	< 1	µg/L	01_052613_02	Undetected
Bons Reservoir	Sodium	5/31/2013	600	µg/L	01_052613_02	Analyte detected between MDL and ML
Bons Reservoir	Sulfate	5/31/2013	6330	µg/L	01_052613_02	
Bons Reservoir	Temperature, Field	5/31/2013	0.3	°C	01_052613_02	
Bons Reservoir	Total Dissolved Solids	5/31/2013	30000	µg/L	01_052613_02	
Bons Reservoir	Total Suspended Solids	5/31/2013	< 5000	µg/L	01_052613_02	Undetected
Bons Reservoir	Zinc	5/31/2013	73	µg/L	01_052613_02	
Bons Reservoir	Alkalinity (As CaCO3)	6/7/2013	20000	µg/L	01_060913_02	
Bons Reservoir	Aluminum	6/7/2013	182	µg/L	01_060913_02	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons Reservoir	Bicarbonate (As CaCO3)	6/7/2013	20000	µg/L	01_060913_02	
Bons Reservoir	Cadmium	6/7/2013	0.3	µg/L	01_060913_02	Analyte detected between MDL and ML
Bons Reservoir	Calcium	6/7/2013	6400	µg/L	01_060913_02	
Bons Reservoir	Carbonate (AS CaCO3)	6/7/2013	< 2000	µg/L	01_060913_02	Undetected
Bons Reservoir	Chloride	6/7/2013	1190	µg/L	01_060913_02	Analyte detected between MDL and ML
Bons Reservoir	Conductivity, Field	6/7/2013	33.6	uS/cm	01_060913_02	
Bons Reservoir	Iron	6/7/2013	450	µg/L	01_060913_02	
Bons Reservoir	Lead	6/7/2013	8.8	µg/L	01_060913_02	
Bons Reservoir	Magnesium	6/7/2013	3000	µg/L	01_060913_02	
Bons Reservoir	pH, Field	6/7/2013	7.08	pH Units	01_060913_02	
Bons Reservoir	Potassium	6/7/2013	800	µg/L	01_060913_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	6/7/2013	< 1	µg/L	01_060913_02	Undetected
Bons Reservoir	Sodium	6/7/2013	600	µg/L	01_060913_02	Analyte detected between MDL and ML
Bons Reservoir	Sulfate	6/7/2013	7470	µg/L	01_060913_02	
Bons Reservoir	Temperature, Field	6/7/2013	1	°C	01_060913_02	
Bons Reservoir	Total Dissolved Solids	6/7/2013	30000	µg/L	01_060913_02	
Bons Reservoir	Total Suspended Solids	6/7/2013	< 5000	µg/L	01_060913_02	Undetected
Bons Reservoir	Zinc	6/7/2013	58	µg/L	01_060913_02	
Bons Reservoir	Alkalinity (As CaCO3)	6/20/2013	34000	µg/L	01_062313_02	
Bons Reservoir	Aluminum	6/20/2013	1140	µg/L	01_062313_02	
Bons Reservoir	Bicarbonate (As CaCO3)	6/20/2013	34000	µg/L	01_062313_02	
Bons Reservoir	Cadmium	6/20/2013	0.1	µg/L	01_062313_02	Analyte detected between MDL and ML
Bons Reservoir	Calcium	6/20/2013	11500	µg/L	01_062313_02	
Bons Reservoir	Carbonate (AS CaCO3)	6/20/2013	< 2000	µg/L	01_062313_02	Undetected
Bons Reservoir	Chloride	6/20/2013	6820	µg/L	01_062313_02	
Bons Reservoir	Conductivity, Field	6/20/2013	68.9	uS/cm	01_062313_02	
Bons Reservoir	Iron	6/20/2013	1980	µg/L	01_062313_02	
Bons Reservoir	Lead	6/20/2013	7.0	µg/L	01_062313_02	
Bons Reservoir	Magnesium	6/20/2013	5600	µg/L	01_062313_02	
Bons Reservoir	pH, Field	6/20/2013	7.55	pH Units	01_062313_02	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons Reservoir	Potassium	6/20/2013	1000	µg/L	01_062313_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	6/20/2013	< 1	µg/L	01_062313_02	Undetected
Bons Reservoir	Sodium	6/20/2013	1200	µg/L	01_062313_02	Analyte detected between MDL and ML
Bons Reservoir	Sulfate	6/20/2013	20100	µg/L	01_062313_02	
Bons Reservoir	Temperature, Field	6/20/2013	5.4	°C	01_062313_02	
Bons Reservoir	Total Dissolved Solids	6/20/2013	100000	µg/L	01_062313_02	
Bons Reservoir	Total Suspended Solids	6/20/2013	13000	µg/L	01_062313_02	Analyte detected between MDL and ML
Bons Reservoir	Zinc	6/20/2013	28	µg/L	01_062313_02	
Bons Reservoir	Alkalinity (As CaCO3)	7/5/2013	53000	µg/L	01_071413_02	
Bons Reservoir	Aluminum	7/5/2013	413	µg/L	01_071413_02	
Bons Reservoir	Bicarbonate (As CaCO3)	7/5/2013	53000	µg/L	01_071413_02	
Bons Reservoir	Cadmium	7/5/2013	< 0.1	µg/L	01_071413_02	Undetected
Bons Reservoir	Calcium	7/5/2013	19200	µg/L	01_071413_02	
Bons Reservoir	Carbonate (AS CaCO3)	7/5/2013	< 2000	µg/L	01_071413_02	Undetected
Bons Reservoir	Chloride	7/5/2013	4680	µg/L	01_071413_02	
Bons Reservoir	Conductivity, Field	7/5/2013	122.3	uS/cm	01_071413_02	
Bons Reservoir	Iron	7/5/2013	760	µg/L	01_071413_02	
Bons Reservoir	Lead	7/5/2013	2.6	µg/L	01_071413_02	
Bons Reservoir	Magnesium	7/5/2013	8900	µg/L	01_071413_02	
Bons Reservoir	pH, Field	7/5/2013	7.37	pH Units	01_071413_02	
Bons Reservoir	Potassium	7/5/2013	600	µg/L	01_071413_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	7/5/2013	< 1	µg/L	01_071413_02	Undetected
Bons Reservoir	Sodium	7/5/2013	1900	µg/L	01_071413_02	Analyte detected between MDL and ML
Bons Reservoir	Sulfate	7/5/2013	34400	µg/L	01_071413_02	
Bons Reservoir	Temperature, Field	7/5/2013	8.4	°C	01_071413_02	
Bons Reservoir	Total Dissolved Solids	7/5/2013	110000	µg/L	01_071413_02	
Bons Reservoir	Total Suspended Solids	7/5/2013	5000	µg/L	01_071413_02	Analyte detected between MDL and ML
Bons Reservoir	Zinc	7/5/2013	26	µg/L	01_071413_02	
Bons Reservoir	Alkalinity (As CaCO3)	7/29/2013	77000	µg/L	01_072813_02	
Bons Reservoir	Aluminum	7/29/2013	68	µg/L	01_072813_02	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons Reservoir	Bicarbonate (As CaCO3)	7/29/2013	77000	µg/L	01_072813_02	
Bons Reservoir	Cadmium	7/29/2013	< 0.1	µg/L	01_072813_02	Undetected
Bons Reservoir	Calcium	7/29/2013	29000	µg/L	01_072813_02	
Bons Reservoir	Carbonate (AS CaCO3)	7/29/2013	< 2000	µg/L	01_072813_02	Undetected
Bons Reservoir	Chloride	7/29/2013	4300	µg/L	01_072813_02	
Bons Reservoir	Conductivity, Field	7/29/2013	188.9	uS/cm	01_072813_02	
Bons Reservoir	Iron	7/29/2013	150	µg/L	01_072813_02	
Bons Reservoir	Lead	7/29/2013	0.5	µg/L	01_072813_02	
Bons Reservoir	Magnesium	7/29/2013	13800	µg/L	01_072813_02	
Bons Reservoir	pH, Field	7/29/2013	7.87	pH Units	01_072813_02	
Bons Reservoir	Potassium	7/29/2013	300	µg/L	01_072813_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	7/29/2013	< 1	µg/L	01_072813_02	Undetected
Bons Reservoir	Sodium	7/29/2013	2600	µg/L	01_072813_02	
Bons Reservoir	Sulfate	7/29/2013	62200	µg/L	01_072813_02	
Bons Reservoir	Temperature, Field	7/29/2013	9.6	°C	01_072813_02	
Bons Reservoir	Total Dissolved Solids	7/29/2013	162000	µg/L	01_072813_02	
Bons Reservoir	Total Suspended Solids	7/29/2013	< 5000	µg/L	01_072813_02	Undetected
Bons Reservoir	Zinc	7/29/2013	36	µg/L	01_072813_02	
Bons Reservoir	Alkalinity (As CaCO3)	8/9/2013	74000	µg/L	01_081113_02	
Bons Reservoir	Aluminum	8/9/2013	326	µg/L	01_081113_02	
Bons Reservoir	Bicarbonate (As CaCO3)	8/9/2013	74000	µg/L	01_081113_02	
Bons Reservoir	Cadmium	8/9/2013	< 0.1	µg/L	01_081113_02	Undetected
Bons Reservoir	Calcium	8/9/2013	27100	µg/L	01_081113_02	
Bons Reservoir	Carbonate (AS CaCO3)	8/9/2013	< 2000	µg/L	01_081113_02	Undetected
Bons Reservoir	Chloride	8/9/2013	4840	µg/L	01_081113_02	
Bons Reservoir	Conductivity, Field	8/9/2013	163.3	uS/cm	01_081113_02	
Bons Reservoir	Iron	8/9/2013	380	µg/L	01_081113_02	
Bons Reservoir	Lead	8/9/2013	0.9	µg/L	01_081113_02	
Bons Reservoir	Magnesium	8/9/2013	13000	µg/L	01_081113_02	
Bons Reservoir	pH, Field	8/9/2013	7.54	pH Units	01_081113_02	
Bons Reservoir	Potassium	8/9/2013	400	µg/L	01_081113_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	8/9/2013	1.1	µg/L	01_081113_02	Analyte detected between MDL and ML
Bons Reservoir	Sodium	8/9/2013	2200	µg/L	01_081113_02	
Bons Reservoir	Sulfate	8/9/2013	46500	µg/L	01_081113_02	
Bons Reservoir	Temperature, Field	8/9/2013	7.2	°C	01_081113_02	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons Reservoir	Total Dissolved Solids	8/9/2013	142000	µg/L	01_081113_02	
Bons Reservoir	Total Suspended Solids	8/9/2013	< 5000	µg/L	01_081113_02	Undetected
Bons Reservoir	Zinc	8/9/2013	39	µg/L	01_081113_02	
Bons Reservoir	Alkalinity (As CaCO3)	8/23/2013	82000	µg/L	01_082513_02	
Bons Reservoir	Aluminum	8/23/2013	95	µg/L	01_082513_02	
Bons Reservoir	Bicarbonate (As CaCO3)	8/23/2013	82000	µg/L	01_082513_02	
Bons Reservoir	Cadmium	8/23/2013	< 0.1	µg/L	01_082513_02	Undetected
Bons Reservoir	Calcium	8/23/2013	29600	µg/L	01_082513_02	
Bons Reservoir	Carbonate (AS CaCO3)	8/23/2013	< 2000	µg/L	01_082513_02	Undetected
Bons Reservoir	Chloride	8/23/2013	3440	µg/L	01_082513_02	
Bons Reservoir	Conductivity, Field	8/23/2013	180.8	uS/cm	01_082513_02	
Bons Reservoir	Iron	8/23/2013	170	µg/L	01_082513_02	
Bons Reservoir	Lead	8/23/2013	0.6	µg/L	01_082513_02	
Bons Reservoir	Magnesium	8/23/2013	14200	µg/L	01_082513_02	
Bons Reservoir	pH, Field	8/23/2013	7.75	pH Units	01_082513_02	
Bons Reservoir	Potassium	8/23/2013	300	µg/L	01_082513_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	8/23/2013	< 1	µg/L	01_082513_02	Undetected
Bons Reservoir	Sodium	8/23/2013	2400	µg/L	01_082513_02	
Bons Reservoir	Sulfate	8/23/2013	46700	µg/L	01_082513_02	
Bons Reservoir	Temperature, Field	8/23/2013	7.75	°C	01_082513_02	
Bons Reservoir	Total Dissolved Solids	8/23/2013	166000	µg/L	01_082513_02	
Bons Reservoir	Total Suspended Solids	8/23/2013	< 5000	µg/L	01_082513_02	Undetected
Bons Reservoir	Zinc	8/23/2013	41	µg/L	01_082513_02	
Bons Reservoir	Alkalinity (As CaCO3)	9/12/2013	96000	µg/L	01_090813_02	
Bons Reservoir	Aluminum	9/12/2013	20	µg/L	01_090813_02	
Bons Reservoir	Bicarbonate (As CaCO3)	9/12/2013	96000	µg/L	01_090813_02	
Bons Reservoir	Cadmium	9/12/2013	< 0.1	µg/L	01_090813_02	Undetected
Bons Reservoir	Calcium	9/12/2013	35000	µg/L	01_090813_02	
Bons Reservoir	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_02	Undetected
Bons Reservoir	Chloride	9/12/2013	4730	µg/L	01_090813_02	
Bons Reservoir	Conductivity, Field	9/12/2013	203.6	uS/cm	01_090813_02	
Bons Reservoir	Iron	9/12/2013	70	µg/L	01_090813_02	
Bons Reservoir	Lead	9/12/2013	0.4	µg/L	01_090813_02	Analyte detected between MDL and ML
Bons Reservoir	Magnesium	9/12/2013	16900	µg/L	01_090813_02	
Bons Reservoir	pH, Field	9/12/2013	7.97	pH Units	01_090813_02	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons Reservoir	Potassium	9/12/2013	400	µg/L	01_090813_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	9/12/2013	1.1	µg/L	01_090813_02	Analyte detected between MDL and ML
Bons Reservoir	Sodium	9/12/2013	3100	µg/L	01_090813_02	
Bons Reservoir	Sulfate	9/12/2013	59800	µg/L	01_090813_02	
Bons Reservoir	Temperature, Field	9/12/2013	5.8	°C	01_090813_02	
Bons Reservoir	Total Dissolved Solids	9/12/2013	192000	µg/L	01_090813_02	
Bons Reservoir	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_02	Undetected
Bons Reservoir	Zinc	9/12/2013	52	µg/L	01_090813_02	
Bons Reservoir	Alkalinity (As CaCO3)	9/27/2013	84000	µg/L	01_092213_02	
Bons Reservoir	Aluminum	9/27/2013	28	µg/L	01_092213_02	
Bons Reservoir	Bicarbonate (As CaCO3)	9/27/2013	84000	µg/L	01_092213_02	
Bons Reservoir	Cadmium	9/27/2013	< 0.1	µg/L	01_092213_02	Undetected
Bons Reservoir	Calcium	9/27/2013	36700	µg/L	01_092213_02	
Bons Reservoir	Carbonate (AS CaCO3)	9/27/2013	< 2000	µg/L	01_092213_02	Undetected
Bons Reservoir	Chloride	9/27/2013	2730	µg/L	01_092213_02	
Bons Reservoir	Conductivity, Field	9/27/2013	189.4	µS/cm	01_092213_02	
Bons Reservoir	Iron	9/27/2013	100	µg/L	01_092213_02	
Bons Reservoir	Lead	9/27/2013	0.5	µg/L	01_092213_02	
Bons Reservoir	Magnesium	9/27/2013	17800	µg/L	01_092213_02	
Bons Reservoir	pH, Field	9/27/2013	7.84	pH Units	01_092213_02	
Bons Reservoir	Potassium	9/27/2013	500	µg/L	01_092213_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	9/27/2013	1.0	µg/L	01_092213_02	Analyte detected between MDL and ML
Bons Reservoir	Sodium	9/27/2013	3100	µg/L	01_092213_02	
Bons Reservoir	Sulfate	9/27/2013	34100	µg/L	01_092213_02	
Bons Reservoir	Temperature, Field	9/27/2013	2.2	°C	01_092213_02	
Bons Reservoir	Total Dissolved Solids	9/27/2013	204000	µg/L	01_092213_02	
Bons Reservoir	Total Suspended Solids	9/27/2013	11000	µg/L	01_092213_02	Analyte detected between MDL and ML
Bons Reservoir	Zinc	9/27/2013	60	µg/L	01_092213_02	
Bons Reservoir	Alkalinity (As CaCO3)	10/7/2013	101000	µg/L	01_101313_02	
Bons Reservoir	Aluminum	10/7/2013	16	µg/L	01_101313_02	
Bons Reservoir	Bicarbonate (As CaCO3)	10/7/2013	101000	µg/L	01_101313_02	
Bons Reservoir	Cadmium	10/7/2013	< 0.1	µg/L	01_101313_02	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons Reservoir	Calcium	10/7/2013	38700	µg/L	01_101313_02	
Bons Reservoir	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_02	Undetected
Bons Reservoir	Chloride	10/7/2013	4700	µg/L	01_101313_02	
Bons Reservoir	Conductivity, Field	10/7/2013	198.7	uS/cm	01_101313_02	
Bons Reservoir	Iron	10/7/2013	50	µg/L	01_101313_02	
Bons Reservoir	Lead	10/7/2013	0.8	µg/L	01_101313_02	
Bons Reservoir	Magnesium	10/7/2013	18600	µg/L	01_101313_02	
Bons Reservoir	pH, Field	10/7/2013	7.46	pH Units	01_101313_02	
Bons Reservoir	Potassium	10/7/2013	400	µg/L	01_101313_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	10/7/2013	1.4	µg/L	01_101313_02	Analyte detected between MDL and ML
Bons Reservoir	Sodium	10/7/2013	3300	µg/L	01_101313_02	
Bons Reservoir	Sulfate	10/7/2013	65000	µg/L	01_101313_02	
Bons Reservoir	Temperature, Field	10/7/2013	2.2	°C	01_101313_02	
Bons Reservoir	Total Dissolved Solids	10/7/2013	192000	µg/L	01_101313_02	
Bons Reservoir	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_02	Undetected
Bons Reservoir	Zinc	10/7/2013	63	µg/L	01_101313_02	
Bons Reservoir	Alkalinity (As CaCO3)	10/11/2013	102000	µg/L	01_102713_02	
Bons Reservoir	Aluminum	10/11/2013	10	µg/L	01_102713_02	
Bons Reservoir	Bicarbonate (As CaCO3)	10/11/2013	102000	µg/L	01_102713_02	
Bons Reservoir	Cadmium	10/11/2013	< 0.1	µg/L	01_102713_02	Undetected
Bons Reservoir	Calcium	10/11/2013	39700	µg/L	01_102713_02	
Bons Reservoir	Carbonate (AS CaCO3)	10/11/2013	< 2000	µg/L	01_102713_02	Undetected
Bons Reservoir	Chloride	10/11/2013	4760	µg/L	01_102713_02	
Bons Reservoir	Conductivity, Field	10/11/2013	196.6	uS/cm	01_102713_02	
Bons Reservoir	Iron	10/11/2013	40	µg/L	01_102713_02	Analyte detected between MDL and ML
Bons Reservoir	Lead	10/11/2013	0.2	µg/L	01_102713_02	Analyte detected between MDL and ML
Bons Reservoir	Magnesium	10/11/2013	19100	µg/L	01_102713_02	
Bons Reservoir	pH, Field	10/11/2013	7.71	pH Units	01_102713_02	
Bons Reservoir	Potassium	10/11/2013	500	µg/L	01_102713_02	Analyte detected between MDL and ML
Bons Reservoir	Selenium	10/11/2013	1.5	µg/L	01_102713_02	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Bons Reservoir	Sodium	10/11/2013	3400	µg/L	01_102713_02	
Bons Reservoir	Sulfate	10/11/2013	65200	µg/L	01_102713_02	
Bons Reservoir	Temperature, Field	10/11/2013	1.8	°C	01_102713_02	
Bons Reservoir	Total Dissolved Solids	10/11/2013	202000	µg/L	01_102713_02	
Bons Reservoir	Total Suspended Solids	10/11/2013	< 5000	µg/L	01_102713_02	Undetected
Bons Reservoir	Zinc	10/11/2013	60	µg/L	01_102713_02	
Buddy 221	Alkalinity (As CaCO3)	5/27/2013	9000	µg/L	01_051213_03	Analyte detected between MDL and ML
Buddy 221	Aluminum	5/27/2013	60	µg/L	01_051213_03	
Buddy 221	Bicarbonate (As CaCO3)	5/27/2013	9000	µg/L	01_051213_03	Analyte detected between MDL and ML
Buddy 221	Cadmium	5/27/2013	0.4	µg/L	01_051213_03	Analyte detected between MDL and ML
Buddy 221	Calcium	5/27/2013	3900	µg/L	01_051213_03	
Buddy 221	Carbonate (AS CaCO3)	5/27/2013	< 2000	µg/L	01_051213_03	Undetected
Buddy 221	Chloride	5/27/2013	1020	µg/L	01_051213_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	5/27/2013	19.4	uS/cm	01_051213_03	
Buddy 221	Iron	5/27/2013	50	µg/L	01_051213_03	
Buddy 221	Lead	5/27/2013	13.8	µg/L	01_051213_03	
Buddy 221	Magnesium	5/27/2013	1500	µg/L	01_051213_03	
Buddy 221	pH, Field	5/27/2013	7.04	pH Units	01_051213_03	
Buddy 221	Potassium	5/27/2013	1200	µg/L	01_051213_03	Analyte detected between MDL and ML
Buddy 221	Selenium	5/27/2013	< 1	µg/L	01_051213_03	Undetected
Buddy 221	Sodium	5/27/2013	700	µg/L	01_051213_03	Analyte detected between MDL and ML
Buddy 221	Sulfate	5/27/2013	4160	µg/L	01_051213_03	
Buddy 221	Temperature, Field	5/27/2013	0	°C	01_051213_03	
Buddy 221	Total Dissolved Solids	5/27/2013	30000	µg/L	01_051213_03	
Buddy 221	Total Suspended Solids	5/27/2013	< 5000	µg/L	01_051213_03	Undetected
Buddy 221	Zinc	5/27/2013	36	µg/L	01_051213_03	
Buddy 221	Alkalinity (As CaCO3)	5/31/2013	10000	µg/L	01_052613_03	Analyte detected between MDL and ML
Buddy 221	Aluminum	5/31/2013	48	µg/L	01_052613_03	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy 221	Bicarbonate (As CaCO3)	5/31/2013	10000	µg/L	01_052613_03	Analyte detected between MDL and ML
Buddy 221	Cadmium	5/31/2013	0.2	µg/L	01_052613_03	Analyte detected between MDL and ML
Buddy 221	Calcium	5/31/2013	3400	µg/L	01_052613_03	
Buddy 221	Carbonate (AS CaCO3)	5/31/2013	< 2000	µg/L	01_052613_03	Undetected
Buddy 221	Chloride	5/31/2013	< 500	µg/L	01_052613_03	Undetected
Buddy 221	Conductivity, Field	5/31/2013	16.9	uS/cm	01_052613_03	
Buddy 221	Iron	5/31/2013	70	µg/L	01_052613_03	
Buddy 221	Lead	5/31/2013	6.0	µg/L	01_052613_03	
Buddy 221	Magnesium	5/31/2013	1200	µg/L	01_052613_03	
Buddy 221	pH, Field	5/31/2013	7.43	pH Units	01_052613_03	
Buddy 221	Potassium	5/31/2013	800	µg/L	01_052613_03	Analyte detected between MDL and ML
Buddy 221	Selenium	5/31/2013	< 1	µg/L	01_052613_03	Undetected
Buddy 221	Sodium	5/31/2013	500	µg/L	01_052613_03	Analyte detected between MDL and ML
Buddy 221	Sulfate	5/31/2013	4160	µg/L	01_052613_03	
Buddy 221	Temperature, Field	5/31/2013	0	°C	01_052613_03	
Buddy 221	Total Dissolved Solids	5/31/2013	30000	µg/L	01_052613_03	
Buddy 221	Total Suspended Solids	5/31/2013	< 5000	µg/L	01_052613_03	Undetected
Buddy 221	Zinc	5/31/2013	20	µg/L	01_052613_03	
Buddy 221	Alkalinity (As CaCO3)	6/7/2013	14000	µg/L	01_060913_03	Analyte detected between MDL and ML
Buddy 221	Aluminum	6/7/2013	575	µg/L	01_060913_03	
Buddy 221	Bicarbonate (As CaCO3)	6/7/2013	14000	µg/L	01_060913_03	Analyte detected between MDL and ML
Buddy 221	Cadmium	6/7/2013	0.1	µg/L	01_060913_03	Analyte detected between MDL and ML
Buddy 221	Calcium	6/7/2013	5800	µg/L	01_060913_03	
Buddy 221	Carbonate (AS CaCO3)	6/7/2013	< 2000	µg/L	01_060913_03	Undetected
Buddy 221	Chloride	6/7/2013	540	µg/L	01_060913_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	6/7/2013	26.6	uS/cm	01_060913_03	
Buddy 221	Iron	6/7/2013	840	µg/L	01_060913_03	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy 221	Lead	6/7/2013	3.6	µg/L	01_060913_03	
Buddy 221	Magnesium	6/7/2013	2200	µg/L	01_060913_03	
Buddy 221	pH, Field	6/7/2013	7.43	pH Units	01_060913_03	
Buddy 221	Potassium	6/7/2013	800	µg/L	01_060913_03	Analyte detected between MDL and ML
Buddy 221	Selenium	6/7/2013	< 1	µg/L	01_060913_03	Undetected
Buddy 221	Sodium	6/7/2013	800	µg/L	01_060913_03	Analyte detected between MDL and ML
Buddy 221	Sulfate	6/7/2013	6020	µg/L	01_060913_03	
Buddy 221	Temperature, Field	6/7/2013	0	°C	01_060913_03	
Buddy 221	Total Dissolved Solids	6/7/2013	30000	µg/L	01_060913_03	
Buddy 221	Total Suspended Solids	6/7/2013	13000	µg/L	01_060913_03	Analyte detected between MDL and ML
Buddy 221	Zinc	6/7/2013	17	µg/L	01_060913_03	
Buddy 221	Alkalinity (As CaCO3)	6/20/2013	55000	µg/L	01_062313_03	
Buddy 221	Aluminum	6/20/2013	561	µg/L	01_062313_03	
Buddy 221	Bicarbonate (As CaCO3)	6/20/2013	55000	µg/L	01_062313_03	
Buddy 221	Cadmium	6/20/2013	< 0.1	µg/L	01_062313_03	Undetected
Buddy 221	Calcium	6/20/2013	17500	µg/L	01_062313_03	
Buddy 221	Carbonate (AS CaCO3)	6/20/2013	< 2000	µg/L	01_062313_03	Undetected
Buddy 221	Chloride	6/20/2013	2870	µg/L	01_062313_03	
Buddy 221	Conductivity, Field	6/20/2013	94.9	uS/cm	01_062313_03	
Buddy 221	Iron	6/20/2013	850	µg/L	01_062313_03	
Buddy 221	Lead	6/20/2013	2.1	µg/L	01_062313_03	
Buddy 221	Magnesium	6/20/2013	6200	µg/L	01_062313_03	
Buddy 221	pH, Field	6/20/2013	7.42	pH Units	01_062313_03	
Buddy 221	Potassium	6/20/2013	900	µg/L	01_062313_03	Analyte detected between MDL and ML
Buddy 221	Selenium	6/20/2013	< 1	µg/L	01_062313_03	Undetected
Buddy 221	Sodium	6/20/2013	2500	µg/L	01_062313_03	
Buddy 221	Sulfate	6/20/2013	21900	µg/L	01_062313_03	
Buddy 221	Temperature, Field	6/20/2013	5.9	°C	01_062313_03	
Buddy 221	Total Dissolved Solids	6/20/2013	90000	µg/L	01_062313_03	
Buddy 221	Total Suspended Solids	6/20/2013	9000	µg/L	01_062313_03	Analyte detected between MDL and ML
Buddy 221	Zinc	6/20/2013	7	µg/L	01_062313_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy 221	Alkalinity (As CaCO3)	7/5/2013	62000	µg/L	01_071413_03	
Buddy 221	Aluminum	7/5/2013	1460	µg/L	01_071413_03	
Buddy 221	Bicarbonate (As CaCO3)	7/5/2013	62000	µg/L	01_071413_03	
Buddy 221	Cadmium	7/5/2013	< 0.1	µg/L	01_071413_03	Undetected
Buddy 221	Calcium	7/5/2013	21600	µg/L	01_071413_03	
Buddy 221	Carbonate (AS CaCO3)	7/5/2013	< 2000	µg/L	01_071413_03	Undetected
Buddy 221	Chloride	7/5/2013	570	µg/L	01_071413_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	7/5/2013	100.1	uS/cm	01_071413_03	
Buddy 221	Iron	7/5/2013	1810	µg/L	01_071413_03	
Buddy 221	Lead	7/5/2013	2.7	µg/L	01_071413_03	
Buddy 221	Magnesium	7/5/2013	6900	µg/L	01_071413_03	
Buddy 221	pH, Field	7/5/2013	7.6	pH Units	01_071413_03	
Buddy 221	Potassium	7/5/2013	800	µg/L	01_071413_03	Analyte detected between MDL and ML
Buddy 221	Selenium	7/5/2013	1.2	µg/L	01_071413_03	Analyte detected between MDL and ML
Buddy 221	Sodium	7/5/2013	3000	µg/L	01_071413_03	
Buddy 221	Sulfate	7/5/2013	23500	µg/L	01_071413_03	
Buddy 221	Temperature, Field	7/5/2013	3.3	°C	01_071413_03	
Buddy 221	Total Dissolved Solids	7/5/2013	110000	µg/L	01_071413_03	
Buddy 221	Total Suspended Solids	7/5/2013	26000	µg/L	01_071413_03	
Buddy 221	Zinc	7/5/2013	8	µg/L	01_071413_03	
Buddy 221	Alkalinity (As CaCO3)	7/29/2013	104000	µg/L	01_072813_03	
Buddy 221	Aluminum	7/29/2013	102	µg/L	01_072813_03	
Buddy 221	Bicarbonate (As CaCO3)	7/29/2013	104000	µg/L	01_072813_03	
Buddy 221	Cadmium	7/29/2013	< 0.1	µg/L	01_072813_03	Undetected
Buddy 221	Calcium	7/29/2013	37300	µg/L	01_072813_03	
Buddy 221	Carbonate (AS CaCO3)	7/29/2013	< 2000	µg/L	01_072813_03	Undetected
Buddy 221	Chloride	7/29/2013	1490	µg/L	01_072813_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	7/29/2013	191.2	uS/cm	01_072813_03	
Buddy 221	Iron	7/29/2013	110	µg/L	01_072813_03	
Buddy 221	Lead	7/29/2013	0.2	µg/L	01_072813_03	Analyte detected between MDL and ML
Buddy 221	Magnesium	7/29/2013	12800	µg/L	01_072813_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy 221	pH, Field	7/29/2013	8.07	pH Units	01_072813_03	
Buddy 221	Potassium	7/29/2013	400	µg/L	01_072813_03	Analyte detected between MDL and ML
Buddy 221	Selenium	7/29/2013	1.9	µg/L	01_072813_03	Analyte detected between MDL and ML
Buddy 221	Sodium	7/29/2013	5000	µg/L	01_072813_03	
Buddy 221	Sulfate	7/29/2013	52700	µg/L	01_072813_03	
Buddy 221	Temperature, Field	7/29/2013	5.5	°C	01_072813_03	
Buddy 221	Total Dissolved Solids	7/29/2013	176000	µg/L	01_072813_03	
Buddy 221	Total Suspended Solids	7/29/2013	< 5000	µg/L	01_072813_03	Undetected
Buddy 221	Zinc	7/29/2013	3	µg/L	01_072813_03	Analyte detected between MDL and ML
Buddy 221	Alkalinity (As CaCO3)	8/9/2013	78000	µg/L	01_081113_03	
Buddy 221	Aluminum	8/9/2013	1730	µg/L	01_081113_03	
Buddy 221	Bicarbonate (As CaCO3)	8/9/2013	78000	µg/L	01_081113_03	
Buddy 221	Cadmium	8/9/2013	0.1	µg/L	01_081113_03	Analyte detected between MDL and ML
Buddy 221	Calcium	8/9/2013	27700	µg/L	01_081113_03	
Buddy 221	Carbonate (AS CaCO3)	8/9/2013	< 2000	µg/L	01_081113_03	Undetected
Buddy 221	Chloride	8/9/2013	1140	µg/L	01_081113_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	8/9/2013	142.1	uS/cm	01_081113_03	
Buddy 221	Iron	8/9/2013	2620	µg/L	01_081113_03	
Buddy 221	Lead	8/9/2013	4.5	µg/L	01_081113_03	
Buddy 221	Magnesium	8/9/2013	9800	µg/L	01_081113_03	
Buddy 221	pH, Field	8/9/2013	7.86	pH Units	01_081113_03	
Buddy 221	Potassium	8/9/2013	800	µg/L	01_081113_03	Analyte detected between MDL and ML
Buddy 221	Selenium	8/9/2013	1.3	µg/L	01_081113_03	Analyte detected between MDL and ML
Buddy 221	Sodium	8/9/2013	3400	µg/L	01_081113_03	
Buddy 221	Sulfate	8/9/2013	34500	µg/L	01_081113_03	
Buddy 221	Temperature, Field	8/9/2013	5.9	°C	01_081113_03	
Buddy 221	Total Dissolved Solids	8/9/2013	138000	µg/L	01_081113_03	
Buddy 221	Total Suspended Solids	8/9/2013	58000	µg/L	01_081113_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy 221	Zinc	8/9/2013	17	µg/L	01_081113_03	
Buddy 221	Alkalinity (As CaCO3)	8/23/2013	106000	µg/L	01_082513_03	
Buddy 221	Aluminum	8/23/2013	46	µg/L	01_082513_03	
Buddy 221	Bicarbonate (As CaCO3)	8/23/2013	106000	µg/L	01_082513_03	
Buddy 221	Cadmium	8/23/2013	< 0.1	µg/L	01_082513_03	Undetected
Buddy 221	Calcium	8/23/2013	38100	µg/L	01_082513_03	
Buddy 221	Carbonate (AS CaCO3)	8/23/2013	< 2000	µg/L	01_082513_03	Undetected
Buddy 221	Chloride	8/23/2013	1140	µg/L	01_082513_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	8/23/2013	169.3	uS/cm	01_082513_03	
Buddy 221	Iron	8/23/2013	100	µg/L	01_082513_03	
Buddy 221	Lead	8/23/2013	0.2	µg/L	01_082513_03	Analyte detected between MDL and ML
Buddy 221	Magnesium	8/23/2013	13800	µg/L	01_082513_03	
Buddy 221	pH, Field	8/23/2013	7.86	pH Units	01_082513_03	
Buddy 221	Potassium	8/23/2013	400	µg/L	01_082513_03	Analyte detected between MDL and ML
Buddy 221	Selenium	8/23/2013	< 1	µg/L	01_082513_03	Undetected
Buddy 221	Sodium	8/23/2013	4600	µg/L	01_082513_03	
Buddy 221	Sulfate	8/23/2013	45200	µg/L	01_082513_03	
Buddy 221	Temperature, Field	8/23/2013	2.8	°C	01_082513_03	
Buddy 221	Total Dissolved Solids	8/23/2013	182000	µg/L	01_082513_03	
Buddy 221	Total Suspended Solids	8/23/2013	< 5000	µg/L	01_082513_03	Undetected
Buddy 221	Zinc	8/23/2013	4	µg/L	01_082513_03	Analyte detected between MDL and ML
Buddy 221	Alkalinity (As CaCO3)	9/12/2013	113000	µg/L	01_090813_03	
Buddy 221	Aluminum	9/12/2013	19	µg/L	01_090813_03	
Buddy 221	Bicarbonate (As CaCO3)	9/12/2013	112000	µg/L	01_090813_03	
Buddy 221	Cadmium	9/12/2013	< 0.1	µg/L	01_090813_03	Undetected
Buddy 221	Calcium	9/12/2013	41700	µg/L	01_090813_03	
Buddy 221	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_03	Undetected
Buddy 221	Chloride	9/12/2013	2880	µg/L	01_090813_03	
Buddy 221	Conductivity, Field	9/12/2013	195.3	uS/cm	01_090813_03	
Buddy 221	Iron	9/12/2013	< 20	µg/L	01_090813_03	Undetected
Buddy 221	Lead	9/12/2013	< 0.1	µg/L	01_090813_03	Undetected
Buddy 221	Magnesium	9/12/2013	14500	µg/L	01_090813_03	
Buddy 221	pH, Field	9/12/2013	8.12	pH Units	01_090813_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy 221	Potassium	9/12/2013	500	µg/L	01_090813_03	Analyte detected between MDL and ML
Buddy 221	Selenium	9/12/2013	2.3	µg/L	01_090813_03	Analyte detected between MDL and ML
Buddy 221	Sodium	9/12/2013	5200	µg/L	01_090813_03	
Buddy 221	Sulfate	9/12/2013	57600	µg/L	01_090813_03	
Buddy 221	Temperature, Field	9/12/2013	2.6	°C	01_090813_03	
Buddy 221	Total Dissolved Solids	9/12/2013	194000	µg/L	01_090813_03	
Buddy 221	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_03	Undetected
Buddy 221	Zinc	9/12/2013	5	µg/L	01_090813_03	
Buddy 221	Alkalinity (As CaCO3)	9/27/2013	89000	µg/L	01_092213_03	
Buddy 221	Aluminum	9/27/2013	27	µg/L	01_092213_03	
Buddy 221	Bicarbonate (As CaCO3)	9/27/2013	89000	µg/L	01_092213_03	
Buddy 221	Cadmium	9/27/2013	< 0.1	µg/L	01_092213_03	Undetected
Buddy 221	Calcium	9/27/2013	39200	µg/L	01_092213_03	
Buddy 221	Carbonate (AS CaCO3)	9/27/2013	< 2000	µg/L	01_092213_03	Undetected
Buddy 221	Chloride	9/27/2013	1150	µg/L	01_092213_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	9/27/2013	176.1	uS/cm	01_092213_03	
Buddy 221	Iron	9/27/2013	40	µg/L	01_092213_03	Analyte detected between MDL and ML
Buddy 221	Lead	9/27/2013	0.2	µg/L	01_092213_03	Analyte detected between MDL and ML
Buddy 221	Magnesium	9/27/2013	14500	µg/L	01_092213_03	
Buddy 221	pH, Field	9/27/2013	7.89	pH Units	01_092213_03	
Buddy 221	Potassium	9/27/2013	500	µg/L	01_092213_03	Analyte detected between MDL and ML
Buddy 221	Selenium	9/27/2013	< 1	µg/L	01_092213_03	Undetected
Buddy 221	Sodium	9/27/2013	6200	µg/L	01_092213_03	
Buddy 221	Sulfate	9/27/2013	30400	µg/L	01_092213_03	
Buddy 221	Temperature, Field	9/27/2013	0	°C	01_092213_03	
Buddy 221	Total Dissolved Solids	9/27/2013	202000	µg/L	01_092213_03	
Buddy 221	Total Suspended Solids	9/27/2013	< 5000	µg/L	01_092213_03	Undetected
Buddy 221	Zinc	9/27/2013	5	µg/L	01_092213_03	
Buddy 221	Alkalinity (As CaCO3)	10/7/2013	117000	µg/L	01_101313_03	
Buddy 221	Aluminum	10/7/2013	20	µg/L	01_101313_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy 221	Bicarbonate (As CaCO3)	10/7/2013	117000	µg/L	01_101313_03	
Buddy 221	Cadmium	10/7/2013	< 0.1	µg/L	01_101313_03	Undetected
Buddy 221	Calcium	10/7/2013	40400	µg/L	01_101313_03	
Buddy 221	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_03	Undetected
Buddy 221	Chloride	10/7/2013	1380	µg/L	01_101313_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	10/7/2013	155.2	uS/cm	01_101313_03	
Buddy 221	Iron	10/7/2013	< 20	µg/L	01_101313_03	Undetected
Buddy 221	Lead	10/7/2013	< 0.1	µg/L	01_101313_03	Undetected
Buddy 221	Magnesium	10/7/2013	14400	µg/L	01_101313_03	
Buddy 221	pH, Field	10/7/2013	7.28	pH Units	01_101313_03	
Buddy 221	Potassium	10/7/2013	500	µg/L	01_101313_03	Analyte detected between MDL and ML
Buddy 221	Selenium	10/7/2013	< 1	µg/L	01_101313_03	Undetected
Buddy 221	Sodium	10/7/2013	7400	µg/L	01_101313_03	
Buddy 221	Sulfate	10/7/2013	51500	µg/L	01_101313_03	
Buddy 221	Temperature, Field	10/7/2013	0	°C	01_101313_03	
Buddy 221	Total Dissolved Solids	10/7/2013	200000	µg/L	01_101313_03	
Buddy 221	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_03	Undetected
Buddy 221	Zinc	10/7/2013	4	µg/L	01_101313_03	Analyte detected between MDL and ML
Buddy 221	Alkalinity (As CaCO3)	10/11/2013	120000	µg/L	01_102713_03	
Buddy 221	Aluminum	10/11/2013	18	µg/L	01_102713_03	
Buddy 221	Bicarbonate (As CaCO3)	10/11/2013	120000	µg/L	01_102713_03	
Buddy 221	Cadmium	10/11/2013	< 0.1	µg/L	01_102713_03	Undetected
Buddy 221	Calcium	10/11/2013	41300	µg/L	01_102713_03	
Buddy 221	Carbonate (AS CaCO3)	10/11/2013	< 2000	µg/L	01_102713_03	Undetected
Buddy 221	Chloride	10/11/2013	1780	µg/L	01_102713_03	Analyte detected between MDL and ML
Buddy 221	Conductivity, Field	10/11/2013	182.8	uS/cm	01_102713_03	
Buddy 221	Iron	10/11/2013	< 20	µg/L	01_102713_03	Undetected
Buddy 221	Lead	10/11/2013	< 0.1	µg/L	01_102713_03	Undetected
Buddy 221	Magnesium	10/11/2013	15000	µg/L	01_102713_03	
Buddy 221	pH, Field	10/11/2013	7.76	pH Units	01_102713_03	
Buddy 221	Potassium	10/11/2013	500	µg/L	01_102713_03	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy 221	Selenium	10/11/2013	< 1	µg/L	01_102713_03	Undetected
Buddy 221	Sodium	10/11/2013	7700	µg/L	01_102713_03	
Buddy 221	Sulfate	10/11/2013	52200	µg/L	01_102713_03	
Buddy 221	Temperature, Field	10/11/2013	0	°C	01_102713_03	
Buddy 221	Total Dissolved Solids	10/11/2013	184000	µg/L	01_102713_03	
Buddy 221	Total Suspended Solids	10/11/2013	< 5000	µg/L	01_102713_03	Undetected
Buddy 221	Zinc	10/11/2013	4	µg/L	01_102713_03	Analyte detected between MDL and ML
Buddy Creek	Alkalinity (As CaCO3)	5/27/2013	20000	µg/L	01_051213_04	
Buddy Creek	Aluminum	5/27/2013	61	µg/L	01_051213_04	
Buddy Creek	Bicarbonate (As CaCO3)	5/27/2013	20000	µg/L	01_051213_04	
Buddy Creek	Cadmium	5/27/2013	0.5	µg/L	01_051213_04	Analyte detected between MDL and ML
Buddy Creek	Calcium	5/27/2013	6200	µg/L	01_051213_04	
Buddy Creek	Carbonate (AS CaCO3)	5/27/2013	< 2000	µg/L	01_051213_04	Undetected
Buddy Creek	Chloride	5/27/2013	1760	µg/L	01_051213_04	Analyte detected between MDL and ML
Buddy Creek	Conductivity, Field	5/27/2013	30.2	uS/cm	01_051213_04	
Buddy Creek	Iron	5/27/2013	70	µg/L	01_051213_04	
Buddy Creek	Lead	5/27/2013	13.9	µg/L	01_051213_04	
Buddy Creek	Magnesium	5/27/2013	2500	µg/L	01_051213_04	
Buddy Creek	pH, Field	5/27/2013	7.17	pH Units	01_051213_04	
Buddy Creek	Potassium	5/27/2013	1200	µg/L	01_051213_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	5/27/2013	< 1	µg/L	01_051213_04	Undetected
Buddy Creek	Sodium	5/27/2013	700	µg/L	01_051213_04	Analyte detected between MDL and ML
Buddy Creek	Sulfate	5/27/2013	6310	µg/L	01_051213_04	
Buddy Creek	Temperature, Field	5/27/2013	0	°C	01_051213_04	
Buddy Creek	Total Dissolved Solids	5/27/2013	40000	µg/L	01_051213_04	
Buddy Creek	Total Suspended Solids	5/27/2013	< 5000	µg/L	01_051213_04	Undetected
Buddy Creek	Zinc	5/27/2013	48	µg/L	01_051213_04	
Buddy Creek	Alkalinity (As CaCO3)	5/31/2013	13000	µg/L	01_052613_04	Analyte detected between MDL and ML
Buddy Creek	Aluminum	5/31/2013	64	µg/L	01_052613_04	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy Creek	Bicarbonate (As CaCO3)	5/31/2013	13000	µg/L	01_052613_04	Analyte detected between MDL and ML
Buddy Creek	Cadmium	5/31/2013	0.3	µg/L	01_052613_04	Analyte detected between MDL and ML
Buddy Creek	Calcium	5/31/2013	5000	µg/L	01_052613_04	
Buddy Creek	Carbonate (AS CaCO3)	5/31/2013	< 2000	µg/L	01_052613_04	Undetected
Buddy Creek	Chloride	5/31/2013	1000	µg/L	01_052613_04	Analyte detected between MDL and ML
Buddy Creek	Conductivity, Field	5/31/2013	24.8	uS/cm	01_052613_04	
Buddy Creek	Iron	5/31/2013	100	µg/L	01_052613_04	
Buddy Creek	Lead	5/31/2013	8.8	µg/L	01_052613_04	
Buddy Creek	Magnesium	5/31/2013	1900	µg/L	01_052613_04	
Buddy Creek	pH, Field	5/31/2013	7.71	pH Units	01_052613_04	
Buddy Creek	Potassium	5/31/2013	800	µg/L	01_052613_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	5/31/2013	< 1	µg/L	01_052613_04	Undetected
Buddy Creek	Sodium	5/31/2013	500	µg/L	01_052613_04	Analyte detected between MDL and ML
Buddy Creek	Sulfate	5/31/2013	6610	µg/L	01_052613_04	
Buddy Creek	Temperature, Field	5/31/2013	0	°C	01_052613_04	
Buddy Creek	Total Dissolved Solids	5/31/2013	30000	µg/L	01_052613_04	
Buddy Creek	Total Suspended Solids	5/31/2013	< 5000	µg/L	01_052613_04	Undetected
Buddy Creek	Zinc	5/31/2013	33	µg/L	01_052613_04	
Buddy Creek	Alkalinity (As CaCO3)	6/7/2013	23000	µg/L	01_060913_04	
Buddy Creek	Aluminum	6/7/2013	330	µg/L	01_060913_04	
Buddy Creek	Bicarbonate (As CaCO3)	6/7/2013	23000	µg/L	01_060913_04	
Buddy Creek	Cadmium	6/7/2013	0.2	µg/L	01_060913_04	Analyte detected between MDL and ML
Buddy Creek	Calcium	6/7/2013	7200	µg/L	01_060913_04	
Buddy Creek	Carbonate (AS CaCO3)	6/7/2013	< 2000	µg/L	01_060913_04	Undetected
Buddy Creek	Chloride	6/7/2013	1010	µg/L	01_060913_04	Analyte detected between MDL and ML
Buddy Creek	Conductivity, Field	6/7/2013	35.4	uS/cm	01_060913_04	
Buddy Creek	Iron	6/7/2013	590	µg/L	01_060913_04	
Buddy Creek	Lead	6/7/2013	4.6	µg/L	01_060913_04	
Buddy Creek	Magnesium	6/7/2013	3100	µg/L	01_060913_04	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy Creek	pH, Field	6/7/2013	7.5	pH Units	01_060913_04	
Buddy Creek	Potassium	6/7/2013	800	µg/L	01_060913_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	6/7/2013	< 1	µg/L	01_060913_04	Undetected
Buddy Creek	Sodium	6/7/2013	700	µg/L	01_060913_04	Analyte detected between MDL and ML
Buddy Creek	Sulfate	6/7/2013	8350	µg/L	01_060913_04	
Buddy Creek	Temperature, Field	6/7/2013	0.5	°C	01_060913_04	
Buddy Creek	Total Dissolved Solids	6/7/2013	40000	µg/L	01_060913_04	
Buddy Creek	Total Suspended Solids	6/7/2013	5000	µg/L	01_060913_04	Analyte detected between MDL and ML
Buddy Creek	Zinc	6/7/2013	34	µg/L	01_060913_04	
Buddy Creek	Alkalinity (As CaCO3)	6/20/2013	56000	µg/L	01_062313_04	
Buddy Creek	Aluminum	6/20/2013	545	µg/L	01_062313_04	
Buddy Creek	Bicarbonate (As CaCO3)	6/20/2013	56000	µg/L	01_062313_04	
Buddy Creek	Cadmium	6/20/2013	< 0.1	µg/L	01_062313_04	Undetected
Buddy Creek	Calcium	6/20/2013	16300	µg/L	01_062313_04	
Buddy Creek	Carbonate (AS CaCO3)	6/20/2013	< 2000	µg/L	01_062313_04	Undetected
Buddy Creek	Chloride	6/20/2013	2200	µg/L	01_062313_04	Analyte detected between MDL and ML
Buddy Creek	Conductivity, Field	6/20/2013	93.0	uS/cm	01_062313_04	
Buddy Creek	Iron	6/20/2013	770	µg/L	01_062313_04	
Buddy Creek	Lead	6/20/2013	3.0	µg/L	01_062313_04	
Buddy Creek	Magnesium	6/20/2013	6600	µg/L	01_062313_04	
Buddy Creek	pH, Field	6/20/2013	7.5	pH Units	01_062313_04	
Buddy Creek	Potassium	6/20/2013	800	µg/L	01_062313_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	6/20/2013	< 1	µg/L	01_062313_04	Undetected
Buddy Creek	Sodium	6/20/2013	1900	µg/L	01_062313_04	Analyte detected between MDL and ML
Buddy Creek	Sulfate	6/20/2013	19600	µg/L	01_062313_04	
Buddy Creek	Temperature, Field	6/20/2013	6.2	°C	01_062313_04	
Buddy Creek	Total Dissolved Solids	6/20/2013	80000	µg/L	01_062313_04	
Buddy Creek	Total Suspended Solids	6/20/2013	9000	µg/L	01_062313_04	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy Creek	Zinc	6/20/2013	17	µg/L	01_062313_04	
Buddy Creek	Alkalinity (As CaCO3)	7/5/2013	63000	µg/L	01_071413_04	
Buddy Creek	Aluminum	7/5/2013	400	µg/L	01_071413_04	
Buddy Creek	Bicarbonate (As CaCO3)	7/5/2013	63000	µg/L	01_071413_04	
Buddy Creek	Cadmium	7/5/2013	< 0.1	µg/L	01_071413_04	Undetected
Buddy Creek	Calcium	7/5/2013	22100	µg/L	01_071413_04	
Buddy Creek	Carbonate (AS CaCO3)	7/5/2013	< 2000	µg/L	01_071413_04	Undetected
Buddy Creek	Chloride	7/5/2013	2760	µg/L	01_071413_04	
Buddy Creek	Conductivity, Field	7/5/2013	121.9	uS/cm	01_071413_04	
Buddy Creek	Iron	7/5/2013	560	µg/L	01_071413_04	
Buddy Creek	Lead	7/5/2013	1.6	µg/L	01_071413_04	
Buddy Creek	Magnesium	7/5/2013	9200	µg/L	01_071413_04	
Buddy Creek	pH, Field	7/5/2013	7.79	pH Units	01_071413_04	
Buddy Creek	Potassium	7/5/2013	500	µg/L	01_071413_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	7/5/2013	1.1	µg/L	01_071413_04	Analyte detected between MDL and ML
Buddy Creek	Sodium	7/5/2013	2200	µg/L	01_071413_04	
Buddy Creek	Sulfate	7/5/2013	30100	µg/L	01_071413_04	
Buddy Creek	Temperature, Field	7/5/2013	5.8	°C	01_071413_04	
Buddy Creek	Total Dissolved Solids	7/5/2013	130000	µg/L	01_071413_04	
Buddy Creek	Total Suspended Solids	7/5/2013	9000	µg/L	01_071413_04	Analyte detected between MDL and ML
Buddy Creek	Zinc	7/5/2013	12	µg/L	01_071413_04	
Buddy Creek	Alkalinity (As CaCO3)	7/29/2013	96000	µg/L	01_072813_04	
Buddy Creek	Aluminum	7/29/2013	55	µg/L	01_072813_04	
Buddy Creek	Bicarbonate (As CaCO3)	7/29/2013	96000	µg/L	01_072813_04	
Buddy Creek	Cadmium	7/29/2013	< 0.1	µg/L	01_072813_04	Undetected
Buddy Creek	Calcium	7/29/2013	35500	µg/L	01_072813_04	
Buddy Creek	Carbonate (AS CaCO3)	7/29/2013	< 2000	µg/L	01_072813_04	Undetected
Buddy Creek	Chloride	7/29/2013	3350	µg/L	01_072813_04	
Buddy Creek	Conductivity, Field	7/29/2013	197.9	uS/cm	01_072813_04	
Buddy Creek	Iron	7/29/2013	80	µg/L	01_072813_04	
Buddy Creek	Lead	7/29/2013	0.6	µg/L	01_072813_04	
Buddy Creek	Magnesium	7/29/2013	14600	µg/L	01_072813_04	
Buddy Creek	pH, Field	7/29/2013	8.1	pH Units	01_072813_04	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy Creek	Potassium	7/29/2013	400	µg/L	01_072813_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	7/29/2013	1.1	µg/L	01_072813_04	Analyte detected between MDL and ML
Buddy Creek	Sodium	7/29/2013	3800	µg/L	01_072813_04	
Buddy Creek	Sulfate	7/29/2013	54100	µg/L	01_072813_04	
Buddy Creek	Temperature, Field	7/29/2013	7.1	°C	01_072813_04	
Buddy Creek	Total Dissolved Solids	7/29/2013	174000	µg/L	01_072813_04	
Buddy Creek	Total Suspended Solids	7/29/2013	< 5000	µg/L	01_072813_04	Undetected
Buddy Creek	Zinc	7/29/2013	14	µg/L	01_072813_04	
Buddy Creek	Alkalinity (As CaCO3)	8/9/2013	83000	µg/L	01_081113_04	
Buddy Creek	Aluminum	8/9/2013	658	µg/L	01_081113_04	
Buddy Creek	Bicarbonate (As CaCO3)	8/9/2013	83000	µg/L	01_081113_04	
Buddy Creek	Cadmium	8/9/2013	< 0.1	µg/L	01_081113_04	Undetected
Buddy Creek	Calcium	8/9/2013	28600	µg/L	01_081113_04	
Buddy Creek	Carbonate (AS CaCO3)	8/9/2013	< 2000	µg/L	01_081113_04	Undetected
Buddy Creek	Chloride	8/9/2013	2870	µg/L	01_081113_04	
Buddy Creek	Conductivity, Field	8/9/2013	158.3	uS/cm	01_081113_04	
Buddy Creek	Iron	8/9/2013	850	µg/L	01_081113_04	
Buddy Creek	Lead	8/9/2013	3.1	µg/L	01_081113_04	
Buddy Creek	Magnesium	8/9/2013	11700	µg/L	01_081113_04	
Buddy Creek	pH, Field	8/9/2013	7.88	pH Units	01_081113_04	
Buddy Creek	Potassium	8/9/2013	500	µg/L	01_081113_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	8/9/2013	1.3	µg/L	01_081113_04	Analyte detected between MDL and ML
Buddy Creek	Sodium	8/9/2013	2800	µg/L	01_081113_04	
Buddy Creek	Sulfate	8/9/2013	40100	µg/L	01_081113_04	
Buddy Creek	Temperature, Field	8/9/2013	6.6	°C	01_081113_04	
Buddy Creek	Total Dissolved Solids	8/9/2013	144000	µg/L	01_081113_04	
Buddy Creek	Total Suspended Solids	8/9/2013	20000	µg/L	01_081113_04	
Buddy Creek	Zinc	8/9/2013	23	µg/L	01_081113_04	
Buddy Creek	Alkalinity (As CaCO3)	8/23/2013	103000	µg/L	01_082513_04	
Buddy Creek	Aluminum	8/23/2013	45	µg/L	01_082513_04	
Buddy Creek	Bicarbonate (As CaCO3)	8/23/2013	103000	µg/L	01_082513_04	
Buddy Creek	Cadmium	8/23/2013	< 0.1	µg/L	01_082513_04	Undetected
Buddy Creek	Calcium	8/23/2013	35400	µg/L	01_082513_04	
Buddy Creek	Carbonate (AS CaCO3)	8/23/2013	< 2000	µg/L	01_082513_04	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy Creek	Chloride	8/23/2013	3080	µg/L	01_082513_04	
Buddy Creek	Conductivity, Field	8/23/2013	186	uS/cm	01_082513_04	
Buddy Creek	Iron	8/23/2013	50	µg/L	01_082513_04	
Buddy Creek	Lead	8/23/2013	0.4	µg/L	01_082513_04	Analyte detected between MDL and ML
Buddy Creek	Magnesium	8/23/2013	15000	µg/L	01_082513_04	
Buddy Creek	pH, Field	8/23/2013	7.94	pH Units	01_082513_04	
Buddy Creek	Potassium	8/23/2013	400	µg/L	01_082513_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	8/23/2013	< 1	µg/L	01_082513_04	Undetected
Buddy Creek	Sodium	8/23/2013	3500	µg/L	01_082513_04	
Buddy Creek	Sulfate	8/23/2013	47100	µg/L	01_082513_04	
Buddy Creek	Temperature, Field	8/23/2013	4.4	°C	01_082513_04	
Buddy Creek	Total Dissolved Solids	8/23/2013	184000	µg/L	01_082513_04	
Buddy Creek	Total Suspended Solids	8/23/2013	< 5000	µg/L	01_082513_04	Undetected
Buddy Creek	Zinc	8/23/2013	17	µg/L	01_082513_04	
Buddy Creek	Alkalinity (As CaCO3)	9/12/2013	108000	µg/L	01_090813_04	
Buddy Creek	Aluminum	9/12/2013	26	µg/L	01_090813_04	
Buddy Creek	Bicarbonate (As CaCO3)	9/12/2013	108000	µg/L	01_090813_04	
Buddy Creek	Cadmium	9/12/2013	< 0.1	µg/L	01_090813_04	Undetected
Buddy Creek	Calcium	9/12/2013	39300	µg/L	01_090813_04	
Buddy Creek	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_04	Undetected
Buddy Creek	Chloride	9/12/2013	3300	µg/L	01_090813_04	
Buddy Creek	Conductivity, Field	9/12/2013	200.5	uS/cm	01_090813_04	
Buddy Creek	Iron	9/12/2013	40	µg/L	01_090813_04	Analyte detected between MDL and ML
Buddy Creek	Lead	9/12/2013	0.8	µg/L	01_090813_04	
Buddy Creek	Magnesium	9/12/2013	16200	µg/L	01_090813_04	
Buddy Creek	pH, Field	9/12/2013	8.13	pH Units	01_090813_04	
Buddy Creek	Potassium	9/12/2013	400	µg/L	01_090813_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	9/12/2013	2.0	µg/L	01_090813_04	Analyte detected between MDL and ML
Buddy Creek	Sodium	9/12/2013	4000	µg/L	01_090813_04	
Buddy Creek	Sulfate	9/12/2013	58600	µg/L	01_090813_04	
Buddy Creek	Temperature, Field	9/12/2013	3.8	°C	01_090813_04	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy Creek	Total Dissolved Solids	9/12/2013	182000	µg/L	01_090813_04	
Buddy Creek	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_04	Undetected
Buddy Creek	Zinc	9/12/2013	16	µg/L	01_090813_04	
Buddy Creek	Alkalinity (As CaCO3)	9/27/2013	106000	µg/L	01_092213_04	
Buddy Creek	Aluminum	9/27/2013	27	µg/L	01_092213_04	
Buddy Creek	Bicarbonate (As CaCO3)	9/27/2013	106000	µg/L	01_092213_04	
Buddy Creek	Cadmium	9/27/2013	< 0.1	µg/L	01_092213_04	Undetected
Buddy Creek	Calcium	9/27/2013	39400	µg/L	01_092213_04	
Buddy Creek	Carbonate (AS CaCO3)	9/27/2013	< 2000	µg/L	01_092213_04	Undetected
Buddy Creek	Chloride	9/27/2013	3810	µg/L	01_092213_04	
Buddy Creek	Conductivity, Field	9/27/2013	187.7	uS/cm	01_092213_04	
Buddy Creek	Iron	9/27/2013	70	µg/L	01_092213_04	
Buddy Creek	Lead	9/27/2013	0.2	µg/L	01_092213_04	Analyte detected between MDL and ML
Buddy Creek	Magnesium	9/27/2013	16900	µg/L	01_092213_04	
Buddy Creek	pH, Field	9/27/2013	7.95	pH Units	01_092213_04	
Buddy Creek	Potassium	9/27/2013	500	µg/L	01_092213_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	9/27/2013	1.7	µg/L	01_092213_04	Analyte detected between MDL and ML
Buddy Creek	Sodium	9/27/2013	4400	µg/L	01_092213_04	
Buddy Creek	Sulfate	9/27/2013	56800	µg/L	01_092213_04	
Buddy Creek	Temperature, Field	9/27/2013	0.5	°C	01_092213_04	
Buddy Creek	Total Dissolved Solids	9/27/2013	206000	µg/L	01_092213_04	
Buddy Creek	Total Suspended Solids	9/27/2013	< 5000	µg/L	01_092213_04	Undetected
Buddy Creek	Zinc	9/27/2013	9	µg/L	01_092213_04	
Buddy Creek	Alkalinity (As CaCO3)	10/7/2013	121000	µg/L	01_101313_04	
Buddy Creek	Aluminum	10/7/2013	12	µg/L	01_101313_04	
Buddy Creek	Bicarbonate (As CaCO3)	10/7/2013	121000	µg/L	01_101313_04	
Buddy Creek	Cadmium	10/7/2013	< 0.1	µg/L	01_101313_04	Undetected
Buddy Creek	Calcium	10/7/2013	42300	µg/L	01_101313_04	
Buddy Creek	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_04	Undetected
Buddy Creek	Chloride	10/7/2013	3940	µg/L	01_101313_04	
Buddy Creek	Conductivity, Field	10/7/2013	198.8	uS/cm	01_101313_04	
Buddy Creek	Iron	10/7/2013	< 20	µg/L	01_101313_04	Undetected
Buddy Creek	Lead	10/7/2013	0.1	µg/L	01_101313_04	Analyte detected between MDL and ML
Buddy Creek	Magnesium	10/7/2013	18100	µg/L	01_101313_04	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Buddy Creek	pH, Field	10/7/2013	7.60	pH Units	01_101313_04	
Buddy Creek	Potassium	10/7/2013	400	µg/L	01_101313_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	10/7/2013	1.5	µg/L	01_101313_04	Analyte detected between MDL and ML
Buddy Creek	Sodium	10/7/2013	4800	µg/L	01_101313_04	
Buddy Creek	Sulfate	10/7/2013	58800	µg/L	01_101313_04	
Buddy Creek	Temperature, Field	10/7/2013	0.9	°C	01_101313_04	
Buddy Creek	Total Dissolved Solids	10/7/2013	200000	µg/L	01_101313_04	
Buddy Creek	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_04	Undetected
Buddy Creek	Zinc	10/7/2013	15	µg/L	01_101313_04	
Buddy Creek	Alkalinity (As CaCO3)	10/11/2013	121000	µg/L	01_102713_04	
Buddy Creek	Aluminum	10/11/2013	9	µg/L	01_102713_04	
Buddy Creek	Bicarbonate (As CaCO3)	10/11/2013	121000	µg/L	01_102713_04	
Buddy Creek	Cadmium	10/11/2013	< 0.1	µg/L	01_102713_04	Undetected
Buddy Creek	Calcium	10/11/2013	43200	µg/L	01_102713_04	
Buddy Creek	Carbonate (AS CaCO3)	10/11/2013	< 2000	µg/L	01_102713_04	Undetected
Buddy Creek	Chloride	10/11/2013	4210	µg/L	01_102713_04	
Buddy Creek	Conductivity, Field	10/11/2013	199.5	uS/cm	01_102713_04	
Buddy Creek	Iron	10/11/2013	< 20	µg/L	01_102713_04	Undetected
Buddy Creek	Lead	10/11/2013	0.1	µg/L	01_102713_04	Analyte detected between MDL and ML
Buddy Creek	Magnesium	10/11/2013	18800	µg/L	01_102713_04	
Buddy Creek	pH, Field	10/11/2013	7.95	pH Units	01_102713_04	
Buddy Creek	Potassium	10/11/2013	500	µg/L	01_102713_04	Analyte detected between MDL and ML
Buddy Creek	Selenium	10/11/2013	1.5	µg/L	01_102713_04	Analyte detected between MDL and ML
Buddy Creek	Sodium	10/11/2013	4800	µg/L	01_102713_04	
Buddy Creek	Sulfate	10/11/2013	59400	µg/L	01_102713_04	
Buddy Creek	Temperature, Field	10/11/2013	0.7	°C	01_102713_04	
Buddy Creek	Total Dissolved Solids	10/11/2013	204000	µg/L	01_102713_04	
Buddy Creek	Total Suspended Solids	10/11/2013	< 5000	µg/L	01_102713_04	Undetected
Buddy Creek	Zinc	10/11/2013	15	µg/L	01_102713_04	
Connie Creek	Alkalinity (As CaCO3)	5/24/2013	98000	µg/L	01_051213_08	
Connie Creek	Aluminum	5/24/2013	74	µg/L	01_051213_08	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Connie Creek	Bicarbonate (As CaCO3)	5/24/2013	98000	µg/L	01_051213_08	
Connie Creek	Cadmium	5/24/2013	5.6	µg/L	01_051213_08	
Connie Creek	Calcium	5/24/2013	61800	µg/L	01_051213_08	
Connie Creek	Carbonate (AS CaCO3)	5/24/2013	< 2000	µg/L	01_051213_08	Undetected
Connie Creek	Chloride	5/24/2013	< 1000	µg/L	01_051213_08	Undetected
Connie Creek	Conductivity, Field	5/24/2013	268.0	uS/cm	01_051213_08	
Connie Creek	Iron	5/24/2013	110	µg/L	01_051213_08	
Connie Creek	Lead	5/24/2013	46.8	µg/L	01_051213_08	
Connie Creek	Magnesium	5/24/2013	40100	µg/L	01_051213_08	
Connie Creek	pH, Field	5/24/2013	6.37	pH Units	01_051213_08	
Connie Creek	Potassium	5/24/2013	1700	µg/L	01_051213_08	Analyte detected between MDL and ML
Connie Creek	Selenium	5/24/2013	< 1	µg/L	01_051213_08	Undetected
Connie Creek	Sodium	5/24/2013	10000	µg/L	01_051213_08	
Connie Creek	Sulfate	5/24/2013	241000	µg/L	01_051213_08	
Connie Creek	Temperature, Field	5/24/2013	0	°C	01_051213_08	
Connie Creek	Total Dissolved Solids	5/24/2013	390000	µg/L	01_051213_08	
Connie Creek	Total Suspended Solids	5/24/2013	< 5000	µg/L	01_051213_08	Undetected
Connie Creek	Zinc	5/24/2013	431	µg/L	01_051213_08	
Connie Creek	Alkalinity (As CaCO3)	6/13/2013	8000	µg/L	01_060913_08	Analyte detected between MDL and ML
Connie Creek	Aluminum	6/13/2013	1010	µg/L	01_060913_08	
Connie Creek	Bicarbonate (As CaCO3)	6/13/2013	8000	µg/L	01_060913_08	Analyte detected between MDL and ML
Connie Creek	Cadmium	6/13/2013	0.5	µg/L	01_060913_08	
Connie Creek	Calcium	6/13/2013	4500	µg/L	01_060913_08	
Connie Creek	Carbonate (AS CaCO3)	6/13/2013	< 2000	µg/L	01_060913_08	Undetected
Connie Creek	Chloride	6/13/2013	600	µg/L	01_060913_08	Analyte detected between MDL and ML
Connie Creek	Conductivity, Field	6/13/2013	26.6	uS/cm	01_060913_08	
Connie Creek	Iron	6/13/2013	2770	µg/L	01_060913_08	
Connie Creek	Lead	6/13/2013	13.2	µg/L	01_060913_08	
Connie Creek	Magnesium	6/13/2013	2600	µg/L	01_060913_08	
Connie Creek	pH, Field	6/13/2013	6.5	pH Units	01_060913_08	
Connie Creek	Potassium	6/13/2013	800	µg/L	01_060913_08	Analyte detected between MDL and ML



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Connie Creek	Selenium	6/13/2013	< 1	µg/L	01_060913_08	Undetected
Connie Creek	Sodium	6/13/2013	800	µg/L	01_060913_08	Analyte detected between MDL and ML
Connie Creek	Sulfate	6/13/2013	13200	µg/L	01_060913_08	
Connie Creek	Temperature, Field	6/13/2013	0.3	°C	01_060913_08	
Connie Creek	Total Dissolved Solids	6/13/2013	30000	µg/L	01_060913_08	
Connie Creek	Total Suspended Solids	6/13/2013	33000	µg/L	01_060913_08	
Connie Creek	Zinc	6/13/2013	61	µg/L	01_060913_08	
Connie Creek	Alkalinity (As CaCO3)	7/11/2013	43000	µg/L	01_071413_08	
Connie Creek	Aluminum	7/11/2013	312	µg/L	01_071413_08	
Connie Creek	Bicarbonate (As CaCO3)	7/11/2013	43000	µg/L	01_071413_08	
Connie Creek	Cadmium	7/11/2013	0.4	µg/L	01_071413_08	Analyte detected between MDL and ML
Connie Creek	Calcium	7/11/2013	33600	µg/L	01_071413_08	
Connie Creek	Carbonate (AS CaCO3)	7/11/2013	< 2000	µg/L	01_071413_08	Undetected
Connie Creek	Chloride	7/11/2013	1140	µg/L	01_071413_08	Analyte detected between MDL and ML
Connie Creek	Conductivity, Field	7/11/2013	240.8	uS/cm	01_071413_08	
Connie Creek	Iron	7/11/2013	1890	µg/L	01_071413_08	
Connie Creek	Lead	7/11/2013	0.3	µg/L	01_071413_08	Analyte detected between MDL and ML
Connie Creek	Magnesium	7/11/2013	20200	µg/L	01_071413_08	
Connie Creek	pH, Field	7/11/2013	6.81	pH Units	01_071413_08	
Connie Creek	Potassium	7/11/2013	700	µg/L	01_071413_08	Analyte detected between MDL and ML
Connie Creek	Selenium	7/11/2013	1.2	µg/L	01_071413_08	Analyte detected between MDL and ML
Connie Creek	Sodium	7/11/2013	4700	µg/L	01_071413_08	
Connie Creek	Sulfate	7/11/2013	155000	µg/L	01_071413_08	
Connie Creek	Temperature, Field	7/11/2013	7.3	°C	01_071413_08	
Connie Creek	Total Dissolved Solids	7/11/2013	250000	µg/L	01_071413_08	
Connie Creek	Total Suspended Solids	7/11/2013	< 5000	µg/L	01_071413_08	Undetected
Connie Creek	Zinc	7/11/2013	85	µg/L	01_071413_08	
Connie Creek	Conductivity, Field	8/12/2013	152.7	uS/cm	01_081113_08	
Connie Creek	pH, Field	8/12/2013	7.12	pH Units	01_081113_08	
Connie Creek	Temperature, Field	8/12/2013	4.3	°C	01_081113_08	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Connie Creek	Alkalinity (As CaCO3)	9/12/2013	58000	µg/L	01_090813_08	
Connie Creek	Aluminum	9/12/2013	241	µg/L	01_090813_08	
Connie Creek	Bicarbonate (As CaCO3)	9/12/2013	58000	µg/L	01_090813_08	
Connie Creek	Cadmium	9/12/2013	0.2	µg/L	01_090813_08	Analyte detected between MDL and ML
Connie Creek	Calcium	9/12/2013	42000	µg/L	01_090813_08	
Connie Creek	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_08	Undetected
Connie Creek	Chloride	9/12/2013	< 1000	µg/L	01_090813_08	Undetected
Connie Creek	Conductivity, Field	9/12/2013	255.8	uS/cm	01_090813_08	
Connie Creek	Iron	9/12/2013	1890	µg/L	01_090813_08	
Connie Creek	Lead	9/12/2013	0.2	µg/L	01_090813_08	Analyte detected between MDL and ML
Connie Creek	Magnesium	9/12/2013	24200	µg/L	01_090813_08	
Connie Creek	pH, Field	9/12/2013	7.33	pH Units	01_090813_08	
Connie Creek	Potassium	9/12/2013	600	µg/L	01_090813_08	Analyte detected between MDL and ML
Connie Creek	Selenium	9/12/2013	1.1	µg/L	01_090813_08	Analyte detected between MDL and ML
Connie Creek	Sodium	9/12/2013	5500	µg/L	01_090813_08	
Connie Creek	Sulfate	9/12/2013	167000	µg/L	01_090813_08	
Connie Creek	Temperature, Field	9/12/2013	2.6	°C	01_090813_08	
Connie Creek	Total Dissolved Solids	9/12/2013	282000	µg/L	01_090813_08	
Connie Creek	Total Suspended Solids	9/12/2013	7000	µg/L	01_090813_08	Analyte detected between MDL and ML
Connie Creek	Zinc	9/12/2013	79	µg/L	01_090813_08	
Connie Creek	Alkalinity (As CaCO3)	10/7/2013	47000	µg/L	01_101313_08	
Connie Creek	Aluminum	10/7/2013	945	µg/L	01_101313_08	
Connie Creek	Bicarbonate (As CaCO3)	10/7/2013	47000	µg/L	01_101313_08	
Connie Creek	Cadmium	10/7/2013	0.7	µg/L	01_101313_08	
Connie Creek	Calcium	10/7/2013	60400	µg/L	01_101313_08	
Connie Creek	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_08	Undetected
Connie Creek	Chloride	10/7/2013	< 1000	µg/L	01_101313_08	Undetected
Connie Creek	Conductivity, Field	10/7/2013	356.4	uS/cm	01_101313_08	
Connie Creek	Iron	10/7/2013	9790	µg/L	01_101313_08	
Connie Creek	Lead	10/7/2013	0.4	µg/L	01_101313_08	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Connie Creek	Magnesium	10/7/2013	41600	µg/L	01_101313_08	
Connie Creek	pH, Field	10/7/2013	6.51	pH Units	01_101313_08	
Connie Creek	Potassium	10/7/2013	700	µg/L	01_101313_08	Analyte detected between MDL and ML
Connie Creek	Selenium	10/7/2013	< 1	µg/L	01_101313_08	Undetected
Connie Creek	Sodium	10/7/2013	8400	µg/L	01_101313_08	
Connie Creek	Sulfate	10/7/2013	281000	µg/L	01_101313_08	
Connie Creek	Temperature, Field	10/7/2013	-0.1	°C	01_101313_08	
Connie Creek	Total Dissolved Solids	10/7/2013	452000	µg/L	01_101313_08	
Connie Creek	Total Suspended Solids	10/7/2013	18000	µg/L	01_101313_08	Analyte detected between MDL and ML
Connie Creek	Zinc	10/7/2013	291	µg/L	01_101313_08	
Dudd Creek	Alkalinity (As CaCO3)	5/27/2013	21000	µg/L	01_051213_05	
Dudd Creek	Aluminum	5/27/2013	47	µg/L	01_051213_05	
Dudd Creek	Bicarbonate (As CaCO3)	5/27/2013	21000	µg/L	01_051213_05	
Dudd Creek	Cadmium	5/27/2013	0.3	µg/L	01_051213_05	Analyte detected between MDL and ML
Dudd Creek	Calcium	5/27/2013	6200	µg/L	01_051213_05	
Dudd Creek	Carbonate (AS CaCO3)	5/27/2013	< 2000	µg/L	01_051213_05	Undetected
Dudd Creek	Chloride	5/27/2013	1900	µg/L	01_051213_05	Analyte detected between MDL and ML
Dudd Creek	Conductivity, Field	5/27/2013	29.8	uS/cm	01_051213_05	
Dudd Creek	Iron	5/27/2013	70	µg/L	01_051213_05	
Dudd Creek	Lead	5/27/2013	8.1	µg/L	01_051213_05	
Dudd Creek	Magnesium	5/27/2013	2500	µg/L	01_051213_05	
Dudd Creek	pH, Field	5/27/2013	7.10	pH Units	01_051213_05	
Dudd Creek	Potassium	5/27/2013	1100	µg/L	01_051213_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	5/27/2013	< 1	µg/L	01_051213_05	Undetected
Dudd Creek	Sodium	5/27/2013	500	µg/L	01_051213_05	Analyte detected between MDL and ML
Dudd Creek	Sulfate	5/27/2013	4620	µg/L	01_051213_05	
Dudd Creek	Temperature, Field	5/27/2013	0	°C	01_051213_05	
Dudd Creek	Total Dissolved Solids	5/27/2013	40000	µg/L	01_051213_05	
Dudd Creek	Total Suspended Solids	5/27/2013	< 5000	µg/L	01_051213_05	Undetected
Dudd Creek	Zinc	5/27/2013	38	µg/L	01_051213_05	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Dudd Creek	Alkalinity (As CaCO3)	5/31/2013	13000	µg/L	01_052613_05	Analyte detected between MDL and ML
Dudd Creek	Aluminum	5/31/2013	169	µg/L	01_052613_05	
Dudd Creek	Bicarbonate (As CaCO3)	5/31/2013	13000	µg/L	01_052613_05	Analyte detected between MDL and ML
Dudd Creek	Cadmium	5/31/2013	0.3	µg/L	01_052613_05	Analyte detected between MDL and ML
Dudd Creek	Calcium	5/31/2013	4700	µg/L	01_052613_05	
Dudd Creek	Carbonate (AS CaCO3)	5/31/2013	< 2000	µg/L	01_052613_05	Undetected
Dudd Creek	Chloride	5/31/2013	1280	µg/L	01_052613_05	Analyte detected between MDL and ML
Dudd Creek	Conductivity, Field	5/31/2013	23.1	uS/cm	01_052613_05	
Dudd Creek	Iron	5/31/2013	220	µg/L	01_052613_05	
Dudd Creek	Lead	5/31/2013	8.5	µg/L	01_052613_05	
Dudd Creek	Magnesium	5/31/2013	1900	µg/L	01_052613_05	
Dudd Creek	pH, Field	5/31/2013	7.86	pH Units	01_052613_05	
Dudd Creek	Potassium	5/31/2013	700	µg/L	01_052613_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	5/31/2013	< 1	µg/L	01_052613_05	Undetected
Dudd Creek	Sodium	5/31/2013	500	µg/L	01_052613_05	Analyte detected between MDL and ML
Dudd Creek	Sulfate	5/31/2013	4910	µg/L	01_052613_05	
Dudd Creek	Temperature, Field	5/31/2013	0.1	°C	01_052613_05	
Dudd Creek	Total Dissolved Solids	5/31/2013	30000	µg/L	01_052613_05	
Dudd Creek	Total Suspended Solids	5/31/2013	< 5000	µg/L	01_052613_05	Undetected
Dudd Creek	Zinc	5/31/2013	34	µg/L	01_052613_05	
Dudd Creek	Alkalinity (As CaCO3)	6/7/2013	27000	µg/L	01_060913_05	
Dudd Creek	Aluminum	6/7/2013	300	µg/L	01_060913_05	
Dudd Creek	Bicarbonate (As CaCO3)	6/7/2013	27000	µg/L	01_060913_05	
Dudd Creek	Cadmium	6/7/2013	0.1	µg/L	01_060913_05	Analyte detected between MDL and ML
Dudd Creek	Calcium	6/7/2013	7600	µg/L	01_060913_05	
Dudd Creek	Carbonate (AS CaCO3)	6/7/2013	< 2000	µg/L	01_060913_05	Undetected
Dudd Creek	Chloride	6/7/2013	1110	µg/L	01_060913_05	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Dudd Creek	Conductivity, Field	6/7/2013	35.3	uS/cm	01_060913_05	
Dudd Creek	Iron	6/7/2013	550	µg/L	01_060913_05	
Dudd Creek	Lead	6/7/2013	3.3	µg/L	01_060913_05	
Dudd Creek	Magnesium	6/7/2013	3200	µg/L	01_060913_05	
Dudd Creek	pH, Field	6/7/2013	7.47	pH Units	01_060913_05	
Dudd Creek	Potassium	6/7/2013	700	µg/L	01_060913_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	6/7/2013	< 1	µg/L	01_060913_05	Undetected
Dudd Creek	Sodium	6/7/2013	600	µg/L	01_060913_05	Analyte detected between MDL and ML
Dudd Creek	Sulfate	6/7/2013	7610	µg/L	01_060913_05	
Dudd Creek	Temperature, Field	6/7/2013	0.2	°C	01_060913_05	
Dudd Creek	Total Dissolved Solids	6/7/2013	40000	µg/L	01_060913_05	
Dudd Creek	Total Suspended Solids	6/7/2013	8000	µg/L	01_060913_05	Analyte detected between MDL and ML
Dudd Creek	Zinc	6/7/2013	22	µg/L	01_060913_05	
Dudd Creek	Alkalinity (As CaCO3)	6/20/2013	49000	µg/L	01_062313_05	
Dudd Creek	Aluminum	6/20/2013	205	µg/L	01_062313_05	
Dudd Creek	Bicarbonate (As CaCO3)	6/20/2013	49000	µg/L	01_062313_05	
Dudd Creek	Cadmium	6/20/2013	< 0.1	µg/L	01_062313_05	Undetected
Dudd Creek	Calcium	6/20/2013	16400	µg/L	01_062313_05	
Dudd Creek	Carbonate (AS CaCO3)	6/20/2013	< 2000	µg/L	01_062313_05	Undetected
Dudd Creek	Chloride	6/20/2013	2160	µg/L	01_062313_05	Analyte detected between MDL and ML
Dudd Creek	Conductivity, Field	6/20/2013	95.3	uS/cm	01_062313_05	
Dudd Creek	Iron	6/20/2013	460	µg/L	01_062313_05	
Dudd Creek	Lead	6/20/2013	1.5	µg/L	01_062313_05	
Dudd Creek	Magnesium	6/20/2013	6400	µg/L	01_062313_05	
Dudd Creek	pH, Field	6/20/2013	7.54	pH Units	01_062313_05	
Dudd Creek	Potassium	6/20/2013	600	µg/L	01_062313_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	6/20/2013	< 1	µg/L	01_062313_05	Undetected
Dudd Creek	Sodium	6/20/2013	1300	µg/L	01_062313_05	Analyte detected between MDL and ML
Dudd Creek	Sulfate	6/20/2013	16700	µg/L	01_062313_05	
Dudd Creek	Temperature, Field	6/20/2013	8.8	°C	01_062313_05	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Dudd Creek	Total Dissolved Solids	6/20/2013	90000	µg/L	01_062313_05	
Dudd Creek	Total Suspended Solids	6/20/2013	< 5000	µg/L	01_062313_05	Undetected
Dudd Creek	Zinc	6/20/2013	8	µg/L	01_062313_05	
Dudd Creek	Alkalinity (As CaCO3)	7/5/2013	53000	µg/L	01_071413_05	
Dudd Creek	Aluminum	7/5/2013	283	µg/L	01_071413_05	
Dudd Creek	Bicarbonate (As CaCO3)	7/5/2013	53000	µg/L	01_071413_05	
Dudd Creek	Cadmium	7/5/2013	< 0.1	µg/L	01_071413_05	Undetected
Dudd Creek	Calcium	7/5/2013	18200	µg/L	01_071413_05	
Dudd Creek	Carbonate (AS CaCO3)	7/5/2013	< 2000	µg/L	01_071413_05	Undetected
Dudd Creek	Chloride	7/5/2013	2190	µg/L	01_071413_05	Analyte detected between MDL and ML
Dudd Creek	Conductivity, Field	7/5/2013	98.4	uS/cm	01_071413_05	
Dudd Creek	Iron	7/5/2013	440	µg/L	01_071413_05	
Dudd Creek	Lead	7/5/2013	1.1	µg/L	01_071413_05	
Dudd Creek	Magnesium	7/5/2013	7100	µg/L	01_071413_05	
Dudd Creek	pH, Field	7/5/2013	7.51	pH Units	01_071413_05	
Dudd Creek	Potassium	7/5/2013	400	µg/L	01_071413_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	7/5/2013	< 1	µg/L	01_071413_05	Undetected
Dudd Creek	Sodium	7/5/2013	1500	µg/L	01_071413_05	Analyte detected between MDL and ML
Dudd Creek	Sulfate	7/5/2013	20800	µg/L	01_071413_05	
Dudd Creek	Temperature, Field	7/5/2013	5.6	°C	01_071413_05	
Dudd Creek	Total Dissolved Solids	7/5/2013	110000	µg/L	01_071413_05	
Dudd Creek	Total Suspended Solids	7/5/2013	6000	µg/L	01_071413_05	Analyte detected between MDL and ML
Dudd Creek	Zinc	7/5/2013	7	µg/L	01_071413_05	
Dudd Creek	Alkalinity (As CaCO3)	7/29/2013	89000	µg/L	01_072813_05	
Dudd Creek	Aluminum	7/29/2013	35	µg/L	01_072813_05	
Dudd Creek	Bicarbonate (As CaCO3)	7/29/2013	89000	µg/L	01_072813_05	
Dudd Creek	Cadmium	7/29/2013	< 0.1	µg/L	01_072813_05	Undetected
Dudd Creek	Calcium	7/29/2013	30100	µg/L	01_072813_05	
Dudd Creek	Carbonate (AS CaCO3)	7/29/2013	< 2000	µg/L	01_072813_05	Undetected
Dudd Creek	Chloride	7/29/2013	3130	µg/L	01_072813_05	
Dudd Creek	Conductivity, Field	7/29/2013	165.8	uS/cm	01_072813_05	
Dudd Creek	Iron	7/29/2013	40	µg/L	01_072813_05	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Dudd Creek	Lead	7/29/2013	0.1	µg/L	01_072813_05	Analyte detected between MDL and ML
Dudd Creek	Magnesium	7/29/2013	11900	µg/L	01_072813_05	
Dudd Creek	pH, Field	7/29/2013	8.04	pH Units	01_072813_05	
Dudd Creek	Potassium	7/29/2013	300	µg/L	01_072813_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	7/29/2013	< 1	µg/L	01_072813_05	Undetected
Dudd Creek	Sodium	7/29/2013	2400	µg/L	01_072813_05	
Dudd Creek	Sulfate	7/29/2013	38800	µg/L	01_072813_05	
Dudd Creek	Temperature, Field	7/29/2013	6.4	°C	01_072813_05	
Dudd Creek	Total Dissolved Solids	7/29/2013	142000	µg/L	01_072813_05	
Dudd Creek	Total Suspended Solids	7/29/2013	< 5000	µg/L	01_072813_05	Undetected
Dudd Creek	Zinc	7/29/2013	5	µg/L	01_072813_05	
Dudd Creek	Alkalinity (As CaCO3)	8/9/2013	78000	µg/L	01_081113_05	
Dudd Creek	Aluminum	8/9/2013	119	µg/L	01_081113_05	
Dudd Creek	Bicarbonate (As CaCO3)	8/9/2013	78000	µg/L	01_081113_05	
Dudd Creek	Cadmium	8/9/2013	< 0.1	µg/L	01_081113_05	Undetected
Dudd Creek	Calcium	8/9/2013	27100	µg/L	01_081113_05	
Dudd Creek	Carbonate (AS CaCO3)	8/9/2013	< 2000	µg/L	01_081113_05	Undetected
Dudd Creek	Chloride	8/9/2013	2540	µg/L	01_081113_05	
Dudd Creek	Conductivity, Field	8/9/2013	146.8	uS/cm	01_081113_05	
Dudd Creek	Iron	8/9/2013	210	µg/L	01_081113_05	
Dudd Creek	Lead	8/9/2013	1.4	µg/L	01_081113_05	
Dudd Creek	Magnesium	8/9/2013	10500	µg/L	01_081113_05	
Dudd Creek	pH, Field	8/9/2013	7.85	pH Units	01_081113_05	
Dudd Creek	Potassium	8/9/2013	< 300	µg/L	01_081113_05	Undetected
Dudd Creek	Selenium	8/9/2013	< 1	µg/L	01_081113_05	Undetected
Dudd Creek	Sodium	8/9/2013	1800	µg/L	01_081113_05	Analyte detected between MDL and ML
Dudd Creek	Sulfate	8/9/2013	31300	µg/L	01_081113_05	
Dudd Creek	Temperature, Field	8/9/2013	6.9	°C	01_081113_05	
Dudd Creek	Total Dissolved Solids	8/9/2013	132000	µg/L	01_081113_05	
Dudd Creek	Total Suspended Solids	8/9/2013	23000	µg/L	01_081113_05	
Dudd Creek	Zinc	8/9/2013	11	µg/L	01_081113_05	
Dudd Creek	Alkalinity (As CaCO3)	8/23/2013	125000	µg/L	01_082513_05	
Dudd Creek	Aluminum	8/23/2013	33	µg/L	01_082513_05	
Dudd Creek	Bicarbonate (As CaCO3)	8/23/2013	125000	µg/L	01_082513_05	
Dudd Creek	Cadmium	8/23/2013	< 0.1	µg/L	01_082513_05	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Dudd Creek	Calcium	8/23/2013	36700	µg/L	01_082513_05	
Dudd Creek	Carbonate (AS CaCO3)	8/23/2013	< 2000	µg/L	01_082513_05	Undetected
Dudd Creek	Chloride	8/23/2013	3080	µg/L	01_082513_05	
Dudd Creek	Conductivity, Field	8/23/2013	183	uS/cm	01_082513_05	
Dudd Creek	Iron	8/23/2013	< 20	µg/L	01_082513_05	Undetected
Dudd Creek	Lead	8/23/2013	0.1	µg/L	01_082513_05	Analyte detected between MDL and ML
Dudd Creek	Magnesium	8/23/2013	14800	µg/L	01_082513_05	
Dudd Creek	pH, Field	8/23/2013	7.98	pH Units	01_082513_05	
Dudd Creek	Potassium	8/23/2013	< 300	µg/L	01_082513_05	Undetected
Dudd Creek	Selenium	8/23/2013	< 1	µg/L	01_082513_05	Undetected
Dudd Creek	Sodium	8/23/2013	2500	µg/L	01_082513_05	
Dudd Creek	Sulfate	8/23/2013	43000	µg/L	01_082513_05	
Dudd Creek	Temperature, Field	8/23/2013	4	°C	01_082513_05	
Dudd Creek	Total Dissolved Solids	8/23/2013	176000	µg/L	01_082513_05	
Dudd Creek	Total Suspended Solids	8/23/2013	< 5000	µg/L	01_082513_05	Undetected
Dudd Creek	Zinc	8/23/2013	8	µg/L	01_082513_05	
Dudd Creek	Alkalinity (As CaCO3)	9/12/2013	105000	µg/L	01_090813_05	
Dudd Creek	Aluminum	9/12/2013	17	µg/L	01_090813_05	
Dudd Creek	Bicarbonate (As CaCO3)	9/12/2013	105000	µg/L	01_090813_05	
Dudd Creek	Cadmium	9/12/2013	< 0.1	µg/L	01_090813_05	Undetected
Dudd Creek	Calcium	9/12/2013	31200	µg/L	01_090813_05	
Dudd Creek	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_05	Undetected
Dudd Creek	Chloride	9/12/2013	3510	µg/L	01_090813_05	
Dudd Creek	Conductivity, Field	9/12/2013	157.7	uS/cm	01_090813_05	
Dudd Creek	Iron	9/12/2013	40	µg/L	01_090813_05	Analyte detected between MDL and ML
Dudd Creek	Lead	9/12/2013	0.1	µg/L	01_090813_05	Analyte detected between MDL and ML
Dudd Creek	Magnesium	9/12/2013	12600	µg/L	01_090813_05	
Dudd Creek	pH, Field	9/12/2013	8.07	pH Units	01_090813_05	
Dudd Creek	Potassium	9/12/2013	300	µg/L	01_090813_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	9/12/2013	< 1	µg/L	01_090813_05	Undetected
Dudd Creek	Sodium	9/12/2013	2400	µg/L	01_090813_05	
Dudd Creek	Sulfate	9/12/2013	38000	µg/L	01_090813_05	
Dudd Creek	Temperature, Field	9/12/2013	3.3	°C	01_090813_05	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Dudd Creek	Total Dissolved Solids	9/12/2013	146000	µg/L	01_090813_05	
Dudd Creek	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_05	Undetected
Dudd Creek	Zinc	9/12/2013	8	µg/L	01_090813_05	
Dudd Creek	Alkalinity (As CaCO3)	9/27/2013	108000	µg/L	01_092213_05	
Dudd Creek	Aluminum	9/27/2013	20	µg/L	01_092213_05	
Dudd Creek	Bicarbonate (As CaCO3)	9/27/2013	108000	µg/L	01_092213_05	
Dudd Creek	Cadmium	9/27/2013	< 0.1	µg/L	01_092213_05	Undetected
Dudd Creek	Calcium	9/27/2013	39500	µg/L	01_092213_05	
Dudd Creek	Carbonate (AS CaCO3)	9/27/2013	< 2000	µg/L	01_092213_05	Undetected
Dudd Creek	Chloride	9/27/2013	3670	µg/L	01_092213_05	
Dudd Creek	Conductivity, Field	9/27/2013	174.7	uS/cm	01_092213_05	
Dudd Creek	Iron	9/27/2013	40	µg/L	01_092213_05	Analyte detected between MDL and ML
Dudd Creek	Lead	9/27/2013	0.1	µg/L	01_092213_05	Analyte detected between MDL and ML
Dudd Creek	Magnesium	9/27/2013	16300	µg/L	01_092213_05	
Dudd Creek	pH, Field	9/27/2013	8.0	pH Units	01_092213_05	
Dudd Creek	Potassium	9/27/2013	500	µg/L	01_092213_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	9/27/2013	< 1	µg/L	01_092213_05	Undetected
Dudd Creek	Sodium	9/27/2013	2900	µg/L	01_092213_05	
Dudd Creek	Sulfate	9/27/2013	47200	µg/L	01_092213_05	
Dudd Creek	Temperature, Field	9/27/2013	0	°C	01_092213_05	
Dudd Creek	Total Dissolved Solids	9/27/2013	198000	µg/L	01_092213_05	
Dudd Creek	Total Suspended Solids	9/27/2013	< 5000	µg/L	01_092213_05	Undetected
Dudd Creek	Zinc	9/27/2013	8	µg/L	01_092213_05	Analyte detected between MDL and ML
Dudd Creek	Alkalinity (As CaCO3)	10/7/2013	118000	µg/L	01_101313_05	
Dudd Creek	Aluminum	10/7/2013	13	µg/L	01_101313_05	
Dudd Creek	Bicarbonate (As CaCO3)	10/7/2013	118000	µg/L	01_101313_05	
Dudd Creek	Cadmium	10/7/2013	< 0.2	µg/L	01_101313_05	Undetected
Dudd Creek	Calcium	10/7/2013	41100	µg/L	01_101313_05	
Dudd Creek	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_05	Undetected
Dudd Creek	Chloride	10/7/2013	3570	µg/L	01_101313_05	
Dudd Creek	Conductivity, Field	10/7/2013	180.5	uS/cm	01_101313_05	
Dudd Creek	Iron	10/7/2013	< 20	µg/L	01_101313_05	Undetected
Dudd Creek	Lead	10/7/2013	< 0.2	µg/L	01_101313_05	Undetected
Dudd Creek	Magnesium	10/7/2013	16700	µg/L	01_101313_05	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Dudd Creek	pH, Field	10/7/2013	7.62	pH Units	01_101313_05	
Dudd Creek	Potassium	10/7/2013	300	µg/L	01_101313_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	10/7/2013	1.1	µg/L	01_101313_05	Analyte detected between MDL and ML
Dudd Creek	Sodium	10/7/2013	2900	µg/L	01_101313_05	
Dudd Creek	Sulfate	10/7/2013	47300	µg/L	01_101313_05	
Dudd Creek	Temperature, Field	10/7/2013	0.4	°C	01_101313_05	
Dudd Creek	Total Dissolved Solids	10/7/2013	176000	µg/L	01_101313_05	
Dudd Creek	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_05	Undetected
Dudd Creek	Zinc	10/7/2013	7	µg/L	01_101313_05	Analyte detected between MDL and ML
Dudd Creek	Alkalinity (As CaCO3)	10/11/2013	119000	µg/L	01_102713_05	
Dudd Creek	Aluminum	10/11/2013	5	µg/L	01_102713_05	
Dudd Creek	Bicarbonate (As CaCO3)	10/11/2013	118000	µg/L	01_102713_05	
Dudd Creek	Cadmium	10/11/2013	< 0.1	µg/L	01_102713_05	Undetected
Dudd Creek	Calcium	10/11/2013	41800	µg/L	01_102713_05	
Dudd Creek	Carbonate (AS CaCO3)	10/11/2013	< 2000	µg/L	01_102713_05	Undetected
Dudd Creek	Chloride	10/11/2013	3650	µg/L	01_102713_05	
Dudd Creek	Conductivity, Field	10/11/2013	183.6	uS/cm	01_102713_05	
Dudd Creek	Iron	10/11/2013	< 20	µg/L	01_102713_05	Undetected
Dudd Creek	Lead	10/11/2013	< 0.1	µg/L	01_102713_05	Undetected
Dudd Creek	Magnesium	10/11/2013	16800	µg/L	01_102713_05	
Dudd Creek	pH, Field	10/11/2013	7.98	pH Units	01_102713_05	
Dudd Creek	Potassium	10/11/2013	300	µg/L	01_102713_05	Analyte detected between MDL and ML
Dudd Creek	Selenium	10/11/2013	1.2	µg/L	01_102713_05	Analyte detected between MDL and ML
Dudd Creek	Sodium	10/11/2013	3100	µg/L	01_102713_05	
Dudd Creek	Sulfate	10/11/2013	47500	µg/L	01_102713_05	
Dudd Creek	Temperature, Field	10/11/2013	0.5	°C	01_102713_05	
Dudd Creek	Total Dissolved Solids	10/11/2013	194000	µg/L	01_102713_05	
Dudd Creek	Total Suspended Solids	10/11/2013	< 5000	µg/L	01_102713_05	Undetected
Dudd Creek	Zinc	10/11/2013	6	µg/L	01_102713_05	
Lower Bons	Alkalinity (As CaCO3)	5/27/2013	16000	µg/L	01_051213_06	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Lower Bons	Aluminum	5/27/2013	234	µg/L	01_051213_06	
			16000	µg/L		Analyte detected between MDL and ML
Lower Bons	Bicarbonate (As CaCO3)	5/27/2013			01_051213_06	
Lower Bons	Cadmium	5/27/2013	2.1	µg/L	01_051213_06	
Lower Bons	Calcium	5/27/2013	10100	µg/L	01_051213_06	
Lower Bons	Carbonate (AS CaCO3)	5/27/2013	< 2000	µg/L	01_051213_06	Undetected
Lower Bons	Chloride	5/27/2013	7820	µg/L	01_051213_06	
Lower Bons	Conductivity, Field	5/27/2013	52.2	uS/cm	01_051213_06	
Lower Bons	Iron	5/27/2013	910	µg/L	01_051213_06	
Lower Bons	Lead	5/27/2013	48.7	µg/L	01_051213_06	
Lower Bons	Magnesium	5/27/2013	3800	µg/L	01_051213_06	
Lower Bons	pH, Field	5/27/2013	6.77	pH Units	01_051213_06	
			1200	µg/L		Analyte detected between MDL and ML
Lower Bons	Potassium	5/27/2013			01_051213_06	
Lower Bons	Selenium	5/27/2013	< 1	µg/L	01_051213_06	Undetected
			1100	µg/L		Analyte detected between MDL and ML
Lower Bons	Sodium	5/27/2013			01_051213_06	
Lower Bons	Sulfate	5/27/2013	14780	µg/L	01_051213_06	
Lower Bons	Temperature, Field	5/27/2013	0	°C	01_051213_06	
Lower Bons	Total Dissolved Solids	5/27/2013	60000	µg/L	01_051213_06	
			5000	µg/L		Analyte detected between MDL and ML
Lower Bons	Total Suspended Solids	5/27/2013			01_051213_06	
Lower Bons	Zinc	5/27/2013	225	µg/L	01_051213_06	
			6000	µg/L		Analyte detected between MDL and ML
Lower Bons	Alkalinity (As CaCO3)	5/31/2013			01_052613_06	
Lower Bons	Aluminum	5/31/2013	358	µg/L	01_052613_06	
			6000	µg/L		Analyte detected between MDL and ML
Lower Bons	Bicarbonate (As CaCO3)	5/31/2013			01_052613_06	
Lower Bons	Cadmium	5/31/2013	1.2	µg/L	01_052613_06	
Lower Bons	Calcium	5/31/2013	2900	µg/L	01_052613_06	
Lower Bons	Carbonate (AS CaCO3)	5/31/2013	< 2000	µg/L	01_052613_06	Undetected
			1220	µg/L		Analyte detected between MDL and ML
Lower Bons	Chloride	5/31/2013			01_052613_06	
Lower Bons	Conductivity, Field	5/31/2013	15.5	uS/cm	01_052613_06	
Lower Bons	Iron	5/31/2013	580	µg/L	01_052613_06	
Lower Bons	Lead	5/31/2013	43.6	µg/L	01_052613_06	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Lower Bons	Magnesium	5/31/2013	1000	µg/L	01_052613_06	Analyte detected between MDL and ML
Lower Bons	pH, Field	5/31/2013	6.95	pH Units	01_052613_06	
Lower Bons	Potassium	5/31/2013	1000	µg/L	01_052613_06	Analyte detected between MDL and ML
Lower Bons	Selenium	5/31/2013	< 1	µg/L	01_052613_06	Undetected
Lower Bons	Sodium	5/31/2013	400	µg/L	01_052613_06	Analyte detected between MDL and ML
Lower Bons	Sulfate	5/31/2013	4100	µg/L	01_052613_06	
Lower Bons	Temperature, Field	5/31/2013	0	°C	01_052613_06	
Lower Bons	Total Dissolved Solids	5/31/2013	20000	µg/L	01_052613_06	
Lower Bons	Total Suspended Solids	5/31/2013	9000	µg/L	01_052613_06	Analyte detected between MDL and ML
Lower Bons	Zinc	5/31/2013	127	µg/L	01_052613_06	
Lower Bons	Alkalinity (As CaCO3)	6/7/2013	11000	µg/L	01_060913_06	Analyte detected between MDL and ML
Lower Bons	Aluminum	6/7/2013	1150	µg/L	01_060913_06	
Lower Bons	Bicarbonate (As CaCO3)	6/7/2013	11000	µg/L	01_060913_06	Analyte detected between MDL and ML
Lower Bons	Cadmium	6/7/2013	0.4	µg/L	01_060913_06	Analyte detected between MDL and ML
Lower Bons	Calcium	6/7/2013	7100	µg/L	01_060913_06	
Lower Bons	Carbonate (AS CaCO3)	6/7/2013	< 2000	µg/L	01_060913_06	Undetected
Lower Bons	Chloride	6/7/2013	3840	µg/L	01_060913_06	
Lower Bons	Conductivity, Field	6/7/2013	38.3	uS/cm	01_060913_06	
Lower Bons	Iron	6/7/2013	1920	µg/L	01_060913_06	
Lower Bons	Lead	6/7/2013	8.5	µg/L	01_060913_06	
Lower Bons	Magnesium	6/7/2013	2900	µg/L	01_060913_06	
Lower Bons	pH, Field	6/7/2013	7.38	pH Units	01_060913_06	
Lower Bons	Potassium	6/7/2013	1100	µg/L	01_060913_06	Analyte detected between MDL and ML
Lower Bons	Selenium	6/7/2013	< 1	µg/L	01_060913_06	Undetected
Lower Bons	Sodium	6/7/2013	800	µg/L	01_060913_06	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Lower Bons	Sulfate	6/7/2013	10600	µg/L	01_060913_06	
Lower Bons	Temperature, Field	6/7/2013	0.7	°C	01_060913_06	
Lower Bons	Total Dissolved Solids	6/7/2013	50000	µg/L	01_060913_06	
Lower Bons	Total Suspended Solids	6/7/2013	31000	µg/L	01_060913_06	
Lower Bons	Zinc	6/7/2013	130	µg/L	01_060913_06	
Lower Bons	Alkalinity (As CaCO3)	6/20/2013	38000	µg/L	01_062313_06	
Lower Bons	Aluminum	6/20/2013	1290	µg/L	01_062313_06	
Lower Bons	Bicarbonate (As CaCO3)	6/20/2013	38000	µg/L	01_062313_06	
Lower Bons	Cadmium	6/20/2013	0.1	µg/L	01_062313_06	Analyte detected between MDL and ML
Lower Bons	Calcium	6/20/2013	15900	µg/L	01_062313_06	
Lower Bons	Carbonate (AS CaCO3)	6/20/2013	< 2000	µg/L	01_062313_06	Undetected
Lower Bons	Chloride	6/20/2013	2900	µg/L	01_062313_06	
Lower Bons	Conductivity, Field	6/20/2013	88.9	uS/cm	01_062313_06	
Lower Bons	Iron	6/20/2013	2540	µg/L	01_062313_06	
Lower Bons	Lead	6/20/2013	3.4	µg/L	01_062313_06	
Lower Bons	Magnesium	6/20/2013	6600	µg/L	01_062313_06	
Lower Bons	pH, Field	6/20/2013	6.97	pH Units	01_062313_06	
Lower Bons	Potassium	6/20/2013	1100	µg/L	01_062313_06	Analyte detected between MDL and ML
Lower Bons	Selenium	6/20/2013	< 1	µg/L	01_062313_06	Undetected
Lower Bons	Sodium	6/20/2013	2000	µg/L	01_062313_06	
Lower Bons	Sulfate	6/20/2013	28000	µg/L	01_062313_06	
Lower Bons	Temperature, Field	6/20/2013	5.4	°C	01_062313_06	
Lower Bons	Total Dissolved Solids	6/20/2013	90000	µg/L	01_062313_06	
Lower Bons	Total Suspended Solids	6/20/2013	21000	µg/L	01_062313_06	
Lower Bons	Zinc	6/20/2013	43	µg/L	01_062313_06	
Lower Bons	Alkalinity (As CaCO3)	7/5/2013	32000	µg/L	01_071413_06	
Lower Bons	Aluminum	7/5/2013	2780	µg/L	01_071413_06	
Lower Bons	Bicarbonate (As CaCO3)	7/5/2013	32000	µg/L	01_071413_06	
Lower Bons	Cadmium	7/5/2013	0.2	µg/L	01_071413_06	Analyte detected between MDL and ML
Lower Bons	Calcium	7/5/2013	21100	µg/L	01_071413_06	
Lower Bons	Carbonate (AS CaCO3)	7/5/2013	< 2000	µg/L	01_071413_06	Undetected
Lower Bons	Chloride	7/5/2013	6710	µg/L	01_071413_06	
Lower Bons	Conductivity, Field	7/5/2013	133.9	uS/cm	01_071413_06	
Lower Bons	Iron	7/5/2013	3100	µg/L	01_071413_06	
Lower Bons	Lead	7/5/2013	4.9	µg/L	01_071413_06	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Lower Bons	Magnesium	7/5/2013	11000	µg/L	01_071413_06	
Lower Bons	pH, Field	7/5/2013	7.23	pH Units	01_071413_06	
Lower Bons	Potassium	7/5/2013	1100	µg/L	01_071413_06	Analyte detected between MDL and ML
Lower Bons	Selenium	7/5/2013	< 1	µg/L	01_071413_06	Undetected
Lower Bons	Sodium	7/5/2013	2300	µg/L	01_071413_06	
Lower Bons	Sulfate	7/5/2013	65900	µg/L	01_071413_06	
Lower Bons	Temperature, Field	7/5/2013	4.7	°C	01_071413_06	
Lower Bons	Total Dissolved Solids	7/5/2013	160000	µg/L	01_071413_06	
Lower Bons	Total Suspended Solids	7/5/2013	43000	µg/L	01_071413_06	
Lower Bons	Zinc	7/5/2013	151	µg/L	01_071413_06	
Lower Bons	Alkalinity (As CaCO3)	7/29/2013	59000	µg/L	01_072813_06	
Lower Bons	Aluminum	7/29/2013	980	µg/L	01_072813_06	
Lower Bons	Bicarbonate (As CaCO3)	7/29/2013	59000	µg/L	01_072813_06	
Lower Bons	Cadmium	7/29/2013	0.4	µg/L	01_072813_06	Analyte detected between MDL and ML
Lower Bons	Calcium	7/29/2013	44100	µg/L	01_072813_06	
Lower Bons	Carbonate (AS CaCO3)	7/29/2013	< 2000	µg/L	01_072813_06	Undetected
Lower Bons	Chloride	7/29/2013	9070	µg/L	01_072813_06	
Lower Bons	Conductivity, Field	7/29/2013	282.1	uS/cm	01_072813_06	
Lower Bons	Iron	7/29/2013	1510	µg/L	01_072813_06	
Lower Bons	Lead	7/29/2013	1.9	µg/L	01_072813_06	
Lower Bons	Magnesium	7/29/2013	25100	µg/L	01_072813_06	
Lower Bons	pH, Field	7/29/2013	7.37	pH Units	01_072813_06	
Lower Bons	Potassium	7/29/2013	800	µg/L	01_072813_06	Analyte detected between MDL and ML
Lower Bons	Selenium	7/29/2013	< 1	µg/L	01_072813_06	Undetected
Lower Bons	Sodium	7/29/2013	3200	µg/L	01_072813_06	
Lower Bons	Sulfate	7/29/2013	165000	µg/L	01_072813_06	
Lower Bons	Temperature, Field	7/29/2013	5.7	°C	01_072813_06	
Lower Bons	Total Dissolved Solids	7/29/2013	314000	µg/L	01_072813_06	
Lower Bons	Total Suspended Solids	7/29/2013	15000	µg/L	01_072813_06	Analyte detected between MDL and ML
Lower Bons	Zinc	7/29/2013	412	µg/L	01_072813_06	
Lower Bons	Alkalinity (As CaCO3)	8/9/2013	44000	µg/L	01_081113_06	
Lower Bons	Aluminum	8/9/2013	2130	µg/L	01_081113_06	
Lower Bons	Bicarbonate (As CaCO3)	8/9/2013	44000	µg/L	01_081113_06	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Lower Bons	Cadmium	8/9/2013	0.4	µg/L	01_081113_06	Analyte detected between MDL and ML
Lower Bons	Calcium	8/9/2013	27200	µg/L	01_081113_06	
Lower Bons	Carbonate (AS CaCO3)	8/9/2013	< 2000	µg/L	01_081113_06	Undetected
Lower Bons	Chloride	8/9/2013	6260	µg/L	01_081113_06	
Lower Bons	Conductivity, Field	8/9/2013	170.6	uS/cm	01_081113_06	
Lower Bons	Iron	8/9/2013	3060	µg/L	01_081113_06	
Lower Bons	Lead	8/9/2013	14.2	µg/L	01_081113_06	
Lower Bons	Magnesium	8/9/2013	13300	µg/L	01_081113_06	
Lower Bons	pH, Field	8/9/2013	7.29	pH Units	01_081113_06	
Lower Bons	Potassium	8/9/2013	1100	µg/L	01_081113_06	Analyte detected between MDL and ML
Lower Bons	Selenium	8/9/2013	< 1	µg/L	01_081113_06	Undetected
Lower Bons	Sodium	8/9/2013	2300	µg/L	01_081113_06	
Lower Bons	Sulfate	8/9/2013	79100	µg/L	01_081113_06	
Lower Bons	Temperature, Field	8/9/2013	6.8	°C	01_081113_06	
Lower Bons	Total Dissolved Solids	8/9/2013	178000	µg/L	01_081113_06	
Lower Bons	Total Suspended Solids	8/9/2013	60000	µg/L	01_081113_06	
Lower Bons	Zinc	8/9/2013	192	µg/L	01_081113_06	
Lower Bons	Alkalinity (As CaCO3)	8/23/2013	63000	µg/L	01_082513_06	
Lower Bons	Aluminum	8/23/2013	507	µg/L	01_082513_06	
Lower Bons	Bicarbonate (As CaCO3)	8/23/2013	63000	µg/L	01_082513_06	
Lower Bons	Cadmium	8/23/2013	0.3	µg/L	01_082513_06	Analyte detected between MDL and ML
Lower Bons	Calcium	8/23/2013	35800	µg/L	01_082513_06	
Lower Bons	Carbonate (AS CaCO3)	8/23/2013	< 2000	µg/L	01_082513_06	Undetected
Lower Bons	Chloride	8/23/2013	2730	µg/L	01_082513_06	
Lower Bons	Conductivity, Field	8/23/2013	196.5	uS/cm	01_082513_06	
Lower Bons	Iron	8/23/2013	1080	µg/L	01_082513_06	
Lower Bons	Lead	8/23/2013	2.1	µg/L	01_082513_06	
Lower Bons	Magnesium	8/23/2013	18600	µg/L	01_082513_06	
Lower Bons	pH, Field	8/23/2013	7.62	pH Units	01_082513_06	
Lower Bons	Potassium	8/23/2013	400	µg/L	01_082513_06	Analyte detected between MDL and ML
Lower Bons	Selenium	8/23/2013	< 1	µg/L	01_082513_06	Undetected
Lower Bons	Sodium	8/23/2013	3000	µg/L	01_082513_06	
Lower Bons	Sulfate	8/23/2013	103000	µg/L	01_082513_06	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Lower Bons	Temperature, Field	8/23/2013	3.6	°C	01_082513_06	
Lower Bons	Total Dissolved Solids	8/23/2013	226000	µg/L	01_082513_06	
Lower Bons	Total Suspended Solids	8/23/2013	16000	µg/L	01_082513_06	Analyte detected between MDL and ML
Lower Bons	Zinc	8/23/2013	279	µg/L	01_082513_06	
Lower Bons	Alkalinity (As CaCO3)	9/12/2013	68000	µg/L	01_090813_06	
Lower Bons	Aluminum	9/12/2013	83	µg/L	01_090813_06	
Lower Bons	Bicarbonate (As CaCO3)	9/12/2013	68000	µg/L	01_090813_06	
Lower Bons	Cadmium	9/12/2013	0.3	µg/L	01_090813_06	Analyte detected between MDL and ML
Lower Bons	Calcium	9/12/2013	41000	µg/L	01_090813_06	
Lower Bons	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_06	Undetected
Lower Bons	Chloride	9/12/2013	7160	µg/L	01_090813_06	
Lower Bons	Conductivity, Field	9/12/2013	227.3	uS/cm	01_090813_06	
Lower Bons	Iron	9/12/2013	330	µg/L	01_090813_06	
Lower Bons	Lead	9/12/2013	1.0	µg/L	01_090813_06	
Lower Bons	Magnesium	9/12/2013	21300	µg/L	01_090813_06	
Lower Bons	pH, Field	9/12/2013	7.61	pH Units	01_090813_06	
Lower Bons	Potassium	9/12/2013	500	µg/L	01_090813_06	Analyte detected between MDL and ML
Lower Bons	Selenium	9/12/2013	< 1	µg/L	01_090813_06	Undetected
Lower Bons	Sodium	9/12/2013	3300	µg/L	01_090813_06	
Lower Bons	Sulfate	9/12/2013	124000	µg/L	01_090813_06	
Lower Bons	Temperature, Field	9/12/2013	2.1	°C	01_090813_06	
Lower Bons	Total Dissolved Solids	9/12/2013	244000	µg/L	01_090813_06	
Lower Bons	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_06	Undetected
Lower Bons	Zinc	9/12/2013	314	µg/L	01_090813_06	
Lower Bons	Alkalinity (As CaCO3)	9/27/2013	71000	µg/L	01_092213_06	
Lower Bons	Aluminum	9/27/2013	53	µg/L	01_092213_06	
Lower Bons	Bicarbonate (As CaCO3)	9/27/2013	71000	µg/L	01_092213_06	
Lower Bons	Cadmium	9/27/2013	0.4	µg/L	01_092213_06	Analyte detected between MDL and ML
Lower Bons	Calcium	9/27/2013	46100	µg/L	01_092213_06	
Lower Bons	Carbonate (AS CaCO3)	9/27/2013	< 2000	µg/L	01_092213_06	Undetected
Lower Bons	Chloride	9/27/2013	4290	µg/L	01_092213_06	
Lower Bons	Conductivity, Field	9/27/2013	235.0	uS/cm	01_092213_06	
Lower Bons	Iron	9/27/2013	350	µg/L	01_092213_06	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Lower Bons	Lead	9/27/2013	0.4	µg/L	01_092213_06	Analyte detected between MDL and ML
Lower Bons	Magnesium	9/27/2013	24800	µg/L	01_092213_06	
Lower Bons	pH, Field	9/27/2013	7.75	pH Units	01_092213_06	
Lower Bons	Potassium	9/27/2013	500	µg/L	01_092213_06	Analyte detected between MDL and ML
Lower Bons	Selenium	9/27/2013	< 1	µg/L	01_092213_06	Undetected
Lower Bons	Sodium	9/27/2013	3600	µg/L	01_092213_06	
Lower Bons	Sulfate	9/27/2013	125000	µg/L	01_092213_06	
Lower Bons	Temperature, Field	9/27/2013	0	°C	01_092213_06	
Lower Bons	Total Dissolved Solids	9/27/2013	274000	µg/L	01_092213_06	
Lower Bons	Total Suspended Solids	9/27/2013	< 5000	µg/L	01_092213_06	Undetected
Lower Bons	Zinc	9/27/2013	580	µg/L	01_092213_06	
Lower Bons	Alkalinity (As CaCO3)	10/7/2013	89000	µg/L	01_101313_06	
Lower Bons	Aluminum	10/7/2013	46	µg/L	01_101313_06	
Lower Bons	Bicarbonate (As CaCO3)	10/7/2013	89000	µg/L	01_101313_06	
Lower Bons	Cadmium	10/7/2013	0.6	µg/L	01_101313_06	Analyte detected between MDL and ML
Lower Bons	Calcium	10/7/2013	55500	µg/L	01_101313_06	
Lower Bons	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_06	Undetected
Lower Bons	Chloride	10/7/2013	5690	µg/L	01_101313_06	Analyte detected between MDL and ML
Lower Bons	Conductivity, Field	10/7/2013	281.5	uS/cm	01_101313_06	
Lower Bons	Iron	10/7/2013	500	µg/L	01_101313_06	
Lower Bons	Lead	10/7/2013	2.1	µg/L	01_101313_06	
Lower Bons	Magnesium	10/7/2013	31100	µg/L	01_101313_06	
Lower Bons	pH, Field	10/7/2013	6.95	pH Units	01_101313_06	
Lower Bons	Potassium	10/7/2013	600	µg/L	01_101313_06	Analyte detected between MDL and ML
Lower Bons	Selenium	10/7/2013	< 1	µg/L	01_101313_06	Undetected
Lower Bons	Sodium	10/7/2013	4100	µg/L	01_101313_06	
Lower Bons	Sulfate	10/7/2013	158000	µg/L	01_101313_06	
Lower Bons	Temperature, Field	10/7/2013	0	°C	01_101313_06	
Lower Bons	Total Dissolved Solids	10/7/2013	334000	µg/L	01_101313_06	
Lower Bons	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_06	Undetected
Lower Bons	Zinc	10/7/2013	743	µg/L	01_101313_06	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Lower Bons	Alkalinity (As CaCO3)	10/11/2013	87000	µg/L	01_102713_06	
Lower Bons	Aluminum	10/11/2013	32	µg/L	01_102713_06	
Lower Bons	Bicarbonate (As CaCO3)	10/11/2013	87000	µg/L	01_102713_06	
Lower Bons	Cadmium	10/11/2013	0.8	µg/L	01_102713_06	
Lower Bons	Calcium	10/11/2013	72500	µg/L	01_102713_06	
Lower Bons	Carbonate (AS CaCO3)	10/11/2013	< 2000	µg/L	01_102713_06	Undetected
Lower Bons	Chloride	10/11/2013	5120	µg/L	01_102713_06	Analyte detected between MDL and ML
Lower Bons	Conductivity, Field	10/11/2013	362.8	uS/cm	01_102713_06	
Lower Bons	Iron	10/11/2013	370	µg/L	01_102713_06	
Lower Bons	Lead	10/11/2013	0.3	µg/L	01_102713_06	Analyte detected between MDL and ML
Lower Bons	Magnesium	10/11/2013	47600	µg/L	01_102713_06	
Lower Bons	pH, Field	10/11/2013	7.30	pH Units	01_102713_06	
Lower Bons	Potassium	10/11/2013	700	µg/L	01_102713_06	Analyte detected between MDL and ML
Lower Bons	Selenium	10/11/2013	< 1	µg/L	01_102713_06	Undetected
Lower Bons	Sodium	10/11/2013	4300	µg/L	01_102713_06	
Lower Bons	Sulfate	10/11/2013	262000	µg/L	01_102713_06	
Lower Bons	Temperature, Field	10/11/2013	0	°C	01_102713_06	
Lower Bons	Total Dissolved Solids	10/11/2013	486000	µg/L	01_102713_06	
Lower Bons	Total Suspended Solids	10/11/2013	< 5000	µg/L	01_102713_06	Undetected
Lower Bons	Zinc	10/11/2013	1470	µg/L	01_102713_06	
Rachel Creek	Alkalinity (As CaCO3)	5/24/2013	3000	µg/L	01_051213_09	Analyte detected between MDL and ML
Rachel Creek	Aluminum	5/24/2013	185	µg/L	01_051213_09	
Rachel Creek	Bicarbonate (As CaCO3)	5/24/2013	3000	µg/L	01_051213_09	Analyte detected between MDL and ML
Rachel Creek	Cadmium	5/24/2013	7.2	µg/L	01_051213_09	
Rachel Creek	Calcium	5/24/2013	2700	µg/L	01_051213_09	
Rachel Creek	Carbonate (AS CaCO3)	5/24/2013	< 2000	µg/L	01_051213_09	Undetected
Rachel Creek	Chloride	5/24/2013	960	µg/L	01_051213_09	Analyte detected between MDL and ML
Rachel Creek	Conductivity, Field	5/24/2013	20.5	uS/cm	01_051213_09	
Rachel Creek	Iron	5/24/2013	240	µg/L	01_051213_09	
Rachel Creek	Lead	5/24/2013	95.5	µg/L	01_051213_09	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Rachel Creek	Magnesium	5/24/2013	1100	µg/L	01_051213_09	
Rachel Creek	pH, Field	5/24/2013	5.35	pH Units	01_051213_09	
Rachel Creek	Potassium	5/24/2013	1200	µg/L	01_051213_09	Analyte detected between MDL and ML
Rachel Creek	Selenium	5/24/2013	< 1	µg/L	01_051213_09	Undetected
Rachel Creek	Sodium	5/24/2013	700	µg/L	01_051213_09	Analyte detected between MDL and ML
Rachel Creek	Sulfate	5/24/2013	10930	µg/L	01_051213_09	
Rachel Creek	Temperature, Field	5/24/2013	0	°C	01_051213_09	
Rachel Creek	Total Dissolved Solids	5/24/2013	10000	µg/L	01_051213_09	Analyte detected between MDL and ML
Rachel Creek	Total Suspended Solids	5/24/2013	< 5000	µg/L	01_051213_09	Undetected
Rachel Creek	Zinc	5/24/2013	677	µg/L	01_051213_09	
Rachel Creek	Alkalinity (As CaCO3)	6/13/2013	4000	µg/L	01_060913_09	Analyte detected between MDL and ML
Rachel Creek	Aluminum	6/13/2013	1050	µg/L	01_060913_09	
Rachel Creek	Bicarbonate (As CaCO3)	6/13/2013	4000	µg/L	01_060913_09	Analyte detected between MDL and ML
Rachel Creek	Cadmium	6/13/2013	1.2	µg/L	01_060913_09	
Rachel Creek	Calcium	6/13/2013	5400	µg/L	01_060913_09	
Rachel Creek	Carbonate (AS CaCO3)	6/13/2013	< 2000	µg/L	01_060913_09	Undetected
Rachel Creek	Chloride	6/13/2013	610	µg/L	01_060913_09	Analyte detected between MDL and ML
Rachel Creek	Conductivity, Field	6/13/2013	40.5	uS/cm	01_060913_09	
Rachel Creek	Iron	6/13/2013	2620	µg/L	01_060913_09	
Rachel Creek	Lead	6/13/2013	14.5	µg/L	01_060913_09	
Rachel Creek	Magnesium	6/13/2013	3800	µg/L	01_060913_09	
Rachel Creek	pH, Field	6/13/2013	6.19	pH Units	01_060913_09	
Rachel Creek	Potassium	6/13/2013	700	µg/L	01_060913_09	Analyte detected between MDL and ML
Rachel Creek	Selenium	6/13/2013	< 1	µg/L	01_060913_09	Undetected
Rachel Creek	Sodium	6/13/2013	800	µg/L	01_060913_09	Analyte detected between MDL and ML
Rachel Creek	Sulfate	6/13/2013	29100	µg/L	01_060913_09	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Rachel Creek	Temperature, Field	6/13/2013	0.6	°C	01_060913_09	
Rachel Creek	Total Dissolved Solids	6/13/2013	40000	µg/L	01_060913_09	
Rachel Creek	Total Suspended Solids	6/13/2013	28000	µg/L	01_060913_09	
Rachel Creek	Zinc	6/13/2013	164	µg/L	01_060913_09	
Rachel Creek	Alkalinity (As CaCO3)	7/11/2013	3000	µg/L	01_071413_09	Analyte detected between MDL and ML
Rachel Creek	Aluminum	7/11/2013	843	µg/L	01_071413_09	
Rachel Creek	Bicarbonate (As CaCO3)	7/11/2013	3000	µg/L	01_071413_09	Analyte detected between MDL and ML
Rachel Creek	Cadmium	7/11/2013	2.1	µg/L	01_071413_09	
Rachel Creek	Calcium	7/11/2013	41500	µg/L	01_071413_09	
Rachel Creek	Carbonate (AS CaCO3)	7/11/2013	< 2000	µg/L	01_071413_09	Undetected
Rachel Creek	Chloride	7/11/2013	< 2500	µg/L	01_071413_09	Undetected
Rachel Creek	Conductivity, Field	7/11/2013	340.0	uS/cm	01_071413_09	
Rachel Creek	Iron	7/11/2013	1090	µg/L	01_071413_09	
Rachel Creek	Lead	7/11/2013	0.4	µg/L	01_071413_09	Analyte detected between MDL and ML
Rachel Creek	Magnesium	7/11/2013	29100	µg/L	01_071413_09	
Rachel Creek	pH, Field	7/11/2013	5.96	pH Units	01_071413_09	
Rachel Creek	Potassium	7/11/2013	600	µg/L	01_071413_09	Analyte detected between MDL and ML
Rachel Creek	Selenium	7/11/2013	3.1	µg/L	01_071413_09	Analyte detected between MDL and ML
Rachel Creek	Sodium	7/11/2013	3400	µg/L	01_071413_09	
Rachel Creek	Sulfate	7/11/2013	243000	µg/L	01_071413_09	
Rachel Creek	Temperature, Field	7/11/2013	9.7	°C	01_071413_09	
Rachel Creek	Total Dissolved Solids	7/11/2013	340000	µg/L	01_071413_09	
Rachel Creek	Total Suspended Solids	7/11/2013	7000	µg/L	01_071413_09	Analyte detected between MDL and ML
Rachel Creek	Zinc	7/11/2013	458	µg/L	01_071413_09	
Rachel Creek	Conductivity, Field	8/12/2013	143.1	uS/cm	01_081113_09	
Rachel Creek	pH, Field	8/12/2013	6.16	pH Units	01_081113_09	
Rachel Creek	Temperature, Field	8/12/2013	4.3	°C	01_081113_09	
Rachel Creek	Alkalinity (As CaCO3)	9/12/2013	8000	µg/L	01_090813_09	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Rachel Creek	Aluminum	9/12/2013	1240	µg/L	01_090813_09	
			8000	µg/L		Analyte detected between MDL and ML
Rachel Creek	Bicarbonate (As CaCO3)	9/12/2013			01_090813_09	
Rachel Creek	Cadmium	9/12/2013	2.0	µg/L	01_090813_09	
Rachel Creek	Calcium	9/12/2013	58800	µg/L	01_090813_09	
Rachel Creek	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_09	Undetected
Rachel Creek	Chloride	9/12/2013	< 5000	µg/L	01_090813_09	Undetected
Rachel Creek	Conductivity, Field	9/12/2013	359.5	uS/cm	01_090813_09	
Rachel Creek	Iron	9/12/2013	1270	µg/L	01_090813_09	
			0.2	µg/L		Analyte detected between MDL and ML
Rachel Creek	Lead	9/12/2013			01_090813_09	
Rachel Creek	Magnesium	9/12/2013	38500	µg/L	01_090813_09	
Rachel Creek	pH, Field	9/12/2013	7.29	pH Units	01_090813_09	
			600	µg/L		Analyte detected between MDL and ML
Rachel Creek	Potassium	9/12/2013			01_090813_09	
			2.7	µg/L		Analyte detected between MDL and ML
Rachel Creek	Selenium	9/12/2013			01_090813_09	
Rachel Creek	Sodium	9/12/2013	4100	µg/L	01_090813_09	
Rachel Creek	Sulfate	9/12/2013	295000	µg/L	01_090813_09	
Rachel Creek	Temperature, Field	9/12/2013	2.6	°C	01_090813_09	
Rachel Creek	Total Dissolved Solids	9/12/2013	442000	µg/L	01_090813_09	
Rachel Creek	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_09	Undetected
Rachel Creek	Zinc	9/12/2013	433	µg/L	01_090813_09	
			6000	µg/L		Analyte detected between MDL and ML
Rachel Creek	Alkalinity (As CaCO3)	10/18/2013			01_101313_09	
Rachel Creek	Aluminum	10/18/2013	537	µg/L	01_101313_09	
			6000	µg/L		Analyte detected between MDL and ML
Rachel Creek	Bicarbonate (As CaCO3)	10/18/2013			01_101313_09	
Rachel Creek	Cadmium	10/18/2013	1.8	µg/L	01_101313_09	
Rachel Creek	Calcium	10/18/2013	27900	µg/L	01_101313_09	
Rachel Creek	Carbonate (AS CaCO3)	10/18/2013	< 2000	µg/L	01_101313_09	Undetected
Rachel Creek	Chloride	10/18/2013	< 2500	µg/L	01_101313_09	Undetected
Rachel Creek	Conductivity, Field	10/18/2013	181.2	uS/cm	01_101313_09	
Rachel Creek	Iron	10/18/2013	320	µg/L	01_101313_09	
Rachel Creek	Lead	10/18/2013	0.7	µg/L	01_101313_09	
Rachel Creek	Magnesium	10/18/2013	17500	µg/L	01_101313_09	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Rachel Creek	pH, Field	10/18/2013	6.89	pH Units	01_101313_09	
Rachel Creek	Potassium	10/18/2013	400	µg/L	01_101313_09	Analyte detected between MDL and ML
Rachel Creek	Selenium	10/18/2013	2.2	µg/L	01_101313_09	Analyte detected between MDL and ML
Rachel Creek	Sodium	10/18/2013	2500	µg/L	01_101313_09	
Rachel Creek	Sulfate	10/18/2013	142000	µg/L	01_101313_09	
Rachel Creek	Temperature, Field	10/18/2013	0	°C	01_101313_09	
Rachel Creek	Total Dissolved Solids	10/18/2013	226000	µg/L	01_101313_09	Analysis exceeded method hold time
Rachel Creek	Total Suspended Solids	10/18/2013	< 5000	µg/L	01_101313_09	Undetected
Rachel Creek	Zinc	10/18/2013	295	µg/L	01_101313_09	
Shelly Creek	Alkalinity (As CaCO3)	5/24/2013	< 2000	µg/L	01_051213_10	Undetected
Shelly Creek	Aluminum	5/24/2013	89	µg/L	01_051213_10	
Shelly Creek	Bicarbonate (As CaCO3)	5/24/2013	< 2000	µg/L	01_051213_10	Undetected
Shelly Creek	Cadmium	5/24/2013	2.9	µg/L	01_051213_10	
Shelly Creek	Calcium	5/24/2013	2100	µg/L	01_051213_10	
Shelly Creek	Carbonate (AS CaCO3)	5/24/2013	< 2000	µg/L	01_051213_10	Undetected
Shelly Creek	Chloride	5/24/2013	920	µg/L	01_051213_10	Analyte detected between MDL and ML
Shelly Creek	Conductivity, Field	5/24/2013	12.7	uS/cm	01_051213_10	
Shelly Creek	Iron	5/24/2013	130	µg/L	01_051213_10	
Shelly Creek	Lead	5/24/2013	105.7	µg/L	01_051213_10	
Shelly Creek	Magnesium	5/24/2013	700	µg/L	01_051213_10	Analyte detected between MDL and ML
Shelly Creek	pH, Field	5/24/2013	5.35	pH Units	01_051213_10	
Shelly Creek	Potassium	5/24/2013	1100	µg/L	01_051213_10	Analyte detected between MDL and ML
Shelly Creek	Selenium	5/24/2013	< 1	µg/L	01_051213_10	Undetected
Shelly Creek	Sodium	5/24/2013	800	µg/L	01_051213_10	Analyte detected between MDL and ML
Shelly Creek	Sulfate	5/24/2013	4550	µg/L	01_051213_10	
Shelly Creek	Temperature, Field	5/24/2013	5.35	°C	01_051213_10	
Shelly Creek	Total Dissolved Solids	5/24/2013	< 10000	µg/L	01_051213_10	Undetected
Shelly Creek	Total Suspended Solids	5/24/2013	< 5000	µg/L	01_051213_10	Undetected
Shelly Creek	Zinc	5/24/2013	202	µg/L	01_051213_10	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Shelly Creek	Alkalinity (As CaCO3)	6/13/2013	12000	µg/L	01_060913_10	Analyte detected between MDL and ML
Shelly Creek	Aluminum	6/13/2013	704	µg/L	01_060913_10	
Shelly Creek	Bicarbonate (As CaCO3)	6/13/2013	12000	µg/L	01_060913_10	Analyte detected between MDL and ML
Shelly Creek	Cadmium	6/13/2013	0.5	µg/L	01_060913_10	
Shelly Creek	Calcium	6/13/2013	3400	µg/L	01_060913_10	
Shelly Creek	Carbonate (AS CaCO3)	6/13/2013	< 2000	µg/L	01_060913_10	Undetected
Shelly Creek	Chloride	6/13/2013	620	µg/L	01_060913_10	Analyte detected between MDL and ML
Shelly Creek	Conductivity, Field	6/13/2013	18.2	uS/cm	01_060913_10	
Shelly Creek	Iron	6/13/2013	1610	µg/L	01_060913_10	
Shelly Creek	Lead	6/13/2013	19.9	µg/L	01_060913_10	
Shelly Creek	Magnesium	6/13/2013	1900	µg/L	01_060913_10	
Shelly Creek	pH, Field	6/13/2013	6.74	pH Units	01_060913_10	
Shelly Creek	Potassium	6/13/2013	700	µg/L	01_060913_10	Analyte detected between MDL and ML
Shelly Creek	Selenium	6/13/2013	< 1	µg/L	01_060913_10	Undetected
Shelly Creek	Sodium	6/13/2013	600	µg/L	01_060913_10	Analyte detected between MDL and ML
Shelly Creek	Sulfate	6/13/2013	4660	µg/L	01_060913_10	
Shelly Creek	Temperature, Field	6/13/2013	1.1	°C	01_060913_10	
Shelly Creek	Total Dissolved Solids	6/13/2013	10000	µg/L	01_060913_10	Analyte detected between MDL and ML
Shelly Creek	Total Suspended Solids	6/13/2013	31000	µg/L	01_060913_10	
Shelly Creek	Zinc	6/13/2013	61	µg/L	01_060913_10	
Shelly Creek	Alkalinity (As CaCO3)	7/11/2013	36000	µg/L	01_071413_10	
Shelly Creek	Aluminum	7/11/2013	93	µg/L	01_071413_10	
Shelly Creek	Bicarbonate (As CaCO3)	7/11/2013	36000	µg/L	01_071413_10	
Shelly Creek	Cadmium	7/11/2013	0.3	µg/L	01_071413_10	Analyte detected between MDL and ML
Shelly Creek	Calcium	7/11/2013	14000	µg/L	01_071413_10	
Shelly Creek	Carbonate (AS CaCO3)	7/11/2013	< 2000	µg/L	01_071413_10	Undetected
Shelly Creek	Chloride	7/11/2013	850	µg/L	01_071413_10	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Shelly Creek	Conductivity, Field	7/11/2013	113.5	uS/cm	01_071413_10	
Shelly Creek	Iron	7/11/2013	170	µg/L	01_071413_10	
Shelly Creek	Lead	7/11/2013	0.8	µg/L	01_071413_10	
Shelly Creek	Magnesium	7/11/2013	7000	µg/L	01_071413_10	
Shelly Creek	pH, Field	7/11/2013	6.87	pH Units	01_071413_10	
Shelly Creek	Potassium	7/11/2013	400	µg/L	01_071413_10	Analyte detected between MDL and ML
Shelly Creek	Selenium	7/11/2013	1.2	µg/L	01_071413_10	Analyte detected between MDL and ML
Shelly Creek	Sodium	7/11/2013	2400	µg/L	01_071413_10	
Shelly Creek	Sulfate	7/11/2013	63100	µg/L	01_071413_10	
Shelly Creek	Temperature, Field	7/11/2013	8.3	°C	01_071413_10	
Shelly Creek	Total Dissolved Solids	7/11/2013	80000	µg/L	01_071413_10	
Shelly Creek	Total Suspended Solids	7/11/2013	< 5000	µg/L	01_071413_10	Undetected
Shelly Creek	Zinc	7/11/2013	59	µg/L	01_071413_10	
Shelly Creek	Conductivity, Field	8/12/2013	66.9	uS/cm	01_081113_10	
Shelly Creek	pH, Field	8/12/2013	7.29	pH Units	01_081113_10	
Shelly Creek	Temperature, Field	8/12/2013	4.0	°C	01_081113_10	
Shelly Creek	Alkalinity (As CaCO3)	9/12/2013	61000	µg/L	01_090813_10	
Shelly Creek	Aluminum	9/12/2013	34	µg/L	01_090813_10	
Shelly Creek	Bicarbonate (As CaCO3)	9/12/2013	61000	µg/L	01_090813_10	
Shelly Creek	Cadmium	9/12/2013	0.2	µg/L	01_090813_10	Analyte detected between MDL and ML
Shelly Creek	Calcium	9/12/2013	23600	µg/L	01_090813_10	
Shelly Creek	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_10	Undetected
Shelly Creek	Chloride	9/12/2013	670	µg/L	01_090813_10	Analyte detected between MDL and ML
Shelly Creek	Conductivity, Field	9/12/2013	131.7	uS/cm	01_090813_10	
Shelly Creek	Iron	9/12/2013	20	µg/L	01_090813_10	Analyte detected between MDL and ML
Shelly Creek	Lead	9/12/2013	0.7	µg/L	01_090813_10	
Shelly Creek	Magnesium	9/12/2013	12400	µg/L	01_090813_10	
Shelly Creek	pH, Field	9/12/2013	7.62	pH Units	01_090813_10	
Shelly Creek	Potassium	9/12/2013	400	µg/L	01_090813_10	Analyte detected between MDL and ML



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Shelly Creek	Selenium	9/12/2013	< 1	µg/L	01_090813_10	Undetected
Shelly Creek	Sodium	9/12/2013	2700	µg/L	01_090813_10	
Shelly Creek	Sulfate	9/12/2013	50500	µg/L	01_090813_10	
Shelly Creek	Temperature, Field	9/12/2013	2.2	°C	01_090813_10	
Shelly Creek	Total Dissolved Solids	9/12/2013	124000	µg/L	01_090813_10	
Shelly Creek	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_10	Undetected
Shelly Creek	Zinc	9/12/2013	18	µg/L	01_090813_10	
Shelly Creek	Alkalinity (As CaCO3)	10/7/2013	45000	µg/L	01_101313_10	
Shelly Creek	Aluminum	10/7/2013	54	µg/L	01_101313_10	
Shelly Creek	Bicarbonate (As CaCO3)	10/7/2013	45000	µg/L	01_101313_10	
Shelly Creek	Cadmium	10/7/2013	1.5	µg/L	01_101313_10	
Shelly Creek	Calcium	10/7/2013	22800	µg/L	01_101313_10	
Shelly Creek	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_10	Undetected
Shelly Creek	Chloride	10/7/2013	540	µg/L	01_101313_10	Analyte detected between MDL and ML
Shelly Creek	Conductivity, Field	10/7/2013	123.0	uS/cm	01_101313_10	
Shelly Creek	Iron	10/7/2013	190	µg/L	01_101313_10	
Shelly Creek	Lead	10/7/2013	10.3	µg/L	01_101313_10	
Shelly Creek	Magnesium	10/7/2013	10500	µg/L	01_101313_10	
Shelly Creek	pH, Field	10/7/2013	6.79	pH Units	01_101313_10	
Shelly Creek	Potassium	10/7/2013	400	µg/L	01_101313_10	Analyte detected between MDL and ML
Shelly Creek	Selenium	10/7/2013	< 1	µg/L	01_101313_10	Undetected
Shelly Creek	Sodium	10/7/2013	4500	µg/L	01_101313_10	
Shelly Creek	Sulfate	10/7/2013	63200	µg/L	01_101313_10	
Shelly Creek	Temperature, Field	10/7/2013	0	°C	01_101313_10	
Shelly Creek	Total Dissolved Solids	10/7/2013	132000	µg/L	01_101313_10	
Shelly Creek	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_10	Undetected
Shelly Creek	Zinc	10/7/2013	196	µg/L	01_101313_10	
Station 145	Alkalinity (As CaCO3)	5/24/2013	15000	µg/L	01_051213_11	Analyte detected between MDL and ML
Station 145	Aluminum	5/24/2013	72	µg/L	01_051213_11	
Station 145	Bicarbonate (As CaCO3)	5/24/2013	15000	µg/L	01_051213_11	Analyte detected between MDL and ML
Station 145	Cadmium	5/24/2013	8.7	µg/L	01_051213_11	
Station 145	Calcium	5/24/2013	8700	µg/L	01_051213_11	
Station 145	Carbonate (AS CaCO3)	5/24/2013	< 2000	µg/L	01_051213_11	Undetected



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 145	Chloride	5/24/2013	950	µg/L	01_051213_11	Analyte detected between MDL and ML
Station 145	Conductivity, Field	5/24/2013	47.3	µS/cm	01_051213_11	
Station 145	Iron	5/24/2013	90	µg/L	01_051213_11	
Station 145	Lead	5/24/2013	240.6	µg/L	01_051213_11	
Station 145	Magnesium	5/24/2013	3300	µg/L	01_051213_11	
Station 145	pH, Field	5/24/2013	6.44	pH Units	01_051213_11	
Station 145	Potassium	5/24/2013	1000	µg/L	01_051213_11	Analyte detected between MDL and ML
Station 145	Selenium	5/24/2013	< 1	µg/L	01_051213_11	Undetected
Station 145	Sodium	5/24/2013	2500	µg/L	01_051213_11	
Station 145	Sulfate	5/24/2013	25840	µg/L	01_051213_11	
Station 145	Temperature, Field	5/24/2013	0	°C	01_051213_11	
Station 145	Total Dissolved Solids	5/24/2013	40000	µg/L	01_051213_11	
Station 145	Total Suspended Solids	5/24/2013	< 5000	µg/L	01_051213_11	Undetected
Station 145	Zinc	5/24/2013	599	µg/L	01_051213_11	
Station 145	Alkalinity (As CaCO3)	6/13/2013	4000	µg/L	01_060913_11	Analyte detected between MDL and ML
Station 145	Aluminum	6/13/2013	1290	µg/L	01_060913_11	
Station 145	Bicarbonate (As CaCO3)	6/13/2013	4000	µg/L	01_060913_11	Analyte detected between MDL and ML
Station 145	Cadmium	6/13/2013	3.3	µg/L	01_060913_11	
Station 145	Calcium	6/13/2013	5400	µg/L	01_060913_11	
Station 145	Carbonate (AS CaCO3)	6/13/2013	< 2000	µg/L	01_060913_11	Undetected
Station 145	Chloride	6/13/2013	620	µg/L	01_060913_11	Analyte detected between MDL and ML
Station 145	Conductivity, Field	6/13/2013	31.1	µS/cm	01_060913_11	
Station 145	Iron	6/13/2013	2210	µg/L	01_060913_11	
Station 145	Lead	6/13/2013	106.6	µg/L	01_060913_11	
Station 145	Magnesium	6/13/2013	2800	µg/L	01_060913_11	
Station 145	pH, Field	6/13/2013	6.49	pH Units	01_060913_11	
Station 145	Potassium	6/13/2013	900	µg/L	01_060913_11	Analyte detected between MDL and ML
Station 145	Selenium	6/13/2013	< 1	µg/L	01_060913_11	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 145	Sodium	6/13/2013	700	µg/L	01_060913_11	Analyte detected between MDL and ML
Station 145	Sulfate	6/13/2013	17900	µg/L	01_060913_11	
Station 145	Temperature, Field	6/13/2013	0.6	°C	01_060913_11	
Station 145	Total Dissolved Solids	6/13/2013	40000	µg/L	01_060913_11	
Station 145	Total Suspended Solids	6/13/2013	29000	µg/L	01_060913_11	
Station 145	Zinc	6/13/2013	443	µg/L	01_060913_11	
Station 145	Alkalinity (As CaCO3)	7/11/2013	34000	µg/L	01_071413_11	
Station 145	Aluminum	7/11/2013	99	µg/L	01_071413_11	
Station 145	Bicarbonate (As CaCO3)	7/11/2013	34000	µg/L	01_071413_11	
Station 145	Cadmium	7/11/2013	11.3	µg/L	01_071413_11	
Station 145	Calcium	7/11/2013	41900	µg/L	01_071413_11	
Station 145	Carbonate (AS CaCO3)	7/11/2013	< 2000	µg/L	01_071413_11	Undetected
Station 145	Chloride	7/11/2013	< 2500	µg/L	01_071413_11	Undetected
Station 145	Conductivity, Field	7/11/2013	283.9	uS/cm	01_071413_11	
Station 145	Iron	7/11/2013	< 20	µg/L	01_071413_11	Undetected
Station 145	Lead	7/11/2013	25.9	µg/L	01_071413_11	
Station 145	Magnesium	7/11/2013	21400	µg/L	01_071413_11	
Station 145	pH, Field	7/11/2013	6.16	pH Units	01_071413_11	
Station 145	Potassium	7/11/2013	500	µg/L	01_071413_11	Analyte detected between MDL and ML
Station 145	Selenium	7/11/2013	3.0	µg/L	01_071413_11	Analyte detected between MDL and ML
Station 145	Sodium	7/11/2013	4900	µg/L	01_071413_11	
Station 145	Sulfate	7/11/2013	173000	µg/L	01_071413_11	
Station 145	Temperature, Field	7/11/2013	8.3	°C	01_071413_11	
Station 145	Total Dissolved Solids	7/11/2013	270000	µg/L	01_071413_11	
Station 145	Total Suspended Solids	7/11/2013	< 5000	µg/L	01_071413_11	Undetected
Station 145	Zinc	7/11/2013	3030	µg/L	01_071413_11	
Station 145	Conductivity, Field	8/12/2013	187.3	uS/cm	01_081113_11	
Station 145	pH, Field	8/12/2013	6.99	pH Units	01_081113_11	
Station 145	Temperature, Field	8/12/2013	5.0	°C	01_081113_11	
Station 145	Alkalinity (As CaCO3)	9/12/2013	49000	µg/L	01_090813_11	
Station 145	Aluminum	9/12/2013	295	µg/L	01_090813_11	
Station 145	Bicarbonate (As CaCO3)	9/12/2013	49000	µg/L	01_090813_11	
Station 145	Cadmium	9/12/2013	18.1	µg/L	01_090813_11	
Station 145	Calcium	9/12/2013	62200	µg/L	01_090813_11	
Station 145	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_11	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 145	Chloride	9/12/2013	< 2500	µg/L	01_090813_11	Undetected
Station 145	Conductivity, Field	9/12/2013	343.6	uS/cm	01_090813_11	
Station 145	Iron	9/12/2013	50	µg/L	01_090813_11	
Station 145	Lead	9/12/2013	44.2	µg/L	01_090813_11	
Station 145	Magnesium	9/12/2013	32700	µg/L	01_090813_11	
Station 145	pH, Field	9/12/2013	7.53	pH Units	01_090813_11	
Station 145	Potassium	9/12/2013	600	µg/L	01_090813_11	Analyte detected between MDL and ML
Station 145	Selenium	9/12/2013	2.1	µg/L	01_090813_11	Analyte detected between MDL and ML
Station 145	Sodium	9/12/2013	6200	µg/L	01_090813_11	
Station 145	Sulfate	9/12/2013	257000	µg/L	01_090813_11	
Station 145	Temperature, Field	9/12/2013	2.8	°C	01_090813_11	
Station 145	Total Dissolved Solids	9/12/2013	408000	µg/L	01_090813_11	
Station 145	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_11	Undetected
Station 145	Zinc	9/12/2013	4330	µg/L	01_090813_11	
Station 145	Alkalinity (As CaCO3)	10/7/2013	64000	µg/L	01_101313_11	
Station 145	Aluminum	10/7/2013	16	µg/L	01_101313_11	
Station 145	Bicarbonate (As CaCO3)	10/7/2013	64000	µg/L	01_101313_11	
Station 145	Cadmium	10/7/2013	9.3	µg/L	01_101313_11	
Station 145	Calcium	10/7/2013	62100	µg/L	01_101313_11	
Station 145	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_11	Undetected
Station 145	Chloride	10/7/2013	< 2500	µg/L	01_101313_11	Undetected
Station 145	Conductivity, Field	10/7/2013	315.5	uS/cm	01_101313_11	
Station 145	Iron	10/7/2013	< 20	µg/L	01_101313_11	Undetected
Station 145	Lead	10/7/2013	4.5	µg/L	01_101313_11	
Station 145	Magnesium	10/7/2013	31400	µg/L	01_101313_11	
Station 145	pH, Field	10/7/2013	6.73	pH Units	01_101313_11	
Station 145	Potassium	10/7/2013	600	µg/L	01_101313_11	Analyte detected between MDL and ML
Station 145	Selenium	10/7/2013	2.1	µg/L	01_101313_11	Analyte detected between MDL and ML
Station 145	Sodium	10/7/2013	9000	µg/L	01_101313_11	
Station 145	Sulfate	10/7/2013	230000	µg/L	01_101313_11	
Station 145	Temperature, Field	10/7/2013	0	°C	01_101313_11	
Station 145	Total Dissolved Solids	10/7/2013	402000	µg/L	01_101313_11	
Station 145	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_11	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 145	Zinc	10/7/2013	3600	µg/L	01_101313_11	
Station 150	Alkalinity (As CaCO3)	5/26/2013	21000	µg/L	13_050713_03	
Station 150	Aluminum	5/26/2013	101	µg/L	13_050713_03	
Station 150	Bicarbonate (As CaCO3)	5/26/2013	21000	µg/L	13_050713_03	
Station 150	Cadmium	5/26/2013	5.0	µg/L	13_050713_03	
Station 150	Calcium	5/26/2013	66000	µg/L	13_050713_03	
Station 150	Carbonate (AS CaCO3)	5/26/2013	< 2000	µg/L	13_050713_03	Undetected
Station 150	Chloride	5/26/2013	< 2500	µg/L	13_050713_03	Undetected
Station 150	Conductivity, Field	5/26/2013	243.7	uS/cm	13_050713_03	
Station 150	Iron	5/26/2013	510	µg/L	13_050713_03	
Station 150	Lead	5/26/2013	61.9	µg/L	13_050713_03	
Station 150	Magnesium	5/26/2013	10300	µg/L	13_050713_03	
Station 150	pH, Field	5/26/2013	7.38	pH Units	13_050713_03	
Station 150	Potassium	5/26/2013	2400	µg/L	13_050713_03	
Station 150	Selenium	5/26/2013	< 1	µg/L	13_050713_03	Undetected
Station 150	Sodium	5/26/2013	7400	µg/L	13_050713_03	
Station 150	Sulfate	5/26/2013	186570	µg/L	13_050713_03	
Station 150	Temperature, Field	5/26/2013	0	°C	13_050713_03	
Station 150	Total Dissolved Solids	5/26/2013	320000	µg/L	13_050713_03	Analysis exceeded method hold time
Station 150	Total Suspended Solids	5/26/2013	5000	µg/L	13_050713_03	Analyte detected between MDL and ML
Station 150	Zinc	5/26/2013	492	µg/L	13_050713_03	
Station 150	Conductivity, Field	5/27/2013	232	uS/cm	12_052113_05	
Station 150	pH, Field	5/27/2013	7.17	pH Units	12_052113_05	
Station 150	Temperature, Field	5/27/2013	0	°C	12_052113_05	
Station 150	Total Dissolved Solids	5/27/2013	300000	µg/L	12_052113_05	
Station 150	Alkalinity (As CaCO3)	6/3/2013	22000	µg/L	13_060413_03	
Station 150	Aluminum	6/3/2013	485	µg/L	13_060413_03	
Station 150	Bicarbonate (As CaCO3)	6/3/2013	22000	µg/L	13_060413_03	
Station 150	Cadmium	6/3/2013	0.8	µg/L	13_060413_03	
Station 150	Calcium	6/3/2013	28000	µg/L	13_060413_03	
Station 150	Carbonate (AS CaCO3)	6/3/2013	< 2000	µg/L	13_060413_03	Undetected
Station 150	Chloride	6/3/2013	860	µg/L	13_060413_03	Analyte detected between MDL and ML
Station 150	Conductivity, Field	6/3/2013	114.3	uS/cm	13_060413_03	
Station 150	Iron	6/3/2013	1200	µg/L	13_060413_03	
Station 150	Lead	6/3/2013	9.4	µg/L	13_060413_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 150	Magnesium	6/3/2013	5000	µg/L	13_060413_03	
Station 150	pH, Field	6/3/2013	7.34	pH Units	13_060413_03	
Station 150	Potassium	6/3/2013	< 2000	µg/L	13_060413_03	Undetected
Station 150	Selenium	6/3/2013	< 1	µg/L	13_060413_03	Undetected
Station 150	Sodium	6/3/2013	3000	µg/L	13_060413_03	Analyte detected between MDL and ML
Station 150	Sulfate	6/3/2013	73800	µg/L	13_060413_03	
Station 150	Temperature, Field	6/3/2013	0.7	°C	13_060413_03	
Station 150	Total Dissolved Solids	6/3/2013	130000	µg/L	13_060413_03	
Station 150	Total Suspended Solids	6/3/2013	14000	µg/L	13_060413_03	Analyte detected between MDL and ML
Station 150	Zinc	6/3/2013	114	µg/L	13_060413_03	
Station 150	Conductivity, Field	6/10/2013	259.7	uS/cm	12_061113_03	
Station 150	pH, Field	6/10/2013	7.53	pH Units	12_061113_03	
Station 150	Temperature, Field	6/10/2013	1.1	°C	12_061113_03	
Station 150	Total Dissolved Solids	6/10/2013	334000	µg/L	12_061113_03	
Station 150	Conductivity, Field	6/17/2013	253.2	uS/cm	12_061813_05	
Station 150	pH, Field	6/17/2013	7.52	pH Units	12_061813_05	
Station 150	Temperature, Field	6/17/2013	5.9	°C	12_061813_05	
Station 150	Total Dissolved Solids	6/17/2013	250000	µg/L	12_061813_05	
Station 150	Conductivity, Field	6/24/2013	382.1	uS/cm	12_062513_03	
Station 150	pH, Field	6/24/2013	7.85	pH Units	12_062513_03	
Station 150	Temperature, Field	6/24/2013	6.7	°C	12_062513_03	
Station 150	Total Dissolved Solids	6/24/2013	420000	µg/L	12_062513_03	
Station 150	Alkalinity (As CaCO3)	7/6/2013	63000	µg/L	13_070213_03	
Station 150	Aluminum	7/6/2013	420	µg/L	13_070213_03	
Station 150	Bicarbonate (As CaCO3)	7/6/2013	63000	µg/L	13_070213_03	
Station 150	Cadmium	7/6/2013	0.8	µg/L	13_070213_03	
Station 150	Calcium	7/6/2013	65800	µg/L	13_070213_03	
Station 150	Carbonate (AS CaCO3)	7/6/2013	< 2000	µg/L	13_070213_03	Undetected
Station 150	Chloride	7/6/2013	3110	µg/L	13_070213_03	Analyte detected between MDL and ML
Station 150	Conductivity, Field	7/6/2013	286.3	uS/cm	13_070213_03	
Station 150	Iron	7/6/2013	950	µg/L	13_070213_03	
Station 150	Lead	7/6/2013	3.7	µg/L	13_070213_03	
Station 150	Magnesium	7/6/2013	12400	µg/L	13_070213_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 150	pH, Field	7/6/2013	7.70	pH Units	13_070213_03	
Station 150	Potassium	7/6/2013	1300	µg/L	13_070213_03	Analyte detected between MDL and ML
Station 150	Selenium	7/6/2013	1.3	µg/L	13_070213_03	Analyte detected between MDL and ML
Station 150	Sodium	7/6/2013	6100	µg/L	13_070213_03	
Station 150	Sulfate	7/6/2013	159000	µg/L	13_070213_03	
Station 150	Temperature, Field	7/6/2013	5.7	°C	13_070213_03	
Station 150	Total Dissolved Solids	7/6/2013	260000	µg/L	13_070213_03	
Station 150	Total Suspended Solids	7/6/2013	25000	µg/L	13_070213_03	
Station 150	Zinc	7/6/2013	150	µg/L	13_070213_03	
Station 150	Conductivity, Field	7/8/2013	423.8	uS/cm	12_070913_03	
Station 150	pH, Field	7/8/2013	7.70	pH Units	12_070913_03	
Station 150	Temperature, Field	7/8/2013	7.3	°C	12_070913_03	
Station 150	Total Dissolved Solids	7/8/2013	440000	µg/L	12_070913_03	
Station 150	Conductivity, Field	7/15/2013	351.0	uS/cm	12_071613_05	
Station 150	pH, Field	7/15/2013	8.01	pH Units	12_071613_05	
Station 150	Temperature, Field	7/15/2013	11.3	°C	12_071613_05	
Station 150	Total Dissolved Solids	7/15/2013	430000	µg/L	12_071613_05	Analysis exceeded method hold time
Station 150	Conductivity, Field	7/22/2013	449.8	uS/cm	12_072313_03	
Station 150	pH, Field	7/22/2013	7.85	pH Units	12_072313_03	
Station 150	Temperature, Field	7/22/2013	7.6	°C	12_072313_03	
Station 150	Total Dissolved Solids	7/22/2013	510000	µg/L	12_072313_03	
Station 150	Conductivity, Field	7/29/2013	371.7	uS/cm	12_072913_03	
Station 150	pH, Field	7/29/2013	8.07	pH Units	12_072913_03	
Station 150	Temperature, Field	7/29/2013	7.6	°C	12_072913_03	
Station 150	Total Dissolved Solids	7/29/2013	394000	µg/L	12_072913_03	
Station 150	Alkalinity (As CaCO3)	8/5/2013	65000	µg/L	13_080613_03	
Station 150	Aluminum	8/5/2013	468	µg/L	13_080613_03	
Station 150	Bicarbonate (As CaCO3)	8/5/2013	65000	µg/L	13_080613_03	
Station 150	Cadmium	8/5/2013	1.0	µg/L	13_080613_03	
Station 150	Calcium	8/5/2013	68900	µg/L	13_080613_03	
Station 150	Carbonate (AS CaCO3)	8/5/2013	< 2000	µg/L	13_080613_03	Undetected
Station 150	Chloride	8/5/2013	3140	µg/L	13_080613_03	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 150	Conductivity, Field	8/5/2013	315.0	uS/cm	13_080613_03	
Station 150	Iron	8/5/2013	970	µg/L	13_080613_03	
Station 150	Lead	8/5/2013	10.1	µg/L	13_080613_03	
Station 150	Magnesium	8/5/2013	14100	µg/L	13_080613_03	
Station 150	pH, Field	8/5/2013	7.87	pH Units	13_080613_03	
Station 150	Potassium	8/5/2013	1100	µg/L	13_080613_03	Analyte detected between MDL and ML
Station 150	Selenium	8/5/2013	1.3	µg/L	13_080613_03	Analyte detected between MDL and ML
Station 150	Sodium	8/5/2013	5900	µg/L	13_080613_03	
Station 150	Sulfate	8/5/2013	164000	µg/L	13_080613_03	
Station 150	Temperature, Field	8/5/2013	6.6	°C	13_080613_03	
Station 150	Total Dissolved Solids	8/5/2013	296000	µg/L	13_080613_03	
Station 150	Total Suspended Solids	8/5/2013	17000	µg/L	13_080613_03	Analyte detected between MDL and ML
Station 150	Zinc	8/5/2013	161	µg/L	13_080613_03	
Station 150	Conductivity, Field	8/12/2013	243.2	uS/cm	12_081313_03	
Station 150	pH, Field	8/12/2013	7.76	pH Units	12_081313_03	
Station 150	Temperature, Field	8/12/2013	5.1	°C	12_081313_03	
Station 150	Total Dissolved Solids	8/12/2013	280000	µg/L	12_081313_03	
Station 150	Conductivity, Field	8/19/2013	501.0	uS/cm	12_082013_05	
Station 150	pH, Field	8/19/2013	8.01	pH Units	12_082013_05	
Station 150	Temperature, Field	8/19/2013	7.7	°C	12_082013_05	
Station 150	Total Dissolved Solids	8/19/2013	546000	µg/L	12_082013_05	
Station 150	Conductivity, Field	8/26/2013	463.9	uS/cm	12_082713_03	
Station 150	pH, Field	8/26/2013	8.04	pH Units	12_082713_03	
Station 150	Temperature, Field	8/26/2013	4.6	°C	12_082713_03	
Station 150	Total Dissolved Solids	8/26/2013	540000	µg/L	12_082713_03	
Station 150	Alkalinity (As CaCO3)	9/2/2013	93000	µg/L	13_090313_03	
Station 150	Aluminum	9/2/2013	40	µg/L	13_090313_03	
Station 150	Bicarbonate (As CaCO3)	9/2/2013	93000	µg/L	13_090313_03	
Station 150	Cadmium	9/2/2013	1	µg/L	13_090313_03	
Station 150	Calcium	9/2/2013	128000	µg/L	13_090313_03	
Station 150	Carbonate (AS CaCO3)	9/2/2013	< 2000	µg/L	13_090313_03	Undetected
Station 150	Chloride	9/2/2013	< 5000	µg/L	13_090313_03	Undetected
Station 150	Conductivity, Field	9/2/2013	448.6	uS/cm	13_090313_03	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 150	Iron	9/2/2013	200	µg/L	13_090313_03	
Station 150	Lead	9/2/2013	0	µg/L	13_090313_03	
Station 150	Magnesium	9/2/2013	25000	µg/L	13_090313_03	
Station 150	pH, Field	9/2/2013	7.87	pH Units	13_090313_03	
Station 150	Potassium	9/2/2013	1000	µg/L	13_090313_03	Analyte detected between MDL and ML
Station 150	Selenium	9/2/2013	1.5	µg/L	13_090313_03	Analyte detected between MDL and ML
Station 150	Sodium	9/2/2013	10000	µg/L	13_090313_03	
Station 150	Sulfate	9/2/2013	330000	µg/L	13_090313_03	
Station 150	Temperature, Field	9/2/2013	1.3	°C	13_090313_03	
Station 150	Total Dissolved Solids	9/2/2013	602000	µg/L	13_090313_03	Analysis exceeded method hold time
Station 150	Total Suspended Solids	9/2/2013	< 5000	µg/L	13_090313_03	
Station 150	Zinc	9/2/2013	310	µg/L	13_090313_03	
Station 150	Conductivity, Field	9/9/2013	475.0	uS/cm	12_091013_03	
Station 150	pH, Field	9/9/2013	8.01	pH Units	12_091013_03	
Station 150	Temperature, Field	9/9/2013	5.2	°C	12_091013_03	
Station 150	Total Dissolved Solids	9/9/2013	580000	µg/L	12_091013_03	
Station 150	Conductivity, Field	9/16/2013	463.8	uS/cm	12_091713_05	
Station 150	pH, Field	9/16/2013	8.16	pH Units	12_091713_05	
Station 150	Temperature, Field	9/16/2013	1.6	°C	12_091713_05	
Station 150	Total Dissolved Solids	9/16/2013	582000	µg/L	12_091713_05	
Station 150	Conductivity, Field	9/23/2013	257	uS/cm	12_092313_05	
Station 150	pH, Field	9/23/2013	7.99	pH Units	12_092313_05	
Station 150	Temperature, Field	9/23/2013	0	°C	12_092313_05	
Station 150	Total Dissolved Solids	9/23/2013	312000	µg/L	12_092313_05	
Station 150	Alkalinity (As CaCO3)	10/1/2013	108000	µg/L	13_100113_03	
Station 150	Aluminum	10/1/2013	57	µg/L	13_100113_03	
Station 150	Bicarbonate (As CaCO3)	10/1/2013	108000	µg/L	13_100113_03	
Station 150	Cadmium	10/1/2013	1.2	µg/L	13_100113_03	
Station 150	Calcium	10/1/2013	78100	µg/L	13_100113_03	
Station 150	Carbonate (AS CaCO3)	10/1/2013	< 2000	µg/L	13_100113_03	Undetected
Station 150	Chloride	10/1/2013	< 5000	µg/L	13_100113_03	Undetected
Station 150	Conductivity, Field	10/1/2013	279	uS/cm	13_100113_03	
Station 150	Iron	10/1/2013	340	µg/L	13_100113_03	
Station 150	Lead	10/1/2013	0.6	µg/L	13_100113_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 150	Magnesium	10/1/2013	23300	µg/L	13_100113_03	
Station 150	pH, Field	10/1/2013	7.72	pH Units	13_100113_03	
Station 150	Potassium	10/1/2013	600	µg/L	13_100113_03	Analyte detected between MDL and ML
Station 150	Selenium	10/1/2013	1.8	µg/L	13_100113_03	Analyte detected between MDL and ML
Station 150	Sodium	10/1/2013	4900	µg/L	13_100113_03	
Station 150	Sulfate	10/1/2013	161000	µg/L	13_100113_03	
Station 150	Temperature, Field	10/1/2013	0.01	°C	13_100113_03	
Station 150	Total Dissolved Solids	10/1/2013	386000	µg/L	13_100113_03	
Station 150	Total Suspended Solids	10/1/2013	< 5000	µg/L	13_100113_03	Undetected
Station 150	Zinc	10/1/2013	284	µg/L	13_100113_03	
Station 150	Conductivity, Field	10/7/2013	287.6	uS/cm	12_100813_03	
Station 150	pH, Field	10/7/2013	7.53	pH Units	12_100813_03	
Station 150	Temperature, Field	10/7/2013	0	°C	12_100813_03	
Station 150	Total Dissolved Solids	10/7/2013	345000	µg/L	12_100813_03	
Station 150	Conductivity, Field	10/14/2013	281.1	uS/cm	12_102213_03	
Station 150	pH, Field	10/14/2013	7.84	pH Units	12_102213_03	
Station 150	Temperature, Field	10/14/2013	0	°C	12_102213_03	
Station 150	Total Dissolved Solids	10/14/2013	348000	µg/L	12_102213_03	
Station 9	Alkalinity (As CaCO3)	5/26/2013	23000	µg/L	01_051213_12	
Station 9	Aluminum	5/26/2013	168	µg/L	01_051213_12	
Station 9	Bicarbonate (As CaCO3)	5/26/2013	23000	µg/L	01_051213_12	
Station 9	Cadmium	5/26/2013	1.5	µg/L	01_051213_12	
Station 9	Calcium	5/26/2013	12500	µg/L	01_051213_12	
Station 9	Carbonate (AS CaCO3)	5/26/2013	< 2000	µg/L	01_051213_12	Undetected
Station 9	Chloride	5/26/2013	920	µg/L	01_051213_12	Analyte detected between MDL and ML
Station 9	Conductivity, Field	5/26/2013	70.7	uS/cm	01_051213_12	
Station 9	Iron	5/26/2013	1050	µg/L	01_051213_12	
Station 9	Lead	5/26/2013	5.7	µg/L	01_051213_12	
Station 9	Magnesium	5/26/2013	6200	µg/L	01_051213_12	
Station 9	pH, Field	5/26/2013	7.36	pH Units	01_051213_12	
Station 9	Potassium	5/26/2013	1200	µg/L	01_051213_12	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 9	Selenium	5/26/2013	< 1	µg/L	01_051213_12	Undetected
Station 9	Sodium	5/26/2013	1300	µg/L	01_051213_12	Analyte detected between MDL and ML
Station 9	Sulfate	5/26/2013	38910	µg/L	01_051213_12	
Station 9	Temperature, Field	5/26/2013	0.1	°C	01_051213_12	
Station 9	Total Dissolved Solids	5/26/2013	90000	µg/L	01_051213_12	Analysis exceeded method hold time
Station 9	Total Suspended Solids	5/26/2013	< 5000	µg/L	01_051213_12	
Station 9	Zinc	5/26/2013	456	µg/L	01_051213_12	
Station 9	Alkalinity (As CaCO3)	5/27/2013	21000	µg/L	01_052613_08	
Station 9	Aluminum	5/27/2013	132	µg/L	01_052613_08	
Station 9	Bicarbonate (As CaCO3)	5/27/2013	21000	µg/L	01_052613_08	
Station 9	Cadmium	5/27/2013	0.5	µg/L	01_052613_08	
Station 9	Calcium	5/27/2013	10000	µg/L	01_052613_08	
Station 9	Carbonate (AS CaCO3)	5/27/2013	< 2000	µg/L	01_052613_08	Undetected
Station 9	Chloride	5/27/2013	750	µg/L	01_052613_08	Analyte detected between MDL and ML
Station 9	Conductivity, Field	5/27/2013	50.3	uS/cm	01_052613_08	
Station 9	Iron	5/27/2013	510	µg/L	01_052613_08	
Station 9	Lead	5/27/2013	4.3	µg/L	01_052613_08	
Station 9	Magnesium	5/27/2013	4100	µg/L	01_052613_08	
Station 9	pH, Field	5/27/2013	7.17	pH Units	01_052613_08	
Station 9	Potassium	5/27/2013	1100	µg/L	01_052613_08	Analyte detected between MDL and ML
Station 9	Selenium	5/27/2013	< 1	µg/L	01_052613_08	Undetected
Station 9	Sodium	5/27/2013	1000	µg/L	01_052613_08	Analyte detected between MDL and ML
Station 9	Sulfate	5/27/2013	22250	µg/L	01_052613_08	
Station 9	Temperature, Field	5/27/2013	0.1	°C	01_052613_08	
Station 9	Total Dissolved Solids	5/27/2013	60000	µg/L	01_052613_08	
Station 9	Total Suspended Solids	5/27/2013	< 5000	µg/L	01_052613_08	Undetected
Station 9	Zinc	5/27/2013	142	µg/L	01_052613_08	
Station 9	Alkalinity (As CaCO3)	6/7/2013	34000	µg/L	01_060913_12	
Station 9	Aluminum	6/7/2013	267	µg/L	01_060913_12	
Station 9	Bicarbonate (As CaCO3)	6/7/2013	34000	µg/L	01_060913_12	
Station 9	Cadmium	6/7/2013	0.6	µg/L	01_060913_12	
Station 9	Calcium	6/7/2013	14700	µg/L	01_060913_12	
Station 9	Carbonate (AS CaCO3)	6/7/2013	< 2000	µg/L	01_060913_12	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 9	Chloride	6/7/2013	< 500	µg/L	01_060913_12	Undetected
Station 9	Conductivity, Field	6/7/2013	68.4	uS/cm	01_060913_12	
Station 9	Iron	6/7/2013	900	µg/L	01_060913_12	
Station 9	Lead	6/7/2013	1.5	µg/L	01_060913_12	
Station 9	Magnesium	6/7/2013	5500	µg/L	01_060913_12	
Station 9	pH, Field	6/7/2013	7.43	pH Units	01_060913_12	
Station 9	Potassium	6/7/2013	500	µg/L	01_060913_12	Analyte detected between MDL and ML
Station 9	Selenium	6/7/2013	< 1	µg/L	01_060913_12	Undetected
Station 9	Sodium	6/7/2013	1000	µg/L	01_060913_12	Analyte detected between MDL and ML
Station 9	Sulfate	6/7/2013	28000	µg/L	01_060913_12	
Station 9	Temperature, Field	6/7/2013	0.4	°C	01_060913_12	
Station 9	Total Dissolved Solids	6/7/2013	70000	µg/L	01_060913_12	
Station 9	Total Suspended Solids	6/7/2013	7000	µg/L	01_060913_12	Analyte detected between MDL and ML
Station 9	Zinc	6/7/2013	170	µg/L	01_060913_12	
Station 9	Alkalinity (As CaCO3)	6/20/2013	48000	µg/L	01_062313_08	
Station 9	Aluminum	6/20/2013	159	µg/L	01_062313_08	
Station 9	Bicarbonate (As CaCO3)	6/20/2013	48000	µg/L	01_062313_08	
Station 9	Cadmium	6/20/2013	0.4	µg/L	01_062313_08	Analyte detected between MDL and ML
Station 9	Calcium	6/20/2013	20200	µg/L	01_062313_08	
Station 9	Carbonate (AS CaCO3)	6/20/2013	< 2000	µg/L	01_062313_08	Undetected
Station 9	Chloride	6/20/2013	660	µg/L	01_062313_08	Analyte detected between MDL and ML
Station 9	Conductivity, Field	6/20/2013	110.4	uS/cm	01_062313_08	
Station 9	Iron	6/20/2013	430	µg/L	01_062313_08	
Station 9	Lead	6/20/2013	0.7	µg/L	01_062313_08	
Station 9	Magnesium	6/20/2013	7300	µg/L	01_062313_08	
Station 9	pH, Field	6/20/2013	7.46	pH Units	01_062313_08	
Station 9	Potassium	6/20/2013	400	µg/L	01_062313_08	Analyte detected between MDL and ML
Station 9	Selenium	6/20/2013	< 1	µg/L	01_062313_08	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 9	Sodium	6/20/2013	1100	µg/L	01_062313_08	Analyte detected between MDL and ML
Station 9	Sulfate	6/20/2013	33700	µg/L	01_062313_08	
Station 9	Temperature, Field	6/20/2013	7.8	°C	01_062313_08	
Station 9	Total Dissolved Solids	6/20/2013	110000	µg/L	01_062313_08	
Station 9	Total Suspended Solids	6/20/2013	< 5000	µg/L	01_062313_08	Undetected
Station 9	Zinc	6/20/2013	89	µg/L	01_062313_08	
Station 9	Alkalinity (As CaCO3)	7/5/2013	71000	µg/L	01_071413_12	
Station 9	Aluminum	7/5/2013	128	µg/L	01_071413_12	
Station 9	Bicarbonate (As CaCO3)	7/5/2013	71000	µg/L	01_071413_12	
Station 9	Cadmium	7/5/2013	0.5	µg/L	01_071413_12	
Station 9	Calcium	7/5/2013	29600	µg/L	01_071413_12	
Station 9	Carbonate (AS CaCO3)	7/5/2013	< 2000	µg/L	01_071413_12	Undetected
Station 9	Chloride	7/5/2013	640	µg/L	01_071413_12	Analyte detected between MDL and ML
Station 9	Conductivity, Field	7/5/2013	153.1	uS/cm	01_071413_12	
Station 9	Iron	7/5/2013	340	µg/L	01_071413_12	
Station 9	Lead	7/5/2013	0.7	µg/L	01_071413_12	
Station 9	Magnesium	7/5/2013	11400	µg/L	01_071413_12	
Station 9	pH, Field	7/5/2013	7.67	pH Units	01_071413_12	
Station 9	Potassium	7/5/2013	400	µg/L	01_071413_12	Analyte detected between MDL and ML
Station 9	Selenium	7/5/2013	< 1	µg/L	01_071413_12	Undetected
Station 9	Sodium	7/5/2013	1800	µg/L	01_071413_12	Analyte detected between MDL and ML
Station 9	Sulfate	7/5/2013	53700	µg/L	01_071413_12	
Station 9	Temperature, Field	7/5/2013	4.6	°C	01_071413_12	
Station 9	Total Dissolved Solids	7/5/2013	150000	µg/L	01_071413_12	
Station 9	Total Suspended Solids	7/5/2013	< 5000	µg/L	01_071413_12	Undetected
Station 9	Zinc	7/5/2013	145	µg/L	01_071413_12	
Station 9	Alkalinity (As CaCO3)	7/29/2013	85000	µg/L	01_072813_08	
Station 9	Aluminum	7/29/2013	132	µg/L	01_072813_08	
Station 9	Bicarbonate (As CaCO3)	7/29/2013	85000	µg/L	01_072813_08	
Station 9	Cadmium	7/29/2013	0.6	µg/L	01_072813_08	
Station 9	Calcium	7/29/2013	37100	µg/L	01_072813_08	
Station 9	Carbonate (AS CaCO3)	7/29/2013	< 2000	µg/L	01_072813_08	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 9	Chloride	7/29/2013	640	µg/L	01_072813_08	Analyte detected between MDL and ML
Station 9	Conductivity, Field	7/29/2013	203.5	uS/cm	01_072813_08	
Station 9	Iron	7/29/2013	410	µg/L	01_072813_08	
Station 9	Lead	7/29/2013	0.5	µg/L	01_072813_08	
Station 9	Magnesium	7/29/2013	14100	µg/L	01_072813_08	
Station 9	pH, Field	7/29/2013	8.1	pH Units	01_072813_08	
Station 9	Potassium	7/29/2013	300	µg/L	01_072813_08	Analyte detected between MDL and ML
Station 9	Selenium	7/29/2013	< 1	µg/L	01_072813_08	Undetected
Station 9	Sodium	7/29/2013	2400	µg/L	01_072813_08	
Station 9	Sulfate	7/29/2013	72900	µg/L	01_072813_08	
Station 9	Temperature, Field	7/29/2013	6.8	°C	01_072813_08	
Station 9	Total Dissolved Solids	7/29/2013	186000	µg/L	01_072813_08	
Station 9	Total Suspended Solids	7/29/2013	< 5000	µg/L	01_072813_08	Undetected
Station 9	Zinc	7/29/2013	175	µg/L	01_072813_08	
Station 9	Alkalinity (As CaCO3)	8/9/2013	69000	µg/L	01_081113_12	
Station 9	Aluminum	8/9/2013	300	µg/L	01_081113_12	
Station 9	Bicarbonate (As CaCO3)	8/9/2013	69000	µg/L	01_081113_12	
Station 9	Cadmium	8/9/2013	0.7	µg/L	01_081113_12	
Station 9	Calcium	8/9/2013	34900	µg/L	01_081113_12	
Station 9	Carbonate (AS CaCO3)	8/9/2013	< 2000	µg/L	01_081113_12	Undetected
Station 9	Chloride	8/9/2013	690	µg/L	01_081113_12	Analyte detected between MDL and ML
Station 9	Conductivity, Field	8/9/2013	188.9	uS/cm	01_081113_12	
Station 9	Iron	8/9/2013	800	µg/L	01_081113_12	
Station 9	Lead	8/9/2013	1.0	µg/L	01_081113_12	
Station 9	Magnesium	8/9/2013	13100	µg/L	01_081113_12	
Station 9	pH, Field	8/9/2013	7.82	pH Units	01_081113_12	
Station 9	Potassium	8/9/2013	300	µg/L	01_081113_12	Analyte detected between MDL and ML
Station 9	Selenium	8/9/2013	1.4	µg/L	01_081113_12	Analyte detected between MDL and ML
Station 9	Sodium	8/9/2013	2200	µg/L	01_081113_12	
Station 9	Sulfate	8/9/2013	78700	µg/L	01_081113_12	
Station 9	Temperature, Field	8/9/2013	5.9	°C	01_081113_12	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 9	Total Dissolved Solids	8/9/2013	180000	µg/L	01_081113_12	
Station 9	Total Suspended Solids	8/9/2013	8000	µg/L	01_081113_12	Analyte detected between MDL and ML
Station 9	Zinc	8/9/2013	185	µg/L	01_081113_12	
Station 9	Alkalinity (As CaCO3)	8/23/2013	90000	µg/L	01_082513_08	
Station 9	Aluminum	8/23/2013	106	µg/L	01_082513_08	
Station 9	Bicarbonate (As CaCO3)	8/23/2013	90000	µg/L	01_082513_08	
Station 9	Cadmium	8/23/2013	0.9	µg/L	01_082513_08	
Station 9	Calcium	8/23/2013	48900	µg/L	01_082513_08	
Station 9	Carbonate (AS CaCO3)	8/23/2013	< 2000	µg/L	01_082513_08	Undetected
Station 9	Conductivity, Field	8/23/2013	241.7	uS/cm	01_082513_08	
Station 9	Iron	8/23/2013	480	µg/L	01_082513_08	
Station 9	Lead	8/23/2013	0.6	µg/L	01_082513_08	
Station 9	Magnesium	8/23/2013	18900	µg/L	01_082513_08	
Station 9	pH, Field	8/23/2013	7.91	pH Units	01_082513_08	
Station 9	Potassium	8/23/2013	400	µg/L	01_082513_08	Analyte detected between MDL and ML
Station 9	Selenium	8/23/2013	< 1	µg/L	01_082513_08	Undetected
Station 9	Sodium	8/23/2013	3400	µg/L	01_082513_08	
Station 9	Temperature, Field	8/23/2013	4.1	°C	01_082513_08	
Station 9	Total Dissolved Solids	8/23/2013	254000	µg/L	01_082513_08	
Station 9	Total Suspended Solids	8/23/2013	< 5000	µg/L	01_082513_08	Undetected
Station 9	Zinc	8/23/2013	251	µg/L	01_082513_08	
Station 9	Alkalinity (As CaCO3)	9/12/2013	98000	µg/L	01_090813_12	
Station 9	Aluminum	9/12/2013	108	µg/L	01_090813_12	
Station 9	Bicarbonate (As CaCO3)	9/12/2013	98000	µg/L	01_090813_12	
Station 9	Cadmium	9/12/2013	0.8	µg/L	01_090813_12	
Station 9	Calcium	9/12/2013	48000	µg/L	01_090813_12	
Station 9	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_12	Undetected
Station 9	Chloride	9/12/2013	< 1000	µg/L	01_090813_12	Undetected
Station 9	Conductivity, Field	9/12/2013	219.7	uS/cm	01_090813_12	
Station 9	Iron	9/12/2013	450	µg/L	01_090813_12	
Station 9	Lead	9/12/2013	0.6	µg/L	01_090813_12	
Station 9	Magnesium	9/12/2013	18300	µg/L	01_090813_12	
Station 9	pH, Field	9/12/2013	8.03	pH Units	01_090813_12	
Station 9	Potassium	9/12/2013	400	µg/L	01_090813_12	Analyte detected between MDL and ML
Station 9	Selenium	9/12/2013	< 1	µg/L	01_090813_12	Undetected



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 9	Sodium	9/12/2013	3100	µg/L	01_090813_12	
Station 9	Sulfate	9/12/2013	128000	µg/L	01_090813_12	
Station 9	Temperature, Field	9/12/2013	2.4	°C	01_090813_12	
Station 9	Total Dissolved Solids	9/12/2013	232000	µg/L	01_090813_12	
Station 9	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_12	Undetected
Station 9	Zinc	9/12/2013	216	µg/L	01_090813_12	
Station 9	Alkalinity (As CaCO3)	9/27/2013	107000	µg/L	01_092213_08	
Station 9	Aluminum	9/27/2013	100	µg/L	01_092213_08	
Station 9	Bicarbonate (As CaCO3)	9/27/2013	107000	µg/L	01_092213_08	
Station 9	Cadmium	9/27/2013	0.9	µg/L	01_092213_08	
Station 9	Calcium	9/27/2013	60300	µg/L	01_092213_08	
Station 9	Carbonate (AS CaCO3)	9/27/2013	< 2000	µg/L	01_092213_08	Undetected
Station 9	Chloride	9/27/2013	< 1000	µg/L	01_092213_08	Undetected
Station 9	Conductivity, Field	9/27/2013	251.0	uS/cm	01_092213_08	
Station 9	Iron	9/27/2013	560	µg/L	01_092213_08	
Station 9	Lead	9/27/2013	0.4	µg/L	01_092213_08	Analyte detected between MDL and ML
Station 9	Magnesium	9/27/2013	22800	µg/L	01_092213_08	
Station 9	pH, Field	9/27/2013	8.03	pH Units	01_092213_08	
Station 9	Potassium	9/27/2013	500	µg/L	01_092213_08	Analyte detected between MDL and ML
Station 9	Selenium	9/27/2013	1.5	µg/L	01_092213_08	Analyte detected between MDL and ML
Station 9	Sodium	9/27/2013	4100	µg/L	01_092213_08	
Station 9	Sulfate	9/27/2013	164000	µg/L	01_092213_08	
Station 9	Temperature, Field	9/27/2013	0.1	°C	01_092213_08	
Station 9	Total Dissolved Solids	9/27/2013	314000	µg/L	01_092213_08	
Station 9	Total Suspended Solids	9/27/2013	< 5000	µg/L	01_092213_08	Undetected
Station 9	Zinc	9/27/2013	289	µg/L	01_092213_08	
Station 9	Alkalinity (As CaCO3)	10/7/2013	102000	µg/L	01_101313_12	
Station 9	Aluminum	10/7/2013	75	µg/L	01_101313_12	
Station 9	Bicarbonate (As CaCO3)	10/7/2013	102000	µg/L	01_101313_12	
Station 9	Cadmium	10/7/2013	1.2	µg/L	01_101313_12	
Station 9	Calcium	10/7/2013	62600	µg/L	01_101313_12	
Station 9	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_12	Undetected
Station 9	Chloride	10/7/2013	< 2500	µg/L	01_101313_12	Undetected
Station 9	Conductivity, Field	10/7/2013	274.7	uS/cm	01_101313_12	
Station 9	Iron	10/7/2013	380	µg/L	01_101313_12	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 9	Lead	10/7/2013	0.2	µg/L	01_101313_12	Analyte detected between MDL and ML
Station 9	Magnesium	10/7/2013	24700	µg/L	01_101313_12	
Station 9	pH, Field	10/7/2013	7.51	pH Units	01_101313_12	
Station 9	Potassium	10/7/2013	400	µg/L	01_101313_12	Analyte detected between MDL and ML
Station 9	Selenium	10/7/2013	1.2	µg/L	01_101313_12	Analyte detected between MDL and ML
Station 9	Sodium	10/7/2013	4700	µg/L	01_101313_12	
Station 9	Sulfate	10/7/2013	153000	µg/L	01_101313_12	
Station 9	Temperature, Field	10/7/2013	0	°C	01_101313_12	
Station 9	Total Dissolved Solids	10/7/2013	320000	µg/L	01_101313_12	
Station 9	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_12	Undetected
Station 9	Zinc	10/7/2013	375	µg/L	01_101313_12	
Station 9	Alkalinity (As CaCO3)	10/11/2013	103000	µg/L	01_102713_08	
Station 9	Aluminum	10/11/2013	74	µg/L	01_102713_08	
Station 9	Bicarbonate (As CaCO3)	10/11/2013	103000	µg/L	01_102713_08	
Station 9	Cadmium	10/11/2013	1.1	µg/L	01_102713_08	
Station 9	Calcium	10/11/2013	64700	µg/L	01_102713_08	
Station 9	Carbonate (AS CaCO3)	10/11/2013	< 2000	µg/L	01_102713_08	Undetected
Station 9	Chloride	10/11/2013	< 2500	µg/L	01_102713_08	Undetected
Station 9	Conductivity, Field	10/11/2013	278.8	uS/cm	01_102713_08	
Station 9	Iron	10/11/2013	390	µg/L	01_102713_08	
Station 9	Lead	10/11/2013	0.2	µg/L	01_102713_08	Analyte detected between MDL and ML
Station 9	Magnesium	10/11/2013	25500	µg/L	01_102713_08	
Station 9	pH, Field	10/11/2013	7.80	pH Units	01_102713_08	
Station 9	Potassium	10/11/2013	400	µg/L	01_102713_08	Analyte detected between MDL and ML
Station 9	Selenium	10/11/2013	1.4	µg/L	01_102713_08	Analyte detected between MDL and ML
Station 9	Sodium	10/11/2013	4900	µg/L	01_102713_08	
Station 9	Sulfate	10/11/2013	153000	µg/L	01_102713_08	
Station 9	Temperature, Field	10/11/2013	0	°C	01_102713_08	
Station 9	Total Dissolved Solids	10/11/2013	338000	µg/L	01_102713_08	
Station 9	Total Suspended Solids	10/11/2013	< 5000	µg/L	01_102713_08	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Station 9	Zinc	10/11/2013	336	µg/L	01_102713_08	
			6000	µg/L		Analyte detected between MDL and ML
Sulfur Creek	Alkalinity (As CaCO3)	5/24/2013			01_051213_13	
Sulfur Creek	Aluminum	5/24/2013	450	µg/L	01_051213_13	
			6000	µg/L		Analyte detected between MDL and ML
Sulfur Creek	Bicarbonate (As CaCO3)	5/24/2013			01_051213_13	
Sulfur Creek	Cadmium	5/24/2013	27.1	µg/L	01_051213_13	
Sulfur Creek	Calcium	5/24/2013	12800	µg/L	01_051213_13	
Sulfur Creek	Carbonate (AS CaCO3)	5/24/2013	< 2000	µg/L	01_051213_13	Undetected
			940	µg/L		Analyte detected between MDL and ML
Sulfur Creek	Chloride	5/24/2013			01_051213_13	
Sulfur Creek	Conductivity, Field	5/24/2013	56.5	µS/cm	01_051213_13	
Sulfur Creek	Iron	5/24/2013	580	µg/L	01_051213_13	
Sulfur Creek	Lead	5/24/2013	684.0	µg/L	01_051213_13	
Sulfur Creek	Magnesium	5/24/2013	1600	µg/L	01_051213_13	
Sulfur Creek	pH, Field	5/24/2013	5.51	pH Units	01_051213_13	
			1800	µg/L		Analyte detected between MDL and ML
Sulfur Creek	Potassium	5/24/2013			01_051213_13	
Sulfur Creek	Selenium	5/24/2013	5.6	µg/L	01_051213_13	
			1400	µg/L		Analyte detected between MDL and ML
Sulfur Creek	Sodium	5/24/2013			01_051213_13	
Sulfur Creek	Sulfate	5/24/2013	37400	µg/L	01_051213_13	
Sulfur Creek	Temperature, Field	5/24/2013	0	°C	01_051213_13	
Sulfur Creek	Total Dissolved Solids	5/24/2013	60000	µg/L	01_051213_13	
			8000	µg/L		Analyte detected between MDL and ML
Sulfur Creek	Total Suspended Solids	5/24/2013			01_051213_13	
Sulfur Creek	Zinc	5/24/2013	1800	µg/L	01_051213_13	
			18000	µg/L		Analyte detected between MDL and ML
Sulfur Creek	Alkalinity (As CaCO3)	6/13/2013			01_060913_13	
Sulfur Creek	Aluminum	6/13/2013	52000	µg/L	01_060913_13	
			18000	µg/L		Analyte detected between MDL and ML
Sulfur Creek	Bicarbonate (As CaCO3)	6/13/2013			01_060913_13	
Sulfur Creek	Cadmium	6/13/2013	12.7	µg/L	01_060913_13	
Sulfur Creek	Calcium	6/13/2013	36800	µg/L	01_060913_13	
Sulfur Creek	Carbonate (AS CaCO3)	6/13/2013	< 2000	µg/L	01_060913_13	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Sulfur Creek	Chloride	6/13/2013	870	µg/L	01_060913_13	Analyte detected between MDL and ML
Sulfur Creek	Conductivity, Field	6/13/2013	57.9	µS/cm	01_060913_13	
Sulfur Creek	Iron	6/13/2013	162000	µg/L	01_060913_13	
Sulfur Creek	Lead	6/13/2013	659.5	µg/L	01_060913_13	
Sulfur Creek	Magnesium	6/13/2013	8500	µg/L	01_060913_13	
Sulfur Creek	pH, Field	6/13/2013	6.51	pH Units	01_060913_13	
Sulfur Creek	Potassium	6/13/2013	7200	µg/L	01_060913_13	
Sulfur Creek	Selenium	6/13/2013	21.0	µg/L	01_060913_13	
Sulfur Creek	Sodium	6/13/2013	1600	µg/L	01_060913_13	Analyte detected between MDL and ML
Sulfur Creek	Sulfate	6/13/2013	14500	µg/L	01_060913_13	
Sulfur Creek	Temperature, Field	6/13/2013	10.7	°C	01_060913_13	
Sulfur Creek	Total Dissolved Solids	6/13/2013	400000	µg/L	01_060913_13	
Sulfur Creek	Total Suspended Solids	6/13/2013	3200000	µg/L	01_060913_13	
Sulfur Creek	Zinc	6/13/2013	2020	µg/L	01_060913_13	
Sulfur Creek	Alkalinity (As CaCO3)	7/11/2013	57000	µg/L	01_071413_13	
Sulfur Creek	Aluminum	7/11/2013	5790	µg/L	01_071413_13	
Sulfur Creek	Bicarbonate (As CaCO3)	7/11/2013	57000	µg/L	01_071413_13	
Sulfur Creek	Cadmium	7/11/2013	1.4	µg/L	01_071413_13	
Sulfur Creek	Calcium	7/11/2013	26700	µg/L	01_071413_13	
Sulfur Creek	Carbonate (AS CaCO3)	7/11/2013	< 2000	µg/L	01_071413_13	Undetected
Sulfur Creek	Chloride	7/11/2013	1040	µg/L	01_071413_13	Analyte detected between MDL and ML
Sulfur Creek	Conductivity, Field	7/11/2013	114.8	µS/cm	01_071413_13	
Sulfur Creek	Iron	7/11/2013	11400	µg/L	01_071413_13	
Sulfur Creek	Lead	7/11/2013	64.4	µg/L	01_071413_13	
Sulfur Creek	Magnesium	7/11/2013	3800	µg/L	01_071413_13	
Sulfur Creek	pH, Field	7/11/2013	7.49	pH Units	01_071413_13	
Sulfur Creek	Potassium	7/11/2013	1100	µg/L	01_071413_13	Analyte detected between MDL and ML
Sulfur Creek	Selenium	7/11/2013	1.5	µg/L	01_071413_13	Analyte detected between MDL and ML
Sulfur Creek	Sodium	7/11/2013	9800	µg/L	01_071413_13	
Sulfur Creek	Sulfate	7/11/2013	33400	µg/L	01_071413_13	
Sulfur Creek	Temperature, Field	7/11/2013	16.4	°C	01_071413_13	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Sulfur Creek	Total Dissolved Solids	7/11/2013	190000	µg/L	01_071413_13	Analysis exceeded method hold time
Sulfur Creek	Total Suspended Solids	7/11/2013	460000	µg/L	01_071413_13	
Sulfur Creek	Zinc	7/11/2013	210	µg/L	01_071413_13	
Sulfur Creek	Conductivity, Field	8/12/2013	109.6	µS/cm	01_081113_13	
Sulfur Creek	pH, Field	8/12/2013	7.77	pH Units	01_081113_13	
Sulfur Creek	Temperature, Field	8/12/2013	7.0	°C	01_081113_13	
Sulfur Creek	Alkalinity (As CaCO3)	9/12/2013	83000	µg/L	01_090813_13	
Sulfur Creek	Aluminum	9/12/2013	381	µg/L	01_090813_13	
Sulfur Creek	Bicarbonate (As CaCO3)	9/12/2013	83000	µg/L	01_090813_13	
Sulfur Creek	Cadmium	9/12/2013	1.6	µg/L	01_090813_13	
Sulfur Creek	Calcium	9/12/2013	40900	µg/L	01_090813_13	
Sulfur Creek	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_13	Undetected
Sulfur Creek	Chloride	9/12/2013	1050	µg/L	01_090813_13	Analyte detected between MDL and ML
Sulfur Creek	Conductivity, Field	9/12/2013	134.8	µS/cm	01_090813_13	
Sulfur Creek	Iron	9/12/2013	880	µg/L	01_090813_13	
Sulfur Creek	Lead	9/12/2013	49.9	µg/L	01_090813_13	
Sulfur Creek	Magnesium	9/12/2013	4400	µg/L	01_090813_13	
Sulfur Creek	pH, Field	9/12/2013	8.0	pH Units	01_090813_13	
Sulfur Creek	Potassium	9/12/2013	400	µg/L	01_090813_13	Analyte detected between MDL and ML
Sulfur Creek	Selenium	9/12/2013	< 1	µg/L	01_090813_13	Undetected
Sulfur Creek	Sodium	9/12/2013	1200	µg/L	01_090813_13	Analyte detected between MDL and ML
Sulfur Creek	Sulfate	9/12/2013	33600	µg/L	01_090813_13	
Sulfur Creek	Temperature, Field	9/12/2013	1.9	°C	01_090813_13	
Sulfur Creek	Total Dissolved Solids	9/12/2013	144000	µg/L	01_090813_13	
Sulfur Creek	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_13	Undetected
Sulfur Creek	Zinc	9/12/2013	215	µg/L	01_090813_13	
Sulfur Creek	Alkalinity (As CaCO3)	10/18/2013	55000	µg/L	01_101313_13	
Sulfur Creek	Aluminum	10/18/2013	225	µg/L	01_101313_13	
Sulfur Creek	Bicarbonate (As CaCO3)	10/18/2013	55000	µg/L	01_101313_13	
Sulfur Creek	Cadmium	10/18/2013	2.3	µg/L	01_101313_13	
Sulfur Creek	Calcium	10/18/2013	27900	µg/L	01_101313_13	
Sulfur Creek	Carbonate (AS CaCO3)	10/18/2013	< 2000	µg/L	01_101313_13	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Sulfur Creek	Chloride	10/18/2013	1040	µg/L	01_101313_13	Analyte detected between MDL and ML
Sulfur Creek	Conductivity, Field	10/18/2013	92.7	µS/cm	01_101313_13	
Sulfur Creek	Iron	10/18/2013	640	µg/L	01_101313_13	
Sulfur Creek	Lead	10/18/2013	120.2	µg/L	01_101313_13	
Sulfur Creek	Magnesium	10/18/2013	2800	µg/L	01_101313_13	
Sulfur Creek	pH, Field	10/18/2013	7.46	pH Units	01_101313_13	
Sulfur Creek	Potassium	10/18/2013	500	µg/L	01_101313_13	Analyte detected between MDL and ML
Sulfur Creek	Selenium	10/18/2013	< 1	µg/L	01_101313_13	Undetected
Sulfur Creek	Sodium	10/18/2013	800	µg/L	01_101313_13	Analyte detected between MDL and ML
Sulfur Creek	Sulfate	10/18/2013	27100	µg/L	01_101313_13	
Sulfur Creek	Temperature, Field	10/18/2013	0	°C	01_101313_13	
Sulfur Creek	Total Dissolved Solids	10/18/2013	120000	µg/L	01_101313_13	Analysis exceeded method hold time
Sulfur Creek	Total Suspended Solids	10/18/2013	9000	µg/L	01_101313_13	Analyte detected between MDL and ML
Sulfur Creek	Zinc	10/18/2013	331	µg/L	01_101313_13	
Upper Bons	Alkalinity (As CaCO3)	5/30/2013	4000	µg/L	01_051213_07	Analyte detected between MDL and ML
Upper Bons	Aluminum	5/30/2013	103	µg/L	01_051213_07	
Upper Bons	Bicarbonate (As CaCO3)	5/30/2013	4000	µg/L	01_051213_07	Analyte detected between MDL and ML
Upper Bons	Cadmium	5/30/2013	0.6	µg/L	01_051213_07	
Upper Bons	Calcium	5/30/2013	1600	µg/L	01_051213_07	
Upper Bons	Carbonate (AS CaCO3)	5/30/2013	< 2000	µg/L	01_051213_07	Undetected
Upper Bons	Chloride	5/30/2013	< 500	µg/L	01_051213_07	Undetected
Upper Bons	Conductivity, Field	5/30/2013	8.8	µS/cm	01_051213_07	
Upper Bons	Iron	5/30/2013	90	µg/L	01_051213_07	
Upper Bons	Lead	5/30/2013	20.6	µg/L	01_051213_07	
Upper Bons	Magnesium	5/30/2013	500	µg/L	01_051213_07	Analyte detected between MDL and ML
Upper Bons	pH, Field	5/30/2013	6.17	pH Units	01_051213_07	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Upper Bons	Potassium	5/30/2013	800	µg/L	01_051213_07	Analyte detected between MDL and ML
Upper Bons	Selenium	5/30/2013	< 1	µg/L	01_051213_07	Undetected
Upper Bons	Sodium	5/30/2013	400	µg/L	01_051213_07	Analyte detected between MDL and ML
Upper Bons	Sulfate	5/30/2013	2200	µg/L	01_051213_07	Analyte detected between MDL and ML
Upper Bons	Temperature, Field	5/30/2013	0.1	°C	01_051213_07	
Upper Bons	Total Dissolved Solids	5/30/2013	20000	µg/L	01_051213_07	Analyte detected between MDL and ML
Upper Bons	Total Suspended Solids	5/30/2013	< 5000	µg/L	01_051213_07	Undetected
Upper Bons	Zinc	5/30/2013	53	µg/L	01_051213_07	
Upper Bons	Alkalinity (As CaCO3)	5/31/2013	4000	µg/L	01_052613_07	Analyte detected between MDL and ML
Upper Bons	Aluminum	5/31/2013	85	µg/L	01_052613_07	
Upper Bons	Bicarbonate (As CaCO3)	5/31/2013	4000	µg/L	01_052613_07	Analyte detected between MDL and ML
Upper Bons	Cadmium	5/31/2013	0.5	µg/L	01_052613_07	
Upper Bons	Calcium	5/31/2013	1600	µg/L	01_052613_07	
Upper Bons	Carbonate (AS CaCO3)	5/31/2013	< 2000	µg/L	01_052613_07	Undetected
Upper Bons	Chloride	5/31/2013	< 500	µg/L	01_052613_07	Undetected
Upper Bons	Conductivity, Field	5/31/2013	9.2	uS/cm	01_052613_07	
Upper Bons	Iron	5/31/2013	100	µg/L	01_052613_07	
Upper Bons	Lead	5/31/2013	17.9	µg/L	01_052613_07	
Upper Bons	Magnesium	5/31/2013	500	µg/L	01_052613_07	Analyte detected between MDL and ML
Upper Bons	pH, Field	5/31/2013	6.63	pH Units	01_052613_07	
Upper Bons	Potassium	5/31/2013	800	µg/L	01_052613_07	Analyte detected between MDL and ML
Upper Bons	Selenium	5/31/2013	< 1	µg/L	01_052613_07	Undetected
Upper Bons	Sodium	5/31/2013	400	µg/L	01_052613_07	Analyte detected between MDL and ML
Upper Bons	Sulfate	5/31/2013	2220	µg/L	01_052613_07	Analyte detected between MDL and ML



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Upper Bons	Temperature, Field	5/31/2013	0	°C	01_052613_07	
Upper Bons	Total Dissolved Solids	5/31/2013	20000	µg/L	01_052613_07	
Upper Bons	Total Suspended Solids	5/31/2013	< 5000	µg/L	01_052613_07	Undetected
Upper Bons	Zinc	5/31/2013	46	µg/L	01_052613_07	
Upper Bons	Alkalinity (As CaCO3)	6/7/2013	4000	µg/L	01_060913_07	Analyte detected between MDL and ML
Upper Bons	Aluminum	6/7/2013	126	µg/L	01_060913_07	
Upper Bons	Bicarbonate (As CaCO3)	6/7/2013	4000	µg/L	01_060913_07	Analyte detected between MDL and ML
Upper Bons	Cadmium	6/7/2013	0.2	µg/L	01_060913_07	Analyte detected between MDL and ML
Upper Bons	Calcium	6/7/2013	2800	µg/L	01_060913_07	
Upper Bons	Carbonate (AS CaCO3)	6/7/2013	< 2000	µg/L	01_060913_07	Undetected
Upper Bons	Chloride	6/7/2013	< 500	µg/L	01_060913_07	Undetected
Upper Bons	Conductivity, Field	6/7/2013	14.3	uS/cm	01_060913_07	
Upper Bons	Iron	6/7/2013	120	µg/L	01_060913_07	
Upper Bons	Lead	6/7/2013	7.1	µg/L	01_060913_07	
Upper Bons	Magnesium	6/7/2013	1200	µg/L	01_060913_07	
Upper Bons	pH, Field	6/7/2013	6.83	pH Units	01_060913_07	
Upper Bons	Potassium	6/7/2013	600	µg/L	01_060913_07	Analyte detected between MDL and ML
Upper Bons	Selenium	6/7/2013	< 1	µg/L	01_060913_07	Undetected
Upper Bons	Sodium	6/7/2013	500	µg/L	01_060913_07	Analyte detected between MDL and ML
Upper Bons	Sulfate	6/7/2013	3970	µg/L	01_060913_07	
Upper Bons	Temperature, Field	6/7/2013	0.2	°C	01_060913_07	
Upper Bons	Total Dissolved Solids	6/7/2013	20000	µg/L	01_060913_07	
Upper Bons	Total Suspended Solids	6/7/2013	< 5000	µg/L	01_060913_07	Undetected
Upper Bons	Zinc	6/7/2013	24	µg/L	01_060913_07	
Upper Bons	Alkalinity (As CaCO3)	6/20/2013	15000	µg/L	01_062313_07	Analyte detected between MDL and ML
Upper Bons	Aluminum	6/20/2013	69	µg/L	01_062313_07	
Upper Bons	Bicarbonate (As CaCO3)	6/20/2013	15000	µg/L	01_062313_07	Analyte detected between MDL and ML
Upper Bons	Cadmium	6/20/2013	< 0.1	µg/L	01_062313_07	Undetected
Upper Bons	Calcium	6/20/2013	6400	µg/L	01_062313_07	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Upper Bons	Carbonate (AS CaCO3)	6/20/2013	< 2000	µg/L	01_062313_07	Undetected
Upper Bons	Chloride	6/20/2013	680	µg/L	01_062313_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	6/20/2013	34.0	uS/cm	01_062313_07	
Upper Bons	Iron	6/20/2013	90	µg/L	01_062313_07	
Upper Bons	Lead	6/20/2013	0.9	µg/L	01_062313_07	
Upper Bons	Magnesium	6/20/2013	2600	µg/L	01_062313_07	
Upper Bons	pH, Field	6/20/2013	7.19	pH Units	01_062313_07	
Upper Bons	Potassium	6/20/2013	400	µg/L	01_062313_07	Analyte detected between MDL and ML
Upper Bons	Selenium	6/20/2013	< 1	µg/L	01_062313_07	Undetected
Upper Bons	Sodium	6/20/2013	1200	µg/L	01_062313_07	Analyte detected between MDL and ML
Upper Bons	Sulfate	6/20/2013	9380	µg/L	01_062313_07	
Upper Bons	Temperature, Field	6/20/2013	4.2	°C	01_062313_07	
Upper Bons	Total Dissolved Solids	6/20/2013	10000	µg/L	01_062313_07	Analyte detected between MDL and ML
Upper Bons	Total Suspended Solids	6/20/2013	< 5000	µg/L	01_062313_07	Undetected
Upper Bons	Zinc	6/20/2013	8	µg/L	01_062313_07	
Upper Bons	Alkalinity (As CaCO3)	7/5/2013	35000	µg/L	01_071413_07	
Upper Bons	Aluminum	7/5/2013	53	µg/L	01_071413_07	
Upper Bons	Bicarbonate (As CaCO3)	7/5/2013	35000	µg/L	01_071413_07	
Upper Bons	Cadmium	7/5/2013	< 0.1	µg/L	01_071413_07	Undetected
Upper Bons	Calcium	7/5/2013	11800	µg/L	01_071413_07	
Upper Bons	Carbonate (AS CaCO3)	7/5/2013	< 2000	µg/L	01_071413_07	Undetected
Upper Bons	Chloride	7/5/2013	610	µg/L	01_071413_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	7/5/2013	63.4	uS/cm	01_071413_07	
Upper Bons	Iron	7/5/2013	30	µg/L	01_071413_07	Analyte detected between MDL and ML
Upper Bons	Lead	7/5/2013	0.4	µg/L	01_071413_07	Analyte detected between MDL and ML
Upper Bons	Magnesium	7/5/2013	4600	µg/L	01_071413_07	
Upper Bons	pH, Field	7/5/2013	7.36	pH Units	01_071413_07	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Upper Bons	Potassium	7/5/2013	400	µg/L	01_071413_07	Analyte detected between MDL and ML
Upper Bons	Selenium	7/5/2013	< 1	µg/L	01_071413_07	Undetected
Upper Bons	Sodium	7/5/2013	2000	µg/L	01_071413_07	
Upper Bons	Sulfate	7/5/2013	18800	µg/L	01_071413_07	
Upper Bons	Temperature, Field	7/5/2013	3.1	°C	01_071413_07	
Upper Bons	Total Dissolved Solids	7/5/2013	60000	µg/L	01_071413_07	
Upper Bons	Total Suspended Solids	7/5/2013	5000	µg/L	01_071413_07	Analyte detected between MDL and ML
Upper Bons	Zinc	7/5/2013	6	µg/L	01_071413_07	
Upper Bons	Alkalinity (As CaCO3)	7/29/2013	60000	µg/L	01_072813_07	
Upper Bons	Aluminum	7/29/2013	12	µg/L	01_072813_07	
Upper Bons	Bicarbonate (As CaCO3)	7/29/2013	60000	µg/L	01_072813_07	
Upper Bons	Cadmium	7/29/2013	< 0.1	µg/L	01_072813_07	Undetected
Upper Bons	Calcium	7/29/2013	20900	µg/L	01_072813_07	
Upper Bons	Carbonate (AS CaCO3)	7/29/2013	< 2000	µg/L	01_072813_07	Undetected
Upper Bons	Chloride	7/29/2013	630	µg/L	01_072813_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	7/29/2013	107.8	µS/cm	01_072813_07	
Upper Bons	Iron	7/29/2013	< 20	µg/L	01_072813_07	Undetected
Upper Bons	Lead	7/29/2013	0.1	µg/L	01_072813_07	Analyte detected between MDL and ML
Upper Bons	Magnesium	7/29/2013	7800	µg/L	01_072813_07	
Upper Bons	pH, Field	7/29/2013	7.75	pH Units	01_072813_07	
Upper Bons	Potassium	7/29/2013	300	µg/L	01_072813_07	Analyte detected between MDL and ML
Upper Bons	Selenium	7/29/2013	< 1	µg/L	01_072813_07	Undetected
Upper Bons	Sodium	7/29/2013	3300	µg/L	01_072813_07	
Upper Bons	Sulfate	7/29/2013	38700	µg/L	01_072813_07	
Upper Bons	Temperature, Field	7/29/2013	3.6	°C	01_072813_07	
Upper Bons	Total Dissolved Solids	7/29/2013	110000	µg/L	01_072813_07	
Upper Bons	Total Suspended Solids	7/29/2013	< 5000	µg/L	01_072813_07	Undetected
Upper Bons	Zinc	7/29/2013	5	µg/L	01_072813_07	
Upper Bons	Alkalinity (As CaCO3)	8/9/2013	46000	µg/L	01_081113_07	
Upper Bons	Aluminum	8/9/2013	50	µg/L	01_081113_07	
Upper Bons	Bicarbonate (As CaCO3)	8/9/2013	46000	µg/L	01_081113_07	
Upper Bons	Cadmium	8/9/2013	< 0.1	µg/L	01_081113_07	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Upper Bons	Calcium	8/9/2013	15900	µg/L	01_081113_07	
Upper Bons	Carbonate (AS CaCO3)	8/9/2013	< 2000	µg/L	01_081113_07	Undetected
Upper Bons	Chloride	8/9/2013	720	µg/L	01_081113_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	8/9/2013	85.6	uS/cm	01_081113_07	
Upper Bons	Iron	8/9/2013	20	µg/L	01_081113_07	Analyte detected between MDL and ML
Upper Bons	Lead	8/9/2013	0.3	µg/L	01_081113_07	Analyte detected between MDL and ML
Upper Bons	Magnesium	8/9/2013	6100	µg/L	01_081113_07	
Upper Bons	pH, Field	8/9/2013	7.59	pH Units	01_081113_07	
Upper Bons	Potassium	8/9/2013	300	µg/L	01_081113_07	Analyte detected between MDL and ML
Upper Bons	Selenium	8/9/2013	< 1	µg/L	01_081113_07	Undetected
Upper Bons	Sodium	8/9/2013	2600	µg/L	01_081113_07	
Upper Bons	Sulfate	8/9/2013	24100	µg/L	01_081113_07	
Upper Bons	Temperature, Field	8/9/2013	4.0	°C	01_081113_07	
Upper Bons	Total Dissolved Solids	8/9/2013	80000	µg/L	01_081113_07	
Upper Bons	Total Suspended Solids	8/9/2013	< 5000	µg/L	01_081113_07	Undetected
Upper Bons	Zinc	8/9/2013	8	µg/L	01_081113_07	
Upper Bons	Alkalinity (As CaCO3)	8/23/2013	59000	µg/L	01_082513_07	
Upper Bons	Aluminum	8/23/2013	24	µg/L	01_082513_07	
Upper Bons	Bicarbonate (As CaCO3)	8/23/2013	59000	µg/L	01_082513_07	
Upper Bons	Cadmium	8/23/2013	< 0.1	µg/L	01_082513_07	Undetected
Upper Bons	Calcium	8/23/2013	21400	µg/L	01_082513_07	
Upper Bons	Carbonate (AS CaCO3)	8/23/2013	< 2000	µg/L	01_082513_07	Undetected
Upper Bons	Chloride	8/23/2013	510	µg/L	01_082513_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	8/23/2013	110.6	uS/cm	01_082513_07	
Upper Bons	Iron	8/23/2013	< 20	µg/L	01_082513_07	Undetected
Upper Bons	Lead	8/23/2013	1.2	µg/L	01_082513_07	
Upper Bons	Magnesium	8/23/2013	8200	µg/L	01_082513_07	
Upper Bons	pH, Field	8/23/2013	7.54	pH Units	01_082513_07	
Upper Bons	Potassium	8/23/2013	300	µg/L	01_082513_07	Analyte detected between MDL and ML
Upper Bons	Selenium	8/23/2013	< 1	µg/L	01_082513_07	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Upper Bons	Sodium	8/23/2013	3300	µg/L	01_082513_07	
Upper Bons	Sulfate	8/23/2013	34600	µg/L	01_082513_07	
Upper Bons	Temperature, Field	8/23/2013	3.5	°C	01_082513_07	
Upper Bons	Total Dissolved Solids	8/23/2013	102000	µg/L	01_082513_07	
Upper Bons	Total Suspended Solids	8/23/2013	< 5000	µg/L	01_082513_07	Undetected
Upper Bons	Zinc	8/23/2013	9	µg/L	01_082513_07	
Upper Bons	Alkalinity (As CaCO3)	9/12/2013	64000	µg/L	01_090813_07	
Upper Bons	Aluminum	9/12/2013	16	µg/L	01_090813_07	
Upper Bons	Bicarbonate (As CaCO3)	9/12/2013	64000	µg/L	01_090813_07	
Upper Bons	Cadmium	9/12/2013	< 0.1	µg/L	01_090813_07	Undetected
Upper Bons	Calcium	9/12/2013	24700	µg/L	01_090813_07	
Upper Bons	Carbonate (AS CaCO3)	9/12/2013	< 2000	µg/L	01_090813_07	Undetected
Upper Bons	Chloride	9/12/2013	690	µg/L	01_090813_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	9/12/2013	122.6	uS/cm	01_090813_07	
Upper Bons	Iron	9/12/2013	< 20	µg/L	01_090813_07	Undetected
Upper Bons	Lead	9/12/2013	0.2	µg/L	01_090813_07	Analyte detected between MDL and ML
Upper Bons	Magnesium	9/12/2013	9400	µg/L	01_090813_07	
Upper Bons	pH, Field	9/12/2013	7.56	pH Units	01_090813_07	
Upper Bons	Potassium	9/12/2013	400	µg/L	01_090813_07	Analyte detected between MDL and ML
Upper Bons	Selenium	9/12/2013	< 1	µg/L	01_090813_07	Undetected
Upper Bons	Sodium	9/12/2013	3600	µg/L	01_090813_07	
Upper Bons	Sulfate	9/12/2013	41800	µg/L	01_090813_07	
Upper Bons	Temperature, Field	9/12/2013	1.8	°C	01_090813_07	
Upper Bons	Total Dissolved Solids	9/12/2013	116000	µg/L	01_090813_07	
Upper Bons	Total Suspended Solids	9/12/2013	< 5000	µg/L	01_090813_07	Undetected
Upper Bons	Zinc	9/12/2013	6	µg/L	01_090813_07	
Upper Bons	Alkalinity (As CaCO3)	9/27/2013	60000	µg/L	01_092213_07	
Upper Bons	Aluminum	9/27/2013	8	µg/L	01_092213_07	
Upper Bons	Bicarbonate (As CaCO3)	9/27/2013	60000	µg/L	01_092213_07	
Upper Bons	Cadmium	9/27/2013	< 0.1	µg/L	01_092213_07	Undetected
Upper Bons	Calcium	9/27/2013	23900	µg/L	01_092213_07	
Upper Bons	Carbonate (AS CaCO3)	9/27/2013	< 2000	µg/L	01_092213_07	Undetected
Upper Bons	Chloride	9/27/2013	600	µg/L	01_092213_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	9/27/2013	114.4	uS/cm	01_092213_07	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Upper Bons	Iron	9/27/2013	< 20	µg/L	01_092213_07	Undetected
Upper Bons	Lead	9/27/2013	0.3	µg/L	01_092213_07	Analyte detected between MDL and ML
Upper Bons	Magnesium	9/27/2013	9200	µg/L	01_092213_07	
Upper Bons	pH, Field	9/27/2013	7.84	pH Units	01_092213_07	
Upper Bons	Potassium	9/27/2013	400	µg/L	01_092213_07	Analyte detected between MDL and ML
Upper Bons	Selenium	9/27/2013	< 1	µg/L	01_092213_07	Undetected
Upper Bons	Sodium	9/27/2013	3500	µg/L	01_092213_07	
Upper Bons	Sulfate	9/27/2013	40500	µg/L	01_092213_07	
Upper Bons	Temperature, Field	9/27/2013	0	°C	01_092213_07	
Upper Bons	Total Dissolved Solids	9/27/2013	120000	µg/L	01_092213_07	
Upper Bons	Total Suspended Solids	9/27/2013	< 5000	µg/L	01_092213_07	Undetected
Upper Bons	Zinc	9/27/2013	7	µg/L	01_092213_07	
Upper Bons	Alkalinity (As CaCO3)	10/7/2013	66000	µg/L	01_101313_07	
Upper Bons	Aluminum	10/7/2013	19	µg/L	01_101313_07	
Upper Bons	Bicarbonate (As CaCO3)	10/7/2013	66000	µg/L	01_101313_07	
Upper Bons	Cadmium	10/7/2013	0.1	µg/L	01_101313_07	Analyte detected between MDL and ML
Upper Bons	Calcium	10/7/2013	25600	µg/L	01_101313_07	
Upper Bons	Carbonate (AS CaCO3)	10/7/2013	< 2000	µg/L	01_101313_07	Undetected
Upper Bons	Chloride	10/7/2013	530	µg/L	01_101313_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	10/7/2013	122.3	uS/cm	01_101313_07	
Upper Bons	Iron	10/7/2013	< 20	µg/L	01_101313_07	Undetected
Upper Bons	Lead	10/7/2013	3.1	µg/L	01_101313_07	
Upper Bons	Magnesium	10/7/2013	9900	µg/L	01_101313_07	
Upper Bons	pH, Field	10/7/2013	7.82	pH Units	01_101313_07	
Upper Bons	Potassium	10/7/2013	300	µg/L	01_101313_07	Analyte detected between MDL and ML
Upper Bons	Selenium	10/7/2013	< 1	µg/L	01_101313_07	Undetected
Upper Bons	Sodium	10/7/2013	3700	µg/L	01_101313_07	
Upper Bons	Sulfate	10/7/2013	44100	µg/L	01_101313_07	
Upper Bons	Temperature, Field	10/7/2013	0	°C	01_101313_07	
Upper Bons	Total Dissolved Solids	10/7/2013	118000	µg/L	01_101313_07	
Upper Bons	Total Suspended Solids	10/7/2013	< 5000	µg/L	01_101313_07	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Upper Bons	Zinc	10/7/2013	15	µg/L	01_101313_07	
Upper Bons	Alkalinity (As CaCO <sub>3</sub> )	10/11/2013	67000	µg/L	01_102713_07	
Upper Bons	Aluminum	10/11/2013	5	µg/L	01_102713_07	
Upper Bons	Bicarbonate (As CaCO <sub>3</sub> )	10/11/2013	67000	µg/L	01_102713_07	
Upper Bons	Cadmium	10/11/2013	< 0.1	µg/L	01_102713_07	Undetected
Upper Bons	Calcium	10/11/2013	26400	µg/L	01_102713_07	
Upper Bons	Carbonate (AS CaCO <sub>3</sub> )	10/11/2013	< 2000	µg/L	01_102713_07	Undetected
Upper Bons	Chloride	10/11/2013	530	µg/L	01_102713_07	Analyte detected between MDL and ML
Upper Bons	Conductivity, Field	10/11/2013	132.6	µS/cm	01_102713_07	
Upper Bons	Iron	10/11/2013	< 20	µg/L	01_102713_07	Undetected
Upper Bons	Lead	10/11/2013	0.1	µg/L	01_102713_07	Analyte detected between MDL and ML
Upper Bons	Magnesium	10/11/2013	10300	µg/L	01_102713_07	
Upper Bons	pH, Field	10/11/2013	7.60	pH Units	01_102713_07	
Upper Bons	Potassium	10/11/2013	300	µg/L	01_102713_07	Analyte detected between MDL and ML
Upper Bons	Selenium	10/11/2013	< 1	µg/L	01_102713_07	Undetected
Upper Bons	Sodium	10/11/2013	3900	µg/L	01_102713_07	
Upper Bons	Sulfate	10/11/2013	45500	µg/L	01_102713_07	
Upper Bons	Temperature, Field	10/11/2013	1.5	°C	01_102713_07	
Upper Bons	Total Dissolved Solids	10/11/2013	136000	µg/L	01_102713_07	
Upper Bons	Total Suspended Solids	10/11/2013	< 5000	µg/L	01_102713_07	Undetected
Upper Bons	Zinc	10/11/2013	9	µg/L	01_102713_07	



## Appendix B, Mine Water Quality Sample Results for 4<sup>th</sup> Quarter 2013

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
East Sump	Acidity as CaCO3	10/18/2013	< 10	mg/L	02_100113_01	Undetected
East Sump	Aluminum, dissolved	10/18/2013	< 0.03	mg/L	02_100113_01	Undetected
East Sump	Ammonia (As N)	10/18/2013	0.3	mg/L	02_100113_01	Analyte detected between MDL and ML
East Sump	Cadmium, dissolved	10/18/2013	0.0160	mg/L	02_100113_01	
East Sump	Calcium, dissolved	10/18/2013	238	mg/L	02_100113_01	
East Sump	Chloride	10/18/2013	< 25	mg/L	02_100113_01	Undetected
East Sump	Conductivity, Field	10/18/2013	1319	uS/cm	02_100113_01	
East Sump	Copper, dissolved	10/18/2013	< 0.001	mg/L	02_100113_01	Undetected
East Sump	Cyanide, WAD	10/18/2013	< 0.003	mg/L	02_100113_01	Undetected
East Sump	Iron, dissolved	10/18/2013	0.12	mg/L	02_100113_01	
East Sump	Lead, dissolved	10/18/2013	0.0022	mg/L	02_100113_01	
East Sump	Magnesium, dissolved	10/18/2013	209	mg/L	02_100113_01	
East Sump	Manganese, dissolved	10/18/2013	6.49	mg/L	02_100113_01	
East Sump	pH, Field	10/18/2013	6.41	pH Units	02_100113_01	
East Sump	Potassium, Dissolved	10/18/2013	2.4	mg/L	02_100113_01	
East Sump	Selenium, dissolved	10/18/2013	0.0014	mg/L	02_100113_01	
East Sump	Selenium, dissolved	10/18/2013	< 0.001	mg/L	02_100113_01	Undetected
East Sump	Sodium, dissolved	10/18/2013	5.1	mg/L	02_100113_01	
East Sump	Sulfate	10/18/2013	1440	mg/L	02_100113_01	
East Sump	Temperature, Field	10/18/2013	1.2	°C	02_100113_01	
East Sump	Total Dissolved Solids	10/18/2013	2080	mg/L	02_100113_01	Analysis exceeded method hold time
East Sump	Zinc, dissolved	10/18/2013	18.6	mg/L	02_100113_01	
East Sump	Acidity as CaCO3	11/18/2013	< 10	mg/L	02_110113_01	Undetected
East Sump	Aluminum, dissolved	11/18/2013	< 0.6	mg/L	02_110113_01	Undetected
East Sump	Ammonia (As N)	11/18/2013	0.4	mg/L	02_110113_01	Analyte detected between MDL and ML
East Sump	Cadmium, dissolved	11/18/2013	0.0317	mg/L	02_110113_01	
East Sump	Calcium, dissolved	11/18/2013	455	mg/L	02_110113_01	
East Sump	Chloride	11/18/2013	< 25	mg/L	02_110113_01	Undetected
East Sump	Conductivity, Field	11/18/2013	1890	uS/cm	02_110113_01	
East Sump	Copper, dissolved	11/18/2013	< 0.003	mg/L	02_110113_01	Undetected
East Sump	Cyanide, WAD	11/18/2013	< 0.003	mg/L	02_110113_01	Undetected
East Sump	Iron, dissolved	11/18/2013	< 0.4	mg/L	02_110113_01	Undetected
East Sump	Lead, dissolved	11/18/2013	< 0.0005	mg/L	02_110113_01	Undetected
East Sump	Magnesium, dissolved	11/18/2013	405	mg/L	02_110113_01	
East Sump	Manganese, dissolved	11/18/2013	12.80	mg/L	02_110113_01	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
East Sump	pH, Field	11/18/2013	6.64	pH Units	02_110113_01	
East Sump	Potassium, Dissolved	11/18/2013	< 6	mg/L	02_110113_01	Undetected
East Sump	Selenium, dissolved	11/18/2013	< 0.0005	mg/L	02_110113_01	Undetected
East Sump	Selenium, dissolved	11/18/2013	< 0.001	mg/L	02_110113_01	Undetected
East Sump	Sodium, dissolved	11/18/2013	10	mg/L	02_110113_01	Analyte detected between MDL and ML
East Sump	Sulfate	11/18/2013	2520	mg/L	02_110113_01	
East Sump	Temperature, Field	11/18/2013	0.4	°C	02_110113_01	
East Sump	Total Dissolved Solids	11/18/2013	4050	mg/L	02_110113_01	Analysis exceeded method hold time
East Sump	Zinc, dissolved	11/18/2013	33.9	mg/L	02_110113_01	
East Sump	Acidity as CaCO3	12/6/2013	< 10	mg/L	02_120113_01	Undetected
East Sump	Aluminum, dissolved	12/6/2013	< 0.2	mg/L	02_120113_01	Undetected
East Sump	Ammonia (As N)	12/6/2013	0.5	mg/L	02_120113_01	
East Sump	Cadmium, dissolved	12/6/2013	0.0269	mg/L	02_120113_01	
East Sump	Calcium, dissolved	12/6/2013	474	mg/L	02_120113_01	
East Sump	Chloride	12/6/2013	< 25	mg/L	02_120113_01	Undetected
East Sump	Conductivity, Field	12/6/2013	2353	uS/cm	02_120113_01	
East Sump	Copper, dissolved	12/6/2013	0.002	mg/L	02_120113_01	Analyte detected between MDL and ML
East Sump	Cyanide, WAD	12/6/2013	< 0.003	mg/L	02_120113_01	Undetected
East Sump	Iron, dissolved	12/6/2013	0.1	mg/L	02_120113_01	Analyte detected between MDL and ML
East Sump	Lead, dissolved	12/6/2013	< 0.0002	mg/L	02_120113_01	Undetected
East Sump	Magnesium, dissolved	12/6/2013	437	mg/L	02_120113_01	
East Sump	Manganese, dissolved	12/6/2013	20.1	mg/L	02_120113_01	
East Sump	pH, Field	12/6/2013	6.56	pH Units	02_120113_01	
East Sump	Potassium, Dissolved	12/6/2013	4	mg/L	02_120113_01	Analyte detected between MDL and ML
East Sump	Selenium, dissolved	12/6/2013	< 0.0002	mg/L	02_120113_01	Undetected
East Sump	Selenium, dissolved	12/6/2013	< 0.001	mg/L	02_120113_01	Undetected
East Sump	Sodium, dissolved	12/6/2013	10	mg/L	02_120113_01	
East Sump	Sulfate	12/6/2013	2720	mg/L	02_120113_01	
East Sump	Temperature, Field	12/6/2013	2.1	°C	02_120113_01	
East Sump	Total Dissolved Solids	12/6/2013	3990	mg/L	02_120113_01	Analysis exceeded method hold time
East Sump	Zinc, dissolved	12/6/2013	30.2	mg/L	02_120113_01	
Mine Sump	Acidity as CaCO3	10/18/2013	2280	mg/L	02_100113_02	
Mine Sump	Aluminum, dissolved	10/18/2013	48.80	mg/L	02_100113_02	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Mine Sump	Ammonia (As N)	10/18/2013	2	mg/L	02_100113_02	Analyte detected between MDL and ML
Mine Sump	Cadmium, dissolved	10/18/2013	6.5	mg/L	02_100113_02	
Mine Sump	Calcium, dissolved	10/18/2013	156	mg/L	02_100113_02	
Mine Sump	Chloride	10/18/2013	< 50	mg/L	02_100113_02	Undetected
Mine Sump	Conductivity, Field	10/18/2013	2851	uS/cm	02_100113_02	
Mine Sump	Copper, dissolved	10/18/2013	0.434	mg/L	02_100113_02	
Mine Sump	Iron, dissolved	10/18/2013	417	mg/L	02_100113_02	
Mine Sump	Lead, dissolved	10/18/2013	1.7200	mg/L	02_100113_02	
Mine Sump	Magnesium, dissolved	10/18/2013	101	mg/L	02_100113_02	
Mine Sump	Manganese, dissolved	10/18/2013	21.5	mg/L	02_100113_02	
Mine Sump	pH, Field	10/18/2013	3.06	pH Units	02_100113_02	
Mine Sump	Potassium, Dissolved	10/18/2013	1	mg/L	02_100113_02	Analyte detected between MDL and ML
Mine Sump	Selenium, dissolved	10/18/2013	0.0043	mg/L	02_100113_02	
Mine Sump	Selenium, dissolved	10/18/2013	0.0026	mg/L	02_100113_02	Analyte detected between MDL and ML
Mine Sump	Sodium, dissolved	10/18/2013	4.5	mg/L	02_100113_02	
Mine Sump	Sulfate	10/18/2013	4130	mg/L	02_100113_02	
Mine Sump	Temperature, Field	10/18/2013	2.2	°C	02_100113_02	
Mine Sump	Total Dissolved Solids	10/18/2013	5670	mg/L	02_100113_02	Analysis exceeded method hold time
Mine Sump	Zinc, dissolved	10/18/2013	106	mg/L	02_100113_02	
Mine Sump	Acidity as CaCO3	11/18/2013	10300	mg/L	02_110113_02	
Mine Sump	Aluminum, dissolved	11/18/2013	58.1	mg/L	02_110113_02	
Mine Sump	Ammonia (As N)	11/18/2013	2	mg/L	02_110113_02	Analyte detected between MDL and ML
Mine Sump	Cadmium, dissolved	11/18/2013	9	mg/L	02_110113_02	
Mine Sump	Calcium, dissolved	11/18/2013	299	mg/L	02_110113_02	
Mine Sump	Chloride	11/18/2013	< 50	mg/L	02_110113_02	Undetected
Mine Sump	Conductivity, Field	11/18/2013	2753	uS/cm	02_110113_02	
Mine Sump	Copper, dissolved	11/18/2013	0.256	mg/L	02_110113_02	
Mine Sump	Iron, dissolved	11/18/2013	407	mg/L	02_110113_02	
Mine Sump	Lead, dissolved	11/18/2013	0.6700	mg/L	02_110113_02	
Mine Sump	Magnesium, dissolved	11/18/2013	188	mg/L	02_110113_02	
Mine Sump	Manganese, dissolved	11/18/2013	31	mg/L	02_110113_02	
Mine Sump	pH, Field	11/18/2013	4.59	pH Units	02_110113_02	
Mine Sump	Potassium, Dissolved	11/18/2013	< 6	mg/L	02_110113_02	Undetected

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Mine Sump	Selenium, dissolved	11/18/2013	0.0024	mg/L	02_110113_02	
Mine Sump	Selenium, dissolved	11/18/2013	< 0.001	mg/L	02_110113_02	Undetected
Mine Sump	Sodium, dissolved	11/18/2013	10	mg/L	02_110113_02	Analyte detected between MDL and ML
Mine Sump	Sulfate	11/18/2013	4990	mg/L	02_110113_02	
Mine Sump	Temperature, Field	11/18/2013	1	°C	02_110113_02	
Mine Sump	Total Dissolved Solids	11/18/2013	7330	mg/L	02_110113_02	Analysis exceeded method hold time
Mine Sump	Zinc, dissolved	11/18/2013	1240	mg/L	02_110113_02	
Mine Sump	Acidity as CaCO3	12/9/2013	4050	mg/L	02_120113_02	
Mine Sump	Aluminum, dissolved	12/9/2013	67.9	mg/L	02_120113_02	
Mine Sump	Ammonia (As N)	12/9/2013	1.5	mg/L	02_120113_02	
Mine Sump	Cadmium, dissolved	12/9/2013	1.2	mg/L	02_120113_02	
Mine Sump	Calcium, dissolved	12/9/2013	343	mg/L	02_120113_02	
Mine Sump	Chloride	12/9/2013	< 50	mg/L	02_120113_02	Undetected
Mine Sump	Conductivity, Field	12/9/2013	3623	uS/cm	02_120113_02	
Mine Sump	Copper, dissolved	12/9/2013	0.248	mg/L	02_120113_02	
Mine Sump	Iron, dissolved	12/9/2013	550	mg/L	02_120113_02	
Mine Sump	Lead, dissolved	12/9/2013	0.7785	mg/L	02_120113_02	
Mine Sump	Magnesium, dissolved	12/9/2013	264	mg/L	02_120113_02	
Mine Sump	Manganese, dissolved	12/9/2013	4	mg/L	02_120113_02	Analyte detected between MDL and ML
Mine Sump	pH, Field	12/9/2013	5.46	pH Units	02_120113_02	
Mine Sump	Potassium, Dissolved	12/9/2013	2	mg/L	02_120113_02	Analyte detected between MDL and ML
Mine Sump	Selenium, dissolved	12/9/2013	0.0015	mg/L	02_120113_02	
Mine Sump	Selenium, dissolved	12/9/2013	< 0.005	mg/L	02_120113_02	Undetected
Mine Sump	Sodium, dissolved	12/9/2013	8	mg/L	02_120113_02	
Mine Sump	Sulfate	12/9/2013	6490	mg/L	02_120113_02	
Mine Sump	Temperature, Field	12/9/2013	1.3	°C	02_120113_02	
Mine Sump	Total Dissolved Solids	12/9/2013	9650	mg/L	02_120113_02	
Mine Sump	Zinc, dissolved	12/9/2013	167	mg/L	02_120113_02	
Reclaim Water	Acidity as CaCO3	10/17/2013	860	mg/L	02_100113_08	
Reclaim Water	Aluminum, dissolved	10/17/2013	3.600	mg/L	02_100113_08	
Reclaim Water	Ammonia (As N)	10/17/2013	5	mg/L	02_100113_08	
Reclaim Water	Cadmium, dissolved	10/17/2013	3.890	mg/L	02_100113_08	
Reclaim Water	Calcium, dissolved	10/17/2013	523	mg/L	02_100113_08	
Reclaim Water	Chloride	10/17/2013	< 50	mg/L	02_100113_08	Undetected
Reclaim Water	Conductivity, Field	10/17/2013	4471	uS/cm	02_100113_08	
Reclaim Water	Copper, dissolved	10/17/2013	0.035	mg/L	02_100113_08	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Reclaim Water	Iron, dissolved	10/17/2013	15.60	mg/L	02_100113_08	
Reclaim Water	Lead, dissolved	10/17/2013	1.7600	mg/L	02_100113_08	
Reclaim Water	Magnesium, dissolved	10/17/2013	205	mg/L	02_100113_08	
Reclaim Water	Manganese, dissolved	10/17/2013	54.500	mg/L	02_100113_08	
Reclaim Water	pH, Field	10/17/2013	4.93	pH Units	02_100113_08	
Reclaim Water	Potassium, Dissolved	10/17/2013	19.1	mg/L	02_100113_08	
Reclaim Water	Selenium, dissolved	10/17/2013	0.0057	mg/L	02_100113_08	
Reclaim Water	Selenium, dissolved	10/17/2013	0.0042	mg/L	02_100113_08	Analyte detected between MDL and ML
Reclaim Water	Sodium, dissolved	10/17/2013	77.2	mg/L	02_100113_08	
Reclaim Water	Sulfate	10/17/2013	3680	mg/L	02_100113_08	
Reclaim Water	Temperature, Field	10/17/2013	3.4	°C	02_100113_08	
Reclaim Water	Total Dissolved Solids	10/17/2013	5450	mg/L	02_100113_08	Analysis exceeded method hold time
Reclaim Water	Acidity as CaCO3	11/11/2013	900	mg/L	02_110113_08	
Reclaim Water	Aluminum, dissolved	11/11/2013	5.8	mg/L	02_110113_08	
Reclaim Water	Ammonia (As N)	11/11/2013	5	mg/L	02_110113_08	
Reclaim Water	Cadmium, dissolved	11/11/2013	4.71	mg/L	02_110113_08	
Reclaim Water	Calcium, dissolved	11/11/2013	568	mg/L	02_110113_08	
Reclaim Water	Chloride	11/11/2013	< 50	mg/L	02_110113_08	Undetected
Reclaim Water	Conductivity, Field	11/11/2013	4424	uS/cm	02_110113_08	
Reclaim Water	Copper, dissolved	11/11/2013	0.078	mg/L	02_110113_08	
Reclaim Water	Iron, dissolved	11/11/2013	20	mg/L	02_110113_08	
Reclaim Water	Lead, dissolved	11/11/2013	2.0300	mg/L	02_110113_08	
Reclaim Water	Magnesium, dissolved	11/11/2013	221	mg/L	02_110113_08	
Reclaim Water	Manganese, dissolved	11/11/2013	60.50	mg/L	02_110113_08	
Reclaim Water	pH, Field	11/11/2013	4.54	pH Units	02_110113_08	
Reclaim Water	Potassium, Dissolved	11/11/2013	20	mg/L	02_110113_08	
Reclaim Water	Selenium, dissolved	11/11/2013	0.0054	mg/L	02_110113_08	
Reclaim Water	Selenium, dissolved	11/11/2013	0.0047	mg/L	02_110113_08	Analyte detected between MDL and ML
Reclaim Water	Sodium, dissolved	11/11/2013	81	mg/L	02_110113_08	
Reclaim Water	Sulfate	11/11/2013	3640	mg/L	02_110113_08	
Reclaim Water	Temperature, Field	11/11/2013	1.7	°C	02_110113_08	
Reclaim Water	Total Dissolved Solids	11/11/2013	5490	mg/L	02_110113_08	Analysis exceeded method hold time
Reclaim Water	Zinc, dissolved	11/11/2013	629	mg/L	02_110113_08	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Reclaim Water	Acidity as CaCO3	12/9/2013	970	mg/L	02_120113_08	
Reclaim Water	Aluminum, dissolved	12/9/2013	3.460	mg/L	02_120113_08	
Reclaim Water	Ammonia (As N)	12/9/2013	5.4	mg/L	02_120113_08	
Reclaim Water	Cadmium, dissolved	12/9/2013	4.43	mg/L	02_120113_08	
Reclaim Water	Calcium, dissolved	12/9/2013	539	mg/L	02_120113_08	
Reclaim Water	Chloride	12/9/2013	< 50	mg/L	02_120113_08	Undetected
Reclaim Water	Conductivity, Field	12/9/2013	4500	uS/cm	02_120113_08	
Reclaim Water	Copper, dissolved	12/9/2013	0.031	mg/L	02_120113_08	
Reclaim Water	Iron, dissolved	12/9/2013	17	mg/L	02_120113_08	
Reclaim Water	Lead, dissolved	12/9/2013	1.8600	mg/L	02_120113_08	
Reclaim Water	Magnesium, dissolved	12/9/2013	206	mg/L	02_120113_08	
Reclaim Water	Manganese, dissolved	12/9/2013	57.50	mg/L	02_120113_08	
Reclaim Water	pH, Field	12/9/2013	4.76	pH Units	02_120113_08	
Reclaim Water	Potassium, Dissolved	12/9/2013	19	mg/L	02_120113_08	
Reclaim Water	Selenium, dissolved	12/9/2013	0.0050	mg/L	02_120113_08	
Reclaim Water	Selenium, dissolved	12/9/2013	0.0052	mg/L	02_120113_08	Analyte detected between MDL and ML
Reclaim Water	Sodium, dissolved	12/9/2013	75	mg/L	02_120113_08	
Reclaim Water	Sulfate	12/9/2013	3710	mg/L	02_120113_08	
Reclaim Water	Temperature, Field	12/9/2013	4.0	°C	02_120113_08	
Reclaim Water	Total Dissolved Solids	12/9/2013	5710	mg/L	02_120113_08	
Reclaim Water	Zinc, dissolved	12/9/2013	609	mg/L	02_120113_08	
Seepage Pond	Acidity as CaCO3	10/17/2013	1340	mg/L	02_100113_05	
Seepage Pond	Aluminum, dissolved	10/17/2013	4.6	mg/L	02_100113_05	
Seepage Pond	Ammonia (As N)	10/17/2013	4.7	mg/L	02_100113_05	
Seepage Pond	Cadmium, dissolved	10/17/2013	6.700	mg/L	02_100113_05	
Seepage Pond	Calcium, dissolved	10/17/2013	471	mg/L	02_100113_05	
Seepage Pond	Chloride	10/17/2013	< 50	mg/L	02_100113_05	Undetected
Seepage Pond	Conductivity, Field	10/17/2013	3664	uS/cm	02_100113_05	
Seepage Pond	Copper, dissolved	10/17/2013	0.006	mg/L	02_100113_05	Analyte detected between MDL and ML
Seepage Pond	Iron, dissolved	10/17/2013	220	mg/L	02_100113_05	
Seepage Pond	Lead, dissolved	10/17/2013	0.0257	mg/L	02_100113_05	
Seepage Pond	Magnesium, dissolved	10/17/2013	332	mg/L	02_100113_05	
Seepage Pond	Manganese, dissolved	10/17/2013	110	mg/L	02_100113_05	
Seepage Pond	pH, Field	10/17/2013	5.25	pH Units	02_100113_05	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Seepage Pond	Potassium, Dissolved	10/17/2013	21	mg/L	02_100113_05	Analyte detected between MDL and ML
Seepage Pond	Selenium, dissolved	10/17/2013	< 0.001	mg/L	02_100113_05	Undetected
Seepage Pond	Sodium, dissolved	10/17/2013	70	mg/L	02_100113_05	
Seepage Pond	Sulfate	10/17/2013	5330	mg/L	02_100113_05	
Seepage Pond	Temperature, Field	10/17/2013	4.7	°C	02_100113_05	
Seepage Pond	Total Dissolved Solids	10/17/2013	8110	mg/L	02_100113_05	Analysis exceeded method hold time
Seepage Pond	Zinc, dissolved	10/17/2013	1200	mg/L	02_100113_05	
Seepage Pond	Acidity as CaCO3	11/11/2013	2230	mg/L	02_110113_05	
Seepage Pond	Aluminum, dissolved	11/11/2013	13.5	mg/L	02_110113_05	
Seepage Pond	Ammonia (As N)	11/11/2013	3.9	mg/L	02_110113_05	
Seepage Pond	Cadmium, dissolved	11/11/2013	7.530	mg/L	02_110113_05	
Seepage Pond	Calcium, dissolved	11/11/2013	444	mg/L	02_110113_05	
Seepage Pond	Chloride	11/11/2013	< 50	mg/L	02_110113_05	Undetected
Seepage Pond	Conductivity, Field	11/11/2013	3846	uS/cm	02_110113_05	
Seepage Pond	Copper, dissolved	11/11/2013	0.124	mg/L	02_110113_05	
Seepage Pond	Iron, dissolved	11/11/2013	177	mg/L	02_110113_05	
Seepage Pond	Lead, dissolved	11/11/2013	0.1921	mg/L	02_110113_05	
Seepage Pond	Magnesium, dissolved	11/11/2013	356	mg/L	02_110113_05	
Seepage Pond	Manganese, dissolved	11/11/2013	120	mg/L	02_110113_05	
Seepage Pond	pH, Field	11/11/2013	4.7	pH Units	02_110113_05	
Seepage Pond	Potassium, Dissolved	11/11/2013	17	mg/L	02_110113_05	
Seepage Pond	Selenium, dissolved	11/11/2013	< 0.005	mg/L	02_110113_05	Undetected
Seepage Pond	Sodium, dissolved	11/11/2013	62	mg/L	02_110113_05	
Seepage Pond	Sulfate	11/11/2013	5590	mg/L	02_110113_05	
Seepage Pond	Temperature, Field	11/11/2013	4.4	°C	02_110113_05	
Seepage Pond	Total Dissolved Solids	11/11/2013	8150	mg/L	02_110113_05	Analysis exceeded method hold time
Seepage Pond	Zinc, dissolved	11/11/2013	1370	mg/L	02_110113_05	
Seepage Pond	Acidity as CaCO3	12/9/2013	2490	mg/L	02_120113_05	
Seepage Pond	Aluminum, dissolved	12/9/2013	13.7	mg/L	02_120113_05	
Seepage Pond	Ammonia (As N)	12/9/2013	4.3	mg/L	02_120113_05	
Seepage Pond	Cadmium, dissolved	12/9/2013	0.7	mg/L	02_120113_05	Analyte detected between MDL and ML
Seepage Pond	Calcium, dissolved	12/9/2013	439	mg/L	02_120113_05	
Seepage Pond	Chloride	12/9/2013	< 50	mg/L	02_120113_05	Undetected
Seepage Pond	Conductivity, Field	12/9/2013	3781	uS/cm	02_120113_05	
Seepage Pond	Copper, dissolved	12/9/2013	0.061	mg/L	02_120113_05	
Seepage Pond	Iron, dissolved	12/9/2013	226	mg/L	02_120113_05	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Seepage Pond	Lead, dissolved	12/9/2013	0.1813	mg/L	02_120113_05	
Seepage Pond	Magnesium, dissolved	12/9/2013	365	mg/L	02_120113_05	
Seepage Pond	Manganese, dissolved	12/9/2013	12	mg/L	02_120113_05	
Seepage Pond	pH, Field	12/9/2013	4.93	pH Units	02_120113_05	
Seepage Pond	Potassium, Dissolved	12/9/2013	18	mg/L	02_120113_05	
Seepage Pond	Selenium, dissolved	12/9/2013	< 0.0005	mg/L	02_120113_05	Undetected
Seepage Pond	Selenium, dissolved	12/9/2013	< 0.005	mg/L	02_120113_05	Undetected
Seepage Pond	Sodium, dissolved	12/9/2013	62	mg/L	02_120113_05	
Seepage Pond	Sulfate	12/9/2013	5860	mg/L	02_120113_05	
Seepage Pond	Temperature, Field	12/9/2013	4	°C	02_120113_05	
Seepage Pond	Total Dissolved Solids	12/9/2013	9630	mg/L	02_120113_05	
Seepage Pond	Zinc, dissolved	12/9/2013	138	mg/L	02_120113_05	
Tailings Water	Acidity as CaCO3	10/17/2013	730	mg/L	02_100113_07	
Tailings Water	Aluminum, dissolved	10/17/2013	0.005	mg/L	02_100113_07	Analyte detected between MDL and ML
Tailings Water	Ammonia (As N)	10/17/2013	6	mg/L	02_100113_07	
Tailings Water	Cadmium, dissolved	10/17/2013	5.5	mg/L	02_100113_07	
Tailings Water	Calcium, dissolved	10/17/2013	585	mg/L	02_100113_07	
Tailings Water	Chloride	10/17/2013	< 50	mg/L	02_100113_07	Undetected
Tailings Water	Conductivity, Field	10/17/2013	4077	uS/cm	02_100113_07	
Tailings Water	Copper, dissolved	10/17/2013	0.127	mg/L	02_100113_07	
Tailings Water	Iron, dissolved	10/17/2013	0.02	mg/L	02_100113_07	Analyte detected between MDL and ML
Tailings Water	Lead, dissolved	10/17/2013	1.6600	mg/L	02_100113_07	
Tailings Water	Magnesium, dissolved	10/17/2013	209	mg/L	02_100113_07	
Tailings Water	Manganese, dissolved	10/17/2013	57.5	mg/L	02_100113_07	
Tailings Water	pH, Field	10/17/2013	6.54	pH Units	02_100113_07	
Tailings Water	Potassium, Dissolved	10/17/2013	26.4	mg/L	02_100113_07	
Tailings Water	Selenium, dissolved	10/17/2013	0.0054	mg/L	02_100113_07	
Tailings Water	Selenium, dissolved	10/17/2013	0.0058	mg/L	02_100113_07	Analyte detected between MDL and ML
Tailings Water	Sodium, dissolved	10/17/2013	95.2	mg/L	02_100113_07	
Tailings Water	Sulfate	10/17/2013	3270	mg/L	02_100113_07	
Tailings Water	Temperature, Field	10/17/2013	19.3	°C	02_100113_07	
Tailings Water	Total Dissolved Solids	10/17/2013	4960	mg/L	02_100113_07	Analysis exceeded method hold time
Tailings Water	Zinc, dissolved	10/17/2013	472	mg/L	02_100113_07	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Tailings Water	Acidity as CaCO3	11/11/2013	840	mg/L	02_110113_07	
Tailings Water	Aluminum, dissolved	11/11/2013	< 0.005	mg/L	02_110113_07	Undetected
Tailings Water	Ammonia (As N)	11/11/2013	5.6	mg/L	02_110113_07	
Tailings Water	Cadmium, dissolved	11/11/2013	3.64	mg/L	02_110113_07	
Tailings Water	Calcium, dissolved	11/11/2013	560	mg/L	02_110113_07	
Tailings Water	Chloride	11/11/2013	< 50	mg/L	02_110113_07	Undetected
Tailings Water	Conductivity, Field	11/11/2013	4033	uS/cm	02_110113_07	
Tailings Water	Copper, dissolved	11/11/2013	0.097	mg/L	02_110113_07	
Tailings Water	Iron, dissolved	11/11/2013	< 0.1	mg/L	02_110113_07	Undetected
Tailings Water	Lead, dissolved	11/11/2013	1.3200	mg/L	02_110113_07	
Tailings Water	Magnesium, dissolved	11/11/2013	209	mg/L	02_110113_07	
Tailings Water	Manganese, dissolved	11/11/2013	59.5	mg/L	02_110113_07	
Tailings Water	pH, Field	11/11/2013	6.06	pH Units	02_110113_07	
Tailings Water	Potassium, Dissolved	11/11/2013	26	mg/L	02_110113_07	
Tailings Water	Selenium, dissolved	11/11/2013	0.0052	mg/L	02_110113_07	
Tailings Water	Selenium, dissolved	11/11/2013	0.0043	mg/L	02_110113_07	Analyte detected between MDL and ML
Tailings Water	Sodium, dissolved	11/11/2013	93	mg/L	02_110113_07	
Tailings Water	Sulfate	11/11/2013	3370	mg/L	02_110113_07	
Tailings Water	Temperature, Field	11/11/2013	16.4	°C	02_110113_07	
Tailings Water	Total Dissolved Solids	11/11/2013	5220	mg/L	02_110113_07	Analysis exceeded method hold time
Tailings Water	Zinc, dissolved	11/11/2013	548	mg/L	02_110113_07	
Tailings Water	Acidity as CaCO3	12/9/2013	850	mg/L	02_120113_07	
Tailings Water	Aluminum, dissolved	12/9/2013	< 1	mg/L	02_120113_07	Undetected
Tailings Water	Ammonia (As N)	12/9/2013	6.7	mg/L	02_120113_07	
Tailings Water	Cadmium, dissolved	12/9/2013	4.3	mg/L	02_120113_07	
Tailings Water	Calcium, dissolved	12/9/2013	574	mg/L	02_120113_07	
Tailings Water	Chloride	12/9/2013	< 50	mg/L	02_120113_07	Undetected
Tailings Water	Conductivity, Field	12/9/2013	4135	uS/cm	02_120113_07	
Tailings Water	Copper, dissolved	12/9/2013	0.006	mg/L	02_120113_07	Analyte detected between MDL and ML
Tailings Water	Iron, dissolved	12/9/2013	< 0.1	mg/L	02_120113_07	Undetected
Tailings Water	Lead, dissolved	12/9/2013	2.8	mg/L	02_120113_07	
Tailings Water	Magnesium, dissolved	12/9/2013	207	mg/L	02_120113_07	
Tailings Water	Manganese, dissolved	12/9/2013	69.2	mg/L	02_120113_07	
Tailings Water	pH, Field	12/9/2013	6.38	pH Units	02_120113_07	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
Tailings Water	Potassium, Dissolved	12/9/2013	26	mg/L	02_120113_07	
Tailings Water	Selenium, dissolved	12/9/2013	0.0050	mg/L	02_120113_07	
Tailings Water	Selenium, dissolved	12/9/2013	< 0.005	mg/L	02_120113_07	Undetected
Tailings Water	Sodium, dissolved	12/9/2013	90	mg/L	02_120113_07	
Tailings Water	Sulfate	12/9/2013	4460	mg/L	02_120113_07	
Tailings Water	Temperature, Field	12/9/2013	20.1	°C	02_120113_07	
Tailings Water	Total Dissolved Solids	12/9/2013	5620	mg/L	02_120113_07	
Tailings Water	Zinc, dissolved	12/9/2013	644	mg/L	02_120113_07	
West Sump	Acidity as CaCO3	10/18/2013	10	mg/L	02_100113_03	Analyte detected between MDL and ML
West Sump	Aluminum, dissolved	10/18/2013	0.03	mg/L	02_100113_03	Analyte detected between MDL and ML
West Sump	Ammonia (As N)	10/18/2013	< 0.1	mg/L	02_100113_03	Undetected
West Sump	Cadmium, dissolved	10/18/2013	0.0021	mg/L	02_100113_03	
West Sump	Calcium, dissolved	10/18/2013	19	mg/L	02_100113_03	
West Sump	Chloride	10/18/2013	1.11	mg/L	02_100113_03	Analyte detected between MDL and ML
West Sump	Conductivity, Field	10/18/2013	131.4	uS/cm	02_100113_03	
West Sump	Copper, dissolved	10/18/2013	0.0125	mg/L	02_100113_03	
West Sump	Cyanide, WAD	10/18/2013	< 0.003	mg/L	02_100113_03	Undetected
West Sump	Iron, dissolved	10/18/2013	0.34	mg/L	02_100113_03	
West Sump	Lead, dissolved	10/18/2013	0.0026	mg/L	02_100113_03	
West Sump	Magnesium, dissolved	10/18/2013	12.6	mg/L	02_100113_03	
West Sump	Manganese, dissolved	10/18/2013	0.0658	mg/L	02_100113_03	
West Sump	pH, Field	10/18/2013	6.94	pH Units	02_100113_03	
West Sump	Potassium, Dissolved	10/18/2013	0.4	mg/L	02_100113_03	Analyte detected between MDL and ML
West Sump	Selenium, dissolved	10/18/2013	0.0002	mg/L	02_100113_03	Analyte detected between MDL and ML
West Sump	Selenium, dissolved	10/18/2013	< 0.001	mg/L	02_100113_03	Undetected
West Sump	Sodium, dissolved	10/18/2013	2.6	mg/L	02_100113_03	
West Sump	Sulfate	10/18/2013	76.2	mg/L	02_100113_03	
West Sump	Temperature, Field	10/18/2013	2.4	°C	02_100113_03	
West Sump	Total Dissolved Solids	10/18/2013	132	mg/L	02_100113_03	Analysis exceeded method hold time
West Sump	Zinc, dissolved	10/18/2013	0.609	mg/L	02_100113_03	
West Sump	Acidity as CaCO3	11/18/2013	< 10	mg/L	02_110113_03	Undetected
West Sump	Aluminum, dissolved	11/18/2013	< 0.2	mg/L	02_110113_03	Undetected
West Sump	Ammonia (As N)	11/18/2013	0.1	mg/L	02_110113_03	Analyte detected between MDL and ML

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
West Sump	Cadmium, dissolved	11/18/2013	0.0152	mg/L	02_110113_03	
West Sump	Calcium, dissolved	11/18/2013	20	mg/L	02_110113_03	
West Sump	Chloride	11/18/2013	< 10	mg/L	02_110113_03	Undetected
West Sump	Conductivity, Field	11/18/2013	161.5	uS/cm	02_110113_03	
West Sump	Copper, dissolved	11/18/2013	0.0014	mg/L	02_110113_03	Analyte detected between MDL and ML
West Sump	Cyanide, WAD	11/18/2013	< 0.003	mg/L	02_110113_03	Undetected
West Sump	Iron, dissolved	11/18/2013	0.3	mg/L	02_110113_03	
West Sump	Lead, dissolved	11/18/2013	0.0003	mg/L	02_110113_03	Analyte detected between MDL and ML
West Sump	Magnesium, dissolved	11/18/2013	13	mg/L	02_110113_03	
West Sump	Manganese, dissolved	11/18/2013	0.254	mg/L	02_110113_03	
West Sump	pH, Field	11/18/2013	6.63	pH Units	02_110113_03	
West Sump	Potassium, Dissolved	11/18/2013	< 2	mg/L	02_110113_03	Undetected
West Sump	Selenium, dissolved	11/18/2013	0.0005	mg/L	02_110113_03	
West Sump	Selenium, dissolved	11/18/2013	< 0.001	mg/L	02_110113_03	Undetected
West Sump	Sodium, dissolved	11/18/2013	4	mg/L	02_110113_03	Analyte detected between MDL and ML
West Sump	Sulfate	11/18/2013	78.7	mg/L	02_110113_03	
West Sump	Temperature, Field	11/18/2013	1.4	°C	02_110113_03	
West Sump	Total Dissolved Solids	11/18/2013	210	mg/L	02_110113_03	
West Sump	Zinc, dissolved	11/18/2013	2.67	mg/L	02_110113_03	
West Sump	Acidity as CaCO3	12/6/2013	< 10	mg/L	02_120113_03	Undetected
West Sump	Aluminum, dissolved	12/6/2013	< 0.03	mg/L	02_120113_03	Undetected
West Sump	Ammonia (As N)	12/6/2013	< 0.1	mg/L	02_120113_03	Undetected
West Sump	Cadmium, dissolved	12/6/2013	0.0076	mg/L	02_120113_03	
West Sump	Calcium, dissolved	12/6/2013	33.2	mg/L	02_120113_03	
West Sump	Chloride	12/6/2013	< 5	mg/L	02_120113_03	Undetected
West Sump	Conductivity, Field	12/6/2013	300.3	uS/cm	02_120113_03	
West Sump	Copper, dissolved	12/6/2013	0.0019	mg/L	02_120113_03	Analyte detected between MDL and ML
West Sump	Cyanide, WAD	12/6/2013	< 0.003	mg/L	02_120113_03	Undetected
West Sump	Iron, dissolved	12/6/2013	0.17	mg/L	02_120113_03	
West Sump	Lead, dissolved	12/6/2013	< 0.0001	mg/L	02_120113_03	Undetected
West Sump	Magnesium, dissolved	12/6/2013	22.6	mg/L	02_120113_03	
West Sump	Manganese, dissolved	12/6/2013	0.1641	mg/L	02_120113_03	
West Sump	pH, Field	12/6/2013	6.48	pH Units	02_120113_03	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
West Sump	Potassium, Dissolved	12/6/2013	0.4	mg/L	02_120113_03	Analyte detected between MDL and ML
West Sump	Selenium, dissolved	12/6/2013	0.0004	mg/L	02_120113_03	
West Sump	Selenium, dissolved	12/6/2013	< 0.001	mg/L	02_120113_03	Undetected
West Sump	Sodium, dissolved	12/6/2013	3.6	mg/L	02_120113_03	
West Sump	Sulfate	12/6/2013	139	mg/L	02_120113_03	
West Sump	Temperature, Field	12/6/2013	3.5	°C	02_120113_03	
West Sump	Total Dissolved Solids	12/6/2013	270	mg/L	02_120113_03	
West Sump	Zinc, dissolved	12/6/2013	1.51	mg/L	02_120113_03	
WTP3 Effluent	Acidity as CaCO3	10/25/2013	< 10	mg/L	02_100113_06	Undetected
WTP3 Effluent	Aluminum, dissolved	10/25/2013	0.09	mg/L	02_100113_06	Analyte detected between MDL and ML
WTP3 Effluent	Ammonia (As N)	10/25/2013	1.5	mg/L	02_100113_06	
WTP3 Effluent	Cadmium, dissolved	10/25/2013	0.0109	mg/L	02_100113_06	
WTP3 Effluent	Calcium, dissolved	10/25/2013	548	mg/L	02_100113_06	
WTP3 Effluent	Chloride	10/25/2013	< 25	mg/L	02_100113_06	Undetected
WTP3 Effluent	Conductivity, Field	10/25/2013	2194.0	uS/cm	02_100113_06	
WTP3 Effluent	Copper, dissolved	10/25/2013	0.0067	mg/L	02_100113_06	
WTP3 Effluent	Iron, dissolved	10/25/2013	< 0.02	mg/L	02_100113_06	Undetected
WTP3 Effluent	Lead, dissolved	10/25/2013	0.0004	mg/L	02_100113_06	Analyte detected between MDL and ML
WTP3 Effluent	Magnesium, dissolved	10/25/2013	32.8	mg/L	02_100113_06	
WTP3 Effluent	Manganese, dissolved	10/25/2013	0.0749	mg/L	02_100113_06	
WTP3 Effluent	pH, Field	10/25/2013	8.01	pH Units	02_100113_06	
WTP3 Effluent	Potassium, Dissolved	10/25/2013	9.8	mg/L	02_100113_06	
WTP3 Effluent	Selenium, dissolved	10/25/2013	0.0087	mg/L	02_100113_06	
WTP3 Effluent	Selenium, dissolved	10/25/2013	0.0058	mg/L	02_100113_06	
WTP3 Effluent	Sodium, dissolved	10/25/2013	44.5	mg/L	02_100113_06	
WTP3 Effluent	Sulfate	10/25/2013	1120	mg/L	02_100113_06	
WTP3 Effluent	Temperature, Field	10/25/2013	5.9	°C	02_100113_06	
WTP3 Effluent	Total Dissolved Solids	10/25/2013	1720	mg/L	02_100113_06	
WTP3 Effluent	Zinc, dissolved	10/25/2013	0.022	mg/L	02_100113_06	
WTP3 Effluent	Acidity as CaCO3	10/28/2013	< 10	mg/L	02_101513_06	Undetected
WTP3 Effluent	Aluminum, dissolved	10/28/2013	0.16	mg/L	02_101513_06	Analyte detected between MDL and ML
WTP3 Effluent	Ammonia (As N)	10/28/2013	1.9	mg/L	02_101513_06	
WTP3 Effluent	Cadmium, dissolved	10/28/2013	0.0017	mg/L	02_101513_06	
WTP3 Effluent	Calcium, dissolved	10/28/2013	663	mg/L	02_101513_06	
WTP3 Effluent	Chloride	10/28/2013	< 25	mg/L	02_101513_06	Undetected
WTP3 Effluent	Conductivity, Field	10/28/2013	2327.0	uS/cm	02_101513_06	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
WTP3 Effluent	Copper, dissolved	10/28/2013	0.005	mg/L	02_101513_06	
WTP3 Effluent	Iron, dissolved	10/28/2013	< 0.04	mg/L	02_101513_06	Undetected
WTP3 Effluent	Lead, dissolved	10/28/2013	0.0019	mg/L	02_101513_06	
WTP3 Effluent	Magnesium, dissolved	10/28/2013	4.4	mg/L	02_101513_06	
WTP3 Effluent	Manganese, dissolved	10/28/2013	0.003	mg/L	02_101513_06	Analyte detected between MDL and ML
WTP3 Effluent	pH, Field	10/28/2013	9.87	pH Units	02_101513_06	
WTP3 Effluent	Potassium, Dissolved	10/28/2013	5.9	mg/L	02_101513_06	
WTP3 Effluent	Selenium, dissolved	10/28/2013	0.0084	mg/L	02_101513_06	
WTP3 Effluent	Selenium, dissolved	10/28/2013	0.0073	mg/L	02_101513_06	
WTP3 Effluent	Sodium, dissolved	10/28/2013	41	mg/L	02_101513_06	
WTP3 Effluent	Sulfate	10/28/2013	1400	mg/L	02_101513_06	
WTP3 Effluent	Temperature, Field	10/28/2013	20.9	°C	02_101513_06	
WTP3 Effluent	Total Dissolved Solids	10/28/2013	2410	mg/L	02_101513_06	
WTP3 Effluent	Zinc, dissolved	10/28/2013	0.052	mg/L	02_101513_06	
WTP3 Effluent	Acidity as CaCO3	12/26/2013	< 10	mg/L	02_120113_06	Undetected
WTP3 Effluent	Aluminum, dissolved	12/26/2013	0.34	mg/L	02_120113_06	
WTP3 Effluent	Ammonia (As N)	12/26/2013	4.2	mg/L	02_120113_06	
WTP3 Effluent	Cadmium, dissolved	12/26/2013	0.0002	mg/L	02_120113_06	Analyte detected between MDL and ML
WTP3 Effluent	Calcium, dissolved	12/26/2013	890	mg/L	02_120113_06	
WTP3 Effluent	Chloride	12/26/2013	26.5	mg/L	02_120113_06	Analyte detected between MDL and ML
WTP3 Effluent	Conductivity, Field	12/26/2013	2786	uS/cm	02_120113_06	
WTP3 Effluent	Copper, dissolved	12/26/2013	0.004	mg/L	02_120113_06	Analyte detected between MDL and ML
WTP3 Effluent	Iron, dissolved	12/26/2013	0.08	mg/L	02_120113_06	Analyte detected between MDL and ML
WTP3 Effluent	Lead, dissolved	12/26/2013	0.0011	mg/L	02_120113_06	
WTP3 Effluent	Magnesium, dissolved	12/26/2013	1.5	mg/L	02_120113_06	
WTP3 Effluent	Manganese, dissolved	12/26/2013	0.001	mg/L	02_120113_06	Analyte detected between MDL and ML
WTP3 Effluent	pH, Field	12/26/2013	11.61	pH Units	02_120113_06	
WTP3 Effluent	Potassium, Dissolved	12/26/2013	15.1	mg/L	02_120113_06	
WTP3 Effluent	Selenium, dissolved	12/26/2013	0.0064	mg/L	02_120113_06	
WTP3 Effluent	Selenium, dissolved	12/26/2013	0.0062	mg/L	02_120113_06	
WTP3 Effluent	Sodium, dissolved	12/26/2013	64.8	mg/L	02_120113_06	
WTP3 Effluent	Sulfate	12/26/2013	1350	mg/L	02_120113_06	
WTP3 Effluent	Temperature, Field	12/26/2013	13.0	°C	02_120113_06	



Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
WTP3 Effluent	Total Dissolved Solids	12/26/2013	2750	mg/L	02_120113_06	
WTP3 Effluent	Zinc, dissolved	12/26/2013	0.471	mg/L	02_120113_06	
WTP3 Influent	Acidity as CaCO3	10/25/2013	44200	mg/L	02_100113_04	
WTP3 Influent	Aluminum, dissolved	10/25/2013	533	mg/L	02_100113_04	
WTP3 Influent	Ammonia (As N)	10/25/2013	5	mg/L	02_100113_04	
WTP3 Influent	Cadmium, dissolved	10/25/2013	60	mg/L	02_100113_04	
WTP3 Influent	Calcium, dissolved	10/25/2013	280	mg/L	02_100113_04	
WTP3 Influent	Chloride	10/25/2013	< 500	mg/L	02_100113_04	Undetected
WTP3 Influent	Conductivity, Field	10/25/2013	25589	uS/cm	02_100113_04	
WTP3 Influent	Copper, dissolved	10/25/2013	8.03	mg/L	02_100113_04	
WTP3 Influent	Iron, dissolved	10/25/2013	1680	mg/L	02_100113_04	
WTP3 Influent	Lead, dissolved	10/25/2013	0.053	mg/L	02_100113_04	
WTP3 Influent	Magnesium, dissolved	10/25/2013	1160	mg/L	02_100113_04	
WTP3 Influent	Manganese, dissolved	10/25/2013	553	mg/L	02_100113_04	
WTP3 Influent	pH, Field	10/25/2013	2.33	pH Units	02_100113_04	
WTP3 Influent	Potassium, Dissolved	10/25/2013	< 20	mg/L	02_100113_04	Undetected
WTP3 Influent	Selenium, dissolved	10/25/2013	0.040	mg/L	02_100113_04	
WTP3 Influent	Selenium, dissolved	10/25/2013	0.0270	mg/L	02_100113_04	Analyte detected between MDL and ML
WTP3 Influent	Sodium, dissolved	10/25/2013	20	mg/L	02_100113_04	Analyte detected between MDL and ML
WTP3 Influent	Sulfate	10/25/2013	42200	mg/L	02_100113_04	
WTP3 Influent	Temperature, Field	10/25/2013	24.2	°C	02_100113_04	
WTP3 Influent	Total Dissolved Solids	10/25/2013	66000	mg/L	02_100113_04	Analysis exceeded method hold time
WTP3 Influent	Zinc, dissolved	10/25/2013	9660	mg/L	02_100113_04	
WTP3 Influent	Acidity as CaCO3	10/28/2013	24900	mg/L	02_101513_04	
WTP3 Influent	Aluminum, dissolved	10/28/2013	815	mg/L	02_101513_04	
WTP3 Influent	Ammonia (As N)	10/28/2013	5	mg/L	02_101513_04	
WTP3 Influent	Cadmium, dissolved	10/28/2013	57	mg/L	02_101513_04	
WTP3 Influent	Calcium, dissolved	10/28/2013	423	mg/L	02_101513_04	
WTP3 Influent	Chloride	10/28/2013	< 500	mg/L	02_101513_04	Undetected
WTP3 Influent	Conductivity, Field	10/28/2013	23540	uS/cm	02_101513_04	
WTP3 Influent	Copper, dissolved	10/28/2013	7.41	mg/L	02_101513_04	
WTP3 Influent	Iron, dissolved	10/28/2013	2520	mg/L	02_101513_04	
WTP3 Influent	Lead, dissolved	10/28/2013	0.100	mg/L	02_101513_04	
WTP3 Influent	Magnesium, dissolved	10/28/2013	1880	mg/L	02_101513_04	
WTP3 Influent	Manganese, dissolved	10/28/2013	600	mg/L	02_101513_04	

Location	Analyte	Sample Date	Result	Unit	Sample Number	Qualifier Comment
WTP3 Influent	pH, Field	10/28/2013	2.55	pH Units	02_101513_04	
WTP3 Influent	Potassium, Dissolved	10/28/2013	< 6	mg/L	02_101513_04	Undetected
WTP3 Influent	Selenium, dissolved	10/28/2013	0.051	mg/L	02_101513_04	
WTP3 Influent	Selenium, dissolved	10/28/2013	0.0320	mg/L	02_101513_04	Analyte detected between MDL and ML
WTP3 Influent	Sodium, dissolved	10/28/2013	30	mg/L	02_101513_04	
WTP3 Influent	Sulfate	10/28/2013	38100	mg/L	02_101513_04	
WTP3 Influent	Temperature, Field	10/28/2013	20.3	°C	02_101513_04	
WTP3 Influent	Total Dissolved Solids	10/28/2013	53200	mg/L	02_101513_04	Analysis exceeded method hold time
WTP3 Influent	Zinc, dissolved	10/28/2013	10100	mg/L	02_101513_04	
WTP3 Influent	Acidity as CaCO3	12/26/2013	29400	mg/L	02_120113_04	
WTP3 Influent	Aluminum, dissolved	12/26/2013	969	mg/L	02_120113_04	
WTP3 Influent	Ammonia (As N)	12/26/2013	7	mg/L	02_120113_04	
WTP3 Influent	Cadmium, dissolved	12/26/2013	69	mg/L	02_120113_04	
WTP3 Influent	Calcium, dissolved	12/26/2013	470	mg/L	02_120113_04	
WTP3 Influent	Chloride	12/26/2013	< 500	mg/L	02_120113_04	Undetected
WTP3 Influent	Conductivity, Field	12/26/2013	12697	uS/cm	02_120113_04	
WTP3 Influent	Copper, dissolved	12/26/2013	8.54	mg/L	02_120113_04	
WTP3 Influent	Iron, dissolved	12/26/2013	3190	mg/L	02_120113_04	
WTP3 Influent	Lead, dissolved	12/26/2013	0.094	mg/L	02_120113_04	
WTP3 Influent	Magnesium, dissolved	12/26/2013	2280	mg/L	02_120113_04	
WTP3 Influent	Manganese, dissolved	12/26/2013	710	mg/L	02_120113_04	
WTP3 Influent	pH, Field	12/26/2013	2.3	pH Units	02_120113_04	
WTP3 Influent	Potassium, Dissolved	12/26/2013	< 20	mg/L	02_120113_04	Undetected
WTP3 Influent	Selenium, dissolved	12/26/2013	0.037	mg/L	02_120113_04	
WTP3 Influent	Selenium, dissolved	12/26/2013	< 0.05	mg/L	02_120113_04	Undetected
WTP3 Influent	Sodium, dissolved	12/26/2013	30	mg/L	02_120113_04	Analyte detected between MDL and ML
WTP3 Influent	Sulfate	12/26/2013	47200	mg/L	02_120113_04	
WTP3 Influent	Temperature, Field	12/26/2013	18.6	°C	02_120113_04	
WTP3 Influent	Total Dissolved Solids	12/26/2013	69000	mg/L	02_120113_04	Analysis exceeded method hold time
WTP3 Influent	Zinc, dissolved	12/26/2013	11600	mg/L	02_120113_04	

## **Appendix C Red Dog 2013 TDS Management Plan**

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**2013 TDS Management Plan Progress Report & Updated  
Management Plan for APDES Permit AK0038652**

February 2014

Pursuant to Part I.A.7.f of APDES Permit AK0038652, Teck Alaska Incorporated (Teck) submitted a TDS Management Plan to EPA and ADEC prior to July 29, 2010. The permit requires Teck to include, by March 1<sup>st</sup> of each year, a TDS Management Plan progress report as part of the Red Dog Mine APDES Annual Water Monitoring Summary Report.

The progress report/updated management plan includes information on the actions and investigative efforts undertaken prior to and during 2013 and the actions that are planned for 2014 to provide enhanced treatment for total dissolved solids (TDS) and/or TDS-source control in order to ensure that:

- Red Dog will be able to discharge treated effluent through Outfall 001 in compliance with permitted TDS limits, and;
- Treated effluent of sufficient volume will be discharged to maintain the integrity of the tailings impoundment dam.

Reducing the concentration of TDS in the Red Dog Mine tailings storage facility (TSF) is a top priority of the mine. In its original TDS Management Plan, Teck identified and selected those actions and/or investigative efforts appropriate for incorporation into the plan. The initial review identified four general categories of actions and/or investigative activities and a fifth category, "Other Opportunities", was added in the 2012 report document. The categories are:

1. Source Control (Pre-ARD Generation) – Examine potential means of reducing or preventing water infiltration into and/or oxidation of ARD generating material stockpiles
2. Source Control (Post-ARD Generation) – Examine improved TDS capture and treatment
3. Enhanced Treatment Capacity – Winterization of Water Treatment Plant 3 and/or improved utilization of Water Treatment Plant 1 and 3
4. Enhanced Treatment Technology Research
5. Other Opportunities

Results of these activities in 2013 as well as those planned for continuation or as new for 2014 are described below.

#### **1. Source Control (Pre-ARD Generation)**

Acid Rock Drainage (ARD) largely results from the action of microbes on sulfide minerals which results in by-production of (sulfuric) acid. The ARD process requires oxygen and water, and generally results in acidic solutions that mobilize metal ions from the host rock. Reducing or eliminating the supply of water and/or oxygen to a reactive waste rock source is a potential method to mitigate or prevent ARD generation.

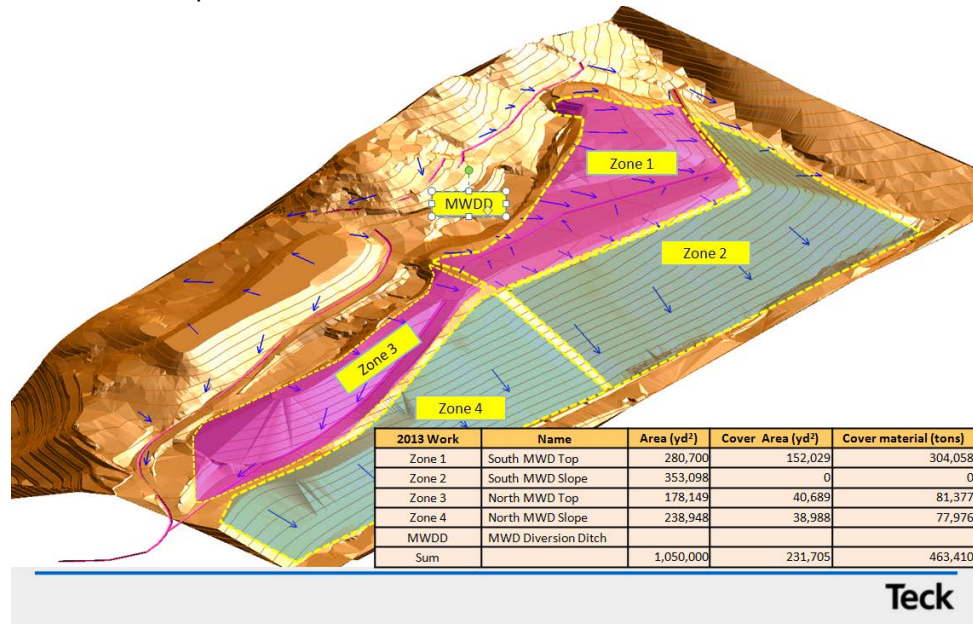
##### **Reduction of Infiltration of precipitation into the MWS**

In Q4 2012, a project was initiated to reduce the infiltration of precipitation into the main waste stockpile (MWS). Elements of the project included re-contouring MWS for proper drainage and

installing drainage structures to capture and divert a portion of the snowmelt and precipitation from the surface of the MWS.

During 2013, work consisted of re-contouring and compacting the MWS surface, and installation of surface runoff diversion ditches.

Future planned work consists of making necessary repairs to the diversion ditches and compaction of the MWS surface and placement of the cover.



## 2. Source Control (Post-ARD Generation)

ARD is currently collected through a series of seven intercept wells that pump recovered ARD to a main collection tank from where it is pumped to WTP3 or WTP1 for treatment. Based on geotechnical information gathered in 2011 and 2012, three new wells and a continuous French Drain trench along the toe of the MWS were installed in order to increase the volume of ARD collected. Pumps and piping were installed to send water from the new wells to the main collection tank from where it is sent for treatment in WTP3/WTP1, or untreated to the Main Pit. New instrumentation was added to the system in order to improve efficiency of ARD-collection, and to monitor performance of the system for future planning.

The changes have allowed for year round collection and treatment of ARD in WTP3/WTP1. Recent system improvements have resulted in an increase in capture of total ARD water from an estimated 20% to 35% – or an increase of approximately 75% – from 2011 to 2013.

### Improved TDS Capture through a MWS Drainage Collection System

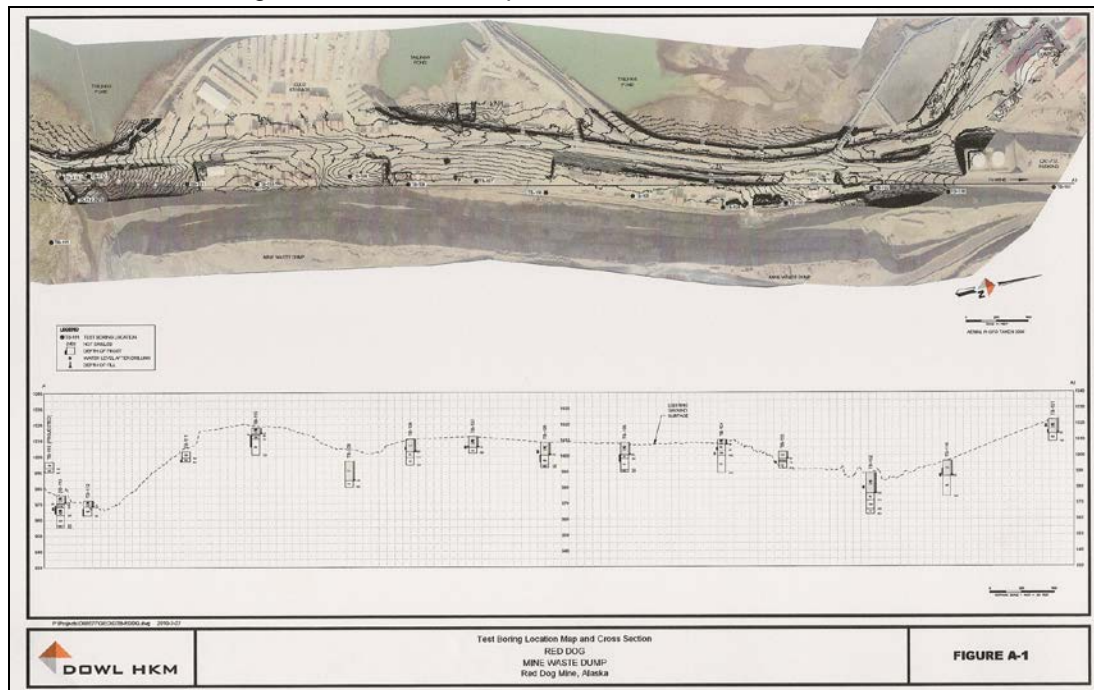
A geotechnical evaluation to determine the water flow paths emanating from the MWS was completed in 2010. This was a two phase program.

Phase I had four objectives

- ✓ Determine nature and material properties of the overburden
- ✓ Determine depth and nature of weathered/fresh bedrock
- ✓ Determine depth to groundwater
- ✓ Locate discrete low resistivity (high conductivity) 2D and 3D pathways that could reflect metal-rich water migrating from the MWS to the tailings impoundment.

The data required to meet the first three objectives was obtained by drilling a series of 15 holes along the base of the MWS using a hollow stem auger. In each of the holes the overburden material was logged, and the condition of the bedrock was determined. In the eight holes that encountered groundwater, the groundwater elevation was measured.

Figure1: DOWL HKM Auger Hole Location Map



To gather the data needed to meet the fourth objective, two different electro-magnetic (EM) surveys were conducted. A RESOLVE Airborne EM Survey was conducted to locate discrete low resistivity (high conductivity) 3D pathways of metals-rich water flowing/draining into the tailings impoundment. The airborne survey was followed up by a ground based Dipole-Dipole Array and Wenner Array survey. The results of the surveys are presented in the figures below.



Figure 2: RESOLVE Airborne EM Survey – Differential Resistivity (320 MASL)

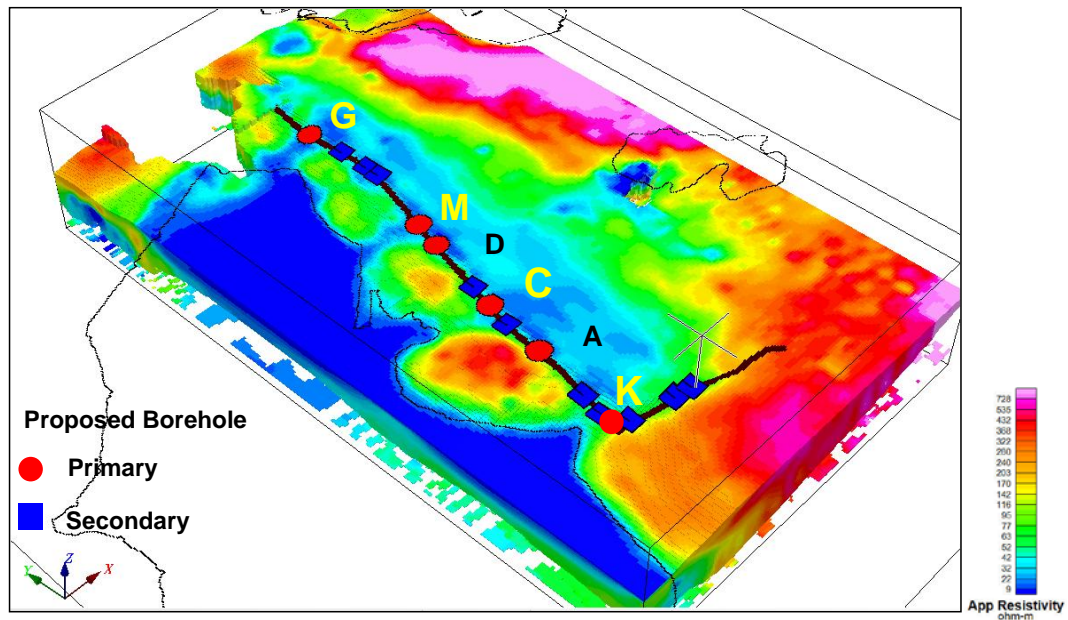
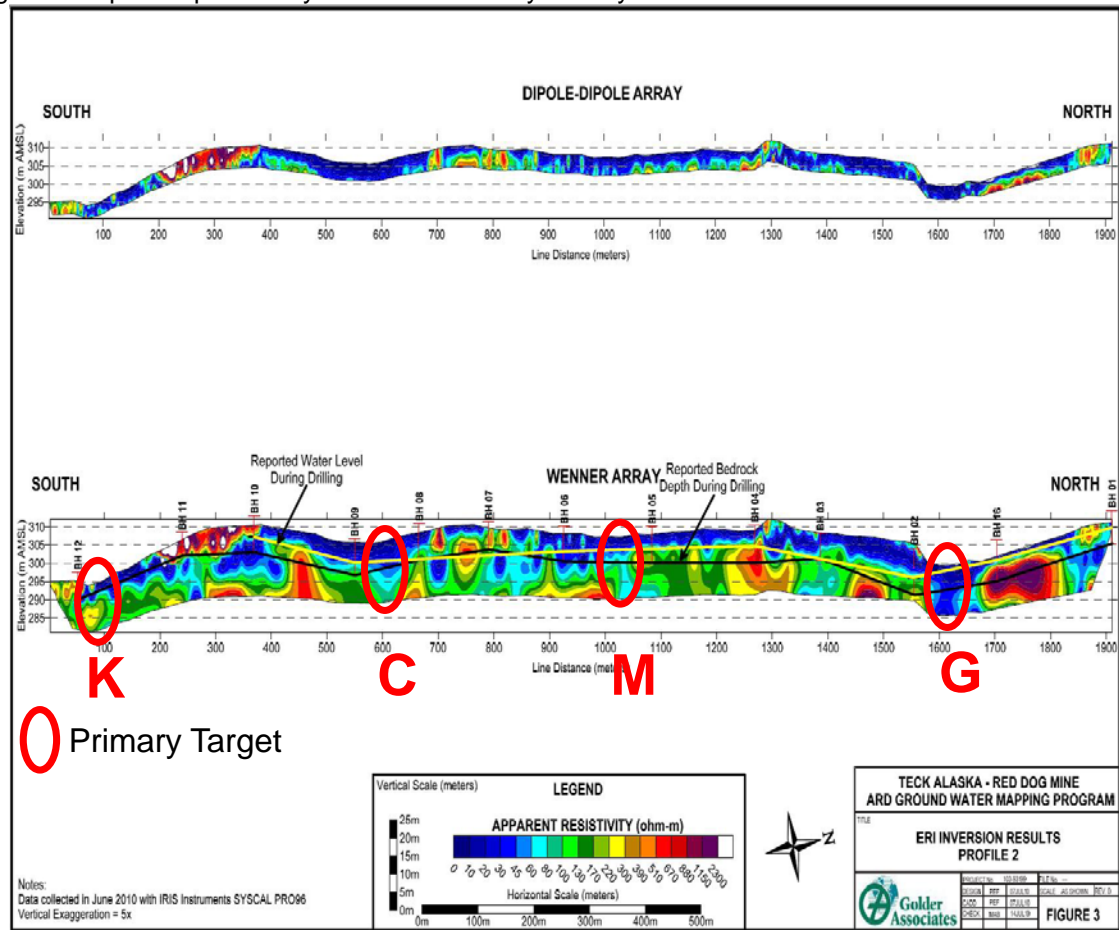


Figure 3: Dipole-Dipole Array and Wenner Array Survey at the Toe of the MWS



The objective of Phase II was to determine the target locations for intercept wells based on the results of the geophysical surveys. Wells were installed at locations G, M, C, and K. Pumps were installed in wells at locations G and M. Initial test work resulted in a non-sustained water draw. A system design evaluation is currently ongoing to re-assess well size diameter, recharge rates and optimal pumping capacity. Additional testing was undertaken during the 2011 field season.

In 2012 additional testing was completed to determine flow rates and loading at different elevations within the bedrock. Also, the pump and pipeline system was refurbished. A series of interconnecting drain ditches has been established along the MWS toe, and the pumping system draws from these ditches.

In 2013, pump drawdown testing was conducted in the vicinity of Target Area "C" (Figure 3). This was done in order to compare the pump testing results with predictions of the model which had been developed, based on results of previous airborne and ground-level EM surveys, and drilling/logging efforts. The model further assumed uniform flow through a weathered fractured zone at the top of bedrock. The model predicted that Target Area "C" would be the most suitable location at which to install a slurry wall as a sub-surface water barrier. However, the pump testing results indicated that the subsurface flow tends to be more localized in discrete fracture zones, and that Target Area "C" may not be the best location for a sub-surface water barrier. The next step should be to identify the fracture zone locations.

### **3. Enhanced Treatment Capacity**

Red Dog is committed to increasing the capture of ARD from the MWS before it enters the TSF. Capturing and separately treating this water has been demonstrated to be the most cost effective method to reduce the TDS load in the TSF. It also provides process benefits as a lower TDS recycle water will reduce pipe scaling, thus improving availability and grade/recovery performance.

#### **Enhanced Utilization of Water Treatment Plant 1 and 3 (WTP1 and WTP3) and Winterization of Water Treatment Plant 3.**

Lime-high density sludge (HDS) treatment of the MWS-stream in WTP1 has proven successful in dramatically lowering the high TDS concentrations of this source.

Certain improvements to the MWS-stream recovery/treatment system were completed to allow reliable winter operation. Further improvements to winterization will continue through 2014.

Water Treatment Plant 1 (WTP1) was successfully utilized to treat the MWS-stream beginning in October 2012 and continues through present.

The scoping-level engineering work for winterization of WTP3 was not completed in 2013. In light of the successful conversion of WTP1 to a facility capable of year-round MWS-stream treatment, the potential need for winterization of WTP3 was deferred with a scoping study to be initiated in 2015.

#### **4. Enhanced Treatment Technology Research**

##### **Reverse Osmosis Bench Study**

In Q2 2012, Red Dog Mine commissioned a water treatment company to conduct a bench scale prefeasibility study to treat a sample of reclaimed TSF water using membrane technology. The technology demonstrated potential although there were concerns over certain operational parameters of the testing and so a second bench test was commissioned in Q4 2012.

The second bench test parameters were better defined to address the issues identified in the initial test. Lime was used as a pretreatment step and the water temperature was maintained to better simulate actual Red Dog conditions. Results of the second bench study were encouraging and Teck plans to continue evaluating membrane technology alternatives in 2014 through pilot studies. Work to be completed in 2014 consists of a 25 gpm membrane pilot program to test various membrane types, reagents, and RDM water. It is anticipated the study will take more than one year.

#### **5. Other Opportunities**

Mining in the Main Pit was completed in Q1 2012. A significant opportunity was identified to accelerate TDS reduction in the TSF by pumping ARD – generated in excess of what can currently be treated – into the Main Pit. The current plan is to fill and/or allow the pit surface water level to reach 840' above mean sea level (AMSL), after which the pit water will be pumped to the ARD treatment system, or untreated to the TSF. In 2013, 22.6 million gallons of untreated ARD was diverted to the Main Pit, thus preventing this TDS load from entering the TSF.

An element of TDS reduction is the diluting impact of spring freshet and summer precipitation flowing into the TSF. This impact is proportionately increased as the TSF water volume is decreased and to maximize this, 205 million gallons of treated water was pumped to the Main Pit in 2013 (rather than back to the TSF). This also helped ensure the TSF water level did not encroach into the TSF dam freeboard limit (TSF water level was 964.3' AMSL by 2013 year end). Red Dog plans to continue pumping ARD water in the Main Pit in 2014.

##### **ARD Diversion to the Main Pit**

Treatment of ARD in WTP3 is limited by lime mixing capacity during the spring and early summer. Lime demand is high during spring melt period as lime is used to treat reclaimed TSF water for discharge purposes. Hence, all of the collected ARD cannot be treated. Historically, ARD that could not be treated in WTP3 overflowed to the TSF, thus increasing its TDS load.

A pumping system was installed in 2012 to divert any collected, untreated ARD to the Main Pit. In 2013, 22.6 million gallons of untreated ARD was sent to the Main Pit, reducing the TDS load in the TSF. It is planned to continue diverting any ARD beyond the treatment capacity to the Main Pit in 2014.

## **Appendix D Waste Rock Production Summary Fourth Quarter 2013**

# Waste Rock Production Summary

## Production Month October 2013

### Waste Type: Construction Waste

#### Formation: Siksikpuk

##### Stockpile Use:

Main pit dump 4

Waste Type Subtotal:

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
8,364	1.9%	0.9%	5.4%
8,364			

### Waste Type: Most Reactive Waste

#### Formation: Ikalukrok

##### Stockpile Use:

Main Pit Dump 2

Waste Type Subtotal:

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
61,500	0.7%	5.5%	0.1%
61,500			

### Waste Type: Other Waste

#### Formation: Ikalukrok

##### Stockpile Use:

New shiter pad

##### Stockpile Use:

Power house pad

##### Stockpile Use:

Oxide north

##### Stockpile Use:

##### Stockpile Use:

Main pit dump 4

##### Stockpile Use:

Landfill @MWD

##### Stockpile Use:

Main Pit Dump 3

##### Stockpile Use:

Main Pit Dump 2

##### Stockpile Use:

Coffer Dam

##### Stockpile Use:

Main Waste Dump

##### Stockpile Use:

Portable crusher Pad

#### Formation: Mixed

##### Stockpile Use:

Main pit dump 4

##### Stockpile Use:

Portable crusher Pad

##### Stockpile Use:

Oxide north

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
4,920	3.9%	0.7%	2.3%
410	2.9%	0.8%	1.9%
71,504	1.4%	0.8%	4.4%
15,826	1.3%	0.9%	5.0%
238,064	2.5%	1.1%	2.4%
492	4.4%	0.9%	2.7%
6,888	1.7%	1.6%	1.3%
39,442	1.5%	1.6%	1.6%
29,367	1.6%	2.1%	0.9%
492	4.1%	0.7%	2.3%
34,033	2.9%	1.1%	1.9%
100,860	1.5%	1.4%	2.7%
328	2.5%	1.1%	2.0%
20,992	0.9%	1.2%	3.6%

<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Main Waste Dump	410	0.6%	1.1%	3.0%
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Coffer Dam	4,346	0.1%	3.1%	0.0%
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Main Pit Dump 2	13,202	1.0%	2.4%	0.8%
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Main Pit Dump 3	1,066	0.6%	2.8%	0.4%
<b>Formation: Siksikpuk</b>				
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Main pit dump 4	44,444	1.4%	1.0%	4.6%
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
New shiter pad	82	0.6%	1.1%	3.0%
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Oxide north	5,576	1.0%	1.2%	3.5%
Waste Type Subtotal:	632,744			
<b>Total tonnes for month:</b>	<b>702,608</b>			

## Production Month November 2013

### Waste Type: Construction Waste

#### Formation: Ikalukrok

##### Stockpile Use:

Phase 3 Main Waste Dump

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
5,576	0.1%	2.2%	0.0%

##### Stockpile Use:

Main Pit Dump 3

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
6,806	2.3%	2.2%	1.3%

##### Stockpile Use:

Main pit dump 4

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
10,086	0.7%	1.1%	4.8%

#### Formation: Siksikpuk

##### Stockpile Use:

Main pit dump 4

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
1,394	0.2%	1.9%	0.1%

Waste Type Subtotal:

23,862

### Waste Type: Most Reactive Waste

#### Formation: Ikalukrok

##### Stockpile Use:

Main Pit Dump 3

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
22,878	1.1%	5.8%	0.3%

##### Stockpile Use:

Main pit dump 4

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
1,148	3.5%	5.6%	2.3%

#### Formation: Mixed

##### Stockpile Use:

Main pit dump 4

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
22,632	0.9%	5.7%	0.2%

##### Stockpile Use:

Main Pit Dump 3

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
17,876	1.7%	6.8%	3.2%

Waste Type Subtotal:

64,534

### Waste Type: Other Waste

#### Formation: Ikalukrok

##### Stockpile Use:

Back Dam

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
52,726	1.6%	1.2%	1.2%

##### Stockpile Use:

Main Pit Dump 2

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
6,806	1.9%	1.0%	3.1%

##### Stockpile Use:

Main Pit Dump 3

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
10,086	1.0%	1.9%	1.1%

##### Stockpile Use:

Landfill @MWD

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
2,296	2.4%	1.1%	3.1%

##### Stockpile Use:

Main pit dump 4

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
506,596	1.8%	1.2%	3.3%

##### Stockpile Use:

incinerator

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
3,444	3.2%	0.8%	2.0%

#### Formation: Mixed

##### Stockpile Use:

Main pit dump 4

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
35,588	2.4%	1.9%	3.4%

#### Formation: Siksikpuk

##### Stockpile Use:

Back Dam

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
6,068	0.2%	1.1%	0.5%

##### Stockpile Use:

Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
--------	-----------	-----------	-----------



Main Pit Dump 2	9,348	0.1%	3.3%	0.0%
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Main Pit Dump 3	16,482	0.3%	3.1%	0.3%
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Main pit dump 4	64,534	0.6%	2.0%	1.6%
<b>Stockpile Use:</b>	<b>Tonnes</b>	<b>Avg. Zinc</b>	<b>Avg. Iron</b>	<b>Avg. Lead</b>
Oxide north	3,444	0.4%	2.0%	1.5%
Waste Type Subtotal:	717,418			
<b>Total tonnes for month:</b>	<b>805,814</b>			

## Production Month December 2013

### Waste Type: Construction Waste

#### Formation: Mixed

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main Pit Dump 3	7,120	3.6%	1.1%	6.0%
Waste Type Subtotal:	7,120			

### Waste Type: Most Reactive Waste

#### Formation: Ikalukrok

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main Pit Dump 3	979	5.1%	5.1%	2.8%

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main pit dump 4	131,364	2.4%	4.8%	2.1%

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main Pit Dump 2	2,581	0.9%	4.9%	0.2%

#### Formation: Mixed

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main Waste Dump	356	1.7%	1.9%	5.3%

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main Pit Dump 3	1,335	7.0%	6.2%	8.0%

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main pit dump 4	18,601	8.0%	5.3%	10.7%

#### Formation: Siksikpuk

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main pit dump 4	890	3.2%	4.2%	1.5%

Waste Type Subtotal: 156,106

### Waste Type: Other Waste

#### Formation: Ikalukrok

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main Pit Dump 2	7,298	4.4%	1.0%	2.6%

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main Pit Dump 3	25,098	1.5%	2.2%	1.0%

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Landfill @MWD	890	1.2%	0.6%	6.3%

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main pit dump 4	238,186	3.1%	1.3%	3.5%

#### Formation: Mixed

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main pit dump 4	163,671	1.4%	2.2%	2.4%

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main Pit Dump 3	104,575	2.4%	1.4%	3.2%

#### Formation: Siksikpuk

Stockpile Use:	Tonnes	Avg. Zinc	Avg. Iron	Avg. Lead
Main pit dump 4	10,146	0.5%	2.6%	0.5%

Waste Type Subtotal: 549,864

Total tonnes for month: 713,090

## **Appendix E Red Dog One Year Mine Plan 2013**



**Red Dog Operations**

**Alaska, USA**

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# **ONE YEAR MINE PLAN – 2014 ADDENDUM**

*(Financial Information Removed)*

January 2014

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# 1. SUMMARY

## 1.1. Introduction

The 2014 budget mine plan schedule was completed in July 2013. The following initial assumptions used for the 2014 mine plan have changed in the time between that schedule and this amended schedule:

- 1) Change in 2013 final pit status from EOY 2013 predictions made in July.
  - a. Progress on 825 and 850 bench shots was moderately different.
  - b. Progress on 975 bench shots was slower than the mid-year prediction, and the need to remove the geotechnical stepouts on 900 and 875 benches required more waste to be removed from 975 before ore is exposed.
- 2) Additional haul access to 950 / 975 bench on the west side of the pit, to be completed in early 2014.
- 3) Phase design changes (12a to 12c phases) – The new phase designs keep the same phase concepts, but with moderate changes to the exact location of the walls, including wider catch benches every 4<sup>th</sup> bench in some areas to reduce geotechnical risk.
- 4) Geotechnical concerns leading to unplanned and planned stepouts.
- 5) In Pit stockpiles – expanding Main Pit Dump 3 (MPD 3) in Q1 and Q2 to provide a platform for locating the stockpiles with the pit boundaries, in order to reduce fugitive dust from the stockpiles.
- 6) Changes in scope of major projects, and the associated equipment requirements. Largest change is that main dam work changed from a 6' raise to additional widening, and haulage requirements from DD2 increased by an order of magnitude, from 15,000 cubic yards to 150,000.

This 2014 Mine Plan Addendum is a collection of revised monthly 2014 mine production plans, equipment forecasts, dumping plans and other major changes.

### **1.2. Mine Production**

The amended production forecast is 12,225 kt of total mine production from the Aqqaluk Pit (Table 1-1). There are 3,627 kt of ore scheduled at 17.5% Zn and 4.7% Pb. There are 8,598 kt of waste scheduled from the Aqqaluk Pit.

**Table 1-1 2014 Mine Plan Summary**

	Aqqaluk Pit
Total (t)	12,225,137
Ore (t)	3,627,189
Zn (%)	17.5
Pb (%)	4.7
Waste (t)	8,597,948
SR	2.37

A comparison between the Amended Plan, 2014 Budget and 2014 5-year mine plan is in Table 1.2.

### **1.3. Mine Planning Parameters**

- 1) Model: RED2012 BH-A
- 2) Aqqaluk 12c phase designs (Phase 2 is 12c1 version)



#### **1.4. Equipment Fleets**

The adjusted 2014 equipment schedule is shown in Table 1-2. The fleet sizes for the blasthole drills, productions loaders and dozers remain the same throughout 2014. The fleet size for operating 777 haul trucks at begins at 8, and is reduced to 7 in July.

**Table 1-2 2014 Equipment Schedule**

Equipment	Description	Q1 / Q2	Q3 / Q4
Drills	DML	3	3
Operating Trucks	777	8	7
Loaders	992/993	5	5
Dozers	D9/D10	4	4

#### **1.5. Haul Access**

The overall goal for access is to have full width (93 ft.) two lane 777 haul roads, with reasonable grades (10-12%) on the most direct route possible between the active mining benches and the haul destinations, the ore stockpile and the waste dumps. Two access points to each mining bench are preferred, though benches may have a single access in the short term while mining is progressing towards an area that will provide additional access.

For drop cuts, the increased size of the 993 loaders has increased the required width to approximately 135 ft. The actual blasted width is adjusted to best fit the blast pattern spacing.

#### **1.6. Risks and Opportunities**

The 2014 Mine Plan has many challenges. Red Dog's continued success will be dependent on overcoming these challenges and on implementing procedures and plans to reduce risks and improve production.

##### **1) Aqqaluk Shape and Mining Phases Change**

There are several outstanding issues that are likely to have an impact on these pit designs, requiring subsequent pit revisions:

- The completed 3-D models of the geotechnically pertinent fault and thrust surfaces in Aqqaluk. The final results of this work are pending. The new information may require an expansion of the Aqqaluk work due to the complexity of that deposit.

- The results of the geotechnical analysis of fault and thrust surfaces and rock properties in Aqqaluk. This work will be done when the 3-D models from the previous bullet are available.
- The adjustment of the geological boundaries to be consistent with the reinterpreted geotechnical structure. Adjustments to the Aqqaluk deposit are not expected to be straightforward due its much greater complexity and size. Resources and timing for this task are not yet determined.
- Diamond core drilling is continuing in the vicinity of the Aqqaluk pit in 2013 and 2014. This data will improve the modeling of several peripheral knobs of high grade exhalite which may lead to local expansions of the ultimate pit. This drilling will also better define mineralization that is currently considered part of the Paalaaq deposit and may lead to a deepening of the ultimate Aqqaluk pit.

#### 2) Aqqaluk Pit Ore Reserves and Block Model Accuracy

It is expected that block model inaccuracies in the benches just below the original ground surface and at the fringes of an ore body will continue as new pits and new pushback phases are pioneered. The ore and waste tonnages and ore grade estimates during this period could be poorer than the historical average. Regular updates of the diamond drillhole model with blasthole assay data should improve the accuracy of the block model used for planning.

#### 3) High Silica, Low Barite and Fine Grain Ore Content in Stockpiles

High silica and high fine grain ore (Type 8) content in stockpiles causes challenges with metal recovery in the mill, because high silica rock is harder to grind, and fine grained rock must be grinded to a smaller diameter to achieve good liberation of the zinc or lead minerals from the gangue. The average barite grade for 2014 is lower than the average mill feed in 2013, so it will be important to mix the ore with high barite content evenly among stockpiles. Also, building stockpiles with ore from several areas of the pit will reduce the proportion that is high silica or high Type 8 rock from a particular location. Planning for fine grained ore is also challenging because it is not included in the block model.

#### 4) Main Pit Dump Stability

Main Pit dump stability will be constantly monitored and evaluated. Efforts to retain the longest strike length for dumping must be made to ensure constant availability for waste disposal. Proper blending of varying waste materials will be maintained.

Dump stability will be particularly important for Main Pit Dump 3, as it will be used as pad for in-pit stockpile building. Significant settling on this dump after a stockpile has been built on it could lead to a significant loss of ore.

#### 5) Aqqaluk Pit Highwall Slope Stability

There are currently four significant zones of concern across Aqqaluk highwalls. These areas are now identified as “Risk Areas” on planning maps. The areas are:

- Risk Area 1 (High Risk) – Located below the 900 bench in the Southeast portion of the pit and involves a three-bench failure, which occurred in early July as result of Barite failing along steeply dipping shales. This area will be removed by mining through the failed wall before the end of 2013
- Risk Area 2 (High Risk) – This large area on the upper Northeast wall of Aqqaluk continues to exhibit instability and movement due to the shearing, foliation and weakness of the Kayak shales. The portion of the ramp on 1025 bench along this wall was stepped out, and the remainder of the bench below the wall has a roll out berm.
- Risk Area 3 (Medium Risk) – This area is located in the center of the Aqqaluk Pit and involves filled catch benches from blasting above it on the 1025 bench and above. This area is currently being remediated and should be eliminated by the end of January 2014.
- Risk Area 4 (Medium Risk) - Located in the Southeast corner of the Aqqaluk Pit, this risk area is caused by the intersection of steeply dipping shale bedding and steeply plunging joint surfaces in the barite contact.

The south wall of the Phase 1 pushback is directly beneath the Red Dog Creek diversion culvert. Instability was noted here while completing the shots directly adjacent to the culvert on 875 bench. Because of this instability, and the high environmental and operational consequences of a failure of the culvert, the wall of Phase 1 was pushed out 75 feet until the culvert can be moved farther away from the crest of the original Phase 1 pushback, which is also the crest of the ultimate Aqqaluk pit. Planning of the RDC culvert move is currently in progress, and it is tentatively schedule for Q4 2014 / Q1 2015.

In addition to inherent geotechnical structure causing issues, blasting on upper benches has filled the catch benches in the highwall in some areas. Blasting technique and mining sequence will be altered while mining the remaining upper benches limit the filling of catch benches.

Additional width will also be included in catch benches at regular intervals, and interim highwalls between phases will be limited to 4 (or at maximum, 5) benches in height.

#### 6) Mill Feed Blending

A challenge to maintaining mill feed requirements will be our ability to plan for varying ore grades. Challenges include difficult sequencing of ore/waste, difficulties maintaining access, and congestion of equipment.

High barite ore will be a critical part of the mining sequence in 2014. A relatively even barite grade must be maintained in all stockpiles built throughout 2014. The mill requirement for barite content is between 7% and 15%, mining forecast for 2014 is 10.5%.

#### 7) Acid Rock Drainage, Total Dissolved Solids and Selenium levels reduction

Due to mining of weathered material at the top of Aqqaluk pit, and Main Waste Dump leaching, dissolved selenium levels in the Tailings Storage Facility (TSF) have been elevated beyond permitted release boundaries at times, even after treatment. When treated water could not be discharged it was being stored in Main Pit, but treated water below release limits was discharged to Red Dog Creek in 2013.

Accelerated raises of the Tailings Dams were completed in 2013 to provide extra volume in the tailings pond if elevated levels of selenium and TDS continue. However, a water balance completed in 2013 shows the water level in the Tailings Storage Facility (TSF) and Main Pit will rise slower than expected.

A variety of projects are in progress to reduce the levels of ARD, TDS and Selenium in the TSF and Main Pit lake.

#### 8) Blasting performance improvement

In June 2013 the mine technical group began to implement High Energy (HE) blasting in the ore shots, with a goal of using a powder factor of 0.44 kg/tonne, to improve fragmentation of mill feed. An ore shot is defined as containing more than 30% ore by tonnage from the block model. Currently Red Dog is using a 13.5' x 11.7' pattern size for ore shots. The powder factor average is 0.36 for the ore shots that are not wall control, Red Dog Creek proximate or affected by water.

In early 2014, a trial study will be conducted on the ore shots using 7.0" drill bits (versus current 6.5" bits). The pattern size will stay constant. A larger hole size allows for more blasting agent, increasing the powder factor.

Analysis has indicated there is a discrepancy between the amount of blasting agent loaded into the holes versus predicted loads. An investigation into variables affecting the amount of product used in the shots is ongoing.

Mine technical is also collecting fragmentation information to evaluate HE blasting results. In April 2013, consistent documentation of each shot with video and photos began, mainly to provide a qualitative indication of fragmentation. Fragmentation software packages that quantitatively measure fragmentation are being researched.

#### 9) Equipment Modernization Projects

Installation and implementation of GPS guidance and wireless data connections on production drills began in late 2013. Utilization of modern technologies is expected to increase productivity in the equipment fleet, increase survey availability, enhance field safety, and produce improved blast performance.

#### 10) Production Efficiencies

Maintaining three benches with ore production, along with at least two additional waste benches, will increase efficiency and maximize production. Multiple haulage paths mitigate access and haulage issues.

#### 11) Waste Rock Reactivity Model

A more predictive model of the reactivity of waste rock is required as not all reactive susceptible waste rock undergoes exothermic reaction. A tighter classification of reactive waste material may reduce the quantity needing to be stored below the water elevation ensuring only the most problematic material uses up the available volume.

#### 12) Project Equipment Hour Forecasts

The 2013 budget forecasts for project equipment hours were significantly less than actual equipment hours used on projects, primarily because the scope of projects changed from when the original budget forecasts were done. Currently, projects for 2014 have not been planned or scheduled in detail, which is likely to result in significant differences in equipment hours again in 2014. The largest impact of these changes is on the 777 truck fleet, so trucks not required for mine production will be parked and kept in reserve to provide additional material movement for projects.

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### 13) Stockpile Performance

Stockpile performance, in terms of the stockpile release vs. mill assay grades is a challenge in Aqqaluk pit. Possible causes of poor performance are: inaccurate blasthole assays, inconsistent stockpile construction, dilution or poor recovery of ore in the pit, and errors caused by having a single constant load factor for ore tonnes for 777 truck load. Geology, mine engineering and mine operations are working to improve the performance of stockpiles.

One action has been to adjust the truck load factors based on a quarterly volume reconciliation.

## 2. MONTHLY MINE PRODUCTION

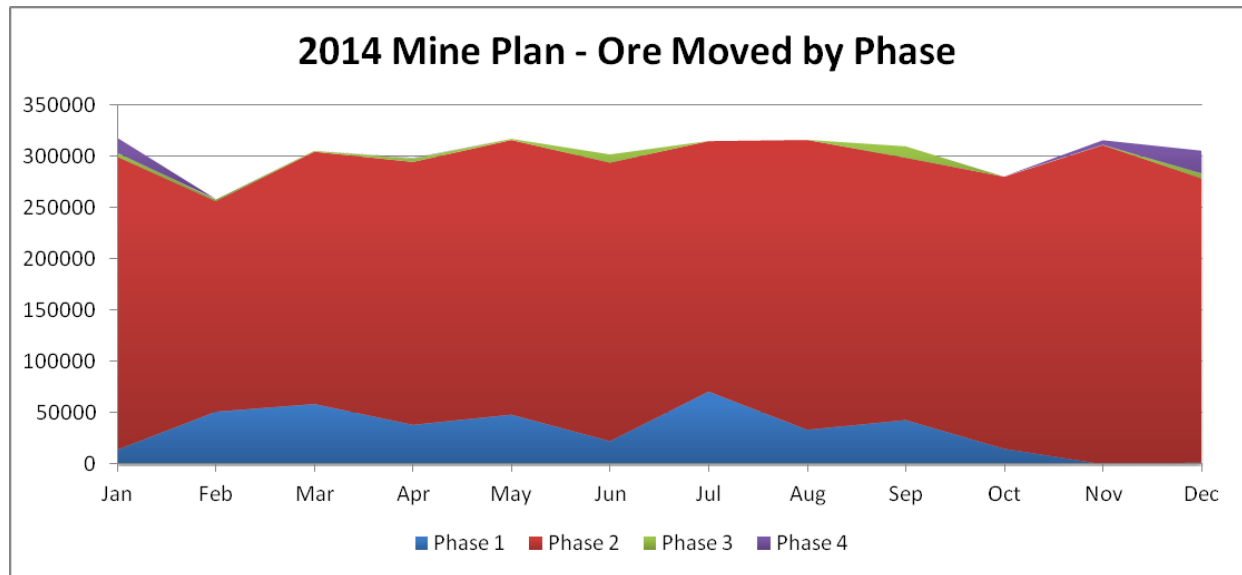


Figure 2-1 Ore Moved by Phase

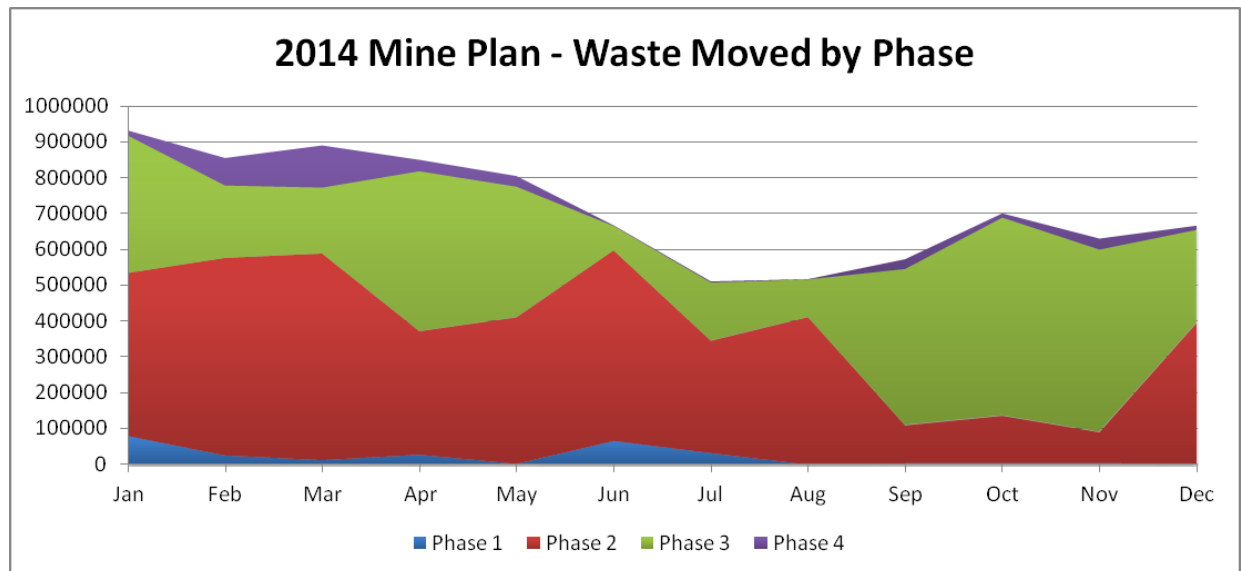


Figure 2-2 Waste Moved by Phase



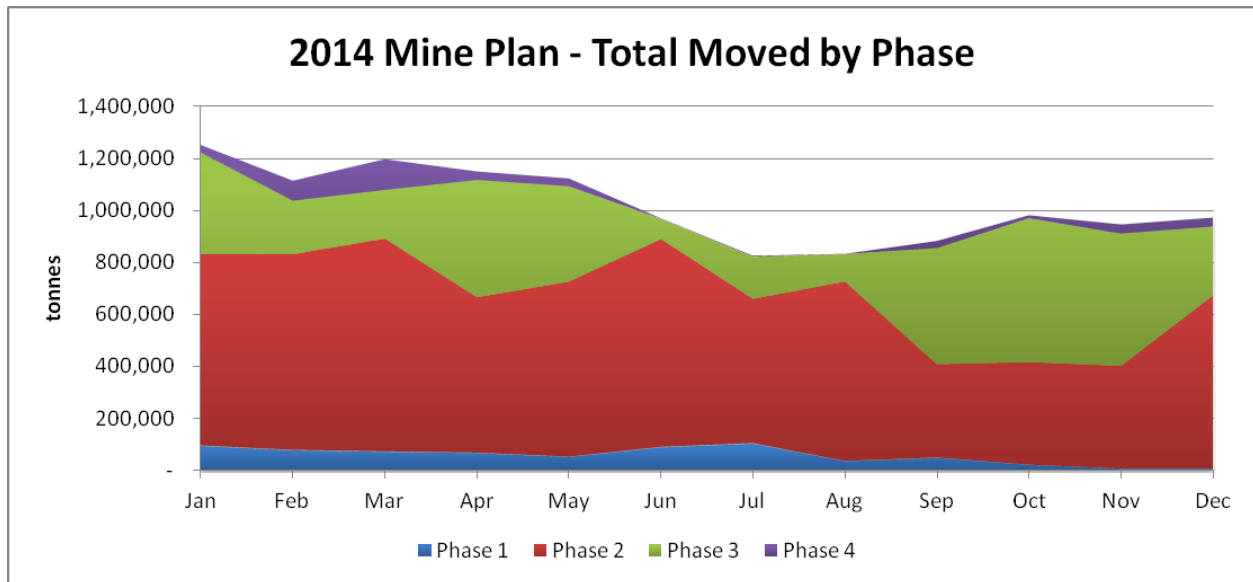


Figure 2-3 Total Moved by Phase

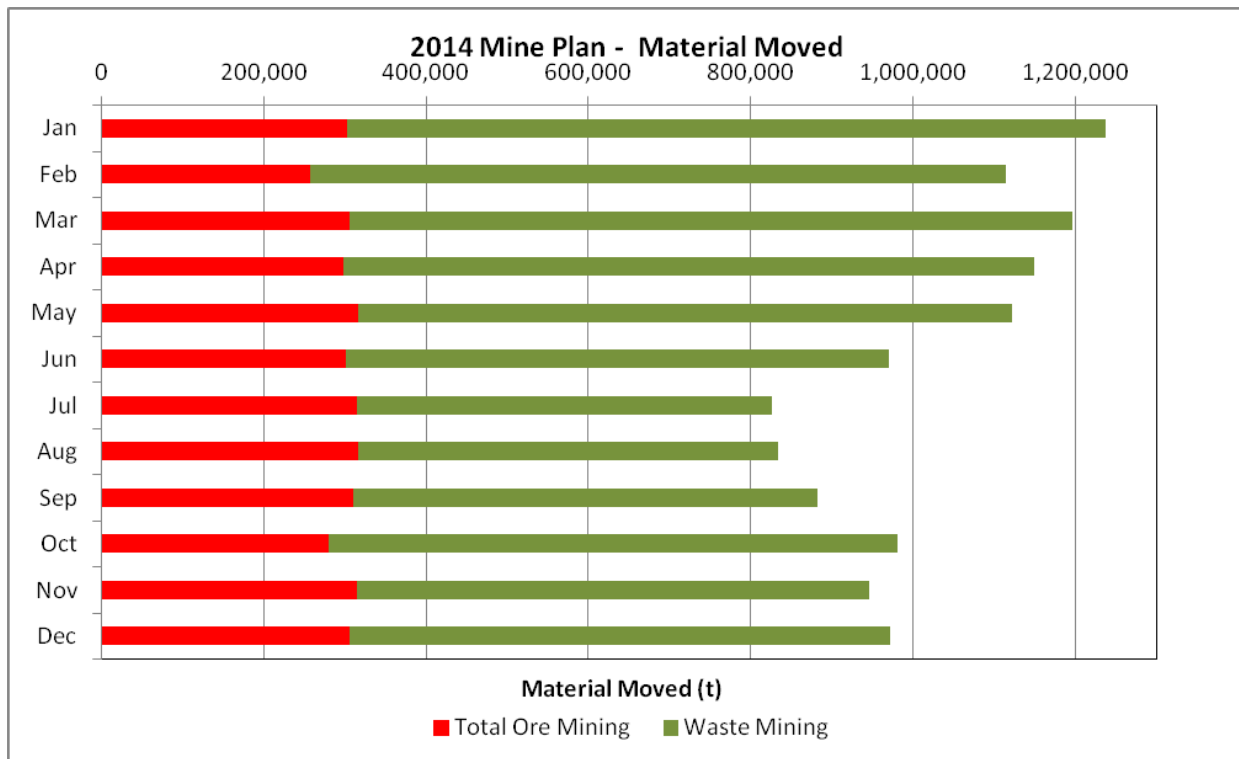
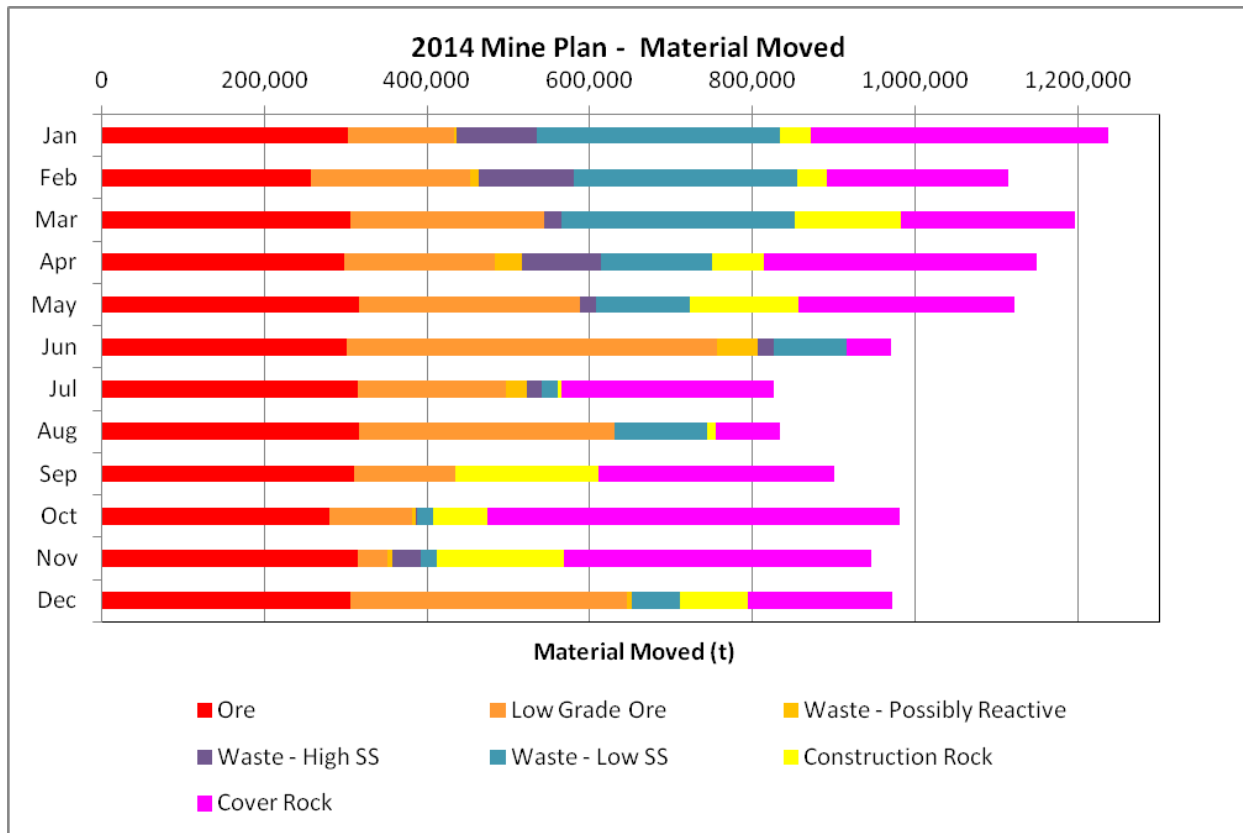


Figure 2-4 Material Movement Split Per Month



**Figure 2-5 Material Types Moved by Month**

Table 2-1 2014 Monthly Mine Plan Summary by Phase

**2014 Monthly Mine Production Forecast by AQQ Pit Phase**

	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	2014 Total
Ore													
PH1	14,151	51,233	58,800	38,478	48,384	22,587	70,915	33,626	43,119	15,053	0	1,642	397,988
PH2	285,710	205,303	245,981	256,314	267,781	271,471	244,218	282,610	255,694	265,346	311,082	277,172	3,168,681
PH3	3,544	1,544	756	3,239	959	7,960	0	0	11,039	0	84	4,512	33,638
PH4	0	0	0	335	0	0	0	0	0	0	4,437	22,108	26,880
<b>Total</b>	<b>303,407</b>	<b>258,081</b>	<b>305,540</b>	<b>298,366</b>	<b>317,123</b>	<b>302,021</b>	<b>315,131</b>	<b>316,234</b>	<b>309,853</b>	<b>280,399</b>	<b>315,602</b>	<b>305,432</b>	<b>3,627,189</b>
Waste													
PH1	79,768	25,652	12,355	27,685	2,086	66,204	32,203	0	4,034	4,281	4,397	2,566	261,230
PH2	453,574	549,561	574,968	343,454	407,701	529,913	312,264	410,219	105,070	131,482	85,672	391,235	4,295,113
PH3	385,136	203,577	185,611	447,324	365,699	69,266	162,517	105,606	436,103	553,021	509,379	260,637	3,683,876
PH4	14,127	76,743	117,779	32,119	29,605	1,751	3,298	676	27,212	11,860	30,655	11,902	357,727
<b>Total</b>	<b>932,605</b>	<b>855,533</b>	<b>890,710</b>	<b>850,585</b>	<b>805,092</b>	<b>667,134</b>	<b>510,281</b>	<b>516,500</b>	<b>572,419</b>	<b>700,648</b>	<b>630,103</b>	<b>666,338</b>	<b>8,597,948</b>
Total													
PH1	93,919	76,885	71,155	66,163	50,470	88,791	103,118	33,626	47,152	19,334	4,397	4,208	659,218
PH2	739,284	754,864	820,949	599,768	675,481	801,384	556,481	692,829	360,764	396,829	396,754	668,407	7,463,794
PH3	388,681	205,122	186,367	450,564	366,658	77,225	162,517	105,606	447,142	553,021	509,463	265,149	3,717,513
PH4	14,127	76,743	117,779	32,453	29,605	1,751	3,298	676	27,212	11,860	35,092	34,010	384,607
<b>Total</b>	<b>1,236,012</b>	<b>1,113,614</b>	<b>1,196,250</b>	<b>1,148,951</b>	<b>1,122,215</b>	<b>969,155</b>	<b>825,412</b>	<b>832,734</b>	<b>882,272</b>	<b>981,047</b>	<b>945,705</b>	<b>971,770</b>	<b>12,225,137</b>

**Table 2-2 2014 Quarterly Mine Plan Summary by Phase****2014 Quarterly Mine Production Forecast by AQQ Pit Phase**

<u>Total</u>	Q1	Q2	Q3	Q4	2014 Total
Ore					
PH1	124,184	109,449	147,660	16,695	397,988
PH2	736,994	795,565	782,522	853,600	3,168,681
PH3	5,845	12,157	11,039	4,596	33,638
PH4	0	335	0	26,546	26,880
<b>Total</b>	<b>867,028</b>	<b>917,510</b>	<b>941,218</b>	<b>901,433</b>	<b>3,627,189</b>
Waste					
PH1	117,775	95,975	36,236	11,244	261,230
PH2	1,578,103	1,281,068	827,553	608,389	4,295,113
PH3	774,324	882,289	704,226	1,323,037	3,683,876
PH4	208,649	63,475	31,186	54,417	357,727
<b>Total</b>	<b>2,678,848</b>	<b>2,322,811</b>	<b>1,599,200</b>	<b>1,997,089</b>	<b>8,597,948</b>
Total					
PH1	241,960	205,423	183,896	27,939	659,218
PH2	2,315,097	2,076,633	1,610,075	1,461,990	7,463,794
PH3	780,169	894,446	715,265	1,327,633	3,717,513
PH4	208,649	63,809	31,186	80,962	384,607
<b>Total</b>	<b>3,545,876</b>	<b>3,240,321</b>	<b>2,540,418</b>	<b>2,898,522</b>	<b>12,225,137</b>

Bench	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1250	10	-	-	-	-	-	-	-	-	-	-	-	10
1225	233	-	-	-	-	-	-	-	-	-	-	-	233
1200	26	241	271	-	-	-	-	-	-	-	-	-	539
1175	-	-	23	376	144	-	-	-	-	-	-	-	542
1150	31	-	-	36	262	-	62	88	209	-	-	-	688
1125	-	-	-	-	-	-	108	-	250	318	256	-	932
1100	-	-	-	-	-	-	-	-	-	216	318	270	805
1075	-	-	-	-	-	-	-	-	-	-	-	-	-
1050	-	-	-	-	-	-	-	-	-	-	-	-	-
1025	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	125	-	-	-	-	-	-	-	-	-	-	-	125
975	324	351	248	81	-	-	-	-	-	-	-	-	1,003
950	-	-	-	376	328	556	-	-	-	-	-	-	1,260
925	-	-	-	-	110	145	227	433	125	40	109	106	1,295
900	23	-	-	-	-	-	-	57	78	145	90	288	681
875	85	32	-	-	-	-	-	-	-	-	38	99	255
850	320	236	479	31	158	-	-	-	-	-	-	-	1,223
825	95	157	149	170	139	195	297	176	172	90	8	-	1,647
800	-	-	-	68	-	91	176	105	124	197	114	250	1,123
<b>Total</b>	1,236	1,114	1,196	1,149	1,122	969	825	833	882	981	946	972	12,225

Figure 2-6 Benches Mined (Total Material)

Bench	Ore	Marginal		Waste		Total
		Not Reactive	React	Excluding Marginal	Total	
1250	-	-	-	10	10	10
1225	-	-	-	233	233	233
1200	-	-	-	539	539	539
1175	-	-	-	542	542	542
1150	-	-	-	688	688	688
1125	-	-	-	932	932	932
1100	-	-	-	805	805	805
1075	-	-	-	-	-	-
1050	-	-	-	-	-	-
1025	-	-	-	-	-	-
1000	-	6	-	119	125	125
975	26	300	16	661	977	1,003
950	251	482	188	340	1,009	1,260
925	462	513	53	267	833	1,295
900	212	327	12	131	469	681
875	111	58	4	82	144	255
850	642	231	1	348	581	1,223
825	1,216	234	4	193	431	1,647
800	825	111	33	154	297	1,123
Total	3,627	2,257	310	6,032	8,598	12,225

Figure 2-7 Material Split by Bench

### 3. ADDITIONAL PROJECTS

#### 3.1. Sulfur Creek Dirty Water Ditch

The expansion of the ultimate pit shell, and the resulting changes in the Sulfur Creek clean water ditch, require a permanent dirty water ditch as part of the diversion system. This ditch will prevent water from the active mining area from entering Sulfur Creek and ultimately Red Dog Creek. The design is still being finalized, but it will likely require a combination of lined ditch, 36" pipe and unlined ditch. The latest design draft is shown in Figure 4-1.

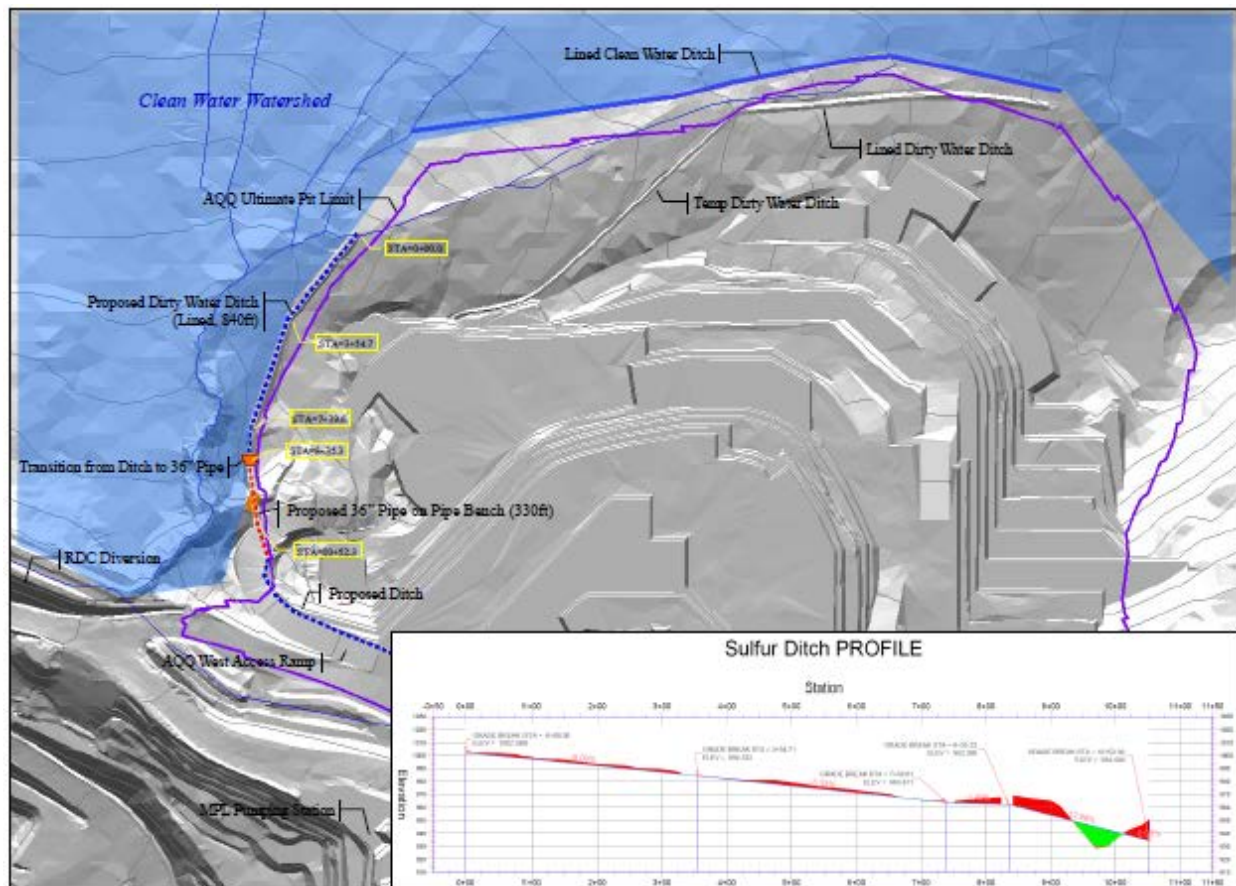


Figure 4-1 Sulfur Creek Diversion System Layout

#### 3.2. Red Dog Creek Culvert Move

The bend in the Red Dog Culvert where it passes closest to the pit will be relocated in late 2014 / early 2015. The culvert will be moved south, onto Main Pit Dump 3 (MPD 3), generally



straightening the bend. This is due to the geotechnical instability in the south wall of Aqqaluk pit. A 75 foot step of the wall has been left in-situ to provide a buffer for the existing culvert.

### 3.3. In-Pit Stockpiles

Fugitive dust comes from the construction and reclamation of the ore stockpiles located in front of the gyratory crusher. The prevailing winds are from the NE, thus carrying dust from stockpile activity to the tundra located south and west of the tailings pond. MPD 3 will be expanded with waste material to create a pad for two 170 kt stockpiles, as shown in Figure 4-2. The lower location should reduce the amount of dust transported to tundra outside the mine site.

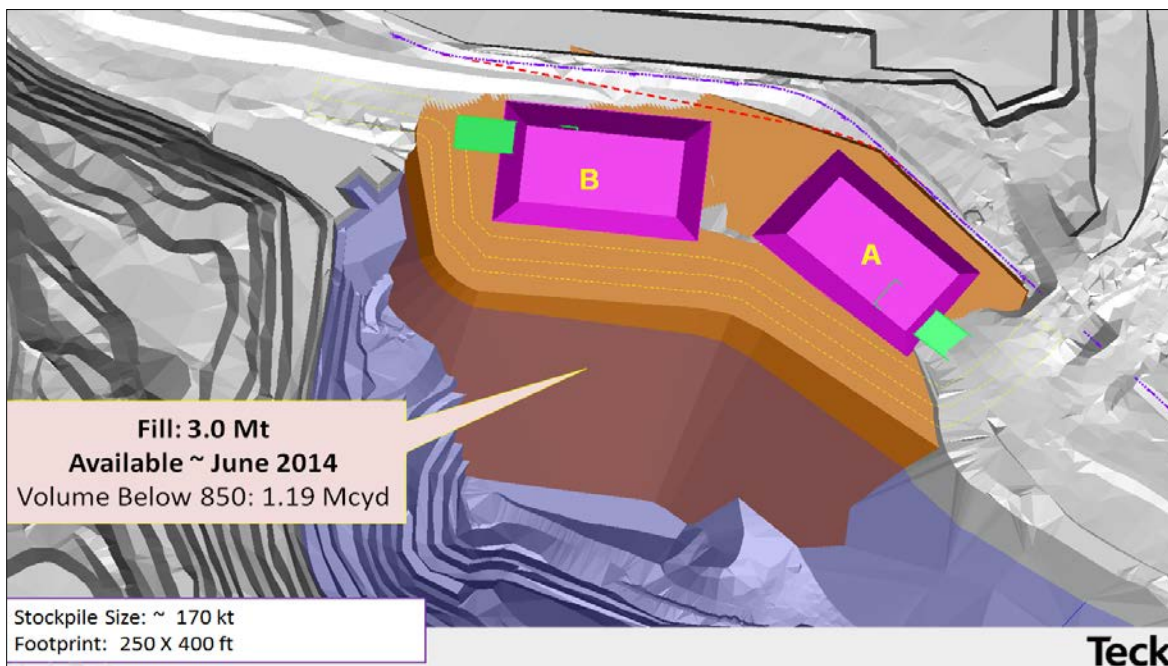


Figure 4-2 In-Pit Stockpile Options



## **Appendix F 2013 Red Dog Mine Disturbance Map**



