Data Validation Package

September 2015 Groundwater and Surface Water Sampling at the Riverton, Wyoming, Processing Site

February 2016

U.S. DEPARTMENT OF ENERGY | Legacy Management

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Sampling Event Summary

Site: Riverton, Wyoming, Processing Site

Sampling Period: September 14–18, 2015

This event comprised sampling 20 monitoring wells, 9 surface water locations, 25 ports of 9 multilevel wells, and 9 domestic wells at the Riverton, Wyoming, Processing Site. Additional sampling and analysis of 10 temporary well points was conducted during this event as part of an advanced site investigation. The results of that investigation will appear in the upcoming Advanced Site Investigation Report. Sampling and analyses were conducted as specified in the *Sampling and Analysis Plan for the U.S. Department of Energy Office of Legacy Management Sites* (SAP) (LMS/PRO/S04351, continually updated). Water levels were measured at all sampled monitoring wells and 13 additional monitoring wells that were not sampled.

Concentrations of molybdenum and uranium in samples collected from semi-confined aquifer monitoring wells were below their respective U.S. Environmental Protection Agency (EPA) (Title 40 *Code of Federal Regulations* [CFR] Part 192) groundwater standard. The EPA groundwater standards for molybdenum and uranium were exceeded in samples collected from surficial aquifer monitoring wells listed in Table 1. Time-concentration graphs are included in the Data Presentation section.

Table 1. Riverton Wells with Samples that Equaled or Exceeded EPA Groundwater Standards in September 2015

Analyte	Standard [a]	Location	Concentration in mg/L
Molybdenum	0.1	0707	0.96
		0716	0.13
		0722R	0.11
		0789	0.57
		0855-2	0.34
		0855-3	0.32
		0855-4	0.25
		0856-2	0.29
		0856-3	0.34
		0856-4	0.30
		0857-3	0.60
		0857-4	0.55
		0858-2	0.90
		0858-3	0.85
		0858-4	0.79
		0860-2	0.20
		0860-3	0.27
		0860-4	0.29
		0866	0.86
		0867	0.64
		0868	0.55
		0869	0.43
		0870	0.31
		0871	0.19
		0872	0.17
		0873	0.16
Uranium	0.044	0707	0.78
		0716	0.21
		0718	0.11
		0722R	0.66
		0789	1.6
		0854-2	0.059
		0855-2	1.4
		0855-3	1.3
		0855-4	0.86
		0856-2	0.47
		0856-3	1.1

Table 1 (continued). Riverton Wells with Samples that Equaled or Exceeded EPA Groundwater Standards in September 2015

Analyte	Standard [a]	Location	Concentration in mg/L
Uranium	0.044	0856-4	1.1
		0857-3	1.3
		0857-4	0.99
		0858-2	0.31
		0858-3	0.61
		0858-4	0.52
		0859-2	0.078
		0859-3	0.11
		0859-4	0.91
		0860-2	0.75
		0860-3	0.76
		0860-4	0.88
		0866	1.0
		0867	0.98
		0868	1.5
		0869	1.7
		0870	1.6
		0871	1.2
		0872	0.89
		0873	0.85
		0874	0.38
		0875	0.28

[a] Standards are listed in 40 CFR 192.02 Table 1 to Subpart A.

Results from domestic wells (Table 2) did not indicate any impacts from the Riverton site. Concentrations of molybdenum and uranium in samples collected from domestic wells were below the drinking water standards.

Table 2. Concentrations of Molybdenum and Uranium in Samples from Domestic Wells

Analyte	Standard [a]	Location	Concentration in mg/L
Molybdenum	0.1	0405	0.003
		0430	0.002
		0436	0.003
		0460	0.003
		0828	0.003
		0841	0.003
		0842	0.002
		0876	0.005
Uranium	0.03	0405	0.0004
		0430	0.0001
		0436	0.0001
		0460	0.0001
		0828	0.0001
		0841	0.0019
		0842	0.0004
		0876	0.0037

[a] Standards are listed in 40 CFR 192.02 Table 1 to Subpart A (molybdenum) and EPA's National Primary Drinking Water Regulations (uranium).

Surface water uranium results were compared to the statistical background threshold value (BTV) derived using historical data from the Little Wind River location 0794, which is located upstream of the site and represents background conditions. After first determining that the data were normally distributed and free of outliers, the BTV was calculated as the 95 percent upper simultaneous limit from a data set containing 31 observations collected since 1997. As shown in Table 3, the benchmark value was exceeded only in the oxbow lake (0747), which was formed by a shift in the river path in 1994. Hydraulic and water quality data indicate that the oxbow lake is fed by the discharge of contaminated groundwater; therefore, elevated concentrations are expected. At the time of this sampling event, water was not flowing from the river into the lake. All other surface water locations had uranium concentrations below the BTV, which indicates minimal site-related impact on the water quality of the Little Wind River and of the other surface water features. Time-concentration graphs of molybdenum and uranium results at all surface water locations are included in the Data Presentation section.

Table 3. Comparison of Surface Water Uranium Concentrations (September 2015) to Uranium BTV

Location		Uranium Concentration (mg/L)
BTV		**0.012**
0794	Little Wind River, BTV Location	0.011
0796	Little Wind River	0.008
0811	Little Wind River	0.008
0812	Little Wind River	0.009
0747	Oxbow Lake	0.190
0810	Constructed Wetlands	0.005
0822	West Side Irrigation Ditch	0.009
0823	Gravel Pit Pond	0.009
0749	Sulfuric acid plant ditch	0.003

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Sam Campbell, Site Lead Date
Navarro Research and Engineering, Inc.

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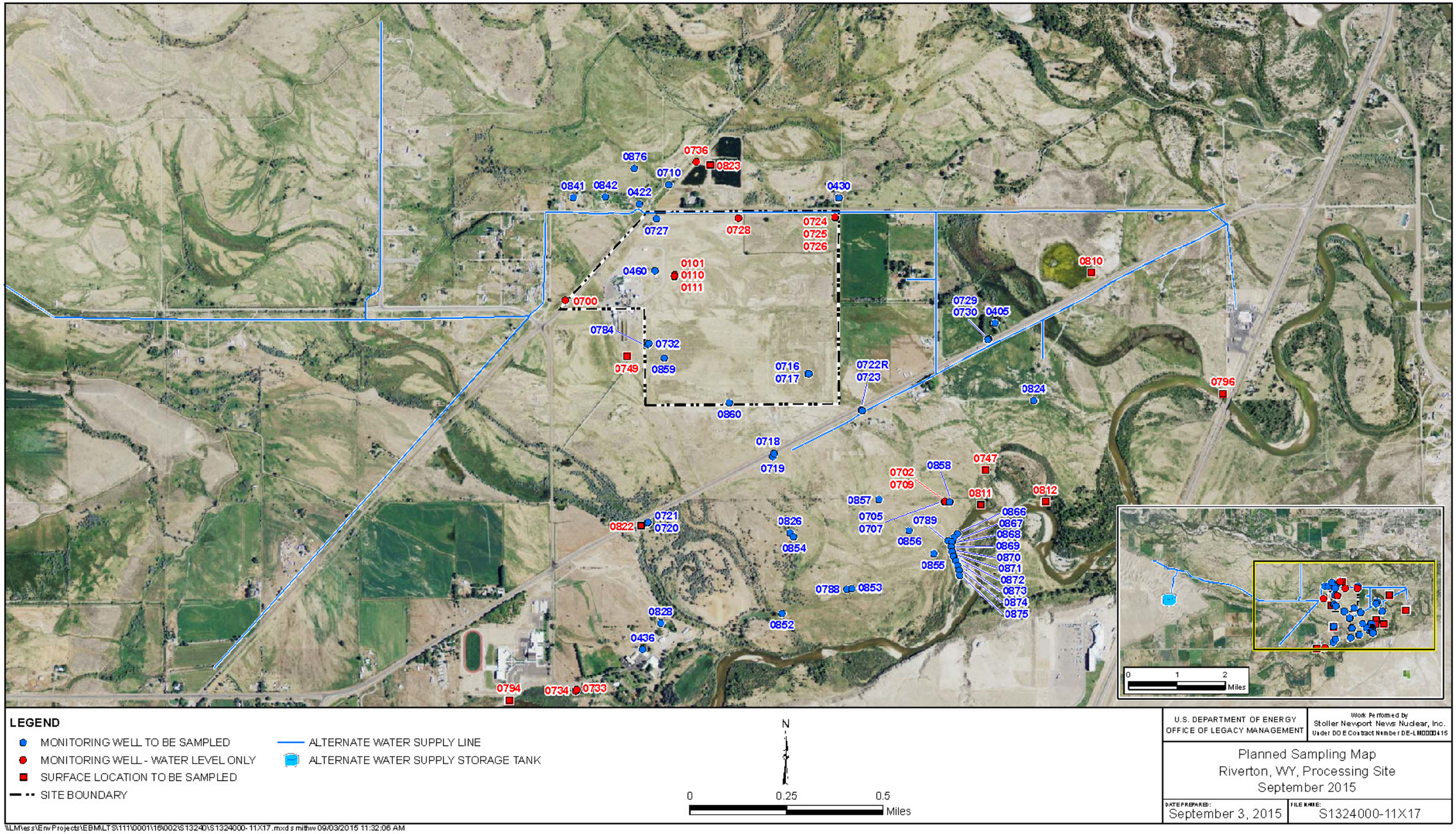

Riverton, Wyoming, Processing Site Planned Sampling Location Map

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Data Assessment Summary

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Water Sampling Field Activities Verification Checklist

Project	Riverton, Wyoming	Date(s) of Water Sampling	September 14–18, 2015
Date(s) of Verification	December 31, 2015	Name of Verifier	Stephen Donivan

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures?	Yes	
List any Program Directives or other documents, SOPs, instructions.		Work Order letter dated August 18, 2015. 2015 Work Plan for Advanced Site Investigation of the Riverton, Wyoming, Processing Site.
2. Were the sampling locations specified in the planning documents sampled?	No	The top ports of all of the CMT monitoring wells were dry. CMT monitoring wells 0852-2 and 0857-2 were dry. Domestic well 0422 was not sampled because the modular home on the property had been removed.
3. Were calibrations conducted as specified in the above-named documents?	Yes	Calibrations were performed on September 10–11, 2015.
4. Was an operational check of the field equipment conducted daily?	Yes	
Did the operational checks meet criteria?	No	The low range turbidity operation check performed on September 14, 2015 for instrument S14818 did not meet the acceptance criteria. The dissolved oxygen operational check for Sonde "F" performed on September 18, 2015, did not meet the acceptance criteria.
5. Were the number and types (alkalinity, temperature, specific conductance, pH, turbidity, DO, ORP) of field measurements taken as specified?	No	DO was not measured at location 0823 because of an instrument malfunction. DO was not measured at locations 0852-3, 0858-2, or 0878.
6. Were wells categorized correctly?	Yes	
7. Were the following conditions met when purging a Category I well:		
Was one pump/tubing volume purged prior to sampling?	Yes	
Did the water level stabilize prior to sampling?	Yes	
Did pH, specific conductance, and turbidity measurements meet criteria prior to sampling?	Yes	
Was the flow rate less than 500 mL/min?	Yes	

Water Sampling Field Activities Verification Checklist (continued)

	Response (Yes, No, NA)	Comments
8. Were the following conditions met when purging a Category II well:		
Was the flow rate less than 500 mL/min?	Yes	
Was one pump/tubing volume removed prior to sampling?	Yes	
9. Were duplicates taken at a frequency of one per 20 samples?	Yes	Duplicate samples were collected from locations 0796, 0858-4, 0860-3, and 0872.
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with non-dedicated equipment?	Yes	
11. Were trip blanks prepared and included with each shipment of VOC samples?	NA	
12. Were the true identities of the QC samples documented?	Yes	
13. Were samples collected in the containers specified?	Yes	
14. Were samples filtered and preserved as specified?	No	Samples from location 0794 were not filtered as required (turbidity greater than 10 NTU).
15. Were the number and types of samples collected as specified?	Yes	
16. Were chain of custody records completed and was sample custody maintained?	Yes	
17. Was all pertinent information documented on the field data sheets?	Yes	
18. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	
19. Were water levels measured at the locations specified in the planning documents?	Yes	

Laboratory Performance Assessment

General Information

Report Number (RIN): 15097345
Sample Event: September 14–18, 2015
Site(s): Riverton, Wyoming
Laboratory: ALS Laboratory Group, Fort Collins, Colorado
Work Order No.: 1509266
Analysis: Metals, Wet Chemistry, and Radiochemistry
Validator: Stephen Donivan
Review Date: December 29, 2015

This validation was performed according to the *Environmental Procedures Catalog*, (LMS/POL/S04325, continually updated) "Standard Practice for Validation of Environmental Data." The procedure was applied at Level 3, Data Validation. All analyses were successfully completed. The samples were prepared and analyzed using accepted procedures based on methods specified by line item code, which are listed in Table 4.

Table 4. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Chloride	MIS-A-045	SW-846 9056	SW-846 9056
Metals: Ca, Fe, K, Mg, Mn, Na, SiO2	LMM-01	SW-846 3005A	SW-846 6010B
Metals: Mo, U	LMM-02	SW-846 3005A	SW-846 6020A
Isotopic Uranium	LMR-02	SOP 714R12	SOP 714R12
Nitrate + Nitrite as N	WCH-A-022	EPA 353.2	EPA 353.2
Sulfate	MIS-A-045	SW-846 9056	SW-846 9056
Sulfide	WCH-A-038	EPA 376.1	EPA 376.1

Data Qualifier Summary

Analytical results were qualified as listed in Table 5. Refer to the attached validation worksheets and the sections below for an explanation of the data qualifiers applied.

Table 5. Data Qualifier Summary

Sample Number	Location	Analyte(s)	Flag	Reason
1509266-5	0430	Alkalinity	J	Outlier, charge balance
1509266-5	0430	Dissolved oxygen	J	Operational check result
1509266-6	0436	Turbidity	J	Operational check result
1509266-8	0789	Uranium-234	J	Less than the determination limit
1509266-8	0789	Uranium-238	U	Less than the decision level
1509266-10	0710	Dissolved oxygen	J	Operational check result
1509266-12	0717	Uranium-235	U	Less than the decision level

Table 5 (continued). Data Qualifier Summary

Sample Number	Location	Analyte(s)	Flag	Reason
1509266-12	0717	Uranium-238	U	Less than the decision level
1509266-14	0719	Uranium-238	J	Less than the determination limit
1509266-20	0729	Uranium-235	U	Less than the decision level
1509266-21	0730	Uranium-235	U	Less than the decision level
1509266-23	0747	Specific conductance	R	Measurement error
1509266-27	0789	Uranium-234	J	Chemical recovery < 30%
1509266-27	0789	Uranium-235	J	Chemical recovery < 30%
1509266-27	0789	Uranium-238	J	Chemical recovery < 30%
1509266-28	0794	Turbidity	J	Operational check result
1509266-30	0810	Dissolved oxygen	J	Operational check result
1509266-36	0826	Iron	U	Less than 5 times the calibration blank
1509266-37	0828	Turbidity	J	Operational check result
1509266-51	0857-3	Uranium-234	J	Chemical recovery < 30%
1509266-51	0857-3	Uranium-235	J	Chemical recovery < 30%
1509266-51	0857-3	Uranium-238	J	Chemical recovery < 30%
1509266-52	0857-4	Uranium-234	J	Chemical recovery < 30%
1509266-52	0857-4	Uranium-235	J	Chemical recovery < 30%
1509266-52	0857-4	Uranium-238	J	Chemical recovery < 30%
1509266-76	0796 Duplicate	Manganese	J	Serial dilution result
1509266-76	0796 Duplicate	Potassium	J	Serial dilution result
1509266-79	Equipment Blank	Iron	U	Less than 5 times the calibration blank
1509266-79	Equipment Blank	Uranium-234	J	Less than the determination limit
1509266-79	Equipment Blank	Uranium-235	U	Less than the decision level

Sample Shipping/Receiving

ALS Laboratory Group in Fort Collins, Colorado, received 78 water samples on September 17, 2015, accompanied by a Chain of Custody (COC) form. The COC form was checked to confirm that all of the samples were listed with sample collection dates and times, and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents had the following errors. The filtration status was not indicated on the COC for samples 0855-2, 0855-3, and 0855-4. The samples were logged with the filtration status taken from the sample labels. Sample 2781 was listed on the COC but not received. This was a quality control (QC) sample number that was not used. Sample 2779 (a QC sample) was received but not listed on the COC. Bottles for nitrate + nitrite as N and uranium isotopes were listed on the COC for sample 2778 (a QC sample) but not received.

Preservation and Holding Times

The sample shipment was received cool and intact with the temperature inside the iced coolers between 3.8 °C and 5.4 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses with the following exception. The anions aliquot for sample 0858-4 was received incorrectly preserved

with acid. The anions analysis for this sample was cancelled. All samples were analyzed within the applicable holding times.

Detection and Quantitation Limits

The method detection limit (MDL) was reported for all metal and wet chemical analytes as required. The MDL, as defined in 40 CFR 136, is the minimum concentration of an analyte that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero. The practical quantitation limit (PQL) for these analytes is the lowest concentration that can be reliably measured, and is defined as 5 times the MDL. For radiochemical analytes (those measured by radiometric counting) the MDL and PQL are not applicable, and these results are evaluated using the minimum detectable concentration (MDC), Decision Level Concentration (DLC), and Determination Limit (DL). The MDC is a measure of radiochemical method performance and was calculated and reported as specified in *Quality Systems Manual*. The DLC is the minimum concentration of an analyte that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, and is estimated as 3 times the one-sigma total propagated uncertainty. Results that are greater than the MDC, but less than the DLC are qualified with a "U" flag (not detected). The DL for radiochemical results is the lowest concentration that can be reliably measured, and is defined as 3 times the MDC. Results not previously "U" qualified that are less than the DL are qualified with a "J" flag as estimated values.

The reported MDLs for all metal and wet chemical analytes; and MDCs for radiochemical analytes demonstrate compliance with contractual requirements.

Laboratory Instrument Calibration

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for all analytes. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear curve. Compliance requirements for continuing calibration checks are established to ensure that the instrument continues to be capable of producing acceptable qualitative and quantitative data. All laboratory instrument calibrations were performed correctly in accordance with the cited methods. All calibration and laboratory spike standards were prepared from independent sources.

Method EPA 353.2, Nitrate+Nitrite as N
The calibrations for nitrate+nitrite as N were performed using seven calibration standards on October 8 and 14, 2015. The calibration curve correlation coefficient values were greater than 0.995 and the absolute value of the intercepts were less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency. All calibration checks met the acceptance criteria.

Method SW-846 6010, Metals
Calibrations were performed on September 30 and October 1-2, 2015. The calibration curve generated using three calibration standards had correlation coefficient values greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency with all

calibration checks meeting the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the PQL and all results were within the acceptance range.

Method SW-846 6020, Molybdenum, Uranium
Calibrations were performed on September 30 and October 1–2, 2015, using four calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency with all calibration checks meeting the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the PQL and all results were within the acceptance range. Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries associated with requested analytes were stable and within acceptable ranges.

Method SW-846 9056, Chloride, Sulfate
The calibrations were performed using six calibration standards on October 1 and 12, 2015. The calibration curve correlation coefficient values were greater than 0.995 and the absolute value of the intercepts were less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency. All calibration checks met the acceptance criteria.

Radiochemical Analysis

Alpha spectrometry calibrations and instrument backgrounds were performed within a month prior to sample analysis. Calibration standards were counted to obtain a minimum of 10,000 counts per peak. Daily instrument checks met the acceptance criteria. The tracer recoveries met the acceptance criteria of 30 to 110 percent for all samples with the exception of samples 0789, 0857-3, and 0857-4. The associated sample results are qualified with a "J" flag as estimated values. The full width at half maximum (FWHM) was reviewed to evaluate the spectral resolution. All internal standard FWHM values were below 100 kiloelectron volts (keV), demonstrating acceptable resolution. All internal standard peaks were within 50 keV of the expected position. The regions of interest (ROIs) for analyte peaks were reviewed. No manual integrations were performed and all ROIs were satisfactory.

Method and Calibration Blanks

Method blanks are analyzed to assess any contamination that may have occurred during sample preparation. Calibration blanks are analyzed to assess instrument contamination prior to and during sample analysis.

Metals and Wet Chemistry
All method blank and calibration blank results associated with the samples were below the PQLs for all analytes with the exception of two calibration blanks for nitrate+nitrite as N. The samples bracketed by these blanks either contained more than 10 times the concentration of nitrate+nitrite as N that was detected in the blank, were below the MDL, or were re-analyzed with acceptable blanks. In cases where a blank concentration exceeds the MDL, the associated sample results are qualified with a "U" flag (not detected) when the sample result is greater than the MDL but less than 5 times the blank concentration.

Radiochemistry
The uranium isotope method blank results were below the DLCs.

Inductively Coupled Plasma Interference Check Sample Analysis

Interference check samples were analyzed at the required frequency to verify the instrumental interelement and background correction factors. All check sample results met the acceptance criteria.

Matrix Spike Analysis

Matrix spike and matrix spike duplicate (MS/MSD) samples are used to measure method performance in the sample matrix. The spike recoveries met the acceptance criteria for all analytes evaluated. One iron and three sulfate spike results were outside the laboratory acceptance range but within the validation acceptance range of 75–125 percent, not requiring qualification.

Laboratory Replicate Analysis

Laboratory replicate sample results demonstrate acceptable laboratory precision. The relative percent difference values for the non-radiochemical sample replicates and matrix spike replicates were less than 20 percent for results that are greater than 5 times the PQL, indicating acceptable precision. The radiochemical relative error ratio (calculated using the one-sigma total propagated uncertainty) for the laboratory control sample replicates was less than three, indicating acceptable precision.

Laboratory Control Sample

Laboratory control samples were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. All control sample results were acceptable.

Metals Serial Dilution

Serial dilutions were prepared and analyzed for the metals analyses to monitor chemical or physical interferences in the sample matrix. Serial dilution data are evaluated when the concentration of the undiluted sample is greater than 50 times the MDL. The serial dilution results met the acceptance criteria with the following exception. The manganese and potassium results for the serial dilution prepared from sample 0796 did not meet the acceptance criteria. The associated sample manganese and potassium results are qualified with a "J" flag as estimated values.

Completeness

Results were reported in the correct units for all analytes requested using contract-required laboratory qualifiers. The analytical report included the MDL (MDC for radiochemistry) and PQL for all analytes, and all required supporting documentation.

Chromatography Peak Integration

The integration of analyte peaks was reviewed for all ion chromatography data. All peak integrations were satisfactory.

Anion/Cation Balance

The anion/cation balance is used to determine if major ion concentrations have been quantified correctly. The total anions should balance with (be equal to) the total cations when expressed in milliequivalents per liter (meq/L). Table 6 shows the total anion and cation results in the samples from this event and the charge balance, which is a relative percent difference calculation. Typically, a charge balance difference less than or equal to 10 percent is considered acceptable.

Table 6. Comparison of Major Anions and Cations

Location	Location Type	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
0405	Domestic Well	8.63	9.03	2.22
0430	Domestic Well	7.18	5.50	13.28
0436	Domestic Well	7.60	7.30	2.04
0460	Domestic Well	7.15	7.06	0.67
0705	Monitoring Well	10.15	11.41	5.81
0707	Monitoring Well	60.78	65.82	3.98
0710	Monitoring Well	7.22	7.17	0.38
0716	Monitoring Well	15.89	15.96	0.21
0717	Monitoring Well	19.09	23.27	9.88
0718	Monitoring Well	57.88	62.91	4.17
0719	Monitoring Well	12.51	13.02	2.00
0720	Monitoring Well	8.18	7.51	4.28
0721	Monitoring Well	8.28	8.86	3.40
0722R	Monitoring Well	26.43	29.17	4.93
0723	Monitoring Well	42.83	47.38	5.05
0727	Monitoring Well	6.56	6.48	0.64
0729	Monitoring Well	7.04	6.37	5.05
0730	Monitoring Well	9.94	9.08	4.54
0732	Monitoring Well	39.17	41.35	2.71
0747	Surface Water	17.62	18.49	2.40
0749	Surface Water	40.12	41.71	1.94
0784	Monitoring Well	25.17	27.71	4.80
0788	Monitoring Well	35.62	38.32	3.65
0789	Monitoring Well	102.17	111.77	4.49
0794	Surface Water	11.06	10.72	1.57
0796	Surface Water	10.78	10.81	0.16
0810	Surface Water	17.03	17.13	0.31
0811	Surface Water	11.32	11.02	1.33
0812	Surface Water	11.12	11.26	0.63
0822	Surface Water	16.05	16.31	0.80

Table 6 (continued). Comparison of Major Anions and Cations

Location	Location Type	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
0823	Surface Water	27.29	28.86	2.79
0824	Monitoring Well	9.55	9.34	1.12
0826	Monitoring Well	33.44	35.56	3.07
0828	Domestic Well	8.02	7.56	3.00
0841	Domestic Well	9.63	9.73	0.52
0842	Domestic Well	6.96	7.13	1.21
0852-3	CMT Well	18.06	17.41	1.84
0852-4	CMT Well	17.47	17.51	0.09
0853-2	CMT Well	37.99	45.41	8.89
0853-3	CMT Well	40.03	45.13	5.99
0853-4	CMT Well	36.73	40.49	4.86
0854-2	CMT Well	54.23	59.32	4.49
0854-3	CMT Well	43.75	45.02	1.43
0854-4	CMT Well	46.49	51.82	5.42
0855-2	CMT Well	132.78	148.97	5.75
0855-3	CMT Well	122.03	136.67	5.66
0855-4	CMT Well	117.46	125.99	3.50
0856-2	CMT Well	80.97	93.23	7.04
0856-3	CMT Well	82.16	93.62	6.52
0856-4	CMT Well	82.64	97.10	8.05
0857-3	CMT Well	98.12	112.44	6.80
0857-4	CMT Well	97.80	110.16	5.94
0858-2	CMT Well	58.62	64.31	4.63
0858-3	CMT Well	56.74	61.41	3.95
0859-2	CMT Well	55.54	61.40	5.02
0859-3	CMT Well	64.89	75.28	7.41
0859-4	CMT Well	69.38	79.59	6.85
0860-2	CMT Well	49.01	57.57	8.03
0860-3	CMT Well	50.75	56.86	5.67
0860-4	CMT Well	49.98	52.45	2.41
0866	Well Point	82.65	87.74	2.99
0867	Well Point	91.48	96.95	2.90
0868	Well Point	98.00	105.01	3.45
0869	Well Point	125.20	141.91	6.26
0870	Well Point	139.89	153.52	4.64
0871	Well Point	136.02	166.72	10.0
0872	Well Point	134.63	153.30	6.48
0873	Well Point	138.81	161.56	7.57
0874	Well Point	130.26	143.38	4.79
0875	Well Point	104.38	110.26	2.74
0876	Domestic Well	7.65	7.33	2.12
0878	Domestic Well	8.09	7.99	0.62

The charge balance for location 0858-4 could not be calculated because chloride and sulfate analysis was not performed (see Preservation and Holding Times above).

Location 0430 has a charge balance greater than 10 percent. This was determined to be due to an anomalously low alkalinity value for this location (see Potential Outliers Report below).

Electronic Data Deliverable (EDD) File

The EDD file arrived on November 6, 2015. The Sample Management System EDD validation module was used to verify that the EDD files were complete and in compliance with requirements. The module compares the contents of the files to the requested analyses to ensure all and only the requested data are delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

SAMPLE MANAGEMENT SYSTEM

General Data Validation Report

RIN: 15097345 **Lab Code:** PAR **Validator:** _____ **Validation Date:** 12/29/2015

Project: Riverton **Analysis Type:** ☐ Metals ☐ General Chem ☐ Rad ☐ Organics

# of Samples: 78 **Matrix:** WATER **Requested Analysis Completed:** Yes

Chain of Custody

Present: OK **Signed:** OK **Dated:** OK

Sample

Integrity: OK **Preservation:** OK **Temperature:** OK

Select Quality Parameters

☑ Holding Times	All analyses were completed within the applicable holding times.
☑ Detection Limits	There are 0 detection limit failures.
☑ Field/Trip Blanks	There was 1 trip/equipment blank evaluated.
☑ Field Duplicates	There were 4 duplicates evaluated.

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 15097345 **Lab Code:** PAR **Date Due:** 10/21/2015

Matrix: Water **Site Code:** RVT01 **Date Completed:** 11/06/2015

Analyte	Method Type	Date Analyzed	CALIBRATION				Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
			Int.	R^2	CCV	CCB								
Calcium	ICP/ES	09/30/2015	0.0000	1.0000	OK	OK	OK	101.0	87.0	93.0	2.0	100.0	2.0	98.0
Calcium	ICP/ES	09/30/2015					OK	102.0	92.0	94.0	1.0	96.0	0.0	80.0
Calcium	ICP/ES	10/01/2015	0.0000	1.0000	OK	OK	OK	102.0	87.0	86.0	0.0	100.0	2.0	106.0
Calcium	ICP/ES	10/01/2015					OK	102.0				97.0	1.0	113.0
Calcium	ICP/ES	10/02/2015	0.0000	1.0000	OK	OK			94.0	94.0	0.0	101.0		117.0
Iron	ICP/ES	09/30/2015	0.0000	1.0000	OK	OK	OK	106.0	102.0	125.0	19.0	99.0	1.0	103.0
Iron	ICP/ES	09/30/2015					OK	105.0	113.0	120.0	3.0	105.0		100.0
Iron	ICP/ES	10/01/2015	0.0000	1.0000	OK	OK	OK	105.0	102.0	106.0	4.0	101.0		110.0
Iron	ICP/ES	10/01/2015					OK	107.0				99.0		98.0
Iron	ICP/ES	10/02/2015	0.0000	1.0000	OK	OK			97.0	100.0	2.0	100.0		85.0
Magnesium	ICP/ES	09/30/2015	0.0000	1.0000	OK	OK	OK	99.0	95.0	100.0	3.0	104.0	3.0	82.0
Magnesium	ICP/ES	09/30/2015					OK	100.0	98.0	100.0	2.0	105.0	0.0	105.0
Magnesium	ICP/ES	10/01/2015	0.0000	1.0000	OK	OK	OK	99.0	97.0	98.0	1.0	106.0	3.0	92.0
Magnesium	ICP/ES	10/01/2015					OK	98.0				104.0	2.0	90.0
Magnesium	ICP/ES	10/02/2015	0.0000	1.0000	OK	OK			100.0	102.0	1.0	106.0		99.0
Manganese	ICP/ES	09/30/2015	0.0000	1.0000	OK	OK	OK	106.0	104.0	107.0	2.0	101.0	0.0	106.0
Manganese	ICP/ES	09/30/2015					OK	107.0	104.0	106.0	2.0	103.0	2.0	106.0
Manganese	ICP/ES	10/01/2015	0.0000	1.0000	OK	OK	OK	107.0	99.0	102.0	1.0	104.0	30.0	108.0

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 15097345 **Lab Code:** PAR **Date Due:** 10/21/2015

Matrix: Water **Site Code:** RVT01 **Date Completed:** 11/06/2015

Analyte	Method Type	Date Analyzed	CALIBRATION				Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
			Int.	R^2	CCV	CCB								
Manganese	ICP/ES	10/01/2015					OK	108.0				103.0		101.0
Manganese	ICP/ES	10/02/2015	0.0000	1.0000	OK	OK			108.0	110.0	2.0	110.0		105.0
Molybdenum	ICP/MS	09/30/2015	0.0000	1.0000	OK	OK	OK	96.0	100.0	100.0	0.0	100.0		88.0
Molybdenum	ICP/MS	09/30/2015					OK	98.0	104.0	97.0	7.0	105.0		75.0
Molybdenum	ICP/MS	10/01/2015	0.0000	1.0000	OK	OK	OK	101.0	103.0	101.0	2.0	102.0		90.0
Molybdenum	ICP/MS	10/01/2015					OK	97.0	99.0	99.0	0.0			
Potassium	ICP/ES	09/30/2015	0.0000	1.0000	OK	OK	OK	101.0	104.0	105.0	1.0		8.0	91.0
Potassium	ICP/ES	09/30/2015					OK	101.0	110.0	111.0	1.0		8.0	96.0
Potassium	ICP/ES	10/01/2015	0.0000	1.0000	OK	OK	OK	102.0	109.0	110.0	1.0		11.0	94.0
Potassium	ICP/ES	10/01/2015					OK	103.0						91.0
Potassium	ICP/ES	10/02/2015	0.0000	1.0000	OK	OK			103.0	107.0	3.0			80.0
Silicon	ICP/ES	09/30/2015	0.0000	1.0000	OK	OK	OK	102.0			1.0	103.0	10.0	96.0
Silicon	ICP/ES	09/30/2015					OK	101.0			3.0	105.0	4.0	110.0
Silicon	ICP/ES	10/01/2015			OK	OK	OK	102.0			2.0	103.0	6.0	123.0
Silicon	ICP/ES	10/01/2015					OK	103.0				102.0	4.0	94.0
Silicon	ICP/ES	10/02/2015			OK	OK					2.0	101.0		96.0
Sodium	ICP/ES	09/30/2015	0.0000	1.0000	OK	OK	OK	99.0	99.0	102.0	2.0		0.0	94.0
Sodium	ICP/ES	09/30/2015					OK	100.0	101.0	104.0	1.0		0.0	125.0

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 15097345 **Lab Code:** PAR **Date Due:** 10/21/2015

Matrix: Water **Site Code:** RVT01 **Date Completed:** 11/06/2015

Analyte	Method Type	Date Analyzed	CALIBRATION				Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
			Int.	R^2	CCV	CCB								
Sodium	ICP/ES	10/01/2015	0.0000	1.0000	OK	OK	OK	101.0	83.0	88.0	1.0		5.0	97.0
Sodium	ICP/ES	10/01/2015					OK	102.0					1.0	107.0
Sodium	ICP/ES	10/02/2015	0.0000	1.0000	OK	OK			92.0	102.0	4.0			96.0
Uranium	ICP/MS	09/30/2015	0.0000	1.0000	OK	OK	OK	99.0	105.0	105.0	1.0	104.0	9.0	120.0
Uranium	ICP/MS	09/30/2015					OK	103.0	114.0	100.0	9.0	106.0	8.0	120.0
Uranium	ICP/MS	10/01/2015	0.0000	1.0000	OK	OK	OK	107.0	110.0	105.0	2.0	106.0	5.0	110.0
Uranium	ICP/MS	10/01/2015					OK	104.0	101.0	103.0	1.0	111.0	9.0	110.0

SAMPLE MANAGEMENT SYSTEM
Radiochemistry Data Validation Worksheet

RIN: 15097345 **Lab Code:** PAR **Date Due:** 10/21/2015

Matrix: Water **Site Code:** RVT01 **Date Completed:** 11/06/2015

Sample	Analyte	Date Analyzed	Result	Flag	Tracer %R	LCS %R	MS %R	Duplicate RER
0705	U-234	10/21/2015			99.1			
0707	U-234	10/21/2015			53.8			
0710	U-234	10/21/2015			96.8			
0716	U-234	10/21/2015			77.1			
0717	U-234	10/21/2015			95.6			
0718	U-234	10/21/2015			88.7			
0719	U-234	10/21/2015			99.1			
0720	U-234	10/21/2015			95.3			
0721	U-234	10/21/2015			93.5			
0722R	U-234	10/21/2015			54.4			
0723	U-234	10/21/2015			95.8			
0727	U-234	10/21/2015			88.5			
0729	U-234	10/21/2015			85.6			
0730	U-234	10/21/2015			82.3			
0732	U-234	10/21/2015			85.2			
0784	U-234	10/21/2015			77.1			
0788	U-234	10/21/2015			78.6			
0855-2	U-234	10/21/2015			31.7			
0855-3	U-234	10/21/2015			35.5			
0855-4	U-234	10/21/2015			52.5			
Blank_Spike	U-234	10/21/2015			82.7	94.10		
Blank_Spike_Du	U-234	10/21/2015			91.0	102.00		
Blank	U-234	10/21/2015			86.2			
0789	U-234	10/22/2015			18.0			
0824	U-234	10/22/2015			79.6			
0826	U-234	10/22/2015			90.6			
0852-3	U-234	10/22/2015			84.4			
0852-4	U-234	10/22/2015			89.9			
0853-2	U-234	10/22/2015			93.0			
0853-3	U-234	10/22/2015			77.7			
0853-4	U-234	10/22/2015			70.3			
0854-2	U-234	10/22/2015			87.5			

SAMPLE MANAGEMENT SYSTEM
Radiochemistry Data Validation Worksheet

RIN: 15097345 **Lab Code:** PAR **Date Due:** 10/21/2015

Matrix: Water **Site Code:** RVT01 **Date Completed:** 11/06/2015

Sample	Analyte	Date Analyzed	Result	Flag	Tracer %R	LCS %R	MS %R	Duplicate RER
0854-3	U-234	10/22/2015			86.6			
0854-4	U-234	10/22/2015			90.1			
0856-2	U-234	10/22/2015			71.9			
0856-3	U-234	10/22/2015			45.6			
0856-4	U-234	10/22/2015			40.6			
0857-3	U-234	10/22/2015			15.8			
0857-4	U-234	10/22/2015			23.2			
0858-2	U-234	10/22/2015			90.6			
0858-3	U-234	10/22/2015			75.2			
0858-4	U-234	10/22/2015			68.5			
0859-2	U-234	10/22/2015			90.0			
Blank_Spike	U-234	10/22/2015			84.9	103.00		
Blank_Spike_Du	U-234	10/22/2015			92.0	96.80		
Blank	U-234	10/22/2015			89.4			
0859-3	U-234	10/28/2015			84.7			
0859-4	U-234	10/28/2015			99.0			
0860-2	U-234	10/28/2015			88.7			
0860-3	U-234	10/28/2015			92.2			
0860-4	U-234	10/28/2015			96.6			
0866	U-234	10/28/2015			95.7			
0867	U-234	10/28/2015			93.6			
0868	U-234	10/28/2015			88.7			
0869	U-234	10/28/2015			90.1			
0870	U-234	10/28/2015			92.6			
0871	U-234	10/28/2015			98.5			
0872	U-234	10/28/2015			102.0			
0873	U-234	10/29/2015			93.0			
0874	U-234	10/29/2015			97.1			
2779	U-234	10/29/2015			94.3			
Blank	U-234	10/29/2015			93.3			
0875	U-234	10/30/2015			78.0			
2776	U-234	10/30/2015			101.0			

SAMPLE MANAGEMENT SYSTEM
Radiochemistry Data Validation Worksheet

RIN: 15097345 **Lab Code:** PAR **Date Due:** 10/21/2015

Matrix: Water **Site Code:** RVT01 **Date Completed:** 11/06/2015

Sample	Analyte	Date Analyzed	Result	Flag	Tracer %R	LCS %R	MS %R	Duplicate RER
2777	U-234	10/30/2015			97.2			
2780	U-234	10/30/2015			97.1			
Blank_Spike	U-234	10/30/2015			86.0	104.00		
Blank_Spike_Du	U-234	10/30/2015			95.3	99.70		
Blank	Uranium-234	10/21/2015	0.0186	U				
Blank	Uranium-234	10/22/2015	0.0430	U				
Blank	Uranium-234	10/29/2015	0.0201	U				
Blank	Uranium-235	10/21/2015	0	U				
Blank	Uranium-235	10/22/2015	0.0211	U				
Blank	Uranium-235	10/29/2015	0.0201					
Blank_Spike	Uranium-238	10/21/2015				99.50		
Blank_Spike_Du	Uranium-238	10/21/2015				108.00		0.60
Blank	Uranium-238	10/21/2015	0.0186	U	86.0			
Blank_Spike	Uranium-238	10/22/2015				107.00		
Blank_Spike_Du	Uranium-238	10/22/2015				105.00		0.10
Blank	Uranium-238	10/22/2015	0.0215	U	89.0			
Blank	Uranium-238	10/29/2015	0.0155	U				
Blank_Spike	Uranium-238	10/30/2015				112.00		
Blank_Spike_Du	Uranium-238	10/30/2015				102.00		0.70

SAMPLE MANAGEMENT SYSTEM

Wet Chemistry Data Validation Worksheet

RIN: 15097345 **Lab Code:** PAR **Date Due:** 10/21/2015

Matrix: Water **Site Code:** RVT01 **Date Completed:** 11/06/2015

Analyte	Date Analyzed	CALIBRATION				Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	CCV	CCB						
CHLORIDE	10/08/2015	0.000	0.9999	OK	OK	OK	104.00	108.0	108.0	0	
CHLORIDE	10/09/2015					OK	105.00	102.0	100.0	1.00	
CHLORIDE	10/09/2015					OK	104.00	102.0	98.0	2.00	
CHLORIDE	10/12/2015	0.000	0.9999	OK	OK	OK	102.00				
CHLORIDE	10/13/2015							101.0	100.0	1.00	
Nitrate+Nitrite as N	10/08/2015	0.000	1.0000	OK	OK	OK	102.00	114.0	100.0	12.00	
Nitrate+Nitrite as N	10/14/2015	0.000	0.9997	OK	OK	OK	100.00	92.0	90.0	3.00	
Nitrate+Nitrite as N	10/14/2015					OK	100.00	107.0	108.0	1.00	
Nitrate+Nitrite as N	10/14/2015					OK	100.00	107.0	108.0	1.00	
SULFATE	10/08/2015	0.000	0.9999	OK	OK	OK	103.00	117.0	115.0	0	
SULFATE	10/09/2015					OK	105.00	96.0	87.0	2.00	
SULFATE	10/09/2015					OK	104.00	83.0	78.0	1.00	
SULFATE	10/12/2015	0.000	1.0000	OK	OK	OK	100.00				
SULFATE	10/13/2015							95.0	89.0	2.00	
SULFIDE	09/21/2015					OK	101.00				

General Information

Report Number (RIN):	15097346
Sample Event:	September 15–17, 2015
Site(s):	Riverton, Wyoming
Laboratory:	GEL Laboratories, Charleston, South Carolina
Work Order No.:	381692
Analysis:	Radiochemistry
Validator:	Stephen Donivan
Review Date:	December 28, 2015

This validation was performed according to the *Environmental Procedures Catalog*, (LMS/POL/S04325, continually updated) "Standard Practice for Validation of Environmental Data." The procedure was applied at Level 2, Data Verification. See attached Data Validation Worksheets for supporting documentation on the data review and validation. All analyses were successfully completed. The samples were prepared and analyzed using accepted procedures based on methods specified by line item code, which are listed in Table 7.

Table 7. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Tritium	LMR-17	GEL Enrichment Method	GL-RAD-B-032 REV# 0

Data Qualifier Summary

Analytical results were qualified as listed in Table 8. Refer to the attached validation worksheets and the sections below for an explanation of the data qualifiers applied.

Table 8. Data Qualifiers

Sample Number	Location	Analyte	Flag	Reason
381692005	0717	Tritium	J	Less than the Determination Limit
381692009	0721	Tritium	U	Less than the Decision Level
3816920016	0784	Tritium	J	Less than the Determination Limit

Sample Shipping/Receiving

GEL Laboratories in Charleston, South Carolina, received 16 water samples on September 23, 2015, accompanied by a Chain of Custody form. The air bill number was listed in the receiving documentation. The Chain of Custody form was checked to confirm that all of the samples were listed with sample collection dates and times, and that signatures and dates were present indicating sample relinquishment and receipt. The Chain of Custody form was complete with no errors or omissions.

Preservation and Holding Times

The sample shipment was received intact at ambient temperature which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses.

Detection and Quantitation Limits

For radiochemical analytes (those measured by radiometric counting) results are evaluated using the minimum detectable concentration (MDC), Decision Level Concentration (DLC), and Determination Limit (DL). The MDC is a measure of radiochemical method performance and was calculated and reported as specified in *Quality Systems Manual*. The DLC is the minimum concentration of an analyte that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, and is estimated as 3 times the one-sigma total propagated uncertainty. Results that are greater than the MDC, but less than the DLC are qualified with a "U" flag (not detected). The DL for radiochemical results is the lowest concentration that can be reliably measured, and is defined as 3 times the MDC. Results not previously "U" qualified that are less than the DL are qualified with a "J" flag as estimated values.

Laboratory Instrument Calibration

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for all analytes. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear curve. Compliance requirements for continuing calibration checks are established to ensure that the instrument continues to be capable of producing acceptable qualitative and quantitative data. All laboratory instrument calibrations were performed correctly in accordance with the cited methods. All calibration and laboratory spike standards were prepared from independent sources.

Method Blanks

Method blanks are analyzed to assess any contamination that may have occurred during sample preparation. All method blank results were below the DLC.

Laboratory Replicate Analysis

Laboratory replicate analyses are used to determine laboratory precision for each sample matrix. The relative percent difference for results that are greater than 5 times the PQL should be less than 20 percent (or less than the laboratory-derived control limits for organics). For results that are less than 5 times the PQL, the range should be no greater than the PQL. All replicate results met these criteria, demonstrating acceptable precision.

Laboratory Control Sample

Laboratory control samples were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. All control sample results were acceptable.

Completeness

Results were reported in the correct units for all analytes requested using contract-required laboratory qualifiers. The analytical report included the MDC for radiochemistry for each sample and all required supporting documentation.

Electronic Data Deliverable (EDD) File

The EDD file arrived on December 22, 2015. The Sample Management System EDD validation module was used to verify that the EDD file was complete and in compliance with requirements. The module compares the contents of the file to the requested analyses to ensure all and only the requested data are delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

SAMPLE MANAGEMENT SYSTEM

General Data Validation Report

RIN: 15097346 **Lab Code:** GEN **Validator:** Stephen Donivan **Validation Date:** 12/28/2015

Project: Riverton **Analysis Type:** ☐ Metals ☐ General Chem ☑ Rad ☐ Organics

# of Samples: 16 **Matrix:** Water **Requested Analysis Completed:** Yes

Chain of Custody

Present: OK **Signed:** OK **Dated:** OK

Sample

Integrity: OK **Preservation:** OK **Temperature:** OK

Select Quality Parameters

- ☑ Holding Times
- ☑ Detection Limits
- ☐ Field/Trip Blanks
- ☐ Field Duplicates

All analyses were completed within the applicable holding times.

The reported detection limits are equal to or below contract requirements.

SAMPLE MANAGEMENT SYSTEM
Radiochemistry Data Validation Worksheet

RIN: 15097346 **Lab Code:** GEN **Date Due:** 12/22/2015

Matrix: Water **Site Code:** RVT01 **Date Completed:** 12/22/2015

Sample	Analyte	Date Analyzed	Result	Flag	Tracer %R	LCS %R	MS %R	Duplicate RER
0705	Tritium	11/26/2015			76.0			
0707	Tritium	11/26/2015			76.0			
0710	Tritium	11/26/2015			76.0			
0716	Tritium	11/26/2015			76.0			
0717	Tritium	11/26/2015			76.0			
0718	Tritium	11/27/2015			76.0			
0719	Tritium	11/27/2015			76.0			
0720	Tritium	11/27/2015			76.0			
0721	Tritium	11/27/2015			76.0			
0722R	Tritium	11/27/2015			76.0			
0723	Tritium	11/27/2015			76.0			
Blank_Spike	Tritium	11/27/2015			76.0	105.00		
Blank	Tritium	11/27/2015	1.3500	U	76.0			
0727	Tritium	12/16/2015			72.0			
0729	Tritium	12/16/2015			72.0			
0730	Tritium	12/16/2015			72.0			
0732	Tritium	12/16/2015			72.0			
0784	Tritium	12/17/2015			72.0			
Blank_Spike	Tritium	12/18/2015			72.0	86.70		
Blank	Tritium	12/18/2015	0.5100	U	72.0			

General Information

Requisition No. (RIN): 15097347
Sample Event: September 15–18, 2015
Site(s): Riverton, Wyoming
Laboratory: Reston Stable Isotope Laboratory, Reston, Virginia
Analysis: Stable Isotopes
Validator: Stephen Donivan
Review Date: December 28, 2015

This validation was performed according to the *Environmental Procedures Catalog* (LMS/POL/S04325, continually updated), "Standard Practice for Validation of Environmental Data." The procedure was applied at Level 1, Data Deliverables Examination. All analyses were successfully completed. The samples were prepared and analyzed using accepted procedures based on methods specified by line item code, which are listed in Table 9.

Table 9. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
H-2/H-1 and O-18/O-16 Isotope Ratios	LMW-08	NA	Mass Spectrometry
S-34/S-32 Isotope Ratio	LMW-09	NA	Mass Spectrometry

Data Qualifier Summary

None of the analytical results required qualification.

Sample Shipping/Receiving

The Reston Stable Isotope Laboratory in Reston, Virginia, received 59 water samples on September 23, 2015, submitted for the determination of stable hydrogen, oxygen, and sulfur isotope ratios. The analytical report was checked to confirm that all of the samples scheduled were received and analyzed.

Preservation and Holding Times

The sample shipment was received intact with the samples in the correct containers and preserved correctly for the requested analyses. The samples were analyzed within the applicable holding time.

Laboratory Analysis

Oxygen and hydrogen isotopic results are reported parts per thousand (per mill) relative to VSMOW (Vienna Standard Mean Ocean Water) and normalized on scales such that the oxygen and hydrogen isotopic values of SLAP (Standard Light Antarctic Precipitation) are -55.5 per mill and -428 per mill, respectively. The 2-sigma uncertainties of oxygen and hydrogen isotopic results are 0.2 per mill and 2 per mill, respectively, unless otherwise indicated.

For sulfur isotope ratio measurements, dissolved sulfate is converted to BaSO4, which is analyzed by conversion to sulfur dioxide with an elemental analyzer and subsequent analysis with a continuous flow isotope ratio mass spectrometer. Samples are analyzed simultaneously with BaSO4 isotopic reference materials. No correction for oxygen isotopic composition was made to the reported data.

Sulfur isotope ratios are reported in per mill relative to VCDT, defined by assigning a value of -0.3 per mill exactly to IAEA-S-1 silver sulfide (previously known as NZ-1).

Completeness

The electronic data deliverable was the only deliverable received for this RIN.

Electronic Data Deliverable (EDD) File

The EDD files arrived on November 30, 2015, and December 7, 2015.

Sampling Quality Control Assessment

The following information summarizes and assesses quality control for this sampling event.

Sampling Protocol

Surface water locations were sampled using a peristaltic pump and tubing reel or by container emersion. Monitoring wells were sampled using a peristaltic pump and dedicated tubing. Domestic wells (0405, 0430, 0436, 0460, 0828, 0841, 0842, 0876, 0878) were sampled by filling bottles at the discharge point.

Sample results for all monitoring wells met the Category I or II low-flow sampling criteria and were qualified with an "F" flag in the database, indicating the wells were purged and sampled using the low-flow sampling method. Wells 0705, 0719, and 0730 were classified as Category II and were further qualified with a "Q" flag, indicating the data are qualitative because of the sampling technique.

The low range turbidity operation check performed on September 14, 2015, for instrument S14818 did not meet the acceptance criteria. The associated sample turbidity results are qualified with a "J" flag as estimated values.

The dissolved oxygen operational check for Sonde "F" performed on September 18, 2015, did not meet the acceptance criteria. Associated sample dissolved oxygen results that were performed since the last successful operational check are qualified with a "J" flag as estimated values.

Equipment Blank Assessment

An equipment blank was collected after decontamination of the non-dedicated sampling equipment used at some surface water locations. Calcium and sodium were detected in the equipment blank. The associated sample results for these analytes were greater than 5 times the blank concentration, not requiring qualification.

Field Duplicate Assessment

Field duplicate samples are collected and analyzed as an indication of overall precision of the measurement process. The precision observed includes both field and laboratory precision and has more variability than laboratory duplicates, which measure only laboratory performance. Duplicate samples were collected from locations 0796, 0858-4, 0860-3, and 0872. For non-radiochemical measurements, the relative percent difference for duplicate results that are greater than 5 times the PQL should be less than 20 percent. The RPD is not used to evaluate results that are less than 5 times the PQL. For these results, the range should be no greater than the PQL. For radiochemical measurements, the relative error ratio (the ratio of the absolute difference between the sample and duplicate results and the sum of the 1-sigma uncertainties) is used to evaluate duplicate results and should be less than 3. All duplicate results met these criteria demonstrating acceptable overall precision.

SAMPLE MANAGEMENT SYSTEM

Validation Report: Equipment/Trip Blanks

RIN: 15097345 **Lab Code:** PAR **Project:** Riverton **Validation Date:** 12/28/2015

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	1509266-79	SW6010	Calcium	48	J	24	UG/L

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
1509266-23	NKT 772	0747	150000	1		
1509266-29	NKT 775	0796	90000	1		
1509266-33	NKT 779	0822	170000	1		
1509266-34	NKT 780	0823	130000	1		

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	1509266-79	SW6010	Iron	7.3	J	6.7	UG/L

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	1509266-79	SW6010	Sodium	160	J	47	UG/L

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
1509266-23	NKT 772	0747	140000	1		
1509266-29	NKT 775	0796	74000	1		
1509266-33	NKT 779	0822	130000	1		
1509266-34	NKT 780	0823	320000	1		

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 15097345 **Lab Code:** PAR **Project:** Riverton **Validation Date:** 12/28/2015

Duplicate: 2776 **Sample:** 0858-4

Analyte	Sample Result	Sample Flag	Sample Error	Sample Dilution	Duplicate Result	Duplicate Flag	Duplicate Error	Duplicate Dilution	RPD	RER	Units
Calcium	390000			5	350000			1	10.81		UG/L
CHLORIDE					96			50			MG/L
Iron	2800			5	2600			1	7.41		UG/L
Magnesium	110000			5	110000			1	0		UG/L
Manganese	1600			5	1500			1	6.45		UG/L
Molybdenum	790			10	730			10	7.89		UG/L
Nitrate+Nitrite as N	0.01	U		1	0.01	U		1			MG/L
Potassium	13000			5	13000			1	0		UG/L
Silica	27000			5	28000			1	3.64		UG/L
Silicon	13000			5	13000			1	0		UG/L
Sodium	620000			5	630000			5	1.60		UG/L
SULFATE					2400			50			MG/L
U-234	143		25.1	1	147		24.6	1	2.76	0.2	pCi/L
Uranium	520			10	490			10	5.94		UG/L
Uranium-235	8.65		1.73	1	8.16		2.23	1	5.83	0.3	pCi/L
Uranium-238	158		27.7	1	151		25.3	1	4.53	0.4	pCi/L

Duplicate: 2777 **Sample:** 0860-3

Analyte	Sample Result	Sample Flag	Sample Error	Sample Dilution	Duplicate Result	Duplicate Flag	Duplicate Error	Duplicate Dilution	RPD	RER	Units
Calcium	410000			1	420000			1	2.41		UG/L
CHLORIDE					49			50			MG/L
Iron	2800			1	2800			1	0		UG/L
Magnesium	47000			1	49000			1	4.17		UG/L
Manganese	3100			1	3200			1	3.17		UG/L
Molybdenum	270			10	270			10	0		UG/L
Nitrate+Nitrite as N	0.012			1	0.015			1			MG/L
Potassium	13000			1	13000			1	0		UG/L
Silica	20000			1	19000			1	5.13		UG/L
Silicon	9200			1	8900			1	3.31		UG/L
Sodium	600000			5	600000			5	0		UG/L
SULFATE					2300			50			MG/L
U-234	209		35.2	1	205		34.1	1	1.93	0.2	pCi/L
Uranium	760			10	770			10	1.31		UG/L
Uranium-235	12.2		3.11	1	13.7		3.22	1	11.58	0.7	pCi/L
Uranium-238	227		38.2	1	241		39.8	1	5.98	0.5	pCi/L

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 15097345 **Lab Code:** PAR **Project:** Riverton **Validation Date:** 12/28/2015

Duplicate: 2778 **Sample:** 0796

Analyte	Sample Result	Sample Flag	Sample Error	Sample Dilution	Duplicate Result	Duplicate Flag	Duplicate Error	Duplicate Dilution	RPD	RER	Units
Calcium	90000			1	96000			1	6.45		UG/L
CHLORIDE					11			4			MG/L
Iron					230			1			UG/L
Magnesium	36000			1	37000			1	2.74		UG/L
Manganese	60			1	52	E		1	14.29		UG/L
Molybdenum	1.9			10	3.1			10	NA		UG/L
Potassium	4200			1	3600	E		1	15.38		UG/L
Silica					8600			1			UG/L
Silicon					4000			1			UG/L
Sodium	74000			1	71000			1	4.14		UG/L
SULFATE					320			4			MG/L
Uranium	8			10	8.5			10	6.06		UG/L

Duplicate: 2780 **Sample:** 0872

Analyte	Sample Result	Sample Flag	Sample Error	Sample Dilution	Duplicate Result	Duplicate Flag	Duplicate Error	Duplicate Dilution	RPD	RER	Units
Calcium	560000			5	560000			5	0		UG/L
CHLORIDE	580			100	580			100	0		MG/L
Iron	3900			5	3900			5	0		UG/L
Magnesium	340000			5	340000			5	0		UG/L
Manganese	2400			5	2400			5	0		UG/L
Molybdenum	170			10	170			10	0		UG/L
Nitrate+Nitrite as N	0.011			1	0.012			1			MG/L
Potassium	17000			5	18000			5	5.71		UG/L
Silica	28000			5	29000			5	3.51		UG/L
Silicon	13000			5	13000			5	0		UG/L
Sodium	1800000			5	1900000			5	5.41		UG/L
SULFATE	6000			100	6000			100	0		MG/L
U-234	252		41.2	1	255		42.4	1	1.18	0.1	pCi/L
Uranium	890			10	920			10	3.31		UG/L
Uranium-235	13.7		3.16	1	14.7		3.48	1	7.04	0.4	pCi/L
Uranium-238	277		45.3	1	268		44.5	1	3.30	0.3	pCi/L

Certification

All laboratory analytical quality control criteria were met except as qualified in this report. The data qualifiers listed on the SEEPro database reports are defined on the last page of each report. All data in this package are considered validated and available for use.

Laboratory Coordinator: Stephen Donivan — Date: 2-23-2016

Data Validation Lead: Stephen Donivan — Date: 2-23-2016

Attachment 1

Assessment of Anomalous Data

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Potential Outliers Report

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Potential Outliers Report

Potential outliers are measurements that are extremely large or small relative to the rest of the data and, therefore, are suspected of misrepresenting the population from which they were collected. Potential outliers can result from transcription errors, data-coding errors, or measurement system problems. However, outliers can also represent true extreme values of a distribution and can indicate more variability in the population than was expected.

Statistical outlier tests give probabilistic evidence that an extreme value does not "fit" with the distribution of the remainder of the data and is therefore a statistical outlier. These tests should only be used to identify data points that require further investigation. The tests alone cannot determine whether a statistical outlier should be discarded or corrected within a data set.

There are three steps involved in identifying extreme values or outliers:

1. **Identify extreme values that may be potential outliers.** This is accomplished by generating the Outliers Report using the Sample Management System from data in the environmental database. The application compares the new data set (in standard environmental database units) with historical data and lists the new data that fall outside the historical data range. A determination is also made as to whether the data are normally distributed using the Shapiro-Wilk Test.
2. **Apply the appropriate statistical test.** Dixon's Test for extreme values is used to test for statistical outliers when the sample size is less than or equal to 25. This test considers both extreme values that are much smaller than the rest of the data (case 1) and extreme values that are much larger than the rest of the data (case 2). This test is valid only if the data without the suspected outlier are normally distributed. Rosner's Test is a parametric test that is used to detect outliers for sample sizes of 25 or more. This test also assumes that the data without the suspected outliers are normally distributed.
3. **Scientifically review statistical outliers and decide on their disposition.** The review should include an evaluation of any notable trends in the data that may indicate the outliers represent true extreme values.

The potassium result for location 0789 was identified as potentially anomalous. There were no errors noted during the review of the data associated with this result.

The alkalinity at location 0430 was anomalously low and the cation/anion balance exceeded 10 percent with a low anion meq/L value indicating that the alkalinity result for this location is inaccurate. The alkalinity result is qualified with a “J” flag as an estimated value.

The alkalinity value entered for location 0732 of 2.4 mg/L was determined to be a data entry error, the entry was corrected to reflect an alkalinity value of 240 mg/L.

The specific conductance value at location 0747 was anomalously low with a value of 12 µmhos/cm. This value is not reasonable and indicates that the flow cell used to make the measurement was likely not configured properly. The specific conductance result of this location is qualified with an “R” flag as rejected.

Data Validation Outliers Report - No Field Parameters
Comparison: All historical Data Beginning 01/01/2006
Laboratory: ALS Laboratory Group
RIN: 15097345
Report Date: 12/29/2015

					Current			**Historical Maximum**			**Historical Minimum**			**Number of** Data Points		**Statistical** Outlier
						Qualifiers			*Qualifiers*			*Qualifiers*				
Site Code	Location Code	Sample ID	Sample Date	Analyte	Result	*Lab*	*Data*	Result	*Lab*	*Data*	Result	*Lab*	*Data*	N	N Below Detect	
RVT01	0405	N001	09/17/2015	Uranium	0.00039			0.00011			0.000021	B	U	18	13	NA
RVT01	0705	N001	09/15/2015	Manganese	0.0990			0.0770		FQ	0.00011	U	FQ	19	4	NA
RVT01	0717	N001	09/17/2015	Molybdenum	0.00960			0.00940		F	0.00520		F	18	0	No
RVT01	0719	N001	09/16/2015	Sulfate	490			480		FQ	400		FQ	18	0	No
RVT01	0720	N001	09/16/2015	Molybdenum	0.00084	J		0.00250		F	0.001		F	18	1	No
RVT01	0749	N001	09/17/2015	Molybdenum	0.0460			0.0410			0.00410			17	0	No
RVT01	0789	N001	09/15/2015	Chloride	180			250		F	190		F	5	0	No
RVT01	0789	N001	09/15/2015	Magnesium	260			240		F	220		F	5	0	NA
RVT01	0789	N001	09/15/2015	Potassium	17.0			31.0		F	28.0		F	5	0	Yes
RVT01	0794	N001	09/14/2015	Uranium	0.0110			0.00831			0.00097			18	0	No
RVT01	0796	N001	09/18/2015	Molybdenum	0.00190			0.00180			0.00032	U		16	3	No
RVT01	0796	N001	09/18/2015	Sulfate	320			310			31.0			18	0	No
RVT01	0796	N002	09/18/2015	Sulfate	320			310			31.0			18	0	No
RVT01	0796	N002	09/18/2015	Uranium	0.00850			0.00765			0.00084			18	0	No
RVT01	0796	N001	09/18/2015	Uranium	0.00800			0.00765			0.00084			18	0	No
RVT01	0811	N001	09/17/2015	Uranium	0.00840			0.00750			0.00095			18	0	No

STATISTICAL TESTS:
The distribution of the data is tested for normality or lognormality using the Shapiro-Wilk Test
Outliers are identified using Dixon's Test when there are 25 or fewer data points.
Outliers are identified using Rosner's Test when there are 26 or more data points.
See Data Quality Assessment: Statistical Methods for Practitioners, EPA QC/G-9S, February 2006.

NA: Data are not normally or lognormally distributed

Data Validation Outliers Report - Field Parameters Only
Comparison: All historical Data Beginning 01/01/2006
Laboratory: Field Measurements
RIN: 15097345
Report Date: 12/31/2015

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current	Qualifiers		Historical Maximum	Qualifiers		Historical Minimum	Qualifiers		Number of Data Points		Statistical Outlier
					Result	*Lab*	*Data*	Result	*Lab*	*Data*	Result	*Lab*	*Data*	N	N Below Detect	
RVT01	0430	N001	09/17/2015	Alkalinity, Total (as $CaCO_3$)	63.0			196			65.0			14	0	Yes
RVT01	0436	N001	09/14/2015	Alkalinity, Total (as $CaCO_3$)	116			216			140			14	0	NA
RVT01	0705	N001	09/15/2015	Dissolved Oxygen	0.450		FQ	4.61		FQ	0.780		FQ	9	0	No
RVT01	0716	N001	09/17/2015	Oxidation Reduction Potential	-31.2		F	179			-22.4		F	18	0	No
RVT01	0717	N001	09/17/2015	Alkalinity, Total (as $CaCO_3$)	299		F	239		F	108		F	14	0	NA
RVT01	0719	N001	09/16/2015	Dissolved Oxygen	0.140		FQ	5.50		FQ	0.420		FQ	10	0	No
RVT01	0719	N001	09/16/2015	Turbidity	9.98		FQ	8.99		FQ	1.36		FQ	18	0	No
RVT01	0729	N001	09/16/2015	Alkalinity, Total (as $CaCO_3$)	212		F	390		F	218		F	14	0	No
RVT01	0732	N001	09/16/2015	Alkalinity, Total (as $CaCO_3$)	240 *(2.4)*		F	406			273		F	5	0	Yes
RVT01	0747	N001	09/16/2015	Specific Conductance	12.0			4868			275			18	0	Yes
RVT01	0810	N001	09/17/2015	pH	9.63			9.50			7.95			18	0	No
RVT01	0811	N001	09/17/2015	Turbidity	5.53			153			6.69			17	0	No
RVT01	0826	N001	09/16/2015	Dissolved Oxygen	1.24		F	1.21		F	0.290		F	9	0	No
RVT01	0828	N001	09/14/2015	Alkalinity, Total (as $CaCO_3$)	129			182			145			13	0	No
RVT01	0828	N001	09/14/2015	Dissolved Oxygen	5.31			4.56			1.30			8	0	No
RVT01	0842	N001	09/17/2015	pH	7.95			7.94			7.37			6	0	No

STATISTICAL TESTS:
The distribution of the data is tested for normality or lognormality using the Shapiro-Wilk Test
Outliers are identified using Dixon's Test when there are 25 or fewer data points.
Outliers are identified using Rosner's Test when there are 26 or more data points.
See Data Quality Assessment: Statistical Methods for Practitioners, EPA QC/G-9S, February 2006.

NA: Data are not normally or lognormally distributed.

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Attachment 2

Data Presentation

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Groundwater Quality Data

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Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0405 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	99			#		
Calcium	mg/L	09/17/2015	N001	-	7.1			#	0.024	
Chloride	mg/L	09/17/2015	N001	-	21			#	0.8	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	4.55			#		
Magnesium	mg/L	09/17/2015	N001	-	0.063	J		#	0.03	
Manganese	mg/L	09/17/2015	N001	-	0.0044	J		#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.0032			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	-	155.5			#		
pH	s.u.	09/17/2015	N001	-	8.92			#		
Potassium	mg/L	09/17/2015	N001	-	0.42	J		#	0.052	
Sodium	mg/L	09/17/2015	N001	-	190			#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	-	950			#		
Sulfate	mg/L	09/17/2015	N001	-	310			#	2	
Temperature	C	09/17/2015	N001	-	11.36			#		
Turbidity	NTU	09/17/2015	N001	-	3.37			#		
Uranium	mg/L	09/17/2015	N001	-	0.00039			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0430 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	63		J	#		
Calcium	mg/L	09/17/2015	N001	-	4.2			#	0.024	
Chloride	mg/L	09/17/2015	N001	-	10			#	0.4	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	4.51			#		
Magnesium	mg/L	09/17/2015	N001	-	0.042	J		#	0.03	
Manganese	mg/L	09/17/2015	N001	-	0.0034	J		#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.0021			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	-	72.2		J	#		
pH	s.u.	09/17/2015	N001	-	8.83			#		
Potassium	mg/L	09/17/2015	N001	-	0.35	J		#	0.052	
Sodium	mg/L	09/17/2015	N001	-	160			#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	-	767			#		
Sulfate	mg/L	09/17/2015	N001	-	190			#	1	
Temperature	C	09/17/2015	N001	-	12.26			#		
Turbidity	NTU	09/17/2015	N001	-	1.62			#		
Uranium	mg/L	09/17/2015	N001	-	0.00005	J		#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0436 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/14/2015	N001	-	116			#		
Calcium	mg/L	09/14/2015	N001	-	3.8			#	0.024	
Chloride	mg/L	09/14/2015	N001	-	14			#	0.8	
Dissolved Oxygen	mg/L	09/14/2015	N001	-	4.12			#		
Magnesium	mg/L	09/14/2015	N001	-	0.049	J		#	0.03	
Manganese	mg/L	09/14/2015	N001	-	0.0035	J		#	0.00024	
Molybdenum	mg/L	09/14/2015	N001	-	0.0034			#	0.00032	
Oxidation Reduction Potential	mV	09/14/2015	N001	-	172.2			#		
pH	s.u.	09/14/2015	N001	-	8.54			#		
Potassium	mg/L	09/14/2015	N001	-	0.41	J		#	0.052	
Sodium	mg/L	09/14/2015	N001	-	170			#	0.047	
Specific Conductance	umhos /cm	09/14/2015	N001	-	834			#		
Sulfate	mg/L	09/14/2015	N001	-	220	N		#	2	
Temperature	C	09/14/2015	N001	-	22.86			#		
Turbidity	NTU	09/14/2015	N001	-	1.83		J	#		
Uranium	mg/L	09/14/2015	N001	-	0.0001			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0460 WELL Sulfuric Acid Plant

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	150			#		
Calcium	mg/L	09/17/2015	N001	-	3.6			#	0.024	
Chloride	mg/L	09/17/2015	N001	-	11			#	0.4	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	2.14			#		
Magnesium	mg/L	09/17/2015	N001	-	0.05	J		#	0.03	
Manganese	mg/L	09/17/2015	N001	-	0.00084	J		#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.0025			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-5.1			#		
pH	s.u.	09/17/2015	N001	-	8.94			#		
Potassium	mg/L	09/17/2015	N001	-	0.36	J		#	0.052	
Sodium	mg/L	09/17/2015	N001	-	160			#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	-	740			#		
Sulfate	mg/L	09/17/2015	N001	-	180			#	1	
Temperature	C	09/17/2015	N001	-	15.36			#		
Turbidity	NTU	09/17/2015	N001	-	0.96			#		
Uranium	mg/L	09/17/2015	N001	-	0.00005	J		#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0705 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	38	-	48	40		FQ	#		
Calcium	mg/L	09/15/2015	N001	38	-	48	28		FQ	#	0.024	
Chloride	mg/L	09/15/2015	N001	38	-	48	58		FQ	#	1	
Dissolved Oxygen	mg/L	09/15/2015	N001	38	-	48	0.45		FQ	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	38	-	48	0		FQ	#		
Iron	mg/L	09/15/2015	N001	38	-	48	0.052	J	FQ	#	0.0067	
Magnesium	mg/L	09/15/2015	N001	38	-	48	0.52	J	FQ	#	0.03	
Manganese	mg/L	09/15/2015	N001	38	-	48	0.099		FQ	#	0.00024	
Molybdenum	mg/L	09/15/2015	N001	38	-	48	0.0025		FQ	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	38	-	48	0.01	U	FQ	#	0.01	
Oxidation Reduction Potential	mV	09/15/2015	N001	38	-	48	19.6		FQ	#		
pH	s.u.	09/15/2015	N001	38	-	48	8.47		FQ	#		
Potassium	mg/L	09/15/2015	N001	38	-	48	0.6	J	FQ	#	0.052	
Silica	mg/L	09/15/2015	N001	38	-	48	9.3		FQ	#	0.021	
Silicon	mg/L	09/15/2015	N001	38	-	48	4.3		FQ	#	0.0097	
Sodium	mg/L	09/15/2015	N001	38	-	48	200		FQ	#	0.047	
Specific Conductance	umhos /cm	09/15/2015	N001	38	-	48	1219		FQ	#		
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	38	-	48	-137.23		FQ	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0705 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	38	-	48	-17.42		FQ	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/15/2015	0003	38	-	48	3.29		FQ	#		
Sulfate	mg/L	09/15/2015	N001	38	-	48	450		FQ	#	2.5	
Temperature	C	09/15/2015	N001	38	-	48	12.52		FQ	#		
Tritium	pCi/L	09/15/2015	N002	38	-	48	2.44	U	FQ	#	2.44	1.66
Turbidity	NTU	09/15/2015	N001	38	-	48	1.48		FQ	#		
Uranium	mg/L	09/15/2015	N001	38	-	48	0.00018		FQ	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	38	-	48	0.11		FQJ	#	0.057	0.0669
Uranium-235	pCi/L	09/15/2015	N001	38	-	48	0.05	U	FQ	#	0.05	0.0368
Uranium-238	pCi/L	09/15/2015	N001	38	-	48	0.0929		UFQ	#	0.057	0.0617

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0707 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	9.8	-	14.8	325		F	#		
Calcium	mg/L	09/15/2015	N001	9.8	-	14.8	430		F	#	0.024	
Chloride	mg/L	09/15/2015	N001	9.8	-	14.8	110		F	#	10	
Dissolved Oxygen	mg/L	09/15/2015	N001	9.8	-	14.8	0.5		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	9.8	-	14.8	0.04		F	#		
Iron	mg/L	09/15/2015	N001	9.8	-	14.8	0.05	J	F	#	0.0067	
Magnesium	mg/L	09/15/2015	N001	9.8	-	14.8	130		F	#	0.03	
Manganese	mg/L	09/15/2015	N001	9.8	-	14.8	1.1		F	#	0.00024	
Molybdenum	mg/L	09/15/2015	N001	9.8	-	14.8	0.96		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	9.8	-	14.8	0.044		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	9.8	-	14.8	0.01		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	9.8	-	14.8	74.7		F	#		
pH	s.u.	09/15/2015	N001	9.8	-	14.8	7.07		F	#		
Potassium	mg/L	09/15/2015	N001	9.8	-	14.8	14		F	#	0.052	
Silica	mg/L	09/15/2015	N001	9.8	-	14.8	29		F	#	0.021	
Silicon	mg/L	09/15/2015	N001	9.8	-	14.8	13		F	#	0.0097	
Sodium	mg/L	09/15/2015	N001	9.8	-	14.8	650		F	#	0.47	
Specific Conductance	umhos /cm	09/15/2015	N001	9.8	-	14.8	4776		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0707 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	9.8 - 14.8	-130.19		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	9.8 - 14.8	-16.38		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/15/2015	0003	9.8 - 14.8	5.64		F	#		
Sulfate	mg/L	09/15/2015	N001	9.8 - 14.8	2700		F	#	25	
Temperature	C	09/15/2015	N001	9.8 - 14.8	14.57		F	#		
Tritium	pCi/L	09/15/2015	N002	9.8 - 14.8	10.7		F	#	2.49	4.09
Turbidity	NTU	09/15/2015	N001	9.8 - 14.8	1.45		F	#		
Uranium	mg/L	09/15/2015	N001	9.8 - 14.8	0.78		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	9.8 - 14.8	227		F	#	0.18	40.8
Uranium-235	pCi/L	09/15/2015	N001	9.8 - 14.8	12.2		F	#	0.14	2.45
Uranium-238	pCi/L	09/15/2015	N001	9.8 - 14.8	253		F	#	0.059	45.5

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0710 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	11.2	-	16.2	190		F	#		
Calcium	mg/L	09/17/2015	N001	11.2	-	16.2	79		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	11.2	-	16.2	15		F	#	0.4	
Dissolved Oxygen	mg/L	09/17/2015	N001	11.2	-	16.2	1.08		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	11.2	-	16.2	0.04		F	#		
Iron	mg/L	09/17/2015	N001	11.2	-	16.2	0.31		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	11.2	-	16.2	17		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	11.2	-	16.2	0.027		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	11.2	-	16.2	0.0025		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	11.2	-	16.2	0.44		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	11.2	-	16.2	0.009		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	11.2	-	16.2	108.7		FJ	#		
pH	s.u.	09/17/2015	N001	11.2	-	16.2	7.51		F	#		
Potassium	mg/L	09/17/2015	N001	11.2	-	16.2	2.2		F	#	0.052	
Silica	mg/L	09/17/2015	N001	11.2	-	16.2	20		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	11.2	-	16.2	9.1		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	11.2	-	16.2	42		F	#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	11.2	-	16.2	689		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0710 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	11.2 - 16.2	-126.97		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	11.2 - 16.2	-16.45		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/17/2015	0003	11.2 - 16.2	-.74		F	#		
Sulfate	mg/L	09/17/2015	N001	11.2 - 16.2	140		F	#	1	
Temperature	C	09/17/2015	N001	11.2 - 16.2	11.7		F	#		
Tritium	pCi/L	09/17/2015	N002	11.2 - 16.2	26.9		F	#	2.43	9.45
Turbidity	NTU	09/17/2015	N001	11.2 - 16.2	3.13		F	#		
Uranium	mg/L	09/17/2015	N001	11.2 - 16.2	0.0042		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	11.2 - 16.2	1.87		F	#	0.042	0.391
Uranium-235	pCi/L	09/17/2015	N001	11.2 - 16.2	0.118		F	#	0.027	0.0709
Uranium-238	pCi/L	09/17/2015	N001	11.2 - 16.2	1.36		F	#	0.061	0.307

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0716 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	11.35 - 16.35	280		F	#		
Calcium	mg/L	09/17/2015	N001	11.35 - 16.35	130		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	11.35 - 16.35	35		F	#	1	
Dissolved Oxygen	mg/L	09/17/2015	N001	11.35 - 16.35	0.89		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	11.35 - 16.35	0.07		F	#		
Iron	mg/L	09/17/2015	N001	11.35 - 16.35	0.1		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	11.35 - 16.35	28		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	11.35 - 16.35	0.23		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	11.35 - 16.35	0.13		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	11.35 - 16.35	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	11.35 - 16.35	0.017		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	11.35 - 16.35	-31.2		F	#		
pH	s.u.	09/17/2015	N001	11.35 - 16.35	7.22		F	#		
Potassium	mg/L	09/17/2015	N001	11.35 - 16.35	5.5		F	#	0.052	
Silica	mg/L	09/17/2015	N001	11.35 - 16.35	23		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	11.35 - 16.35	11		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	11.35 - 16.35	160		F	#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	11.35 - 16.35	1384		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0716 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	11.35 - 16.35	-129.61		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	11.35 - 16.35	-16.5		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/17/2015	0003	11.35 - 16.35	0.9		F	#		
Sulfate	mg/L	09/17/2015	N001	11.35 - 16.35	450		F	#	2.5	
Temperature	C	09/17/2015	N001	11.35 - 16.35	15.15		F	#		
Tritium	pCi/L	09/17/2015	N002	11.35 - 16.35	19.2		F	#	2.48	6.85
Turbidity	NTU	09/17/2015	N001	11.35 - 16.35	1.35		F	#		
Uranium	mg/L	09/17/2015	N001	11.35 - 16.35	0.21		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	11.35 - 16.35	63.2		F	#	0.055	10.5
Uranium-235	pCi/L	09/17/2015	N001	11.35 - 16.35	3.41		F	#	0.035	0.7
Uranium-238	pCi/L	09/17/2015	N001	11.35 - 16.35	70.2		F	#	0.074	11.7

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0717 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	46.6	-	56.6	299		F	#		
Calcium	mg/L	09/17/2015	N001	46.6	-	56.6	93		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	46.6	-	56.6	52		F	#	2	
Dissolved Oxygen	mg/L	09/17/2015	N001	46.6	-	56.6	0.25		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	46.6	-	56.6	0.16		F	#		
Iron	mg/L	09/17/2015	N001	46.6	-	56.6	0.19		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	46.6	-	56.6	6.1		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	46.6	-	56.6	0.18		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	46.6	-	56.6	0.0096		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	46.6	-	56.6	0.023		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	46.6	-	56.6	0.008		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	46.6	-	56.6	-41.7		F	#		
pH	s.u.	09/17/2015	N001	46.6	-	56.6	7.84		F	#		
Potassium	mg/L	09/17/2015	N001	46.6	-	56.6	0.99	J	F	#	0.052	
Silica	mg/L	09/17/2015	N001	46.6	-	56.6	13		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	46.6	-	56.6	6		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	46.6	-	56.6	320		F	#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	46.6	-	56.6	1912		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0717 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	46.6	-	56.6	-137.57		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	46.6	-	56.6	-17.79		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/17/2015	0003	46.6	-	56.6	4.27		F	#		
Sulfate	mg/L	09/17/2015	N001	46.6	-	56.6	760		F	#	5	
Temperature	C	09/17/2015	N001	46.6	-	56.6	11.67		F	#		
Tritium	pCi/L	09/17/2015	N002	46.6	-	56.6	5.67		FJ	#	2.44	2.53
Turbidity	NTU	09/17/2015	N001	46.6	-	56.6	1.5		F	#		
Uranium	mg/L	09/17/2015	N001	46.6	-	56.6	0.00011		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	46.6	-	56.6	0.107		UF	#	0.024	0.064
Uranium-235	pCi/L	09/17/2015	N001	46.6	-	56.6	0.0628		F	#	0.028	0.0522
Uranium-238	pCi/L	09/17/2015	N001	46.6	-	56.6	0.0591		F	#	0.045	0.0484

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0718 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	18.76 - 23.76	330		F	#		
Calcium	mg/L	09/16/2015	N001	18.76 - 23.76	350		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	18.76 - 23.76	150		F	#	10	
Dissolved Oxygen	mg/L	09/16/2015	N001	18.76 - 23.76	0.41		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	18.76 - 23.76	0		F	#		
Iron	mg/L	09/16/2015	N001	18.76 - 23.76	0.042	J	F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	18.76 - 23.76	96		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	18.76 - 23.76	0.41		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	18.76 - 23.76	0.073		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	18.76 - 23.76	0.4		F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	18.76 - 23.76	0.005		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	18.76 - 23.76	139.3		F	#		
pH	s.u.	09/16/2015	N001	18.76 - 23.76	7.14		F	#		
Potassium	mg/L	09/16/2015	N001	18.76 - 23.76	13		F	#	0.052	
Silica	mg/L	09/16/2015	N001	18.76 - 23.76	26		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	18.76 - 23.76	12		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	18.76 - 23.76	740		F	#	0.47	
Specific Conductance	umhos /cm	09/16/2015	N001	18.76 - 23.76	4636		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0718 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	18.76 - 23.76	-125.42		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	18.76 - 23.76	-15.41		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/16/2015	0003	18.76 - 23.76	4.64		F	#		
Sulfate	mg/L	09/16/2015	N001	18.76 - 23.76	2500		F	#	25	
Temperature	C	09/16/2015	N001	18.76 - 23.76	14.61		F	#		
Tritium	pCi/L	09/16/2015	N002	18.76 - 23.76	13.8		F	#	2.37	5.05
Turbidity	NTU	09/16/2015	N001	18.76 - 23.76	1.15		F	#		
Uranium	mg/L	09/16/2015	N001	18.76 - 23.76	0.11		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	18.76 - 23.76	36.9		F	#	0.07	6.11
Uranium-235	pCi/L	09/16/2015	N001	18.76 - 23.76	1.88		F	#	0.075	0.423
Uranium-238	pCi/L	09/16/2015	N001	18.76 - 23.76	35.7		F	#	0.048	5.9

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0719 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	39.05 - 49.05	83		FQ	#		
Calcium	mg/L	09/16/2015	N001	39.05 - 49.05	80		FQ	#	0.024	
Chloride	mg/L	09/16/2015	N001	39.05 - 49.05	41		FQ	#	2	
Dissolved Oxygen	mg/L	09/16/2015	N001	39.05 - 49.05	0.14		FQ	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	39.05 - 49.05	0.22		FQ	#		
Iron	mg/L	09/16/2015	N001	39.05 - 49.05	0.48		FQ	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	39.05 - 49.05	2.7		FQ	#	0.03	
Manganese	mg/L	09/16/2015	N001	39.05 - 49.05	0.1		FQ	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	39.05 - 49.05	0.01		FQ	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	39.05 - 49.05	0.01	U	FQ	#	0.01	
Nitrite	mg/L	09/16/2015	N001	39.05 - 49.05	0.1		FQ	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	39.05 - 49.05	-53.4		FQ	#		
pH	s.u.	09/16/2015	N001	39.05 - 49.05	7.88		FQ	#		
Potassium	mg/L	09/16/2015	N001	39.05 - 49.05	1.2		FQ	#	0.052	
Silica	mg/L	09/16/2015	N001	39.05 - 49.05	13		FQ	#	0.021	
Silicon	mg/L	09/16/2015	N001	39.05 - 49.05	6		FQ	#	0.0097	
Sodium	mg/L	09/16/2015	N001	39.05 - 49.05	190		FQ	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	39.05 - 49.05	1256		FQ	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0719 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	39.05 - 49.05	-138.33		FQ	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	39.05 - 49.05	-17.9		FQ	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/16/2015	0003	39.05 - 49.05	2.98		FQ	#		
Sulfate	mg/L	09/16/2015	N001	39.05 - 49.05	490		FQ	#	5	
Temperature	C	09/16/2015	N001	39.05 - 49.05	13.41		FQ	#		
Tritium	pCi/L	09/16/2015	N002	39.05 - 49.05	2.46	U	FQ	#	2.46	1.44
Turbidity	NTU	09/16/2015	N001	39.05 - 49.05	9.98		FQ	#		
Uranium	mg/L	09/16/2015	N001	39.05 - 49.05	0.00034		FQ	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	39.05 - 49.05	0.195		FQ	#	0.057	0.0896
Uranium-235	pCi/L	09/16/2015	N001	39.05 - 49.05	0.05	U	FQ	#	0.05	0.041
Uranium-238	pCi/L	09/16/2015	N001	39.05 - 49.05	0.112		FQJ	#	0.067	0.0696

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0720 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	8.63 - 13.63	207		F	#		
Calcium	mg/L	09/16/2015	N001	8.63 - 13.63	94		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	8.63 - 13.63	5.6		F	#	0.4	
Dissolved Oxygen	mg/L	09/16/2015	N001	8.63 - 13.63	2.48		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	8.63 - 13.63	0.01		F	#		
Iron	mg/L	09/16/2015	N001	8.63 - 13.63	0.0093	J	F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	8.63 - 13.63	23		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	8.63 - 13.63	0.00024	U	F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	8.63 - 13.63	0.00084	J	F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	8.63 - 13.63	1.2		F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	8.63 - 13.63	0.008		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	8.63 - 13.63	78		F	#		
pH	s.u.	09/16/2015	N001	8.63 - 13.63	7.3		F	#		
Potassium	mg/L	09/16/2015	N001	8.63 - 13.63	2.9		F	#	0.052	
Silica	mg/L	09/16/2015	N001	8.63 - 13.63	20		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	8.63 - 13.63	9.4		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	8.63 - 13.63	35		F	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	8.63 - 13.63	721		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0720 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	8.63 - 13.63	-122.29		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	8.63 - 13.63	-15.81		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/16/2015	0003	8.63 - 13.63	-5.46		F	#		
Sulfate	mg/L	09/16/2015	N001	8.63 - 13.63	150		F	#	1	
Temperature	C	09/16/2015	N001	8.63 - 13.63	13.28		F	#		
Tritium	pCi/L	09/16/2015	N002	8.63 - 13.63	22.9		F	#	2.45	8.18
Turbidity	NTU	09/16/2015	N001	8.63 - 13.63	0.66		F	#		
Uranium	mg/L	09/16/2015	N001	8.63 - 13.63	0.0052		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	8.63 - 13.63	2.38		F	#	0.05	0.477
Uranium-235	pCi/L	09/16/2015	N001	8.63 - 13.63	0.0993		F	#	0.027	0.0648
Uranium-238	pCi/L	09/16/2015	N001	8.63 - 13.63	1.58		F	#	0.05	0.344

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0721 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	45.01 - 55.01	94		F	#		
Calcium	mg/L	09/16/2015	N001	45.01 - 55.01	8.7		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	45.01 - 55.01	26		F	#	0.8	
Dissolved Oxygen	mg/L	09/16/2015	N001	45.01 - 55.01	0.25		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	45.01 - 55.01	0		F	#		
Iron	mg/L	09/16/2015	N001	45.01 - 55.01	0.042	J	F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	45.01 - 55.01	0.091	J	F	#	0.03	
Manganese	mg/L	09/16/2015	N001	45.01 - 55.01	0.003	J	F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	45.01 - 55.01	0.0024		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	45.01 - 55.01	0.01	U	F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	45.01 - 55.01	0		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	45.01 - 55.01	72.3		F	#		
pH	s.u.	09/16/2015	N001	45.01 - 55.01	8.86		F	#		
Potassium	mg/L	09/16/2015	N001	45.01 - 55.01	0.33	J	F	#	0.052	
Silica	mg/L	09/16/2015	N001	45.01 - 55.01	9.6		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	45.01 - 55.01	4.5		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	45.01 - 55.01	180		F	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	45.01 - 55.01	889		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0721 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	45.01 - 55.01	-134.38		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	45.01 - 55.01	-17.06		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/16/2015	0003	45.01 - 55.01	-1.16		F	#		
Sulfate	mg/L	09/16/2015	N001	45.01 - 55.01	300		F	#	2	
Temperature	C	09/16/2015	N001	45.01 - 55.01	11.61		F	#		
Tritium	pCi/L	09/16/2015	N002	45.01 - 55.01	2.72		UF	#	2.39	1.79
Turbidity	NTU	09/16/2015	N001	45.01 - 55.01	0.76		F	#		
Uranium	mg/L	09/16/2015	N001	45.01 - 55.01	0.00009	J	F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	45.01 - 55.01	0.242		F	#	0.049	0.0989
Uranium-235	pCi/L	09/16/2015	N001	45.01 - 55.01	0.049	U	F	#	0.049	0.036
Uranium-238	pCi/L	09/16/2015	N001	45.01 - 55.01	0.069	U	F	#	0.069	0.0434

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0722R WELL Replacement well for destroyed well 0722.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	11.1	-	16.1	270		F	#		
Calcium	mg/L	09/17/2015	N001	11.1	-	16.1	340		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	11.1	-	16.1	29		F	#	4	
Dissolved Oxygen	mg/L	09/17/2015	N001	11.1	-	16.1	0.54		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	11.1	-	16.1	0.02		F	#		
Iron	mg/L	09/17/2015	N001	11.1	-	16.1	0.015	J	F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	11.1	-	16.1	33		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	11.1	-	16.1	0.0025	J	F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	11.1	-	16.1	0.11		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	11.1	-	16.1	0.75		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	11.1	-	16.1	0.016		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	11.1	-	16.1	9.5		F	#		
pH	s.u.	09/17/2015	N001	11.1	-	16.1	7		F	#		
Potassium	mg/L	09/17/2015	N001	11.1	-	16.1	8.9		F	#	0.052	
Silica	mg/L	09/17/2015	N001	11.1	-	16.1	21		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	11.1	-	16.1	9.8		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	11.1	-	16.1	150		F	#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	11.1	-	16.1	2151		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site

REPORT DATE: 01/05/2016

Location: 0722R WELL Replacement well for destroyed well 0722.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	11.1	-	16.1	-127.51		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	11.1	-	16.1	-16.56		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/17/2015	0003	11.1	-	16.1	6.26		F	#		
Sulfate	mg/L	09/17/2015	N001	11.1	-	16.1	1100		F	#	10	
Temperature	C	09/17/2015	N001	11.1	-	16.1	22.36		F	#		
Tritium	pCi/L	09/17/2015	N002	11.1	-	16.1	18.9		F	#	2.39	6.78
Turbidity	NTU	09/17/2015	N001	11.1	-	16.1	0.96		F	#		
Uranium	mg/L	09/17/2015	N001	11.1	-	16.1	0.66		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	11.1	-	16.1	203		F	#	0.16	36.4
Uranium-235	pCi/L	09/17/2015	N001	11.1	-	16.1	11.5		F	#	0.068	2.3
Uranium-238	pCi/L	09/17/2015	N001	11.1	-	16.1	238		F	#	0.14	42.6

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0723 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	46.64 - 56.64	308		F	#		
Calcium	mg/L	09/17/2015	N001	46.64 - 56.64	290		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	46.64 - 56.64	59		F	#	4	
Dissolved Oxygen	mg/L	09/17/2015	N001	46.64 - 56.64	0.27		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	46.64 - 56.64	0.55		F	#		
Iron	mg/L	09/17/2015	N001	46.64 - 56.64	0.56		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	46.64 - 56.64	11		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	46.64 - 56.64	0.39		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	46.64 - 56.64	0.00032	U	F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	46.64 - 56.64	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	46.64 - 56.64	0.017		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	46.64 - 56.64	-28.8		F	#		
pH	s.u.	09/17/2015	N001	46.64 - 56.64	7.2		F	#		
Potassium	mg/L	09/17/2015	N001	46.64 - 56.64	1.9		F	#	0.052	
Silica	mg/L	09/17/2015	N001	46.64 - 56.64	22		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	46.64 - 56.64	10		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	46.64 - 56.64	630		F	#	0.47	
Specific Conductance	umhos /cm	09/17/2015	N001	46.64 - 56.64	3766		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0723 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	46.64 - 56.64	-134.53		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	46.64 - 56.64	-17.3		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/17/2015	0003	46.64 - 56.64	5.65		F	#		
Sulfate	mg/L	09/17/2015	N001	46.64 - 56.64	1900		F	#	10	
Temperature	C	09/17/2015	N001	46.64 - 56.64	11.46		F	#		
Tritium	pCi/L	09/17/2015	N002	46.64 - 56.64	21.3		F	#	2.4	7.6
Turbidity	NTU	09/17/2015	N001	46.64 - 56.64	2.32		F	#		
Uranium	mg/L	09/17/2015	N001	46.64 - 56.64	0.00018		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	46.64 - 56.64	0.052	U	F	#	0.052	0.0361
Uranium-235	pCi/L	09/17/2015	N001	46.64 - 56.64	0.028	U	F	#	0.028	0.0376
Uranium-238	pCi/L	09/17/2015	N001	46.64 - 56.64	0.076	U	F	#	0.076	0.0344

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0727 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	35.38 - 45.38	170		F	#		
Calcium	mg/L	09/17/2015	N001	35.38 - 45.38	57		F	#	0.24	
Chloride	mg/L	09/17/2015	N001	35.38 - 45.38	13		F	#	0.4	
Dissolved Oxygen	mg/L	09/17/2015	N001	35.38 - 45.38	0.2		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	35.38 - 45.38	0		F	#		
Iron	mg/L	09/17/2015	N001	35.38 - 45.38	0.067	U	F	#	0.067	
Magnesium	mg/L	09/17/2015	N001	35.38 - 45.38	6.4	J	F	#	0.3	
Manganese	mg/L	09/17/2015	N001	35.38 - 45.38	0.41		F	#	0.0024	
Molybdenum	mg/L	09/17/2015	N001	35.38 - 45.38	0.0038		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	35.38 - 45.38	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	35.38 - 45.38	0.002		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	35.38 - 45.38	2.3		F	#		
pH	s.u.	09/17/2015	N001	35.38 - 45.38	7.82		F	#		
Potassium	mg/L	09/17/2015	N001	35.38 - 45.38	0.52	U	F	#	0.52	
Silica	mg/L	09/17/2015	N001	35.38 - 45.38	12		F	#	0.21	
Silicon	mg/L	09/17/2015	N001	35.38 - 45.38	5.7		F	#	0.097	
Sodium	mg/L	09/17/2015	N001	35.38 - 45.38	73		F	#	0.47	
Specific Conductance	umhos /cm	09/17/2015	N001	35.38 - 45.38	620		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0727 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	35.38 - 45.38	-129.27		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	35.38 - 45.38	-16.82		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/17/2015	0003	35.38 - 45.38	-.81		F	#		
Sulfate	mg/L	09/17/2015	N001	35.38 - 45.38	130		F	#	1	
Temperature	C	09/17/2015	N001	35.38 - 45.38	12.42		F	#		
Tritium	pCi/L	09/17/2015	N002	35.38 - 45.38	20.2		F	#	2.64	3.77
Turbidity	NTU	09/17/2015	N001	35.38 - 45.38	6.51		F	#		
Uranium	mg/L	09/17/2015	N001	35.38 - 45.38	0.0022		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	35.38 - 45.38	1.13		F	#	0.063	0.277
Uranium-235	pCi/L	09/17/2015	N001	35.38 - 45.38	0.055	U	F	#	0.055	0.0407
Uranium-238	pCi/L	09/17/2015	N001	35.38 - 45.38	0.625		F	#	0.069	0.185

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0729 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	15.34 - 20.34	212		F	#		
Calcium	mg/L	09/16/2015	N001	15.34 - 20.34	80		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	15.34 - 20.34	6.9		F	#	2	
Dissolved Oxygen	mg/L	09/16/2015	N001	15.34 - 20.34	0.53		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	15.34 - 20.34	0.13		F	#		
Iron	mg/L	09/16/2015	N001	15.34 - 20.34	0.11	N	F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	15.34 - 20.34	20		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	15.34 - 20.34	0.0052		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	15.34 - 20.34	0.0039		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	15.34 - 20.34	1.4		F	#	0.05	
Nitrite	mg/L	09/16/2015	N001	15.34 - 20.34	0.003		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	15.34 - 20.34	67.4		F	#		
pH	s.u.	09/16/2015	N001	15.34 - 20.34	7.29		F	#		
Potassium	mg/L	09/16/2015	N001	15.34 - 20.34	7.4		F	#	0.052	
Silica	mg/L	09/16/2015	N001	15.34 - 20.34	30		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	15.34 - 20.34	14		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	15.34 - 20.34	28		F	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	15.34 - 20.34	631		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0729 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	15.34 - 20.34	-119.61		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	15.34 - 20.34	-15.3		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/16/2015	0003	15.34 - 20.34	-2.35		F	#		
Sulfate	mg/L	09/16/2015	N001	15.34 - 20.34	88		F	#	5	
Temperature	C	09/16/2015	N001	15.34 - 20.34	15.73		F	#		
Tritium	pCi/L	09/16/2015	N002	15.34 - 20.34	22.2		F	#	2.86	4.13
Turbidity	NTU	09/16/2015	N001	15.34 - 20.34	2.16		F	#		
Uranium	mg/L	09/16/2015	N001	15.34 - 20.34	0.0046		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	15.34 - 20.34	1.6		F	#	0.066	0.362
Uranium-235	pCi/L	09/16/2015	N001	15.34 - 20.34	0.0997		UF	#	0.058	0.0716
Uranium-238	pCi/L	09/16/2015	N001	15.34 - 20.34	1.39		F	#	0.049	0.325

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0730 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	39.42	-	49.42	298		FQ	#		
Calcium	mg/L	09/16/2015	N001	39.42	-	49.42	79		FQ	#	0.024	
Chloride	mg/L	09/16/2015	N001	39.42	-	49.42	7.2		FQ	#	0.4	
Dissolved Oxygen	mg/L	09/16/2015	N001	39.42	-	49.42	1.23		FQ	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	39.42	-	49.42	0.15		FQ	#		
Iron	mg/L	09/16/2015	N001	39.42	-	49.42	1.3		FQ	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	39.42	-	49.42	14		FQ	#	0.03	
Manganese	mg/L	09/16/2015	N001	39.42	-	49.42	0.092		FQ	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	39.42	-	49.42	0.0043		FQ	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	39.42	-	49.42	0.01	U	FQ	#	0.01	
Nitrite	mg/L	09/16/2015	N001	39.42	-	49.42	0.011		FQ	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	39.42	-	49.42	53.8		FQ	#		
pH	s.u.	09/16/2015	N001	39.42	-	49.42	7.53		FQ	#		
Potassium	mg/L	09/16/2015	N001	39.42	-	49.42	2.5		FQ	#	0.052	
Silica	mg/L	09/16/2015	N001	39.42	-	49.42	24		FQ	#	0.021	
Silicon	mg/L	09/16/2015	N001	39.42	-	49.42	11		FQ	#	0.0097	
Sodium	mg/L	09/16/2015	N001	39.42	-	49.42	110		FQ	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	39.42	-	49.42	903		FQ	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0730 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	39.42 - 49.42	-127.85		FQ	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	39.42 - 49.42	-16.36		FQ	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/16/2015	0003	39.42 - 49.42	0.68		FQ	#		
Sulfate	mg/L	09/16/2015	N001	39.42 - 49.42	140		FQ	#	1	
Temperature	C	09/16/2015	N001	39.42 - 49.42	14.09		FQ	#		
Tritium	pCi/L	09/16/2015	N002	39.42 - 49.42	23.8		FQ	#	2.86	4.21
Turbidity	NTU	09/16/2015	N001	39.42 - 49.42	2.27		FQ	#		
Uranium	mg/L	09/16/2015	N001	39.42 - 49.42	0.0051		FQ	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	39.42 - 49.42	2.15		FQ	#	0.075	0.461
Uranium-235	pCi/L	09/16/2015	N001	39.42 - 49.42	0.104		UFQ	#	0.06	0.0744
Uranium-238	pCi/L	09/16/2015	N001	39.42 - 49.42	1.86		FQ	#	0.068	0.411

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0732 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	26.51 - 41.51	240		F	#		
Calcium	mg/L	09/17/2015	N001	26.51 - 41.51	480		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	26.51 - 41.51	41		F	#	5	
Dissolved Oxygen	mg/L	09/17/2015	N001	26.51 - 41.51	0.25		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	26.51 - 41.51	0.02		F	#		
Iron	mg/L	09/17/2015	N001	26.51 - 41.51	0.071	J	F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	26.51 - 41.51	31		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	26.51 - 41.51	1.2		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	26.51 - 41.51	0.029		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	26.51 - 41.51	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	26.51 - 41.51	0.008		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	26.51 - 41.51	34.4		F	#		
pH	s.u.	09/17/2015	N001	26.51 - 41.51	7.22		F	#		
Potassium	mg/L	09/17/2015	N001	26.51 - 41.51	2.2		F	#	0.052	
Silica	mg/L	09/17/2015	N001	26.51 - 41.51	17		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	26.51 - 41.51	8.1		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	26.51 - 41.51	290		F	#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	26.51 - 41.51	3111		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0732 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	26.51 - 41.51	-130.92		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	26.51 - 41.51	-15.83		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/17/2015	0003	26.51 - 41.51	6.36		F	#		
Sulfate	mg/L	09/17/2015	N001	26.51 - 41.51	1700		F	#	12	
Temperature	C	09/17/2015	N001	26.51 - 41.51	12.39		F	#		
Tritium	pCi/L	09/17/2015	N002	26.51 - 41.51	18		F	#	2.8	3.47
Turbidity	NTU	09/17/2015	N001	26.51 - 41.51	0.99		F	#		
Uranium	mg/L	09/17/2015	N001	26.51 - 41.51	0.0057		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	26.51 - 41.51	2.15		F	#	0.11	0.467
Uranium-235	pCi/L	09/17/2015	N001	26.51 - 41.51	0.091	U	F	#	0.091	0.0691
Uranium-238	pCi/L	09/17/2015	N001	26.51 - 41.51	2.09		F	#	0.053	0.453

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0784 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	3.2	-	8.2	215		F	#		
Calcium	mg/L	09/17/2015	N001	3.2	-	8.2	170		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	3.2	-	8.2	18		F	#	4	
Dissolved Oxygen	mg/L	09/17/2015	N001	3.2	-	8.2	0.26		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	3.2	-	8.2	0.05		F	#		
Iron	mg/L	09/17/2015	N001	3.2	-	8.2	0.11		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	3.2	-	8.2	16		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	3.2	-	8.2	1		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	3.2	-	8.2	0.021		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	3.2	-	8.2	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	3.2	-	8.2	0.006		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	3.2	-	8.2	5		F	#		
pH	s.u.	09/17/2015	N001	3.2	-	8.2	7.29		F	#		
Potassium	mg/L	09/17/2015	N001	3.2	-	8.2	5.8		F	#	0.052	
Silica	mg/L	09/17/2015	N001	3.2	-	8.2	61		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	3.2	-	8.2	29		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	3.2	-	8.2	350		F	#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	3.2	-	8.2	2338		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0784 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	3.2	-	8.2	-129.85		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	3.2	-	8.2	-15.24		F	#		
Stable isotope ratio S-34/S-32 in Sulfate	‰	09/17/2015	0003	3.2	-	8.2	8.36		F	#		
Sulfate	mg/L	09/17/2015	N001	3.2	-	8.2	1100		F	#	10	
Temperature	C	09/17/2015	N001	3.2	-	8.2	18.32		F	#		
Tritium	pCi/L	09/17/2015	N002	3.2	-	8.2	4.93		FJ	#	2.8	1.97
Turbidity	NTU	09/17/2015	N001	3.2	-	8.2	0.96		F	#		
Uranium	mg/L	09/17/2015	N001	3.2	-	8.2	0.0026		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	3.2	-	8.2	1.04		F	#	0.087	0.277
Uranium-235	pCi/L	09/17/2015	N001	3.2	-	8.2	0.087	U	F	#	0.087	0.0665
Uranium-238	pCi/L	09/17/2015	N001	3.2	-	8.2	0.983		F	#	0.074	0.265

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0788 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	1.75 - 13.75	402		F	#		
Calcium	mg/L	09/16/2015	N001	1.75 - 13.75	230		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	1.75 - 13.75	40		F	#	4	
Dissolved Oxygen	mg/L	09/16/2015	N001	1.75 - 13.75	1.4		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	1.75 - 13.75	0		F	#		
Iron	mg/L	09/16/2015	N001	1.75 - 13.75	0.16		F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	1.75 - 13.75	69		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	1.75 - 13.75	0.25		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	1.75 - 13.75	0.02		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	1.75 - 13.75	0.01	U	F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	1.75 - 13.75	0.036		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	1.75 - 13.75	43.8		F	#		
pH	s.u.	09/16/2015	N001	1.75 - 13.75	7.24		F	#		
Potassium	mg/L	09/16/2015	N001	1.75 - 13.75	7.7		F	#	0.052	
Silica	mg/L	09/16/2015	N001	1.75 - 13.75	32		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	1.75 - 13.75	15		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	1.75 - 13.75	420		F	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	1.75 - 13.75	3039		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0788 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	1.75 - 13.75	-125.78		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	1.75 - 13.75	-15.89		F	#		
Sulfate	mg/L	09/16/2015	N001	1.75 - 13.75	1400		F	#	10	
Temperature	C	09/16/2015	N001	1.75 - 13.75	12.97		F	#		
Turbidity	NTU	09/16/2015	N001	1.75 - 13.75	1.23		F	#		
Uranium	mg/L	09/16/2015	N001	1.75 - 13.75	0.038		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	1.75 - 13.75	14.8		F	#	0.12	2.57
Uranium-235	pCi/L	09/16/2015	N001	1.75 - 13.75	0.64		F	#	0.089	0.215
Uranium-238	pCi/L	09/16/2015	N001	1.75 - 13.75	12.3		F	#	0.083	2.16

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0789 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	2.57 - 14.57	442		F	#		
Calcium	mg/L	09/15/2015	N001	2.57 - 14.57	390		F	#	0.024	
Chloride	mg/L	09/15/2015	N001	2.57 - 14.57	180		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	2.57 - 14.57	2.59		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	2.57 - 14.57	0		F	#		
Iron	mg/L	09/15/2015	N001	2.57 - 14.57	0.15		F	#	0.0067	
Magnesium	mg/L	09/15/2015	N001	2.57 - 14.57	260		F	#	0.03	
Manganese	mg/L	09/15/2015	N001	2.57 - 14.57	0.87		F	#	0.00024	
Molybdenum	mg/L	09/15/2015	N001	2.57 - 14.57	0.57		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	2.57 - 14.57	0.013		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	2.57 - 14.57	0.02		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	2.57 - 14.57	70.5		F	#		
pH	s.u.	09/15/2015	N001	2.57 - 14.57	7.16		F	#		
Potassium	mg/L	09/15/2015	N001	2.57 - 14.57	17		F	#	0.052	
Silica	mg/L	09/15/2015	N001	2.57 - 14.57	37		F	#	0.021	
Silicon	mg/L	09/15/2015	N001	2.57 - 14.57	17		F	#	0.0097	
Sodium	mg/L	09/15/2015	N001	2.57 - 14.57	1400		F	#	0.47	
Specific Conductance	umhos /cm	09/15/2015	N001	2.57 - 14.57	7876		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0789 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	2.57 - 14.57	-130.09		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	2.57 - 14.57	-16.06		F	#		
Sulfate	mg/L	09/15/2015	N001	2.57 - 14.57	4700		F	#	50	
Temperature	C	09/15/2015	N001	2.57 - 14.57	12.04		F	#		
Turbidity	NTU	09/15/2015	N001	2.57 - 14.57	9.31		F	#		
Uranium	mg/L	09/15/2015	N001	2.57 - 14.57	1.6		F	#	0.00029	
Uranium-234	pCi/L	09/15/2015	N001	2.57 - 14.57	419		FJ	#	0.045	72.4
Uranium-235	pCi/L	09/15/2015	N001	2.57 - 14.57	25.5		FJ	#	0.053	4.6
Uranium-238	pCi/L	09/15/2015	N001	2.57 - 14.57	476		FJ	#	0.23	82.1

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0824 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/18/2015	N001	9.5	-	14.5	320		F	#		
Calcium	mg/L	09/18/2015	N001	9.5	-	14.5	90		F	#	0.024	
Chloride	mg/L	09/18/2015	N001	9.5	-	14.5	6.5		F	#	0.4	
Dissolved Oxygen	mg/L	09/18/2015	N001	9.5	-	14.5	4.37		F	#		
Field Ferrous Iron	mg/L	09/18/2015	N001	9.5	-	14.5	0.01		F	#		
Iron	mg/L	09/18/2015	N001	9.5	-	14.5	0.0067	U	F	#	0.0067	
Magnesium	mg/L	09/18/2015	N001	9.5	-	14.5	24		F	#	0.03	
Manganese	mg/L	09/18/2015	N001	9.5	-	14.5	0.00086	J	F	#	0.00024	
Molybdenum	mg/L	09/18/2015	N001	9.5	-	14.5	0.0036		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2015	N001	9.5	-	14.5	0.67		F	#	0.01	
Oxidation Reduction Potential	mV	09/18/2015	N001	9.5	-	14.5	132.5		F	#		
pH	s.u.	09/18/2015	N001	9.5	-	14.5	7.29		F	#		
Potassium	mg/L	09/18/2015	N001	9.5	-	14.5	6.7		F	#	0.052	
Silica	mg/L	09/18/2015	N001	9.5	-	14.5	34		F	#	0.021	
Silicon	mg/L	09/18/2015	N001	9.5	-	14.5	16		F	#	0.0097	
Sodium	mg/L	09/18/2015	N001	9.5	-	14.5	67		F	#	0.047	
Specific Conductance	umhos /cm	09/18/2015	N001	9.5	-	14.5	844		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/18/2015	N003	9.5	-	14.5	-124.25		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0824 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio O18/O16 in Water	‰	09/18/2015	N003	9.5	-	14.5	-15.95		F	#		
Sulfate	mg/L	09/18/2015	N001	9.5	-	14.5	130		F	#	1	
Temperature	C	09/18/2015	N001	9.5	-	14.5	13.66		F	#		
Turbidity	NTU	09/18/2015	N001	9.5	-	14.5	1.93		F	#		
Uranium	mg/L	09/18/2015	N001	9.5	-	14.5	0.013		F	#	0.000029	
Uranium-234	pCi/L	09/18/2015	N001	9.5	-	14.5	5.07		F	#	0.035	0.827
Uranium-235	pCi/L	09/18/2015	N001	9.5	-	14.5	0.212		F	#	0.041	0.0714
Uranium-238	pCi/L	09/18/2015	N001	9.5	-	14.5	4.09		F	#	0.01	0.677

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0826 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	6.6	-	11.6	371		F	#		
Calcium	mg/L	09/16/2015	N001	6.6	-	11.6	210		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	6.6	-	11.6	38		F	#	4	
Dissolved Oxygen	mg/L	09/16/2015	N001	6.6	-	11.6	1.24		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	6.6	-	11.6	0.18		F	#		
Iron	mg/L	09/16/2015	N001	6.6	-	11.6	0.055	J	UF	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	6.6	-	11.6	60		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	6.6	-	11.6	1.6		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	6.6	-	11.6	0.018		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	6.6	-	11.6	0.01	U	F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	6.6	-	11.6	0.026		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	6.6	-	11.6	14.6		F	#		
pH	s.u.	09/16/2015	N001	6.6	-	11.6	7.19		F	#		
Potassium	mg/L	09/16/2015	N001	6.6	-	11.6	7.7		F	#	0.052	
Silica	mg/L	09/16/2015	N001	6.6	-	11.6	31		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	6.6	-	11.6	14		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	6.6	-	11.6	410		F	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	6.6	-	11.6	2908		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0826 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	6.6 - 11.6	-126.89		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	6.6 - 11.6	-15.98		F	#		
Sulfate	mg/L	09/16/2015	N001	6.6 - 11.6	1300		F	#	10	
Temperature	C	09/16/2015	N001	6.6 - 11.6	12.18		F	#		
Turbidity	NTU	09/16/2015	N001	6.6 - 11.6	0.96		F	#		
Uranium	mg/L	09/16/2015	N001	6.6 - 11.6	0.037		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	6.6 - 11.6	13.5		F	#	0.036	2.12
Uranium-235	pCi/L	09/16/2015	N001	6.6 - 11.6	0.482		F	#	0.011	0.114
Uranium-238	pCi/L	09/16/2015	N001	6.6 - 11.6	11.7		F	#	0.031	1.84

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0828 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/14/2015	N001	-	129			#		
Calcium	mg/L	09/14/2015	N001	-	3.5			#	0.024	
Chloride	mg/L	09/14/2015	N001	-	14			#	0.8	
Dissolved Oxygen	mg/L	09/14/2015	N001	-	5.31			#		
Magnesium	mg/L	09/14/2015	N001	-	0.082	J		#	0.03	
Manganese	mg/L	09/14/2015	N001	-	0.0023	J		#	0.00024	
Molybdenum	mg/L	09/14/2015	N001	-	0.0029			#	0.00032	
Oxidation Reduction Potential	mV	09/14/2015	N001	-	175.8			#		
pH	s.u.	09/14/2015	N001	-	8.7			#		
Potassium	mg/L	09/14/2015	N001	-	0.42	J		#	0.052	
Sodium	mg/L	09/14/2015	N001	-	180			#	0.047	
Specific Conductance	umhos /cm	09/14/2015	N001	-	824			#		
Sulfate	mg/L	09/14/2015	N001	-	220			#	2	
Temperature	C	09/14/2015	N001	-	18.75			#		
Turbidity	NTU	09/14/2015	N001	-	3.79		J	#		
Uranium	mg/L	09/14/2015	N001	-	0.00008	J		#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0841 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2015	N001	-	200			#		
Calcium	mg/L	09/17/2015	N001	-	85			#	0.024	
Chloride	mg/L	09/17/2015	N001	-	26			#	0.8	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	2.84			#		
Magnesium	mg/L	09/17/2015	N001	-	14			#	0.03	
Manganese	mg/L	09/17/2015	N001	-	0.1			#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.003			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	-	129.2			#		
pH	s.u.	09/17/2015	N001	-	7.59			#		
Potassium	mg/L	09/17/2015	N001	-	2.4			#	0.052	
Sodium	mg/L	09/17/2015	N001	-	96			#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	-	895			#		
Sulfate	mg/L	09/17/2015	N001	-	240			#	2	
Temperature	C	09/17/2015	N001	-	16.64			#		
Turbidity	NTU	09/17/2015	N001	-	1.81			#		
Uranium	mg/L	09/17/2015	N001	-	0.0019			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0842 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	169			#		
Calcium	mg/L	09/17/2015	N001	-	57			#	0.024	
Chloride	mg/L	09/17/2015	N001	-	15			#	0.4	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	4.66			#		
Magnesium	mg/L	09/17/2015	N001	-	6.5			#	0.03	
Manganese	mg/L	09/17/2015	N001	-	0.058			#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.0022			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	-	37.6			#		
pH	s.u.	09/17/2015	N001	-	7.95			#		
Potassium	mg/L	09/17/2015	N001	-	0.65	J		#	0.052	
Sodium	mg/L	09/17/2015	N001	-	82			#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	-	665			#		
Sulfate	mg/L	09/17/2015	N001	-	160			#	1	
Temperature	C	09/17/2015	N001	-	10.93			#		
Turbidity	NTU	09/17/2015	N001	-	2.27			#		
Uranium	mg/L	09/17/2015	N001	-	0.0004			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0852-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	325		F	#		
Calcium	mg/L	09/15/2015	N001	-	120		F	#	0.024	
Chloride	mg/L	09/15/2015	N001	-	27		F	#	2	
Field Ferrous Iron	mg/L	09/15/2015	N001	-	0.1		F	#		
Iron	mg/L	09/15/2015	N001	-	0.57		F	#	0.0067	
Magnesium	mg/L	09/15/2015	N001	-	29		F	#	0.03	
Manganese	mg/L	09/15/2015	N001	-	0.68		F	#	0.00024	
Molybdenum	mg/L	09/15/2015	N001	-	0.0089		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	2.1		F	#	0.05	
Nitrite	mg/L	09/15/2015	N001	-	0.019		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	33.1		F	#		
pH	s.u.	09/15/2015	N001	-	7.76		F	#		
Potassium	mg/L	09/15/2015	N001	-	4.5		F	#	0.052	
Silica	mg/L	09/15/2015	N001	-	21		F	#	0.021	
Silicon	mg/L	09/15/2015	N001	-	10		F	#	0.0097	
Sodium	mg/L	09/15/2015	N001	-	220		F	#	0.047	
Specific Conductance	umhos /cm	09/15/2015	N001	-	1607		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-126.47		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0852-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.2		F	#		
Sulfate	mg/L	09/15/2015	N001	-	480		F	#	5	
Temperature	C	09/15/2015	N001	-	11.3		F	#		
Turbidity	NTU	09/15/2015	N001	-	8.25		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.021		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	10.3		F	#	0.039	1.64
Uranium-235	pCi/L	09/15/2015	N001	-	0.44		F	#	0.031	0.11
Uranium-238	pCi/L	09/15/2015	N001	-	7.04		F	#	0.039	1.13

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0852-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	330		F	#		
Calcium	mg/L	09/15/2015	N001	-	110		F	#	0.024	
Chloride	mg/L	09/15/2015	N001	-	26		F	#	1	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	0.31		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	0		F	#		
Iron	mg/L	09/15/2015	N001	-	0.065	J	F	#	0.0067	
Magnesium	mg/L	09/15/2015	N001	-	28		F	#	0.03	
Manganese	mg/L	09/15/2015	N001	-	0.64		F	#	0.00024	
Molybdenum	mg/L	09/15/2015	N001	-	0.011		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	2.5		F	#	0.05	
Nitrite	mg/L	09/15/2015	N001	-	0.86		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	62.1		F	#		
pH	s.u.	09/15/2015	N001	-	7.76		F	#		
Potassium	mg/L	09/15/2015	N001	-	4.4		F	#	0.052	
Silica	mg/L	09/15/2015	N001	-	18		F	#	0.021	
Silicon	mg/L	09/15/2015	N001	-	8.2		F	#	0.0097	
Sodium	mg/L	09/15/2015	N001	-	220		F	#	0.047	
Specific Conductance	umhos /cm	09/15/2015	N001	-	1586		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0852-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-126.26		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.2		F	#		
Sulfate	mg/L	09/15/2015	N001	-	480		F	#	2.5	
Temperature	C	09/15/2015	N001	-	10.44		F	#		
Turbidity	NTU	09/15/2015	N001	-	3.08		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.018		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	9.08		F	#	0.039	1.43
Uranium-235	pCi/L	09/15/2015	N001	-	0.296		F	#	0.028	0.0819
Uranium-238	pCi/L	09/15/2015	N001	-	6.18		F	#	0.0088	0.988

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0853-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	430		F	#		
Calcium	mg/L	09/16/2015	N001	-	230		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	-	50		F	#	5	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	1.78		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	2.08		F	#		
Iron	mg/L	09/16/2015	N001	-	2.8		F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	-	66		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	-	5.1		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	-	0.046		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.012		F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.022		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-84.5		F	#		
pH	s.u.	09/16/2015	N001	-	7.26		F	#		
Potassium	mg/L	09/16/2015	N001	-	8.2		F	#	0.052	
Silica	mg/L	09/16/2015	N001	-	31		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	-	15		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	-	480		F	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	-	3359		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0853-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-125.33		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-15.79		F	#		
Sulfate	mg/L	09/16/2015	N001	-	1700		F	#	12	
Temperature	C	09/16/2015	N001	-	14.37		F	#		
Turbidity	NTU	09/16/2015	N001	-	2.32		F	#		
Uranium	mg/L	09/16/2015	N001	-	0.028		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	-	11.5		F	#	0.023	1.81
Uranium-235	pCi/L	09/16/2015	N001	-	0.499		F	#	0.01	0.115
Uranium-238	pCi/L	09/16/2015	N001	-	9.3		F	#	0.038	1.46

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0853-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	412		F	#		
Calcium	mg/L	09/16/2015	N001	-	260		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	-	53		F	#	5	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	1.5		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	0.5		F	#		
Iron	mg/L	09/16/2015	N001	-	0.63		F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	-	67		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	-	3.8		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	-	0.029		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.04		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-49.9		F	#		
pH	s.u.	09/16/2015	N001	-	7.23		F	#		
Potassium	mg/L	09/16/2015	N001	-	8.9		F	#	0.052	
Silica	mg/L	09/16/2015	N001	-	24		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	-	11		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	-	490		F	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	-	3417		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0853-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-126.3		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-15.96		F	#		
Sulfate	mg/L	09/16/2015	N001	-	1700		F	#	12	
Temperature	C	09/16/2015	N001	-	12.75		F	#		
Turbidity	NTU	09/16/2015	N001	-	1.61		F	#		
Uranium	mg/L	09/16/2015	N001	-	0.021		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	-	8.7		F	#	0.029	1.39
Uranium-235	pCi/L	09/16/2015	N001	-	0.346		F	#	0.013	0.0962
Uranium-238	pCi/L	09/16/2015	N001	-	6.63		F	#	0.042	1.07

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0853-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	388		F	#		
Calcium	mg/L	09/16/2015	N001	-	250		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	-	53		F	#	5	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	1.29		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	2.96		F	#		
Iron	mg/L	09/16/2015	N001	-	3.3		F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	-	65		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	-	3.8		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	-	0.026		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.061		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-174.9		F	#		
pH	s.u.	09/16/2015	N001	-	7.38		F	#		
Potassium	mg/L	09/16/2015	N001	-	8.1		F	#	0.052	
Silica	mg/L	09/16/2015	N001	-	24		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	-	11		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	-	430		F	#	0.047	
Specific Conductance	umhos /cm	09/16/2015	N001	-	3059		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0853-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-127.02		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-16.05		F	#		
Sulfate	mg/L	09/16/2015	N001	-	1500		F	#	12	
Temperature	C	09/16/2015	N001	-	11.91		F	#		
Turbidity	NTU	09/16/2015	N001	-	9.79		F	#		
Uranium	mg/L	09/16/2015	N001	-	0.022		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	-	8.5		F	#	0.012	1.37
Uranium-235	pCi/L	09/16/2015	N001	-	0.348		F	#	0.014	0.1
Uranium-238	pCi/L	09/16/2015	N001	-	6.86		F	#	0.032	1.12

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0854-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	470		F	#		
Calcium	mg/L	09/16/2015	N001	-	310		F	#	0.12	
Chloride	mg/L	09/16/2015	N001	-	72		F	#	10	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	1.49		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	2.48		F	#		
Iron	mg/L	09/16/2015	N001	-	2.9		F	#	0.033	
Magnesium	mg/L	09/16/2015	N001	-	97		F	#	0.15	
Manganese	mg/L	09/16/2015	N001	-	3		F	#	0.0012	
Molybdenum	mg/L	09/16/2015	N001	-	0.035		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.027		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-79.4		F	#		
pH	s.u.	09/16/2015	N001	-	7.07		F	#		
Potassium	mg/L	09/16/2015	N001	-	13		F	#	0.26	
Silica	mg/L	09/16/2015	N001	-	31		F	#	0.1	
Silicon	mg/L	09/16/2015	N001	-	14		F	#	0.048	
Sodium	mg/L	09/16/2015	N001	-	700		F	#	0.23	
Specific Conductance	umhos /cm	09/16/2015	N001	-	4441		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0854-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-126.57		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-15.96		F	#		
Sulfate	mg/L	09/16/2015	N001	-	2300		F	#	25	
Temperature	C	09/16/2015	N001	-	13.16		F	#		
Turbidity	NTU	09/16/2015	N001	-	1.38		F	#		
Uranium	mg/L	09/16/2015	N001	-	0.059		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	-	20.5		F	#	0.042	3.19
Uranium-235	pCi/L	09/16/2015	N001	-	0.908		F	#	0.044	0.186
Uranium-238	pCi/L	09/16/2015	N001	-	18.7		F	#	0.026	2.92

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0854-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	298		F	#		
Calcium	mg/L	09/16/2015	N001	-	230		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	-	56		F	#	5	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	1.19		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	0.61		F	#		
Iron	mg/L	09/16/2015	N001	-	0.82		F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	-	72		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	-	1.6		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	-	0.03		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.001		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-41.2		F	#		
pH	s.u.	09/16/2015	N001	-	7.18		F	#		
Potassium	mg/L	09/16/2015	N001	-	9.8		F	#	0.052	
Silica	mg/L	09/16/2015	N001	-	33		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	-	16		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	-	600		F	#	0.23	
Specific Conductance	umhos /cm	09/16/2015	N001	-	3586		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0854-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-126.22		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-16.02		F	#		
Sulfate	mg/L	09/16/2015	N001	-	1800		F	#	12	
Temperature	C	09/16/2015	N001	-	13.05		F	#		
Turbidity	NTU	09/16/2015	N001	-	2.22		F	#		
Uranium	mg/L	09/16/2015	N001	-	0.04		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	-	14.7		F	#	0.038	2.31
Uranium-235	pCi/L	09/16/2015	N001	-	0.717		F	#	0.03	0.155
Uranium-238	pCi/L	09/16/2015	N001	-	13.2		F	#	0.046	2.07

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0854-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	420		F	#		
Calcium	mg/L	09/17/2015	N001	-	270		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	-	63		F	#	5	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	1.41		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	2.13		F	#		
Iron	mg/L	09/17/2015	N001	-	6.3		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	-	86		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	-	3.1		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.038		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.012		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.025		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-109.2		F	#		
pH	s.u.	09/17/2015	N001	-	7.26		F	#		
Potassium	mg/L	09/17/2015	N001	-	11		F	#	0.052	
Silica	mg/L	09/17/2015	N001	-	34		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	-	16		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	-	590		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	3819		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0854-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-126.48		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-16.02		F	#		
Sulfate	mg/L	09/17/2015	N001	-	2000		F	#	12	
Temperature	C	09/17/2015	N001	-	10.7		F	#		
Turbidity	NTU	09/17/2015	N001	-	8.9		F	#		
Uranium	mg/L	09/17/2015	N001	-	0.034		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	-	11.3		F	#	0.03	1.78
Uranium-235	pCi/L	09/17/2015	N001	-	0.454		F	#	0.01	0.108
Uranium-238	pCi/L	09/17/2015	N001	-	10.4		F	#	0.03	1.64

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0855-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	520		F	#		
Calcium	mg/L	09/16/2015	N001	-	380		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	-	410		F	#	20	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	1.91		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	2.99		F	#		
Iron	mg/L	09/16/2015	N001	-	3		F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	-	320		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	-	3.1		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	-	0.34		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.034		F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.1		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-34.9		F	#		
pH	s.u.	09/16/2015	N001	-	7.18		F	#		
Potassium	mg/L	09/16/2015	N001	-	20		F	#	0.052	
Silica	mg/L	09/16/2015	N001	-	33		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	-	15		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	-	2000		F	#	0.47	
Specific Conductance	umhos /cm	09/16/2015	N001	-	10540		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0855-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-127.9		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-16		F	#		
Sulfate	mg/L	09/16/2015	N001	-	6100		F	#	50	
Sulfide	mg/L	09/16/2015	N001	-	2	U	F	#	2	
Temperature	C	09/16/2015	N001	-	14.65		F	#		
Turbidity	NTU	09/16/2015	N001	-	2.35		F	#		
Uranium	mg/L	09/16/2015	N001	-	1.4		F	#	0.00029	
Uranium-234	pCi/L	09/16/2015	N001	-	430		F	#	0.1	85.5
Uranium-235	pCi/L	09/16/2015	N001	-	22.4		F	#	0.12	4.87
Uranium-238	pCi/L	09/16/2015	N001	-	470		F	#	0.37	93.5

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0855-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	468		F	#		
Calcium	mg/L	09/16/2015	N001	-	460		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	-	380		F	#	20	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	0.44		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	0.19		F	#		
Iron	mg/L	09/16/2015	N001	-	0.36		F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	-	300		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	-	1.3		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	-	0.32		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.017		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	28.7		F	#		
pH	s.u.	09/16/2015	N001	-	7.15		F	#		
Potassium	mg/L	09/16/2015	N001	-	18		F	#	0.052	
Silica	mg/L	09/16/2015	N001	-	31		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	-	14		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	-	1700		F	#	0.47	
Specific Conductance	umhos /cm	09/16/2015	N001	-	9531		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0855-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-128.25		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-15.86		F	#		
Sulfate	mg/L	09/16/2015	N001	-	5600		F	#	50	
Sulfide	mg/L	09/16/2015	N001	-	2	U	F	#	2	
Temperature	C	09/16/2015	N001	-	13.93		F	#		
Turbidity	NTU	09/16/2015	N001	-	1.71		F	#		
Uranium	mg/L	09/16/2015	N001	-	1.3		F	#	0.00029	
Uranium-234	pCi/L	09/16/2015	N001	-	386		F	#	0.23	75
Uranium-235	pCi/L	09/16/2015	N001	-	24.8		F	#	0.27	5.18
Uranium-238	pCi/L	09/16/2015	N001	-	436		F	#	0.091	84.6

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0855-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	440		F	#		
Calcium	mg/L	09/16/2015	N001	-	490		F	#	0.024	
Chloride	mg/L	09/16/2015	N001	-	390		F	#	20	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	0.23		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	2.18		F	#		
Iron	mg/L	09/16/2015	N001	-	2.8		F	#	0.0067	
Magnesium	mg/L	09/16/2015	N001	-	280		F	#	0.03	
Manganese	mg/L	09/16/2015	N001	-	4.3		F	#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	-	0.25		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.022		F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.2		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-30.8		F	#		
pH	s.u.	09/16/2015	N001	-	7.12		F	#		
Potassium	mg/L	09/16/2015	N001	-	15		F	#	0.052	
Silica	mg/L	09/16/2015	N001	-	26		F	#	0.021	
Silicon	mg/L	09/16/2015	N001	-	12		F	#	0.0097	
Sodium	mg/L	09/16/2015	N001	-	1600		F	#	0.47	
Specific Conductance	umhos /cm	09/16/2015	N001	-	8929		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0855-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-128.86		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-15.95		F	#		
Sulfate	mg/L	09/16/2015	N001	-	5100		F	#	50	
Sulfide	mg/L	09/16/2015	N001	-	2	U	F	#	2	
Temperature	C	09/16/2015	N001	-	11.3		F	#		
Turbidity	NTU	09/16/2015	N001	-	2.27		F	#		
Uranium	mg/L	09/16/2015	N001	-	0.86		F	#	0.000029	
Uranium-234	pCi/L	09/16/2015	N001	-	253		F	#	0.18	45.9
Uranium-235	pCi/L	09/16/2015	N001	-	17.9		F	#	0.073	3.51
Uranium-238	pCi/L	09/16/2015	N001	-	298		F	#	0.16	54.1

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0856-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	390		F	#		
Calcium	mg/L	09/17/2015	N001	-	460		F	#	0.12	
Chloride	mg/L	09/17/2015	N001	-	150		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	1.49		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	1.1		F	#		
Iron	mg/L	09/17/2015	N001	-	1.6		F	#	0.033	
Magnesium	mg/L	09/17/2015	N001	-	170		F	#	0.15	
Manganese	mg/L	09/17/2015	N001	-	5.5		F	#	0.0012	
Molybdenum	mg/L	09/17/2015	N001	-	0.29		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.018		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.032		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-36.1		F	#		
pH	s.u.	09/17/2015	N001	-	7.23		F	#		
Potassium	mg/L	09/17/2015	N001	-	21		F	#	0.26	
Silica	mg/L	09/17/2015	N001	-	27		F	#	0.1	
Silicon	mg/L	09/17/2015	N001	-	12		F	#	0.048	
Sodium	mg/L	09/17/2015	N001	-	1000		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	6439		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0856-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-128.13		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-15.88		F	#		
Sulfate	mg/L	09/17/2015	N001	-	3900		F	#	25	
Temperature	C	09/17/2015	N001	-	13.85		F	#		
Turbidity	NTU	09/17/2015	N001	-	1.63		F	#		
Uranium	mg/L	09/17/2015	N001	-	0.47		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	-	131		F	#	0.1	22.5
Uranium-235	pCi/L	09/17/2015	N001	-	7.71		F	#	0.1	1.51
Uranium-238	pCi/L	09/17/2015	N001	-	145		F	#	0.15	24.9

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0856-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	381		F	#		
Calcium	mg/L	09/17/2015	N001	-	470		F	#	0.12	
Chloride	mg/L	09/17/2015	N001	-	170		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	1.39		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	0.48		F	#		
Iron	mg/L	09/17/2015	N001	-	0.56		F	#	0.033	
Magnesium	mg/L	09/17/2015	N001	-	180		F	#	0.15	
Manganese	mg/L	09/17/2015	N001	-	1.3		F	#	0.0012	
Molybdenum	mg/L	09/17/2015	N001	-	0.34		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.014		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.041		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-12		F	#		
pH	s.u.	09/17/2015	N001	-	7.11		F	#		
Potassium	mg/L	09/17/2015	N001	-	16		F	#	0.26	
Silica	mg/L	09/17/2015	N001	-	29		F	#	0.1	
Silicon	mg/L	09/17/2015	N001	-	14		F	#	0.048	
Sodium	mg/L	09/17/2015	N001	-	1000		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	6453		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0856-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-129.33		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-15.93		F	#		
Sulfate	mg/L	09/17/2015	N001	-	3900		F	#	25	
Temperature	C	09/17/2015	N001	-	13.2		F	#		
Turbidity	NTU	09/17/2015	N001	-	0.91		F	#		
Uranium	mg/L	09/17/2015	N001	-	1.1		F	#	0.00029	
Uranium-234	pCi/L	09/17/2015	N001	-	279		F	#	0.19	51.4
Uranium-235	pCi/L	09/17/2015	N001	-	15.2		F	#	0.08	3.1
Uranium-238	pCi/L	09/17/2015	N001	-	315		F	#	0.17	58

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0856-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	409		F	#		
Calcium	mg/L	09/17/2015	N001	-	480		F	#	0.12	
Chloride	mg/L	09/17/2015	N001	-	200		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	1.26		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	1.62		F	#		
Iron	mg/L	09/17/2015	N001	-	2.1		F	#	0.033	
Magnesium	mg/L	09/17/2015	N001	-	180		F	#	0.15	
Manganese	mg/L	09/17/2015	N001	-	1.9		F	#	0.0012	
Molybdenum	mg/L	09/17/2015	N001	-	0.3		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.01		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.093		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-61.8		F	#		
pH	s.u.	09/17/2015	N001	-	7.14		F	#		
Potassium	mg/L	09/17/2015	N001	-	15		F	#	0.26	
Silica	mg/L	09/17/2015	N001	-	27		F	#	0.1	
Silicon	mg/L	09/17/2015	N001	-	13		F	#	0.048	
Sodium	mg/L	09/17/2015	N001	-	1000		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	6554		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0856-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-129.82		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-16		F	#		
Sulfate	mg/L	09/17/2015	N001	-	4000		F	#	25	
Temperature	C	09/17/2015	N001	-	12.73		F	#		
Turbidity	NTU	09/17/2015	N001	-	3.22		F	#		
Uranium	mg/L	09/17/2015	N001	-	1.1		F	#	0.00029	
Uranium-234	pCi/L	09/17/2015	N001	-	303		F	#	0.2	57.5
Uranium-235	pCi/L	09/17/2015	N001	-	16.4		F	#	0.094	3.44
Uranium-238	pCi/L	09/17/2015	N001	-	341		F	#	0.3	64.7

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0857-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	447		F	#		
Calcium	mg/L	09/16/2015	N001	-	580		F	#	0.12	
Chloride	mg/L	09/16/2015	N001	-	200		F	#	10	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	2.09		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	1.1		F	#		
Iron	mg/L	09/16/2015	N001	-	3.3		F	#	0.033	
Magnesium	mg/L	09/16/2015	N001	-	200		F	#	0.15	
Manganese	mg/L	09/16/2015	N001	-	2.5		F	#	0.0012	
Molybdenum	mg/L	09/16/2015	N001	-	0.6		F	#	0.0016	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.012		F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.024		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-65.2		F	#		
pH	s.u.	09/16/2015	N001	-	7.05		F	#		
Potassium	mg/L	09/16/2015	N001	-	21		F	#	0.26	
Silica	mg/L	09/16/2015	N001	-	35		F	#	0.1	
Silicon	mg/L	09/16/2015	N001	-	16		F	#	0.048	
Sodium	mg/L	09/16/2015	N001	-	1200		F	#	0.23	
Specific Conductance	umhos /cm	09/16/2015	N001	-	7690		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0857-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-130.77		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-16.04		F	#		
Sulfate	mg/L	09/16/2015	N001	-	4700		F	#	25	
Temperature	C	09/16/2015	N001	-	15.58		F	#		
Turbidity	NTU	09/16/2015	N001	-	1.25		F	#		
Uranium	mg/L	09/16/2015	N001	-	1.3		F	#	0.00015	
Uranium-234	pCi/L	09/16/2015	N001	-	363		FJ	#	0.2	65
Uranium-235	pCi/L	09/16/2015	N001	-	24		FJ	#	0.16	4.53
Uranium-238	pCi/L	09/16/2015	N001	-	419		FJ	#	0.23	75.2

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0857-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	-	437		F	#		
Calcium	mg/L	09/16/2015	N001	-	590		F	#	0.12	
Chloride	mg/L	09/16/2015	N001	-	200		F	#	10	
Dissolved Oxygen	mg/L	09/16/2015	N001	-	1.57		F	#		
Field Ferrous Iron	mg/L	09/16/2015	N001	-	4.11		F	#		
Iron	mg/L	09/16/2015	N001	-	7.1		F	#	0.033	
Magnesium	mg/L	09/16/2015	N001	-	190		F	#	0.15	
Manganese	mg/L	09/16/2015	N001	-	4		F	#	0.0012	
Molybdenum	mg/L	09/16/2015	N001	-	0.55		F	#	0.0016	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2015	N001	-	0.012		F	#	0.01	
Nitrite	mg/L	09/16/2015	N001	-	0.061		F	#		
Oxidation Reduction Potential	mV	09/16/2015	N001	-	-91.5		F	#		
pH	s.u.	09/16/2015	N001	-	7.14		F	#		
Potassium	mg/L	09/16/2015	N001	-	21		F	#	0.26	
Silica	mg/L	09/16/2015	N001	-	34		F	#	0.1	
Silicon	mg/L	09/16/2015	N001	-	16		F	#	0.048	
Sodium	mg/L	09/16/2015	N001	-	1200		F	#	0.23	
Specific Conductance	umhos /cm	09/16/2015	N001	-	7475		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0857-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/16/2015	N003	-	-130.55		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/16/2015	N003	-	-16.05		F	#		
Sulfate	mg/L	09/16/2015	N001	-	4600		F	#	25	
Temperature	C	09/16/2015	N001	-	15.45		F	#		
Turbidity	NTU	09/16/2015	N001	-	2.18		F	#		
Uranium	mg/L	09/16/2015	N001	-	0.99		F	#	0.00015	
Uranium-234	pCi/L	09/16/2015	N001	-	320		FJ	#	0.14	53.7
Uranium-235	pCi/L	09/16/2015	N001	-	21.2		FJ	#	0.11	3.72
Uranium-238	pCi/L	09/16/2015	N001	-	357		FJ	#	0.096	59.9

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0858-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	376		F	#		
Calcium	mg/L	09/15/2015	N001	-	410		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	94		F	#	10	
Field Ferrous Iron	mg/L	09/15/2015	N001	-	1.02		F	#		
Iron	mg/L	09/15/2015	N001	-	1.7		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	100		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	5.9		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.9		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.011		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.01		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-33.9		F	#		
pH	s.u.	09/15/2015	N001	-	7.22		F	#		
Potassium	mg/L	09/15/2015	N001	-	14		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	27		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	13		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	680		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	4519		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-130.18		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0858-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.3		F	#		
Sulfate	mg/L	09/15/2015	N001	-	2600		F	#	25	
Temperature	C	09/15/2015	N001	-	15.19		F	#		
Turbidity	NTU	09/15/2015	N001	-	2.04		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.31		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	86.9		F	#	0.12	14.7
Uranium-235	pCi/L	09/15/2015	N001	-	5.62		F	#	0.087	1.11
Uranium-238	pCi/L	09/15/2015	N001	-	95.3		F	#	0.1	16.1

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0858-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	334		F	#		
Calcium	mg/L	09/15/2015	N001	-	400		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	95		F	#	10	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	2.85		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	2.06		F	#		
Iron	mg/L	09/15/2015	N001	-	3.9		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	110		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	1.5		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.85		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.015		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.002		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-63		F	#		
pH	s.u.	09/15/2015	N001	-	7.18		F	#		
Potassium	mg/L	09/15/2015	N001	-	13		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	28		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	13		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	630		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	4495		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0858-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-130.13		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.41		F	#		
Sulfate	mg/L	09/15/2015	N001	-	2500		F	#	25	
Temperature	C	09/15/2015	N001	-	13.58		F	#		
Turbidity	NTU	09/15/2015	N001	-	9.54		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.61		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	164		F	#	0.22	28.6
Uranium-235	pCi/L	09/15/2015	N001	-	8.68		F	#	0.17	1.72
Uranium-238	pCi/L	09/15/2015	N001	-	178		F	#	0.096	31.1

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0858-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	320		F	#		
Calcium	mg/L	09/15/2015	N001	-	390		F	#	0.12	
Calcium	mg/L	09/15/2015	N002	-	350		F	#	0.024	
Chloride	mg/L	09/15/2015	N002	-	96		F	#	10	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.55		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	1.88		F	#		
Iron	mg/L	09/15/2015	N001	-	2.8		F	#	0.033	
Iron	mg/L	09/15/2015	N002	-	2.6		F	#	0.0067	
Magnesium	mg/L	09/15/2015	N001	-	110		F	#	0.15	
Magnesium	mg/L	09/15/2015	N002	-	110		F	#	0.03	
Manganese	mg/L	09/15/2015	N001	-	1.6		F	#	0.0012	
Manganese	mg/L	09/15/2015	N002	-	1.5		F	#	0.00024	
Molybdenum	mg/L	09/15/2015	N001	-	0.79		F	#	0.00032	
Molybdenum	mg/L	09/15/2015	N002	-	0.73		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.01	U	F	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N002	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.012		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-51.8		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0858-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
pH	s.u.	09/15/2015	N001	-	7.13		F	#		
Potassium	mg/L	09/15/2015	N001	-	13		F	#	0.26	
Potassium	mg/L	09/15/2015	N002	-	13		F	#	0.052	
Silica	mg/L	09/15/2015	N001	-	27		F	#	0.1	
Silica	mg/L	09/15/2015	N002	-	28		F	#	0.021	
Silicon	mg/L	09/15/2015	N001	-	13		F	#	0.048	
Silicon	mg/L	09/15/2015	N002	-	13		F	#	0.0097	
Sodium	mg/L	09/15/2015	N001	-	620		F	#	0.23	
Sodium	mg/L	09/15/2015	N002	-	630		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	4420		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-130.59		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N004	-	-129.62		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.34		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N004	-	-16.31		F	#		
Sulfate	mg/L	09/15/2015	N002	-	2400		F	#	25	
Temperature	C	09/15/2015	N001	-	12.7		F	#		
Turbidity	NTU	09/15/2015	N001	-	2.35		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.52		F	#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0858-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Uranium	mg/L	09/15/2015	N002	-	0.49		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	143		F	#	0.17	25.1
Uranium-234	pCi/L	09/15/2015	N002	-	147		F	#	0.56	24.6
Uranium-235	pCi/L	09/15/2015	N001	-	8.65		F	#	0.16	1.73
Uranium-235	pCi/L	09/15/2015	N002	-	8.16		F	#	0.5	2.23
Uranium-238	pCi/L	09/15/2015	N001	-	158		F	#	0.15	27.7
Uranium-238	pCi/L	09/15/2015	N002	-	151		F	#	0.42	25.3

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0859-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	314		F	#		
Calcium	mg/L	09/17/2015	N001	-	350		F	#	0.12	
Chloride	mg/L	09/17/2015	N001	-	35		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	0.24		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	0.24		F	#		
Iron	mg/L	09/17/2015	N001	-	0.85		F	#	0.033	
Magnesium	mg/L	09/17/2015	N001	-	37		F	#	0.15	
Manganese	mg/L	09/17/2015	N001	-	1.4		F	#	0.0012	
Molybdenum	mg/L	09/17/2015	N001	-	0.066		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.012		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.013		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	22.9		F	#		
pH	s.u.	09/17/2015	N001	-	7.06		F	#		
Potassium	mg/L	09/17/2015	N001	-	9		F	#	0.26	
Silica	mg/L	09/17/2015	N001	-	38		F	#	0.1	
Silicon	mg/L	09/17/2015	N001	-	18		F	#	0.048	
Sodium	mg/L	09/17/2015	N001	-	800		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	4546		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0859-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-131.69		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-16.03		F	#		
Sulfate	mg/L	09/17/2015	N001	-	2600		F	#	25	
Temperature	C	09/17/2015	N001	-	17.55		F	#		
Turbidity	NTU	09/17/2015	N001	-	1.63		F	#		
Uranium	mg/L	09/17/2015	N001	-	0.078		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	-	24.7		F	#	0.062	3.84
Uranium-235	pCi/L	09/17/2015	N001	-	1.3		F	#	0.045	0.249
Uranium-238	pCi/L	09/17/2015	N001	-	26		F	#	0.043	4.04

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0859-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	285		F	#		
Calcium	mg/L	09/17/2015	N001	-	450		F	#	0.12	
Chloride	mg/L	09/17/2015	N001	-	31		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	0.28		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	1.94		F	#		
Iron	mg/L	09/17/2015	N001	-	4.5		F	#	0.033	
Magnesium	mg/L	09/17/2015	N001	-	58		F	#	0.15	
Manganese	mg/L	09/17/2015	N001	-	1.7		F	#	0.0012	
Molybdenum	mg/L	09/17/2015	N001	-	0.088		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.006		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-9		F	#		
pH	s.u.	09/17/2015	N001	-	6.88		F	#		
Potassium	mg/L	09/17/2015	N001	-	10		F	#	0.26	
Silica	mg/L	09/17/2015	N001	-	21		F	#	0.1	
Silicon	mg/L	09/17/2015	N001	-	9.7		F	#	0.048	
Sodium	mg/L	09/17/2015	N001	-	860		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	5400		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0859-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-131.14		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-16.02		F	#		
Sulfate	mg/L	09/17/2015	N001	-	3300		F	#	25	
Temperature	C	09/17/2015	N001	-	16.86		F	#		
Turbidity	NTU	09/17/2015	N001	-	1.8		F	#		
Uranium	mg/L	09/17/2015	N001	-	0.11		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	-	31.2		F	#	0.13	5.31
Uranium-235	pCi/L	09/17/2015	N001	-	1.83		F	#	0.12	0.508
Uranium-238	pCi/L	09/17/2015	N001	-	34		F	#	0.14	5.77

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0859-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	288		F	#		
Calcium	mg/L	09/17/2015	N001	-	450		F	#	0.12	
Chloride	mg/L	09/17/2015	N001	-	34		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	0.25		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	2.2		F	#		
Iron	mg/L	09/17/2015	N001	-	5.6		F	#	0.033	
Magnesium	mg/L	09/17/2015	N001	-	70		F	#	0.15	
Manganese	mg/L	09/17/2015	N001	-	4.5		F	#	0.0012	
Molybdenum	mg/L	09/17/2015	N001	-	0.072		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.009		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-26.5		F	#		
pH	s.u.	09/17/2015	N001	-	6.91		F	#		
Potassium	mg/L	09/17/2015	N001	-	11		F	#	0.26	
Silica	mg/L	09/17/2015	N001	-	19		F	#	0.1	
Silicon	mg/L	09/17/2015	N001	-	8.7		F	#	0.048	
Sodium	mg/L	09/17/2015	N001	-	940		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	5739		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0859-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-131.48		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-15.98		F	#		
Sulfate	mg/L	09/17/2015	N001	-	3500		F	#	25	
Temperature	C	09/17/2015	N001	-	15.86		F	#		
Turbidity	NTU	09/17/2015	N001	-	2.5		F	#		
Uranium	mg/L	09/17/2015	N001	-	0.091		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	-	27.8		F	#	0.11	4.67
Uranium-235	pCi/L	09/17/2015	N001	-	1.47		F	#	0.1	0.417
Uranium-238	pCi/L	09/17/2015	N001	-	29.2		F	#	0.085	4.9

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0860-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	274		F	#		
Calcium	mg/L	09/17/2015	N001	-	450		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	-	75		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	0.28		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	2.94		F	#		
Iron	mg/L	09/17/2015	N001	-	4.5		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	-	64		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	-	8.8		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.2		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.004		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-68.6		F	#		
pH	s.u.	09/17/2015	N001	-	6.99		F	#		
Potassium	mg/L	09/17/2015	N001	-	16		F	#	0.052	
Silica	mg/L	09/17/2015	N001	-	23		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	-	11		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	-	480		F	#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	-	4182		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0860-2 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-130.53		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-16.3		F	#		
Sulfate	mg/L	09/17/2015	N001	-	2400		F	#	25	
Temperature	C	09/17/2015	N001	-	16.4		F	#		
Turbidity	NTU	09/17/2015	N001	-	2.97		F	#		
Uranium	mg/L	09/17/2015	N001	-	0.75		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	-	196		F	#	0.74	33
Uranium-235	pCi/L	09/17/2015	N001	-	9.74		F	#	0.56	2.62
Uranium-238	pCi/L	09/17/2015	N001	-	230		F	#	0.63	38.4

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0860-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	278		F	#		
Calcium	mg/L	09/17/2015	N001	-	410		F	#	0.024	
Calcium	mg/L	09/17/2015	N002	-	420		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	-	47		F	#	10	
Chloride	mg/L	09/17/2015	N002	-	49		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	0.99		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	1.99		F	#		
Iron	mg/L	09/17/2015	N001	-	2.8		F	#	0.0067	
Iron	mg/L	09/17/2015	N002	-	2.8		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	-	47		F	#	0.03	
Magnesium	mg/L	09/17/2015	N002	-	49		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	-	3.1		F	#	0.00024	
Manganese	mg/L	09/17/2015	N002	-	3.2		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.27		F	#	0.00032	
Molybdenum	mg/L	09/17/2015	N002	-	0.27		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.012		F	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N002	-	0.015		F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.018		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0860-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-45.5		F	#		
pH	s.u.	09/17/2015	N001	-	7.09		F	#		
Potassium	mg/L	09/17/2015	N001	-	13		F	#	0.052	
Potassium	mg/L	09/17/2015	N002	-	13		F	#	0.052	
Silica	mg/L	09/17/2015	N001	-	20		F	#	0.021	
Silica	mg/L	09/17/2015	N002	-	19		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	-	9.2		F	#	0.0097	
Silicon	mg/L	09/17/2015	N002	-	8.9		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	-	600		F	#	0.23	
Sodium	mg/L	09/17/2015	N002	-	600		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	4109		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-132.52		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N004	-	-131.11		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-16.12		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N004	-	-16.22		F	#		
Sulfate	mg/L	09/17/2015	N001	-	2400		F	#	25	
Sulfate	mg/L	09/17/2015	N002	-	2300		F	#	25	
Temperature	C	09/17/2015	N001	-	15.49		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0860-3 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Turbidity	NTU	09/17/2015	N001	-	2.74		F	#		
Uranium	mg/L	09/17/2015	N001	-	0.76		F	#	0.000029	
Uranium	mg/L	09/17/2015	N002	-	0.77		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	-	209		F	#	1	35.2
Uranium-234	pCi/L	09/17/2015	N002	-	205		F	#	0.63	34.1
Uranium-235	pCi/L	09/17/2015	N001	-	12.2		F	#	0.84	3.11
Uranium-235	pCi/L	09/17/2015	N002	-	13.7		F	#	0.51	3.22
Uranium-238	pCi/L	09/17/2015	N001	-	227		F	#	0.49	38.2
Uranium-238	pCi/L	09/17/2015	N002	-	241		F	#	0.58	39.8

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0860-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	-	273		F	#		
Calcium	mg/L	09/17/2015	N001	-	400		F	#	0.024	
Chloride	mg/L	09/17/2015	N001	-	42		F	#	10	
Dissolved Oxygen	mg/L	09/17/2015	N001	-	0.24		F	#		
Field Ferrous Iron	mg/L	09/17/2015	N001	-	2.06		F	#		
Iron	mg/L	09/17/2015	N001	-	2.4		F	#	0.0067	
Magnesium	mg/L	09/17/2015	N001	-	44		F	#	0.03	
Manganese	mg/L	09/17/2015	N001	-	1.6		F	#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	-	0.29		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/17/2015	N001	-	0.001		F	#		
Oxidation Reduction Potential	mV	09/17/2015	N001	-	-32		F	#		
pH	s.u.	09/17/2015	N001	-	7.04		F	#		
Potassium	mg/L	09/17/2015	N001	-	12		F	#	0.052	
Silica	mg/L	09/17/2015	N001	-	14		F	#	0.021	
Silicon	mg/L	09/17/2015	N001	-	6.6		F	#	0.0097	
Sodium	mg/L	09/17/2015	N001	-	600		F	#	0.23	
Specific Conductance	umhos /cm	09/17/2015	N001	-	4068		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0860-4 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/17/2015	N003	-	-131.48		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/17/2015	N003	-	-16.19		F	#		
Sulfate	mg/L	09/17/2015	N001	-	2200		F	#	25	
Temperature	C	09/17/2015	N001	-	15.12		F	#		
Turbidity	NTU	09/17/2015	N001	-	3.52		F	#		
Uranium	mg/L	09/17/2015	N001	-	0.88		F	#	0.000029	
Uranium-234	pCi/L	09/17/2015	N001	-	226		F	#	0.69	37.5
Uranium-235	pCi/L	09/17/2015	N001	-	13.9		F	#	0.62	3.29
Uranium-238	pCi/L	09/17/2015	N001	-	249		F	#	0.59	41.2

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0866 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	366		F	#		
Calcium	mg/L	09/15/2015	N001	-	490		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	120		F	#	10	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.74		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	1.28		F	#		
Iron	mg/L	09/15/2015	N001	-	1.4		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	180		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	1.6		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.86		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.012		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.036		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-46.1		F	#		
pH	s.u.	09/15/2015	N001	-	7.1		F	#		
Potassium	mg/L	09/15/2015	N001	-	13		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	30		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	14		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	990		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	6151		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0866 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-130.54		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.22		F	#		
Sulfate	mg/L	09/15/2015	N001	-	3700		F	#	25	
Temperature	C	09/15/2015	N001	-	15.66		F	#		
Turbidity	NTU	09/15/2015	N001	-	1.19		F	#		
Uranium	mg/L	09/15/2015	N001	-	1		F	#	0.00029	
Uranium-234	pCi/L	09/15/2015	N001	-	256		F	#	0.96	42.6
Uranium-235	pCi/L	09/15/2015	N001	-	14.9		F	#	0.74	3.53
Uranium-238	pCi/L	09/15/2015	N001	-	278		F	#	0.68	46.2

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0867 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	396		F	#		
Calcium	mg/L	09/15/2015	N001	-	450		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	130		F	#	10	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.33		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	2.78		F	#		
Iron	mg/L	09/15/2015	N001	-	3.4		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	200		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	4.3		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.64		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.014		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.037		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-119.6		F	#		
pH	s.u.	09/15/2015	N001	-	7.28		F	#		
Potassium	mg/L	09/15/2015	N001	-	15		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	30		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	14		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	1200		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	6900		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0867 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-130.31		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.18		F	#		
Sulfate	mg/L	09/15/2015	N001	-	4100		F	#	25	
Temperature	C	09/15/2015	N001	-	16.91		F	#		
Turbidity	NTU	09/15/2015	N001	-	3.79		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.98		F	#	0.00029	
Uranium-234	pCi/L	09/15/2015	N001	-	270		F	#	1.4	44.7
Uranium-235	pCi/L	09/15/2015	N001	-	14.7		F	#	0.53	3.45
Uranium-238	pCi/L	09/15/2015	N001	-	296		F	#	0.66	48.9

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0868 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	416		F	#		
Calcium	mg/L	09/15/2015	N001	-	460		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	180		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.4		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	0.02		F	#		
Iron	mg/L	09/15/2015	N001	-	0.69		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	220		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	2.5		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.55		F	#	0.0016	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.01		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.029		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-39.3		F	#		
pH	s.u.	09/15/2015	N001	-	7.25		F	#		
Potassium	mg/L	09/15/2015	N001	-	16		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	31		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	14		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	1300		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	7452		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0868 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-130.24		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.12		F	#		
Sulfate	mg/L	09/15/2015	N001	-	4400		F	#	50	
Temperature	C	09/15/2015	N001	-	16.6		F	#		
Turbidity	NTU	09/15/2015	N001	-	2.52		F	#		
Uranium	mg/L	09/15/2015	N001	-	1.5		F	#	0.00015	
Uranium-234	pCi/L	09/15/2015	N001	-	400		F	#	2.1	67.5
Uranium-235	pCi/L	09/15/2015	N001	-	19.9		F	#	1.2	5.42
Uranium-238	pCi/L	09/15/2015	N001	-	431		F	#	1.3	72.7

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0869 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	516		F	#		
Calcium	mg/L	09/15/2015	N001	-	490		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	310		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.23		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	0.68		F	#		
Iron	mg/L	09/15/2015	N001	-	3.2		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	320		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	2.2		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.43		F	#	0.0016	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.013		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.07		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-6		F	#		
pH	s.u.	09/15/2015	N001	-	7.18		F	#		
Potassium	mg/L	09/15/2015	N001	-	19		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	45		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	21		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	1700		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	9908		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0869 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-129.27		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-15.98		F	#		
Sulfate	mg/L	09/15/2015	N001	-	5900		F	#	50	
Temperature	C	09/15/2015	N001	-	15.27		F	#		
Turbidity	NTU	09/15/2015	N001	-	4.32		F	#		
Uranium	mg/L	09/15/2015	N001	-	1.7		F	#	0.00015	
Uranium-234	pCi/L	09/15/2015	N001	-	510		F	#	1.9	85.5
Uranium-235	pCi/L	09/15/2015	N001	-	27.8		F	#	1.2	6.82
Uranium-238	pCi/L	09/15/2015	N001	-	538		F	#	1.7	90

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0870 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	601		F	#		
Calcium	mg/L	09/15/2015	N001	-	490		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	440		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.27		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	3.03		F	#		
Iron	mg/L	09/15/2015	N001	-	6.4		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	340		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	1.5		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.31		F	#	0.0016	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.011		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.118		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-93.8		F	#		
pH	s.u.	09/15/2015	N001	-	7.13		F	#		
Potassium	mg/L	09/15/2015	N001	-	19		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	30		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	14		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	2000		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	10422		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0870 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-128.3		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-15.84		F	#		
Sulfate	mg/L	09/15/2015	N001	-	6200		F	#	50	
Temperature	C	09/15/2015	N001	-	15.01		F	#		
Turbidity	NTU	09/15/2015	N001	-	1.93		F	#		
Uranium	mg/L	09/15/2015	N001	-	1.6		F	#	0.00015	
Uranium-234	pCi/L	09/15/2015	N001	-	465		F	#	2	77
Uranium-235	pCi/L	09/15/2015	N001	-	25.4		F	#	1.5	6.14
Uranium-238	pCi/L	09/15/2015	N001	-	502		F	#	1.4	83

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0871 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	1210		F	#		
Calcium	mg/L	09/15/2015	N001	-	500		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	550		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.22		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	0.24		F	#		
Iron	mg/L	09/15/2015	N001	-	0.46	J	F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	340		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	2.1		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.19		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.01		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.155		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	16.4		F	#		
pH	s.u.	09/15/2015	N001	-	7.08		F	#		
Potassium	mg/L	09/15/2015	N001	-	18		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	25		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	12		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	1900		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	10593		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0871 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-127.5		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-15.84		F	#		
Sulfate	mg/L	09/15/2015	N001	-	6100		F	#	50	
Temperature	C	09/15/2015	N001	-	15.83		F	#		
Turbidity	NTU	09/15/2015	N001	-	2.11		F	#		
Uranium	mg/L	09/15/2015	N001	-	1.2		F	#	0.00029	
Uranium-234	pCi/L	09/15/2015	N001	-	325		F	#	0.86	53.3
Uranium-235	pCi/L	09/15/2015	N001	-	17		F	#	0.6	3.78
Uranium-238	pCi/L	09/15/2015	N001	-	344		F	#	0.79	56.4

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0872 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	601		F	#		
Calcium	mg/L	09/15/2015	N001	-	560		F	#	0.12	
Calcium	mg/L	09/15/2015	N002	-	560		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	580		F	#	20	
Chloride	mg/L	09/15/2015	N002	-	580		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.09		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	2.93		F	#		
Iron	mg/L	09/15/2015	N001	-	3.9		F	#	0.033	
Iron	mg/L	09/15/2015	N002	-	3.9		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	340		F	#	0.15	
Magnesium	mg/L	09/15/2015	N002	-	340		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	2.4		F	#	0.0012	
Manganese	mg/L	09/15/2015	N002	-	2.4		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.17		F	#	0.00032	
Molybdenum	mg/L	09/15/2015	N002	-	0.17		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.011		F	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N002	-	0.012		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.16		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0872 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-78.8		F	#		
pH	s.u.	09/15/2015	N001	-	7.11		F	#		
Potassium	mg/L	09/15/2015	N001	-	17		F	#	0.26	
Potassium	mg/L	09/15/2015	N002	-	18		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	28		F	#	0.1	
Silica	mg/L	09/15/2015	N002	-	29		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	13		F	#	0.048	
Silicon	mg/L	09/15/2015	N002	-	13		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	1800		F	#	0.23	
Sodium	mg/L	09/15/2015	N002	-	1900		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	10449		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-127.39		F	#		
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N004	-	-127.46		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-15.82		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N004	-	-15.89		F	#		
Sulfate	mg/L	09/15/2015	N001	-	6000		F	#	50	
Sulfate	mg/L	09/15/2015	N002	-	6000		F	#	50	
Temperature	C	09/15/2015	N001	-	15.05		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0872 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Turbidity	NTU	09/15/2015	N001	-	0.8		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.89		F	#	0.000029	
Uranium	mg/L	09/15/2015	N002	-	0.92		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	252		F	#	0.76	41.2
Uranium-234	pCi/L	09/15/2015	N002	-	255		F	#	0.99	42.4
Uranium-235	pCi/L	09/15/2015	N001	-	13.7		F	#	0.73	3.16
Uranium-235	pCi/L	09/15/2015	N002	-	14.7		F	#	0.8	3.48
Uranium-238	pCi/L	09/15/2015	N001	-	277		F	#	0.58	45.3
Uranium-238	pCi/L	09/15/2015	N002	-	268		F	#	0.47	44.5

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0873 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	631		F	#		
Calcium	mg/L	09/15/2015	N001	-	540		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	630		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.17		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	1.81		F	#		
Iron	mg/L	09/15/2015	N001	-	2.8		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	350		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	1.8		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.16		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.013		F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.11		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-64.5		F	#		
pH	s.u.	09/15/2015	N001	-	7.11		F	#		
Potassium	mg/L	09/15/2015	N001	-	17		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	27		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	13		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	1900		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	10886		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0873 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-127.05		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-15.82		F	#		
Sulfate	mg/L	09/15/2015	N001	-	6300		F	#	50	
Temperature	C	09/15/2015	N001	-	14.32		F	#		
Turbidity	NTU	09/15/2015	N001	-	7.4		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.85		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	259		F	#	1	43.2
Uranium-235	pCi/L	09/15/2015	N001	-	13.6		F	#	0.83	3.34
Uranium-238	pCi/L	09/15/2015	N001	-	253		F	#	0.49	42.3

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0874 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	620		F	#		
Calcium	mg/L	09/15/2015	N001	-	610		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	510		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.2		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	1.86		F	#		
Iron	mg/L	09/15/2015	N001	-	2.9		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	310		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	2.5		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.058		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.075		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-54.5		F	#		
pH	s.u.	09/15/2015	N001	-	7.06		F	#		
Potassium	mg/L	09/15/2015	N001	-	15		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	27		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	13		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	1700		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	9864		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0874 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-127.29		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.12		F	#		
Sulfate	mg/L	09/15/2015	N001	-	5600		F	#	50	
Temperature	C	09/15/2015	N001	-	13.75		F	#		
Turbidity	NTU	09/15/2015	N001	-	2.71		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.38		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	118		F	#	0.34	19.6
Uranium-235	pCi/L	09/15/2015	N001	-	5.69		F	#	0.31	1.42
Uranium-238	pCi/L	09/15/2015	N001	-	116		F	#	0.29	19.2

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0875 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/15/2015	N001	-	529		F	#		
Calcium	mg/L	09/15/2015	N001	-	540		F	#	0.12	
Chloride	mg/L	09/15/2015	N001	-	360		F	#	20	
Dissolved Oxygen	mg/L	09/15/2015	N001	-	1.21		F	#		
Field Ferrous Iron	mg/L	09/15/2015	N001	-	2.32		F	#		
Iron	mg/L	09/15/2015	N001	-	2.6		F	#	0.033	
Magnesium	mg/L	09/15/2015	N001	-	250		F	#	0.15	
Manganese	mg/L	09/15/2015	N001	-	3.6		F	#	0.0012	
Molybdenum	mg/L	09/15/2015	N001	-	0.053		F	#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2015	N001	-	0.01	U	F	#	0.01	
Nitrite	mg/L	09/15/2015	N001	-	0.038		F	#		
Oxidation Reduction Potential	mV	09/15/2015	N001	-	-62.1		F	#		
pH	s.u.	09/15/2015	N001	-	7.12		F	#		
Potassium	mg/L	09/15/2015	N001	-	13		F	#	0.26	
Silica	mg/L	09/15/2015	N001	-	25		F	#	0.1	
Silicon	mg/L	09/15/2015	N001	-	12		F	#	0.048	
Sodium	mg/L	09/15/2015	N001	-	1300		F	#	0.23	
Specific Conductance	umhos /cm	09/15/2015	N001	-	7798		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0875 WELL Hand-Driven Temporary Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Stable isotope ratio H2/H1 in Water	‰	09/15/2015	N003	-	-128.79		F	#		
Stable isotope ratio O18/O16 in Water	‰	09/15/2015	N003	-	-16.28		F	#		
Sulfate	mg/L	09/15/2015	N001	-	4300		F	#	50	
Temperature	C	09/15/2015	N001	-	13.6		F	#		
Turbidity	NTU	09/15/2015	N001	-	3.82		F	#		
Uranium	mg/L	09/15/2015	N001	-	0.28		F	#	0.000029	
Uranium-234	pCi/L	09/15/2015	N001	-	88.4		F	#	0.36	15.1
Uranium-235	pCi/L	09/15/2015	N001	-	5.6		F	#	0.37	1.5
Uranium-238	pCi/L	09/15/2015	N001	-	85.8		F	#	0.36	14.7

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0876 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	0 - 0	32			#		
Calcium	mg/L	09/17/2015	N001	0 - 0	4.9			#	0.024	
Chloride	mg/L	09/17/2015	N001	0 - 0	38			#	0.8	
Dissolved Oxygen	mg/L	09/17/2015	N001	0 - 0	7.42			#		
Magnesium	mg/L	09/17/2015	N001	0 - 0	0.03	U		#	0.03	
Manganese	mg/L	09/17/2015	N001	0 - 0	0.00077	J		#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	0 - 0	0.0049			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	0 - 0	68.6			#		
pH	s.u.	09/17/2015	N001	0 - 0	9.63			#		
Potassium	mg/L	09/17/2015	N001	0 - 0	0.33	J		#	0.052	
Sodium	mg/L	09/17/2015	N001	0 - 0	170			#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	0 - 0	816			#		
Sulfate	mg/L	09/17/2015	N001	0 - 0	270			#	2	
Temperature	C	09/17/2015	N001	0 - 0	15.26			#		
Turbidity	NTU	09/17/2015	N001	0 - 0	2.41			#		
Uranium	mg/L	09/17/2015	N001	0 - 0	0.0037			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0878 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	0 - 0	125			#		
Calcium	mg/L	09/17/2015	N001	0 - 0	4.9			#	0.024	
Chloride	mg/L	09/17/2015	N001	0 - 0	10			#	0.8	
Magnesium	mg/L	09/17/2015	N001	0 - 0	0.03	U		#	0.03	
Manganese	mg/L	09/17/2015	N001	0 - 0	0.0035	J		#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	0 - 0	0.002			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	0 - 0	140.1			#		
pH	s.u.	09/17/2015	N001	0 - 0	8.95			#		
Potassium	mg/L	09/17/2015	N001	0 - 0	0.43	J		#	0.052	
Sodium	mg/L	09/17/2015	N001	0 - 0	180			#	0.047	
Specific Conductance	umhos /cm	09/17/2015	N001	0 - 0	844			#		
Sulfate	mg/L	09/17/2015	N001	0 - 0	250			#	2	
Temperature	C	09/17/2015	N001	0 - 0	10.45			#		
Turbidity	NTU	09/17/2015	N001	0 - 0	1.66			#		
Uranium	mg/L	09/17/2015	N001	0 - 0	0.00024			#	0.000029	

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

*	Replicate analysis not within control limits.
>	Result above upper detection limit.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
C	Pesticide result confirmed by GC-MS.
D	Analyte determined in diluted sample.
E	Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
H	Holding time expired, value suspect.
I	Increased detection limit due to required dilution.
J	Estimated
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
P	> 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
U	Analytical result below detection limit.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X,Y,Z	Laboratory defined qualifier, see case narrative.

DATA QUALIFIERS:

F	Low flow sampling method used.	G	Possible grout contamination, pH > 9.	J	Estimated value.
L	Less than 3 bore volumes purged prior to sampling.	Q	Qualitative result due to sampling technique.	R	Unusable result.
U	Parameter analyzed for but was not detected.	X	Location is undefined.		

QA QUALIFIER:

Validated according to quality assurance guidelines.

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Surface Water Quality Data

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Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0747 SURFACE LOCATION 8/26/97 State plane east changed from 594497.14 to an estimation close to river

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	248			#		
Calcium	mg/L	09/16/2015	0001	150			#	0.024	
Chloride	mg/L	09/16/2015	0001	22			#	2	
Dissolved Oxygen	mg/L	09/16/2015	N001	2.13			#		
Magnesium	mg/L	09/16/2015	0001	47			#	0.03	
Manganese	mg/L	09/16/2015	0001	0.65			#	0.00024	
Molybdenum	mg/L	09/16/2015	0001	0.027			#	0.00032	
Oxidation Reduction Potential	mV	09/16/2015	N001	48.6			#		
pH	s.u.	09/16/2015	N001	8.09			#		
Potassium	mg/L	09/16/2015	0001	7.1			#	0.052	
Sodium	mg/L	09/16/2015	0001	140			#	0.047	
Specific Conductance	umhos/cm	09/16/2015	N001	12		R	#		
Sulfate	mg/L	09/16/2015	0001	620			#	5	
Temperature	C	09/16/2015	N001	18.5			#		
Turbidity	NTU	09/16/2015	N001	67.7			#		
Uranium	mg/L	09/16/2015	0001	0.19			#	0.000029	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0749 SURFACE LOCATION 8/26/97 State plane east changed from 589532.71 to an estimation close to river

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	89			#		
Calcium	mg/L	09/17/2015	N001	580			#	0.24	
Chloride	mg/L	09/17/2015	N001	13			#	5	
Dissolved Oxygen	mg/L	09/17/2015	N001	7.33			#		
Magnesium	mg/L	09/17/2015	N001	3.1			#	0.03	
Manganese	mg/L	09/17/2015	N001	0.1			#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	0.046			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	19.7			#		
pH	s.u.	09/17/2015	N001	7.86			#		
Potassium	mg/L	09/17/2015	N001	1.8			#	0.052	
Sodium	mg/L	09/17/2015	N001	250			#	0.047	
Specific Conductance	umhos/cm	09/17/2015	N001	3017			#		
Sulfate	mg/L	09/17/2015	N001	1900			#	12	
Temperature	C	09/17/2015	N001	19.07			#		
Turbidity	NTU	09/17/2015	N001	5.28			#		
Uranium	mg/L	09/17/2015	N001	0.0031			#	0.000029	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0794 SURFACE LOCATION 8/26/97 State plane north changed from 844178.27 to an estimation close to river

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/14/2015	0001	177			#		
Calcium	mg/L	09/14/2015	N001	89			#	0.024	
Chloride	mg/L	09/14/2015	N001	11			#	0.8	
Dissolved Oxygen	mg/L	09/14/2015	N001	8.61			#		
Magnesium	mg/L	09/14/2015	N001	36			#	0.03	
Manganese	mg/L	09/14/2015	N001	0.037			#	0.00024	
Molybdenum	mg/L	09/14/2015	N001	0.0026			#	0.00032	
Oxidation Reduction Potential	mV	09/14/2015	N001	104.5			#		
pH	s.u.	09/14/2015	N001	8.17			#		
Potassium	mg/L	09/14/2015	N001	7.1			#	0.052	
Sodium	mg/L	09/14/2015	N001	80			#	0.047	
Specific Conductance	umhos/cm	09/14/2015	N001	1007			#		
Sulfate	mg/L	09/14/2015	N001	330			#	2	
Temperature	C	09/14/2015	N001	18.21			#		
Turbidity	NTU	09/14/2015	N001	31.4		J	#		
Uranium	mg/L	09/14/2015	N001	0.011			#	0.000029	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0796 SURFACE LOCATION Was possibly historically sampled ~900 ft E from current location

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/18/2015	N001	192			#		
Calcium	mg/L	09/18/2015	N001	90			#	0.024	
Calcium	mg/L	09/18/2015	N002	96			#	0.024	
Chloride	mg/L	09/18/2015	N001	11			#	0.8	
Chloride	mg/L	09/18/2015	N002	11			#	0.8	
Dissolved Oxygen	mg/L	09/18/2015	N001	13.32			#		
Iron	mg/L	09/18/2015	N002	0.23			#	0.0067	
Magnesium	mg/L	09/18/2015	N001	36			#	0.03	
Magnesium	mg/L	09/18/2015	N002	37			#	0.03	
Manganese	mg/L	09/18/2015	N001	0.06			#	0.00024	
Manganese	mg/L	09/18/2015	N002	0.052	E	J	#	0.00024	
Molybdenum	mg/L	09/18/2015	N001	0.0019			#	0.00032	
Molybdenum	mg/L	09/18/2015	N002	0.0031			#	0.00032	
Oxidation Reduction Potential	mV	09/18/2015	N001	173.5			#		
pH	s.u.	09/18/2015	N001	8.15			#		
Potassium	mg/L	09/18/2015	N001	4.2			#	0.052	
Potassium	mg/L	09/18/2015	N002	3.6	E	J	#	0.052	
Silica	mg/L	09/18/2015	N002	8.6			#	0.021	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0796 SURFACE LOCATION Was possibly historically sampled ~900 ft E from current location

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Silicon	mg/L	09/18/2015	N002	4			#	0.0097	
Sodium	mg/L	09/18/2015	N001	74			#	0.047	
Sodium	mg/L	09/18/2015	N002	71			#	0.047	
Specific Conductance	umhos/cm	09/18/2015	N001	976			#		
Sulfate	mg/L	09/18/2015	N001	320			#	2	
Sulfate	mg/L	09/18/2015	N002	320			#	2	
Temperature	C	09/18/2015	N001	10.34			#		
Turbidity	NTU	09/18/2015	N001	7.84			#		
Uranium	mg/L	09/18/2015	N001	0.008			#	0.000029	
Uranium	mg/L	09/18/2015	N002	0.0085			#	0.000029	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0810 SURFACE LOCATION Gravel Pit Pond

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	315			#		
Calcium	mg/L	09/17/2015	N001	18			#	0.024	
Chloride	mg/L	09/17/2015	N001	37			#	1	
Dissolved Oxygen	mg/L	09/17/2015	N001	8.54			#		
Magnesium	mg/L	09/17/2015	N001	81			#	0.03	
Manganese	mg/L	09/17/2015	N001	0.074			#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	0.0014			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	173.9		J	#		
pH	s.u.	09/17/2015	N001	9.63			#		
Potassium	mg/L	09/17/2015	N001	13			#	0.052	
Sodium	mg/L	09/17/2015	N001	210			#	0.047	
Specific Conductance	umhos/cm	09/17/2015	N001	1502			#		
Sulfate	mg/L	09/17/2015	N001	470			#	2.5	
Temperature	C	09/17/2015	N001	16.32			#		
Turbidity	NTU	09/17/2015	N001	3.54			#		
Uranium	mg/L	09/17/2015	N001	0.0051			#	0.000029	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0811 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	192			#		
Calcium	mg/L	09/17/2015	N001	95			#	0.024	
Chloride	mg/L	09/17/2015	N001	11			#	0.8	
Dissolved Oxygen	mg/L	09/17/2015	N001	9.74			#		
Magnesium	mg/L	09/17/2015	N001	38			#	0.03	
Manganese	mg/L	09/17/2015	N001	0.057			#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	0.0021			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	60.8			#		
pH	s.u.	09/17/2015	N001	8.38			#		
Potassium	mg/L	09/17/2015	N001	4			#	0.052	
Sodium	mg/L	09/17/2015	N001	77			#	0.047	
Specific Conductance	umhos/cm	09/17/2015	N001	1007			#		
Sulfate	mg/L	09/17/2015	N001	330			#	2	
Temperature	C	09/17/2015	N001	11.98			#		
Turbidity	NTU	09/17/2015	N001	5.53			#		
Uranium	mg/L	09/17/2015	N001	0.0084			#	0.000029	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0812 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	N001	192			#		
Calcium	mg/L	09/17/2015	N001	90			#	0.024	
Chloride	mg/L	09/17/2015	N001	12			#	0.8	
Dissolved Oxygen	mg/L	09/17/2015	N001	9.92			#		
Magnesium	mg/L	09/17/2015	N001	38			#	0.03	
Manganese	mg/L	09/17/2015	N001	0.047			#	0.00024	
Molybdenum	mg/L	09/17/2015	N001	0.0018			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	86.2			#		
pH	s.u.	09/17/2015	N001	8.45			#		
Potassium	mg/L	09/17/2015	N001	4.2			#	0.052	
Sodium	mg/L	09/17/2015	N001	78			#	0.047	
Specific Conductance	umhos/cm	09/17/2015	N001	1001			#		
Sulfate	mg/L	09/17/2015	N001	340			#	2	
Temperature	C	09/17/2015	N001	16.38			#		
Turbidity	NTU	09/17/2015	N001	8.41			#		
Uranium	mg/L	09/17/2015	N001	0.0091			#	0.000029	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0822 SURFACE LOCATION west-side irrigation ditch

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/16/2015	N001	247			#		
Calcium	mg/L	09/16/2015	N001	170			#	0.024	
Chloride	mg/L	09/16/2015	N001	12			#	2	
Dissolved Oxygen	mg/L	09/16/2015	N001	9.03			#		
Magnesium	mg/L	09/16/2015	N001	22			#	0.03	
Manganese	mg/L	09/16/2015	N001	0.059			#	0.00024	
Molybdenum	mg/L	09/16/2015	N001	0.0085			#	0.00032	
Oxidation Reduction Potential	mV	09/16/2015	N001	99			#		
pH	s.u.	09/16/2015	N001	8.2			#		
Potassium	mg/L	09/16/2015	N001	4.2			#	0.052	
Sodium	mg/L	09/16/2015	N001	130			#	0.047	
Specific Conductance	umhos/cm	09/16/2015	N001	1409			#		
Sulfate	mg/L	09/16/2015	N001	530			#	5	
Temperature	C	09/16/2015	N001	16.8			#		
Turbidity	NTU	09/16/2015	N001	4.74			#		
Uranium	mg/L	09/16/2015	N001	0.0089			#	0.000029	

Surface Water Quality Data by Location (USEE102) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 01/05/2016
Location: 0823 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	09/17/2015	0001	148			#		
Calcium	mg/L	09/17/2015	0001	130			#	0.024	
Chloride	mg/L	09/17/2015	0001	180			#	4	
Magnesium	mg/L	09/17/2015	0001	80			#	0.03	
Manganese	mg/L	09/17/2015	0001	0.059			#	0.00024	
Molybdenum	mg/L	09/17/2015	0001	0.0038			#	0.00032	
Oxidation Reduction Potential	mV	09/17/2015	N001	98.2			#		
pH	s.u.	09/17/2015	N001	8.51			#		
Potassium	mg/L	09/17/2015	0001	12			#	0.052	
Sodium	mg/L	09/17/2015	0001	320			#	0.047	
Specific Conductance	umhos/cm	09/17/2015	N001	2527			#		
Sulfate	mg/L	09/17/2015	0001	1000			#	10	
Temperature	C	09/17/2015	N001	18.78			#		
Turbidity	NTU	09/17/2015	N001	11.1			#		
Uranium	mg/L	09/17/2015	0001	0.0093			#	0.000029	

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

*	Replicate analysis not within control limits.
>	Result above upper detection limit.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
C	Pesticide result confirmed by GC-MS.
D	Analyte determined in diluted sample.
E	Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
H	Holding time expired, value suspect.
I	Increased detection limit due to required dilution.
J	Estimated
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
P	> 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
U	Analytical result below detection limit.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X,Y,Z	Laboratory defined qualifier, see case narrative.

DATA QUALIFIERS:

F Low flow sampling method used.	G Possible grout contamination, pH > 9.	J Estimated value.
L Less than 3 bore volumes purged prior to sampling.	Q Qualitative result due to sampling technique.	R Unusable result.
U Parameter analyzed for but was not detected.	X Location is undefined.	

QA QUALIFIER:

#	Validated according to quality assurance guidelines.

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Equipment Blank Data

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BLANKS REPORT

LAB: PARAGON/ALS LABORATORY GROUP (Fort Collins, CO)
RIN: 15097345
Report Date: 12/31/2015

Parameter	Site Code	Location ID	Sample Date	Sample ID	Units	Result	Qualifiers Lab	Qualifiers Data	Detection Limit	Uncertainty	Sample Type
Calcium	RVT01	0999	09/18/2015	N001	mg/L	0.048	J		0.024		E
Chloride	RVT01	0999	09/18/2015	N001	mg/L	0.2	U		0.2		E
Iron	RVT01	0999	09/18/2015	N001	mg/L	0.0073	J	U	0.0067		E
Magnesium	RVT01	0999	09/18/2015	N001	mg/L	0.03	U		0.03		E
Manganese	RVT01	0999	09/18/2015	N001	mg/L	0.00024	U		0.00024		E
Molybdenum	RVT01	0999	09/18/2015	N001	mg/L	0.00032	U		0.00032		E
Nitrate + Nitrite as Nitrogen	RVT01	0999	09/18/2015	N001	mg/L	0.01	U		0.01		E
Potassium	RVT01	0999	09/18/2015	N001	mg/L	0.052	U		0.052		E
Silica	RVT01	0999	09/18/2015	N001	mg/L	0.021	U		0.021		E
Silicon	RVT01	0999	09/18/2015	N001	mg/L	0.0097	U		0.0097		E
Sodium	RVT01	0999	09/18/2015	N001	mg/L	0.16	J		0.047		E
Sulfate	RVT01	0999	09/18/2015	N001	mg/L	0.5	U		0.5		E
Uranium	RVT01	0999	09/18/2015	N001	mg/L	0.000029	U		0.000029		E
Uranium-234	RVT01	0999	09/18/2015	N001	pCi/L	0.0484		J	0.022	0.0267	E
Uranium-235	RVT01	0999	09/18/2015	N001	pCi/L	0.0321		U	0.0097	0.0219	E
Uranium-238	RVT01	0999	09/18/2015	N001	pCi/L	0.022	U		0.022	0.0149	E

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

*	Replicate analysis not within control limits.
>	Result above upper detection limit.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
C	Pesticide result confirmed by GC-MS.
D	Analyte determined in diluted sample.
E	Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
H	Holding time expired, value suspect.
I	Increased detection limit due to required dilution.
J	Estimated
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
P	> 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
U	Analytical result below detection limit.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X,Y,Z	Laboratory defined qualifier, see case narrative.

DATA QUALIFIERS:

F	Low flow sampling method used.	G	Possible grout contamination, pH > 9.	J	Estimated value.
L	Less than 3 bore volumes purged prior to sampling.	Q	Qualitative result due to sampling technique.	R	Unusable result.
U	Parameter analyzed for but was not detected.	X	Location is undefined.		

SAMPLE TYPES:

E	Equipment Blank.

Static Water Level Data

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STATIC WATER LEVELS (USEE700) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 12/31/2015

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0101	O	4950.68	09/17/2015	13:01:00	10.78	4939.9	
0110	O	4950.19	09/17/2015	10:58:00	13.71	4936.48	
0111	O	4948.85	09/17/2015	13:02:00	10.39	4938.46	
0700	U	4951.97	09/17/2015	13:04:00	6.74	4945.23	
0702	D	4931.92	09/15/2015	09:22:00	7.08	4924.84	
0705	D	4931.91	09/15/2015	12:30:20	7.13	4924.78	
0707	D	4931.3	09/15/2015	13:10:55	6.3	4925	
0709	D	4931.64	09/15/2015	08:40:00	7.22	4924.42	
0710	U	4947.69	09/17/2015	16:50:17	6.71	4940.98	
0716	O	4940.69	09/17/2015	11:55:07	9.1	4931.59	
0717	O	4940.3	09/17/2015	11:25:42	8.61	4931.69	
0718	D	4937.6	09/16/2015	16:10:39	8.9	4928.7	
0719	D	4937.55	09/16/2015	16:50:43	8.43	4929.12	
0720	C	4941.15	09/16/2015	14:55:21	5.28	4935.87	
0721	C	4941.05	09/16/2015	14:20:53	8.69	4932.36	
0722R		4937.83	09/17/2015	09:10:57	9.2	4928.63	
0723	D	4936.01	09/17/2015	08:40:31	7.9	4928.11	
0724	U	4941.93	09/17/2015	10:57:00	7.12	4934.81	
0725	U	4942.21	09/17/2015	10:48:00	7.41	4934.8	
0726	U	4942.2	09/17/2015	10:55:00	8.2	4934	
0727	U	4952.26	09/17/2015	10:25:47	10.86	4941.4	
0728	U	4946.63	09/15/2015	09:24:00	8.99	4937.64	
0729	D	4932.75	09/16/2015	13:35:29	5.48	4927.27	
0730	D	4933.08	09/16/2015	13:00:53	6	4927.08	
0732	U	4946.58	09/17/2015	17:05:01	8.6	4937.98	
0733	U	4947.46	09/14/2015	16:21:00	5.2	4942.26	
0734	U	4946.84	09/14/2015	16:20:00	6.74	4940.1	
0736	U	4946.43	09/17/2015	17:32:00	7.72	4938.71	
0784	U	4947	09/17/2015	16:35:19	7.25	4939.75	

STATIC WATER LEVELS (USEE700) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 12/31/2015

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0788	C	4935.43	09/16/2015	12:30:30	9.78	4925.65	
0789	D	4933.08	09/15/2015	17:15:34	9.8	4923.28	
0824		4929.38	09/18/2015	09:45:55	6.31	4923.07	
0826		4937.36	09/16/2015	15:55:06	8.66	4928.7	
0852-1		4938	09/15/2015	15:40:00			D
0852-2		4938	09/15/2015	16:02:00			D
0852-3		4938	09/15/2015	16:40:31	11.06	4926.94	
0852-4		4938.3	09/15/2015	17:15:28	11.59	4926.71	
0853-2		4935.81	09/16/2015	13:40:26	10.12	4925.69	
0853-3		4935.81	09/16/2015	14:30:32	10.14	4925.67	
0853-4		4935.98	09/16/2015	15:10:04	10.25	4925.73	
0854-2		4937.19	09/16/2015	16:40:01	8.5	4928.69	
0854-3		4937.19	09/16/2015	17:10:09	8.52	4928.67	
0854-4		4937.42	09/17/2015	08:30:56	8.75	4928.67	
0855-1		4931.02	09/15/2015	14:17:00			D
0855-2		4931.02	09/16/2015	09:35:46	7.44	4923.58	
0855-3		4931.02	09/16/2015	10:15:35	7.44	4923.58	
0855-4		4931.48	09/16/2015	10:40:10	7.91	4923.57	
0856-2		4933.63	09/17/2015	09:25:24			B
0856-3		4933.63	09/17/2015	09:55:00	9.11	4924.52	
0856-4		4933.87	09/17/2015	10:25:33	9.35	4924.52	
0857-3		4935.51	09/16/2015	10:15:08	9.44	4926.07	
0857-4		4935.76	09/16/2015	11:10:54	9.72	4926.04	
0858-1		4932.14	09/15/2015	14:16:00			D
0858-2		4932.14	09/15/2015	09:30:50	7.98	4924.16	
0858-3		4932.14	09/15/2015	10:35:03	7.98	4924.16	
0858-4		4932.39	09/15/2015	11:35:34	8.23	4924.16	
0859-1		4945.98	09/17/2015	14:27:00			D
0859-2		4945.98	09/17/2015	15:15:46	8.6	4937.38	

STATIC WATER LEVELS (USEE700) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 12/31/2015

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0859-3		4945.98	09/17/2015	15:35:55	8.61	4937.37	
0859-4		4946.26	09/17/2015	16:00:29	8.94	4937.32	
0860-1		4944.1	09/17/2015	12:13:00			D
0860-2		4944.1	09/17/2015	13:25:27	11.3	4932.8	
0860-3		4944.1	09/17/2015	13:45:45	11.3	4932.8	
0860-4		4944.38	09/17/2015	14:15:31	11.57	4932.81	
0866		4925.87	09/15/2015	09:10:58	2.75	4923.12	
0867		4927.52	09/15/2015	10:15:02	4.39	4923.13	
0868		4925.68	09/15/2015	10:50:14	2.55	4923.13	
0869		4926.79	09/15/2015	11:40:43	3.63	4923.16	
0870		4926.76	09/15/2015	12:55:20	3.6	4923.16	
0871		4927.9	09/15/2015	13:25:58	4.74	4923.16	
0872		4927.35	09/15/2015	14:05:37	4.15	4923.2	
0873		4927.62	09/15/2015	14:45:24	4.13	4923.49	
0874		4927.45	09/15/2015	15:55:44	4.24	4923.21	
0875		4927.48	09/15/2015	16:25:41	4.3	4923.18	

FLOW CODES: B BACKGROUND C CROSS GRADIENT D DOWNGRADIENT F OFFSITE
N UNKNOWN O ONSITE U UPGRADIENT

WATER LEVEL FLAGS: D Dry F Flowing B Below top of pump

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Time-Concentration Graphs

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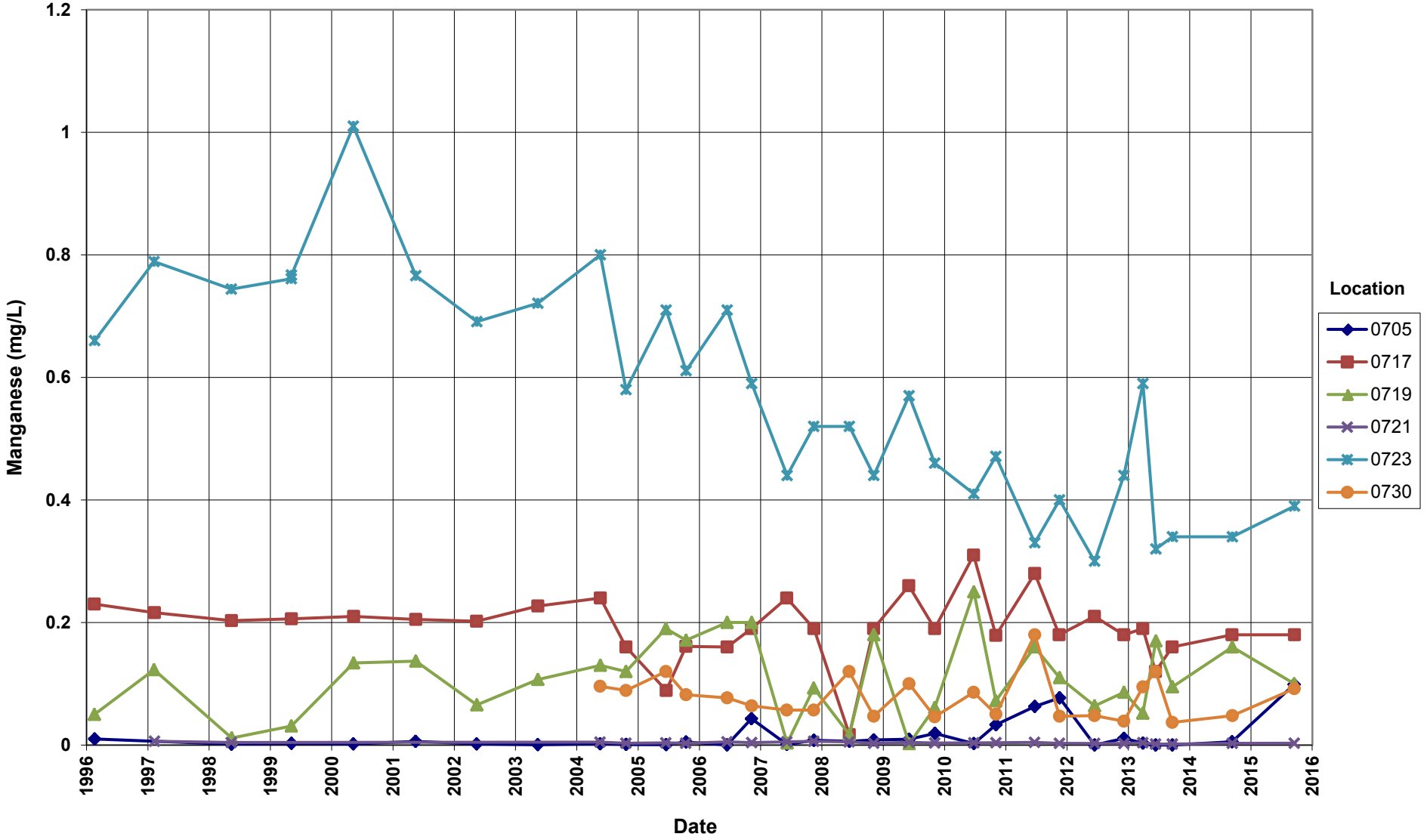
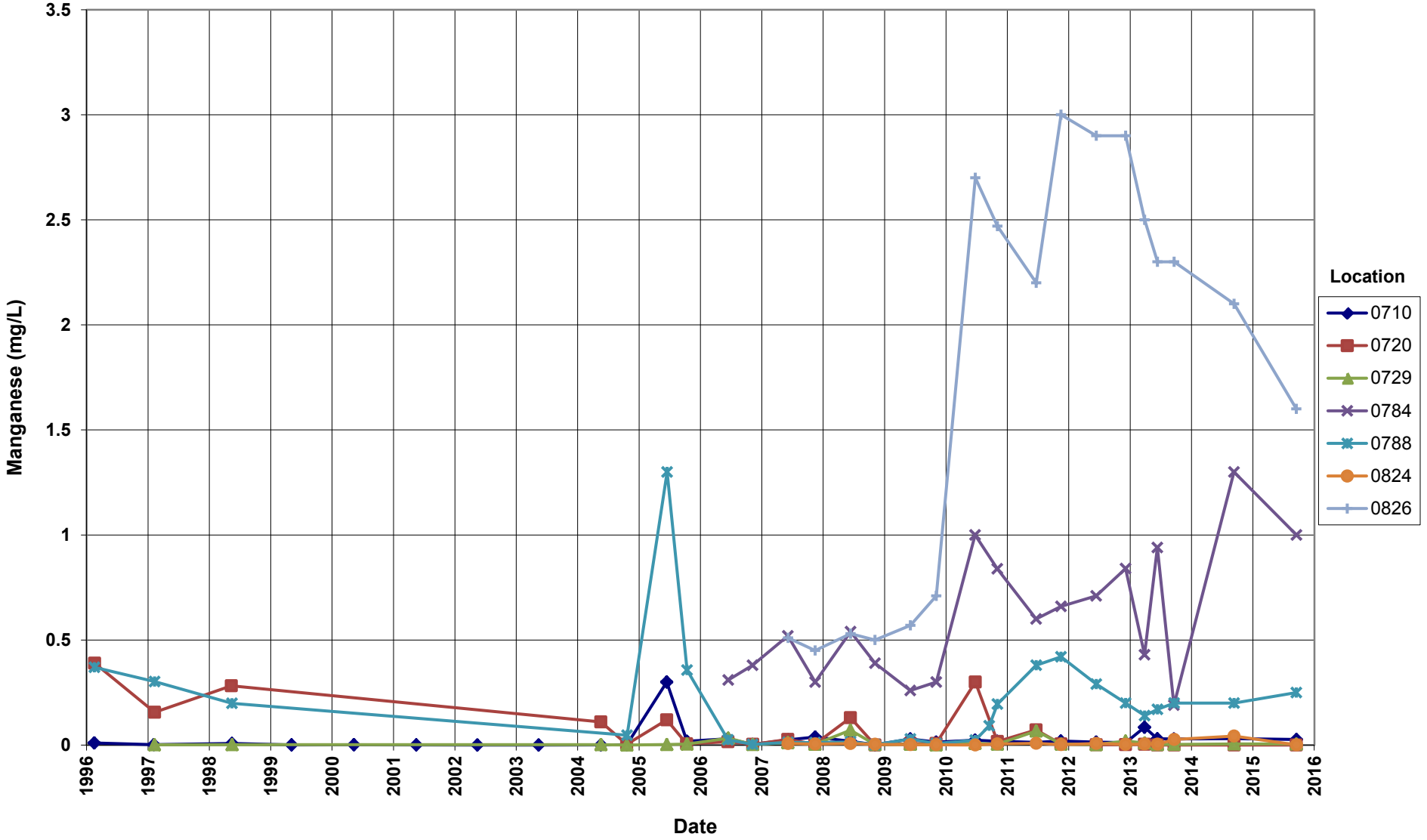
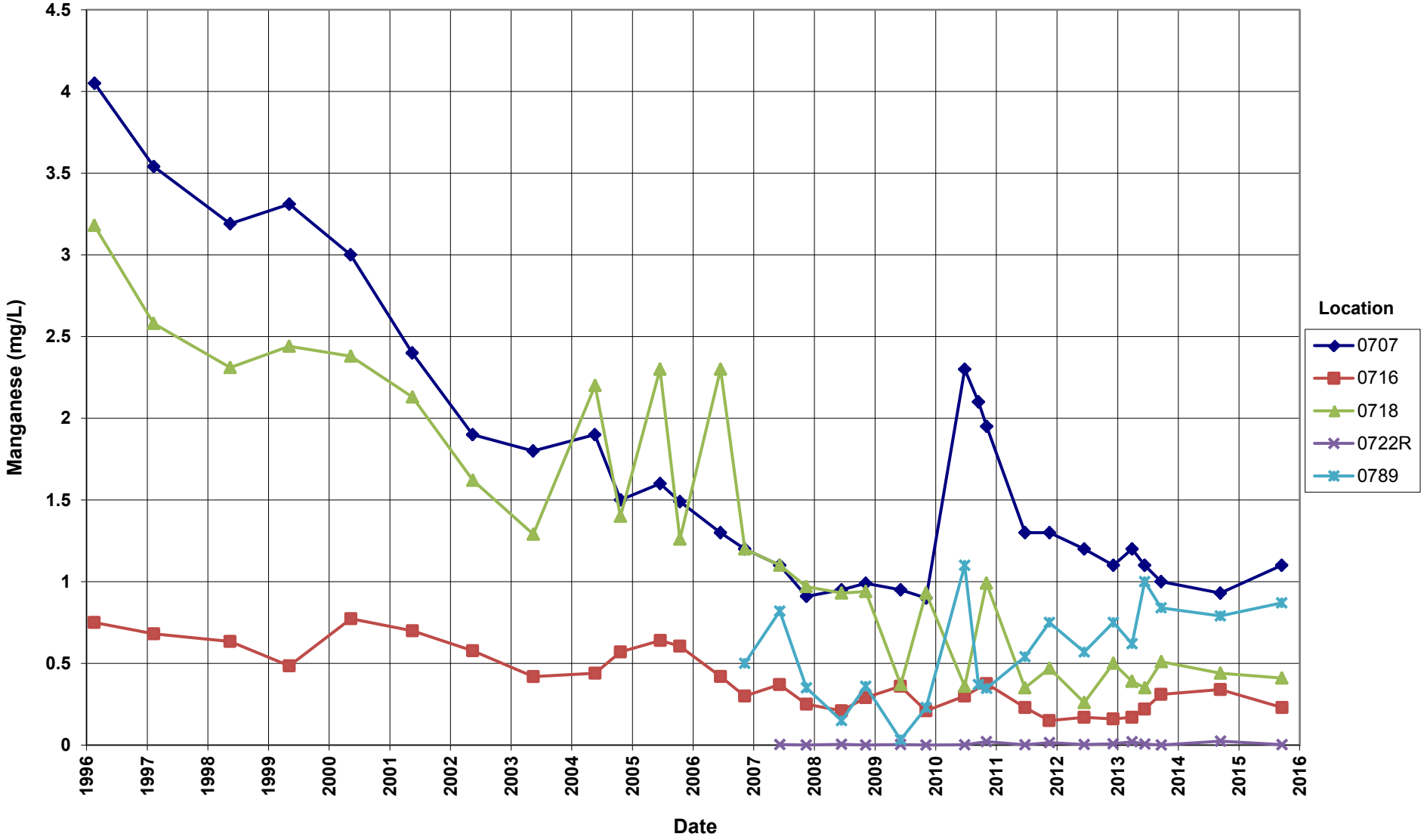
Riverton Processing Site
Manganese Concentration
Semi-Confined Aquifer Locations



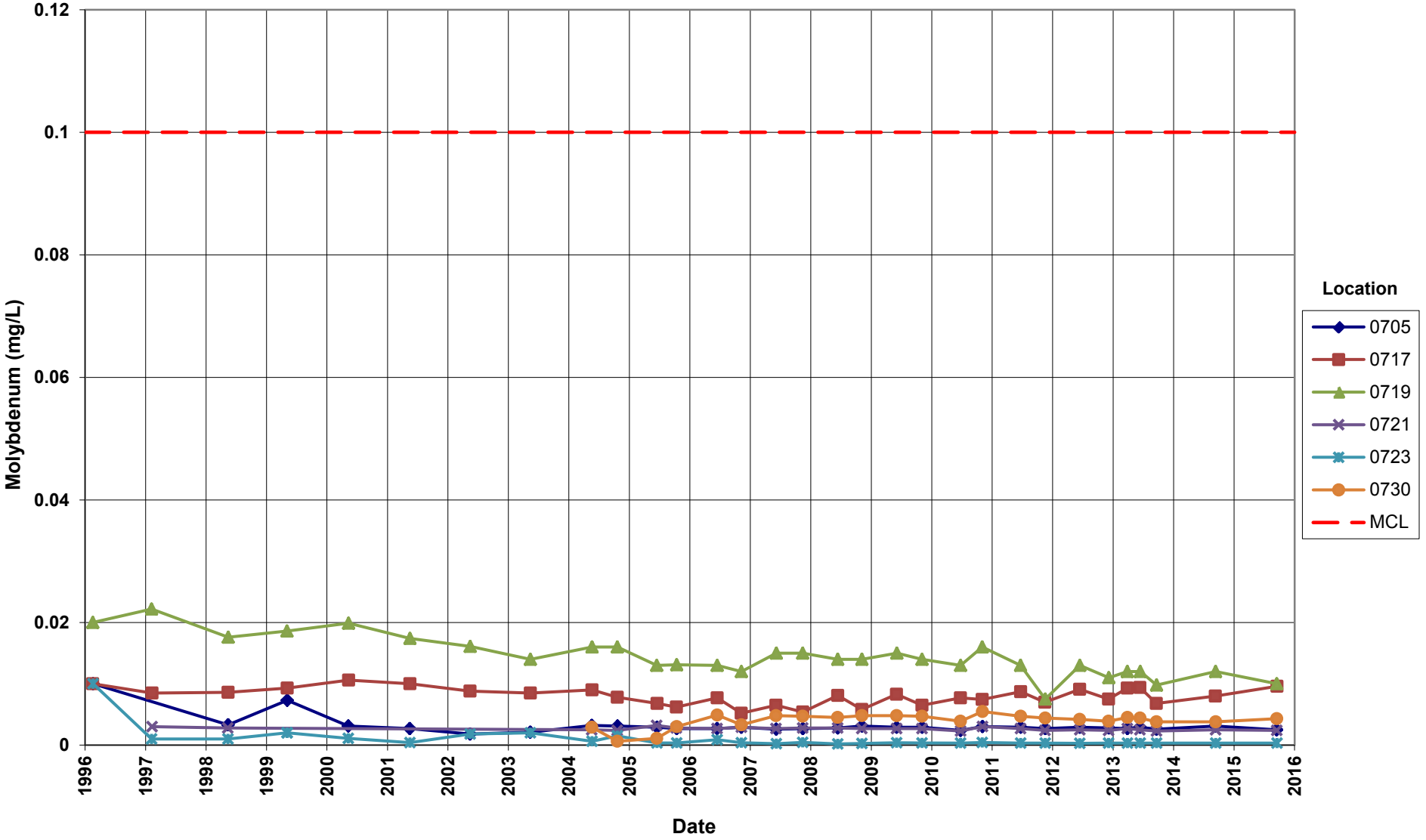
Riverton Processing Site
Manganese Concentration
Surficial Aquifer Locations



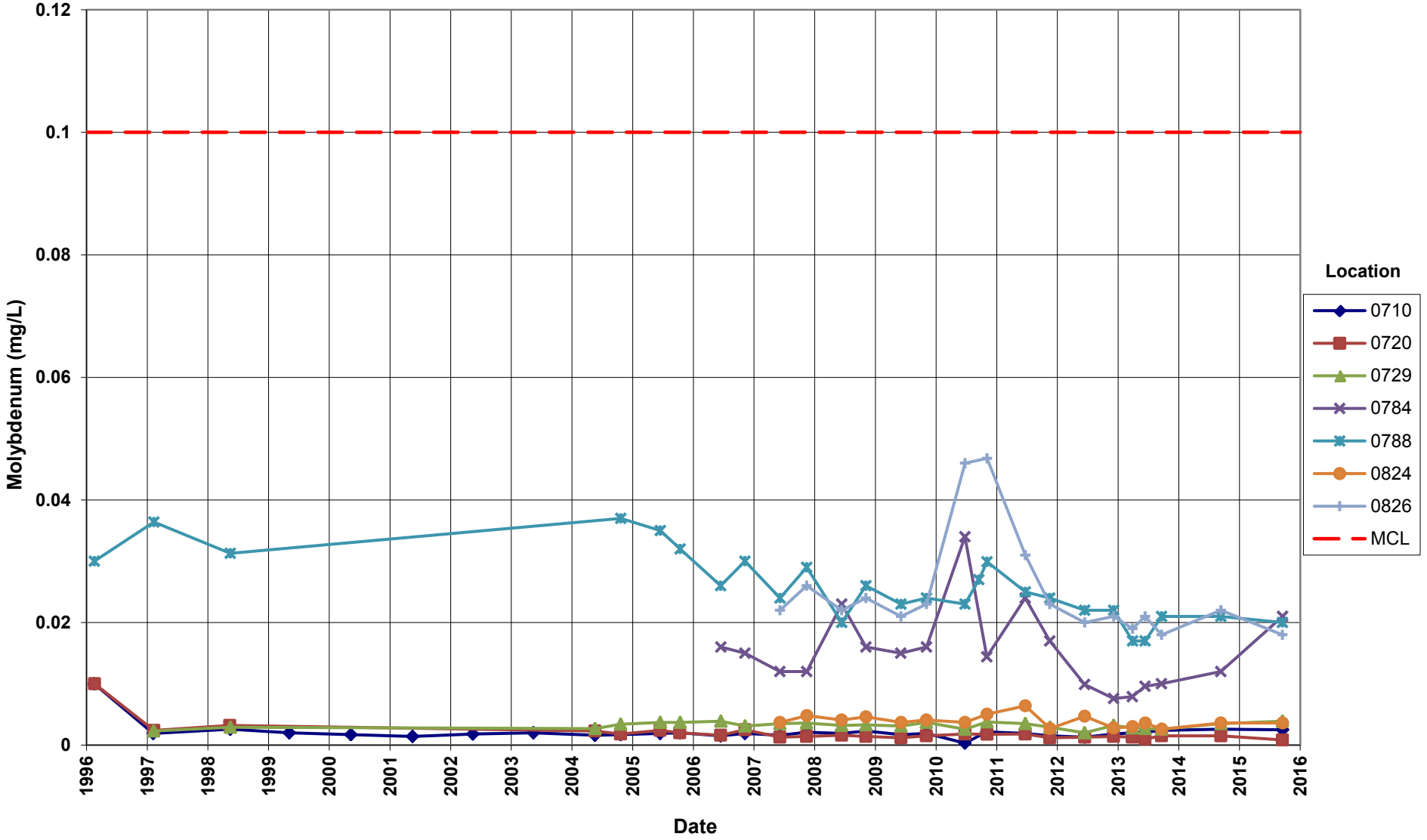
Riverton Processing Site
Manganese Concentration
Surficial Aquifer Locations



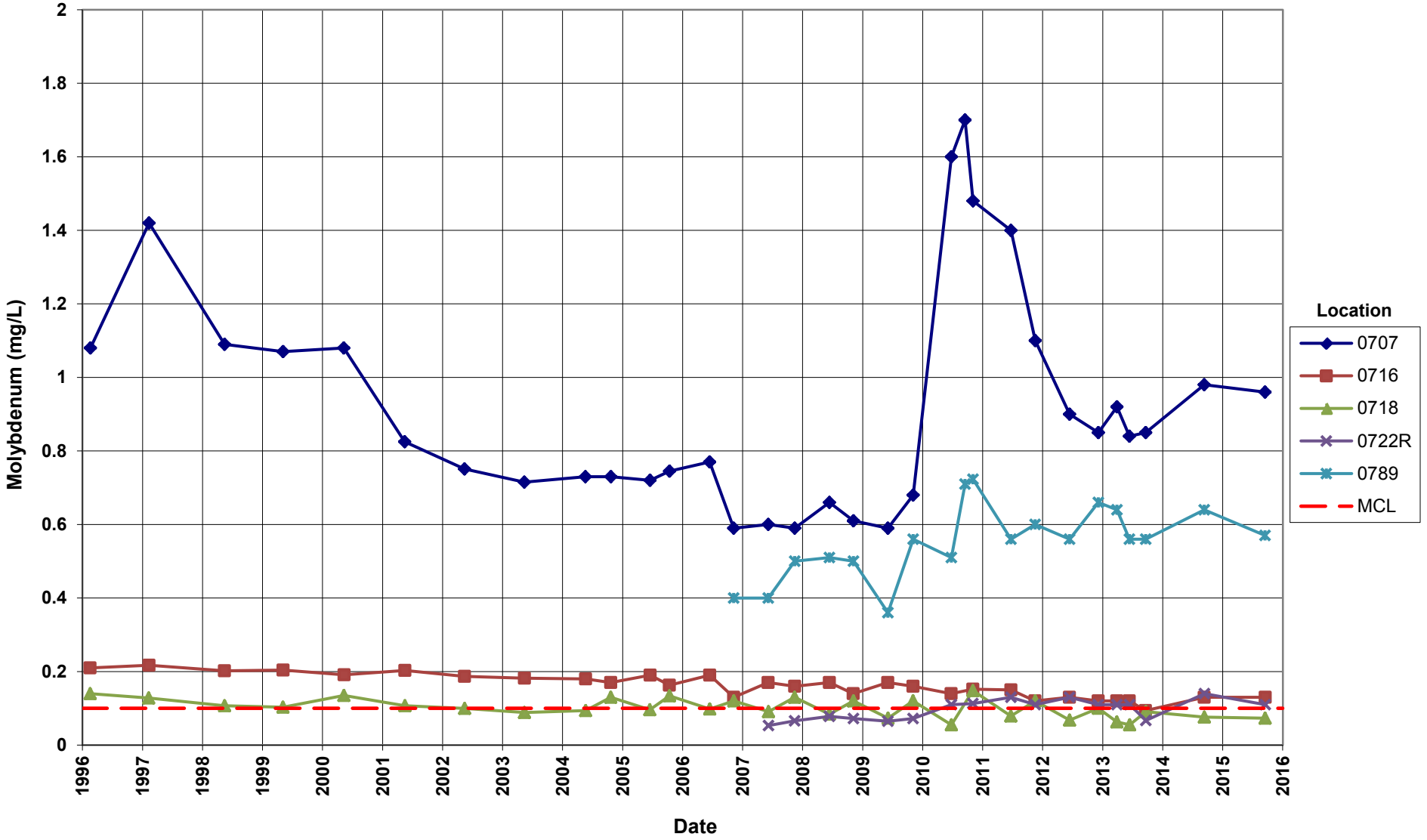
Riverton Processing Site
Molybdenum Concentration
Semi-confined Aquifer Locations
Maximum Concentration Limit (MCL) = 0.1 mg/L



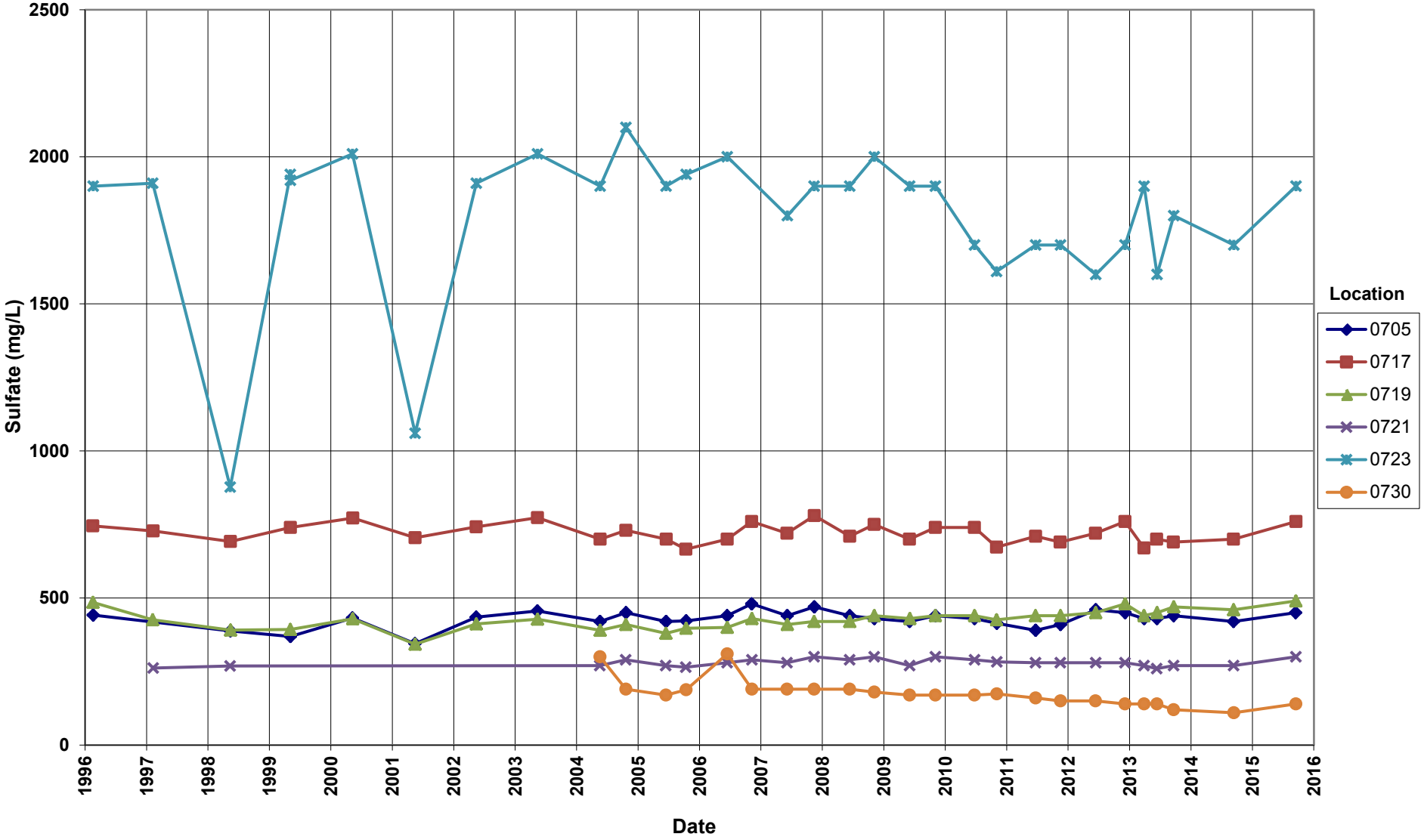
Riverton Processing Site
Molybdenum Concentration
Surficial Aquifer Locations
Maximum Concentration Limit (MCL) = 0.1 mg/L



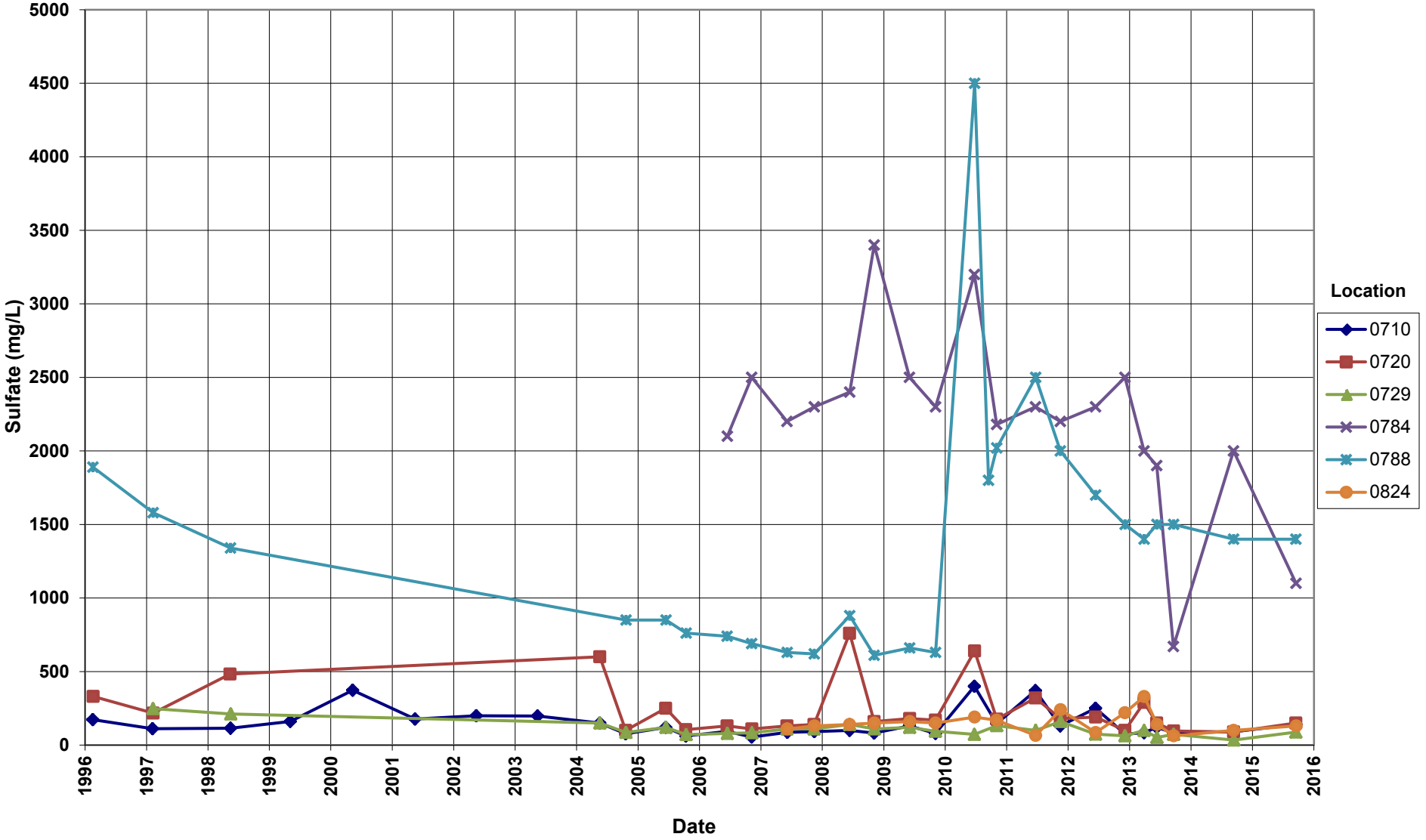
Riverton Processing Site
Molybdenum Concentration
Surficial Aquifer Locations
Maximum Concentration Limit (MCL) = 0.1 mg/L



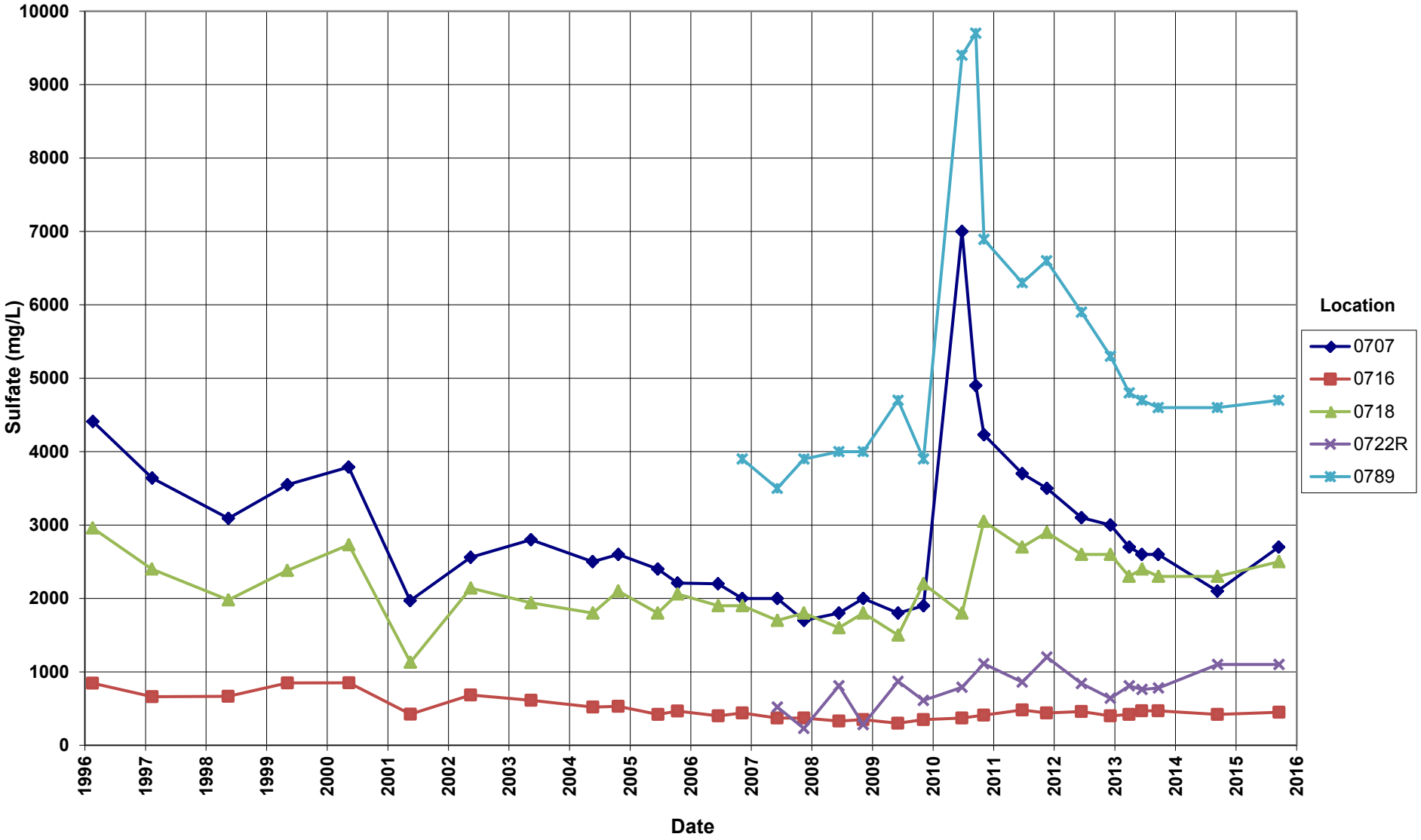
Riverton Processing Site
Sulfate Concentration
Semi-Confined Aquifer Locations



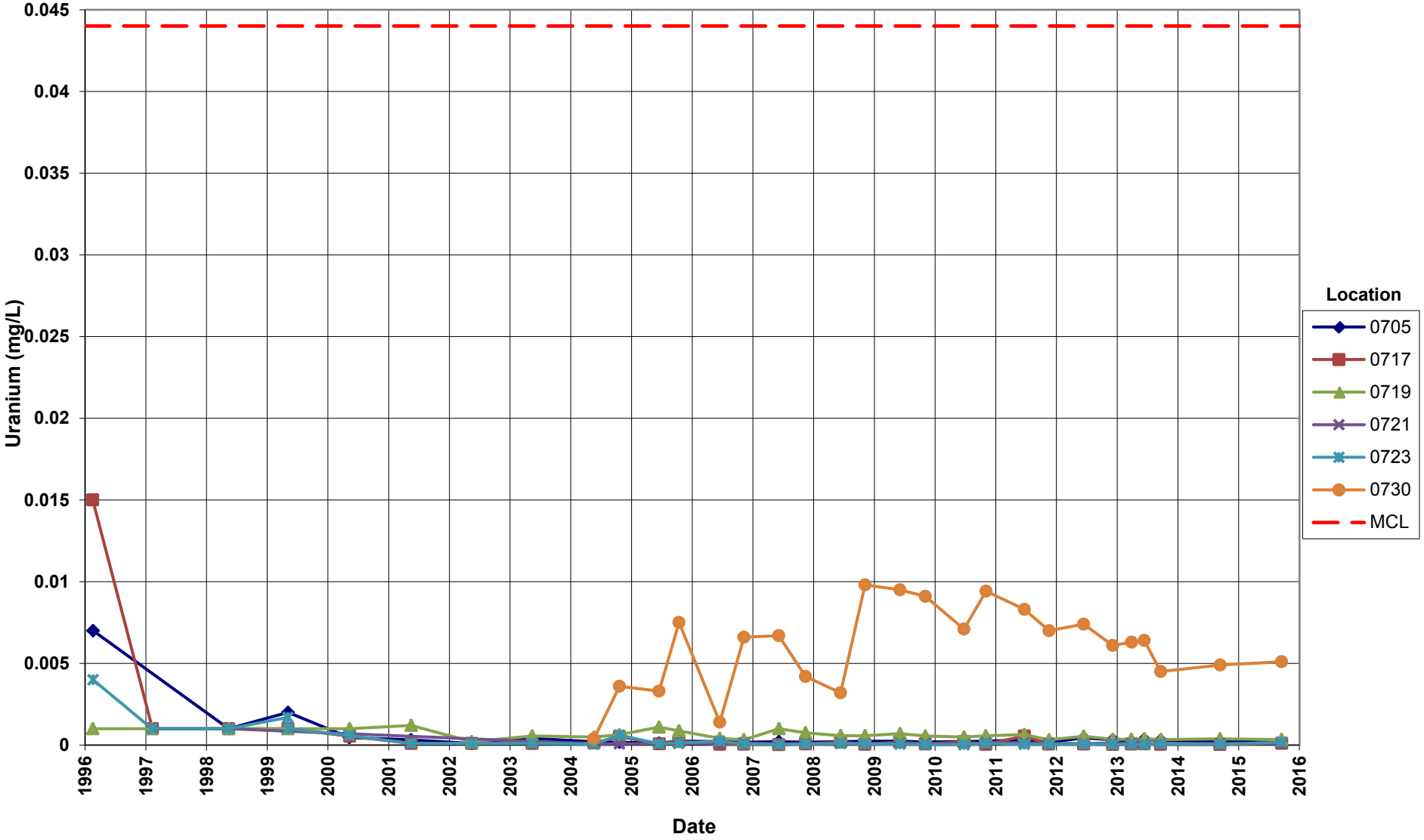
Riverton Processing Site
Sulfate Concentration
Surficial Aquifer Locations



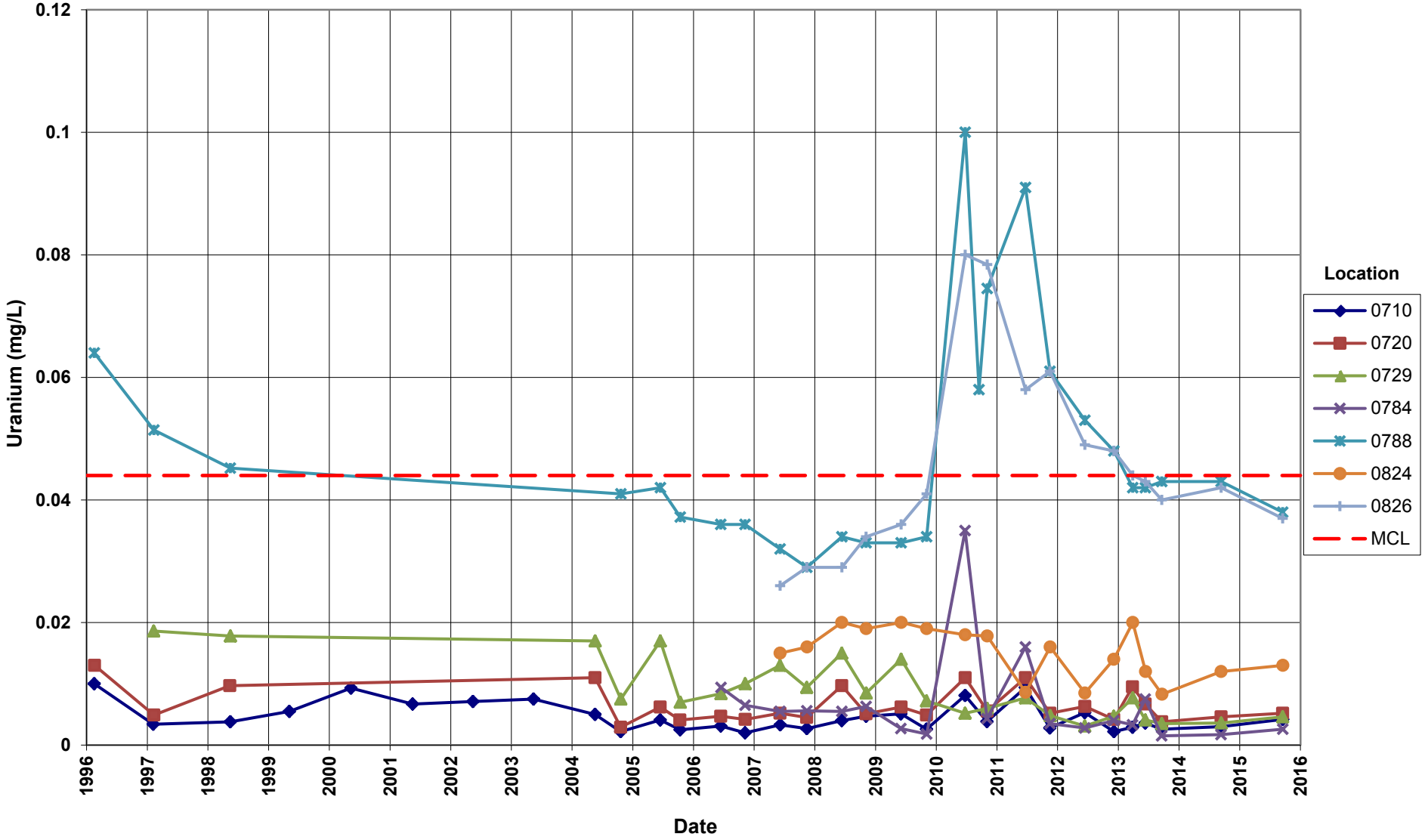
Riverton Processing Site
Sulfate Concentration
Surficial Aquifer Locations



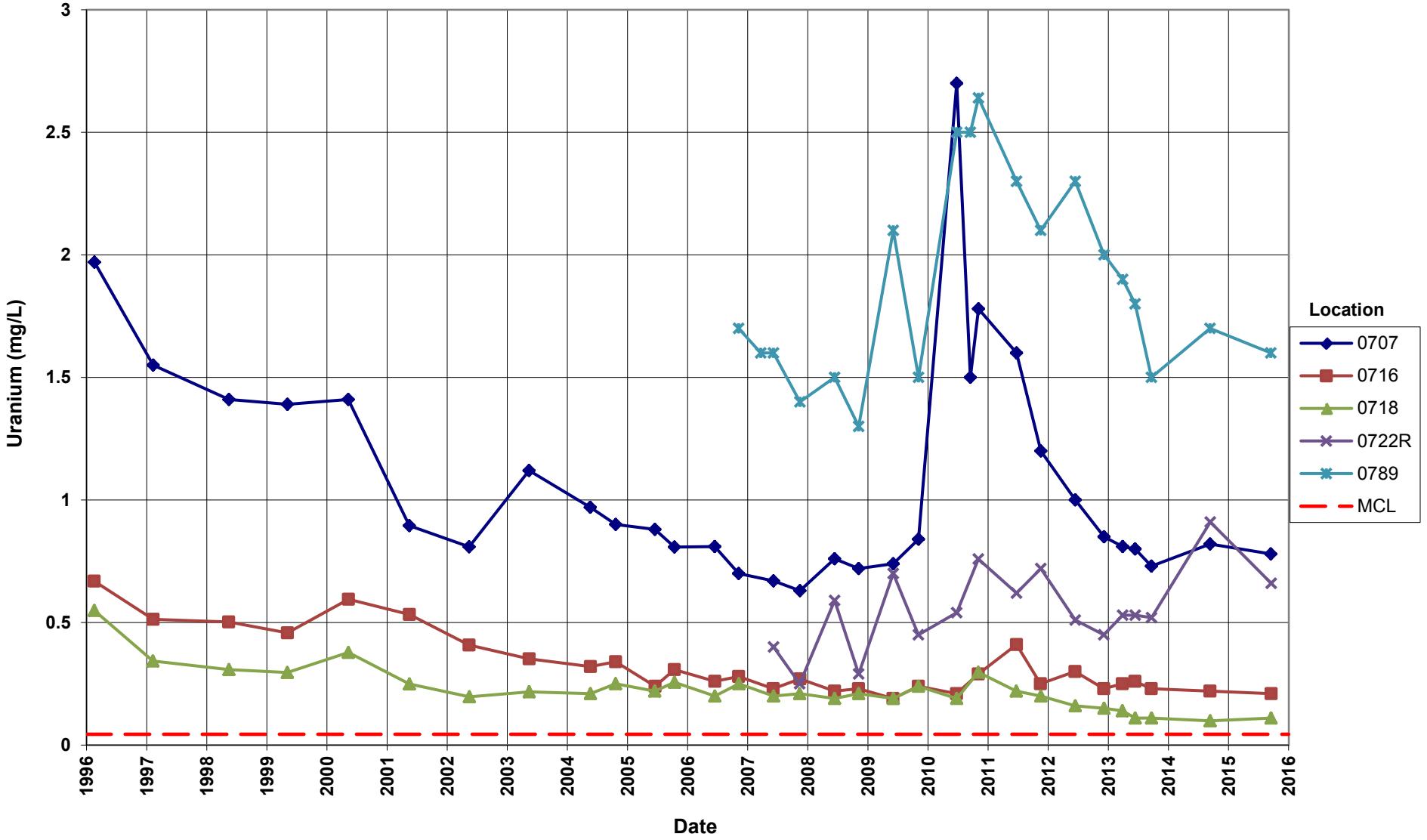
Riverton Processing Site
Uranium Concentration
Semi-Confined Aquifer Locations
Maximum Concentration Limit (MCL) = 0.044 mg/L



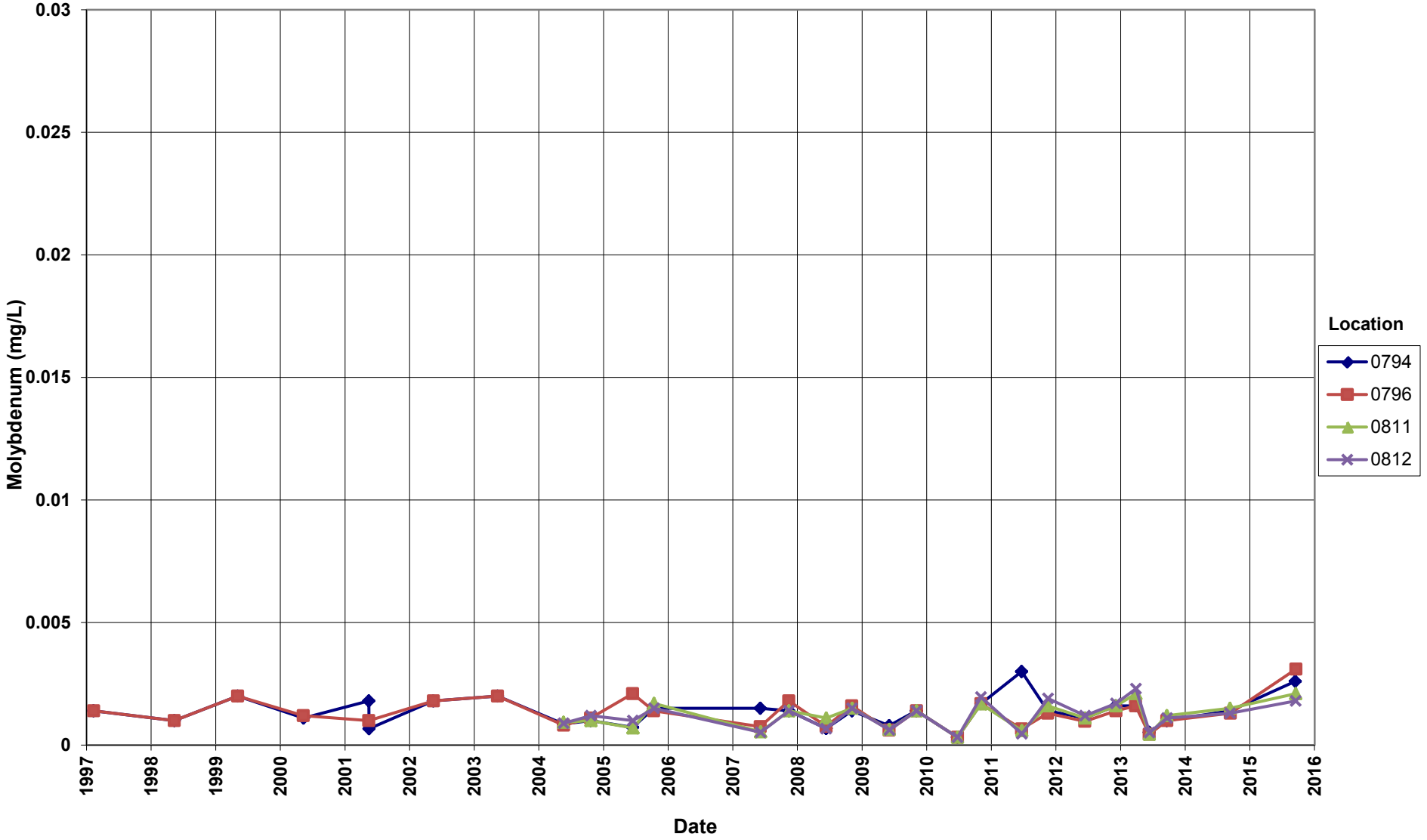
Riverton Processing Site
Uranium Concentration
Surficial Aquifer Locations
Maximum Concentration Limit (MCL) = 0.044 mg/L



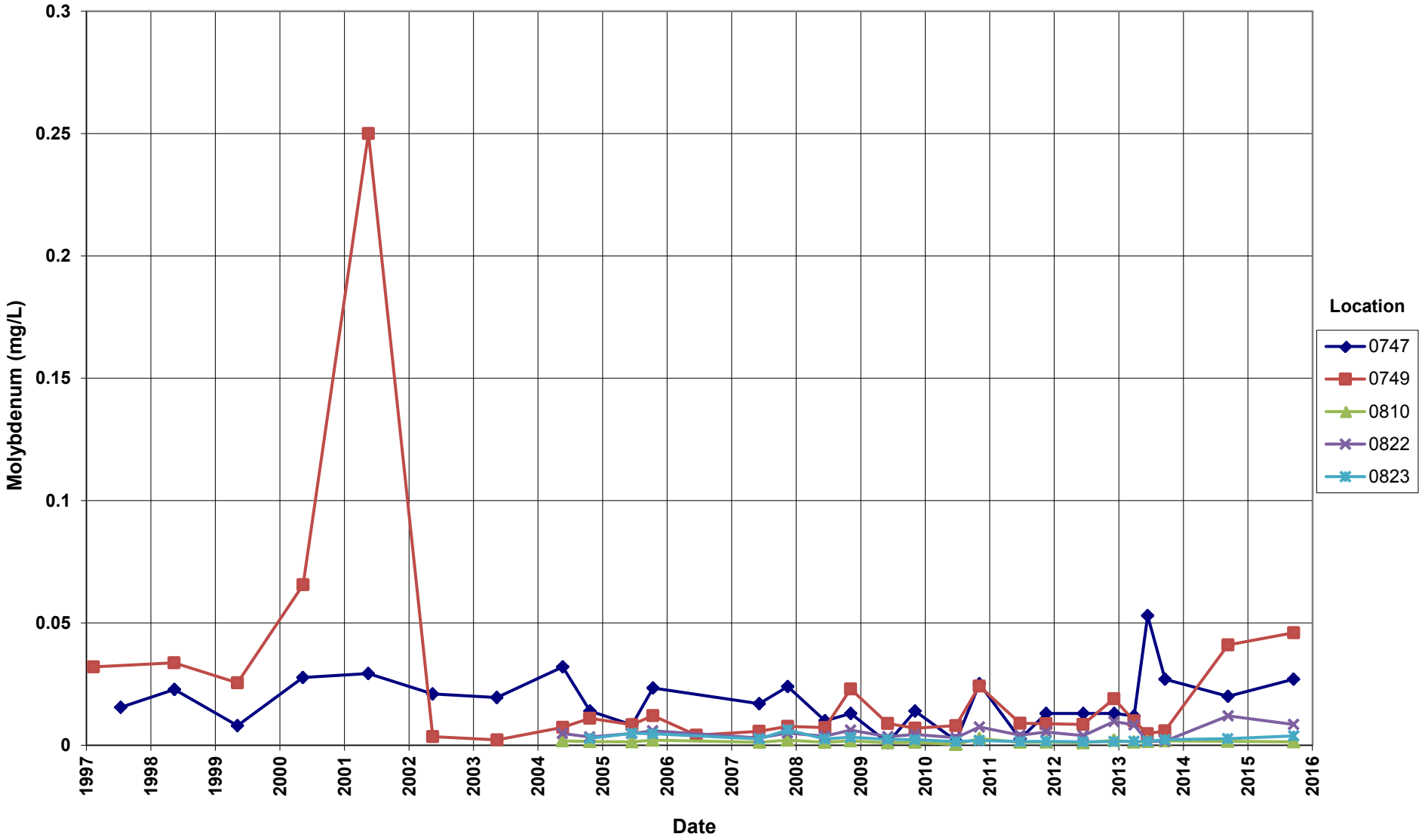
Riverton Processing Site
Uranium Concentration
Surficial Aquifer Locations
Maximum Concentration Limit (MCL) = 0.044 mg/L



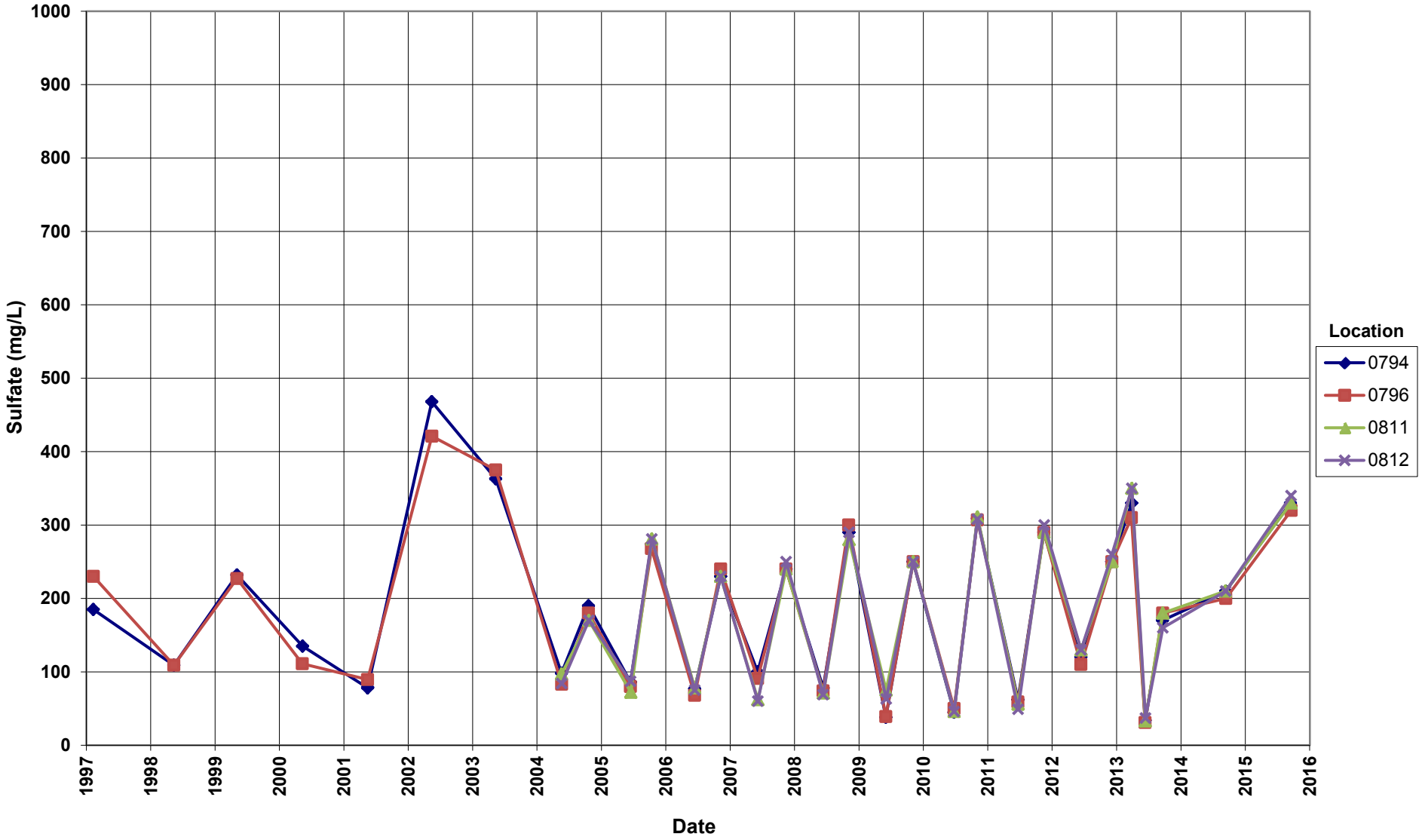
Riverton Processing Site
Molybdenum Concentration
Little Wind River Surface Water Locations



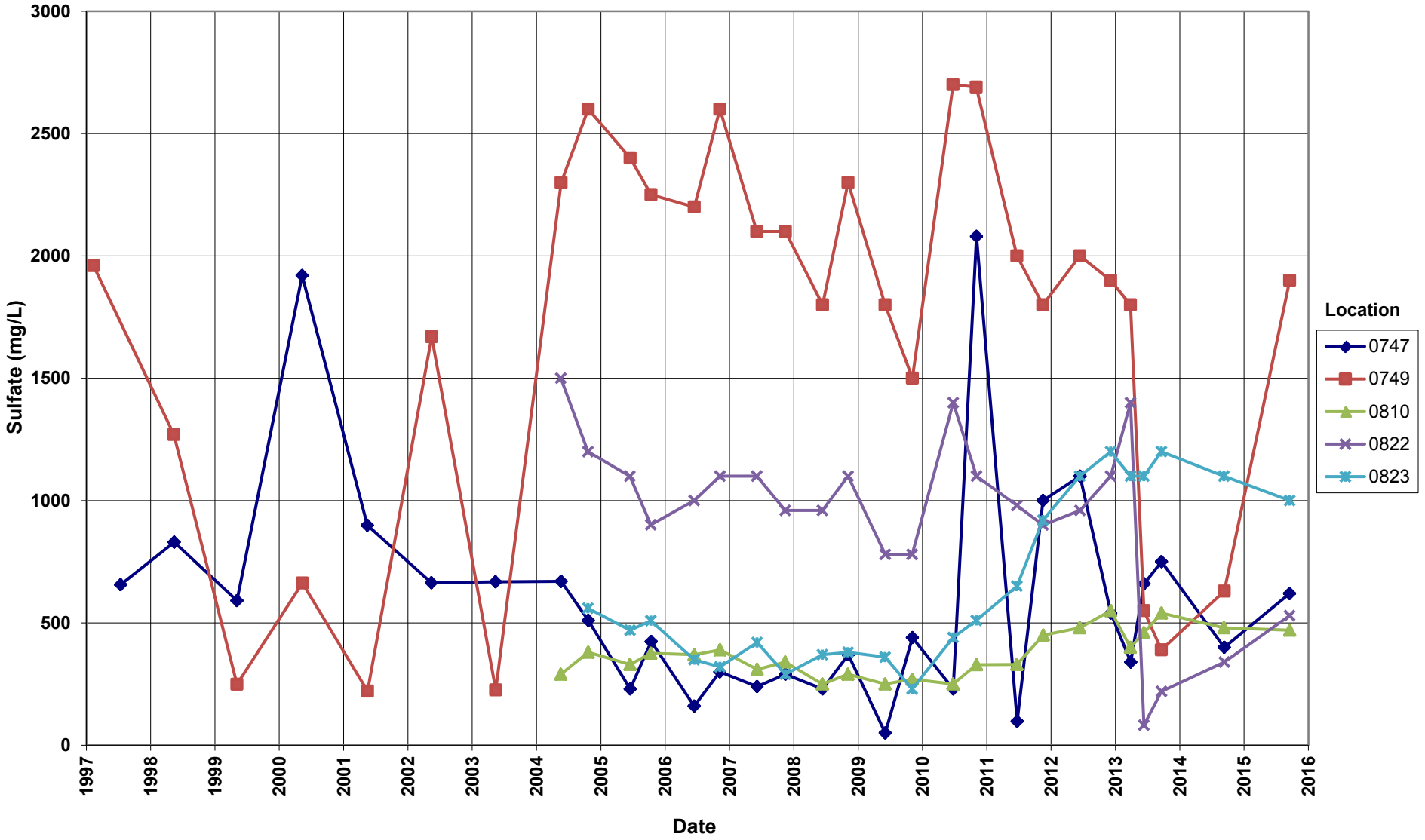
Riverton Processing Site
Molybdenum Concentration
Oxbow Lake, Wetlands, Ditch & Pond Surface Water Locations



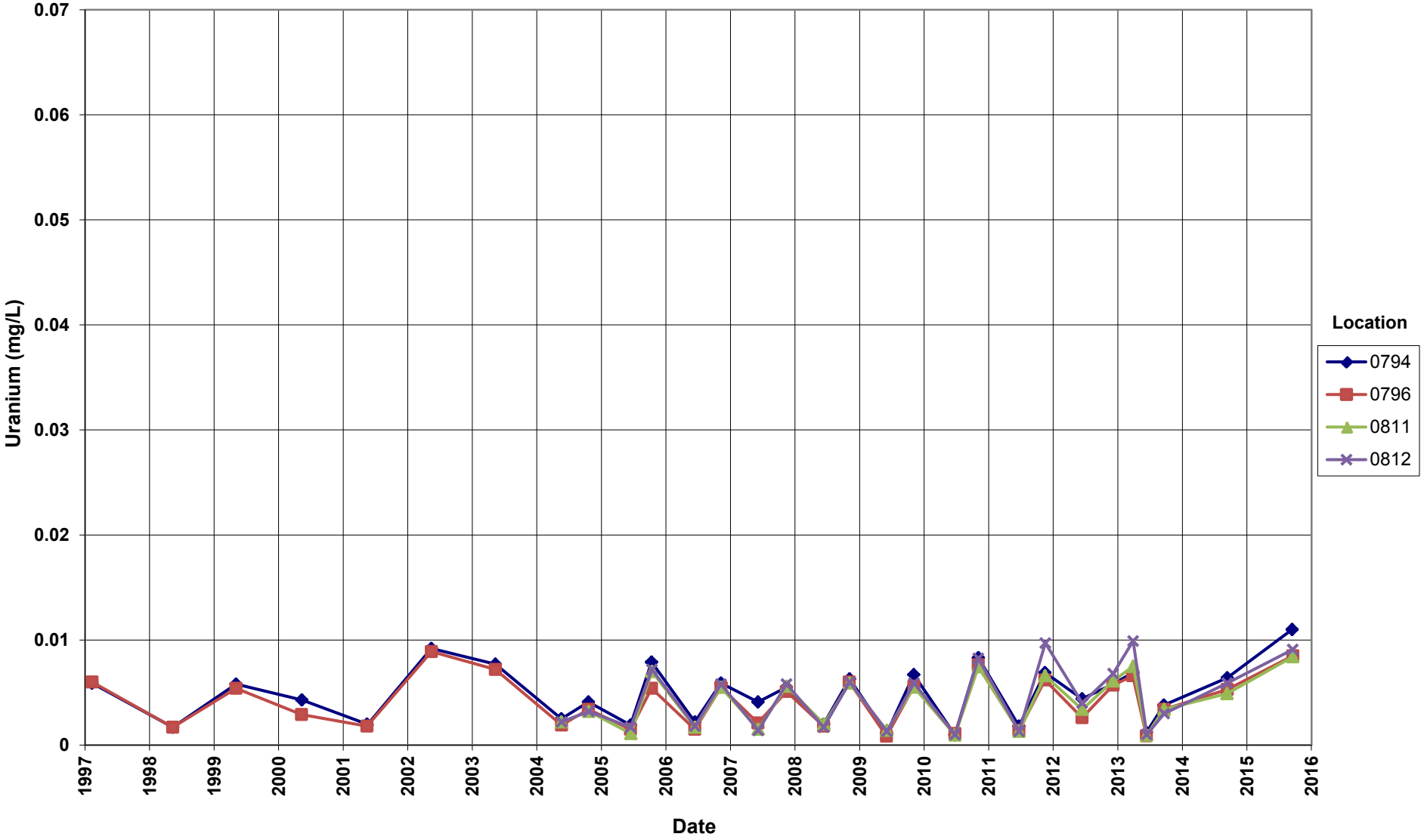
Riverton Processing Site
Sulfate Concentration
Little Wind River Surface Water Locations



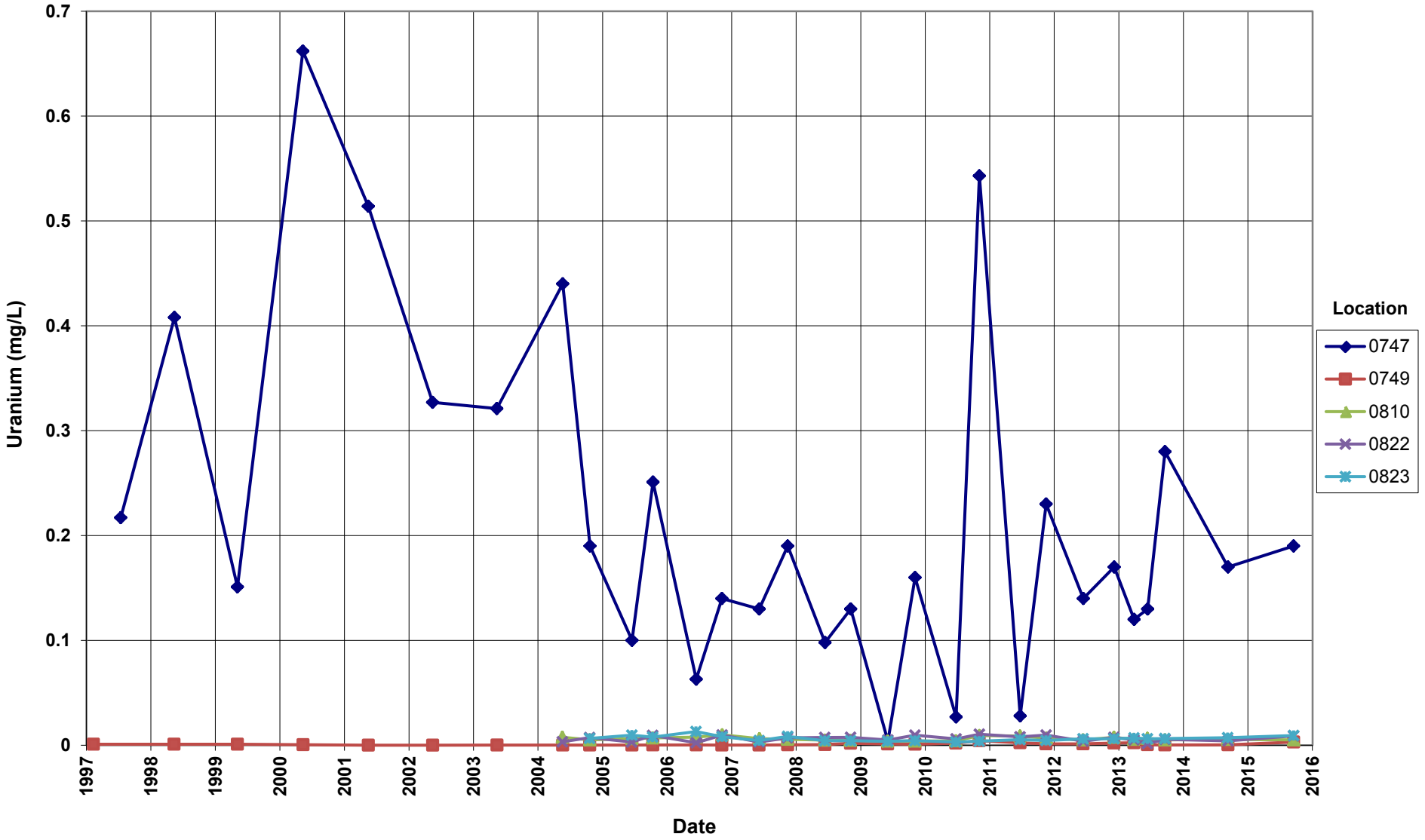
Riverton Processing Site
Sulfate Concentration
Oxbow Lake, Wetlands, Ditch & Pond Surface Water Locations



Riverton Processing Site
Uranium Concentration
Little Wind River Surface Water Locations



Riverton Processing Site
Uranium Concentration
Oxbow Lake, Wetlands, Ditch & Pond Surface Water Locations



Attachment 3

Sampling and Analysis Work Order

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Stoller Newport News Nuclear

August 18, 2015

Task Assignment 103
Control Number 15-0740

U.S. Department of Energy
Office of Legacy Management
ATTN: William Dam
Site Manager
2597 Legacy Way
Grand Junction, CO 81503

SUBJECT: Contract No. DE-LM0000415, Stoller Newport News Nuclear, Inc. (SN3), a wholly owned subsidiary of Huntington Ingalls Industries, Inc.
Task Assignment 103 LTS&M - UMTRCA TI & TII, D&D, Others, and AS&T
September 2015 Environmental Sampling at the Riverton, Wyoming, Processing Site

REFERENCE: Task Assignment 103, 3-103-1-02-117, Riverton, Wyoming, Processing Site

Dear Mr. Dam:

The purpose of this letter is to inform you of the upcoming sampling event at Riverton, Wyoming. Enclosed are the map and tables specifying sample locations and analytes for monitoring at the Riverton Processing Site. Water quality data will be collected from the following locations scheduled to begin the week of September 14, 2015.

The following lists show the monitoring wells (with zone of completion), surface locations, domestic wells, and water supply system locations scheduled to be sampled during this event.

Monitoring Wells*

705 Se	716 Sf	719 Se	722R Sf	729 Sf	732 Se	788 Sf	824 Sf
707 Sf	717 Se	720 Sf	723 Se	730 Se	784 Sf	789 Sf	826 Sf
710 Sf	718 Sf	721 Se	727 Se				

*NOTE: Se = Semi-confined sandstone; Sf = surficial

Surface Locations

747	794	796	810	811	812	822	823
749							

Domestic Wells

405	422	430	436	460	828	841	842
876							

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CMT wells (each well has 4 ports)

0852	0854	0855	0856	0857	0858	0859	0860
0853							

Well Points

0866	0868	0870	0871	0872	0873	0874	0875
0867	0869						

Samples will be collected as directed in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites*. Access agreements are being reviewed and are expected to be complete by the beginning of fieldwork.

Please contact me at (970) 248-6654 if you have any questions.

Sincerely,

Sam Campbell

Sam Campbell
Site Lead

SC/lcg/bkb

Enclosure (3)

cc: (electronic)
Christina Pennal, DOE
Sam Campbell, SN3
Steve Donivan, SN3
Lauren Goodknight, SN3
Diana Osborne, SN3
EDD Delivery
rc-grand.junction
File: RVT 400.02

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Sampling Frequencies for Locations at Riverton, Wyoming

Location ID	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Monitoring Wells						
101					X	WL only
110					X	WL only
111					X	WL only
700					X	WL only
702					X	Data logger
705			X			
707			X			Data logger
709					X	WL only; Data logger
710			X			
716			X			
717			X			
718			X			
719			X			
720			X			
721			X			
722R			X			
723			X			
724					X	WL only
725					X	WL only
726					X	WL only
727			X			WL only
728					X	WL only
729			X			
730			X			
732			X			WL only
733					X	WL only
734					X	WL only
736					X	WL only
784			X			
788			X			
789			X			Data logger
824			X			
826			X			
Surface Locations						
747			X			
749			X			
794			X			
796			X			
810			X			Gravel pit
811			X			Little Wind River
812			X			Little Wind River
822			X			
823			X			

Sampling Frequencies for Locations at Riverton, Wyoming

Location ID	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Domestic Wells						
405			X			921 Rendezvous Road
422			X			10 Whitetail Drive
430			X			204 Goes in Lodge Road
436			X			33 St Stephens Road
460			X			140 Goes in Lodge Road
828			X			33 St Stephens Road
841			X			22 Whitetail Dr
842			X			14 Whitetail Dr
876			X			160 Goes in Lodge Road
CMT Wells						
0852-1			X			
0852-2			X			
0852-3			X			
0852-4			X			
0853-1			X			
0853-2			X			
0853-3			X			
0853-4			X			
0854-1			X			
0854-2			X			
0854-3			X			
0854-4			X			
0855-1			X			
0855-2			X			
0855-3			X			
0855-4			X			
0856-1			X			
0856-2			X			
0856-3			X			
0856-4			X			
0857-1			X			
0857-2			X			
0857-3			X			
0857-4			X			
0858-1			X			
0858-2			X			
0858-3			X			
0858-4			X			
0859-1			X			
0859-2			X			
CMT Wells						

Sampling Frequencies for Locations at Riverton, Wyoming

Location ID	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
0859-3			X			
0859-4			X			
0860-1			X			
0860-2			X			
0860-3			X			
0860-4			X			
Well Points						
866			X			
867			X			
868			X			
869			X			
870			X			
871			X			
872			X			
873			X			
874			X			
875			X			

Annual groundwater and surface water sampling conducted in September.

Constituent Sampling Breakdown

Site	Riverton				
Analyte	Groundwater	Surface Water	Required Detection Limit (mg/L)	Analytical Method	Line Item Code
Approx. No. Samples/yr	75	9			
Field Measurements					
Alkalinity	X	X			
Dissolved Oxygen	X	X			
Nitrite	X				
Ferrous iron	X				
Redox Potential	X	X			
Residual Chlorine					
pH	X	X			
Specific Conductance	X	X			
Turbidity	X	X			
Temperature	X	X			
Laboratory Measurements					
Aluminum					
Calcium	X	X	5	SW-846 6010	LMM-01
Chloride	X	X	0.5	SW-846 9056	MIS-A-039
Chromium					
Deuterium	X		NA	Mass Spectrometry	LMW-08
Iron	X		0.01	SW-846 6010	LMM-01
Lead					
Magnesium	X	X	5	SW-846 6010	LMM-01
Manganese	X	X	0.005	SW-846 6010	LMM-01
Molybdenum	X	X	0.003	SW-846 6020	LMM-02
Nickel					
Nitrate + Nitrite as N (NO3+NO2)-N	X		0.05	EPA 353.2	WCH-A-022
Oxygen-18	X		NA	Mass Spectrometry	LMW-08
Potassium	X	X	1	SW-846 6010	LMM-01
Radium-226			1 pCi/L	Gas Proportional Counter	GPC-A-018
Radium-228			1 pCi/L	Gas Proportional Counter	GPC-A-020
Silica	X		0.2	SW-846 6010	LMM-01
Sodium	X	X	1	SW-846 6010	LMM-01
Sulfate	X	X	0.5	SW-846 9056	MIS-A-044
Sulfide	855		0.002	SM-4500	WCH-A-038
Sulfur-34	705, 707, 710, 716, 717, 718, 719, 720, 721, 722R, 723, 727, 729, 730, 732, 784 only		NA	Mass Spectrometry	LMW-09
Total Dissolved Solids					
Tritium	705, 707, 710, 716, 717, 718, 719, 720, 721, 722R, 723, 727, 729, 730, 732, 784 only		3 pCi/L	Electrolytic Enrichment/LSC	LMR017
Uranium	X	X	0.0001	SW-846 6020	LMM-02
U-234, U-238	X		0.1 pCi/L	Alpha Spectrometry	LMR-02
Zinc					
Total No. of Analytes	18	9			

Note: All private well samples are to be unfiltered. The total number of analytes does not include field parameters.

Attachment 4

Trip Report

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Stoller Newport News Nuclear

Memorandum

DATE: September 30, 2015

TO: Distribution

FROM: Sam Campbell

SUBJECT: Trip Report

Site: Riverton, Wyoming, Processing Site

Dates of Sampling Event: September 14 to September 18, 2015

Team Members: Sam Campbell, Jennifer Graham, Rob Rice, Eric Szabelski, and Samantha Tigar.

Number of Locations Sampled: Samples were collected from 72 of the 84 locations identified on the sampling notification letter. In addition, a new domestic well (0878) within the IC boundary was identified by the Northern Arapaho Environmental Office, sampled, and included in the long-term monitoring program.

Locations Not Sampled/Reason: The following locations were not sampled:

- The top ports of all of the CMT monitoring wells were dry. These ports were designed to be saturated only during flood conditions, so the dry condition was expected. These include wells 0852-1 through 0860-1.
- CMT monitoring wells 0852-2 and 0857-2 were dry.
- Domestic well 0422 was not sampled because the modular home on the property had been removed.

Location Specific Information:

- Additional field measurements of ferrous iron and nitrite were made at each monitoring well (no measurements were made at surface water or domestic well locations). Ferrous iron measurements were uploaded to the database when the field computers were synced; however, FDCS does not accommodate nitrate measurements, which were recorded in the comments section of FDCS.
- New downhole and pump-head tubing was installed in all CMT monitoring well 2, 3, and 4 ports; some tubing is still needed in some -1 ports.
- Depth information on the temporary well-points is displayed in Table 1. All temporary well-points were removed, cleaned, and stored for use on future projects.
- The Little Wind River was not flowing into the oxbow lake at the time of sampling.

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According to USGS personnel, the river was near all-time record low-flows during the sampling event.

- Water was not obtained from the SLAC pore water samplers and samples were not collected as planned – the problem was likely from stealthy terminal caps that allow syringe access but were not removed.

Table 1. Temporary Well-Point Depth Information

Well-Point Location	Rod Length (ft.)	Stick-Up Height (ft.)	Depth BGS (ft.)	Sampling Interval (ft. BGS)
0866	7	1.45	5.55	4.55-5.55
0867	7	3.04	3.96	2.96-3.96
0868	4	0.79	3.21	2.21-3.21
0869	7	1.7	5.3	4.3-5.3
0870	7	1.91	5.09	4.09-5.09
0871	7	2.71	4.29	3.29-4.29
0872	7	2.17	4.83	3.83-4.83
0873	7	1.25	5.75	4.75-5.75
0874	7	1.42	5.58	4.58-5.58
0875	7	1.25	5.75	4.75-5.75

Quality Control Sample Cross Reference: False identifications assigned to the quality control samples are shown in Table 2.

Table 2. Quality Control Sample Cross-Reference

False ID	Ticket Number	True ID	Sample Type	Associated Matrix	Associated Samples
2776	NKT 880	0858-4	Duplicate	Groundwater	N/A
2777	NKT 881	0860-3	Duplicate	Groundwater	N/A
2778	NKT 882	0796	Duplicate	Surface Water	N/A
2779	NKT 883	0999	Equipment Blank	Surface Water	0747, 0796, 0822, and 0823
2780	NKT 884	0872	Duplicate	Groundwater	N/A

Requisition Index Number (RIN) Assigned: Samples were assigned to RINs 15097345, 15097346, and 15097347. Field data sheets can be found in \\crow\SMS\15097345\FieldData.

Sample Shipment: Samples for sulfide analyses (well 0855 ports) were shipped from Riverton mid-week of the sampling event (9/16/2015) to the ALS Laboratory Group because of the short holding time (7 days). All other samples were shipped overnight via FedEx from the Grand Junction office to three different laboratories on 9/22/2015: ALS Laboratory Group in Fort Collins, Colorado; GEL Laboratories in Charleston, South Carolina; and the Reston Stable Isotope Laboratory in Reston, Virginia.

Water Level Measurements: Water levels were measured in all sampled wells and in 13 additional wells.

Well Inspection Summary: No issues were identified. All new wells were labeled in the concrete pad, and protective casing, and on each port in the interior.

Sampling Method: Samples were collected according to the *Sampling and Analysis Plan (SAP) for the U. S. Department of Energy Office of Legacy Management Sites* (LMS/PRO/S04351, continually updated) (SAP) and Program Directive RVT-2015-01, which specifies protocols for sampling CMT wells.

Field Variance: Several daily operational checks on the dissolved oxygen probes did not meet criteria. The probes were recalibrated and measurements were made during the day. In addition, one of the dissolved oxygen probes malfunctioned during operation; the membrane was changed and the probe was recalibrated and used in subsequent measurements. An assessment of the validity of the dissolved oxygen measurements will be made during the data validation process.

Equipment: The internal battery of one of the peristaltic pumps would not hold a charge – the pump was run off the vehicle battery during the sampling event. The other peristaltic pump had an issue with the DC cord connection; the connection was repaired in the field and the pump continued to operate. One of the water level indicator's audible function was intermittent. One of the turbidity meters required field cleaning prior to meeting daily operational check criteria.

Dataloggers: Dataloggers were installed and started in the stilling well (0849) and monitoring well 0722R.

The stilling well datalogger was started with an initial depth to river level (10.90 ft.) obtained with the laser level. The stilling well angle (degrees below horizontal) was calculated to be 35.13 based on the vertical distance from the measuring point to the water surface (10.90 ft.) using the laser level and the distance from the measuring point to the water surface inside the pipe (18.94 ft.) using the water level indicator. This angle will be used in conjunction with the depth to water measurement in the pipe during future downloads of the stilling well to determine the vertical depth to water.

Surveying: New monitoring wells 0852, 0853, 0854, 0859, and 0860 were surveyed with a combination of the survey-grade GPS and laser-level instruments. Stick-up heights of all new monitoring wells were measured and placed in the comments section in FDCS. Stick-up heights are also listed in Table 3.

Table 3. Stick-up Heights of CMT Monitoring Wells

Well ID	Stick-Up Height Above Ground Surface (ft.)	
	CMT Ports 1, 2, and 3	Port 4 – 1.5-inch well
0852	2.25	2.78
0853	2.33	2.42
0854	2.23	2.54
0855	2.09	2.54
0856	2.17	2.50
0857	2.50	2.82
0858	1.94	2.19
0859	2.28	2.59
0860	2.39	2.65

Stakeholder/Regulatory/DOE: Steve Babits of the Northern Arapaho Environmental Office was on-site to provide oversight of sampling activities. Jim Campbell of USGS was on-site to observe sampling of temporary well-points and to discuss sampling protocols for the CMT monitoring wells.

Institutional Controls:

Signs: Warning signs around the oxbow lake were in place and in good condition.
Trespassing/Site Disturbances: No unauthorized land use or new domestic well installations was observed.

Safety Issues: Organic vapors were measured with a PID at monitoring well 0859; all readings, including the initial reading at the well head, were less than 1 ppm. The highest reading measured was 1.1 ppm in the one of the sample bottles.

Access Issues: All team members had received ChemTrade access training during the previous field investigation event, and all team members signed in and out of ChemTrade, as required.

General Information: Nothing to note

Immediate Actions Taken: New domestic well location 0878 was established in the environmental database by Data Management personnel. GPS coordinates of the new domestic well, and survey coordinates and elevations of the new monitoring wells were forwarded to the Data Management group for inclusion in the environmental database.

Future Actions Required or Suggested: Actions required include:

- Nitrate data hand-entered into the environmental database by Data Management personnel.
- Deficient equipment tagged out of service and repaired.
- Domestic well 0878 added to the long-term sampling table in the Riverton section of the SAP.
- Amend the equipment blank entry in FDCS to the correct false ID number.
- Samantha Tigar added to the sampler list in FDCS.
- Alkalinity results at monitoring wells 0705 and 0852-4 corrected in FDCS and the environmental database. Actual values should be 330 mg/L at 0852-4 and 40 mg/L at

well 0705. These corrections are based on notes that the test was performed on a reduced sample volume.

(SC/lcg)

cc: (electronic)
Bill Dam, DOE
Terry Petrosky, DOE
John Bargar, SLAC
Sam Campbell, SN3
Steve Donivan, SN3
Jennifer Graham, SN3
Ray Johnson, SN3
Rob Rice, SN3
Eric Szabelski, SN3
Samantha Tigar, SN3
EDD Delivery
rc-grand.junction
File: RVT410.02 (A)

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