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Contaminant Leach Testing of Hanford Tank 241-C-104 Residual Waste

July 2015

KJ Cantrell
MMV Snyder
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U.S. DEPARTMENT OF ENERGY

Prepared for the U.S. Department of Energy
under Contract DE-AC05-76RL01830

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Pacific Northwest National Laboratory
Richland, Washington 99352

Summary

Leach testing of residual waste in Tank 241-C-104 at the Hanford Site was completed using both batch and column experiments. Tank C-104 residual waste contains exceptionally high concentrations of uranium (as high as 115 mg/g or 11.5 wt.%). This study was conducted to provide data to develop contaminant release models for Tank C-104 residual waste and for Tank C-104 residual waste that has been treated with lime to transform uranium in the waste to a highly insoluble calcium uranate ($CaUO_4$) or a similar phase.

Three column leaching cases were investigated. In the first case, C-104 residual waste was leached with DI water. In the second case, crushed grout was added to the column so that DI water contacted the grout prior to contacting the waste. In the third scenario, lime was mixed in with the grout.

Results of the column experiments demonstrate that addition of lime dramatically reduces the leachability of uranium from Tank C-104 residual waste. Initial indications suggest that $CaUO_4$ or a similar highly insoluble calcium-rich uranium phase forms as a result of the lime addition. Additional work is needed to definitively identify the uranium phases that occur in the as-received waste and the waste after lime treatment.

Acknowledgments

Support for this project was provided through the U.S. Department of Energy Office of River Protection in Richland, Washington.

The authors wish to acknowledge Mark Triplett for programmatic guidance, direction, and support. We also acknowledge Wooyong Um (PNNL) for technical review of the document.

The authors also acknowledge the following PNNL staff from the Environmental Sciences Lab, which is part of the Geosciences Group, for performing the leach tests and making all of the analytical measurements on the leachates: Steven Baum, and Ian Leavy. The authors also thank Susan Ennor for editorial review and document production.

Acronyms and Abbreviations

BSE	backscattered electron
DI	deionized water
EDS	energy dispersive spectroscopy
FEG	Field Emission Gun
IC	Ion chromatography
ICDD	International Center for Diffraction Data
ICP-MS	inductively coupled plasma-mass spectrometry
ICP-OES	inductively coupled plasma-optical emission spectroscopy
K_{sp}	mineral solubility product at equilibrium at the temperature of interest
NIST	National Institute for Science and Technology
PEEK	polyetheretherketone
PNNL	Pacific Northwest National Laboratory
Q	activity product
SE	scanning emission
SEM	scanning electron microscopy
SI	saturation index, $SI = \log (Q/K_{sp})$
XRD	x-ray diffraction

Units of Measure

ºC	temperature in degrees Celsius
g	gram
keV	kilo-electron volt
kV	kilovolt
L	liter
M	mole
m	meter
mA	milliamps
Mg	milligram
mL	milliliter
mm	millimeter
µg	microgram
wt.%	weight percent

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1.0 Introduction

Scientifically defensible contaminant release models for tank residual waste under simulated tank closure conditions are needed to support the closure of Waste Management Area C at the Hanford Site. Residual waste retrieved from Tank 241-C-104 has been shown to contain high concentrations of uranium (average of 115 mg/g or 11.5 wt.%). With support from the U.S. Department of Energy Office of River Protection, Pacific Northwest National Laboratory (PNNL) researchers conducted the study reported herein to help develop defensible contaminant release models. The scope of the reported effort was to provide data to develop contaminant release models for Tank C-104 residual waste and for Tank C-104 residual waste that has been treated with lime to transform uranium in the waste to a highly insoluble calcium uranate ($CaUO_4$) or a similar phase. Chemical stabilization of tank residual waste has the potential to be used as part of a risk-based closure strategy to demonstrate that a greater volume of waste can be left in the tanks, while actually reducing overall risk levels to human health and the environment.

Both batch and column leaching experiments were conducted to evaluate the leachability of contaminants of concern. Geochemical modeling of the effluent sample compositions was conducted to determine saturation indices of phases that could control the solubility of contaminants of concern.

2.0 Materials and Methods

The following sections describe the materials and methods used for this work.

2.1 Hanford Tank 241-C-104 Residual Waste Sample

Residual tank waste from Tank C-104 was collected by Washington River Protection Services for analysis by PNNL. The sample (Lab ID S14R000109) was received on May 14, 2014. Mean concentrations of major components and contaminants of concern in the waste are listed in Table 2.1 (Hulse 2013).

Table 2.1. Mean Analytical Results of Tank C-104 Residual Waste

Analyte	Mean (wt.%)
Al	10.0
Ca	0.12
Cr	0.027
Fe	2.8
Na	10.1
Si	1.2
Tc-99	1.6 (μg/g)
Th-232	0.3
U-238	11.5
Zr	0.2
Oxalate	2.1
Phosphate	0.62
H_2O	26.6
Source: Hulse 2013	

2.2 Batch Leach Experiments

Batch leaching experiments were conducted with untreated Tank C-104 residual waste to assess the time necessary to reach equilibrium and determine the flow rate for the column experiments. Each sample vial was prepared by adding approximately 0.5 g of C-104 tank waste and 25 mL of 0.005 M $Ca(OH)_2$. After the vials were assembled, they were equilibrated using a shaker or rotating sample holder. Eight contact periods (i.e., 2 days, 4 days, 1 week, 2 weeks, 3 weeks, 4 weeks, 5 weeks, and 6 weeks) were used. Leaching experiments were run in duplicate for each time period, for a total of 16 samples. Experiments were conducted at room temperature (i.e., approximately 20°C). After equilibration, the experiments were terminated, pH values were measured immediately, and the samples were prepared for inductively coupled plasma-optical emission spectroscopy (ICP-OES), inductively coupled plasma-mass spectrometry (ICP-MS), ion chromatography (IC), and alkalinity testing. The following elements were measured by ICP: Ag, Al, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Na, Ni, P, Pb, S, Si, Sr, Tc, Th, U, V, Zr, and Zn. The following analytes were measured by IC: Cl^-, F^-, PO_4^{3-}, NO_3^-, NO_2^-, SO_4^{2-}, and oxalate.

2.3 Column Leach Experiments

Three column leaching cases were investigated. In the first case, C-104 residual waste was leached with deionized (DI) water. In the second case, crushed grout was added to the column so that DI water contacted the grout prior to contacting the waste. In the third case, lime was mixed in with the grout. The third case was conducted in duplicate. The columns used in the experiments were 10 cm long polyetheretherketone (PEEK) columns with an inside diameter of 0.76 cm and a total volume of 4.54 mL. The weights of the various components used in the column experiments are listed in Table 2.2. The configuration of the columns and the effluent samplers is shown in Figure 2.1. The void volume in the columns not occupied by the components listed in Table 2.2 was filled with Teflon beads (Engineering Laboratories, Oakland, NJ) that had a diameter of 0.793 ± 0.025 mm.

Table 2.2. Component Weights Used in Column Experiments Used to Measure Contaminant Leaching from Tank C-104 Residual Waste

Column ID	Column Configuration	Waste (g)	Grout (g)	Lime (g)
1	Waste Only	0.263	0.0	0.0
2	Waste +Grout	0.301	4.0	0.0
3	Waste+Grout+Lime	0.241	4.0	0.5
4	Waste+Grout+Lime	0.240	4.0	0.5

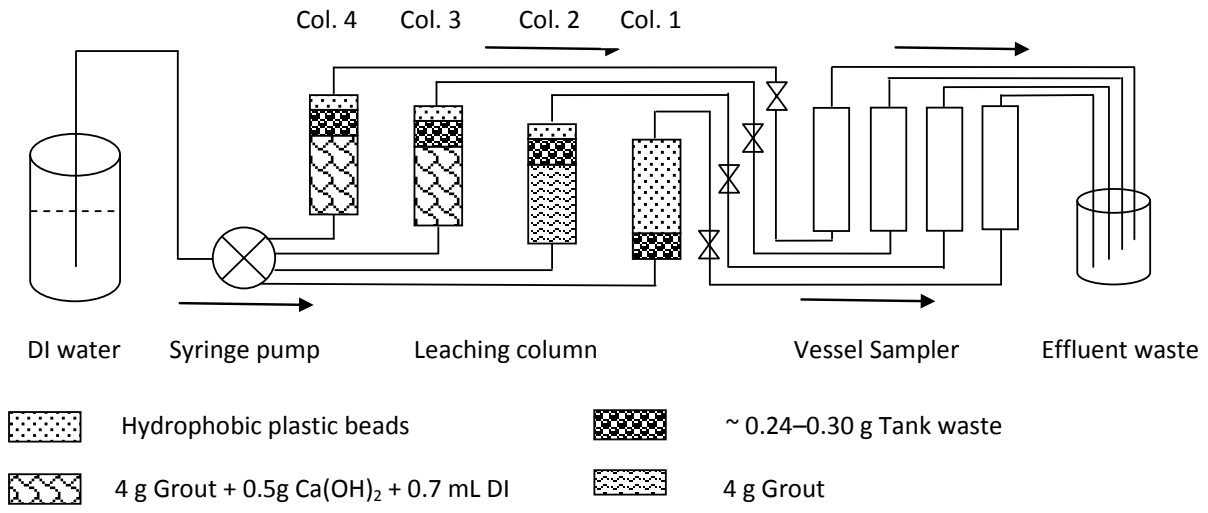

Figure 2.1. Column Configuration for Tank C-104 Residual Waste Leaching Experiments

At the beginning of the experiments, columns were saturated by pumping DI water into the columns until the void volume was completely filled with water. After the columns were saturated with water, a syringe pump was used to pump DI water through the columns at a flow rate of approximately 5.0 mL per week. The estimated porosity of the columns was 0.4 and the average estimated pore volume of the columns was 1.8 mL. Residence time for the water was close to 2.5 days inside the column. Experiments were conducted at room temperature (approximately 20°C).

Because the column effluent samples were relatively alkaline (i.e., pH 9.2 to 12.6), precautions were taken to minimize effluent sample contamination from CO_2 in the air. This was accomplished by pumping effluent solution through empty PEEK columns that were filled with argon prior to initiating flow (see Figure 2.1).

The number of pore volumes that were pumped through the four columns was not identical because plugging occurred and inhibited flow in some columns.

2.4 Grout Formulation

The grout formula used for the tank leaching studies is based on the one used for bulk fill grout given in the Area C Closure Conceptual Design Report by Quigley (2011). Table 2.3 shows the formula Quigley provided and the volumes of materials used to make approximately 250 mL of grout for the experimental work.

Table 2.3. Grout Formulation Used in the Tank C-104 Residual Waste Column Leaching Experiments

Component	Grout (ft^3/yd^3)	Grout (mL/250 mL)
Fly Ash	6.1	56.5
Portland Cement	2.1	19.5
Sand	23.3	215.8
Water	5.95	55.0

The grout was made by measuring the dry ingredients in a graduated cylinder (by volume), mixing the dry ingredients together, then measuring the water in a graduated cylinder (by volume), and mixing the water and dry ingredients thoroughly. The mixture was then poured into plastic tubes, and cured for 30 days. After 30 days the grout was broken up and sieved to obtain material >50 μm and <2.0 mm.

2.5 Solution Analytical Methods

Major cation analysis (including aluminum, silicon, calcium, magnesium, sodium, potassium, iron, and manganese) was performed by ICP-OES following PNNL technical procedure PNNL-ESL-ICP-OES, Revision 3 (Baum 2014a).[1] Selected trace metals analysis (^{99}Tc and uranium isotopes) was performed using ICP-MS following technical procedure PNNL-ESL-ICP-MS, Revision 3 (Baum 2014b).[2] For both ICP-OES and ICP-MS, high-purity calibration standards were used to generate calibration curves and verify continuing calibration during the analysis. Appropriate dilutions were made for each sample and analyzed to investigate and correct for matrix interferences.

[1] Baum SR. 2014a. *Inductively Coupled Plasma -Optical Emission Spectrometry (ICP-OES) Analysis.* PNNL-ESL-ICP-OES-rev3, Pacific Northwest National Laboratory, Richland, Washington.
[2] Baum SR. 2014b. *Inductively Coupled Plasma Mass Spectrophotometry (ICP-MS) Analysis.* PNNL-ESL-ICPMS-rev3, Pacific Northwest National Laboratory, Richland, Washington.

Anion analysis was performed using IC following technical procedure PNNL-ESL-IC, Revision 1 (Baum 2014c).[3] Anions F^-, Cl^-, B^-, NO_3^-, NO_2^-, PO_4^{3-}, and SO_4^{2-} were separated on a Dionex®[4] AS17C column with a gradient elution technique from 1 mM to 35 mM KOH and measured using a conductivity detector. This methodology is a substitution for U.S. Environmental Protection Agency (EPA) SW-846 Method 9056 A (EPA 2007), with the exception of using gradient elution with KOH instead of the recommended isocratic elution with a HCO_3 buffer.

Alkalinity was measured by standard titration. A volume of standardized sulfuric acid was added to the sample to an endpoint of pH 4.5 to measure total alkalinity. Alkalinity is reported in terms of an equivalent mass of $CaCO_3$. The alkalinity procedure followed Standard Method 2320 B, "Alkalinity by Titration" (Clesceri et al. 1998).

Solution pH values were measured using technical procedure PNNL-ESL-pH, Revision 2 (Snyder 2014).[5]

2.6 X-Ray Diffraction Analysis

A standard powder x-ray diffraction (XRD) technique was used to identify crystalline phases present in the waste samples after leaching. Because the residual waste samples are highly radioactive dispersible powders, it was necessary to prepare the XRD mounts of these samples inside a fume hood regulated for handling radioactive materials. Each sample was mixed with approximately 2 mL of krylon in a vial, then ground into a paste. The paste was arranged into a circular shape onto a glass slide. Krylon serves as a mixing agent and as a fixating agent, ensuring nondispersibility of the radioactive sample. After allowing each sample mount to air dry, self-adhesive Kapton® film was placed over the sample on the glass slide. The glass slide was then removed from the fume hood for XRD analysis.

Each sample was analyzed using a Rigaku Ultima IV diffractometer XRD unit equipped with a high-speed position-sensitive detector system D/teX and a copper x-ray tube (Cu Kα radiation, λ = 1.5418 Å). Data were collected in a step scan mode between 3 and 80° 2-theta with a step size of 0.02° and a speed of 2°/minute. The x-ray tube operating conditions were 40 kV and 44 mA. Scans were collected electronically and processed using the JADE MDI® XRD pattern-processing software (Jade® 9.1) and the International Center for Diffraction Data (ICDD) 2009 database. For background subtraction, the JADE® 9.1 software provides the user with control of the selection of background-subtraction points. This process allows a better fit to 2θ regions under broad reflections (e.g., those resulting from amorphous materials).

Identification of the mineral phases in the x-ray powder patterns was based on a comparison of the XRD patterns measured for the residual waste samples with the mineral powder diffraction files published by the Joint Committee on Powder Diffraction Standards ICDD. In general, a crystalline phase must be present at greater than ~5 to 10 wt.% of the total sample mass (greater than 1 wt.% under optimum conditions) to be readily detected by XRD. In general, the measured peak intensities depend on several

[3] Baum SR. 2014c. *Ion Chromatography (IC) Analysis*. PNNL-ESL-IC-rev1, Pacific Northwest National Laboratory, Richland, Washington.
[4] Dionex is a registered trademark of Dionex Corporation.
[5] Snyder MMV. 2009. *pH Measurements*. PNNL-ESL-pH-rev1, Pacific Northwest National Laboratory, Richland, Washington.

factors, including the combined mass of each crystalline phase in the sample. Because of the physical characteristics of these residual waste samples (e.g., high radioactivity, high dispersibility, and variable moisture content) the mass of residual waste combined with the krylon solution for each XRD mount could not be controlled or easily determined. In addition, dissimilarities in mineral segregation (settling) resulting from the different densities of minerals mixed with the krylon solution and associated effects on relative peak intensities influence the overall pattern intensity. The combined effect of these factors could have some effect on the characteristic mineral peak intensities, which precluded quantitative comparisons of peak intensities for equivalent reflections in background-subtracted XRD patterns for different residual waste samples.

2.7 Electron Microscopy Analysis

Most scanning electron microscopy (SEM) images were obtained at 30 keV with backscattered imaging to enable the uranium phases to be easily viewed. Because the sample was not a polished, flat section, it was unreliable to extract quantitative data from the energy dispersive spectroscopy (EDS) analyses; however, qualitative analysis is reported. Analyses where the lower energy x-rays were absent were deleted from consideration.

The SEM magnification scale was calibrated with a National Institute for Science and Technology (NIST) traceable standard. The SEM images of this measurement standard are shown in Figure 2.2. The instrument indicated magnification was within 1 percent of the expected value. The energy scale was checked by looking at high- and low-energy x-rays from known materials.

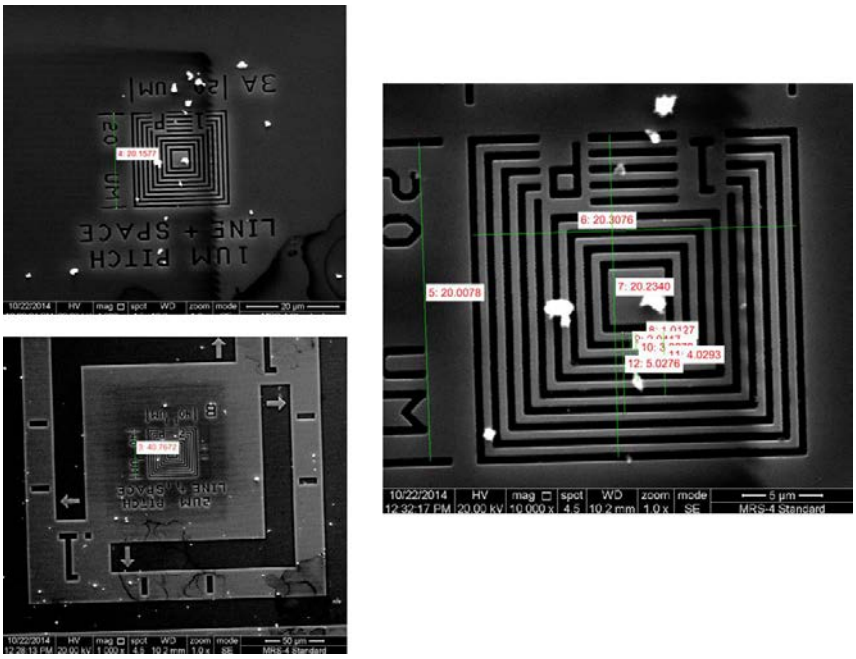

Figure 2.2. SEM Images of the Magnification Standard (MRS-4) Showing Calibration Checked Distances at x1000, x4000, and x10000

SEM analyses were conducted by placing a small quantity of the solid material on a sticky carbon tape mounted on an aluminum SEM stub. The SEM sample was examined in a FEI Quanta250 Field

Emission Gun (FEG) equipped with a backscattered electron (BSE) detector and EDAX Genesis x-ray EDS system in the 325 Building. A conductive carbon coat was also used for sample preparation.

2.8 Thermodynamic Modeling

Thermodynamic equilibrium modeling was used to calculate mineral saturation indices and to identify solid phases potentially in equilibrium with the leachate compositions. The saturation index (SI) is defined as SI = log (Q/K_{sp}), where Q is the activity product and K_{sp} is the mineral solubility product at equilibrium at the temperature of interest. In general, minerals with SI values near zero (within ± ~0.5) are considered at or near equilibrium, more positive values are considered oversaturated, and more negative values are considered undersaturated with respect to the solution composition. Geochemist's Workbench® version 8.09 (Bethke and Yeakel 2010) was used to calculate the mineral SIs for the leachates. Previous SI calculations (Deutsch et al. 2007) have been revised to include thermodynamic constants for a number of additional uranium solid phases as well as solution phase complexes. The thermodynamic database thermo.com.V8.R6+.dat was used for the modeling calculations. The database was augmented to include solubility products for čejkaite [$Na_4(UO_2)(CO_3)_3$] and $NaUO_2PO_4 \cdot xH_2O$ (Felmy et al. 2005); becquerelite [$Ca(UO_2)_6O_4(OH)_6 \cdot 8H_2O$] (Rai et al. 2002); Na-compreignacite [$Na_2(UO_2)_6O_4(OH)_6 \cdot 7H_2O$] (Gorman-Lewis et al. 2008a); Na diuranate hydrate [$Na_2U_2O_7 \cdot xH_2O$] (Yamamura et al. 1998); an estimated value for urancalcarite [$Ca(UO_2)_3(CO_3)(OH)_6 \cdot 3H_2O$] (Chen et al. 1999); leibigite [$Ca_2UO_2(CO_3)_3 \cdot 10H_2O$] and andersonite [$Na_2Ca(UO_2)(CO_3)_3 \cdot 5H_2O$] (Gorman-Lewis et al. 2008b; Alwan and Williams 1980); autunite [$Ca(UO_2)_2(PO_4)_2$] (Gorman-Lewis et al. 2009); soddyite [$(UO_2)_2SiO_4 \cdot 2H_2O$] (Gorman-Lewis et al. 2007); and stability constants for the dissolved species $CaUO_2(CO_3)_3^{2-}$(aq) and $Ca_2UO_2(CO_3)_3^{0}$(aq) (Dong and Brooks 2006).

3.0 Results and Discussion

Solid-phase characterization and contaminant leaching results, then leachate saturation indices are presented in the sections below.

3.1 Solid-Phase Characterization

XRD was attempted on several samples of the as-received Tank C-104 residual waste but no crystalline phases were identified. Figure 3.1 presents BSE and scanning emission (SE) images of the as-received Tank C-104 residual waste showing the nature of typical agglomerates in the waste. It is apparent that the particles often contain multiple phases.

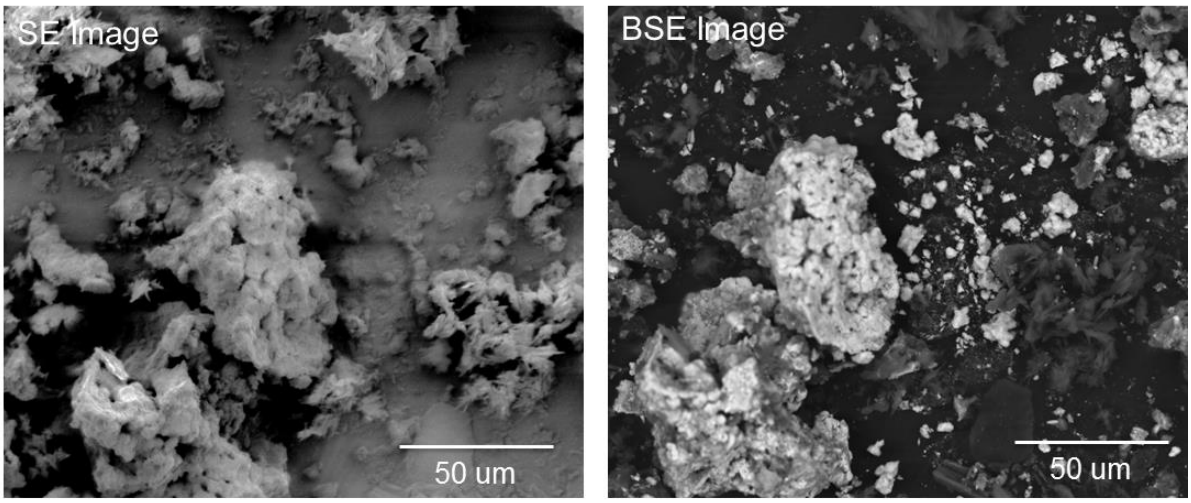

Figure 3.1. BSE and SE Images of Tank C-104 Residual Waste Showing the Typical Agglomerates

Composition analysis results (i.e., SEM-EDS) for several selected particles are presented in Table 3.1. It is apparent from these results that many of the particles contained high concentrations of uranium (i.e., A to D in Table 3.1) (see Figure 3.2). Particles containing high concentrations of aluminum (i.e., E in Table 3.1) possess low contrast, and small amounts of thorium (i.e., E in Table 3.1) were also observed. The example in Figure 3.2 is not as significant in thorium (Th) concentration as was observed in other areas where there were much higher concentrations of Th. Determining the nature of the uranium phase(s) from these data is not possible, but the results are consistent with $Na_2U_2O_7$. Thorium observed in these samples could be in the form of $Th(OH)_4(s)$.

Table 3.1. SEM-EDS Analysis Results for Selected Particles in C-104 Residual Waste (wt.%)

	A	B	C	D	E	F
NaK	14.5	23.3	28.4	17.3	4.0	88.0
MgK	1.3	0.3	0.4	1.5	0.3	0.2
AlK	17.8	6.8	6.1	6.7	74.8	7.5
SiK	1.6	2.2	1.8	2.1	1.3	3.0
PK	1.2	1.0	2.7	2.8	1.2	0.1

Table 3.1. (contd)

	A	B	C	D	E	F
CaK	0.6	0.6	1.4	2.0	0.6	0.2
FeK	1.1	1.1	0.8	1.3	1.9	0.3
ZrK	2.7	2.9	2.4	2.8	2.7	0.0
ThL	0.3	0.4	0.0	0.8	8.3	0.0
UL	58.9	61.4	56.0	62.7	5.0	0.7

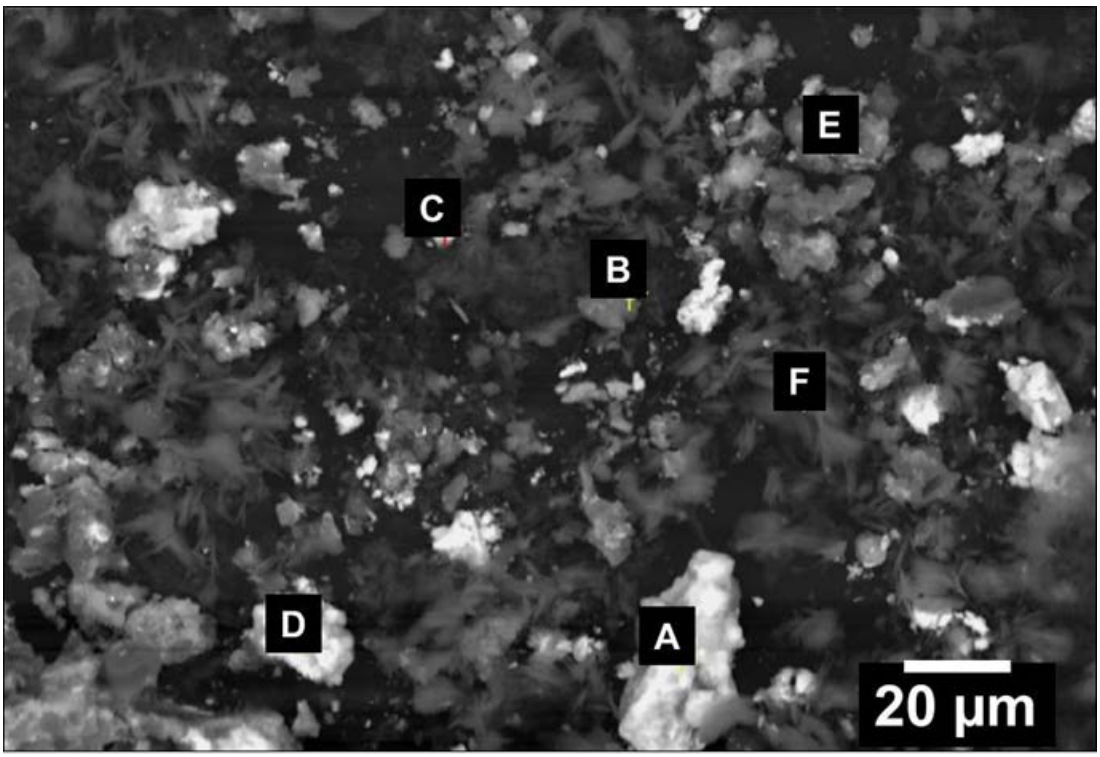

Figure 3.2. BSE Image of Tank C-104 Showing Analyzed Areas

3.2 Contaminant Leaching – Batch Leachates

Concentrations of uranium, technetium, and chromium in the batch leaching experiments as a function of contact time are shown in Figures 3.3 through 3.5. Results of the uranium batch leaching experiments (Figure 3.3) suggest that steady state was reached after approximately seven days.

In contrast to the uranium results, results for technetium (Figure 3.4) and chromium (Figure 3.5) indicate that steady state was achieved at or before two days. These results suggest that the mechanism that governs the release of uranium may be different than that for technetium and chromium.

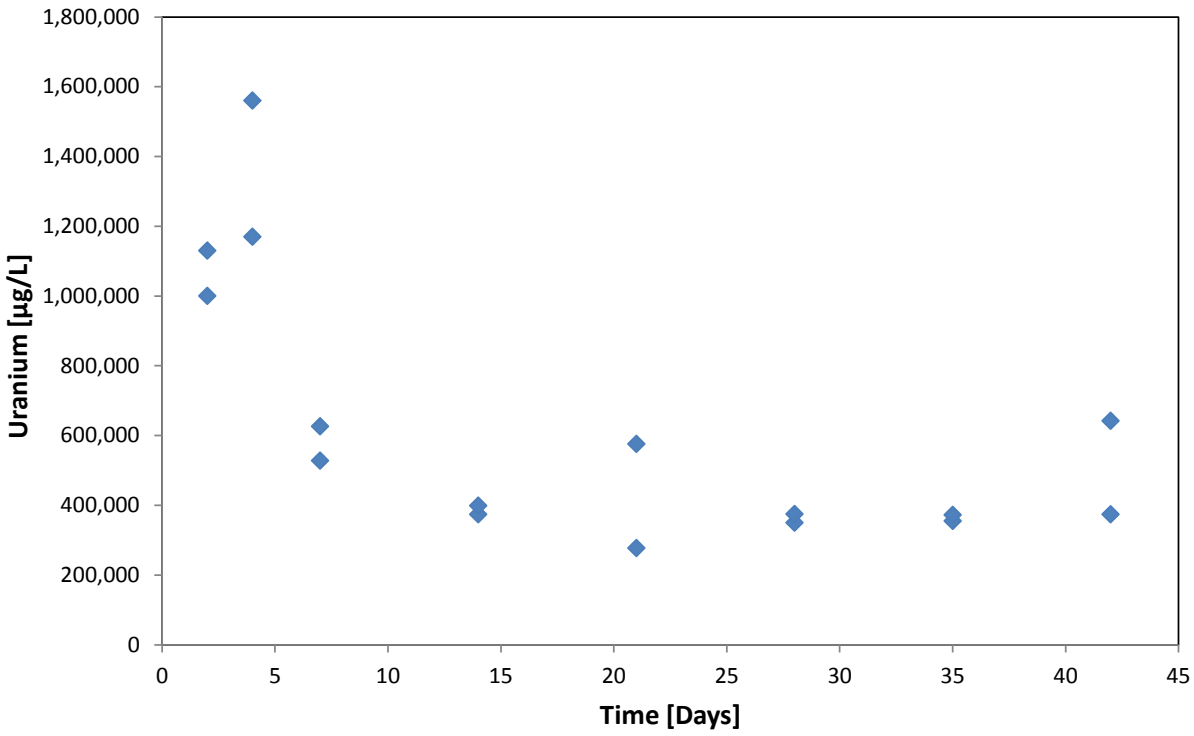

Figure 3.3. Uranium Concentration in Batch Leaching Experiments as a Function of Contact Time

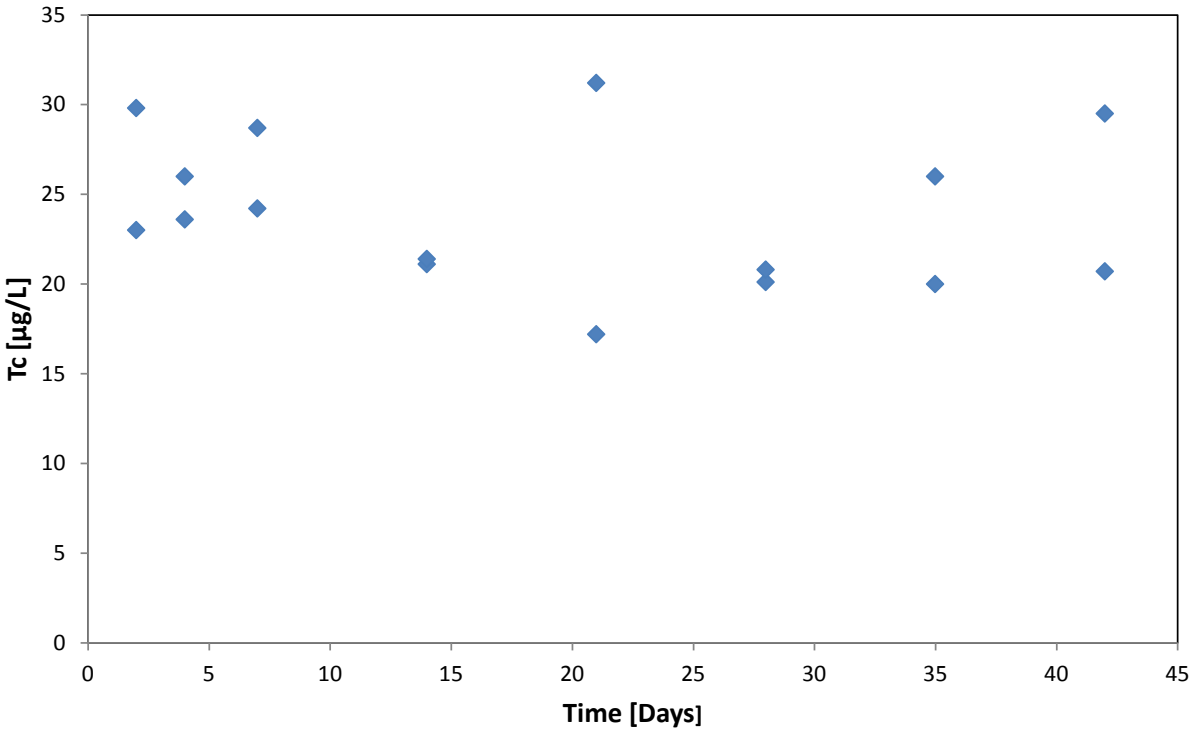

Figure 3.4. Technetium Concentration in Batch Leaching Experiments as a Function of Contact Time

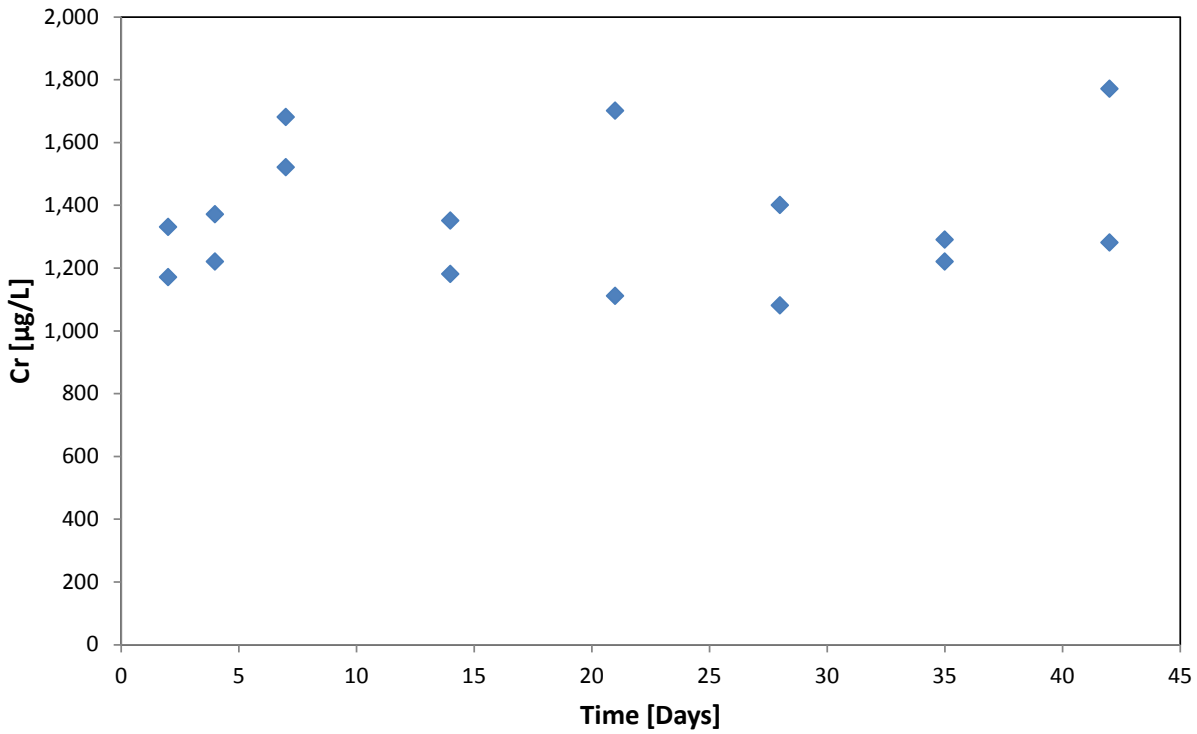

Figure 3.5. Chromium Concentration in Batch Leaching Experiments as a Function of Contact Time

3.3 Contaminant Leaching – Column Leachates

Uranium concentrations measured in the column effluents are shown in Figure 3.6. Effluent uranium concentrations were initially high in all of the columns, and concentrations decreased dramatically during the early stages of the leaching experiments. Results for the waste and grout+waste columns were fairly similar. Uranium concentrations in the effluent of the two columns containing lime+grout+waste were dramatically lower than those of the waste and grout+waste columns. The results clearly demonstrate that addition of lime can greatly reduce the leachability of uranium.

Technetium concentrations measured in the column effluents are shown in Figure 3.7. The technetium concentrations in the effluents of the four columns were all fairly similar, indicating that the grout or lime did not significantly affect leachability.

Concentrations of chromium measured in the column effluents are shown in Figure 3.8. After approximately eight pore volumes, the chromium concentrations in the effluents of the grout+waste column were higher than those of the waste column. In addition, the lime+grout+waste columns had lower chromium concentrations in the effluent than the waste column at flows of approximately 8 to 25 pore volumes. Above approximately 20 pore volumes, the chromium concentrations in the lime+grout+waste columns increased to values above those in the waste effluents.

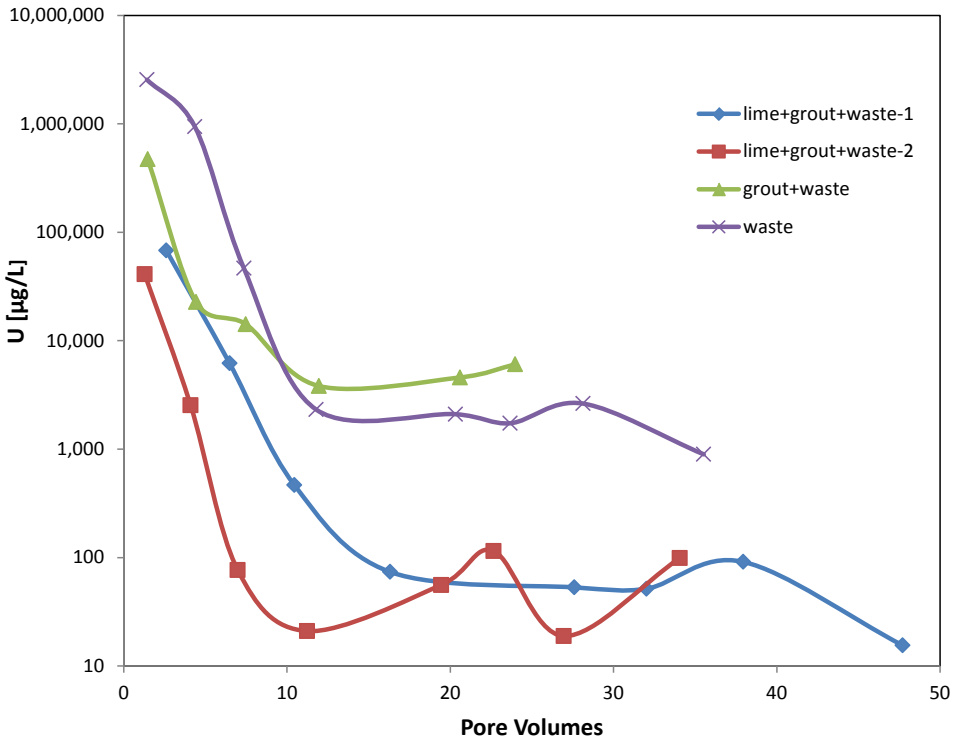

Figure 3.6. Uranium Concentrations (µg/L) in Column Effluents

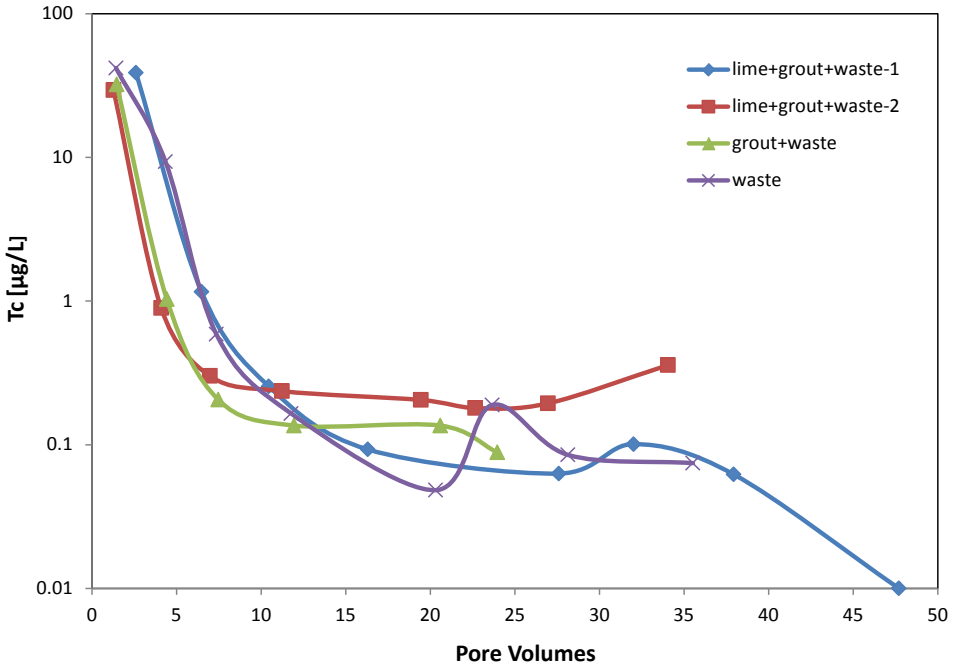

Figure 3.7. Technetium Concentrations (µg/L) in Column Effluents

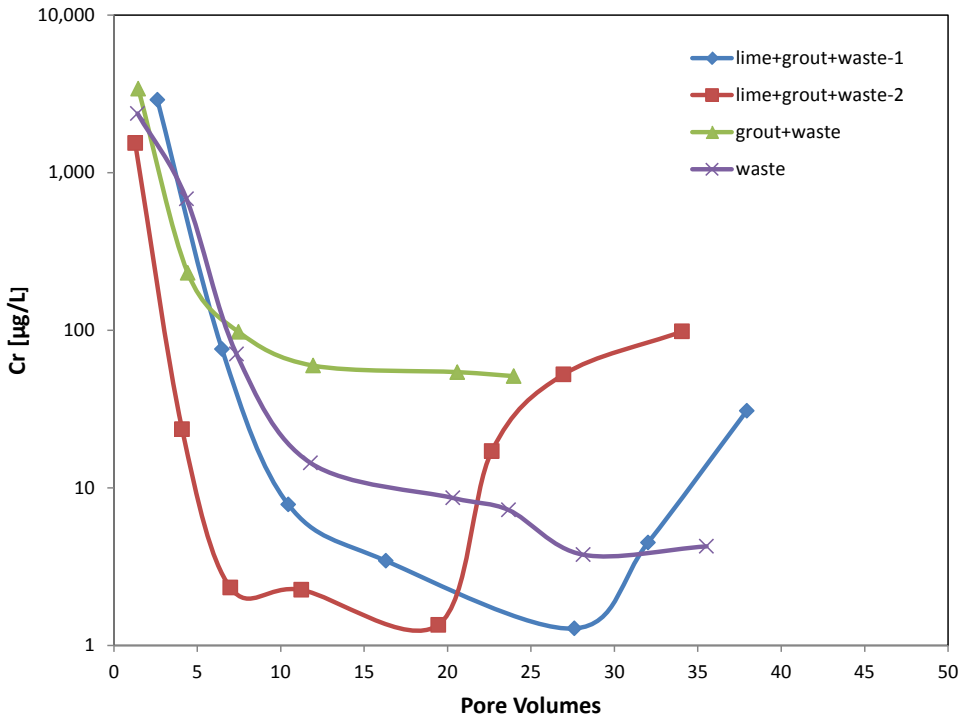

Figure 3.8. Chromium Concentrations (µg/L) in Column Effluents

3.4 Saturation Indices of Batch Leachates

Saturation indices calculated for uranium and aluminum phases in the batch leachates that are reasonably close to equilibrium are shown in Table 3.2. Initially, all three uranium phases in Table 3.2 are undersaturated. At one week, $Na_2U_2O_7$(c) has become oversaturated, andersonite [$Na_2Ca(UO_2)(CO_3)_3 \cdot 5H_2O$] has come close to equilibrium, and $CaUO_4$ remains undersaturated. Subsequently, andersonite remains closest to equilibrium. Based on previous work with Tank C-200 wastes (Cantrell et al. 2011, 2013, 2014) and the fact that little phosphate occurs in the C-104 waste (Table 2.1), part or most of the uranium in the as-received Tank C-104 residual waste is suspected to occur as $Na_2U_2O_7$ or schoepite ($UO_3 \cdot 2H_2O$). After contact with the 0.005 M $Ca(OH)_2$ solution in these batch experiments, these uranium phases appear to transform to andersonite.

Table 3.2. Saturation Indices Calculated for Noteworthy Phases in Batch 0.005 M $Ca(OH)_2$ Extracts of C-104 Residual Waste

Contact Time	Phase				
	$Na_2U_2O_7$(c)	Andersonite	$CaUO_4$	Dawsonite	Gibbsite
2 days	-0.90	-2.66	-2.33	-1.44	-0.10
2 days	-2.58	-2.57	<-3.0	-0.89	0.10
4 days	-1.60	-2.74	-2.99	-1.16	0.01
4 days	-1.91	-2.64	<-3.0	-0.98	0.06
1 week	0.32	0.04	-1.34	0.45	0.86

1 week	0.10	0.04	-1.55	0.57	0.90

Table 3.2. (contd)

Contact Time	Phase				
	$Na_2U_2O_7$(c)	Andersonite	$CaUO_4$	Dawsonite	Gibbsite
2 weeks	0.13	-0.31	-1.51	0.21	0.71
2 weeks	1.46	-0.37	-0.77	-0.07	0.62
3 weeks	-0.06	-0.11	-1.79	0.59	0.88
3 weeks	1.41	-0.66	-0.90	-0.19	0.56
4 weeks	1.79	-0.31	-0.38	-0.28	0.49
4 weeks	1.30	-0.45	-0.82	-0.06	0.65
5 weeks	1.23	-0.35	-0.79	-0.07	0.61
5 weeks	1.18	-0.37	-0.88	-0.05	0.60
6 weeks	1.07	-0.21	-1.18	0.29	0.80
6 weeks	1.73	-0.59	-0.72	-0.18	0.63

For the aluminum phases, gibbsite appears to be close to equilibrium after contact periods of less than a week; however, after longer contact times dawsonite appears to be controlling aluminum concentration in the batch leachant solutions.

3.5 Saturation Indices of Column Leachates

Saturation indices for various uranium phases calculated for the column leachates are listed in Table 3.3. For the waste only (W) column, the first effluent sample (pore volume 1.6) is close to saturation with respect to andersonite. The first effluent sample from each column is not expected to have reached equilibrium because the columns were initially filled with DI water immediately before starting the experiment. As a result, the first samples in each of the column experiments will be ignored in subsequent discussion. The second and third W samples (pore volumes 4.3 and 7.4) were close to saturation with respect to $Na_2U_2O_7$(c). This is consistent with the expectation that a major portion of the uranium in the C-104 sample is in the form of this phase. As the experiment progresses, the saturation indices for all uranium phases become increasingly negative, indicating uranium phases in this sample are dissolving.

For the second waste+grout (W+G) sample (pore volume 4.4), a number of phases are significantly oversaturated, including $Na_2U_2O_7$(c), $Na_2U_2O_7$(am), Na-compreignacite, $CaUO_4$, and Na-boltwoodite. By the last W+G sample (pore volume 20.6), only $Na_2U_2O_7$(c), $CaUO_4$, Na-boltwoodite, and soddyite remain oversaturated. These results suggest that $Na_2U_2O_7$(c) may be transforming to these less-soluble phases as a result of the calcium and silica released from the grout.

For the waste+grout+lime (W+G+L) columns, the effluent samples are initially highly oversaturated with respect to $Na_2U_2O_7$(c), $Na_2U_2O_7$(am), $CaUO_4$, and Na-boltwoodite (W+G+L #1). As the experiment progresses, all uranium phases become increasingly undersaturated with the exception of $CaUO_4$. These results suggest that the initial uranium phase in the waste (presumably $Na_2U_2O_7$(c)) is being transformed to $CaUO_4$ (or a similar highly insoluble phase) as a result of the high calcium concentrations resulting from the presence of the lime.

Table 3.3. Saturation Indices Calculated for Uranium Phases in Tank C-104 Residual Waste Column Leachates

Column	Pore Volumes	$Na_2U_2O_7$(c)	$Na_2U_2O_7$(am)	$NaUO_2PO_4 \cdot xH_2O$	Na-Compreignacite	Andersonite	$CaUO_4$	Na-Boltwoodite	Soddyite	Schoepite
W	1.4	-2.29	<-3.0	<-3.0	<-3.0	0.60	<-3.0	-	-	<-3.0
W	4.3	0.13	-2.38	-2.53	<-3.0	-0.74	-2.84	-1.08	-2.55	-2.62
W	7.4	0.55	-1.96	-1.91	<-3.0	-2.64	-1.89	0.94	1.28	-1.65
W	11.8	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	-1.51	<-3.0	<-3.0	<-3.0
W	20.3	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	-1.33	<-3.0	<-3.0	<-3.0
W	23.7	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	-2.69	<-3.0	<-3.0	<-3.0
W	28.1	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	-2.17	<-3.0	<-3.0	<-3.0
W	35.5	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0
W+G	1.5	<-3.0	<-3.0	<-3.0	<-3.0	1.27	2.93	<-3.0	<-3.0	<-3.0
W+G	4.4	5.54	3.03	-2.19	1.74	-0.77	2.11	1.72	-0.37	-1.58
W+G	7.5	2.56	0.05	-2.70	-0.58	<-3.0	1.57	1.61	1.33	-1.42
W+G	11.9	1.02	-1.49	<-3.0	<-3.0	<-3.0	1.36	0.97	0.25	-2.03
W+G	20.6	0.92	-1.59	<-3.0	<-3.0	<-3.0	1.28	1.28	0.67	-1.92
W+G+L #1	2.6	5.38	2.87	<-3.0	-2.60	-0.63	2.67	1.28	-2.82	-2.63
W+G+L #1	6.5	2.39	-0.12	<-3.0	<-3.0	-2.34	2.57	1.00	-1.44	-2.54
W+G+L #1	10.5	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	2.81	<-3.0	<-3.0	<-3.0
W+G+L #1	16.3	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	2.64	<-3.0	<-3.0	<-3.0
W+G+L #1	27.6	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	2.51	<-3.0	<-3.0	<-3.0
W+G+L #1	32.0	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	2.60	<-3.0	<-3.0	<-3.0
W+G+L #1	37.9	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	2.36	<-3.0	<-3.0	<-3.0
W+G+L #2	1.3	2.89	0.38	<-3.0	<-3.0	-0.56	4.50	-0.08	<-3.0	<-3.0
W+G+L #2	4.1	<-3.0	<-3.0	<-3.0	<-3.0	-2.84	3.48	<-3.0	<-3.0	<-3.0
W+G+L #2	7.0	<-3.0	<-3.0	<-3.0	<-3.0	-2.84	2.50	<-3.0	<-3.0	<-3.0
W+G+L #2	11.2	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	1.98	<-3.0	<-3.0	<-3.0
W+G+L #2	19.4	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	2.66	<-3.0	<-3.0	<-3.0
W+G+L #2	22.7	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	2.41	<-3.0	<-3.0	<-3.0
W+G+L #2	27.0	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0	1.41	<-3.0	<-3.0	<-3.0

W = waste only; W+G = waste plus grout; W+G+L #1 = waste plus grout plus lime #1; W+G+L #2 = waste plus grout plus lime #2

4.0 Conclusions

Batch leach tests conducted on Tank C-104 residual waste resulted in different rates at which technetium and chromium reached steady state (at or before two days) versus uranium, which reached steady state after approximately seven days. This suggests a different mechanism may control the release of uranium.

Three column leach tests were conducted. For the first leach test, Tank C-104 residual waste was leached with DI water. In the second, crushed grout was added to the column such that DI water came into contact with the grout prior to contacting the waste. In the third leach test, lime was mixed in with the crushed grout.

Technetium concentrations in the effluents of all three column leach tests were comparable, indicating that the addition of grout or lime did not affect the technetium leachability. Uranium concentrations measured in the effluents were initially high in all of the columns. In the column leach test containing lime, grout, and waste, the uranium concentration in the effluent was dramatically lower than the uranium concentration in the other two columns. The results demonstrate that the addition of lime reduced the leachability of uranium. Initial indications suggest that Tank C-104 residual waste that has been treated with lime addition transforms the uranium in the waste to a highly insoluble calcium urinate ($CaUO_4$) or a similar highly insoluble calcium-rich uranium mineral phase.

5.0 References

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Appendix A

Analytical Data for Batch Leach Experiments

Appendix A

Analytical Data for Batch Leach Experiments

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-19	0.286 Weeks-1	Alkalinity as CaCO3	4620	ug/mL	23.5	Alkalinity-NP
1406024-19	0.286 Weeks-1	Aluminum	2130	ug/L	165	ICP-OES Vadose-NP
1406024-19	0.286 Weeks-1	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Barium 138	ND	ug/L	3.66	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Calcium	1370	ug/L	490	ICP-OES Vadose-NP
1406024-19	0.286 Weeks-1	Cesium 133	1.33	ug/L	0.99	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1406024-19	0.286 Weeks-1	Chromium	ND	ug/L	57.8	ICP-OES Vadose-NP
1406024-19	0.286 Weeks-1	Chromium 52	1170	ug/L	19.2	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Copper	96.7	ug/L	87	ICP-OES Vadose-NP
1406024-19	0.286 Weeks-1	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Fluoride	25	ug/mL	10	Anions by IC _oxalate_acetate-NP
1406024-19	0.286 Weeks-1	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-19	0.286 Weeks-1	Nitrite	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-19	0.286 Weeks-1	Oxalate	334	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-19	0.286 Weeks-1	pH	11	pH Units		pH-NP
1406024-19	0.286 Weeks-1	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1406024-19	0.286 Weeks-1	Phosphorus	ND	ug/L	715	ICP-OES Vadose-NP
1406024-19	0.286 Weeks-1	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Ruthenium 104	38.8	ug/L	5.96	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Silver 107	160	ug/L	6	ICPMS-RCRA-NP
1406024-19	0.286 Weeks-1	Sodium	229000	ug/L	447	ICP-OES Vadose-NP
1406024-19	0.286 Weeks-1	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1406024-19	0.286 Weeks-1	Technetium-99	23	ug/L	0.41	ICPMS-Tc_U-NP
1406024-19	0.286 Weeks-1	Thorium 232	6.26	ug/L	2.5	ICPMS-Tc_U-NP
1406024-19	0.286 Weeks-1	Uranium 238	1000000	ug/L	1060	ICPMS-Tc_U-NP
1406024-20	0.286 Weeks-2	Alkalinity as CaCO3	5840	ug/mL	23.5	Alkalinity-NP
1406024-20	0.286 Weeks-2	Aluminum	2120	ug/L	165	ICP-OES Vadose-NP
1406024-20	0.286 Weeks-2	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Barium 138	ND	ug/L	3.66	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Calcium	1230	ug/L	490	ICP-OES Vadose-NP
1406024-20	0.286 Weeks-2	Cesium 133	1.51	ug/L	0.99	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1406024-20	0.286 Weeks-2	Chromium	93.3	ug/L	57.8	ICP-OES Vadose-NP
1406024-20	0.286 Weeks-2	Chromium 52	1330	ug/L	19.2	ICPMS-RCRA-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-20	0.286 Weeks-2	Copper	116	ug/L	87	ICP-OES Vadose-NP
1406024-20	0.286 Weeks-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Fluoride	36.3	ug/mL	10	Anions by IC _oxalate_acetate-NP
1406024-20	0.286 Weeks-2	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-20	0.286 Weeks-2	Nitrite	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-20	0.286 Weeks-2	Oxalate	418	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-20	0.286 Weeks-2	pH	10.8	pH Units		pH-NP
1406024-20	0.286 Weeks-2	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1406024-20	0.286 Weeks-2	Phosphorus	721	ug/L	715	ICP-OES Vadose-NP
1406024-20	0.286 Weeks-2	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Ruthenium 104	46	ug/L	5.96	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Silver 107	193	ug/L	6	ICPMS-RCRA-NP
1406024-20	0.286 Weeks-2	Sodium	285000	ug/L	447	ICP-OES Vadose-NP
1406024-20	0.286 Weeks-2	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1406024-20	0.286 Weeks-2	Technetium-99	29.8	ug/L	0.41	ICPMS-Tc_U-NP
1406024-20	0.286 Weeks-2	Thorium 232	3.92	ug/L	2.5	ICPMS-Tc_U-NP
1406024-20	0.286 Weeks-2	Uranium 238	1130000	ug/L	1060	ICPMS-Tc_U-NP
1406024-22	0.571 Weeks-1	Alkalinity as CaCO3	5230	ug/mL	23.5	Alkalinity-NP
1406024-22	0.571 Weeks-1	Aluminum	2170	ug/L	165	ICP-OES Vadose-NP
1406024-22	0.571 Weeks-1	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Barium 138	ND	ug/L	3.66	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Calcium	946	ug/L	490	ICP-OES Vadose-NP
1406024-22	0.571 Weeks-1	Cesium 133	1.47	ug/L	0.99	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1406024-22	0.571 Weeks-1	Chromium	70.4	ug/L	57.8	ICP-OES Vadose-NP
1406024-22	0.571 Weeks-1	Chromium 52	1220	ug/L	19.2	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Copper	105	ug/L	87	ICP-OES Vadose-NP
1406024-22	0.571 Weeks-1	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Fluoride	31.3	ug/mL	10	Anions by IC _oxalate_acetate-NP
1406024-22	0.571 Weeks-1	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-22	0.571 Weeks-1	Nitrite	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-22	0.571 Weeks-1	Oxalate	452	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-22	0.571 Weeks-1	pH	10.9	pH Units		pH-NP
1406024-22	0.571 Weeks-1	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1406024-22	0.571 Weeks-1	Phosphorus	1100	ug/L	715	ICP-OES Vadose-NP
1406024-22	0.571 Weeks-1	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Ruthenium 104	44.7	ug/L	5.96	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Silver 107	232	ug/L	6	ICPMS-RCRA-NP
1406024-22	0.571 Weeks-1	Sodium	261000	ug/L	447	ICP-OES Vadose-NP
1406024-22	0.571 Weeks-1	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1406024-22	0.571 Weeks-1	Technetium-99	23.6	ug/L	0.41	ICPMS-Tc_U-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-22	0.571 Weeks-1	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1406024-22	0.571 Weeks-1	Uranium 238	1170000	ug/L	1060	ICPMS-Tc_U-NP
1406024-23	0.571 Weeks-2	Alkalinity as CaCO3	5730	ug/mL	23.5	Alkalinity-NP
1406024-23	0.571 Weeks-2	Aluminum	1940	ug/L	165	ICP-OES Vadose-NP
1406024-23	0.571 Weeks-2	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Barium 138	ND	ug/L	3.66	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Calcium	990	ug/L	490	ICP-OES Vadose-NP
1406024-23	0.571 Weeks-2	Cesium 133	1.5	ug/L	0.99	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Chromium	85.6	ug/L	57.8	ICP-OES Vadose-NP
1406024-23	0.571 Weeks-2	Chromium 52	1370	ug/L	19.2	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Copper	111	ug/L	87	ICP-OES Vadose-NP
1406024-23	0.571 Weeks-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Lead 208	13.8	ug/L	9.32	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	pH	10.8	pH Units		pH-NP
1406024-23	0.571 Weeks-2	Phosphorus	881	ug/L	715	ICP-OES Vadose-NP
1406024-23	0.571 Weeks-2	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Ruthenium 104	49.5	ug/L	5.96	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Silver 107	214	ug/L	6	ICPMS-RCRA-NP
1406024-23	0.571 Weeks-2	Sodium	293000	ug/L	447	ICP-OES Vadose-NP
1406024-23	0.571 Weeks-2	Technetium-99	26	ug/L	0.41	ICPMS-Tc_U-NP
1406024-23	0.571 Weeks-2	Thorium 232	10.1	ug/L	2.5	ICPMS-Tc_U-NP
1406024-23	0.571 Weeks-2	Uranium 238	1560000	ug/L	1060	ICPMS-Tc_U-NP
1406024-02	1 Weeks-1	Alkalinity as CaCO3	5200	ug/mL	23.5	Alkalinity-NP
1406024-02	1 Weeks-1	Aluminum	24900	ug/L	165	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-02	1 Weeks-1	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Calcium	8270	ug/L	490	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Cesium 133	1.44	ug/L	0.99	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-02	1 Weeks-1	Chromium	1070	ug/L	57.8	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Chromium 52	1520	ug/L	19.2	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Copper	967	ug/L	87	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Fluoride	29.8	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-02	1 Weeks-1	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Lead	302	ug/L	259	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-02	1 Weeks-1	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Magnesium	142	ug/L	34.3	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Mercury 200	74.2	ug/L	15	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Molybdenum 95	14.1	ug/L	13	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Nitrate	23.4	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-02	1 Weeks-1	Nitrite	11.4	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-02	1 Weeks-1	Oxalate	348	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-02	1 Weeks-1	pH	11.1	pH Units		pH-NP
1406024-02	1 Weeks-1	Phosphate	33.1	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-02	1 Weeks-1	Phosphorus	8330	ug/L	715	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Potassium	ND	ug/L	2960	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Ruthenium 102	58.5	ug/L	3.25	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Silver 109	209	ug/L	6	ICPMS-RCRA-NP
1406024-02	1 Weeks-1	Sodium	2290000	ug/L	447	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-02	1 Weeks-1	Technetium-99	24.2	ug/L	0.41	ICPMS-Tc_U-NP
1406024-02	1 Weeks-1	Thorium 232	86.3	ug/L	0.125	ICPMS-Np_Th-NP
1406024-02	1 Weeks-1	Titanium	230	ug/L	159	ICP-OES Vadose-NP
1406024-02	1 Weeks-1	Uranium 238	528000	ug/L	1060	ICPMS-Tc_U-NP
1406024-03	1 Weeks-2	Alkalinity as CaCO3	6110	ug/mL	23.5	Alkalinity-NP
1406024-03	1 Weeks-2	Aluminum	27700	ug/L	165	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-03	1 Weeks-2	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Calcium	7230	ug/L	490	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Cesium 133	1.47	ug/L	0.99	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-03	1 Weeks-2	Chromium	1250	ug/L	57.8	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Chromium 52	1680	ug/L	19.2	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Copper	1190	ug/L	87	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Fluoride	36.3	ug/mL	1	Anions by IC _oxalate_acetate-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-03	1 Weeks-2	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Lead	367	ug/L	259	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Magnesium	145	ug/L	34.3	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Mercury 200	93.8	ug/L	15	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Molybdenum 95	14.4	ug/L	13	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Nitrate	27.9	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-03	1 Weeks-2	Nitrite	13.5	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-03	1 Weeks-2	Oxalate	446	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-03	1 Weeks-2	pH	11.1	pH Units		pH-NP
1406024-03	1 Weeks-2	Phosphate	38.9	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-03	1 Weeks-2	Phosphorus	9730	ug/L	715	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Potassium	3330	ug/L	2960	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Ruthenium 102	64.9	ug/L	3.25	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Silver 109	212	ug/L	6	ICPMS-RCRA-NP
1406024-03	1 Weeks-2	Sodium	2570000	ug/L	447	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-03	1 Weeks-2	Technetium-99	28.7	ug/L	0.41	ICPMS-Tc_U-NP
1406024-03	1 Weeks-2	Thorium 232	65.1	ug/L	0.125	ICPMS-Np_Th-NP
1406024-03	1 Weeks-2	Titanium	283	ug/L	159	ICP-OES Vadose-NP
1406024-03	1 Weeks-2	Uranium 238	626000	ug/L	1060	ICPMS-Tc_U-NP
1406024-05	2 Weeks-1	Alkalinity as CaCO3	4680	ug/mL	23.5	Alkalinity-NP
1406024-05	2 Weeks-1	Aluminum	17400	ug/L	165	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-05	2 Weeks-1	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Calcium	4890	ug/L	490	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Cesium 133	1.17	ug/L	0.99	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-05	2 Weeks-1	Chromium	790	ug/L	57.8	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Chromium 52	1180	ug/L	19.2	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Copper	693	ug/L	87	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-05	2 Weeks-1	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Fluoride	23.2	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-05	2 Weeks-1	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Lead	ND	ug/L	259	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Magnesium	88.9	ug/L	34.3	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Mercury 200	60.8	ug/L	15	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Nitrate	17.2	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-05	2 Weeks-1	Nitrite	7.5	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-05	2 Weeks-1	Oxalate	293	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-05	2 Weeks-1	pH	11.1	pH Units		pH-NP
1406024-05	2 Weeks-1	Phosphate	28.5	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-05	2 Weeks-1	Phosphorus	7000	ug/L	715	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Potassium	ND	ug/L	2960	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Ruthenium 102	41.9	ug/L	3.25	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Silver 109	160	ug/L	6	ICPMS-RCRA-NP
1406024-05	2 Weeks-1	Sodium	1920000	ug/L	447	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-05	2 Weeks-1	Technetium-99	21.1	ug/L	0.41	ICPMS-Tc_U-NP
1406024-05	2 Weeks-1	Thorium 232	61.9	ug/L	0.125	ICPMS-Np_Th-NP
1406024-05	2 Weeks-1	Titanium	168	ug/L	159	ICP-OES Vadose-NP
1406024-05	2 Weeks-1	Uranium 238	374000	ug/L	1060	ICPMS-Tc_U-NP
1406024-06	2 Weeks-2	Alkalinity as CaCO3	4590	ug/mL	23.5	Alkalinity-NP
1406024-06	2 Weeks-2	Aluminum	22700	ug/L	165	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-06	2 Weeks-2	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Calcium	3980	ug/L	490	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Cesium 133	1.33	ug/L	0.99	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-06	2 Weeks-2	Chromium	919	ug/L	57.8	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Chromium 52	1350	ug/L	19.2	ICPMS-RCRA-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-06	2 Weeks-2	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Copper	716	ug/L	87	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Fluoride	26.6	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-06	2 Weeks-2	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Lead	ND	ug/L	259	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Magnesium	94.1	ug/L	34.3	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Mercury 200	64.3	ug/L	15	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Nitrate	20	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-06	2 Weeks-2	Nitrite	8.8	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-06	2 Weeks-2	Oxalate	445	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-06	2 Weeks-2	pH	11.3	pH Units		pH-NP
1406024-06	2 Weeks-2	Phosphate	39.6	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-06	2 Weeks-2	Phosphorus	10900	ug/L	715	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Potassium	ND	ug/L	2960	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Ruthenium 102	49.6	ug/L	3.25	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Silver 109	190	ug/L	6	ICPMS-RCRA-NP
1406024-06	2 Weeks-2	Sodium	1990000	ug/L	447	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-06	2 Weeks-2	Technetium-99	21.4	ug/L	0.41	ICPMS-Tc_U-NP
1406024-06	2 Weeks-2	Thorium 232	73.2	ug/L	0.125	ICPMS-Np_Th-NP
1406024-06	2 Weeks-2	Titanium	175	ug/L	159	ICP-OES Vadose-NP
1406024-06	2 Weeks-2	Uranium 238	399000	ug/L	1060	ICPMS-Tc_U-NP
1406024-08	3 Weeks-1	Alkalinity as CaCO3	6320	ug/mL	23.5	Alkalinity-NP
1406024-08	3 Weeks-1	Aluminum	26700	ug/L	165	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-08	3 Weeks-1	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Calcium	4640	ug/L	490	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Cesium 133	1.7	ug/L	0.99	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-08	3 Weeks-1	Chromium	1210	ug/L	57.8	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Chromium 52	1700	ug/L	19.2	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Copper	1080	ug/L	87	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Fluoride	37.3	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-08	3 Weeks-1	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Lead	337	ug/L	259	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Magnesium	123	ug/L	34.3	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Mercury 200	106	ug/L	15	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Molybdenum 95	14.4	ug/L	13	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Nitrate	27.3	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-08	3 Weeks-1	Nitrite	12.5	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-08	3 Weeks-1	Oxalate	504	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-08	3 Weeks-1	pH	11.1	pH Units		pH-NP
1406024-08	3 Weeks-1	Phosphate	54.2	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-08	3 Weeks-1	Phosphorus	15100	ug/L	715	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Potassium	3800	ug/L	2960	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Ruthenium 102	64.9	ug/L	3.25	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Silver 109	231	ug/L	6	ICPMS-RCRA-NP
1406024-08	3 Weeks-1	Sodium	2710000	ug/L	447	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-08	3 Weeks-1	Technetium-99	31.2	ug/L	0.41	ICPMS-Tc_U-NP
1406024-08	3 Weeks-1	Thorium 232	54.6	ug/L	0.125	ICPMS-Np_Th-NP
1406024-08	3 Weeks-1	Titanium	260	ug/L	159	ICP-OES Vadose-NP
1406024-08	3 Weeks-1	Uranium 238	576000	ug/L	1060	ICPMS-Tc_U-NP
1406024-09	3 Weeks-2	Alkalinity as CaCO3	4020	ug/mL	23.5	Alkalinity-NP
1406024-09	3 Weeks-2	Aluminum	19600	ug/L	165	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-09	3 Weeks-2	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Calcium	2300	ug/L	490	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-09	3 Weeks-2	Cesium 133	1.47	ug/L	0.99	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-09	3 Weeks-2	Chromium	832	ug/L	57.8	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Chromium 52	1110	ug/L	19.2	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Copper	515	ug/L	87	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Fluoride	27	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-09	3 Weeks-2	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Lead	ND	ug/L	259	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Magnesium	46.2	ug/L	34.3	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Mercury 200	63	ug/L	15	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Nitrate	18.4	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-09	3 Weeks-2	Nitrite	7.6	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-09	3 Weeks-2	Oxalate	394	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-09	3 Weeks-2	pH	11.3	pH Units		pH-NP
1406024-09	3 Weeks-2	Phosphate	29.7	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-09	3 Weeks-2	Phosphorus	7610	ug/L	715	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Potassium	ND	ug/L	2960	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Ruthenium 102	39.3	ug/L	3.25	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Silver 109	134	ug/L	6	ICPMS-RCRA-NP
1406024-09	3 Weeks-2	Sodium	1810000	ug/L	447	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-09	3 Weeks-2	Technetium-99	17.2	ug/L	0.41	ICPMS-Tc_U-NP
1406024-09	3 Weeks-2	Thorium 232	35.7	ug/L	0.125	ICPMS-Np_Th-NP
1406024-09	3 Weeks-2	Titanium	ND	ug/L	159	ICP-OES Vadose-NP
1406024-09	3 Weeks-2	Uranium 238	277000	ug/L	1060	ICPMS-Tc_U-NP
1406024-11	4 Weeks-1	Alkalinity as CaCO3	4750	ug/mL	23.5	Alkalinity-NP
1406024-11	4 Weeks-1	Aluminum	20900	ug/L	165	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-11	4 Weeks-1	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-11	4 Weeks-1	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Calcium	4610	ug/L	490	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Cesium 133	1.2	ug/L	0.99	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-11	4 Weeks-1	Chromium	775	ug/L	57.8	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Chromium 52	1080	ug/L	19.2	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Copper	612	ug/L	87	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Fluoride	22.7	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-11	4 Weeks-1	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Lead	ND	ug/L	259	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Magnesium	63.7	ug/L	34.3	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Mercury 200	51	ug/L	15	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Nitrate	18.3	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-11	4 Weeks-1	Nitrite	7.6	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-11	4 Weeks-1	Oxalate	294	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-11	4 Weeks-1	pH	11.4	pH Units		pH-NP
1406024-11	4 Weeks-1	Phosphate	27.8	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-11	4 Weeks-1	Phosphorus	6820	ug/L	715	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Potassium	3070	ug/L	2960	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Ruthenium 102	41.4	ug/L	3.25	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Silver 109	152	ug/L	6	ICPMS-RCRA-NP
1406024-11	4 Weeks-1	Sodium	1990000	ug/L	447	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-11	4 Weeks-1	Technetium-99	20.1	ug/L	0.41	ICPMS-Tc_U-NP
1406024-11	4 Weeks-1	Thorium 232	48.5	ug/L	0.125	ICPMS-Np_Th-NP
1406024-11	4 Weeks-1	Titanium	ND	ug/L	159	ICP-OES Vadose-NP
1406024-11	4 Weeks-1	Uranium 238	350000	ug/L	1060	ICPMS-Tc_U-NP
1406024-12	4 Weeks-2	Alkalinity as CaCO3	4620	ug/mL	23.5	Alkalinity-NP
1406024-12	4 Weeks-2	Aluminum	24300	ug/L	165	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Boron	ND	ug/L	595	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-12	4 Weeks-2	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-12	4 Weeks-2	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Calcium	3870	ug/L	490	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Cesium 133	1.49	ug/L	0.99	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-12	4 Weeks-2	Chromium	939	ug/L	57.8	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Chromium 52	1400	ug/L	19.2	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Copper	718	ug/L	87	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Fluoride	29.4	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-12	4 Weeks-2	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Lead	ND	ug/L	259	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Magnesium	63.3	ug/L	34.3	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Mercury 200	78.1	ug/L	15	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Molybdenum 95	13.4	ug/L	13	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Nitrate	21.7	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-12	4 Weeks-2	Nitrite	9.4	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-12	4 Weeks-2	Oxalate	297	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-12	4 Weeks-2	pH	11.3	pH Units		pH-NP
1406024-12	4 Weeks-2	Phosphate	27.7	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-12	4 Weeks-2	Phosphorus	6750	ug/L	715	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Potassium	ND	ug/L	2960	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Ruthenium 102	51.5	ug/L	3.25	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Silver 109	180	ug/L	6	ICPMS-RCRA-NP
1406024-12	4 Weeks-2	Sodium	1820000	ug/L	447	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-12	4 Weeks-2	Technetium-99	20.8	ug/L	0.41	ICPMS-Tc_U-NP
1406024-12	4 Weeks-2	Thorium 232	20.9	ug/L	0.125	ICPMS-Np_Th-NP
1406024-12	4 Weeks-2	Titanium	173	ug/L	159	ICP-OES Vadose-NP
1406024-12	4 Weeks-2	Uranium 238	375000	ug/L	1060	ICPMS-Tc_U-NP
1406024-14	5 Weeks-1	Alkalinity as CaCO3	4710	ug/mL	23.5	Alkalinity-NP
1406024-14	5 Weeks-1	Aluminum	22000	ug/L	165	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-14	5 Weeks-1	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-14	5 Weeks-1	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Calcium	4330	ug/L	490	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Cesium 133	1.39	ug/L	0.99	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-14	5 Weeks-1	Chromium	956	ug/L	57.8	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Chromium 52	1290	ug/L	19.2	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Copper	641	ug/L	87	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Fluoride	23.1	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-14	5 Weeks-1	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Lead	ND	ug/L	259	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Magnesium	72.4	ug/L	34.3	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Mercury 200	57.2	ug/L	15	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Nitrate	20.5	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-14	5 Weeks-1	Nitrite	8.3	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-14	5 Weeks-1	Oxalate	292	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-14	5 Weeks-1	pH	11.3	pH Units		pH-NP
1406024-14	5 Weeks-1	Phosphate	24	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-14	5 Weeks-1	Phosphorus	5860	ug/L	715	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Potassium	ND	ug/L	2960	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Ruthenium 102	44.9	ug/L	3.25	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Silver 109	162	ug/L	6	ICPMS-RCRA-NP
1406024-14	5 Weeks-1	Sodium	1940000	ug/L	447	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-14	5 Weeks-1	Technetium-99	26	ug/L	0.41	ICPMS-Tc_U-NP
1406024-14	5 Weeks-1	Thorium 232	43.7	ug/L	0.125	ICPMS-Np_Th-NP
1406024-14	5 Weeks-1	Titanium	159	ug/L	159	ICP-OES Vadose-NP
1406024-14	5 Weeks-1	Uranium 238	355000	ug/L	1060	ICPMS-Tc_U-NP
1406024-15	5 Weeks-2	Alkalinity as CaCO3	4930	ug/mL	23.5	Alkalinity-NP
1406024-15	5 Weeks-2	Aluminum	21900	ug/L	165	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-15	5 Weeks-2	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-15	5 Weeks-2	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Calcium	3880	ug/L	490	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Cesium 133	1.38	ug/L	0.99	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-15	5 Weeks-2	Chromium	898	ug/L	57.8	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Chromium 52	1220	ug/L	19.2	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Copper	691	ug/L	87	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Fluoride	24.5	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-15	5 Weeks-2	Iron	7270	ug/L	100	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Lead	ND	ug/L	259	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Magnesium	76.6	ug/L	34.3	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Mercury 200	62.2	ug/L	15	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Nitrate	21.3	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-15	5 Weeks-2	Nitrite	8.7	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-15	5 Weeks-2	Oxalate	337	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-15	5 Weeks-2	pH	11.3	pH Units		pH-NP
1406024-15	5 Weeks-2	Phosphate	28.8	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-15	5 Weeks-2	Phosphorus	7180	ug/L	715	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Potassium	ND	ug/L	2960	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Ruthenium 102	45.8	ug/L	3.25	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Silver 109	165	ug/L	6	ICPMS-RCRA-NP
1406024-15	5 Weeks-2	Sodium	2040000	ug/L	447	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-15	5 Weeks-2	Technetium-99	20	ug/L	0.41	ICPMS-Tc_U-NP
1406024-15	5 Weeks-2	Thorium 232	42.7	ug/L	0.125	ICPMS-Np_Th-NP
1406024-15	5 Weeks-2	Titanium	170	ug/L	159	ICP-OES Vadose-NP
1406024-15	5 Weeks-2	Uranium 238	372000	ug/L	1060	ICPMS-Tc_U-NP
1406024-17	6 Weeks-1	Alkalinity as CaCO3	5370	ug/mL	23.5	Alkalinity-NP
1406024-17	6 Weeks-1	Aluminum	27700	ug/L	165	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-17	6 Weeks-1	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-17	6 Weeks-1	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Calcium	4750	ug/L	490	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Cesium 133	1.79	ug/L	0.99	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-17	6 Weeks-1	Chromium	1190	ug/L	57.8	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Chromium 52	1770	ug/L	19.2	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Copper	1100	ug/L	87	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Fluoride	35.6	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-17	6 Weeks-1	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Lead	378	ug/L	259	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Magnesium	132	ug/L	34.3	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Mercury 200	99.7	ug/L	15	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Molybdenum 95	15.9	ug/L	13	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Nitrate	28.8	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-17	6 Weeks-1	Nitrite	13	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-17	6 Weeks-1	Oxalate	410	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-17	6 Weeks-1	pH	11.2	pH Units		pH-NP
1406024-17	6 Weeks-1	Phosphate	34.5	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-17	6 Weeks-1	Phosphorus	9210	ug/L	715	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Potassium	3260	ug/L	2960	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Ruthenium 102	74	ug/L	3.25	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Silver 109	265	ug/L	6	ICPMS-RCRA-NP
1406024-17	6 Weeks-1	Sodium	2290000	ug/L	447	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-17	6 Weeks-1	Technetium-99	29.5	ug/L	0.41	ICPMS-Tc_U-NP
1406024-17	6 Weeks-1	Thorium 232	49.6	ug/L	0.125	ICPMS-Np_Th-NP
1406024-17	6 Weeks-1	Titanium	264	ug/L	159	ICP-OES Vadose-NP
1406024-17	6 Weeks-1	Uranium 238	642000	ug/L	1060	ICPMS-Tc_U-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-18	6 Weeks-2	Alkalinity as CaCO3	3960	ug/mL	23.5	Alkalinity-NP
1406024-18	6 Weeks-2	Aluminum	22700	ug/L	165	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Antimony 121	ND	ug/L	6.26	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Arsenic	ND	ug/L	653	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Arsenic 75	ND	ug/L	46.8	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Barium	ND	ug/L	36.3	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Beryllium	ND	ug/L	23.7	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Boron	ND	ug/L	595	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Bromide	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1406024-18	6 Weeks-2	Cadmium	ND	ug/L	145	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Cadmium 111	ND	ug/L	10.1	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Calcium	3150	ug/L	490	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Cesium 133	1.73	ug/L	0.99	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Chloride	ND	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1406024-18	6 Weeks-2	Chromium	856	ug/L	57.8	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Chromium 52	1280	ug/L	19.2	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Cobalt	ND	ug/L	183	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Copper	679	ug/L	87	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Fluoride	25.7	ug/mL	1	Anions by IC _oxalate_acetate-NP
1406024-18	6 Weeks-2	Iron	ND	ug/L	100	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Lead	ND	ug/L	259	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Lead 208	ND	ug/L	9.32	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Lithium	ND	ug/L	267	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Magnesium	72.7	ug/L	34.3	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Manganese	ND	ug/L	94.1	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Mercury 200	67.9	ug/L	15	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Molybdenum 95	ND	ug/L	13	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Nickel	ND	ug/L	227	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Nitrate	21.4	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-18	6 Weeks-2	Nitrite	8.5	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-18	6 Weeks-2	Oxalate	402	ug/mL	5	Anions by IC _oxalate_acetate-NP
1406024-18	6 Weeks-2	pH	11.3	pH Units		pH-NP
1406024-18	6 Weeks-2	Phosphate	30.3	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-18	6 Weeks-2	Phosphorus	7740	ug/L	715	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Potassium	ND	ug/L	2960	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Rhenium 185	ND	ug/L	1	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Ruthenium 102	52.5	ug/L	3.25	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Selenium	ND	ug/L	2180	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Selenium 82	ND	ug/L	136	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Silicon	ND	ug/L	1310	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Silver	ND	ug/L	179	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Silver 109	174	ug/L	6	ICPMS-RCRA-NP
1406024-18	6 Weeks-2	Sodium	1660000	ug/L	447	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1406024-18	6 Weeks-2	Technetium-99	20.7	ug/L	0.41	ICPMS-Tc_U-NP
1406024-18	6 Weeks-2	Thorium 232	36.9	ug/L	0.125	ICPMS-Np_Th-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1406024-18	6 Weeks-2	Titanium	169	ug/L	159	ICP-OES Vadose-NP
1406024-18	6 Weeks-2	Uranium 238	374000	ug/L	1060	ICPMS-Tc_U-NP

Appendix B

Analytical Data for Column Leach Experiments

Appendix B

Analytical Data for Column Leach Experiments

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1412017-01	Sample 2-1	Alkalinity as CaCO3	10700	ug/mL	23.5	Alkalinity-NP
1412017-01	Sample 2-1	Aluminum	128000	ug/L	329	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Barium	(1.92)	ug/L	72.6	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Barium 138	(2.55)	ug/L	3.66	ICPMS-RCRA-NP
1412017-01	Sample 2-1	Calcium	(561)	ug/L	981	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Cesium 133	63.5	ug/L	0.99	ICPMS-RCRA-NP
1412017-01	Sample 2-1	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-01	Sample 2-1	Chromium	2630	ug/L	116	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Chromium 52	2900	ug/L	19.2	ICPMS-RCRA-NP
1412017-01	Sample 2-1	Copper 65	88.4	ug/L	43.7	ICPMS-RCRA-NP
1412017-01	Sample 2-1	Fluoride	62.6	ug/mL	10	Anions by IC-NP
1412017-01	Sample 2-1	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Magnesium	ND	ug/L	68.6	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-01	Sample 2-1	Oxalate	1440	ug/mL	50	Anions by IC_Oxalate-NP
1412017-01	Sample 2-1	pH	12.6	pH Units		pH-NP
1412017-01	Sample 2-1	Phosphate	172	ug/mL	75	Anions by IC-NP
1412017-01	Sample 2-1	Phosphorus	46300	ug/L	1430	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Potassium	130000	ug/L	5920	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Silicon	18000	ug/L	2620	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Sodium	5380000	ug/L	8940	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Sulfate	186	ug/mL	75	Anions by IC-NP
1412017-01	Sample 2-1	Sulfur	38800	ug/L	6650	ICP-OES Vadose-NP
1412017-01	Sample 2-1	Technetium-99	38.8	ug/L	0.41	ICPMS-Tc_U-NP
1412017-01RE1	Sample 2-1	Thorium 232	2.91	ug/L	2.5	ICPMS-Tc_U-NP
1412017-01	Sample 2-1	Uranium 238	67800	ug/L	1060	ICPMS-Tc_U-NP
1412017-01	Sample 2-1	Vanadium	594	ug/L	396	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Alkalinity as CaCO3	903	ug/mL	23.5	Alkalinity-NP
1412017-02	Sample 2-2	Aluminum	33800	ug/L	329	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Barium	(1.37)	ug/L	72.6	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Barium 138	(0.51)	ug/L	3.66	ICPMS-RCRA-NP
1412017-02	Sample 2-2	Calcium	(430)	ug/L	981	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Cesium 133	10.2	ug/L	0.99	ICPMS-RCRA-NP
1412017-02	Sample 2-2	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-02	Sample 2-2	Chromium	ND	ug/L	116	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Chromium 52	75.9	ug/L	19.2	ICPMS-RCRA-NP
1412017-02	Sample 2-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1412017-02	Sample 2-2	Fluoride	ND	ug/mL	10	Anions by IC-NP
1412017-02	Sample 2-2	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Magnesium	ND	ug/L	68.6	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1412017-02	Sample 2-2	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-02	Sample 2-2	Oxalate	ND	ug/mL	50	Anions by IC_Oxalate-NP
1412017-02	Sample 2-2	pH	12	pH Units		pH-NP
1412017-02	Sample 2-2	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-02	Sample 2-2	Phosphorus	2120	ug/L	1430	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Potassium	27600	ug/L	5920	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Silicon	15400	ug/L	2620	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Sodium	445000	ug/L	8940	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Sulfate	ND	ug/mL	75	Anions by IC-NP
1412017-02	Sample 2-2	Sulfur	ND	ug/L	6650	ICP-OES Vadose-NP
1412017-02	Sample 2-2	Technetium-99	1.16	ug/L	0.41	ICPMS-Tc_U-NP
1412017-02RE1	Sample 2-2	Thorium 232	11.5	ug/L	2.5	ICPMS-Tc_U-NP
1412017-02	Sample 2-2	Uranium 238	6190	ug/L	1060	ICPMS-Tc_U-NP
1412017-02	Sample 2-2	Vanadium	ND	ug/L	396	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Alkalinity as CaCO3	843	ug/mL	23.5	Alkalinity-NP
1412017-03	Sample 2-3	Aluminum	22900	ug/L	329	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Barium	(6.05)	ug/L	72.6	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Barium 138	(0.49)	ug/L	3.66	ICPMS-RCRA-NP
1412017-03	Sample 2-3	Calcium	65800	ug/L	981	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Cesium 133	53	ug/L	0.99	ICPMS-RCRA-NP
1412017-03	Sample 2-3	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-03	Sample 2-3	Chromium	ND	ug/L	116	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1412017-03	Sample 2-3	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1412017-03	Sample 2-3	Fluoride	ND	ug/mL	10	Anions by IC-NP
1412017-03	Sample 2-3	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Magnesium	220	ug/L	68.6	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-03	Sample 2-3	Oxalate	ND	ug/mL	50	Anions by IC_Oxalate-NP
1412017-03	Sample 2-3	pH	12.2	pH Units		pH-NP
1412017-03	Sample 2-3	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-03	Sample 2-3	Phosphorus	ND	ug/L	1430	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Potassium	31300	ug/L	5920	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Silicon	4990	ug/L	2620	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Sodium	229000	ug/L	8940	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Strontium	18000	ug/L	285	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Sulfate	ND	ug/mL	75	Anions by IC-NP
1412017-03	Sample 2-3	Sulfur	ND	ug/L	6650	ICP-OES Vadose-NP
1412017-03	Sample 2-3	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1412017-03RE1	Sample 2-3	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1412017-03	Sample 2-3	Uranium 238	(467)	ug/L	1060	ICPMS-Tc_U-NP
1412017-03	Sample 2-3	Vanadium	ND	ug/L	396	ICP-OES Vadose-NP
1412017-13	Sample 2-4	Alkalinity as CaCO3	1320	ug/mL	23.5	Alkalinity-NP
1503018-01	Sample 2-4	Aluminum	1720	ug/L	82.4	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Barium	83.9	ug/L	18.2	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Barium 138	73.8	ug/L	3.66	ICPMS-RCRA-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-01	Sample 2-4	Calcium	362000	ug/L	245	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Cesium 133	32.2	ug/L	0.99	ICPMS-RCRA-NP
1503018-01	Sample 2-4	Chloride	19.8	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-01	Sample 2-4	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-01	Sample 2-4	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-01	Sample 2-4	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-01	Sample 2-4	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Nitrate	22.9	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-01	Sample 2-4	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1412017-13	Sample 2-4	pH	12.4	pH Units		pH-NP
1503018-01	Sample 2-4	Phosphate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-01	Sample 2-4	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Potassium	16800	ug/L	1480	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Silicon	892	ug/L	655	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Sodium	105000	ug/L	223	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Strontium	29200	ug/L	71.4	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-01	Sample 2-4	Sulfur	3060	ug/L	1660	ICP-OES Vadose-NP
1503018-01	Sample 2-4	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-01	Sample 2-4	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-01	Sample 2-4	Uranium 238	(73.8)	ug/L	1060	ICPMS-Tc_U-NP
1503018-01	Sample 2-4	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-14	Sample 2-5	Alkalinity as CaCO3	1490	ug/mL	23.5	Alkalinity-NP
1503018-02	Sample 2-5	Aluminum	813	ug/L	82.4	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Barium	1150	ug/L	18.2	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Barium 138	1040	ug/L	3.66	ICPMS-RCRA-NP
1503018-02	Sample 2-5	Calcium	512000	ug/L	245	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Cesium 133	16.7	ug/L	0.99	ICPMS-RCRA-NP
1503018-02	Sample 2-5	Chloride	4.93	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-02	Sample 2-5	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-02	Sample 2-5	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-02	Sample 2-5	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-02	Sample 2-5	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Nitrate	12.2	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-02	Sample 2-5	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1412017-14	Sample 2-5	pH	12.4	pH Units		pH-NP
1503018-02	Sample 2-5	Phosphate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-02	Sample 2-5	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Potassium	11300	ug/L	1480	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Silicon	(486)	ug/L	655	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Sodium	66700	ug/L	223	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Strontium	10500	ug/L	71.4	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-02	Sample 2-5	Sulfur	4450	ug/L	1660	ICP-OES Vadose-NP
1503018-02	Sample 2-5	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-02	Sample 2-5	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-02	Sample 2-5	Uranium 238	(53.1)	ug/L	1060	ICPMS-Tc_U-NP
1503018-02	Sample 2-5	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-15	Sample 2-6	Alkalinity as CaCO3	1300	ug/mL	23.5	Alkalinity-NP
1503018-03	Sample 2-6	Aluminum	1360	ug/L	82.4	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Barium	841	ug/L	18.2	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Barium 138	773	ug/L	3.66	ICPMS-RCRA-NP
1503018-03	Sample 2-6	Calcium	429000	ug/L	245	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Cesium 133	10.7	ug/L	0.99	ICPMS-RCRA-NP
1503018-03	Sample 2-6	Chloride	5.17	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-03	Sample 2-6	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-03	Sample 2-6	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-03	Sample 2-6	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-03	Sample 2-6	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Nitrate	7.44	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-03	Sample 2-6	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1412017-15	Sample 2-6	pH	12.4	pH Units		pH-NP
1503018-03	Sample 2-6	Phosphate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-03	Sample 2-6	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Potassium	9980	ug/L	1480	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Silicon	(435)	ug/L	655	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Sodium	60800	ug/L	223	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Strontium	7790	ug/L	71.4	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-03	Sample 2-6	Sulfur	3610	ug/L	1660	ICP-OES Vadose-NP
1503018-03	Sample 2-6	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-03	Sample 2-6	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-03	Sample 2-6	Uranium 238	(51.6)	ug/L	1060	ICPMS-Tc_U-NP
1503018-03	Sample 2-6	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Alkalinity as CaCO3	905	ug/mL	23.5	Alkalinity-NP
1503018-04	Sample 2-7	Aluminum	3280	ug/L	82.4	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Barium	369	ug/L	18.2	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Barium 138	342	ug/L	3.66	ICPMS-RCRA-NP
1503018-04	Sample 2-7	Calcium	277000	ug/L	245	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Cesium 133	4.45	ug/L	0.99	ICPMS-RCRA-NP
1503018-04	Sample 2-7	Chloride	7.84	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-04	Sample 2-7	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Chromium 52	30.8	ug/L	19.2	ICPMS-RCRA-NP
1503018-04	Sample 2-7	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-04	Sample 2-7	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-04	Sample 2-7	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Nitrate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-04	Sample 2-7	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-04	Sample 2-7	pH	12.2	pH Units		pH-NP
1503018-04	Sample 2-7	Phosphate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-04	Sample 2-7	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Potassium	12300	ug/L	1480	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Silicon	(544)	ug/L	655	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Sodium	33100	ug/L	223	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Strontium	4830	ug/L	71.4	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-04	Sample 2-7	Sulfur	2280	ug/L	1660	ICP-OES Vadose-NP
1503018-04	Sample 2-7	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-04	Sample 2-7	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-04	Sample 2-7	Uranium 238	(91.3)	ug/L	1060	ICPMS-Tc_U-NP
1503018-04	Sample 2-7	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Aluminum	3550	ug/L	82.4	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Barium	280	ug/L	18.2	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Calcium	176000	ug/L	245	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Potassium	2910	ug/L	1480	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Silicon	(540)	ug/L	655	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Sodium	24500	ug/L	223	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Strontium	4180	ug/L	71.4	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Sulfur	ND	ug/L	1660	ICP-OES Vadose-NP
1503018-05	Sample 2-8	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-05	Sample 2-8	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-05	Sample 2-8	Uranium 238	(15.5)	ug/L	1060	ICPMS-Tc_U-NP
1503018-05	Sample 2-8	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Alkalinity as CaCO3	7600	ug/mL	23.5	Alkalinity-NP
1412017-04	Sample 3-1	Aluminum	94500	ug/L	329	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Barium	ND	ug/L	72.6	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Barium 138	(2.69)	ug/L	3.66	ICPMS-RCRA-NP
1412017-04	Sample 3-1	Calcium	(743)	ug/L	981	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Cesium 133	9.89	ug/L	0.99	ICPMS-RCRA-NP
1412017-04	Sample 3-1	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-04	Sample 3-1	Chromium	3190	ug/L	116	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Chromium 52	3410	ug/L	19.2	ICPMS-RCRA-NP
1412017-04	Sample 3-1	Copper 65	114	ug/L	43.7	ICPMS-RCRA-NP
1412017-04	Sample 3-1	Fluoride	52.1	ug/mL	10	Anions by IC-NP
1412017-04	Sample 3-1	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Magnesium	97.5	ug/L	68.6	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-04	Sample 3-1	Oxalate	749	ug/mL	50	Anions by IC_Oxalate-NP
1412017-04	Sample 3-1	pH	12	pH Units		pH-NP
1412017-04	Sample 3-1	Phosphate	132	ug/mL	75	Anions by IC-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1412017-04	Sample 3-1	Phosphorus	38200	ug/L	1430	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Potassium	36300	ug/L	5920	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Silicon	3790	ug/L	2620	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Sodium	3960000	ug/L	8940	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Sulfate	239	ug/mL	75	Anions by IC-NP
1412017-04	Sample 3-1	Sulfur	71400	ug/L	6650	ICP-OES Vadose-NP
1412017-04	Sample 3-1	Technetium-99	32.1	ug/L	0.41	ICPMS-Tc_U-NP
1412017-04RE1	Sample 3-1	Thorium 232	16.6	ug/L	2.5	ICPMS-Tc_U-NP
1412017-04	Sample 3-1	Uranium 238	473000	ug/L	1060	ICPMS-Tc_U-NP
1412017-04	Sample 3-1	Vanadium	702	ug/L	396	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Alkalinity as CaCO3	686	ug/mL	23.5	Alkalinity-NP
1412017-05	Sample 3-2	Aluminum	32900	ug/L	329	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Barium	(5.34)	ug/L	72.6	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Barium 138	(2.66)	ug/L	3.66	ICPMS-RCRA-NP
1412017-05	Sample 3-2	Calcium	(329)	ug/L	981	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Cesium 133	1.92	ug/L	0.99	ICPMS-RCRA-NP
1412017-05	Sample 3-2	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-05	Sample 3-2	Chromium	243	ug/L	116	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Chromium 52	231	ug/L	19.2	ICPMS-RCRA-NP
1412017-05	Sample 3-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1412017-05	Sample 3-2	Fluoride	ND	ug/mL	10	Anions by IC-NP
1412017-05	Sample 3-2	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Magnesium	69	ug/L	68.6	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-05	Sample 3-2	Oxalate	ND	ug/mL	50	Anions by IC_Oxalate-NP
1412017-05	Sample 3-2	pH	11.7	pH Units		pH-NP
1412017-05	Sample 3-2	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-05	Sample 3-2	Phosphorus	15900	ug/L	1430	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Potassium	7610	ug/L	5920	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Silicon	8010	ug/L	2620	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Sodium	358000	ug/L	8940	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Sulfate	326	ug/mL	75	Anions by IC-NP
1412017-05	Sample 3-2	Sulfur	6980	ug/L	6650	ICP-OES Vadose-NP
1412017-05	Sample 3-2	Technetium-99	1.03	ug/L	0.41	ICPMS-Tc_U-NP
1412017-05RE1	Sample 3-2	Thorium 232	114	ug/L	2.5	ICPMS-Tc_U-NP
1412017-05	Sample 3-2	Uranium 238	22700	ug/L	1060	ICPMS-Tc_U-NP
1412017-05	Sample 3-2	Vanadium	399	ug/L	396	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Alkalinity as CaCO3	270	ug/mL	23.5	Alkalinity-NP
1412017-06	Sample 3-3	Aluminum	23200	ug/L	329	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Barium	(1.29)	ug/L	72.6	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Barium 138	(0.71)	ug/L	3.66	ICPMS-RCRA-NP
1412017-06	Sample 3-3	Calcium	(437)	ug/L	981	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Cesium 133	1.32	ug/L	0.99	ICPMS-RCRA-NP
1412017-06	Sample 3-3	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-06	Sample 3-3	Chromium	122	ug/L	116	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1412017-06	Sample 3-3	Chromium 52	97.6	ug/L	19.2	ICPMS-RCRA-NP
1412017-06	Sample 3-3	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1412017-06	Sample 3-3	Fluoride	ND	ug/mL	10	Anions by IC-NP
1412017-06	Sample 3-3	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Magnesium	ND	ug/L	68.6	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-06	Sample 3-3	Oxalate	ND	ug/mL	50	Anions by IC_Oxalate-NP
1412017-06	Sample 3-3	pH	11.4	pH Units		pH-NP
1412017-06	Sample 3-3	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-06	Sample 3-3	Phosphorus	10600	ug/L	1430	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Potassium	8530	ug/L	5920	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Silicon	8930	ug/L	2620	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Sodium	151000	ug/L	8940	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Sulfate	ND	ug/mL	75	Anions by IC-NP
1412017-06	Sample 3-3	Sulfur	ND	ug/L	6650	ICP-OES Vadose-NP
1412017-06	Sample 3-3	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1412017-06RE1	Sample 3-3	Thorium 232	74.9	ug/L	2.5	ICPMS-Tc_U-NP
1412017-06	Sample 3-3	Uranium 238	14200	ug/L	1060	ICPMS-Tc_U-NP
1412017-06	Sample 3-3	Vanadium	ND	ug/L	396	ICP-OES Vadose-NP
1412017-16	Sample 3-4	Alkalinity as CaCO3	230	ug/mL	23.5	Alkalinity-NP
1503018-06	Sample 3-4	Aluminum	23800	ug/L	82.4	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Barium	(2.90)	ug/L	18.2	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Barium 138	(2.62)	ug/L	3.66	ICPMS-RCRA-NP
1503018-06	Sample 3-4	Calcium	(191)	ug/L	245	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Cesium 133	1.62	ug/L	0.99	ICPMS-RCRA-NP
1503018-06	Sample 3-4	Chloride	4.47	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-06	Sample 3-4	Chromium	34.7	ug/L	28.9	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Chromium 52	59.6	ug/L	19.2	ICPMS-RCRA-NP
1503018-06	Sample 3-4	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-06	Sample 3-4	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-06	Sample 3-4	Iron	109	ug/L	50	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Magnesium	20	ug/L	17.2	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Nitrate	19.3	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-06	Sample 3-4	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1412017-16	Sample 3-4	pH	11.4	pH Units		pH-NP
1503018-06	Sample 3-4	Phosphate	16.6	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-06	Sample 3-4	Phosphorus	5640	ug/L	358	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Potassium	11700	ug/L	1480	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Silicon	11600	ug/L	655	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Sodium	104000	ug/L	223	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Strontium	ND	ug/L	71.4	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Sulfate	11.4	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-06	Sample 3-4	Sulfur	2170	ug/L	1660	ICP-OES Vadose-NP
1503018-06	Sample 3-4	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-06	Sample 3-4	Thorium 232	52.4	ug/L	2.5	ICPMS-Tc_U-NP
1503018-06	Sample 3-4	Uranium 238	3820	ug/L	1060	ICPMS-Tc_U-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-06	Sample 3-4	Vanadium	112	ug/L	99	ICP-OES Vadose-NP
1412017-17	Sample 3-5	Alkalinity as CaCO3	211	ug/mL	23.5	Alkalinity-NP
1503018-07	Sample 3-5	Aluminum	22800	ug/L	82.4	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Barium	(4.06)	ug/L	18.2	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Barium 138	4.22	ug/L	3.66	ICPMS-RCRA-NP
1503018-07	Sample 3-5	Calcium	301	ug/L	245	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Cesium 133	2.85	ug/L	0.99	ICPMS-RCRA-NP
1503018-07	Sample 3-5	Chloride	3.5	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-07	Sample 3-5	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Chromium 52	54.2	ug/L	19.2	ICPMS-RCRA-NP
1503018-07	Sample 3-5	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-07	Sample 3-5	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-07	Sample 3-5	Iron	170	ug/L	50	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Magnesium	22.1	ug/L	17.2	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Nitrate	15	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-07	Sample 3-5	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1412017-17	Sample 3-5	pH	11.3	pH Units		pH-NP
1503018-07	Sample 3-5	Phosphate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-07	Sample 3-5	Phosphorus	2050	ug/L	358	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Potassium	12500	ug/L	1480	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Silicon	14600	ug/L	655	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Sodium	92000	ug/L	223	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Strontium	ND	ug/L	71.4	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Sulfate	11.7	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-07	Sample 3-5	Sulfur	2300	ug/L	1660	ICP-OES Vadose-NP
1503018-07	Sample 3-5	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-07	Sample 3-5	Thorium 232	39	ug/L	2.5	ICPMS-Tc_U-NP
1503018-07	Sample 3-5	Uranium 238	4580	ug/L	1060	ICPMS-Tc_U-NP
1503018-07	Sample 3-5	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-18	Sample 3-6	Alkalinity as CaCO3	172	ug/mL	23.5	Alkalinity-NP
1503018-08	Sample 3-6	Aluminum	19500	ug/L	82.4	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Barium	(4.85)	ug/L	18.2	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Barium 138	5.45	ug/L	3.66	ICPMS-RCRA-NP
1503018-08	Sample 3-6	Calcium	(236)	ug/L	245	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Cesium 133	3.39	ug/L	0.99	ICPMS-RCRA-NP
1503018-08	Sample 3-6	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Chromium 52	51.1	ug/L	19.2	ICPMS-RCRA-NP
1503018-08	Sample 3-6	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-08	Sample 3-6	Iron	89.5	ug/L	50	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Magnesium	18.5	ug/L	17.2	ICP-OES Vadose-NP
1412017-18	Sample 3-6	pH	11.2	pH Units		pH-NP
1503018-08	Sample 3-6	Phosphorus	1250	ug/L	358	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Potassium	9550	ug/L	1480	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Silicon	14600	ug/L	655	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Sodium	87300	ug/L	223	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Strontium	ND	ug/L	71.4	ICP-OES Vadose-NP
1503018-08	Sample 3-6	Sulfur	2410	ug/L	1660	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-08	Sample 3-6	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-08	Sample 3-6	Thorium 232	30.7	ug/L	2.5	ICPMS-Tc_U-NP
1503018-08	Sample 3-6	Uranium 238	6050	ug/L	1060	ICPMS-Tc_U-NP
1503018-08	Sample 3-6	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Alkalinity as CaCO3	9420	ug/mL	23.5	Alkalinity-NP
1412017-07	Sample 5-1	Aluminum	ND	ug/L	329	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Barium	ND	ug/L	72.6	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Barium 138	10.2	ug/L	3.66	ICPMS-RCRA-NP
1412017-07	Sample 5-1	Calcium	11200	ug/L	981	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Cesium 133	1.15	ug/L	0.99	ICPMS-RCRA-NP
1412017-07	Sample 5-1	Chloride	102	ug/mL	25	Anions by IC-NP
1412017-07	Sample 5-1	Chromium	2340	ug/L	116	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Chromium 52	2370	ug/L	19.2	ICPMS-RCRA-NP
1412017-07	Sample 5-1	Copper 65	131	ug/L	43.7	ICPMS-RCRA-NP
1412017-07	Sample 5-1	Fluoride	49.8	ug/mL	10	Anions by IC-NP
1412017-07	Sample 5-1	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Magnesium	1750	ug/L	68.6	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-07	Sample 5-1	Oxalate	580	ug/mL	50	Anions by IC_Oxalate-NP
1412017-07	Sample 5-1	pH	10.5	pH Units		pH-NP
1412017-07	Sample 5-1	Phosphate	80.3	ug/mL	75	Anions by IC-NP
1412017-07	Sample 5-1	Phosphorus	18100	ug/L	1430	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Potassium	9560	ug/L	5920	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Silicon	ND	ug/L	2620	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Sodium	4510000	ug/L	8940	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Sulfate	ND	ug/mL	75	Anions by IC-NP
1412017-07	Sample 5-1	Sulfur	ND	ug/L	6650	ICP-OES Vadose-NP
1412017-07	Sample 5-1	Technetium-99	41.9	ug/L	0.41	ICPMS-Tc_U-NP
1412017-07RE1	Sample 5-1	Thorium 232	1620	ug/L	2.5	ICPMS-Tc_U-NP
1412017-07	Sample 5-1	Uranium 238	2550000	ug/L	1060	ICPMS-Tc_U-NP
1412017-07	Sample 5-1	Vanadium	644	ug/L	396	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Alkalinity as CaCO3	2600	ug/mL	23.5	Alkalinity-NP
1412017-08	Sample 5-2	Aluminum	10300	ug/L	329	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Barium	(1.34)	ug/L	72.6	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Barium 138	8.74	ug/L	3.66	ICPMS-RCRA-NP
1412017-08	Sample 5-2	Calcium	2880	ug/L	981	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Cesium 133	ND	ug/L	0.99	ICPMS-RCRA-NP
1412017-08	Sample 5-2	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-08	Sample 5-2	Chromium	637	ug/L	116	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Chromium 52	682	ug/L	19.2	ICPMS-RCRA-NP
1412017-08	Sample 5-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1412017-08	Sample 5-2	Fluoride	25.3	ug/mL	10	Anions by IC-NP
1412017-08	Sample 5-2	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Magnesium	243	ug/L	68.6	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-08	Sample 5-2	Oxalate	201	ug/mL	50	Anions by IC_Oxalate-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1412017-08	Sample 5-2	pH	10.5	pH Units		pH-NP
1412017-08	Sample 5-2	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-08	Sample 5-2	Phosphorus	7270	ug/L	1430	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Potassium	ND	ug/L	5920	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Silicon	(93)	ug/L	2620	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Sodium	1340000	ug/L	8940	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Sulfate	ND	ug/mL	75	Anions by IC-NP
1412017-08	Sample 5-2	Sulfur	ND	ug/L	6650	ICP-OES Vadose-NP
1412017-08	Sample 5-2	Technetium-99	9.32	ug/L	0.41	ICPMS-Tc_U-NP
1412017-08RE1	Sample 5-2	Thorium 232	149	ug/L	2.5	ICPMS-Tc_U-NP
1412017-08	Sample 5-2	Uranium 238	943000	ug/L	1060	ICPMS-Tc_U-NP
1412017-08	Sample 5-2	Vanadium	ND	ug/L	396	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Alkalinity as CaCO3	387	ug/mL	23.5	Alkalinity-NP
1412017-09	Sample 5-3	Aluminum	14000	ug/L	329	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Barium	(5.13)	ug/L	72.6	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Barium 138	(2.62)	ug/L	3.66	ICPMS-RCRA-NP
1412017-09	Sample 5-3	Calcium	(670)	ug/L	981	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Cesium 133	ND	ug/L	0.99	ICPMS-RCRA-NP
1412017-09	Sample 5-3	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-09	Sample 5-3	Chromium	ND	ug/L	116	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Chromium 52	70.5	ug/L	19.2	ICPMS-RCRA-NP
1412017-09	Sample 5-3	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1412017-09	Sample 5-3	Fluoride	ND	ug/mL	10	Anions by IC-NP
1412017-09	Sample 5-3	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Magnesium	ND	ug/L	68.6	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-09	Sample 5-3	Oxalate	ND	ug/mL	50	Anions by IC_Oxalate-NP
1412017-09	Sample 5-3	pH	10.5	pH Units		pH-NP
1412017-09	Sample 5-3	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-09	Sample 5-3	Phosphorus	9360	ug/L	1430	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Potassium	ND	ug/L	5920	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Silicon	2990	ug/L	2620	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Sodium	205000	ug/L	8940	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Sulfate	ND	ug/mL	75	Anions by IC-NP
1412017-09	Sample 5-3	Sulfur	ND	ug/L	6650	ICP-OES Vadose-NP
1412017-09	Sample 5-3	Technetium-99	0.589	ug/L	0.41	ICPMS-Tc_U-NP
1412017-09RE1	Sample 5-3	Thorium 232	111	ug/L	2.5	ICPMS-Tc_U-NP
1412017-09	Sample 5-3	Uranium 238	46700	ug/L	1060	ICPMS-Tc_U-NP
1412017-09	Sample 5-3	Vanadium	ND	ug/L	396	ICP-OES Vadose-NP
1412017-19	Sample 5-4	Alkalinity as CaCO3	121	ug/mL	23.5	Alkalinity-NP
1503018-09	Sample 5-4	Aluminum	12900	ug/L	82.4	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Barium	363	ug/L	18.2	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Barium 138	464	ug/L	3.66	ICPMS-RCRA-NP
1503018-09	Sample 5-4	Calcium	22200	ug/L	245	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Cesium 133	ND	ug/L	0.99	ICPMS-RCRA-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-09	Sample 5-4	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1503018-09	Sample 5-4	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-09	Sample 5-4	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-09	Sample 5-4	Fluoride	ND	ug/mL	10	Anions by IC _oxalate_acetate-NP
1503018-09	Sample 5-4	Iron	71.6	ug/L	50	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Magnesium	32.6	ug/L	17.2	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1503018-09	Sample 5-4	Oxalate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1412017-19	Sample 5-4	pH	10.3	pH Units		pH-NP
1503018-09	Sample 5-4	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-09	Sample 5-4	Phosphorus	9280	ug/L	358	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Potassium	3530	ug/L	1480	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Silicon	5740	ug/L	655	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Sodium	64400	ug/L	223	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Strontium	5210	ug/L	71.4	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-09	Sample 5-4	Sulfur	ND	ug/L	1660	ICP-OES Vadose-NP
1503018-09	Sample 5-4	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-09	Sample 5-4	Thorium 232	65.9	ug/L	2.5	ICPMS-Tc_U-NP
1503018-09	Sample 5-4	Uranium 238	2320	ug/L	1060	ICPMS-Tc_U-NP
1503018-09	Sample 5-4	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-24	Sample 5-5	Alkalinity as CaCO3	92.6	ug/mL	23.5	Alkalinity-NP
1503018-10	Sample 5-5	Aluminum	12700	ug/L	82.4	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Barium	1180	ug/L	18.2	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Barium 138	828	ug/L	3.66	ICPMS-RCRA-NP
1503018-10	Sample 5-5	Calcium	72700	ug/L	245	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Cesium 133	ND	ug/L	0.99	ICPMS-RCRA-NP
1503018-10	Sample 5-5	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1503018-10	Sample 5-5	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-10	Sample 5-5	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-10	Sample 5-5	Fluoride	ND	ug/mL	10	Anions by IC _oxalate_acetate-NP
1503018-10	Sample 5-5	Iron	223	ug/L	50	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Magnesium	37.6	ug/L	17.2	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1503018-10	Sample 5-5	Oxalate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1412017-24	Sample 5-5	pH	10.2	pH Units		pH-NP
1503018-10	Sample 5-5	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-10	Sample 5-5	Phosphorus	4920	ug/L	358	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Potassium	3830	ug/L	1480	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Silicon	7510	ug/L	655	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Sodium	41900	ug/L	223	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Strontium	18000	ug/L	71.4	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-10	Sample 5-5	Sulfur	ND	ug/L	1660	ICP-OES Vadose-NP
1503018-10	Sample 5-5	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-10	Sample 5-5	Thorium 232	69	ug/L	2.5	ICPMS-Tc_U-NP
1503018-10	Sample 5-5	Uranium 238	2100	ug/L	1060	ICPMS-Tc_U-NP
1503018-10	Sample 5-5	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-20	Sample 5-6	Alkalinity as CaCO3	68	ug/mL	23.5	Alkalinity-NP
1503018-11	Sample 5-6	Aluminum	2160	ug/L	82.4	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Barium	315	ug/L	18.2	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Barium 138	667	ug/L	3.66	ICPMS-RCRA-NP
1503018-11	Sample 5-6	Calcium	19800	ug/L	245	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Cesium 133	ND	ug/L	0.99	ICPMS-RCRA-NP
1503018-11	Sample 5-6	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1503018-11	Sample 5-6	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-11	Sample 5-6	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-11	Sample 5-6	Fluoride	ND	ug/mL	10	Anions by IC _oxalate_acetate-NP
1503018-11	Sample 5-6	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1503018-11	Sample 5-6	Oxalate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1412017-20	Sample 5-6	pH	9.93	pH Units		pH-NP
1503018-11	Sample 5-6	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-11	Sample 5-6	Phosphorus	568	ug/L	358	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Potassium	ND	ug/L	1480	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Silicon	1870	ug/L	655	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Sodium	7710	ug/L	223	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Strontium	4990	ug/L	71.4	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-11	Sample 5-6	Sulfur	ND	ug/L	1660	ICP-OES Vadose-NP
1503018-11	Sample 5-6	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-11	Sample 5-6	Thorium 232	15.4	ug/L	2.5	ICPMS-Tc_U-NP
1503018-11	Sample 5-6	Uranium 238	(400.2)	ug/L	1060	ICPMS-Tc_U-NP
1503018-11	Sample 5-6	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Alkalinity as CaCO3	84.6	ug/mL	23.5	Alkalinity-NP
1503018-12	Sample 5-7	Aluminum	10400	ug/L	82.4	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Barium	124	ug/L	18.2	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Barium 138	152	ug/L	3.66	ICPMS-RCRA-NP
1503018-12	Sample 5-7	Calcium	8140	ug/L	245	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Cesium 133	ND	ug/L	0.99	ICPMS-RCRA-NP
1503018-12	Sample 5-7	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1503018-12	Sample 5-7	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-12	Sample 5-7	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-12	Sample 5-7	Fluoride	ND	ug/mL	10	Anions by IC _oxalate_acetate-NP
1503018-12	Sample 5-7	Iron	74.3	ug/L	50	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Magnesium	19.4	ug/L	17.2	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1503018-12	Sample 5-7	Oxalate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1503018-12	Sample 5-7	pH	9.9	pH Units		pH-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-12	Sample 5-7	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-12	Sample 5-7	Phosphorus	2160	ug/L	358	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Potassium	ND	ug/L	1480	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Silicon	7710	ug/L	655	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Sodium	29300	ug/L	223	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Strontium	2020	ug/L	71.4	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-12	Sample 5-7	Sulfur	ND	ug/L	1660	ICP-OES Vadose-NP
1503018-12	Sample 5-7	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-12	Sample 5-7	Thorium 232	39.8	ug/L	2.5	ICPMS-Tc_U-NP
1503018-12	Sample 5-7	Uranium 238	2630	ug/L	1060	ICPMS-Tc_U-NP
1503018-12	Sample 5-7	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Alkalinity as CaCO3	73.7	ug/mL	23.5	Alkalinity-NP
1503018-13	Sample 5-8	Aluminum	11700	ug/L	82.4	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Barium	99.1	ug/L	18.2	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Barium 138	97.4	ug/L	3.66	ICPMS-RCRA-NP
1503018-13	Sample 5-8	Calcium	6420	ug/L	245	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Cesium 133	ND	ug/L	0.99	ICPMS-RCRA-NP
1503018-13	Sample 5-8	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1503018-13	Sample 5-8	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-13	Sample 5-8	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-13	Sample 5-8	Fluoride	ND	ug/mL	10	Anions by IC _oxalate_acetate-NP
1503018-13	Sample 5-8	Iron	68.5	ug/L	50	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Magnesium	22.1	ug/L	17.2	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1503018-13	Sample 5-8	Oxalate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1503018-13	Sample 5-8	pH	9.2	pH Units		pH-NP
1503018-13	Sample 5-8	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-13	Sample 5-8	Phosphorus	2060	ug/L	358	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Potassium	8120	ug/L	1480	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Silicon	8420	ug/L	655	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Sodium	28700	ug/L	223	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Strontium	1570	ug/L	71.4	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-13	Sample 5-8	Sulfur	ND	ug/L	1660	ICP-OES Vadose-NP
1503018-13	Sample 5-8	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-13	Sample 5-8	Thorium 232	41.6	ug/L	2.5	ICPMS-Tc_U-NP
1503018-13	Sample 5-8	Uranium 238	(895)	ug/L	1060	ICPMS-Tc_U-NP
1503018-13	Sample 5-8	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Alkalinity as CaCO3	4900	ug/mL	23.5	Alkalinity-NP
1412017-10	Sample 6-1	Aluminum	83200	ug/L	329	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Barium	(1.89)	ug/L	72.6	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Barium 138	(0.87)	ug/L	3.66	ICPMS-RCRA-NP
1412017-10	Sample 6-1	Calcium	(484)	ug/L	981	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Cesium 133	35.3	ug/L	0.99	ICPMS-RCRA-NP
1412017-10	Sample 6-1	Chloride	ND	ug/mL	25	Anions by IC-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1412017-10	Sample 6-1	Chromium	1400	ug/L	116	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Chromium 52	1540	ug/L	19.2	ICPMS-RCRA-NP
1412017-10	Sample 6-1	Copper 65	54.1	ug/L	43.7	ICPMS-RCRA-NP
1412017-10	Sample 6-1	Fluoride	19.9	ug/mL	10	Anions by IC-NP
1412017-10	Sample 6-1	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Magnesium	ND	ug/L	68.6	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-10	Sample 6-1	Oxalate	341	ug/mL	50	Anions by IC_Oxalate-NP
1412017-10	Sample 6-1	pH	12.5	pH Units		pH-NP
1412017-10	Sample 6-1	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-10	Sample 6-1	Phosphorus	13800	ug/L	1430	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Potassium	67300	ug/L	5920	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Silicon	7730	ug/L	2620	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Sodium	2400000	ug/L	8940	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Strontium	ND	ug/L	285	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Sulfate	307	ug/mL	75	Anions by IC-NP
1412017-10	Sample 6-1	Sulfur	16600	ug/L	6650	ICP-OES Vadose-NP
1412017-10	Sample 6-1	Technetium-99	29.4	ug/L	0.41	ICPMS-Tc_U-NP
1412017-10RE1	Sample 6-1	Thorium 232	10.3	ug/L	2.5	ICPMS-Tc_U-NP
1412017-10	Sample 6-1	Uranium 238	41000	ug/L	1060	ICPMS-Tc_U-NP
1412017-10	Sample 6-1	Vanadium	ND	ug/L	396	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Alkalinity as CaCO3	873	ug/mL	23.5	Alkalinity-NP
1412017-11	Sample 6-2	Aluminum	24800	ug/L	329	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Barium	(2.88)	ug/L	72.6	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Barium 138	ND	ug/L	3.66	ICPMS-RCRA-NP
1412017-11	Sample 6-2	Calcium	50700	ug/L	981	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Cesium 133	71.8	ug/L	0.99	ICPMS-RCRA-NP
1412017-11	Sample 6-2	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-11	Sample 6-2	Chromium	ND	ug/L	116	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Chromium 52	23.5	ug/L	19.2	ICPMS-RCRA-NP
1412017-11	Sample 6-2	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1412017-11	Sample 6-2	Fluoride	ND	ug/mL	10	Anions by IC-NP
1412017-11	Sample 6-2	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Magnesium	ND	ug/L	68.6	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Nitrate	50	ug/mL	50	Anions by IC-NP
1412017-11	Sample 6-2	Oxalate	ND	ug/mL	50	Anions by IC_Oxalate-NP
1412017-11	Sample 6-2	pH	12.2	pH Units		pH-NP
1412017-11	Sample 6-2	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-11	Sample 6-2	Phosphorus	ND	ug/L	1430	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Potassium	35400	ug/L	5920	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Silicon	3310	ug/L	2620	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Sodium	262000	ug/L	8940	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Strontium	12900	ug/L	285	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Sulfate	ND	ug/mL	75	Anions by IC-NP
1412017-11	Sample 6-2	Sulfur	ND	ug/L	6650	ICP-OES Vadose-NP
1412017-11	Sample 6-2	Technetium-99	0.895	ug/L	0.41	ICPMS-Tc_U-NP
1412017-11RE1	Sample 6-2	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1412017-11	Sample 6-2	Uranium 238	2540	ug/L	1060	ICPMS-Tc_U-NP
1412017-11	Sample 6-2	Vanadium	ND	ug/L	396	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Alkalinity as CaCO3	1430	ug/mL	23.5	Alkalinity-NP
1412017-12	Sample 6-3	Aluminum	1160	ug/L	329	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Barium	(3.42)	ug/L	72.6	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Barium 138	(1.72)	ug/L	3.66	ICPMS-RCRA-NP
1412017-12	Sample 6-3	Calcium	348000	ug/L	981	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Cesium 133	34.3	ug/L	0.99	ICPMS-RCRA-NP
1412017-12	Sample 6-3	Chloride	ND	ug/mL	25	Anions by IC-NP
1412017-12	Sample 6-3	Chromium	ND	ug/L	116	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1412017-12	Sample 6-3	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1412017-12	Sample 6-3	Fluoride	ND	ug/mL	10	Anions by IC-NP
1412017-12	Sample 6-3	Iron	ND	ug/L	200	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Magnesium	ND	ug/L	68.6	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Nitrate	ND	ug/mL	50	Anions by IC-NP
1412017-12	Sample 6-3	Oxalate	ND	ug/mL	50	Anions by IC_Oxalate-NP
1412017-12	Sample 6-3	pH	12.4	pH Units		pH-NP
1412017-12	Sample 6-3	Phosphate	ND	ug/mL	75	Anions by IC-NP
1412017-12	Sample 6-3	Phosphorus	ND	ug/L	1430	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Potassium	10500	ug/L	5920	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Silicon	(332)	ug/L	2620	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Sodium	101000	ug/L	8940	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Strontium	31400	ug/L	285	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Sulfate	ND	ug/mL	75	Anions by IC-NP
1412017-12	Sample 6-3	Sulfur	ND	ug/L	6650	ICP-OES Vadose-NP
1412017-12	Sample 6-3	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1412017-12RE1	Sample 6-3	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1412017-12	Sample 6-3	Uranium 238	(76.7)	ug/L	1060	ICPMS-Tc_U-NP
1412017-12	Sample 6-3	Vanadium	ND	ug/L	396	ICP-OES Vadose-NP
1412017-21	Sample 6-4	Alkalinity as CaCO3	1560	ug/mL	23.5	Alkalinity-NP
1503018-14	Sample 6-4	Aluminum	809	ug/L	82.4	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Barium	50.1	ug/L	18.2	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Barium 138	35.6	ug/L	3.66	ICPMS-RCRA-NP
1503018-14	Sample 6-4	Calcium	480000	ug/L	245	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Cesium 133	19.9	ug/L	0.99	ICPMS-RCRA-NP
1503018-14	Sample 6-4	Chloride	ND	ug/mL	25	Anions by IC _oxalate_acetate-NP
1503018-14	Sample 6-4	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-14	Sample 6-4	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-14	Sample 6-4	Fluoride	ND	ug/mL	10	Anions by IC _oxalate_acetate-NP
1503018-14	Sample 6-4	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Magnesium	41	ug/L	17.2	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Nitrate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1503018-14	Sample 6-4	Oxalate	ND	ug/mL	50	Anions by IC _oxalate_acetate-NP
1412017-21	Sample 6-4	pH	12.4	pH Units		pH-NP
1503018-14	Sample 6-4	Phosphate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-14	Sample 6-4	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Potassium	12600	ug/L	1480	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Silicon	776	ug/L	655	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Sodium	79400	ug/L	223	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Strontium	17700	ug/L	71.4	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Sulfate	ND	ug/mL	75	Anions by IC _oxalate_acetate-NP
1503018-14	Sample 6-4	Sulfur	4250	ug/L	1660	ICP-OES Vadose-NP
1503018-14	Sample 6-4	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-14	Sample 6-4	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-14	Sample 6-4	Uranium 238	(21.0)	ug/L	1060	ICPMS-Tc_U-NP
1503018-14	Sample 6-4	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-22	Sample 6-5	Alkalinity as CaCO3	1270	ug/mL	23.5	Alkalinity-NP
1503018-15	Sample 6-5	Aluminum	845	ug/L	82.4	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Barium	300	ug/L	18.2	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Barium 138	267	ug/L	3.66	ICPMS-RCRA-NP
1503018-15	Sample 6-5	Calcium	420000	ug/L	245	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Cesium 133	5.07	ug/L	0.99	ICPMS-RCRA-NP
1503018-15	Sample 6-5	Chloride	3.83	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-15	Sample 6-5	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-15	Sample 6-5	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-15	Sample 6-5	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-15	Sample 6-5	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Nitrate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-15	Sample 6-5	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1412017-22	Sample 6-5	pH	12.4	pH Units		pH-NP
1503018-15	Sample 6-5	Phosphate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-15	Sample 6-5	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Potassium	8540	ug/L	1480	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Silicon	(512)	ug/L	655	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Sodium	39600	ug/L	223	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Strontium	7050	ug/L	71.4	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-15	Sample 6-5	Sulfur	3700	ug/L	1660	ICP-OES Vadose-NP
1503018-15	Sample 6-5	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-15	Sample 6-5	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-15	Sample 6-5	Uranium 238	(55.9)	ug/L	1060	ICPMS-Tc_U-NP
1503018-15	Sample 6-5	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1412017-23	Sample 6-6	Alkalinity as CaCO3	916	ug/mL	23.5	Alkalinity-NP
1503018-16	Sample 6-6	Aluminum	4190	ug/L	82.4	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Barium	122	ug/L	18.2	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Barium 138	117	ug/L	3.66	ICPMS-RCRA-NP
1503018-16	Sample 6-6	Calcium	265000	ug/L	245	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Cesium 133	3.31	ug/L	0.99	ICPMS-RCRA-NP
1503018-16	Sample 6-6	Chloride	4.31	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-16	Sample 6-6	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-16	Sample 6-6	Chromium 52	ND	ug/L	19.2	ICPMS-RCRA-NP
1503018-16	Sample 6-6	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-16	Sample 6-6	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-16	Sample 6-6	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Nitrate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-16	Sample 6-6	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1412017-23	Sample 6-6	pH	12.2	pH Units		pH-NP
1503018-16	Sample 6-6	Phosphate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-16	Sample 6-6	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Potassium	8370	ug/L	1480	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Silicon	(457)	ug/L	655	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Sodium	29600	ug/L	223	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Strontium	4850	ug/L	71.4	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-16	Sample 6-6	Sulfur	2170	ug/L	1660	ICP-OES Vadose-NP
1503018-16	Sample 6-6	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-16	Sample 6-6	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-16	Sample 6-6	Uranium 238	(115)	ug/L	1060	ICPMS-Tc_U-NP
1503018-16	Sample 6-6	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Alkalinity as CaCO3	748	ug/mL	23.5	Alkalinity-NP
1503018-17	Sample 6-7	Aluminum	5790	ug/L	82.4	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Barium	76.2	ug/L	18.2	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Barium 138	70.2	ug/L	3.66	ICPMS-RCRA-NP
1503018-17	Sample 6-7	Calcium	209000	ug/L	245	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Cesium 133	2.67	ug/L	0.99	ICPMS-RCRA-NP
1503018-17	Sample 6-7	Chloride	2.88	ug/mL	2.5	Anions by IC _oxalate_acetate-NP
1503018-17	Sample 6-7	Chromium	ND	ug/L	28.9	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Chromium 52	52.4	ug/L	19.2	ICPMS-RCRA-NP
1503018-17	Sample 6-7	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-17	Sample 6-7	Fluoride	ND	ug/mL	1	Anions by IC _oxalate_acetate-NP
1503018-17	Sample 6-7	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Nitrate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-17	Sample 6-7	Oxalate	ND	ug/mL	5	Anions by IC _oxalate_acetate-NP
1503018-17	Sample 6-7	pH	12.1	pH Units		pH-NP
1503018-17	Sample 6-7	Phosphate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-17	Sample 6-7	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Potassium	6280	ug/L	1480	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Silicon	(600)	ug/L	655	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Sodium	27600	ug/L	223	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Strontium	3990	ug/L	71.4	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Sulfate	ND	ug/mL	7.5	Anions by IC _oxalate_acetate-NP
1503018-17	Sample 6-7	Sulfur	1780	ug/L	1660	ICP-OES Vadose-NP
1503018-17	Sample 6-7	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-17	Sample 6-7	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-17	Sample 6-7	Uranium 238	(18.9)	ug/L	1060	ICPMS-Tc_U-NP

LabNumber	SampleName	Analyte	Result	Units	EQL	Analysis
1503018-17	Sample 6-7	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Aluminum	5160	ug/L	82.4	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Barium	46.3	ug/L	18.2	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Barium 138	12.3	ug/L	3.66	ICPMS-RCRA-NP
1503018-18	Sample 6-8	Calcium	185000	ug/L	245	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Cesium 133	3.77	ug/L	0.99	ICPMS-RCRA-NP
1503018-18	Sample 6-8	Chromium	66.3	ug/L	28.9	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Chromium 52	98.1	ug/L	19.2	ICPMS-RCRA-NP
1503018-18	Sample 6-8	Copper 65	ND	ug/L	43.7	ICPMS-RCRA-NP
1503018-18	Sample 6-8	Iron	ND	ug/L	50	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Magnesium	ND	ug/L	17.2	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Phosphorus	ND	ug/L	358	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Potassium	5090	ug/L	1480	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Silicon	836	ug/L	655	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Sodium	38100	ug/L	223	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Strontium	3830	ug/L	71.4	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Sulfur	1700	ug/L	1660	ICP-OES Vadose-NP
1503018-18	Sample 6-8	Technetium-99	ND	ug/L	0.41	ICPMS-Tc_U-NP
1503018-18	Sample 6-8	Thorium 232	ND	ug/L	2.5	ICPMS-Tc_U-NP
1503018-18	Sample 6-8	Uranium 238	(98.9)	ug/L	1060	ICPMS-Tc_U-NP
1503018-18	Sample 6-8	Vanadium	ND	ug/L	99	ICP-OES Vadose-NP

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