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Z-AREA SALTSTONE DISPOSAL FACILITY GROUNDWATER MONITORING REPORT FOR 2017 (U)

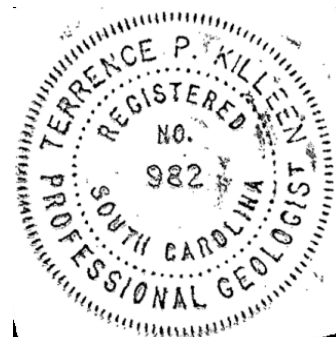
Class 3 Landfill Permit #025500-1603

SRNS-TR-2017-00387

Revision 0

January 2018

TPK
11/29/17



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**Printed in the United States of America
Prepared for
U. S. Department of Energy
and
Savannah River Nuclear Solutions, LLC
Aiken, South Carolina**

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LIST OF ACRONYMS AND ABBREVIATIONS

1Q17	first quarter of 2017
2Q17	second quarter of 2017
3Q15	third quarter of 2015
3Q16	third quarter of 2016
Bi-214	bismuth-214
biennial sampling	1 sample event (which may cross calendar quarters) for Ra-226, Ra-228, benzene, PCE, toluene, and TCE every other year; odd years only.
Cs-137	cesium-137
ft	feet
ft-msl	feet above mean sea level
GSA	General Separations Area
GWPS	groundwater protection standard
I-129	iodine-129
LAZ	Lower Aquifer Zone
µg/L	microgram per liter
µS/cm	microsiemens per centimeter
MDL	method detection limit
mg/L	milligram per liter
mrem	millirem
NTU	nephelometric turbidity units
Pb-214	lead-214
pCi/L	picocuries per liter
pCi/mL	picocuries per milliliter
PDWS	Primary Drinking Water Standard
PQL	Practical Quantitation Limit
Pu-238	plutonium-238
Pu-239	plutonium-239
Ra-226	radium-226
SCDHEC	South Carolina Department of Health and Environmental Control
SDF	Saltstone Disposal Facility
SDU	Saltstone Disposal Unit
semiannual sampling	2 sample events per year (conductivity, pH, water elevation, nitrates, gross alpha, gross beta, gamma spectroscopy, I-129, Tc-99, and tritium); 1 sample event may cross calendar quarters.
SPF	Saltstone Production Facility
SRNS	Savannah River Nuclear Solutions, LLC
SRR	Savannah River Remediation LLC
SRS	Savannah River Site
SDWS	Secondary Drinking Water Standard
Sr-90	strontium-90
Tc-99	technetium-99
TCCZ	Tan Clay Confining Zone
Th-228	thorium-228
Th-230	thorium-230
Th-232	thorium-232
UAZ	Upper Aquifer Zone
U-234	uranium-234
U-235	uranium-235
U-238	uranium-238
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
UTRA	Upper Three Runs Aquifer
WSRC	Washington Savannah River Company LLC (Oct. 2005 through Aug. 2008)
WSRC	Westinghouse Savannah River Company (before Oct. 2005)

1.0 SITE DESCRIPTION AND BACKGROUND

The Savannah River Site (SRS) Saltstone Facility is located within Z-Area (238 acres) on the SRS in Aiken County, and is operated by Savannah River Remediation LLC (SRR) for the U.S. Department of Energy (USDOE) (Figure 1). The Saltstone Facility consists of two facility segments: the Saltstone Production Facility (SPF), which receives and treats salt solution to produce solidified saltstone, and the Saltstone Disposal Facility (SDF), which consists of Saltstone Disposal Units (SDUs) used for the final disposal of the solidified saltstone. The SPF is permitted as a wastewater treatment facility per South Carolina Department of Health and Environmental Control (SCDHEC) regulations (SCDHEC 2011). The SDF is permitted as a Class 3 Landfill per SCDHEC regulations (SCDHEC 2011). The SDF currently contains two rectangular SDUs, formerly referred to as vaults, six circular SDUs, and one large circular SDU (SDU 6) (Figure 2).

2.0 GROUNDWATER MONITORING

In accordance with the SDF Class 3 Landfill permit (SCDHEC 2011), a groundwater monitoring plan is in place to monitor groundwater in the vicinity of the SDF (WSRC 2005). Currently, twenty-two wells located up-gradient and down-gradient of the SDF (Figure 2) are sampled semiannually and biennially for the constituents and parameters listed in Table 1.

In 1987, wells ZBG 1 and ZBG 2 were installed to determine baseline groundwater chemistry in Z-Area. Construction of SDUs 1 and 4 was completed in February 1986 and July 1988, respectively. The SPF started radioactive operations in June 1990, and disposal into SDU 1 occurred between June 1990 and September 1996. Disposal into SDU 4 began in January 1997 and was discontinued in 2012. Wells ZBG 3, ZBG 4, and ZBG 5 were installed in 2003 to monitor SDUs 1 and 4. Wells ZBG 6, ZBG 7, and ZBG 8 were installed in 2007 to provide improved groundwater monitoring for SDU 1.

In 2012, six wells (ZBG009D thru ZBG014D) were installed to monitor SDUs 2, 3, and 5. A seventh well (ZBG015D) was also installed to provide an additional background well (Figure 2). SDU 2 was put into service in September 2012, and was completely filled in 2014. SDU 5 was

put into service in December 2013, and was completely filled in January 2017. SDU 3 was placed put into service in February 2017, and is actively being filled.

In 2014 and 2015, three additional wells and one replacement well were added to the SDF monitoring network, and one well was abandoned.

- Surface water and sediment contamination (i.e. plutonium-239 [Pu-239], plutonium-238 [Pu-238], uranium-238 [U-238], uranium-235 [U-235], uranium-234 [U-234], thorium-232 [Th-232], thorium-230 [Th-230], thorium-228 [Th-228], cesium-137 [Cs-137], iodine-129 [I-129], technetium-99 [Tc-99], tritium, nonvolatile beta, and gross alpha) was detected in 2011 in Sedimentation Basin #4 (SRNS 2012). Concerns of potential groundwater contamination from Sedimentation Basin #4 initiated the installation of a shallow well (ZBG016D) and a deeper well (ZBG016C) to monitor perched water in the vadose zone and the groundwater.
- Deeper well ZBG002C was installed in the Lower Aquifer Zone (LAZ) adjacent to shallow well ZBG 2, when contaminated water was observed at ZBG 2.
- Ultimately, well ZBG 2 was abandoned due to its potential as a pathway for contamination from the Upper Aquifer Zone (UAZ) into the LAZ in the Upper Three Runs Aquifer (UTRA). Well ZBG 2 was replaced by well ZBG002D, which is screened entirely in the UAZ, and does not dissect through the Tan Clay Confining Zone (TCCZ).

In the second quarter of 2017 (2Q17), four additional wells (ZBG017D, ZBG018D, ZBG019D, and ZBG020D) were added to the SDF monitoring network (Figure 2). Wells ZBG017D, ZBG018D and ZBG019D were installed to monitor SDU 6 and in the future SDU 7 and SDU 8. Well ZBG020D provides additional downgradient groundwater monitoring of SDU 4.

The monitoring well network and monitoring plan for the SDF are designed to effectively detect any release associated with the SDUs. As additional SDUs are constructed, or as conditions change at the facility, the monitoring network will be expanded accordingly.

Groundwater samples were collected during the first quarter of 2017 (1Q17), the second quarter of 2017 (2Q17) and the third quarter of 2017 (3Q17) in accordance with the *Hydrogeologic Data Collection Procedures and Specifications* (SRNS 2010), and the samples were sent to SCDHEC

certified labs for analyses. Two thresholds (8 picocuries/liter [pCi/L] and 30 pCi/L) are established for gross beta (i.e. nonvolatile beta) analyses as part of the *Groundwater Monitoring Plan for the Z-Area Saltstone Disposal Facility* (WSRC 2005). If the 8 pCi/L threshold is exceeded by a well sample, then the same well is to be resampled within 30 days for the Contingent Analysis 1 (Strontium-90 [Sr-90]) listed in Table 1. If the contingent Sr-90 analysis is above detection, then it will be added to the list of semiannual analytes. If the 30 pCi/L threshold is exceeded by a well sample, then the same well and the applicable background well (ZBG 1 or ZBG015D) are resampled within 30 days for the constituents listed as Contingent Analyses 2 in Table 1. If any contingent analyte is above maximum background well concentrations, then it will be added to the list of semiannual analytes. If the following sample event confirms the exceedance results for a constituent(s), then a characterization plan to determine plume extent will be developed and submitted to SCDHEC within 60 days (WSRC 2005).

3.0 GROUNDWATER FLOW DIRECTION AND RATE

Water level data collected for 1Q17 and 2Q17 are presented in Figure 3, and water level data collected for 3Q17 are presented in Figure 4. Groundwater flow is radial in this area of SRS. The water table elevation at SDU 1 is approximately 236 feet above mean sea level (ft-msl) and is approximately 226 ft-msl at SDU 4. The water table at SDU 1 and SDU 4 indicate groundwater flow is to the northeast, groundwater flow at SDU 2 is to the north, and groundwater flow at SDUs 3 and 5 is to the northwest (Figures 3 and 4). Flow rates can be estimated using the distance and head difference between wells with the following equation:

$$Q = \frac{K}{n} \times \frac{dh}{dl}$$

Where:

- Q = Flow (feet [ft]/day);
- K = Hydraulic Conductivity (ft/day) = 13 ft/day^a;
- n = Effective Porosity = 0.25^a;
- dh = Difference in Head (ft) = 9.93 ft; and
- dl = Distance between Wells (ft) = 1,085 ft^b.

- a) In 2013 these parameters were changed to be consistent with the Performance Assessment modeling data in the SRS General Separations Area (GSA) (WSRC 2007).

- b) Replacement well ZBG002D provides a better flow estimate for the water table, and is now used for the distance (dl) between ZBG 7 and ZBG002D, as recommended by the U.S. Nuclear Regulatory Commission.

The hydraulic conductivity (K) is 13 ft/day, and the effective porosity (n) value is 25 percent (WSRC 2007). The head difference (dh) between wells ZBG 7 and ZBG002D was 9.93 ft for 1Q17 and 10.9 ft for 3Q17. The horizontal distance (dl) is 1,085 ft, which is the distance between wells ZBG 7 and ZBG002D (Figure 2). The first quarter groundwater flow rates are calculated as follows:

$$\text{First Quarter: } Q = \frac{13 \text{ ft/day}}{0.25} \times \frac{9.93 \text{ ft}}{1,085 \text{ ft}}$$

$$Q = 0.475908 \text{ ft/day or } 173.7 \text{ ft/year}$$

$$\text{Third Quarter: } Q = \frac{13 \text{ ft/day}}{0.25} \times \frac{10.9 \text{ ft}}{1,085 \text{ ft}}$$

$$Q = 0.522396 \text{ ft/day or } 190.7 \text{ ft/year}$$

The 3Q17 groundwater flow rate (190.7 ft/yr) is slightly higher than the 1Q17 flow rate (173.7 ft/yr). The 2017 groundwater flow estimates are similar to the 2016 flow estimates (184.2 ft/yr and 180.7 ft/yr) (SRNS 2017).

Wells ZBG 1 and ZBG 2 depict the long-term fluctuations in the water table elevation (Figure 5). The water table in the GSA is located in the UAZ. However, as the water table approaches McQueens Branch and Upper Three Runs, the water table drops into the underlying LAZ (Figure 6). The TCCZ separates the LAZ from the overlying UAZ.

4.0 GROUNDWATER CONSTITUENTS AND PARAMETERS

In accordance with the Z-Area SDF Class 3 Landfill Permit (SCDHEC 2011), the monitoring wells were sampled during 1Q17 and 2Q17 for the semiannual analytes and the parameters listed in Table 1. In 3Q17, the monitoring wells were sampled for the semiannual and biennial analyses.

5.0 RESULTS

Groundwater samples were collected during 1Q17 from the ten wells monitoring SDUs 1 and 4 (Figure 2). Groundwater samples were collected during 1Q17 from the seven wells monitoring SDUs 2, 3, and 5. Wells ZBG017D, ZBG018D, ZBG019D and ZBG020D were sampled after installation in the 2Q17, which will help establish background groundwater chemistry as SDU 6 has not been placed into service. Groundwater samples were collected during 1Q17 for well ZBG016C that monitors Sedimentation Basin #4 (Figure 2). Data collected to date at well ZBG016C indicate there have been no impacts to the groundwater at Sedimentation Basin #4. Well ZBG016D, also installed downgradient of Sedimentation Basin #4, is positioned on top of the TCCZ to monitor for potentially contaminated perched water in the vadose zone. Well ZBG016D was dry when sampling was conducted in 1Q17. All of the ZBG wells were sampled in August for the 3Q17 sample event, except ZBG016D which was dry. The laboratory results are presented in Table 2, the field measurements are presented in Table 3, and the water elevation data are presented in Table 4.

Groundwater monitoring results are compared to Practical Quantitation Limits (PQLs), background concentrations, and Groundwater Protection Standards (GWPSs). PQLs are indicators of laboratory instrument sensitivity, but are not regulatory limits, nor are they risk-based. The PQL is the lowest concentration of an analyte which can be reliably quantified in a given sample. In contrast, the method detection limit (MDL) is the lowest concentration of an analyte which can be detected, but not quantified, in a given sample. Background concentrations are based on historical data from wells (ZBG 1 and ZBG015D) upgradient of the SDF. Comparison with background is important because several SRS facilities are upgradient of the SDF. The GWPSs for the SDF are based on the Primary Drinking Water Standards (PDWSs), proposed Primary Drinking Water Standards (PPDWSs), or Secondary Drinking Water Standards (SDWSs), and are listed in Table 1 (WSRC 2005). Unlike PQLs and background concentrations, GWPSs are regulatory limits, and exceedances are relevant to water quality.

6.0 DISCUSSION

The following constituents exceeded the PQL in one or more wells monitoring the SDF and are discussed in further detail below (Table 2):

- Gross Alpha;
- Radium-226 (Ra-226)
- Bismuth-214 (Bi-214);
- Lead-214 (Pb-214);
- Nonvolatile Beta*;
- Tc-99;
- Nitrate-Nitrite as Nitrogen; and
- Tritium.

* Results exceeded the 8 pCi/L and 30 pCi/L thresholds for nonvolatile beta (gross beta) requiring Sr-90 and all the other contingent analyses for some wells.

Well ZBG015D was sampled independently for four quarters in 2012 to establish initial background concentrations as required by the monitoring plan (WSRC 2005). Data from well ZBG015D is currently used for background comparisons to monitoring data collected at wells downgradient of SDUs 1 and 4. Data from well ZBG 1 is used for background comparisons to monitoring data collected at wells downgradient of SDUs 2, 3, 5, and 6 (Figures 2 - 4).

Gross Alpha

Gross alpha results have been detected above the MDL in 15 of the 22 wells since January 2004 and in the background wells. No gross alpha results exceeded their PQL in 2017, but gross alpha results did exceed the MDL at 3 wells (ZBG 4, ZBG 6 and ZBG010D) and are briefly discussed because historical results have been above the PQL. In 1Q17, the maximum gross alpha concentration (J 2.66 pCi/L) at well ZBG 4 exceeds the historic maximum (1.48 pCi/L) at background well ZBG015D, but it is below the GWPS (15 pCi/L). In 3Q17, the maximum gross alpha concentration (J 2.88 pCi/L) at well ZBG010D is less than the historic maximum (4.28 pCi/L) at background well ZBG 1, and it is below the GWPS (15 pCi/L). The historic well data indicate the gross alpha concentrations are naturally-occurring in origin.

Radium-226

Ra-226 results have been detected above the MDL in 22 of the 22 wells since January 2004 including the background wells. Ra-226 results exceeded the PQL at 8 wells in 1Q17 and 2 wells in 3Q17, which is expected as Ra-226 contributes to the gross alpha activity in groundwater. The maximum Ra-226 concentration (1.52 pCi/L) sample was from well ZBG 6 in 1Q17, and the maximum Ra-226 concentration (0.48 pCi/L) sample was from well ZBG019D in 3Q17. The 1Q17 Ra-226 maximum groundwater concentration is greater than the historic

maximum (1.10 pCi/L) for background well ZBG015D, but less than the SDF GWPS (5 pCi/L). The 3Q17 maximum Ra-226 concentration is less than the historic maximum (2.6 pCi/L) for former background well ZBG 1. Ra-226 is commonly detected in the groundwater (UGA 2005). Collectively, the ZBG well data indicate the Ra-226 concentrations are naturally-occurring in origin.

Bismuth-214 and Lead-214

The maximum Bi-214 concentration (153 pCi/L) sample was collected at well ZBG019D in 1Q17, and the maximum Bi-214 concentration (127 pCi/L) sample was collected at well ZBG019D in 3Q17. The 1Q17 and 3Q17 Bi-214 maximum groundwater concentrations are below the historic maximum (160 pCi/L) for background well ZBG015D, and below the 4 millirem (mrem) GWPS for Bi-214 (18,900 pCi/L) (USEPA 2000).

The 1Q17 maximum Pb-214 groundwater concentration (174 pCi/L) sample was collected at well ZBG019D, and the 3Q17 maximum Pb-214 groundwater concentration (152 pCi/L) sample was collected at well ZBG019D. The 1Q17 maximum Pb-214 groundwater concentration (174 pCi/L) is slightly above the historic maximum (171 pCi/L) for background well ZBG015D, but below the 4 mrem GWPS for Pb-214 (11,800 pCi/L) (USEPA 2000). The 3Q17 maximum Pb-214 groundwater concentration (152 pCi/L) is less than the historic maximum (171 pCi/L) for background well ZBG015D and below the 4 mrem GWPS for Pb-214 (11,800 pCi/L) (USEPA 2000). Since January 2004, Bi-214 and Pb-214 results have been detected above the PQL in 18 of the 22 wells, including the background wells. Pb-214 and Bi-214 are short-lived daughter products in the naturally-occurring uranium-238 decay series, and are supported by the relatively long-lived (half-life 1,599 years) Ra-226 intermediary radionuclide. Bi-214, Pb-214 and Radium-226 appear to be of natural origin, not related to SDF operations.

Nonvolatile Beta

Samples from well ZBG002D, which replaced well ZBG 2, continue to have elevated groundwater concentrations for nonvolatile beta and Tc-99. The 1Q17 maximum nonvolatile beta groundwater concentration (21.7 pCi/L) was at well ZBG002D. The 3Q17 maximum nonvolatile beta groundwater concentration (51.9 pCi/L) was at well ZBG020D, which is installed 60 m (197 ft) east (side-gradient) of ZBG002D. The 1Q17 and 3Q17 maximum

nonvolatile beta groundwater concentrations (21.7 pCi/L and 51.9 pCi/L) are lower than the 1Q15 maximum nonvolatile beta groundwater concentration (158 pCi/L) at well ZBG 2 (Figure 7). Figure 8 depicts the approximate area of the Z-Area nonvolatile beta groundwater plume (3Q17).

In 1Q17, only well ZBG002D exceeded the 8 pCi/L threshold for nonvolatile beta groundwater concentrations. The 2Q17 sample from well ZBG020D also exceeded the 8 pCi/L threshold for nonvolatile beta groundwater concentrations. In 3Q17, wells ZBG002D and ZBG020D exceeded the 8 pCi/L threshold for nonvolatile beta groundwater concentrations and well ZBG020D also exceeded the 30 pCi/L threshold.

In 2017, LAZ wells ZBG002C, ZBG 4, ZBG 6 and ZBG 8 had detectable levels of nonvolatile beta groundwater concentrations (2.77 – 5.58 pCi/L) that did not exceed the 8 pCi/L threshold, but did exceed the maximum nonvolatile beta value (2.17) for background well ZBG015D, which indicates potential contamination below the TCCZ.

The 1Q17 and 3Q17 nonvolatile beta results (21.7 and 21.1 pCi/L) for ZBG002D, the 2Q17 and 3Q17 nonvolatile beta results (15.0 and 51.9 pCi/L) for ZBG020D all exceeded the 8 pCi/L threshold for nonvolatile beta initiating Sr-90 analyses for these well samples. All the Sr-90 sample results were below their MDLs indicating that Sr-90 was not detected in these samples. The 3Q17 ZBG020D nonvolatile beta result (51.9 pCi/L) exceeded the 30 pCi/L threshold for nonvolatile beta, so the Contingent Analyses Group 2 from Table 1 were required for this sample and the background well ZBG015D sample.

In 1Q17, background well ZBG015D had the highest sum of beta-emitting radionuclides greater than their PQLs (non-qualified results in Table 2), but the sum of beta-emitting activity level (0.61 mrem) for ZBG015D is below the GWPS (4 mrem). The only radionuclide, including all the contingent analyses, above its PQL at well ZBG015D was tritium at 3.03 picocuries per milliliter (pCi/mL) in both 1Q17 and 3Q17 (Table 2). In 3Q17, well ZBG020D had the highest sum (0.84 mrem) of beta-emitting radionuclides greater than their PQLs (non-qualified results in Table 2). Both Tc-99 (126 pCi/L) and tritium (3.03 pCi/mL) were above their PQLs at well ZBG020D, but the sum of beta-emitting activity level is below the GWPS (4 mrem).

Technetium-99

In 2Q17 and 3Q17, the samples from well ZBG020D had the maximum Tc-99 results (32.7 pCi/L and 126 pCi/L, respectively), but these concentrations did not exceed the GWPS (900 pCi/L). In 2017, decreasing Tc-99 groundwater concentrations (28.4 pCi/mL and 54.7 pCi/L) were observed at well ZBG002D, relative to the Tc-99 groundwater concentrations in 2015 and 2016 at this well, which may indicate the highest concentration portion of the Tc-99 plume has moved through ZBG002D (Figure 7). The decreasing concentrations of Tc-99, nonvolatile beta, nitrate and specific conductance may, in part, be due to dilution, as these constituents tend to inversely correlate with water elevation measurements at abandoned well ZBG 2 and its replacement well ZBG002D (Figures 5 and 7). Figure 9 depicts the approximate area of the Z-Area Tc-99 groundwater plume in 1Q17.

Samples from wells ZBG002C and ZBG 4 also had Tc-99 results above detection in 1Q17, which is consistent with the nonvolatile beta results from the same well samples and historical data. Tc-99 detected in wells ZBG002C and ZBG 4 indicates Tc-99 contamination has migrated through the TCCZ, but at low concentrations.

As demonstrated by the 2017 data at well ZBG002D, it is not uncommon for the Tc-99 results (28.4 pCi/L and 54.7 pCi/L) to be higher than the nonvolatile beta results (21.7 pCi/L and 21.1 pCi/L) for the same samples, as some Tc-99 is volatilized by the drying step in the nonvolatile beta analytical method. In contrast, the Tc-99 analytical method does not include a drying step, thus avoiding any volatilization of Tc-99.

Nitrate

Nitrates in the groundwater are determined using Nitrate – Nitrite as Nitrogen EPA methods 353.1 or 353.2. At SRS nitrogen in the groundwater is primarily in the form of nitrate, because the groundwater is typically well oxygenated, especially in the UAZ. In 1Q17 and 3Q17, the samples from well ZBG019D had the highest nitrate groundwater concentrations (5.74 milligrams/liter [mg/L] and 4.03 mg/L, respectively), while the samples from well ZBG002D had the second highest groundwater concentrations (2.06 mg/L and 2.11 mg/L, respectively) for nitrates in 1Q17 and 3Q17. The ZBG019D nitrate sample results and the ZBG002D nitrate sample results did not exceed the GWPS (10 mg/L). However, all the results for ZBG019D and

ZBG002D samples exceeded the PQLs and maximum concentrations in background wells ZBG 1 and ZBG015D (2.03 and 1.30 mg/L, respectively). In 3Q17, the nitrate sample concentration for well ZB002D decreased slightly to 2.11 mg/L from 2.97 mg/L in 3Q16 (Figure 7). The elevated nitrate groundwater concentration at well ZBG019D is most likely from an upgradient source because SDU 6 has not been placed in service yet and upgradient well ZBG 1 has a history of elevated nitrate concentrations (Figure 10). The 1Q17 and 3Q17 samples for ZBG019D did not have detectable levels of nonvolatile beta or Tc-99, which also indicates the source of the nitrates is not from saltstone material. Figure 10 depicts the approximate area of the Z-Area nitrate groundwater plume in 3Q17.

Tritium

The maximum tritium concentration was 3.03 pCi/mL at background well ZBG0015D in both 1Q17 and 3Q17. This concentration is below the historic maximum (4.02 pCi/mL) for well ZBG015D. The older background well ZBG 1 has indicated steadily decreasing tritium concentration trends from 19.0 pCi/mL in 1987 to 1.23 pCi/mL in 3Q17. All of the SDF monitoring wells appear to be following this trend. Data from the background wells ZBG 1 and ZBG015D indicate the tritium in Z-Area is from an up-gradient source (Figure 11).

Field Measurements

It has been observed that nonvolatile beta, Tc-99, nitrates and specific conductance correlate well with each other (Figure 7). In 2017, decreasing groundwater specific conductance (46 microsiemens per centimeter [$\mu\text{S}/\text{cm}$] and 38 $\mu\text{S}/\text{cm}$) were observed at well ZBG002D, relative to the groundwater specific conductance of 211 $\mu\text{S}/\text{cm}$ in 2015 at well ZBG002D (Figure 7).

In 1Q17 and 3Q17, wells ZBG012D, ZBG013D, and ZBG014D continue to have the highest specific conductance (148-209 $\mu\text{S}/\text{cm}$), alkalinity (63-90 mg/L), and pH (6.9-8.0) measurements. These elevated field measurements are consistent for these wells and appear to be related to the geologic formation as calcium carbonate material was identified in the lithology cores during well installation. Wells ZBG012D, ZBG013D, and ZBG014D monitor the groundwater near SDU 3 and SDU 5, which began receiving saltstone material in December 2013. Therefore, the elevated field measurements are the baseline groundwater conditions for these wells.

7.0 CONCLUSIONS

- 1) Concentrations of contaminants at well ZBG002D, where the highest concentrations have historically been measured, have decreased since 3Q15.

In 2017, groundwater at well ZBG002D showed decreases in nonvolatile beta activity (21.7 pCi/L and 21.1 pCi/L), Tc-99 activity (28.4 pCi/L and 54.7 pCi/L), nitrate concentration (2.06 mg/L and 2.11 mg/L), and specific conductance (46 μ S/cm and 38 μ S/cm) relative to the maximum 2015 concentrations for nonvolatile beta activity (132 pCi/L), Tc-99 activity (230 pCi/L), nitrate concentration (6.8 mg/L), and specific conductance (211 μ S/cm). In 2Q17, the ZBG020D well sample had similar concentrations of nonvolatile beta activity (15.0 pCi/L), Tc-99 activity (32.7 pCi/L), nitrate concentration (0.63 mg/L), and specific conductance (43 μ S/cm) to the 1Q17 ZBG002D sample. In 3Q17, the ZBG020D well sample had higher concentrations of nonvolatile beta activity (51.9 pCi/L), Tc-99 activity (126 pCi/L), nitrate concentration (1.65 mg/L), and specific conductance (44 μ S/cm) to the 3Q17 ZBG002D sample. This indicates the highest concentration portion of the groundwater plume is now at well ZBG020D. In 2017, Tc-99 and nitrate groundwater concentrations at wells ZBG002D and ZBG020D remained below their respective GWPS.

- 2) Contaminants have moved downward into the LAZ at well ZBG002C, but concentrations of contaminants remain below their respective GWPS.

Well ZBG002C was installed adjacent to ZBG002D in 2014 with a screen zone below the TCCZ to monitor groundwater in the LAZ. In 2017, samples collected in the LAZ at wells ZBG002C and ZBG 4 indicate contamination has migrated through the TCCZ and into the LAZ, consistent with monitoring results from previous years. However, all contaminants in the LAZ are below their respective GWPS. The SDF groundwater monitoring well network is adequately monitoring contaminants above and below the TCCZ.

- 3) There have been no impacts to groundwater from Sedimentation Basin #4.

In 2011 and 2012, surface water and sediment contamination (i.e. Pu-239, Pu-238, U-238, U-235, U-234, Th-232, Th-230, Th-228, Cs-137, I-129, Tc-99, tritium, nonvolatile beta, and gross alpha) was detected in Sedimentation Basin #4 (SRNS 2012) (Figure 2). In 2014, two

groundwater monitoring wells (ZBG016C and ZBG016D) were installed downgradient of Sedimentation Basin #4 in the UAZ and LAZ (Figure 2). The data for the samples collected to date at well ZBG016C indicate there have been no impacts to the groundwater from Sedimentation Basin #4. The screen zone for well ZBG016D is positioned on top of the TCCZ to monitor for potentially contaminated perched water in the vadose zone. Well ZBG016D has been dry since installation, indicating there has not been any perched water at this location since installation.

8.0 REFERENCES

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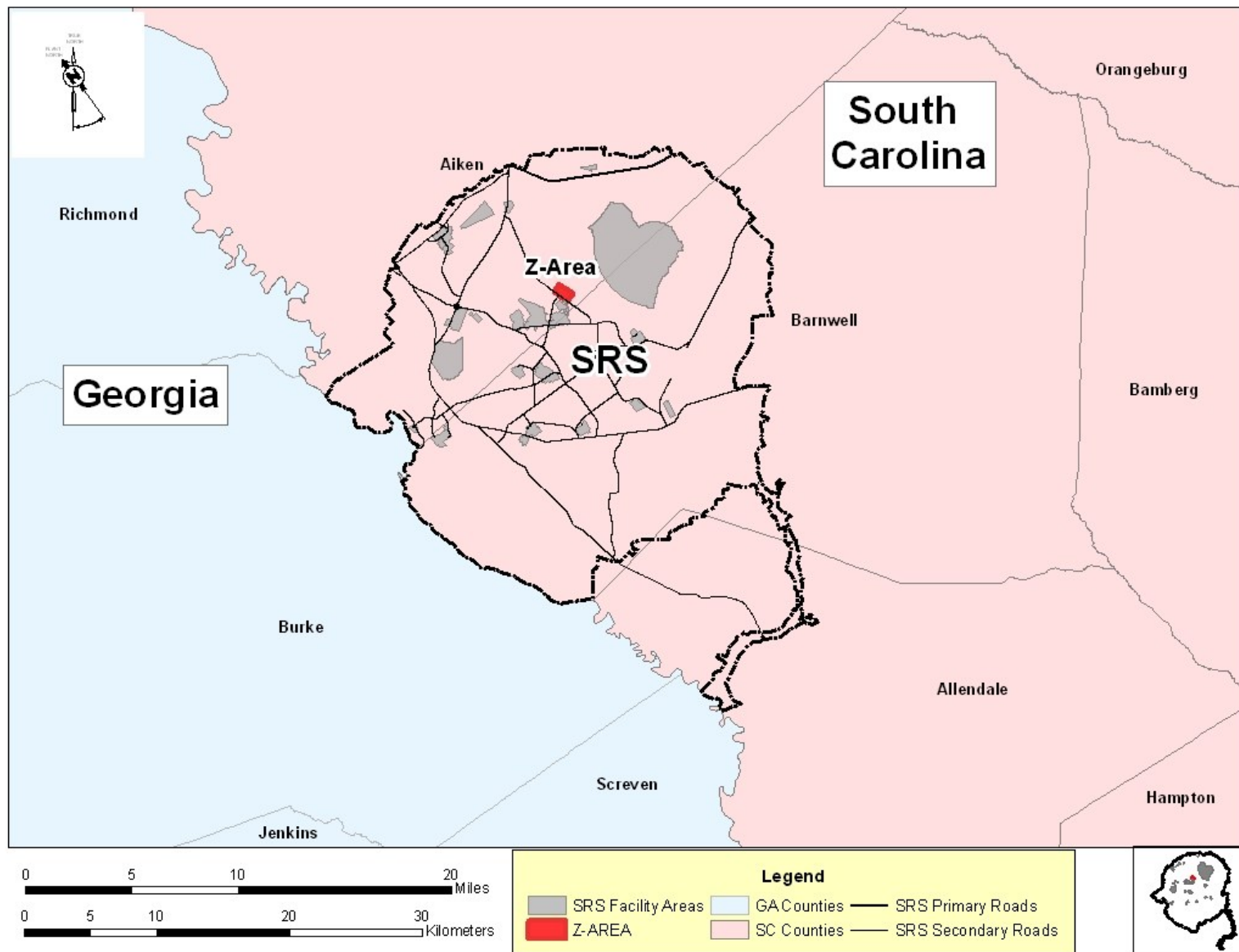


Figure 1. Z-Area Location within the Savannah River Site

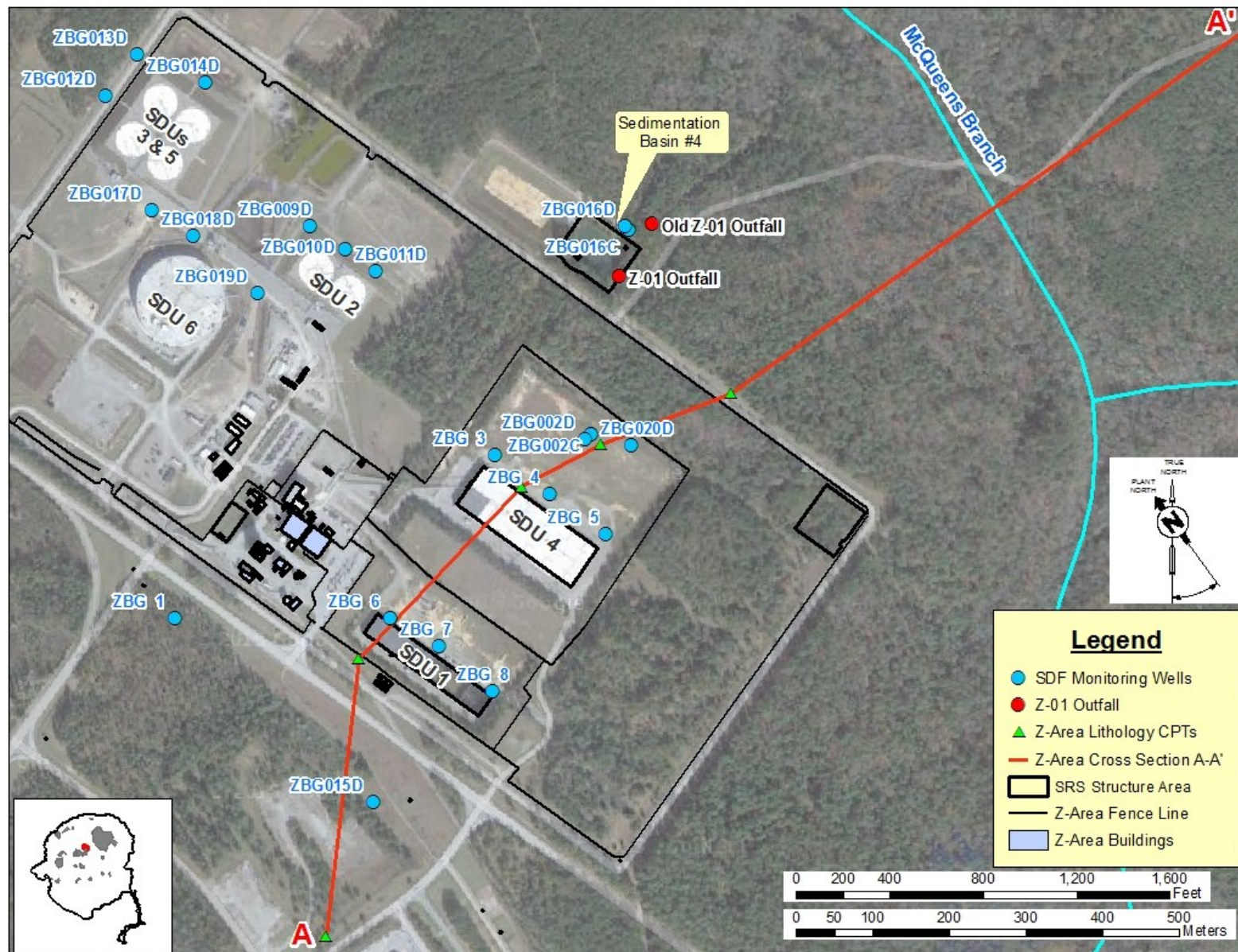


Figure 2. Monitoring Well Locations at the SDF

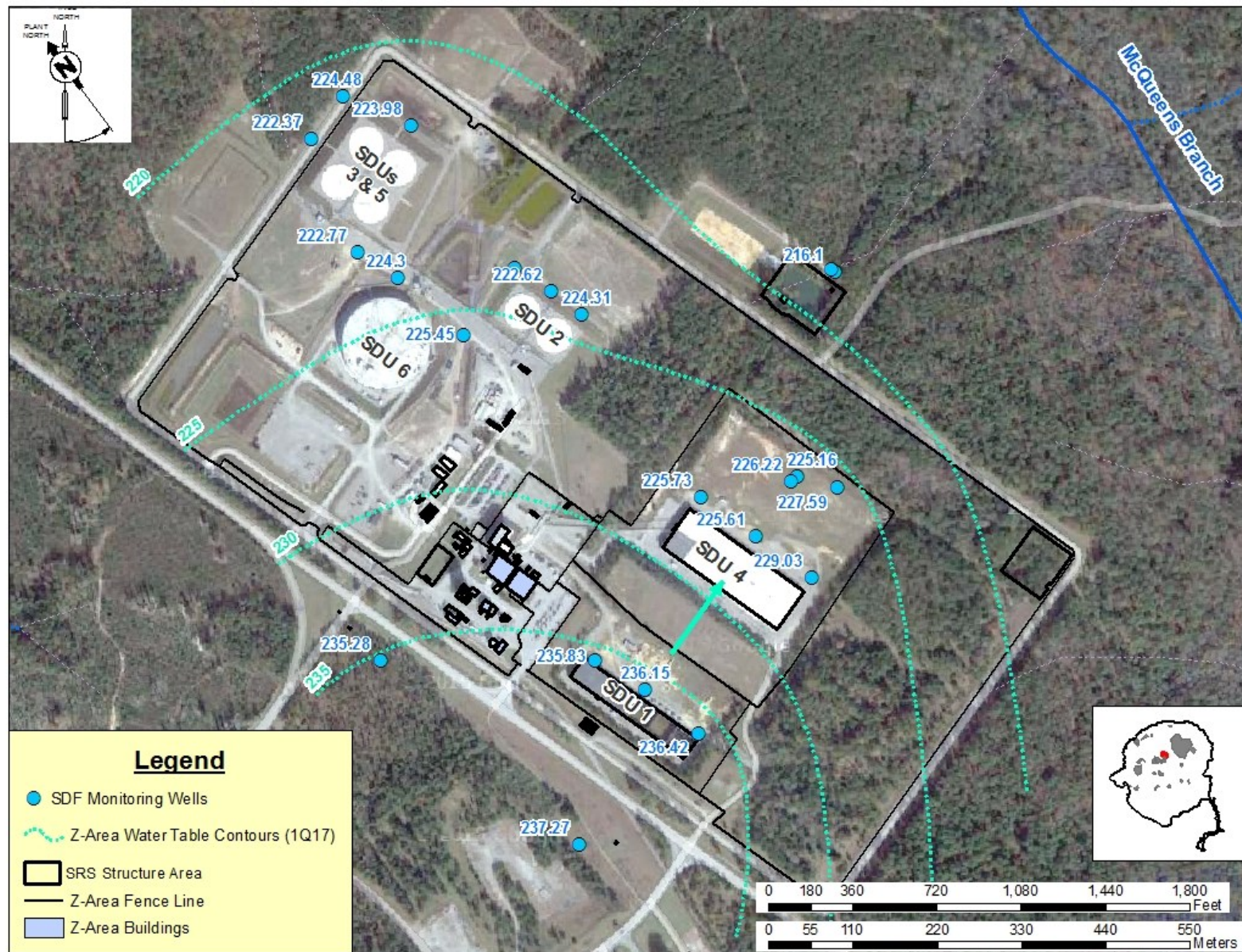


Figure 3. 1Q17 and 2Q17 Water Table Elevations (ft-msl)

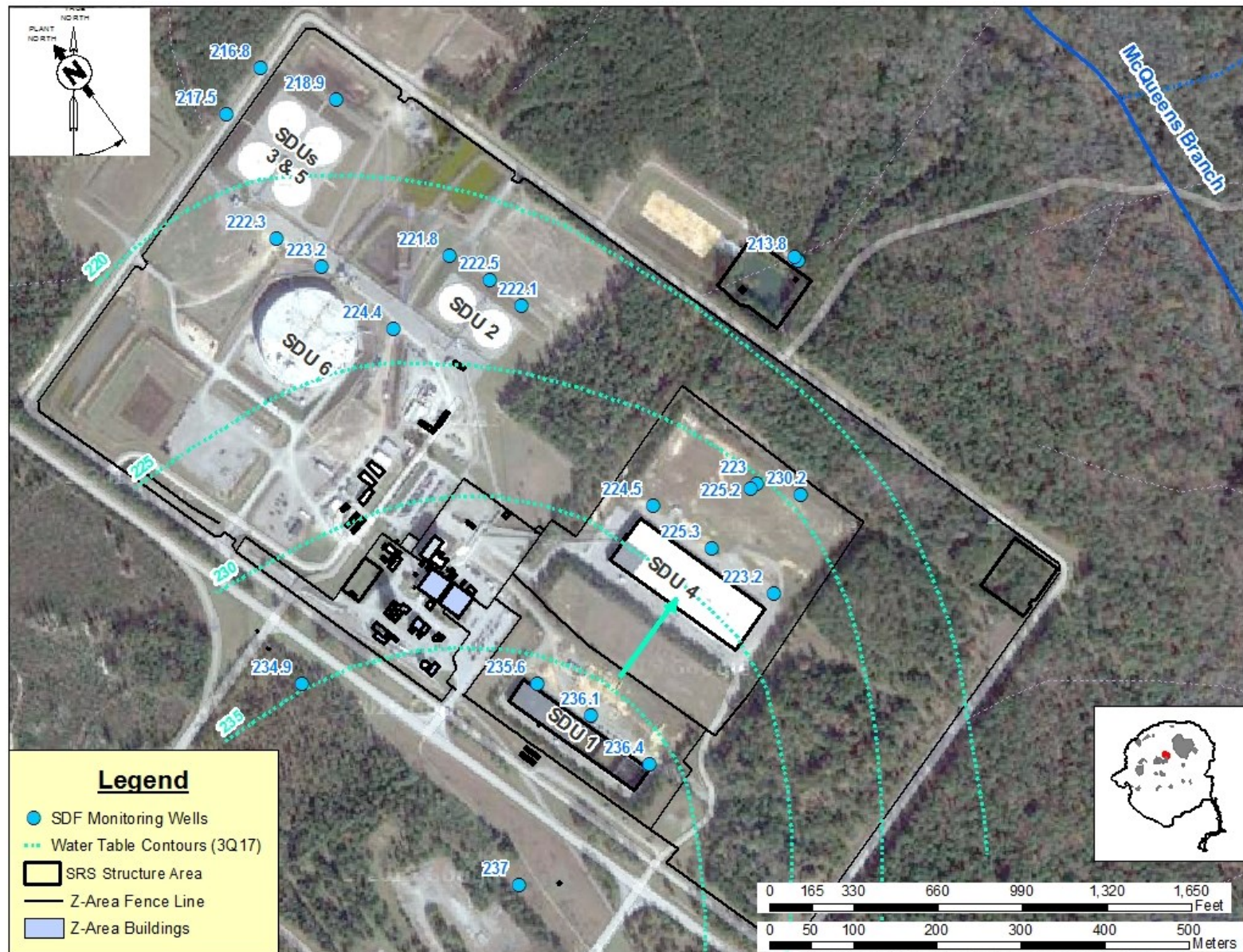


Figure 4. 3Q17 Water Table Elevations (ft-msl)

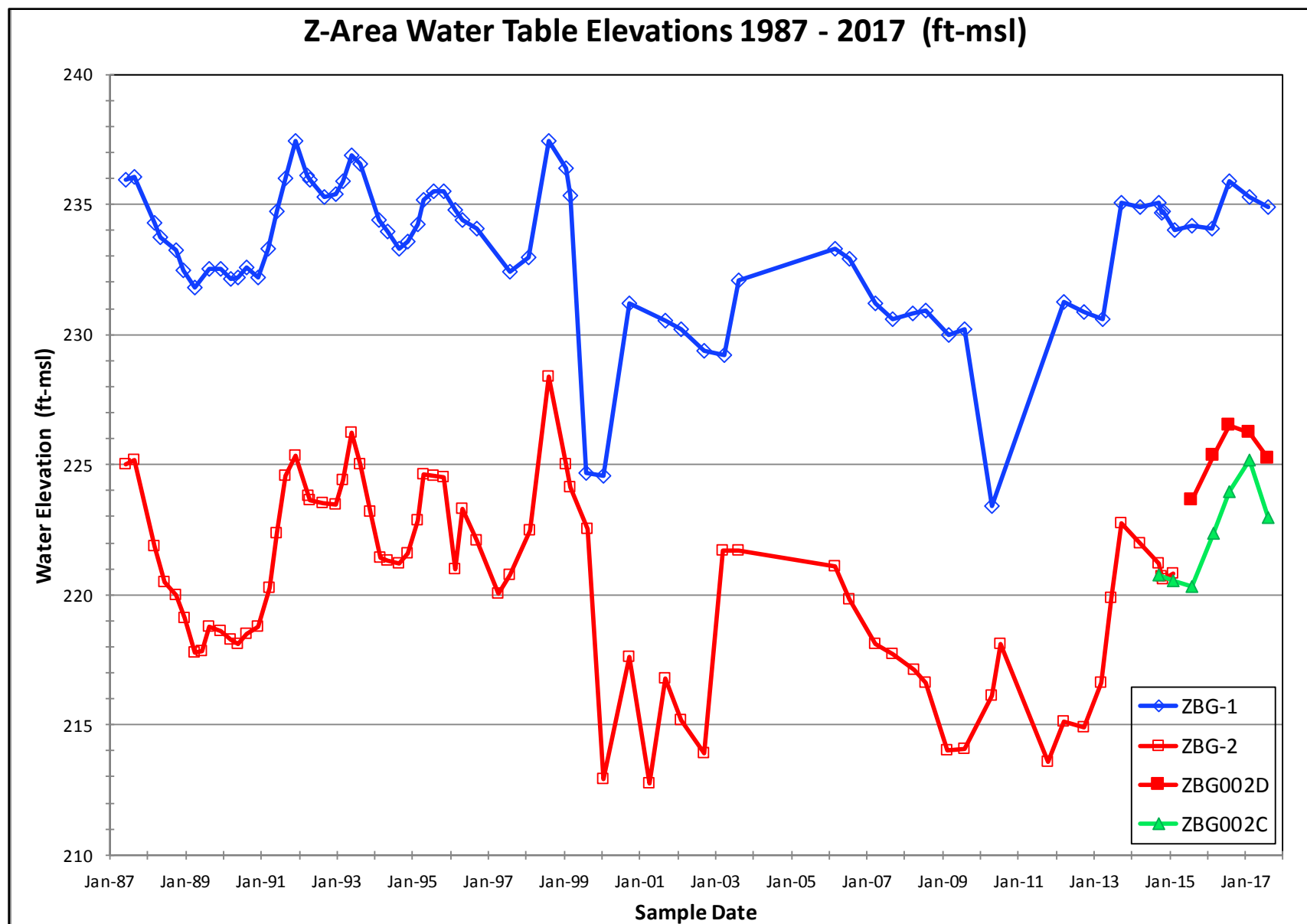


Figure 5. Z-Area Water Table Elevations (ft-msl)

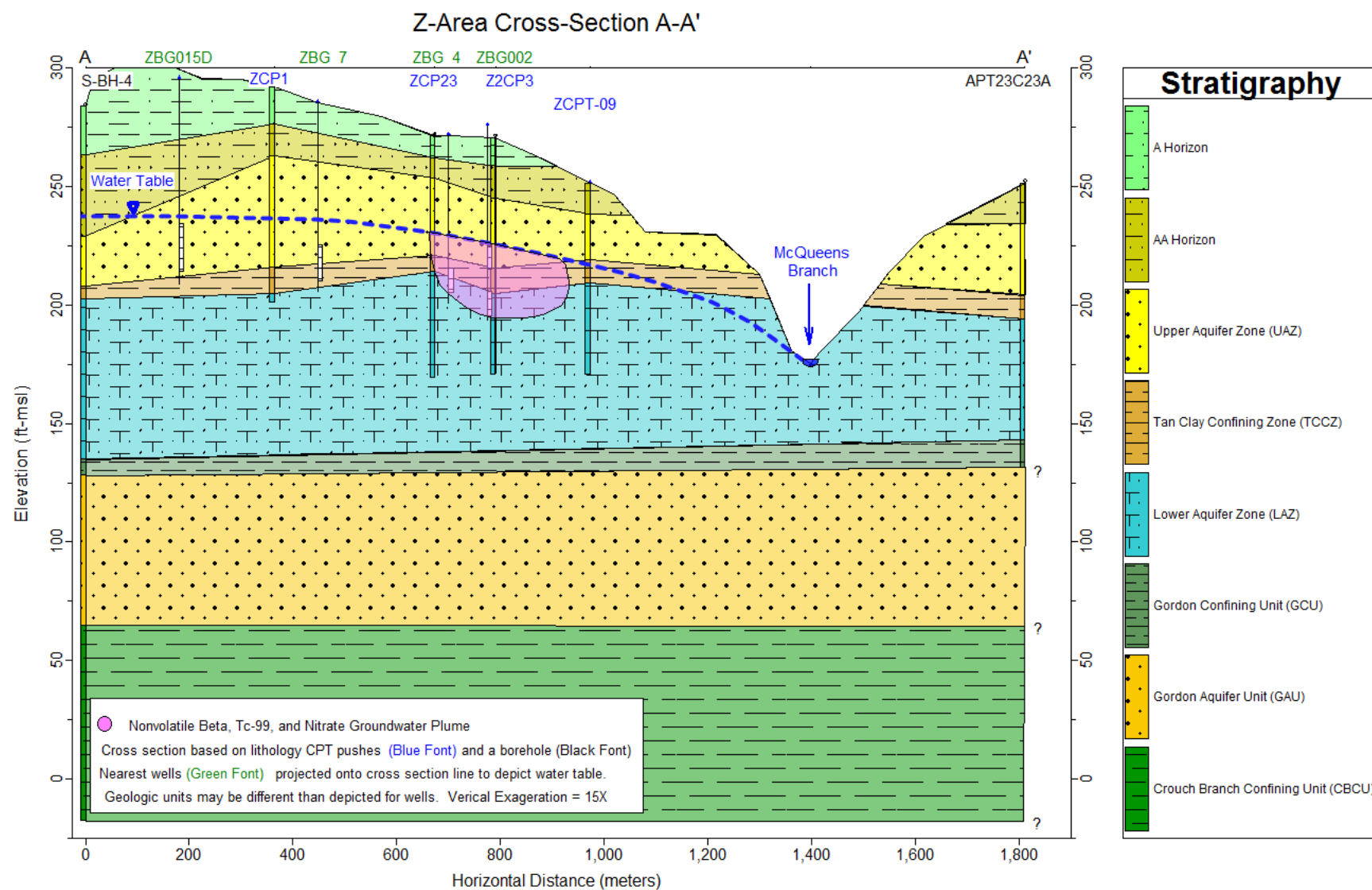


Figure 6. Z-Area Cross Section with 1Q17 Water Table

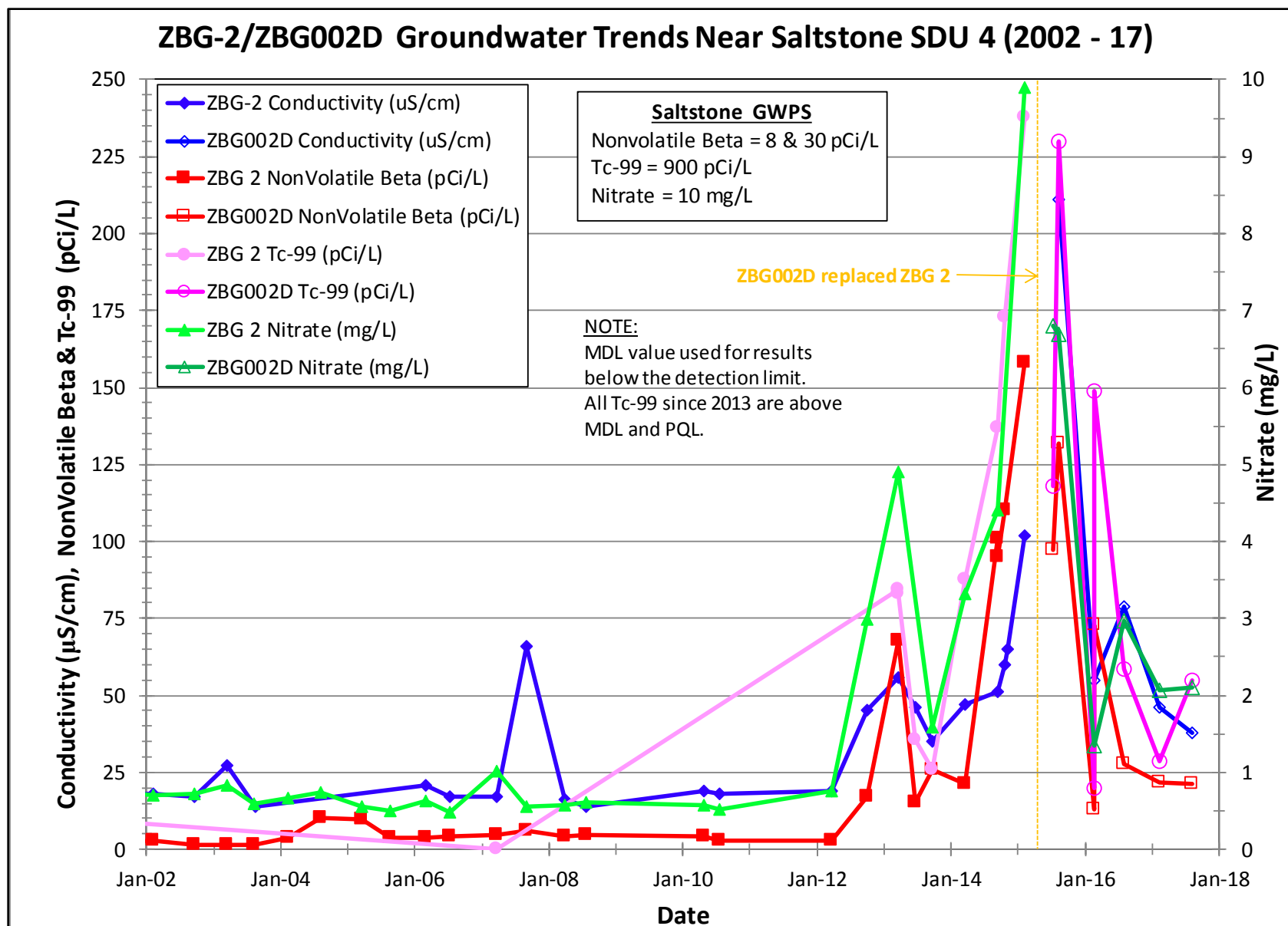


Figure 7. ZBG 2 / ZBG002D Tc-99 Groundwater Trends

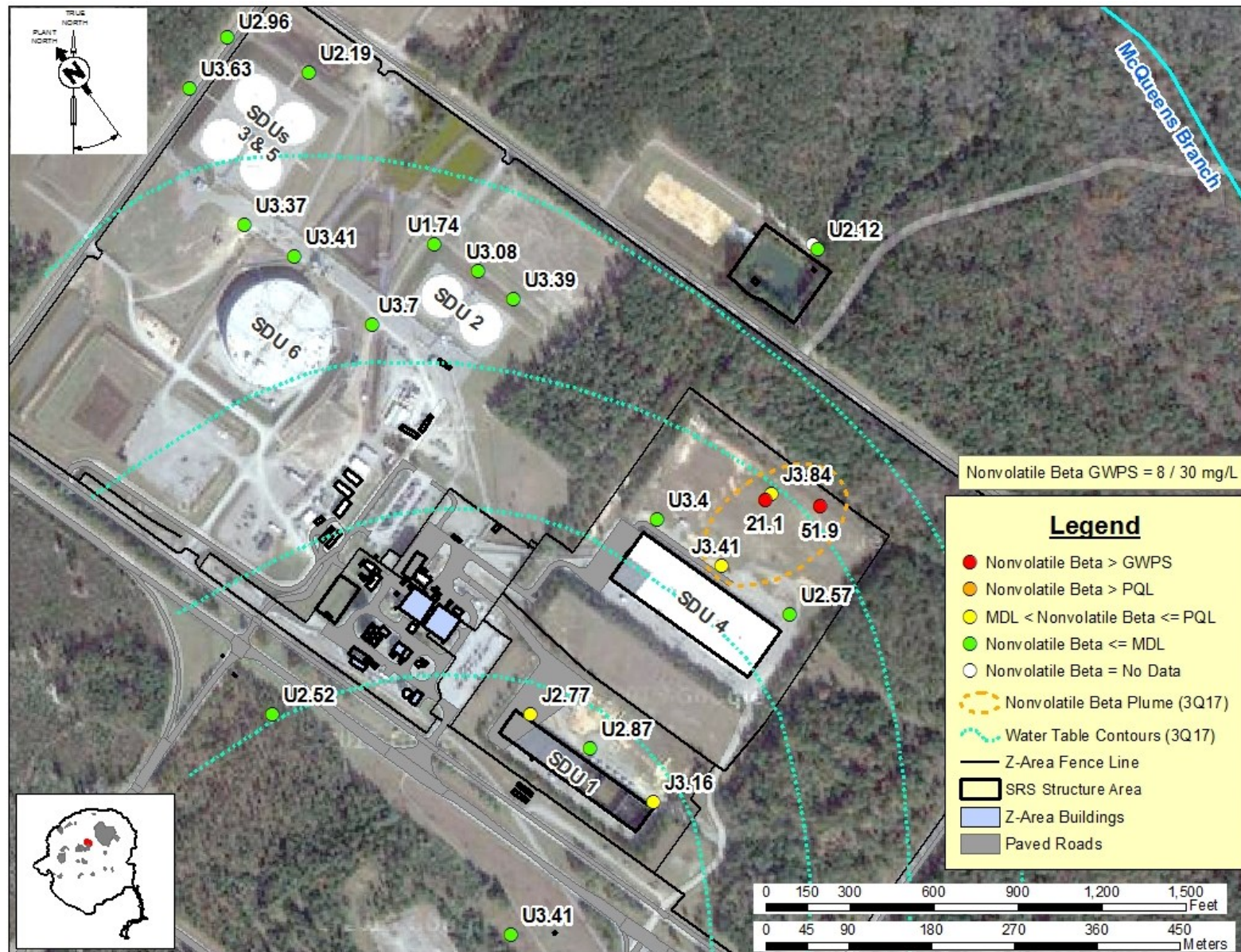


Figure 8. Approximate Nonvolatile Beta Groundwater Plume (3Q17)

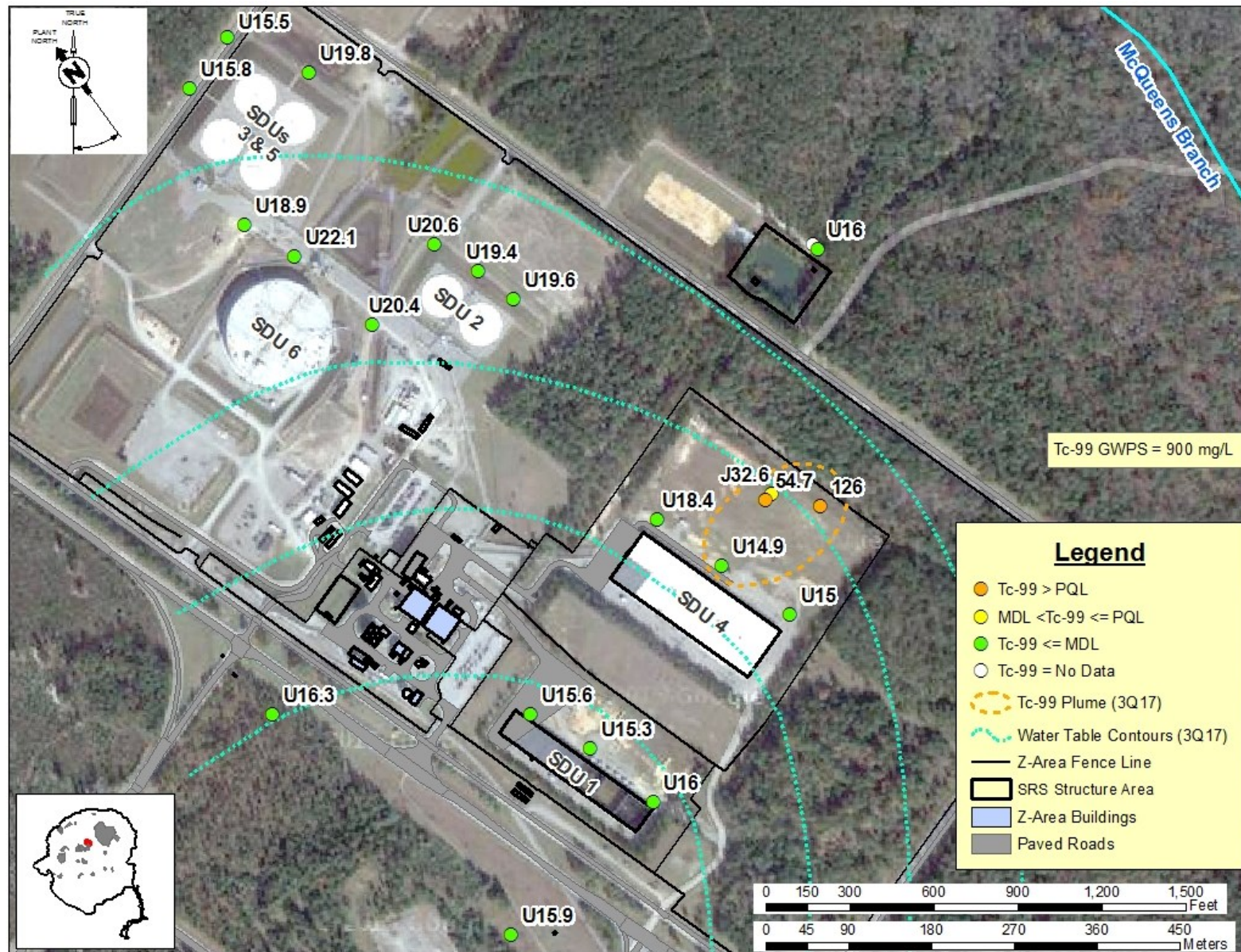


Figure 9. Approximate Tc-99 Groundwater Plume (3Q17)

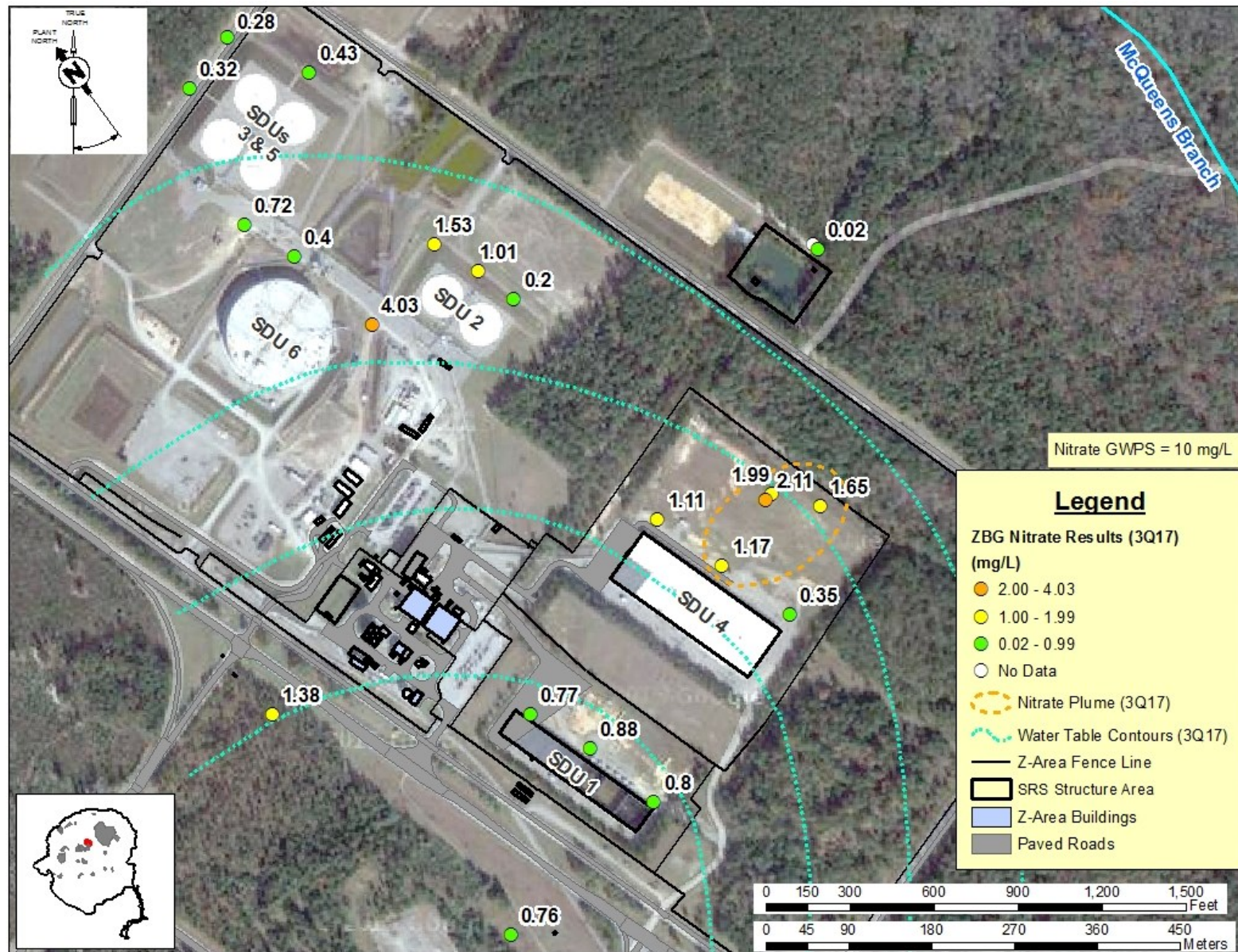


Figure 10. Approximate Nitrate Groundwater Plume (3Q17)

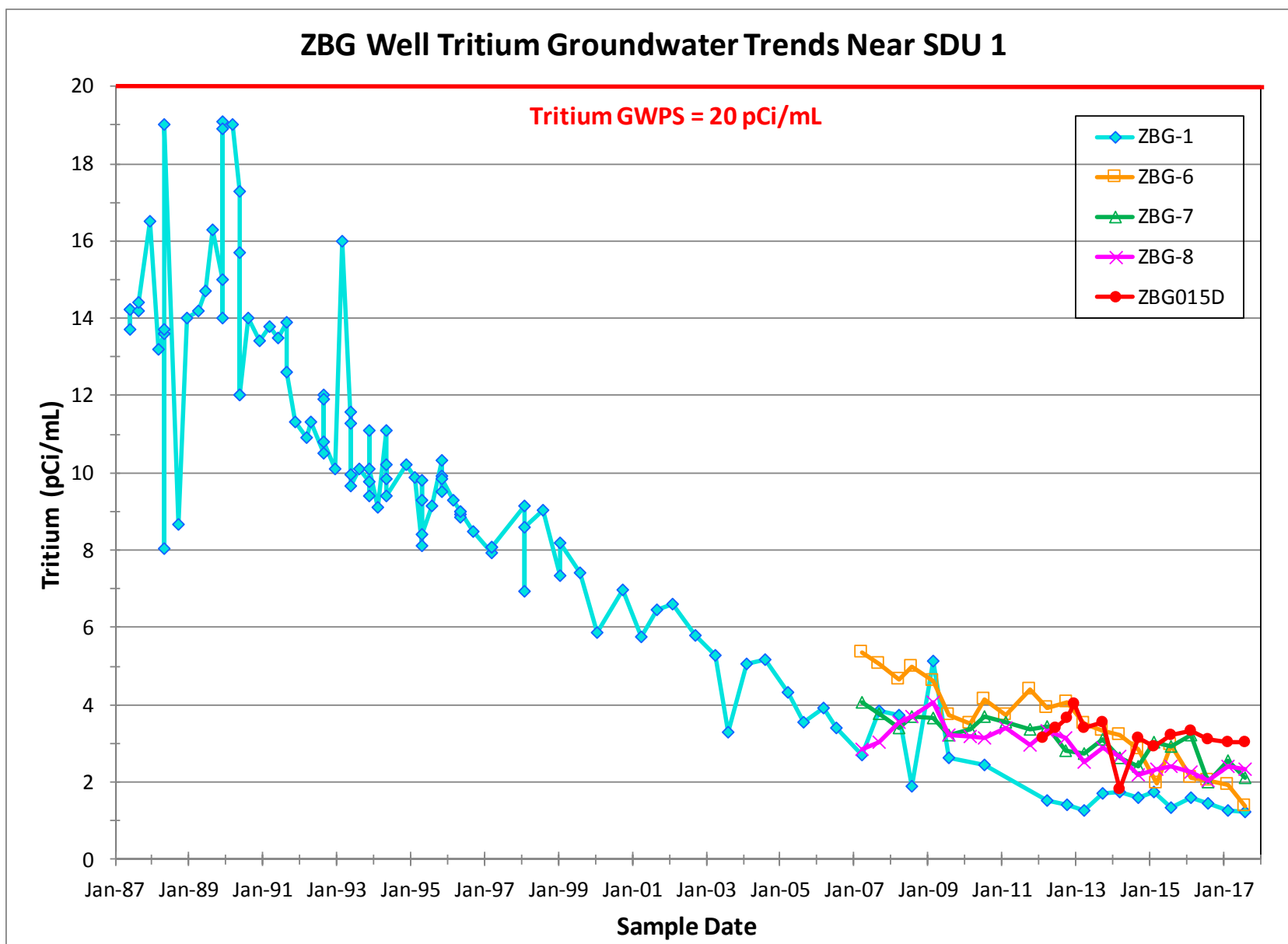


Figure 11. ZBG Well Tritium Groundwater Trends

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Table 1. List of Analytes and Parameters for the SDF

Semiannual Constituents	Groundwater Protection Standard	Units
pH	NA	pH
Specific Conductance	NA	μS/cm
Groundwater Elevations	NA	ft-msl
Nitrate (Nitrate/Nitrite)	10	mg/L
Gross Alpha	15	pCi/L
Gross Beta ^{1,2} (Nonvolatile Beta)	8 / 30	pCi/L
Gamma Spectroscopy-Emitters (Beta-Emitters)	4	mrem
Iodine-129 (I-129)	1	pCi/L
Technetium-99 (Tc-99)	900	pCi/L
Tritium	20	pCi/mL
Biennial Constituents	Groundwater Protection Standard	Units
Radium-226 (Ra-226)	5 (Ra-226 + Ra-228)	pCi/L
Radium-228 (Ra-228)	5 (Ra-226 + Ra-228)	pCi/L
Benzene	5	μg/L
Tetrachloroethylene	5	μg/L
Toluene	1000	μg/L
Trichloroethylene	5	μg/L
Contingent Analysis 1	Groundwater Protection Standard	Units
Strontium-90 (Sr-90)	8	pCi/L
Contingent Analyses 2	Groundwater Protection Standard	Units
Carbon-14 (C-14)	2000	pCi/L
Cobalt-60 (Co-60)	100	pCi/L
Cesium-137 (Cs-137)	200	pCi/L
Gross Beta (Re-analysis)	30	pCi/L
Niobium-94 (Nb-94)	707 ³	pCi/L
Nickel-59 (Ni-59)	300	pCi/L
Nickel-63 (Ni-63)	50	pCi/L
Plutonium-241 (Pu-241)	62.6 ³	pCi/L
Ruthenium-106 (Ru-106)	30	pCi/L
Antimony (Sb-125)	300	pCi/L
Technetium-99 (Tc-99)	900	pCi/L
¹ If Gross Beta is equal to or exceeds 8 pCi/L then Contingent Analysis 1 is analyzed for that sample.		
² If Gross Beta is equal to or exceeds 30 pCi/L then all Contingent Analyses 2 are analyzed for that well and the background well.		
³ Proposed Primary Drinking Water Standard. NA = Not Applicable.		

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Table 2. Laboratory Results for Saltstone Wells (2017)

WELL	DATE	ANALYTE	MDL	PQL	QUALIFIER	RESULT	UNITS	SAMPLE TYPE	ANALYSIS CODE
ZBG 1	2/9/17	ACTINIUM-228	46.30	94.90	U	19.80	pCi/L	REG	REG
ZBG 1	8/8/17	ACTINIUM-228	14.10	45.50	U	5.61	pCi/L	REG	REG
ZBG 1	2/9/17	ANTIMONY-125	25.00	54.70	U	-2.79	pCi/L	REG	REG
ZBG 1	8/8/17	ANTIMONY-125	7.70	16.30	U	3.64	pCi/L	REG	REG
ZBG 1	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 1	2/9/17	BISMUTH-214	21.50	45.60	U	-1.81	pCi/L	REG	REG
ZBG 1	8/8/17	BISMUTH-214	8.21	25.60	R	11.50	pCi/L	REG	REG
ZBG 1	2/9/17	CESIUM-137	10.10	20.80	U	3.23	pCi/L	REG	REG
ZBG 1	8/8/17	CESIUM-137	3.21	6.83	U	0.53	pCi/L	REG	REG
ZBG 1	2/9/17	COBALT-60	10.50	20.80	U	4.36	pCi/L	REG	REG
ZBG 1	8/8/17	COBALT-60	3.45	10.20	U	-1.41	pCi/L	REG	REG
ZBG 1	2/9/17	GROSS ALPHA	2.19	5.56	U	1.54	pCi/L	REG	REG
ZBG 1	8/8/17	GROSS ALPHA	2.43	4.77	U	0.13	pCi/L	REG	REG
ZBG 1	2/9/17	IODINE-129	0.76	1.63	U	0.45	pCi/L	REG	REG
ZBG 1	2/9/17	IODINE-129	0.78	1.69	U	0.22	pCi/L	REG	LD
ZBG 1	8/8/17	IODINE-129	0.68	1.51	U	-0.02	pCi/L	REG	LD
ZBG 1	8/8/17	IODINE-129	0.68	1.95	J	0.71	pCi/L	REG	REG
ZBG 1	2/9/17	LEAD-212	18.60	43.10	U	-2.70	pCi/L	REG	REG
ZBG 1	8/8/17	LEAD-212	4.78	17.50	U	2.22	pCi/L	REG	REG
ZBG 1	2/9/17	LEAD-214	23.50	50.20	U	6.22	pCi/L	REG	REG
ZBG 1	8/8/17	LEAD-214	7.24	21.10	U	0.25	pCi/L	REG	REG
ZBG 1	8/8/17	NIOBIUM-94	3.06	6.40	U	1.44	pCi/L	REG	REG
ZBG 1	2/9/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.38	mg/L	REG	REG
ZBG 1	8/8/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.38	mg/L	REG	REG
ZBG 1	2/9/17	NONVOLATILE BETA	3.97	9.12	U	1.91	pCi/L	REG	REG
ZBG 1	8/8/17	NONVOLATILE BETA	2.52	5.64	U	1.90	pCi/L	REG	REG
ZBG 1	2/9/17	POTASSIUM-40	191.00	370.00	U	-13.20	pCi/L	REG	REG
ZBG 1	8/8/17	POTASSIUM-40	50.10	125.00	U	-0.95	pCi/L	REG	REG
ZBG 1	2/9/17	RADIUM-226	0.02	0.30		0.55	pCi/L	REG	REG
ZBG 1	2/9/17	RADIUM-228	0.54	1.60	U	0.40	pCi/L	REG	REG
ZBG 1	8/8/17	RUTHENIUM-106	27.60	59.20	U	1.00	pCi/L	REG	REG
ZBG 1	2/9/17	STRONTIUM-90	3.37	7.15	U	-1.43	pCi/L	REG	REG

WELL	DATE	ANALYTE	MDL	PQL	QUALIFIER	RESULT	UNITS	SAMPLE TYPE	ANALYSIS CODE
ZBG 1	8/8/17	STRONTIUM-90	4.94	9.94	U	-1.21	pCi/L	REG	REG
ZBG 1	2/9/17	TECHNETIUM-99	4.22	9.38	U	2.42	pCi/L	REG	REG
ZBG 1	8/8/17	TECHNETIUM-99	16.30	35.40	U	4.14	pCi/L	REG	REG
ZBG 1	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 1	2/9/17	THALLIUM-208	11.20	23.40	U	0.56	pCi/L	REG	REG
ZBG 1	8/8/17	THALLIUM-208	3.59	10.40	U	-2.10	pCi/L	REG	REG
ZBG 1	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 1	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 1	2/9/17	TRITIUM	0.45	1.12		1.26	pCi/mL	REG	REG
ZBG 1	8/8/17	TRITIUM	0.43	1.09		1.23	pCi/mL	REG	REG
ZBG 3	2/14/17	ACTINIUM-228	40.80	83.90	U	3.05	pCi/L	REG	REG
ZBG 3	8/7/17	ACTINIUM-228	13.90	44.10	U	1.64	pCi/L	REG	REG
ZBG 3	8/7/17	ACTINIUM-228	12.10	45.70	U	0.21	pCi/L	REG	LD
ZBG 3	2/14/17	ANTIMONY-125	25.40	54.20	U	3.59	pCi/L	REG	REG
ZBG 3	8/7/17	ANTIMONY-125	7.95	16.90	U	0.06	pCi/L	REG	REG
ZBG 3	8/7/17	ANTIMONY-125	8.92	18.30	U	4.47	pCi/L	REG	LD
ZBG 3	2/14/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 3	2/14/17	BISMUTH-214	15.80	49.80	J	47.60	pCi/L	REG	REG
ZBG 3	8/7/17	BISMUTH-214	6.93	35.90	R	8.51	pCi/L	REG	LD
ZBG 3	8/7/17	BISMUTH-214	8.23	26.90	U	6.04	pCi/L	REG	REG
ZBG 3	2/14/17	CESIUM-137	9.33	18.90	U	3.35	pCi/L	REG	REG
ZBG 3	8/7/17	CESIUM-137	3.11	6.75	U	-0.66	pCi/L	REG	LD
ZBG 3	8/7/17	CESIUM-137	3.41	7.07	U	1.37	pCi/L	REG	REG
ZBG 3	2/14/17	COBALT-60	9.96	19.40	U	5.82	pCi/L	REG	REG
ZBG 3	8/7/17	COBALT-60	3.39	8.65	U	2.19	pCi/L	REG	REG
ZBG 3	8/7/17	COBALT-60	3.82	7.76	U	1.88	pCi/L	REG	LD
ZBG 3	2/14/17	GROSS ALPHA	2.25	5.04	U	0.85	pCi/L	REG	REG
ZBG 3	2/14/17	GROSS ALPHA	2.26	5.06	U	0.85	pCi/L	REG	LD
ZBG 3	8/7/17	GROSS ALPHA	2.55	5.77	U	1.61	pCi/L	REG	REG
ZBG 3	2/14/17	IODINE-129	0.75	1.62	U	0.18	pCi/L	REG	REG
ZBG 3	8/7/17	IODINE-129	0.71	1.52	U	0.19	pCi/L	REG	REG
ZBG 3	8/7/17	IODINE-129	0.61	1.34	U	-0.21	pCi/L	REG	LD
ZBG 3	2/14/17	LEAD-212	18.20	39.30	U	-5.61	pCi/L	REG	REG

WELL	DATE	ANALYTE	MDL	PQL	QUALIFIER	RESULT	UNITS	SAMPLE TYPE	ANALYSIS CODE
ZBG 3	8/7/17	LEAD-212	6.35	17.80	U	-2.22	pCi/L	REG	REG
ZBG 3	8/7/17	LEAD-212	6.69	22.20	U	1.86	pCi/L	REG	LD
ZBG 3	2/14/17	LEAD-214	18.70	64.00	J	49.40	pCi/L	REG	REG
ZBG 3	8/7/17	LEAD-214	7.64	26.10	U	7.61	pCi/L	REG	REG
ZBG 3	8/7/17	LEAD-214	7.14	20.50	U	0.25	pCi/L	REG	LD
ZBG 3	8/7/17	NIOBIUM-94	3.06	6.92	U	-2.33	pCi/L	REG	LD
ZBG 3	8/7/17	NIOBIUM-94	2.93	6.37	U	-0.56	pCi/L	REG	REG
ZBG 3	2/14/17	NITRATE-NITRITE AS NITROGEN	0.02	0.04		1.09	mg/L	REG	REG
ZBG 3	8/7/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.11	mg/L	REG	REG
ZBG 3	2/14/17	NONVOLATILE BETA	4.33	10.60	J	4.34	pCi/L	REG	LD
ZBG 3	2/14/17	NONVOLATILE BETA	4.33	9.79	U	1.73	pCi/L	REG	REG
ZBG 3	8/7/17	NONVOLATILE BETA	3.40	7.60	U	2.55	pCi/L	REG	REG
ZBG 3	2/14/17	POTASSIUM-40	194.00	373.00	U	-36.10	pCi/L	REG	REG
ZBG 3	8/7/17	POTASSIUM-40	39.10	108.00	UJ	-113.00	pCi/L	REG	REG
ZBG 3	8/7/17	POTASSIUM-40	49.20	133.00	U	-8.61	pCi/L	REG	LD
ZBG 3	2/14/17	RADIUM-226	0.03	0.26		0.30	pCi/L	REG	REG
ZBG 3	2/14/17	RADIUM-228	0.55	1.57	U	0.08	pCi/L	REG	REG
ZBG 3	8/7/17	RUTHENIUM-106	28.90	59.90	U	12.00	pCi/L	REG	REG
ZBG 3	8/7/17	RUTHENIUM-106	29.40	61.60	U	7.35	pCi/L	REG	LD
ZBG 3	2/14/17	TECHNETIUM-99	4.15	9.13	U	0.99	pCi/L	REG	REG
ZBG 3	8/7/17	TECHNETIUM-99	18.40	40.00	U	3.78	pCi/L	REG	REG
ZBG 3	8/7/17	TECHNETIUM-99	16.50	35.60	U	1.77	pCi/L	REG	LD
ZBG 3	2/14/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 3	2/14/17	THALLIUM-208	11.30	24.00	U	0.09	pCi/L	REG	REG
ZBG 3	8/7/17	THALLIUM-208	3.73	11.50	U	-1.04	pCi/L	REG	REG
ZBG 3	8/7/17	THALLIUM-208	3.30	9.98	R	8.54	pCi/L	REG	LD
ZBG 3	2/14/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 3	2/14/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 3	2/14/17	TRITIUM	0.52	1.33		2.45	pCi/mL	REG	REG
ZBG 3	8/7/17	TRITIUM	0.43	1.15		1.86	pCi/mL	REG	REG
ZBG 4	2/9/17	ACTINIUM-228	36.90	76.80	U	-10.30	pCi/L	REG	REG
ZBG 4	8/7/17	ACTINIUM-228	10.40	36.40	U	1.42	pCi/L	REG	REG
ZBG 4	2/9/17	ANTIMONY-125	24.80	51.90	U	8.32	pCi/L	REG	REG

WELL	DATE	ANALYTE	MDL	PQL	QUALIFIER	RESULT	UNITS	SAMPLE TYPE	ANALYSIS CODE
ZBG 4	8/7/17	ANTIMONY-125	6.68	14.10	U	-0.44	pCi/L	REG	REG
ZBG 4	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 4	2/9/17	BISMUTH-214	24.50	59.20	U	20.60	pCi/L	REG	REG
ZBG 4	8/7/17	BISMUTH-214	7.08	21.60	U	6.92	pCi/L	REG	REG
ZBG 4	2/9/17	CESIUM-137	8.95	18.50	U	1.17	pCi/L	REG	REG
ZBG 4	8/7/17	CESIUM-137	2.79	5.93	U	-0.02	pCi/L	REG	REG
ZBG 4	2/9/17	COBALT-60	8.29	17.50	U	-0.62	pCi/L	REG	REG
ZBG 4	8/7/17	COBALT-60	3.19	6.55	U	0.36	pCi/L	REG	REG
ZBG 4	2/9/17	GROSS ALPHA	2.19	6.45	J	2.66	pCi/L	REG	REG
ZBG 4	8/7/17	GROSS ALPHA	2.81	5.31	U	-0.80	pCi/L	REG	REG
ZBG 4	2/9/17	IODINE-129	0.71	1.52	U	0.19	pCi/L	REG	REG
ZBG 4	8/7/17	IODINE-129	0.62	1.36	U	-0.16	pCi/L	REG	REG
ZBG 4	2/9/17	LEAD-212	17.50	38.40	U	-5.30	pCi/L	REG	REG
ZBG 4	8/7/17	LEAD-212	5.50	15.20	U	-0.18	pCi/L	REG	REG
ZBG 4	2/9/17	LEAD-214	22.50	48.60	U	3.17	pCi/L	REG	REG
ZBG 4	8/7/17	LEAD-214	6.68	20.60	U	2.68	pCi/L	REG	REG
ZBG 4	8/7/17	NIOBIUM-94	2.66	5.46	U	1.58	pCi/L	REG	REG
ZBG 4	2/9/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.16	mg/L	REG	REG
ZBG 4	8/7/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.17	mg/L	REG	REG
ZBG 4	2/9/17	NONVOLATILE BETA	4.00	10.40	J	5.58	pCi/L	REG	REG
ZBG 4	8/7/17	NONVOLATILE BETA	2.92	6.64	J	3.41	pCi/L	REG	REG
ZBG 4	2/9/17	POTASSIUM-40	190.00	363.00	U	-34.80	pCi/L	REG	REG
ZBG 4	8/7/17	POTASSIUM-40	25.60	118.00	R	35.40	pCi/L	REG	REG
ZBG 4	2/9/17	RADIUM-226	0.05	0.18	J	0.11	pCi/L	REG	REG
ZBG 4	2/9/17	RADIUM-228	0.50	1.79	U	0.14	pCi/L	REG	REG
ZBG 4	8/7/17	RUTHENIUM-106	25.50	53.90	U	2.58	pCi/L	REG	REG
ZBG 4	2/9/17	TECHNETIUM-99	4.22	9.99		13.40	pCi/L	REG	REG
ZBG 4	8/7/17	TECHNETIUM-99	14.90	32.90	U	12.60	pCi/L	REG	REG
ZBG 4	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 4	2/9/17	THALLIUM-208	10.40	22.40	U	-2.05	pCi/L	REG	REG
ZBG 4	8/7/17	THALLIUM-208	2.52	11.10	U	1.39	pCi/L	REG	REG
ZBG 4	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 4	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG

WELL	DATE	ANALYTE	MDL	PQL	QUALIFIER	RESULT	UNITS	SAMPLE TYPE	ANALYSIS CODE
ZBG 4	2/9/17	TRITIUM	0.44	1.12		1.41	pCi/mL	REG	REG
ZBG 4	8/7/17	TRITIUM	0.43	1.10		1.46	pCi/mL	REG	REG
ZBG 5	2/9/17	ACTINIUM-228	35.80	76.60	U	-18.70	pCi/L	REG	REG
ZBG 5	8/7/17	ACTINIUM-228	14.10	37.50	U	-11.50	pCi/L	REG	REG
ZBG 5	2/9/17	ANTIMONY-125	25.70	54.00	U	7.37	pCi/L	REG	REG
ZBG 5	8/7/17	ANTIMONY-125	8.47	17.70	U	2.92	pCi/L	REG	REG
ZBG 5	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 5	2/9/17	BISMUTH-214	23.30	48.70	U	14.80	pCi/L	REG	REG
ZBG 5	8/7/17	BISMUTH-214	8.06	25.10	U	4.07	pCi/L	REG	REG
ZBG 5	2/9/17	CESIUM-137	8.64	18.70	U	-2.92	pCi/L	REG	REG
ZBG 5	8/7/17	CESIUM-137	3.05	7.17	U	-1.09	pCi/L	REG	REG
ZBG 5	2/9/17	COBALT-60	8.54	17.30	U	1.41	pCi/L	REG	REG
ZBG 5	8/7/17	COBALT-60	3.47	7.45	U	-1.16	pCi/L	REG	REG
ZBG 5	2/9/17	GROSS ALPHA	2.24	3.81	U	0.04	pCi/L	REG	REG
ZBG 5	8/7/17	GROSS ALPHA	2.08	4.70	U	1.35	pCi/L	REG	REG
ZBG 5	2/9/17	IODINE-129	0.70	1.68	U	-0.16	pCi/L	REG	REG
ZBG 5	8/7/17	IODINE-129	0.65	1.40	U	0.10	pCi/L	REG	REG
ZBG 5	2/9/17	LEAD-212	17.30	38.30	U	-8.13	pCi/L	REG	REG
ZBG 5	8/7/17	LEAD-212	7.28	23.70	U	1.04	pCi/L	REG	REG
ZBG 5	2/9/17	LEAD-214	21.00	53.00	U	15.90	pCi/L	REG	REG
ZBG 5	8/7/17	LEAD-214	7.27	22.10	U	3.00	pCi/L	REG	REG
ZBG 5	8/7/17	NIOBIUM-94	2.87	6.39	U	-1.51	pCi/L	REG	REG
ZBG 5	2/9/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.34	mg/L	REG	REG
ZBG 5	8/7/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.35	mg/L	REG	LD
ZBG 5	8/7/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.35	mg/L	REG	REG
ZBG 5	2/9/17	NONVOLATILE BETA	3.95	9.66	U	3.64	pCi/L	REG	REG
ZBG 5	8/7/17	NONVOLATILE BETA	2.57	5.57	U	1.03	pCi/L	REG	REG
ZBG 5	2/9/17	POTASSIUM-40	217.00	413.00	U	68.90	pCi/L	REG	REG
ZBG 5	8/7/17	POTASSIUM-40	44.20	114.00	U	-68.30	pCi/L	REG	REG
ZBG 5	2/9/17	RADIUM-226	0.05	0.14	J	0.07	pCi/L	REG	REG
ZBG 5	2/9/17	RADIUM-228	0.59	1.91	U	-0.09	pCi/L	REG	REG
ZBG 5	8/7/17	RUTHENIUM-106	29.60	61.80	U	9.92	pCi/L	REG	REG
ZBG 5	2/9/17	TECHNETIUM-99	4.21	9.39	U	3.00	pCi/L	REG	REG

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ZBG 5	8/7/17	TECHNETIUM-99	15.00	32.40	U	1.69	pCi/L	REG	REG
ZBG 5	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 5	2/9/17	THALLIUM-208	10.80	23.20	U	-1.33	pCi/L	REG	REG
ZBG 5	8/7/17	THALLIUM-208	3.31	12.60	U	0.82	pCi/L	REG	REG
ZBG 5	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 5	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 5	2/9/17	TRITIUM	0.45	1.02	J	0.50	pCi/mL	REG	REG
ZBG 5	8/7/17	TRITIUM	0.43	1.00	J	0.60	pCi/mL	REG	REG
ZBG 6	2/9/17	ACTINIUM-228	41.20	83.60	U	3.87	pCi/L	REG	REG
ZBG 6	8/7/17	ACTINIUM-228	12.80	35.20	U	8.54	pCi/L	REG	REG
ZBG 6	2/9/17	ANTIMONY-125	24.30	53.50	U	-7.96	pCi/L	REG	REG
ZBG 6	8/7/17	ANTIMONY-125	6.75	14.50	U	-0.91	pCi/L	REG	REG
ZBG 6	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 6	2/9/17	BISMUTH-214	21.30	46.30	U	-1.56	pCi/L	REG	REG
ZBG 6	8/7/17	BISMUTH-214	7.61	25.30	U	7.27	pCi/L	REG	REG
ZBG 6	2/9/17	CESIUM-137	9.40	18.90	U	4.22	pCi/L	REG	REG
ZBG 6	8/7/17	CESIUM-137	3.00	6.26	U	1.50	pCi/L	REG	REG
ZBG 6	2/9/17	COBALT-60	7.20	15.80	U	-2.45	pCi/L	REG	REG
ZBG 6	8/7/17	COBALT-60	2.92	6.20	U	-0.53	pCi/L	REG	REG
ZBG 6	2/9/17	GROSS ALPHA	2.18	6.15	J	2.28	pCi/L	REG	REG
ZBG 6	8/7/17	GROSS ALPHA	1.85	3.87	U	0.49	pCi/L	REG	REG
ZBG 6	2/9/17	IODINE-129	0.69	1.58	U	-0.25	pCi/L	REG	REG
ZBG 6	8/7/17	IODINE-129	0.63	1.37	U	0.09	pCi/L	REG	REG
ZBG 6	2/9/17	LEAD-212	19.20	41.50	U	-0.13	pCi/L	REG	REG
ZBG 6	8/7/17	LEAD-212	5.78	18.30	U	5.42	pCi/L	REG	REG
ZBG 6	2/9/17	LEAD-214	22.10	47.40	U	4.71	pCi/L	REG	REG
ZBG 6	8/7/17	LEAD-214	6.89	23.20	R	7.44	pCi/L	REG	REG
ZBG 6	8/7/17	NIOBIUM-94	2.57	5.87	U	0.19	pCi/L	REG	REG
ZBG 6	2/9/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.59	mg/L	REG	REG
ZBG 6	8/7/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.77	mg/L	REG	REG
ZBG 6	2/9/17	NONVOLATILE BETA	3.99	9.39	U	2.57	pCi/L	REG	REG
ZBG 6	8/7/17	NONVOLATILE BETA	2.27	5.23	J	2.77	pCi/L	REG	REG
ZBG 6	2/9/17	POTASSIUM-40	190.00	366.00	U	-52.00	pCi/L	REG	REG

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ZBG 6	8/7/17	POTASSIUM-40	47.70	125.00	U	-5.65	pCi/L	REG	REG
ZBG 6	2/9/17	RADIUM-226	0.02	0.50		1.52	pCi/L	REG	REG
ZBG 6	2/9/17	RADIUM-228	0.49	1.42	J	1.31	pCi/L	REG	REG
ZBG 6	8/7/17	RUTHENIUM-106	24.60	52.40	U	2.82	pCi/L	REG	REG
ZBG 6	2/9/17	TECHNETIUM-99	4.24	9.46	U	3.27	pCi/L	REG	REG
ZBG 6	8/7/17	TECHNETIUM-99	15.60	33.50	U	-0.93	pCi/L	REG	REG
ZBG 6	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 6	2/9/17	THALLIUM-208	10.30	22.30	U	-2.70	pCi/L	REG	REG
ZBG 6	8/7/17	THALLIUM-208	2.74	10.40	U	1.16	pCi/L	REG	REG
ZBG 6	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 6	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 6	2/9/17	TRITIUM	0.52	1.28		1.84	pCi/mL	REG	LD
ZBG 6	2/9/17	TRITIUM	0.51	1.28		1.94	pCi/mL	REG	REG
ZBG 6	8/7/17	TRITIUM	0.43	1.09		1.37	pCi/mL	REG	REG
ZBG 7	2/9/17	ACTINIUM-228	42.70	87.60	U	1.35	pCi/L	REG	REG
ZBG 7	8/7/17	ACTINIUM-228	10.20	36.60	U	3.09	pCi/L	REG	REG
ZBG 7	2/9/17	ANTIMONY-125	23.80	52.70	U	-9.82	pCi/L	REG	REG
ZBG 7	8/7/17	ANTIMONY-125	7.11	15.20	U	0.44	pCi/L	REG	REG
ZBG 7	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 7	2/9/17	BISMUTH-214	20.70	44.00	U	4.81	pCi/L	REG	REG
ZBG 7	8/7/17	BISMUTH-214	6.62	17.50	U	5.59	pCi/L	REG	REG
ZBG 7	2/9/17	CESIUM-137	8.98	18.40	U	1.78	pCi/L	REG	REG
ZBG 7	8/7/17	CESIUM-137	2.93	6.17	U	1.09	pCi/L	REG	REG
ZBG 7	2/9/17	COBALT-60	8.94	19.60	U	-2.60	pCi/L	REG	REG
ZBG 7	8/7/17	COBALT-60	3.22	8.88	U	-0.21	pCi/L	REG	REG
ZBG 7	2/9/17	GROSS ALPHA	2.19	4.33	U	0.41	pCi/L	REG	REG
ZBG 7	8/7/17	GROSS ALPHA	1.75	3.65	U	0.40	pCi/L	REG	REG
ZBG 7	2/9/17	IODINE-129	0.71	1.54	U	-0.03	pCi/L	REG	REG
ZBG 7	8/7/17	IODINE-129	0.64	1.40	U	-0.12	pCi/L	REG	REG
ZBG 7	2/9/17	LEAD-212	17.60	38.60	U	-5.13	pCi/L	REG	REG
ZBG 7	8/7/17	LEAD-212	4.19	14.00	U	1.55	pCi/L	REG	REG
ZBG 7	2/9/17	LEAD-214	21.80	47.30	U	-0.28	pCi/L	REG	REG
ZBG 7	8/7/17	LEAD-214	5.53	18.40	U	4.91	pCi/L	REG	REG

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ZBG 7	8/7/17	NIOBIUM-94	2.63	5.61	U	0.54	pCi/L	REG	REG
ZBG 7	2/9/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.90	mg/L	REG	REG
ZBG 7	8/7/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		0.88	mg/L	REG	REG
ZBG 7	2/9/17	NONVOLATILE BETA	3.95	9.34	U	2.68	pCi/L	REG	REG
ZBG 7	8/7/17	NONVOLATILE BETA	2.87	6.35	U	2.05	pCi/L	REG	REG
ZBG 7	2/9/17	POTASSIUM-40	193.00	369.00	U	-26.50	pCi/L	REG	REG
ZBG 7	8/7/17	POTASSIUM-40	30.90	118.00	U	7.66	pCi/L	REG	REG
ZBG 7	2/9/17	RADIUM-226	0.02	0.31		0.57	pCi/L	REG	REG
ZBG 7	2/9/17	RADIUM-228	0.49	1.77	U	0.13	pCi/L	REG	REG
ZBG 7	8/7/17	RUTHENIUM-106	24.30	53.50	U	11.10	pCi/L	REG	REG
ZBG 7	2/9/17	TECHNETIUM-99	4.21	9.38	U	2.95	pCi/L	REG	REG
ZBG 7	8/7/17	TECHNETIUM-99	15.30	32.80	U	-0.89	pCi/L	REG	REG
ZBG 7	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 7	2/9/17	THALLIUM-208	11.00	23.80	U	-2.39	pCi/L	REG	REG
ZBG 7	8/7/17	THALLIUM-208	2.69	10.00	U	0.80	pCi/L	REG	REG
ZBG 7	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 7	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 7	2/9/17	TRITIUM	0.51	1.33		2.56	pCi/mL	REG	REG
ZBG 7	8/7/17	TRITIUM	0.43	1.18		2.13	pCi/mL	REG	REG
ZBG 8	2/9/17	ACTINIUM-228	34.50	73.30	U	-16.70	pCi/L	REG	REG
ZBG 8	8/8/17	ACTINIUM-228	15.10	30.20	U	8.83	pCi/L	REG	REG
ZBG 8	2/9/17	ANTIMONY-125	25.40	54.80	U	-0.69	pCi/L	REG	REG
ZBG 8	8/8/17	ANTIMONY-125	8.76	18.50	U	0.71	pCi/L	REG	REG
ZBG 8	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 8	2/9/17	BISMUTH-214	22.80	48.20	U	8.80	pCi/L	REG	REG
ZBG 8	8/8/17	BISMUTH-214	7.05	28.50	U	5.72	pCi/L	REG	REG
ZBG 8	2/9/17	CESIUM-137	7.75	17.00	U	-3.89	pCi/L	REG	REG
ZBG 8	8/8/17	CESIUM-137	3.13	6.99	U	0.42	pCi/L	REG	REG
ZBG 8	2/9/17	COBALT-60	8.54	18.30	U	-1.37	pCi/L	REG	REG
ZBG 8	8/8/17	COBALT-60	3.51	6.93	U	1.55	pCi/L	REG	REG
ZBG 8	2/9/17	GROSS ALPHA	2.18	5.55	U	1.53	pCi/L	REG	REG
ZBG 8	8/8/17	GROSS ALPHA	2.30	5.32	U	1.74	pCi/L	REG	REG
ZBG 8	2/9/17	IODINE-129	0.71	1.66	J	0.72	pCi/L	REG	REG

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ZBG 8	8/8/17	IODINE-129	0.72	1.55	U	0.10	pCi/L	REG	REG
ZBG 8	2/9/17	LEAD-212	19.40	41.40	U	8.83	pCi/L	REG	REG
ZBG 8	8/8/17	LEAD-212	7.12	22.00	U	4.88	pCi/L	REG	REG
ZBG 8	2/9/17	LEAD-214	24.60	51.80	U	21.10	pCi/L	REG	REG
ZBG 8	8/8/17	LEAD-214	8.76	28.20	U	8.55	pCi/L	REG	REG
ZBG 8	8/8/17	NIOBIUM-94	3.31	7.29	U	-1.18	pCi/L	REG	REG
ZBG 8	2/9/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.82	mg/L	REG	REG
ZBG 8	8/8/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		0.80	mg/L	REG	REG
ZBG 8	2/9/17	NONVOLATILE BETA	3.97	8.76	U	0.97	pCi/L	REG	REG
ZBG 8	8/8/17	NONVOLATILE BETA	2.62	6.16	J	3.16	pCi/L	REG	REG
ZBG 8	2/9/17	POTASSIUM-40	196.00	371.00	U	-10.50	pCi/L	REG	REG
ZBG 8	8/8/17	POTASSIUM-40	49.40	141.00	U	3.37	pCi/L	REG	REG
ZBG 8	2/9/17	RADIUM-226	0.03	0.47		1.19	pCi/L	REG	REG
ZBG 8	2/9/17	RADIUM-228	0.58	1.89	U	0.24	pCi/L	REG	REG
ZBG 8	8/8/17	RUTHENIUM-106	31.20	66.80	U	-1.46	pCi/L	REG	REG
ZBG 8	2/9/17	TECHNETIUM-99	4.25	9.31	U	0.12	pCi/L	REG	REG
ZBG 8	8/8/17	TECHNETIUM-99	16.00	35.00	U	7.71	pCi/L	REG	REG
ZBG 8	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 8	2/9/17	THALLIUM-208	11.70	24.60	U	2.37	pCi/L	REG	REG
ZBG 8	8/8/17	THALLIUM-208	3.42	14.10	U	2.04	pCi/L	REG	REG
ZBG 8	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 8	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG 8	2/9/17	TRITIUM	0.52	1.32		2.41	pCi/mL	REG	REG
ZBG 8	8/8/17	TRITIUM	0.44	1.21		2.35	pCi/mL	REG	REG
ZBG002C	2/9/17	ACTINIUM-228	40.50	82.40	U	1.67	pCi/L	REG	REG
ZBG002C	8/7/17	ACTINIUM-228	17.60	46.20	U	-11.40	pCi/L	REG	REG
ZBG002C	2/9/17	ANTIMONY-125	27.00	57.20	U	5.85	pCi/L	REG	REG
ZBG002C	8/7/17	ANTIMONY-125	9.39	19.90	U	1.24	pCi/L	REG	REG
ZBG002C	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG002C	2/9/17	BISMUTH-214	23.60	55.90	U	16.80	pCi/L	REG	REG
ZBG002C	8/7/17	BISMUTH-214	9.53	23.30	U	8.52	pCi/L	REG	REG
ZBG002C	2/9/17	CESIUM-137	9.18	18.70	U	2.83	pCi/L	REG	REG
ZBG002C	8/7/17	CESIUM-137	4.11	8.83	U	0.37	pCi/L	REG	REG

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ZBG002C	2/9/17	COBALT-60	7.68	15.80	U	0.31	pCi/L	REG	REG
ZBG002C	8/7/17	COBALT-60	4.28	8.78	U	0.96	pCi/L	REG	REG
ZBG002C	2/9/17	GROSS ALPHA	2.19	2.47	U	-0.34	pCi/L	REG	REG
ZBG002C	8/7/17	GROSS ALPHA	2.47	4.51	U	-0.39	pCi/L	REG	REG
ZBG002C	8/7/17	GROSS ALPHA	1.93	3.59	U	0.08	pCi/L	REG	LD
ZBG002C	2/9/17	IODINE-129	0.68	1.51	U	-0.02	pCi/L	REG	REG
ZBG002C	8/7/17	IODINE-129	0.65	1.42	U	-0.19	pCi/L	REG	REG
ZBG002C	2/9/17	LEAD-212	19.50	42.20	U	-0.69	pCi/L	REG	REG
ZBG002C	8/7/17	LEAD-212	6.69	18.30	U	-1.48	pCi/L	REG	REG
ZBG002C	2/9/17	LEAD-214	23.50	50.40	U	6.39	pCi/L	REG	REG
ZBG002C	8/7/17	LEAD-214	7.58	19.60	U	-4.16	pCi/L	REG	REG
ZBG002C	8/7/17	NIOBIUM-94	3.58	14.20	U	-5.49	pCi/L	REG	REG
ZBG002C	2/9/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.69	mg/L	REG	REG
ZBG002C	8/7/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.99	mg/L	REG	REG
ZBG002C	2/9/17	NONVOLATILE BETA	3.93	9.07	U	2.02	pCi/L	REG	REG
ZBG002C	8/7/17	NONVOLATILE BETA	2.85	8.01		11.50	pCi/L	REG	LD
ZBG002C	8/7/17	NONVOLATILE BETA	3.68	8.38	J	3.84	pCi/L	REG	REG
ZBG002C	2/9/17	POTASSIUM-40	169.00	332.00	U	-132.00	pCi/L	REG	REG
ZBG002C	8/7/17	POTASSIUM-40	50.80	136.00	U	-30.30	pCi/L	REG	REG
ZBG002C	2/9/17	RADIUM-226	0.05	0.15	J	0.06	pCi/L	REG	REG
ZBG002C	2/9/17	RADIUM-228	0.48	1.82	U	0.12	pCi/L	REG	REG
ZBG002C	8/7/17	RUTHENIUM-106	34.20	73.40	U	1.69	pCi/L	REG	REG
ZBG002C	2/9/17	TECHNETIUM-99	4.21	10.20		17.30	pCi/L	REG	REG
ZBG002C	8/7/17	TECHNETIUM-99	15.70	36.10	J	32.60	pCi/L	REG	REG
ZBG002C	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG002C	2/9/17	THALLIUM-208	11.40	23.60	U	3.89	pCi/L	REG	REG
ZBG002C	8/7/17	THALLIUM-208	4.55	13.40	U	-2.62	pCi/L	REG	REG
ZBG002C	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG002C	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG002C	2/9/17	TRITIUM	0.51	1.27		1.82	pCi/mL	REG	REG
ZBG002C	8/7/17	TRITIUM	0.43	1.10		1.46	pCi/mL	REG	REG
ZBG002D	8/8/17	ACTINIUM-228	15.70	47.30	U	-6.24	pCi/L	REG	REG
ZBG002D	2/14/17	ANTIMONY-125	12.50	26.30	U	3.66	pCi/L	REG	REG

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ZBG002D	8/8/17	ANTIMONY-125	7.66	16.70	U	-2.92	pCi/L	REG	REG
ZBG002D	2/14/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG002D	8/8/17	BISMUTH-214	6.95	24.10	U	6.15	pCi/L	REG	REG
ZBG002D	2/14/17	CARBON-14	31.40	67.60	U	-7.91	pCi/L	REG	REG
ZBG002D	8/8/17	CARBON-14	33.80	73.00	U	4.50	pCi/L	REG	REG
ZBG002D	8/8/17	CARBON-14	33.90	72.10	U	-11.50	pCi/L	REG	LD
ZBG002D	8/8/17	CESIUM-137	3.27	7.23	U	-1.02	pCi/L	REG	REG
ZBG002D	8/8/17	COBALT-60	3.86	7.88	U	1.25	pCi/L	REG	REG
ZBG002D	2/14/17	GROSS ALPHA	2.94	6.84	U	2.13	pCi/L	REG	REG
ZBG002D	8/8/17	GROSS ALPHA	1.66	3.98	U	1.42	pCi/L	REG	REG
ZBG002D	2/14/17	IODINE-129	0.77	1.65	U	0.41	pCi/L	REG	REG
ZBG002D	8/8/17	IODINE-129	0.70	1.65	U	0.27	pCi/L	REG	REG
ZBG002D	8/8/17	LEAD-212	5.44	18.60	U	3.31	pCi/L	REG	REG
ZBG002D	8/8/17	LEAD-214	6.56	24.70	J	11.80	pCi/L	REG	REG
ZBG002D	2/14/17	NICKEL-59	20.20	48.60	U	-13.00	pCi/L	REG	REG
ZBG002D	8/8/17	NICKEL-59	12.20	28.80	U	-17.10	pCi/L	REG	REG
ZBG002D	8/8/17	NICKEL-59	11.90	26.50	U	-5.88	pCi/L	REG	LD
ZBG002D	2/14/17	NICKEL-63	25.20	53.60	U	-14.50	pCi/L	REG	REG
ZBG002D	8/8/17	NICKEL-63	38.10	82.10	U	2.31	pCi/L	REG	LD
ZBG002D	8/8/17	NICKEL-63	34.90	75.90	U	11.50	pCi/L	REG	REG
ZBG002D	2/14/17	NIOBIUM-94	3.79	8.05	U	-0.73	pCi/L	REG	REG
ZBG002D	8/8/17	NIOBIUM-94	3.06	6.48	U	0.93	pCi/L	REG	REG
ZBG002D	2/14/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		2.06	mg/L	REG	REG
ZBG002D	8/8/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		2.11	mg/L	REG	REG
ZBG002D	2/14/17	NONVOLATILE BETA	2.67	9.19		21.70	pCi/L	REG	REG
ZBG002D	8/8/17	NONVOLATILE BETA	2.48	8.06		21.10	pCi/L	REG	REG
ZBG002D	2/14/17	PLUTONIUM-241	8.82	18.90	U	-8.22	pCi/L	REG	REG
ZBG002D	8/8/17	PLUTONIUM-241	8.99	19.50	U	-0.31	pCi/L	REG	REG
ZBG002D	8/8/17	POTASSIUM-40	49.60	123.00	U	-17.20	pCi/L	REG	REG
ZBG002D	2/14/17	RADIUM-226	0.38	0.98	J	0.56	pCi/L	REG	REG
ZBG002D	2/14/17	RADIUM-228	0.86	2.04	J	1.26	pCi/L	REG	REG
ZBG002D	2/14/17	RUTHENIUM-106	39.40	78.00	U	21.10	pCi/L	REG	REG
ZBG002D	8/8/17	RUTHENIUM-106	28.90	62.50	U	-0.42	pCi/L	REG	REG

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ZBG002D	2/14/17	STRONTIUM-90	5.13	9.75	U	-2.83	pCi/L	REG	REG
ZBG002D	8/8/17	STRONTIUM-90	4.52	9.48	U	0.54	pCi/L	REG	REG
ZBG002D	2/14/17	TECHNETIUM-99	23.30	53.30	J	28.40	pCi/L	REG	REG
ZBG002D	8/8/17	TECHNETIUM-99	17.80	42.00		54.70	pCi/L	REG	REG
ZBG002D	2/14/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG002D	8/8/17	THALLIUM-208	4.05	11.80	U	-3.94	pCi/L	REG	REG
ZBG002D	2/14/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG002D	2/14/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG002D	2/14/17	TRITIUM	0.51	1.27		1.84	pCi/mL	REG	REG
ZBG002D	8/8/17	TRITIUM	0.44	1.11		1.35	pCi/mL	REG	REG
ZBG009D	2/13/17	ACTINIUM-228	36.90	79.90	U	-13.40	pCi/L	REG	REG
ZBG009D	8/10/17	ACTINIUM-228	15.30	37.30	U	-7.99	pCi/L	REG	REG
ZBG009D	2/13/17	ANTIMONY-125	23.10	50.60	U	-3.16	pCi/L	REG	REG
ZBG009D	8/10/17	ANTIMONY-125	8.51	18.10	U	0.75	pCi/L	REG	REG
ZBG009D	2/13/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG009D	2/13/17	BISMUTH-214	23.10	47.70	U	8.15	pCi/L	REG	REG
ZBG009D	8/10/17	BISMUTH-214	6.65	28.10		49.60	pCi/L	REG	REG
ZBG009D	2/13/17	CESIUM-137	9.52	20.00	U	0.62	pCi/L	REG	REG
ZBG009D	8/10/17	CESIUM-137	3.60	7.66	U	0.45	pCi/L	REG	REG
ZBG009D	2/13/17	COBALT-60	8.41	18.50	U	-3.83	pCi/L	REG	REG
ZBG009D	8/10/17	COBALT-60	4.34	11.10	U	2.54	pCi/L	REG	REG
ZBG009D	2/13/17	GROSS ALPHA	2.21	4.38	U	0.42	pCi/L	REG	REG
ZBG009D	8/10/17	GROSS ALPHA	1.02	2.37	U	0.94	pCi/L	REG	REG
ZBG009D	2/13/17	IODINE-129	0.67	1.97	U	0.66	pCi/L	REG	REG
ZBG009D	8/10/17	IODINE-129	0.65	1.41	U	0.03	pCi/L	REG	REG
ZBG009D	2/13/17	LEAD-212	18.90	40.80	U	5.53	pCi/L	REG	REG
ZBG009D	8/10/17	LEAD-212	5.06	17.50	R	6.22	pCi/L	REG	REG
ZBG009D	2/13/17	LEAD-214	21.80	45.90	U	9.93	pCi/L	REG	REG
ZBG009D	8/10/17	LEAD-214	14.30	33.80		59.00	pCi/L	REG	REG
ZBG009D	8/10/17	NIOBIUM-94	3.38	9.22	U	-0.67	pCi/L	REG	REG
ZBG009D	2/13/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.65	mg/L	REG	REG
ZBG009D	8/10/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.53	mg/L	REG	REG
ZBG009D	2/13/17	NONVOLATILE BETA	3.95	8.92	U	1.51	pCi/L	REG	REG

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ZBG009D	8/10/17	NONVOLATILE BETA	1.74	3.78	U	0.59	pCi/L	REG	REG
ZBG009D	2/13/17	POTASSIUM-40	195.00	369.00	U	40.00	pCi/L	REG	REG
ZBG009D	8/10/17	POTASSIUM-40	47.90	113.00	U	-34.70	pCi/L	REG	REG
ZBG009D	2/13/17	RADIUM-226	0.02	0.20		0.23	pCi/L	REG	REG
ZBG009D	2/13/17	RADIUM-228	0.45	1.47	U	0.31	pCi/L	REG	REG
ZBG009D	8/10/17	RUTHENIUM-106	29.50	62.90	U	1.81	pCi/L	REG	REG
ZBG009D	2/13/17	TECHNETIUM-99	4.09	9.06	U	1.84	pCi/L	REG	REG
ZBG009D	8/10/17	TECHNETIUM-99	20.60	43.80	U	-8.30	pCi/L	REG	REG
ZBG009D	2/13/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG009D	2/13/17	THALLIUM-208	10.90	22.70	U	1.30	pCi/L	REG	REG
ZBG009D	8/10/17	THALLIUM-208	3.14	12.20	R	3.61	pCi/L	REG	REG
ZBG009D	2/13/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG009D	2/13/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG009D	2/13/17	TRITIUM	0.45	1.19		1.91	pCi/mL	REG	REG
ZBG009D	8/10/17	TRITIUM	0.46	1.21		2.00	pCi/mL	REG	REG
ZBG010D	2/13/17	ACTINIUM-228	41.10	88.60	U	-11.10	pCi/L	REG	REG
ZBG010D	8/10/17	ACTINIUM-228	21.50	50.50	U	-5.28	pCi/L	REG	REG
ZBG010D	2/13/17	ANTIMONY-125	26.40	55.20	U	13.40	pCi/L	REG	REG
ZBG010D	8/10/17	ANTIMONY-125	12.70	34.50	U	3.20	pCi/L	REG	REG
ZBG010D	2/13/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG010D	2/13/17	BISMUTH-214	27.10	55.30	J	28.70	pCi/L	REG	REG
ZBG010D	8/10/17	BISMUTH-214	8.97	37.60		124.00	pCi/L	REG	REG
ZBG010D	2/13/17	CESIUM-137	9.42	20.30	U	-1.83	pCi/L	REG	REG
ZBG010D	8/10/17	CESIUM-137	4.59	9.63	U	-0.56	pCi/L	REG	REG
ZBG010D	2/13/17	COBALT-60	8.26	16.80	U	0.50	pCi/L	REG	REG
ZBG010D	8/10/17	COBALT-60	4.95	12.60	U	-1.72	pCi/L	REG	REG
ZBG010D	2/13/17	GROSS ALPHA	2.20	5.24	U	1.17	pCi/L	REG	REG
ZBG010D	8/10/17	GROSS ALPHA	2.36	6.08	J	2.88	pCi/L	REG	REG
ZBG010D	2/13/17	IODINE-129	0.69	1.68	U	-0.35	pCi/L	REG	REG
ZBG010D	8/10/17	IODINE-129	0.65	1.41	U	0.22	pCi/L	REG	REG
ZBG010D	2/13/17	LEAD-212	19.50	42.10	U	4.08	pCi/L	REG	REG
ZBG010D	8/10/17	LEAD-212	7.20	26.10	U	5.30	pCi/L	REG	REG
ZBG010D	2/13/17	LEAD-214	24.80	52.70	U	11.40	pCi/L	REG	REG

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ZBG010D	8/10/17	LEAD-214	24.90	57.50		143.00	pCi/L	REG	REG
ZBG010D	8/10/17	NIOBIUM-94	4.58	9.60	U	-0.18	pCi/L	REG	REG
ZBG010D	2/13/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.49	mg/L	REG	REG
ZBG010D	8/10/17	NITRATE-NITRITE AS NITROGEN	0.02	0.04		1.01	mg/L	REG	REG
ZBG010D	2/13/17	NONVOLATILE BETA	3.97	8.48	U	0.30	pCi/L	REG	REG
ZBG010D	8/10/17	NONVOLATILE BETA	3.08	6.62	U	0.91	pCi/L	REG	REG
ZBG010D	2/13/17	POTASSIUM-40	181.00	353.00	U	-56.80	pCi/L	REG	REG
ZBG010D	8/10/17	POTASSIUM-40	64.40	158.00	U	-27.20	pCi/L	REG	REG
ZBG010D	2/13/17	RADIUM-226	0.02	0.27		0.56	pCi/L	REG	REG
ZBG010D	2/13/17	RADIUM-228	0.46	1.34	U	0.27	pCi/L	REG	REG
ZBG010D	8/10/17	RUTHENIUM-106	35.80	78.60	U	-7.99	pCi/L	REG	REG
ZBG010D	2/13/17	TECHNETIUM-99	4.15	9.11	U	0.53	pCi/L	REG	LD
ZBG010D	2/13/17	TECHNETIUM-99	4.14	9.16	U	1.56	pCi/L	REG	REG
ZBG010D	8/10/17	TECHNETIUM-99	19.40	41.40	U	-6.85	pCi/L	REG	REG
ZBG010D	2/13/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG010D	2/13/17	THALLIUM-208	10.90	23.20	U	-1.81	pCi/L	REG	REG
ZBG010D	8/10/17	THALLIUM-208	4.43	16.40	U	2.01	pCi/L	REG	REG
ZBG010D	2/13/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG010D	2/13/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG010D	2/13/17	TRITIUM	0.46	1.14		1.21	pCi/mL	REG	REG
ZBG010D	8/10/17	TRITIUM	0.46	1.12	J	1.11	pCi/mL	REG	REG
ZBG011D	2/13/17	ACTINIUM-228	39.10	84.90	U	-13.60	pCi/L	REG	REG
ZBG011D	8/10/17	ACTINIUM-228	18.70	55.30	U	12.00	pCi/L	REG	REG
ZBG011D	2/13/17	ANTIMONY-125	25.30	55.30	U	-2.83	pCi/L	REG	REG
ZBG011D	8/10/17	ANTIMONY-125	9.73	20.40	U	1.60	pCi/L	REG	REG
ZBG011D	2/13/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG011D	2/13/17	BISMUTH-214	20.10	43.00	U	-5.66	pCi/L	REG	REG
ZBG011D	8/10/17	BISMUTH-214	9.92	24.50	R	17.20	pCi/L	REG	REG
ZBG011D	2/13/17	CESIUM-137	10.00	20.30	U	5.03	pCi/L	REG	REG
ZBG011D	8/10/17	CESIUM-137	3.76	7.94	U	0.49	pCi/L	REG	REG
ZBG011D	2/13/17	COBALT-60	8.94	18.00	U	1.42	pCi/L	REG	REG
ZBG011D	8/10/17	COBALT-60	3.98	8.22	U	0.18	pCi/L	REG	REG
ZBG011D	2/13/17	GROSS ALPHA	2.27	4.50	U	0.43	pCi/L	REG	REG

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ZBG011D	8/10/17	GROSS ALPHA	2.39	4.36	U	-0.28	pCi/L	REG	REG
ZBG011D	2/13/17	IODINE-129	0.73	1.62	U	-0.28	pCi/L	REG	REG
ZBG011D	2/13/17	IODINE-129	0.75	1.80	U	-0.09	pCi/L	REG	LD
ZBG011D	8/10/17	IODINE-129	0.64	1.38	U	0.07	pCi/L	REG	REG
ZBG011D	2/13/17	LEAD-212	18.00	39.90	U	-6.48	pCi/L	REG	REG
ZBG011D	8/10/17	LEAD-212	7.16	17.90	U	-2.04	pCi/L	REG	REG
ZBG011D	2/13/17	LEAD-214	21.60	47.60	U	-6.73	pCi/L	REG	REG
ZBG011D	8/10/17	LEAD-214	9.42	25.20	J	10.70	pCi/L	REG	REG
ZBG011D	8/10/17	NIOBIUM-94	3.73	7.89	U	0.73	pCi/L	REG	REG
ZBG011D	2/13/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.20	mg/L	REG	REG
ZBG011D	2/13/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.20	mg/L	REG	LD
ZBG011D	8/10/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.20	mg/L	REG	REG
ZBG011D	2/13/17	NONVOLATILE BETA	3.96	8.86	U	1.28	pCi/L	REG	REG
ZBG011D	8/10/17	NONVOLATILE BETA	3.39	6.81	U	-1.20	pCi/L	REG	REG
ZBG011D	2/13/17	POTASSIUM-40	167.00	330.00	U	-104.00	pCi/L	REG	REG
ZBG011D	8/10/17	POTASSIUM-40	62.80	143.00	U	14.50	pCi/L	REG	REG
ZBG011D	2/13/17	RADIUM-226	0.09	0.18	U	0.02	pCi/L	REG	REG
ZBG011D	2/13/17	RADIUM-228	0.48	1.57	U	0.02	pCi/L	REG	REG
ZBG011D	8/10/17	RUTHENIUM-106	31.80	68.00	U	-0.69	pCi/L	REG	REG
ZBG011D	2/13/17	TECHNETIUM-99	4.15	9.12	U	0.60	pCi/L	REG	REG
ZBG011D	8/10/17	TECHNETIUM-99	19.60	41.40	U	-13.20	pCi/L	REG	REG
ZBG011D	2/13/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG011D	2/13/17	THALLIUM-208	11.50	23.50	U	4.89	pCi/L	REG	REG
ZBG011D	8/10/17	THALLIUM-208	4.03	12.40	U	-5.63	pCi/L	REG	REG
ZBG011D	2/13/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG011D	2/13/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG011D	2/13/17	TRITIUM	0.45	1.03	J	0.47	pCi/mL	REG	REG
ZBG011D	8/10/17	TRITIUM	0.47	1.04	U	0.26	pCi/mL	REG	REG
ZBG012D	2/9/17	ACTINIUM-228	37.50	75.90	U	0.34	pCi/L	REG	REG
ZBG012D	8/8/17	ACTINIUM-228	15.60	54.60	U	5.25	pCi/L	REG	REG
ZBG012D	2/9/17	ANTIMONY-125	24.40	50.70	U	10.60	pCi/L	REG	REG
ZBG012D	8/8/17	ANTIMONY-125	9.55	20.80	U	-0.97	pCi/L	REG	REG
ZBG012D	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG

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ZBG012D	2/9/17	BISMUTH-214	22.80	48.20	U	8.74	pCi/L	REG	REG
ZBG012D	8/8/17	BISMUTH-214	6.88	24.30	U	4.39	pCi/L	REG	REG
ZBG012D	2/9/17	CESIUM-137	10.40	20.90	U	5.74	pCi/L	REG	REG
ZBG012D	8/8/17	CESIUM-137	3.77	7.75	U	1.61	pCi/L	REG	REG
ZBG012D	2/9/17	COBALT-60	8.58	18.10	U	-0.50	pCi/L	REG	REG
ZBG012D	8/8/17	COBALT-60	3.53	7.31	U	0.75	pCi/L	REG	REG
ZBG012D	2/9/17	GROSS ALPHA	2.34	6.28	U	2.05	pCi/L	REG	REG
ZBG012D	8/8/17	GROSS ALPHA	2.70	5.14	U	-0.03	pCi/L	REG	REG
ZBG012D	2/9/17	IODINE-129	0.71	1.55	U	-0.13	pCi/L	REG	REG
ZBG012D	2/9/17	IODINE-129	0.69	1.51	U	-0.08	pCi/L	REG	LD
ZBG012D	8/8/17	IODINE-129	0.60	1.99	J	0.89	pCi/L	REG	REG
ZBG012D	2/9/17	LEAD-212	17.80	39.10	U	-6.69	pCi/L	REG	REG
ZBG012D	8/8/17	LEAD-212	5.56	18.80	U	4.16	pCi/L	REG	REG
ZBG012D	2/9/17	LEAD-214	20.70	44.60	U	2.68	pCi/L	REG	REG
ZBG012D	8/8/17	LEAD-214	7.19	24.10	U	1.27	pCi/L	REG	REG
ZBG012D	8/8/17	NIOBIUM-94	3.28	7.06	U	-1.40	pCi/L	REG	REG
ZBG012D	2/9/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.07	mg/L	REG	REG
ZBG012D	8/8/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.33	mg/L	REG	LD
ZBG012D	8/8/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.32	mg/L	REG	REG
ZBG012D	2/9/17	NONVOLATILE BETA	4.01	8.45	U	0.01	pCi/L	REG	REG
ZBG012D	8/8/17	NONVOLATILE BETA	3.63	7.59	U	0.03	pCi/L	REG	REG
ZBG012D	2/9/17	POTASSIUM-40	85.80	278.00	U	49.60	pCi/L	REG	REG
ZBG012D	8/8/17	POTASSIUM-40	30.50	116.00	U	1.88	pCi/L	REG	REG
ZBG012D	2/9/17	RADIUM-226	0.06	0.12	U	0.01	pCi/L	REG	REG
ZBG012D	2/9/17	RADIUM-228	0.57	1.79	U	-0.10	pCi/L	REG	REG
ZBG012D	8/8/17	RUTHENIUM-106	31.00	68.20	U	-4.80	pCi/L	REG	REG
ZBG012D	2/9/17	TECHNETIUM-99	4.22	9.30	U	1.34	pCi/L	REG	REG
ZBG012D	8/8/17	TECHNETIUM-99	15.80	34.20	U	2.38	pCi/L	REG	REG
ZBG012D	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG012D	2/9/17	THALLIUM-208	10.30	22.00	U	-1.28	pCi/L	REG	REG
ZBG012D	8/8/17	THALLIUM-208	3.86	10.10	U	-1.36	pCi/L	REG	REG
ZBG012D	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG012D	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG

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ZBG012D	2/9/17	TRITIUM	0.52	1.26		1.68	pCi/mL	REG	REG
ZBG012D	8/8/17	TRITIUM	0.43	1.06		1.15	pCi/mL	REG	REG
ZBG013D	2/9/17	ACTINIUM-228	35.20	72.90	U	-9.45	pCi/L	REG	REG
ZBG013D	8/8/17	ACTINIUM-228	13.90	41.90	U	2.32	pCi/L	REG	REG
ZBG013D	2/9/17	ANTIMONY-125	21.90	46.70	U	0.78	pCi/L	REG	REG
ZBG013D	8/8/17	ANTIMONY-125	6.96	14.70	U	0.39	pCi/L	REG	REG
ZBG013D	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG013D	2/9/17	BISMUTH-214	20.20	43.20	U	2.96	pCi/L	REG	REG
ZBG013D	8/8/17	BISMUTH-214	6.42	18.70	U	-4.64	pCi/L	REG	REG
ZBG013D	2/9/17	CESIUM-137	8.61	18.60	U	-3.00	pCi/L	REG	REG
ZBG013D	8/8/17	CESIUM-137	3.80	9.52	U	-1.99	pCi/L	REG	REG
ZBG013D	2/9/17	COBALT-60	9.53	19.10	U	2.97	pCi/L	REG	REG
ZBG013D	8/8/17	COBALT-60	2.73	5.85	U	-0.83	pCi/L	REG	REG
ZBG013D	2/9/17	GROSS ALPHA	2.33	5.91	U	1.64	pCi/L	REG	REG
ZBG013D	8/8/17	GROSS ALPHA	2.32	5.10	U	1.14	pCi/L	REG	REG
ZBG013D	2/9/17	IODINE-129	0.71	1.54	U	0.17	pCi/L	REG	REG
ZBG013D	8/8/17	IODINE-129	0.64	1.51	U	0.07	pCi/L	REG	REG
ZBG013D	8/8/17	IODINE-129	0.62	2.14	U	0.14	pCi/L	REG	LD
ZBG013D	2/9/17	LEAD-212	19.20	41.10	U	4.63	pCi/L	REG	REG
ZBG013D	8/8/17	LEAD-212	6.16	17.40	U	1.37	pCi/L	REG	REG
ZBG013D	2/9/17	LEAD-214	19.60	42.80	U	-2.32	pCi/L	REG	REG
ZBG013D	8/8/17	LEAD-214	6.30	18.20	U	-5.90	pCi/L	REG	REG
ZBG013D	8/8/17	NIOBIUM-94	2.74	5.90	U	-0.11	pCi/L	REG	REG
ZBG013D	2/9/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.26	mg/L	REG	REG
ZBG013D	8/8/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.29	mg/L	REG	REG
ZBG013D	2/9/17	NONVOLATILE BETA	4.00	9.00	U	1.45	pCi/L	REG	REG
ZBG013D	8/8/17	NONVOLATILE BETA	2.96	6.52	U	1.68	pCi/L	REG	REG
ZBG013D	2/9/17	POTASSIUM-40	206.00	392.00	U	21.90	pCi/L	REG	REG
ZBG013D	8/8/17	POTASSIUM-40	42.90	108.00	U	-15.30	pCi/L	REG	REG
ZBG013D	2/9/17	RADIUM-226	0.02	0.07	J	0.02	pCi/L	REG	REG
ZBG013D	2/9/17	RADIUM-228	0.49	1.30	U	0.21	pCi/L	REG	REG
ZBG013D	8/8/17	RUTHENIUM-106	23.30	50.70	U	-7.47	pCi/L	REG	REG
ZBG013D	2/9/17	TECHNETIUM-99	4.20	9.19	U	0.09	pCi/L	REG	REG

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ZBG013D	8/8/17	TECHNETIUM-99	15.50	33.60	U	4.25	pCi/L	REG	REG
ZBG013D	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG013D	2/9/17	THALLIUM-208	11.40	24.30	U	-0.03	pCi/L	REG	REG
ZBG013D	8/8/17	THALLIUM-208	2.53	11.10	U	1.47	pCi/L	REG	REG
ZBG013D	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG013D	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG013D	2/9/17	TRITIUM	0.52	1.17	J	0.54	pCi/mL	REG	REG
ZBG013D	8/8/17	TRITIUM	0.43	0.97	U	0.38	pCi/mL	REG	REG
ZBG014D	2/13/17	ACTINIUM-228	35.40	78.30	U	-19.70	pCi/L	REG	REG
ZBG014D	8/10/17	ACTINIUM-228	17.90	52.50	R	20.90	pCi/L	REG	REG
ZBG014D	2/13/17	ANTIMONY-125	23.20	51.70	U	-8.12	pCi/L	REG	REG
ZBG014D	8/10/17	ANTIMONY-125	9.04	18.50	U	3.27	pCi/L	REG	REG
ZBG014D	2/13/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG014D	2/13/17	BISMUTH-214	22.30	45.50	U	11.10	pCi/L	REG	REG
ZBG014D	8/10/17	BISMUTH-214	8.32	23.20	U	-6.90	pCi/L	REG	REG
ZBG014D	2/13/17	CESIUM-137	9.86	20.50	U	1.91	pCi/L	REG	REG
ZBG014D	8/10/17	CESIUM-137	3.36	7.26	U	-0.85	pCi/L	REG	REG
ZBG014D	2/13/17	COBALT-60	9.00	18.50	U	0.45	pCi/L	REG	REG
ZBG014D	8/10/17	COBALT-60	3.79	7.95	U	-0.57	pCi/L	REG	REG
ZBG014D	2/13/17	GROSS ALPHA	2.34	2.63	U	-0.36	pCi/L	REG	REG
ZBG014D	8/10/17	GROSS ALPHA	1.90	3.69	U	-0.49	pCi/L	REG	REG
ZBG014D	2/13/17	IODINE-129	0.74	1.81	U	-0.32	pCi/L	REG	REG
ZBG014D	8/10/17	IODINE-129	0.64	1.39	U	-0.02	pCi/L	REG	REG
ZBG014D	2/13/17	LEAD-212	18.50	40.30	U	0.27	pCi/L	REG	REG
ZBG014D	8/10/17	LEAD-212	6.82	19.50	U	2.40	pCi/L	REG	REG
ZBG014D	2/13/17	LEAD-214	20.30	45.60	U	-12.10	pCi/L	REG	REG
ZBG014D	8/10/17	LEAD-214	8.13	21.30	U	2.94	pCi/L	REG	REG
ZBG014D	8/10/17	NIOBIUM-94	3.43	7.17	U	0.57	pCi/L	REG	REG
ZBG014D	2/13/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.43	mg/L	REG	REG
ZBG014D	8/10/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.43	mg/L	REG	REG
ZBG014D	2/13/17	NONVOLATILE BETA	3.95	8.58	U	0.62	pCi/L	REG	REG
ZBG014D	8/10/17	NONVOLATILE BETA	2.19	4.79	U	1.11	pCi/L	REG	REG
ZBG014D	2/13/17	POTASSIUM-40	177.00	339.00	U	-28.10	pCi/L	REG	REG

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ZBG014D	8/10/17	POTASSIUM-40	38.10	131.00	U	3.69	pCi/L	REG	REG
ZBG014D	2/13/17	RADIUM-226	0.05	0.10	U	0.01	pCi/L	REG	REG
ZBG014D	2/13/17	RADIUM-228	0.41	1.08	U	0.22	pCi/L	REG	REG
ZBG014D	8/10/17	RUTHENIUM-106	31.40	67.20	U	-4.13	pCi/L	REG	REG
ZBG014D	2/13/17	TECHNETIUM-99	4.16	9.09	U	0.14	pCi/L	REG	REG
ZBG014D	8/10/17	TECHNETIUM-99	19.80	42.00	U	-7.62	pCi/L	REG	REG
ZBG014D	2/13/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG014D	2/13/17	THALLIUM-208	11.00	23.40	U	-1.96	pCi/L	REG	REG
ZBG014D	8/10/17	THALLIUM-208	4.15	10.60	U	-2.83	pCi/L	REG	REG
ZBG014D	2/13/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG014D	2/13/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG014D	2/13/17	TRITIUM	0.45	1.04	J	0.66	pCi/mL	REG	REG
ZBG014D	8/10/17	TRITIUM	0.46	1.07	J	0.62	pCi/mL	REG	REG
ZBG015D	8/8/17	ACTINIUM-228	13.10	43.90	U	3.63	pCi/L	REG	REG
ZBG015D	2/14/17	ANTIMONY-125	11.80	23.20	U	4.38	pCi/L	REG	REG
ZBG015D	8/8/17	ANTIMONY-125	7.03	15.20	U	-1.90	pCi/L	REG	REG
ZBG015D	2/14/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG015D	8/8/17	BISMUTH-214	5.78	23.00	U	5.77	pCi/L	REG	REG
ZBG015D	2/14/17	CARBON-14	31.50	68.30	U	1.83	pCi/L	REG	REG
ZBG015D	8/8/17	CARBON-14	33.80	72.40	U	-5.33	pCi/L	REG	REG
ZBG015D	8/8/17	CESIUM-137	2.83	6.01	U	0.82	pCi/L	REG	REG
ZBG015D	8/8/17	COBALT-60	2.72	5.72	U	0.10	pCi/L	REG	REG
ZBG015D	2/14/17	GROSS ALPHA	2.60	5.18	U	0.27	pCi/L	REG	REG
ZBG015D	8/8/17	GROSS ALPHA	2.32	4.02	U	-0.60	pCi/L	REG	REG
ZBG015D	2/14/17	IODINE-129	0.68	1.80	U	0.53	pCi/L	REG	REG
ZBG015D	8/8/17	IODINE-129	0.69	1.50	U	-0.12	pCi/L	REG	REG
ZBG015D	8/8/17	LEAD-212	4.40	16.30	R	4.66	pCi/L	REG	REG
ZBG015D	8/8/17	LEAD-214	6.69	20.50	U	5.28	pCi/L	REG	REG
ZBG015D	2/14/17	NICKEL-59	6.52	12.30	U	1.74	pCi/L	REG	REG
ZBG015D	8/8/17	NICKEL-59	15.30	30.70	U	3.88	pCi/L	REG	REG
ZBG015D	2/14/17	NICKEL-63	22.90	48.90	U	-12.20	pCi/L	REG	REG
ZBG015D	8/8/17	NICKEL-63	34.80	76.40	U	19.80	pCi/L	REG	REG
ZBG015D	2/14/17	NIOBIUM-94	4.29	8.57	U	0.93	pCi/L	REG	REG

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ZBG015D	8/8/17	NIOBIUM-94	2.94	6.12	U	2.19	pCi/L	REG	REG
ZBG015D	2/14/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.70	mg/L	REG	REG
ZBG015D	8/8/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02		0.76	mg/L	REG	REG
ZBG015D	2/14/17	NONVOLATILE BETA	2.19	4.41	U	-0.06	pCi/L	REG	REG
ZBG015D	8/8/17	NONVOLATILE BETA	3.41	7.17	U	0.29	pCi/L	REG	REG
ZBG015D	2/14/17	PLUTONIUM-241	8.87	19.10	U	-3.89	pCi/L	REG	REG
ZBG015D	2/14/17	PLUTONIUM-241	8.46	18.10	U	-8.84	pCi/L	REG	LD
ZBG015D	8/8/17	PLUTONIUM-241	9.89	21.40	U	-1.62	pCi/L	REG	REG
ZBG015D	8/8/17	POTASSIUM-40	46.40	112.00	U	-15.40	pCi/L	REG	REG
ZBG015D	2/14/17	RADIUM-226	0.45	0.93	U	0.11	pCi/L	REG	REG
ZBG015D	2/14/17	RADIUM-228	0.67	1.47	U	0.36	pCi/L	REG	REG
ZBG015D	2/14/17	RUTHENIUM-106	33.40	69.40	U	-4.90	pCi/L	REG	REG
ZBG015D	8/8/17	RUTHENIUM-106	27.70	58.90	U	8.11	pCi/L	REG	REG
ZBG015D	2/14/17	STRONTIUM-90	4.79	9.55	U	-0.83	pCi/L	REG	REG
ZBG015D	8/8/17	STRONTIUM-90	4.55	8.97	U	-0.87	pCi/L	REG	REG
ZBG015D	8/8/17	STRONTIUM-90	4.01	8.63	U	1.53	pCi/L	REG	LD
ZBG015D	2/14/17	TECHNETIUM-99	15.20	31.70	U	-2.49	pCi/L	REG	REG
ZBG015D	8/8/17	TECHNETIUM-99	15.90	34.60	U	5.97	pCi/L	REG	REG
ZBG015D	2/14/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG015D	8/8/17	THALLIUM-208	3.61	10.20	U	-0.76	pCi/L	REG	REG
ZBG015D	2/14/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG015D	2/14/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG015D	2/14/17	TRITIUM	0.51	1.36		3.03	pCi/mL	REG	REG
ZBG015D	8/8/17	TRITIUM	0.43	1.26		3.03	pCi/mL	REG	REG
ZBG016C	2/9/17	ACTINIUM-228	39.60	85.10	U	-9.92	pCi/L	REG	REG
ZBG016C	8/8/17	ACTINIUM-228	14.60	40.40	U	-14.80	pCi/L	REG	REG
ZBG016C	2/9/17	ANTIMONY-125	25.20	54.50	U	1.07	pCi/L	REG	REG
ZBG016C	8/8/17	ANTIMONY-125	8.35	18.30	U	-3.00	pCi/L	REG	REG
ZBG016C	2/9/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG016C	2/9/17	BISMUTH-214	24.60	50.50	U	13.20	pCi/L	REG	REG
ZBG016C	8/8/17	BISMUTH-214	7.16	25.70	U	4.36	pCi/L	REG	REG
ZBG016C	2/9/17	CESIUM-137	10.20	21.00	U	3.08	pCi/L	REG	REG
ZBG016C	8/8/17	CESIUM-137	3.52	7.40	U	1.32	pCi/L	REG	REG

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ZBG016C	2/9/17	COBALT-60	9.15	19.10	U	-0.66	pCi/L	REG	REG
ZBG016C	8/8/17	COBALT-60	3.60	7.54	U	-0.07	pCi/L	REG	REG
ZBG016C	2/9/17	GROSS ALPHA	2.20	4.82	U	0.79	pCi/L	REG	REG
ZBG016C	8/8/17	GROSS ALPHA	2.04	4.70	U	1.38	pCi/L	REG	REG
ZBG016C	2/9/17	IODINE-129	0.74	1.71	U	0.58	pCi/L	REG	REG
ZBG016C	8/8/17	IODINE-129	0.67	1.44	U	0.36	pCi/L	REG	REG
ZBG016C	2/9/17	LEAD-212	19.00	41.30	U	0.98	pCi/L	REG	REG
ZBG016C	8/8/17	LEAD-212	6.69	20.90	U	3.46	pCi/L	REG	REG
ZBG016C	2/9/17	LEAD-214	22.10	54.50	U	15.00	pCi/L	REG	REG
ZBG016C	8/8/17	LEAD-214	8.10	27.20	U	8.09	pCi/L	REG	REG
ZBG016C	8/8/17	NIOBIUM-94	3.22	6.84	U	0.94	pCi/L	REG	REG
ZBG016C	2/9/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02	U	0.02	mg/L	REG	REG
ZBG016C	8/8/17	NITRATE-NITRITE AS NITROGEN	0.01	0.02	U	0.02	mg/L	REG	REG
ZBG016C	2/9/17	NONVOLATILE BETA	3.96	9.67	U	3.59	pCi/L	REG	REG
ZBG016C	8/8/17	NONVOLATILE BETA	2.12	3.83	U	-0.99	pCi/L	REG	REG
ZBG016C	2/9/17	POTASSIUM-40	182.00	354.00	U	-48.80	pCi/L	REG	REG
ZBG016C	8/8/17	POTASSIUM-40	45.50	122.00	U	3.28	pCi/L	REG	REG
ZBG016C	2/9/17	RADIUM-226	0.02	0.08	J	0.03	pCi/L	REG	REG
ZBG016C	2/9/17	RADIUM-226	0.07	0.14	U	0.01	pCi/L	REG	LD
ZBG016C	2/9/17	RADIUM-228	0.47	1.64	U	0.38	pCi/L	REG	LD
ZBG016C	2/9/17	RADIUM-228	0.51	1.79	U	0.33	pCi/L	REG	REG
ZBG016C	8/8/17	RUTHENIUM-106	29.60	65.20	U	-8.34	pCi/L	REG	REG
ZBG016C	2/9/17	TECHNETIUM-99	4.21	9.25	U	0.81	pCi/L	REG	REG
ZBG016C	8/8/17	TECHNETIUM-99	16.00	34.90	U	7.64	pCi/L	REG	REG
ZBG016C	2/9/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG016C	2/9/17	THALLIUM-208	11.10	23.60	U	-0.91	pCi/L	REG	REG
ZBG016C	8/8/17	THALLIUM-208	3.14	13.10	U	2.87	pCi/L	REG	REG
ZBG016C	2/9/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG016C	2/9/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG016C	2/9/17	TRITIUM	0.51	1.26		1.74	pCi/mL	REG	REG
ZBG016C	8/8/17	TRITIUM	0.43	1.11		1.51	pCi/mL	REG	REG
ZBG017D	4/18/17	ACTINIUM-228	17.50	36.80	U	-7.06	pCi/L	REG	LD
ZBG017D	4/18/17	ACTINIUM-228	17.50	36.80	U	-7.06	pCi/L	REG	LD

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ZBG017D	4/18/17	ACTINIUM-228	16.70	35.90	U	-0.68	pCi/L	REG	REG
ZBG017D	8/10/17	ACTINIUM-228	20.70	69.70	U	8.57	pCi/L	REG	REG
ZBG017D	8/10/17	ACTINIUM-228	20.70	56.90	U	2.43	pCi/L	REG	LD
ZBG017D	4/18/17	ANTIMONY-125	10.70	22.60	U	-3.05	pCi/L	REG	REG
ZBG017D	4/18/17	ANTIMONY-125	8.78	19.00	U	-4.65	pCi/L	REG	LD
ZBG017D	4/18/17	ANTIMONY-125	8.78	19.00	U	-4.65	pCi/L	REG	LD
ZBG017D	8/10/17	ANTIMONY-125	11.20	23.90	U	-1.73	pCi/L	REG	REG
ZBG017D	8/10/17	ANTIMONY-125	11.30	24.80	U	-4.40	pCi/L	REG	LD
ZBG017D	4/18/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG017D	8/10/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG017D	4/18/17	BISMUTH-214	7.35	33.40		108.00	pCi/L	REG	REG
ZBG017D	4/18/17	BISMUTH-214	6.80	33.20		82.20	pCi/L	REG	LD
ZBG017D	4/18/17	BISMUTH-214	6.80	33.20		82.20	pCi/L	REG	LD
ZBG017D	8/10/17	BISMUTH-214	8.67	33.50		70.60	pCi/L	REG	LD
ZBG017D	8/10/17	BISMUTH-214	8.64	35.40		83.40	pCi/L	REG	REG
ZBG017D	4/18/17	CESIUM-137	4.43	8.51	U	2.59	pCi/L	REG	REG
ZBG017D	4/18/17	CESIUM-137	4.08	8.12	U	0.71	pCi/L	REG	LD
ZBG017D	4/18/17	CESIUM-137	4.08	8.12	U	0.71	pCi/L	REG	LD
ZBG017D	8/10/17	CESIUM-137	4.34	9.08	U	0.68	pCi/L	REG	REG
ZBG017D	8/10/17	CESIUM-137	4.32	9.10	U	-0.51	pCi/L	REG	LD
ZBG017D	4/18/17	COBALT-60	4.87	10.10	U	-1.33	pCi/L	REG	LD
ZBG017D	4/18/17	COBALT-60	4.87	10.10	U	-1.33	pCi/L	REG	LD
ZBG017D	4/18/17	COBALT-60	5.41	10.50	U	1.18	pCi/L	REG	REG
ZBG017D	8/10/17	COBALT-60	5.13	10.40	U	0.41	pCi/L	REG	REG
ZBG017D	8/10/17	COBALT-60	4.26	8.94	U	0.01	pCi/L	REG	LD
ZBG017D	4/18/17	GROSS ALPHA	2.77	6.19	U	1.58	pCi/L	REG	REG
ZBG017D	8/10/17	GROSS ALPHA	2.09	4.31	U	0.57	pCi/L	REG	REG
ZBG017D	4/18/17	IODINE-129	0.72	1.53	U	0.14	pCi/L	REG	REG
ZBG017D	4/18/17	IODINE-129	0.68	1.54	U	-0.17	pCi/L	REG	LD
ZBG017D	4/18/17	IODINE-129	0.68	1.54	U	-0.17	pCi/L	REG	LD
ZBG017D	8/10/17	IODINE-129	0.72	1.55	U	0.06	pCi/L	REG	LD
ZBG017D	8/10/17	IODINE-129	0.70	1.62	U	0.39	pCi/L	REG	REG
ZBG017D	4/18/17	LEAD-212	8.89	18.70	U	2.87	pCi/L	REG	REG

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ZBG017D	4/18/17	LEAD-212	8.57	19.40	U	-2.36	pCi/L	REG	LD
ZBG017D	4/18/17	LEAD-212	8.57	19.40	U	-2.36	pCi/L	REG	LD
ZBG017D	8/10/17	LEAD-212	9.01	23.30	U	-3.14	pCi/L	REG	REG
ZBG017D	8/10/17	LEAD-212	6.82	20.90	U	4.23	pCi/L	REG	LD
ZBG017D	4/18/17	LEAD-214	26.10	55.70		98.70	pCi/L	REG	REG
ZBG017D	4/18/17	LEAD-214	9.17	38.20		76.10	pCi/L	REG	LD
ZBG017D	4/18/17	LEAD-214	9.17	38.20		76.10	pCi/L	REG	LD
ZBG017D	8/10/17	LEAD-214	21.80	50.80		97.00	pCi/L	REG	REG
ZBG017D	8/10/17	LEAD-214	9.36	35.80		86.10	pCi/L	REG	LD
ZBG017D	4/18/17	NIOBIUM-94	3.94	8.38	U	0.40	pCi/L	REG	LD
ZBG017D	4/18/17	NIOBIUM-94	3.57	7.37	U	-0.15	pCi/L	REG	REG
ZBG017D	4/18/17	NIOBIUM-94	3.94	8.38	U	0.40	pCi/L	REG	LD
ZBG017D	8/10/17	NIOBIUM-94	4.59	9.55	U	1.54	pCi/L	REG	REG
ZBG017D	8/10/17	NIOBIUM-94	4.06	8.66	U	-1.15	pCi/L	REG	LD
ZBG017D	4/18/17	NITRATE-NITRITE AS NITROGEN	0.09	0.25		0.76	mg/L	REG	REG
ZBG017D	4/18/17	NITRATE-NITRITE AS NITROGEN	0.09	0.25		0.76	mg/L	REG	LD
ZBG017D	8/10/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		0.72	mg/L	REG	REG
ZBG017D	4/18/17	NONVOLATILE BETA	3.20	8.06	J	7.07	pCi/L	REG	REG
ZBG017D	8/10/17	NONVOLATILE BETA	3.37	7.29	U	1.29	pCi/L	REG	REG
ZBG017D	4/18/17	POTASSIUM-40	36.80	110.00	U	17.40	pCi/L	REG	LD
ZBG017D	4/18/17	POTASSIUM-40	36.80	110.00	U	17.40	pCi/L	REG	LD
ZBG017D	4/18/17	POTASSIUM-40	53.20	105.00	U	-5.29	pCi/L	REG	REG
ZBG017D	8/10/17	POTASSIUM-40	48.20	183.00	U	47.30	pCi/L	REG	REG
ZBG017D	8/10/17	POTASSIUM-40	52.90	125.00	U	-24.40	pCi/L	REG	LD
ZBG017D	4/18/17	RADIUM-226	0.53	1.24	U	0.47	pCi/L	REG	LD
ZBG017D	4/18/17	RADIUM-226	0.53	1.24	U	0.47	pCi/L	REG	LD
ZBG017D	4/18/17	RADIUM-226	0.60	1.48	J	0.71	pCi/L	REG	REG
ZBG017D	8/10/17	RADIUM-226	0.02	0.16		0.23	pCi/L	REG	REG
ZBG017D	4/18/17	RADIUM-228	0.88	1.94	U	0.51	pCi/L	REG	REG
ZBG017D	8/10/17	RADIUM-228	0.54	2.05	U	0.21	pCi/L	REG	REG
ZBG017D	4/18/17	RUTHENIUM-106	37.10	75.50	U	2.64	pCi/L	REG	LD
ZBG017D	4/18/17	RUTHENIUM-106	32.20	64.40	U	3.52	pCi/L	REG	REG
ZBG017D	4/18/17	RUTHENIUM-106	37.10	75.50	U	2.64	pCi/L	REG	LD

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ZBG017D	8/10/17	RUTHENIUM-106	40.00	82.00	U	32.70	pCi/L	REG	LD
ZBG017D	8/10/17	RUTHENIUM-106	35.80	88.20	U	28.80	pCi/L	REG	REG
ZBG017D	4/18/17	TECHNETIUM-99	8.11	17.70	U	1.88	pCi/L	REG	REG
ZBG017D	8/10/17	TECHNETIUM-99	18.90	40.10	U	-8.84	pCi/L	REG	REG
ZBG017D	8/10/17	TECHNETIUM-99	20.60	44.20	U	-1.99	pCi/L	REG	LD
ZBG017D	4/18/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG017D	8/10/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG017D	4/18/17	THALLIUM-208	4.10	11.10	U	3.42	pCi/L	REG	LD
ZBG017D	4/18/17	THALLIUM-208	4.10	11.10	U	3.42	pCi/L	REG	LD
ZBG017D	4/18/17	THALLIUM-208	4.73	10.90	U	-3.96	pCi/L	REG	REG
ZBG017D	8/10/17	THALLIUM-208	4.82	13.00	U	-2.78	pCi/L	REG	LD
ZBG017D	8/10/17	THALLIUM-208	5.48	13.70	U	-0.12	pCi/L	REG	REG
ZBG017D	4/18/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG017D	8/10/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG017D	4/18/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG017D	8/10/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG017D	4/18/17	TRITIUM	0.51	1.30		1.33	pCi/mL	REG	REG
ZBG017D	4/18/17	TRITIUM	0.51	1.29	J	1.19	pCi/mL	REG	LD
ZBG017D	4/18/17	TRITIUM	0.51	1.29	J	1.19	pCi/mL	REG	LD
ZBG017D	8/10/17	TRITIUM	0.46	1.10	J	0.92	pCi/mL	REG	REG
ZBG018D	4/19/17	ACTINIUM-228	25.10	49.90	U	5.12	pCi/L	REG	REG
ZBG018D	8/10/17	ACTINIUM-228	20.10	50.30	U	-5.89	pCi/L	REG	REG
ZBG018D	4/19/17	ANTIMONY-125	11.50	24.30	U	1.06	pCi/L	REG	REG
ZBG018D	8/10/17	ANTIMONY-125	10.00	21.40	U	-0.47	pCi/L	REG	REG
ZBG018D	4/19/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG018D	8/10/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG018D	4/19/17	BISMUTH-214	9.54	34.90		62.30	pCi/L	REG	REG
ZBG018D	8/10/17	BISMUTH-214	7.96	35.00		75.60	pCi/L	REG	REG
ZBG018D	4/19/17	CESIUM-137	4.30	9.50	U	-0.24	pCi/L	REG	REG
ZBG018D	8/10/17	CESIUM-137	4.26	9.34	U	1.81	pCi/L	REG	REG
ZBG018D	4/19/17	COBALT-60	5.56	9.68	U	2.34	pCi/L	REG	REG
ZBG018D	8/10/17	COBALT-60	4.31	9.37	U	-1.47	pCi/L	REG	REG
ZBG018D	4/19/17	GROSS ALPHA	2.78	5.70	U	0.38	pCi/L	REG	LD

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ZBG018D	4/19/17	GROSS ALPHA	2.78	5.70	U	0.38	pCi/L	REG	LD
ZBG018D	4/19/17	GROSS ALPHA	2.51	4.93	U	0.32	pCi/L	REG	REG
ZBG018D	8/10/17	GROSS ALPHA	2.78	5.96	U	1.10	pCi/L	REG	REG
ZBG018D	4/19/17	IODINE-129	0.57	1.85	U	0.13	pCi/L	REG	REG
ZBG018D	8/10/17	IODINE-129	0.73	1.57	U	0.15	pCi/L	REG	REG
ZBG018D	4/19/17	LEAD-212	9.61	21.40	U	-0.70	pCi/L	REG	REG
ZBG018D	8/10/17	LEAD-212	6.33	20.10	U	4.01	pCi/L	REG	REG
ZBG018D	4/19/17	LEAD-214	28.30	60.10		79.90	pCi/L	REG	REG
ZBG018D	8/10/17	LEAD-214	8.14	34.10		77.80	pCi/L	REG	REG
ZBG018D	4/19/17	NIOBIUM-94	4.65	9.55	U	0.16	pCi/L	REG	REG
ZBG018D	8/10/17	NIOBIUM-94	3.81	8.45	U	-1.21	pCi/L	REG	REG
ZBG018D	4/19/17	NITRATE-NITRITE AS NITROGEN	0.09	0.25		0.74	mg/L	REG	REG
ZBG018D	8/10/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		0.40	mg/L	REG	REG
ZBG018D	4/19/17	NONVOLATILE BETA	1.94	4.34	U	1.11	pCi/L	REG	REG
ZBG018D	4/19/17	NONVOLATILE BETA	1.81	3.71	U	-0.05	pCi/L	REG	LD
ZBG018D	4/19/17	NONVOLATILE BETA	1.81	3.71	U	-0.05	pCi/L	REG	LD
ZBG018D	8/10/17	NONVOLATILE BETA	3.41	6.79	U	-1.47	pCi/L	REG	REG
ZBG018D	4/19/17	POTASSIUM-40	72.90	143.00	U	22.20	pCi/L	REG	REG
ZBG018D	8/10/17	POTASSIUM-40	61.60	146.00	U	-22.80	pCi/L	REG	REG
ZBG018D	4/19/17	RADIUM-226	0.33	0.79	U	0.24	pCi/L	REG	REG
ZBG018D	8/10/17	RADIUM-226	0.02	0.11	J	0.08	pCi/L	REG	REG
ZBG018D	4/19/17	RADIUM-228	0.77	1.70	U	0.44	pCi/L	REG	REG
ZBG018D	8/10/17	RADIUM-228	0.59	1.53	U	0.10	pCi/L	REG	REG
ZBG018D	4/19/17	RUTHENIUM-106	40.10	85.10	U	-8.72	pCi/L	REG	REG
ZBG018D	8/10/17	RUTHENIUM-106	38.60	82.80	U	2.53	pCi/L	REG	REG
ZBG018D	4/19/17	TECHNETIUM-99	7.91	17.30	U	3.27	pCi/L	REG	REG
ZBG018D	8/10/17	TECHNETIUM-99	22.10	46.30	U	-16.30	pCi/L	REG	REG
ZBG018D	4/19/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG018D	8/10/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG018D	4/19/17	THALLIUM-208	6.00	13.20	U	-2.84	pCi/L	REG	REG
ZBG018D	8/10/17	THALLIUM-208	5.07	13.90	U	-3.63	pCi/L	REG	REG
ZBG018D	4/19/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG018D	8/10/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG

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ZBG018D	4/19/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG018D	8/10/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG018D	4/19/17	TRITIUM	0.51	1.39		2.00	pCi/mL	REG	REG
ZBG018D	8/10/17	TRITIUM	0.47	1.14		1.22	pCi/mL	REG	REG
ZBG019D	4/20/17	ACTINIUM-228	20.90	43.50	U	-5.94	pCi/L	REG	REG
ZBG019D	8/10/17	ACTINIUM-228	17.60	47.80	U	-10.10	pCi/L	REG	REG
ZBG019D	4/20/17	ANTIMONY-125	13.40	28.50	U	-3.53	pCi/L	REG	REG
ZBG019D	8/10/17	ANTIMONY-125	10.20	36.80	U	4.42	pCi/L	REG	REG
ZBG019D	4/20/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG019D	8/10/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG019D	4/20/17	BISMUTH-214	9.82	44.00		153.00	pCi/L	REG	REG
ZBG019D	8/10/17	BISMUTH-214	8.29	35.10		127.00	pCi/L	REG	REG
ZBG019D	4/20/17	CESIUM-137	5.53	13.50	U	2.78	pCi/L	REG	REG
ZBG019D	8/10/17	CESIUM-137	3.47	7.91	U	-2.88	pCi/L	REG	REG
ZBG019D	4/20/17	COBALT-60	5.16	10.40	U	0.00	pCi/L	REG	REG
ZBG019D	8/10/17	COBALT-60	4.50	9.60	U	-0.88	pCi/L	REG	REG
ZBG019D	4/20/17	GROSS ALPHA	2.78	5.60	U	0.45	pCi/L	REG	REG
ZBG019D	8/10/17	GROSS ALPHA	2.63	5.49	U	0.73	pCi/L	REG	LD
ZBG019D	8/10/17	GROSS ALPHA	2.77	5.33	U	-0.02	pCi/L	REG	REG
ZBG019D	4/20/17	IODINE-129	0.75	1.52	U	-0.14	pCi/L	REG	REG
ZBG019D	8/10/17	IODINE-129	0.56	1.95	J	0.90	pCi/L	REG	REG
ZBG019D	4/20/17	LEAD-212	8.99	25.80	U	5.91	pCi/L	REG	REG
ZBG019D	8/10/17	LEAD-212	6.14	22.10	J	11.70	pCi/L	REG	REG
ZBG019D	4/20/17	LEAD-214	35.60	73.00		174.00	pCi/L	REG	REG
ZBG019D	8/10/17	LEAD-214	8.53	35.50		152.00	pCi/L	REG	REG
ZBG019D	4/20/17	NIOBIUM-94	4.68	9.46	U	1.06	pCi/L	REG	REG
ZBG019D	8/10/17	NIOBIUM-94	3.69	7.81	U	0.43	pCi/L	REG	REG
ZBG019D	4/20/17	NITRATE-NITRITE AS NITROGEN	0.17	0.50		5.74	mg/L	REG	REG
ZBG019D	8/10/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		4.03	mg/L	REG	REG
ZBG019D	4/20/17	NONVOLATILE BETA	2.30	4.92	U	0.68	pCi/L	REG	REG
ZBG019D	8/10/17	NONVOLATILE BETA	1.94	4.28	U	1.01	pCi/L	REG	LD
ZBG019D	8/10/17	NONVOLATILE BETA	3.70	7.78	U	0.20	pCi/L	REG	REG
ZBG019D	4/20/17	POTASSIUM-40	44.20	123.00	U	9.95	pCi/L	REG	REG

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ZBG019D	8/10/17	POTASSIUM-40	49.10	140.00	U	39.90	pCi/L	REG	REG
ZBG019D	4/20/17	RADIUM-226	0.29	1.12		1.13	pCi/L	REG	REG
ZBG019D	8/10/17	RADIUM-226	0.05	0.28		0.48	pCi/L	REG	REG
ZBG019D	4/20/17	RADIUM-228	0.68	1.53	U	0.48	pCi/L	REG	LD
ZBG019D	4/20/17	RADIUM-228	0.68	1.53	U	0.48	pCi/L	REG	LD
ZBG019D	4/20/17	RADIUM-228	0.51	1.16	U	0.42	pCi/L	REG	REG
ZBG019D	8/10/17	RADIUM-228	0.58	1.49	U	0.01	pCi/L	REG	REG
ZBG019D	4/20/17	RUTHENIUM-106	43.00	82.20	U	23.00	pCi/L	REG	REG
ZBG019D	8/10/17	RUTHENIUM-106	34.40	73.20	U	-0.05	pCi/L	REG	REG
ZBG019D	4/20/17	TECHNETIUM-99	8.45	18.40	U	0.76	pCi/L	REG	REG
ZBG019D	8/10/17	TECHNETIUM-99	20.40	43.20	U	-9.84	pCi/L	REG	REG
ZBG019D	4/20/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG019D	8/10/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG019D	4/20/17	THALLIUM-208	4.02	21.40	R	9.25	pCi/L	REG	REG
ZBG019D	8/10/17	THALLIUM-208	4.76	13.00	U	-2.93	pCi/L	REG	REG
ZBG019D	4/20/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG019D	8/10/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG019D	4/20/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG019D	8/10/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG019D	4/20/17	TRITIUM	0.52	1.30	J	1.26	pCi/mL	REG	REG
ZBG019D	8/10/17	TRITIUM	0.46	1.13		1.13	pCi/mL	REG	REG
ZBG020D	5/8/17	ACTINIUM-228	10.90	29.40	U	-1.74	pCi/L	REG	REG
ZBG020D	5/8/17	ACTINIUM-228	10.30	24.80	U	-6.54	pCi/L	REG	LD
ZBG020D	8/8/17	ACTINIUM-228	17.60	50.20	U	4.76	pCi/L	REG	REG
ZBG020D	5/8/17	ANTIMONY-125	6.38	13.90	U	-2.80	pCi/L	REG	REG
ZBG020D	5/8/17	ANTIMONY-125	6.49	15.90	U	-6.17	pCi/L	REG	LD
ZBG020D	8/8/17	ANTIMONY-125	10.10	21.10	U	3.12	pCi/L	REG	REG
ZBG020D	5/8/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG020D	8/8/17	BENZENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG020D	5/8/17	BISMUTH-214	4.54	21.10		65.00	pCi/L	REG	LD
ZBG020D	5/8/17	BISMUTH-214	4.82	21.60		58.80	pCi/L	REG	REG
ZBG020D	8/8/17	BISMUTH-214	10.70	29.30	U	1.14	pCi/L	REG	REG
ZBG020D	8/8/17	CARBON-14	34.00	73.00	U	-2.03	pCi/L	REG	REG

WELL	DATE	ANALYTE	MDL	PQL	QUALIFIER	RESULT	UNITS	SAMPLE TYPE	ANALYSIS CODE
ZBG020D	5/8/17	CESIUM-137	2.70	5.66	U	0.58	pCi/L	REG	REG
ZBG020D	5/8/17	CESIUM-137	3.34	7.76	U	-2.01	pCi/L	REG	LD
ZBG020D	8/8/17	CESIUM-137	3.66	7.70	U	0.71	pCi/L	REG	REG
ZBG020D	5/8/17	COBALT-60	2.61	6.93	U	0.86	pCi/L	REG	LD
ZBG020D	5/8/17	COBALT-60	2.21	4.37	U	0.54	pCi/L	REG	REG
ZBG020D	8/8/17	COBALT-60	4.31	8.61	U	1.68	pCi/L	REG	REG
ZBG020D	5/8/17	GROSS ALPHA	1.94	4.36	U	1.07	pCi/L	REG	LD
ZBG020D	5/8/17	GROSS ALPHA	2.00	3.72	U	0.10	pCi/L	REG	REG
ZBG020D	8/8/17	GROSS ALPHA	2.80	5.10	U	-0.99	pCi/L	REG	REG
ZBG020D	5/8/17	IODINE-129	0.33	0.98	U	-0.29	pCi/L	REG	LD
ZBG020D	5/8/17	IODINE-129	1.36	2.48	U	-0.11	pCi/L	REG	REG
ZBG020D	8/8/17	IODINE-129	0.69	1.58	U	0.28	pCi/L	REG	REG
ZBG020D	5/8/17	LEAD-212	4.19	13.40	U	3.19	pCi/L	REG	LD
ZBG020D	5/8/17	LEAD-212	4.09	12.20	U	1.91	pCi/L	REG	REG
ZBG020D	8/8/17	LEAD-212	6.72	23.90	U	0.25	pCi/L	REG	REG
ZBG020D	5/8/17	LEAD-214	4.93	22.00		62.70	pCi/L	REG	LD
ZBG020D	5/8/17	LEAD-214	12.80	32.40		69.60	pCi/L	REG	REG
ZBG020D	8/8/17	LEAD-214	7.85	32.30	U	7.27	pCi/L	REG	REG
ZBG020D	8/8/17	NICKEL-59	9.72	21.40	U	-4.23	pCi/L	REG	REG
ZBG020D	8/8/17	NICKEL-63	29.20	63.80	U	14.20	pCi/L	REG	REG
ZBG020D	5/8/17	NIOBIUM-94	2.50	5.10	U	1.11	pCi/L	REG	LD
ZBG020D	5/8/17	NIOBIUM-94	2.32	4.74	U	1.24	pCi/L	REG	REG
ZBG020D	8/8/17	NIOBIUM-94	3.62	7.48	U	1.92	pCi/L	REG	REG
ZBG020D	5/8/17	NITRATE-NITRITE AS NITROGEN	0.02	0.05		0.63	mg/L	REG	REG
ZBG020D	5/8/17	NITRATE-NITRITE AS NITROGEN	0.02	0.05		0.63	mg/L	REG	LD
ZBG020D	8/8/17	NITRATE-NITRITE AS NITROGEN	0.08	0.20		1.65	mg/L	REG	REG
ZBG020D	5/8/17	NONVOLATILE BETA	3.10	8.72		13.30	pCi/L	REG	REG
ZBG020D	5/8/17	NONVOLATILE BETA	2.93	8.75		15.00	pCi/L	REG	LD
ZBG020D	8/8/17	NONVOLATILE BETA	1.97	10.60		51.90	pCi/L	REG	REG
ZBG020D	8/8/17	PLUTONIUM-241	11.30	24.40	U	-2.99	pCi/L	REG	REG
ZBG020D	5/8/17	POTASSIUM-40	24.30	89.10	U	7.85	pCi/L	REG	LD
ZBG020D	5/8/17	POTASSIUM-40	21.20	92.60	R	80.90	pCi/L	REG	REG
ZBG020D	8/8/17	POTASSIUM-40	64.20	164.00	U	-43.80	pCi/L	REG	REG

WELL	DATE	ANALYTE	MDL	PQL	QUALIFIER	RESULT	UNITS	SAMPLE TYPE	ANALYSIS CODE
ZBG020D	5/8/17	RADIUM-226	0.31	0.79	J	0.46	pCi/L	REG	LD
ZBG020D	5/8/17	RADIUM-226	0.16	0.54	J	0.38	pCi/L	REG	REG
ZBG020D	8/8/17	RADIUM-226	0.05	0.15	J	0.06	pCi/L	REG	REG
ZBG020D	5/8/17	RADIUM-228	0.70	1.56	U	0.51	pCi/L	REG	REG
ZBG020D	5/8/17	RADIUM-228	0.42	0.87	U	0.05	pCi/L	REG	LD
ZBG020D	8/8/17	RADIUM-228	0.60	1.87	U	-0.09	pCi/L	REG	REG
ZBG020D	5/8/17	RUTHENIUM-106	22.40	47.00	U	4.25	pCi/L	REG	REG
ZBG020D	5/8/17	RUTHENIUM-106	23.00	49.00	U	-2.69	pCi/L	REG	LD
ZBG020D	8/8/17	RUTHENIUM-106	30.00	64.60	U	-5.85	pCi/L	REG	REG
ZBG020D	5/8/17	STRONTIUM-90	3.45	7.67	U	2.09	pCi/L	REG	LD
ZBG020D	5/8/17	STRONTIUM-90	2.85	5.21	U	-1.40	pCi/L	REG	REG
ZBG020D	8/8/17	STRONTIUM-90	5.01	10.30	U	0.21	pCi/L	REG	REG
ZBG020D	5/8/17	TECHNETIUM-99	6.90	15.80		24.90	pCi/L	REG	REG
ZBG020D	5/8/17	TECHNETIUM-99	7.22	16.80		32.70	pCi/L	REG	LD
ZBG020D	8/8/17	TECHNETIUM-99	16.70	43.70		126.00	pCi/L	REG	REG
ZBG020D	5/8/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG020D	8/8/17	TETRACHLOROETHYLENE (PCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG020D	5/8/17	THALLIUM-208	2.27	9.25	R	2.47	pCi/L	REG	REG
ZBG020D	5/8/17	THALLIUM-208	2.71	7.41	U	2.03	pCi/L	REG	LD
ZBG020D	8/8/17	THALLIUM-208	4.95	12.70	U	-0.14	pCi/L	REG	REG
ZBG020D	5/8/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG020D	8/8/17	TOLUENE	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG020D	5/8/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG020D	8/8/17	TRICHLOROETHYLENE (TCE)	0.33	1.00	U	1.00	µg/L	REG	REG
ZBG020D	5/8/17	TRITIUM	0.59	1.39	J	0.79	pCi/mL	REG	REG
ZBG020D	5/8/17	TRITIUM	0.60	1.38	J	0.70	pCi/mL	REG	LD
ZBG020D	8/8/17	TRITIUM	0.43	1.09		1.38	pCi/mL	REG	REG

Table 2 Notes:

FD	Field Duplicate Sample
LD	Laboratory Duplicate Quality Control (QC) Analysis
MDL	Method Detection Limit
µg/L	micrograms per liter
mg/L	milligrams per liter
pCi/L	picocuries per liter
pCi/mL	picocuries per milliliter
PQL	Practical Quantitation Limit
QUALIFIER	United States Environmental Protection Agency (USEPA) Functional Guideline Codes applied by labs.
REG	Regular Sample; Regular Laboratory Analysis of Sample
RERUN	Requested Reanalysis of Original Sample

USEPA Functional Guideline Codes

- J The detected analyte was positively identified but the result is approximate.
- NJ The detected analyte was only tentatively identified and the result is approximate. All usable TIC results receive this code.
- U The analyte was analyzed for, but not detected. The sample detection and quantitation limits (MDL & PQL) are valid unless blank contamination is indicated.
- UJ The analyte was analyzed for, but not detected. The MDL & PQL are approximate, and may be inaccurate or imprecise.
- R The sample result is rejected as unusable due to serious deficiencies in meeting quality control criteria. The analyte may be present or absent.
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Table 3. Field Measurements for Saltstone Wells (2017)

WELL	DATE	ANALYTE	VALUE	UNITS
ZBG 1	2/9/17	AIR TEMPERATURE	11.10	°C
ZBG 1	8/8/17	AIR TEMPERATURE	28.80	°C
ZBG 1	2/9/17	FLOW RATE	1.00	gpm
ZBG 1	8/8/17	FLOW RATE	1.00	gpm
ZBG 1	2/9/17	PH	4.60	pH
ZBG 1	8/8/17	PH	5.30	pH
ZBG 1	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 1	8/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 1	2/9/17	SPECIFIC CONDUCTANCE	31.00	µS/cm
ZBG 1	8/8/17	SPECIFIC CONDUCTANCE	29.00	µS/cm
ZBG 1	2/9/17	TOTAL ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 1	8/8/17	TOTAL ALKALINITY (AS CaCO ₃)	5.00	mg/L
ZBG 1	2/9/17	TURBIDITY	0.20	NTU
ZBG 1	8/8/17	TURBIDITY	1.20	NTU
ZBG 1	2/9/17	VOLUME PURGED	21.00	gal
ZBG 1	8/8/17	VOLUME PURGED	22.00	gal
ZBG 1	2/9/17	WATER TEMPERATURE	20.30	°C
ZBG 1	8/8/17	WATER TEMPERATURE	21.60	°C
ZBG 3	2/14/17	AIR TEMPERATURE	12.80	°C
ZBG 3	8/7/17	AIR TEMPERATURE	28.70	°C
ZBG 3	2/14/17	FLOW RATE	0.20	gpm
ZBG 3	8/7/17	FLOW RATE	0.20	gpm
ZBG 3	2/14/17	PH	4.60	pH
ZBG 3	8/7/17	PH	4.60	pH
ZBG 3	2/14/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 3	8/7/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 3	2/14/17	SPECIFIC CONDUCTANCE	22.00	µS/cm
ZBG 3	8/7/17	SPECIFIC CONDUCTANCE	24.00	µS/cm
ZBG 3	2/14/17	TOTAL ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 3	8/7/17	TOTAL ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 3	2/14/17	TURBIDITY	14.80	NTU
ZBG 3	8/7/17	TURBIDITY	8.30	NTU
ZBG 3	2/14/17	VOLUME PURGED	4.00	gal
ZBG 3	8/7/17	VOLUME PURGED	3.00	gal
ZBG 3	2/14/17	WATER TEMPERATURE	19.90	°C
ZBG 3	8/7/17	WATER TEMPERATURE	21.00	°C
ZBG 4	2/9/17	AIR TEMPERATURE	11.80	°C
ZBG 4	8/7/17	AIR TEMPERATURE	29.80	°C
ZBG 4	2/9/17	FLOW RATE	0.20	gpm
ZBG 4	8/7/17	FLOW RATE	0.20	gpm
ZBG 4	2/9/17	PH	6.20	pH
ZBG 4	8/7/17	PH	5.40	pH
ZBG 4	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 4	8/7/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 4	2/9/17	SPECIFIC CONDUCTANCE	26.00	µS/cm
ZBG 4	8/7/17	SPECIFIC CONDUCTANCE	26.00	µS/cm

WELL	DATE	ANALYTE	VALUE	UNITS
ZBG 4	2/9/17	TOTAL ALKALINITY (AS CaCO ₃)	26.00	mg/L
ZBG 4	8/7/17	TOTAL ALKALINITY (AS CaCO ₃)	3.00	mg/L
ZBG 4	2/9/17	TURBIDITY	9.80	NTU
ZBG 4	8/7/17	TURBIDITY	1.40	NTU
ZBG 4	2/9/17	VOLUME PURGED	3.00	gal
ZBG 4	8/7/17	VOLUME PURGED	2.00	gal
ZBG 4	2/9/17	WATER TEMPERATURE	19.10	°C
ZBG 4	8/7/17	WATER TEMPERATURE	21.20	°C
ZBG 5	2/9/17	AIR TEMPERATURE	11.00	°C
ZBG 5	8/7/17	AIR TEMPERATURE	32.60	°C
ZBG 5	2/9/17	FLOW RATE	0.20	gpm
ZBG 5	8/7/17	FLOW RATE	0.20	gpm
ZBG 5	2/9/17	PH	5.70	pH
ZBG 5	8/7/17	PH	6.60	pH
ZBG 5	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 5	8/7/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 5	2/9/17	SPECIFIC CONDUCTANCE	80.00	µS/cm
ZBG 5	8/7/17	SPECIFIC CONDUCTANCE	64.00	µS/cm
ZBG 5	2/9/17	TOTAL ALKALINITY (AS CaCO ₃)	31.00	mg/L
ZBG 5	8/7/17	TOTAL ALKALINITY (AS CaCO ₃)	13.00	mg/L
ZBG 5	2/9/17	TURBIDITY	1.80	NTU
ZBG 5	8/7/17	TURBIDITY	1.10	NTU
ZBG 5	2/9/17	VOLUME PURGED	3.00	gal
ZBG 5	8/7/17	VOLUME PURGED	1.00	gal
ZBG 5	2/9/17	WATER TEMPERATURE	20.20	°C
ZBG 5	8/7/17	WATER TEMPERATURE	21.60	°C
ZBG 6	2/9/17	AIR TEMPERATURE	10.90	°C
ZBG 6	8/7/17	AIR TEMPERATURE	34.00	°C
ZBG 6	2/9/17	FLOW RATE	0.20	gpm
ZBG 6	8/7/17	FLOW RATE	0.20	gpm
ZBG 6	2/9/17	PH	3.70	pH
ZBG 6	8/7/17	PH	5.00	pH
ZBG 6	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 6	8/7/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 6	2/9/17	SPECIFIC CONDUCTANCE	22.00	µS/cm
ZBG 6	8/7/17	SPECIFIC CONDUCTANCE	24.00	µS/cm
ZBG 6	2/9/17	TOTAL ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 6	8/7/17	TOTAL ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG 6	2/9/17	TURBIDITY	0.40	NTU
ZBG 6	8/7/17	TURBIDITY	0.40	NTU
ZBG 6	2/9/17	VOLUME PURGED	2.00	gal
ZBG 6	8/7/17	VOLUME PURGED	2.00	gal
ZBG 6	2/9/17	WATER TEMPERATURE	20.10	°C
ZBG 6	8/7/17	WATER TEMPERATURE	20.10	°C
ZBG 7	2/9/17	AIR TEMPERATURE	10.80	°C
ZBG 7	8/7/17	AIR TEMPERATURE	34.80	°C
ZBG 7	2/9/17	FLOW RATE	0.20	gpm
ZBG 7	8/7/17	FLOW RATE	0.20	gpm

WELL	DATE	ANALYTE	VALUE	UNITS
ZBG 7	2/9/17	PH	4.00	pH
ZBG 7	8/7/17	PH	6.50	pH
ZBG 7	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG 7	8/7/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG 7	2/9/17	SPECIFIC CONDUCTANCE	18.00	µS/cm
ZBG 7	8/7/17	SPECIFIC CONDUCTANCE	19.00	µS/cm
ZBG 7	2/9/17	TOTAL ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG 7	8/7/17	TOTAL ALKALINITY (AS CaCO3)	3.00	mg/L
ZBG 7	2/9/17	TURBIDITY	0.50	NTU
ZBG 7	8/7/17	TURBIDITY	0.30	NTU
ZBG 7	2/9/17	VOLUME PURGED	2.00	gal
ZBG 7	8/7/17	VOLUME PURGED	1.00	gal
ZBG 7	2/9/17	WATER TEMPERATURE	19.40	°C
ZBG 7	8/7/17	WATER TEMPERATURE	20.80	°C
ZBG 8	2/9/17	AIR TEMPERATURE	15.20	°C
ZBG 8	8/8/17	AIR TEMPERATURE	30.30	°C
ZBG 8	2/9/17	FLOW RATE	0.20	gpm
ZBG 8	8/8/17	FLOW RATE	0.20	gpm
ZBG 8	2/9/17	PH	6.30	pH
ZBG 8	8/8/17	PH	4.30	pH
ZBG 8	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG 8	8/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG 8	2/9/17	SPECIFIC CONDUCTANCE	18.00	µS/cm
ZBG 8	8/8/17	SPECIFIC CONDUCTANCE	19.00	µS/cm
ZBG 8	2/9/17	TOTAL ALKALINITY (AS CaCO3)	2.00	mg/L
ZBG 8	8/8/17	TOTAL ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG 8	2/9/17	TURBIDITY	0.30	NTU
ZBG 8	8/8/17	TURBIDITY	0.30	NTU
ZBG 8	2/9/17	VOLUME PURGED	2.00	gal
ZBG 8	8/8/17	VOLUME PURGED	2.00	gal
ZBG 8	2/9/17	WATER TEMPERATURE	19.70	°C
ZBG 8	8/8/17	WATER TEMPERATURE	20.50	°C
ZBG002C	2/9/17	AIR TEMPERATURE	11.70	°C
ZBG002C	8/7/17	AIR TEMPERATURE	32.30	°C
ZBG002C	2/9/17	FLOW RATE	0.20	gpm
ZBG002C	8/7/17	FLOW RATE	0.20	gpm
ZBG002C	2/9/17	PH	6.00	pH
ZBG002C	8/7/17	PH	5.70	pH
ZBG002C	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG002C	8/7/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG002C	2/9/17	SPECIFIC CONDUCTANCE	40.00	µS/cm
ZBG002C	8/7/17	SPECIFIC CONDUCTANCE	45.00	µS/cm
ZBG002C	2/9/17	TOTAL ALKALINITY (AS CaCO3)	32.00	mg/L
ZBG002C	8/7/17	TOTAL ALKALINITY (AS CaCO3)	8.00	mg/L
ZBG002C	2/9/17	TURBIDITY	0.90	NTU
ZBG002C	8/7/17	TURBIDITY	0.90	NTU
ZBG002C	2/9/17	VOLUME PURGED	2.00	gal
ZBG002C	8/7/17	VOLUME PURGED	2.00	gal

WELL	DATE	ANALYTE	VALUE	UNITS
ZBG002C	2/9/17	WATER TEMPERATURE	19.00	°C
ZBG002C	8/7/17	WATER TEMPERATURE	20.60	°C
ZBG002D	2/14/17	AIR TEMPERATURE	9.10	°C
ZBG002D	8/8/17	AIR TEMPERATURE	30.80	°C
ZBG002D	2/14/17	FLOW RATE	0.10	gpm
ZBG002D	8/8/17	FLOW RATE	0.10	gpm
ZBG002D	2/14/17	PH	5.20	pH
ZBG002D	8/8/17	PH	4.40	pH
ZBG002D	2/14/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG002D	8/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG002D	2/14/17	SPECIFIC CONDUCTANCE	46.00	µS/cm
ZBG002D	8/8/17	SPECIFIC CONDUCTANCE	38.00	µS/cm
ZBG002D	2/14/17	TOTAL ALKALINITY (AS CaCO ₃)	4.00	mg/L
ZBG002D	8/8/17	TOTAL ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG002D	2/14/17	TURBIDITY	6.70	NTU
ZBG002D	8/8/17	TURBIDITY	4.20	NTU
ZBG002D	2/14/17	VOLUME PURGED	3.00	gal
ZBG002D	8/8/17	VOLUME PURGED	3.00	gal
ZBG002D	2/14/17	WATER TEMPERATURE	19.80	°C
ZBG002D	8/8/17	WATER TEMPERATURE	21.30	°C
ZBG009D	2/13/17	AIR TEMPERATURE	14.00	°C
ZBG009D	8/10/17	AIR TEMPERATURE	24.60	°C
ZBG009D	2/13/17	FLOW RATE	0.20	gpm
ZBG009D	8/10/17	FLOW RATE	0.20	gpm
ZBG009D	2/13/17	PH	5.00	pH
ZBG009D	8/10/17	PH	5.50	pH
ZBG009D	2/13/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG009D	8/10/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG009D	2/13/17	SPECIFIC CONDUCTANCE	29.00	µS/cm
ZBG009D	8/10/17	SPECIFIC CONDUCTANCE	28.00	µS/cm
ZBG009D	2/13/17	TOTAL ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG009D	8/10/17	TOTAL ALKALINITY (AS CaCO ₃)	8.00	mg/L
ZBG009D	2/13/17	TURBIDITY	0.90	NTU
ZBG009D	8/10/17	TURBIDITY	0.60	NTU
ZBG009D	2/13/17	VOLUME PURGED	2.00	gal
ZBG009D	8/10/17	VOLUME PURGED	3.00	gal
ZBG009D	2/13/17	WATER TEMPERATURE	19.30	°C
ZBG009D	8/10/17	WATER TEMPERATURE	20.10	°C
ZBG010D	2/13/17	AIR TEMPERATURE	16.20	°C
ZBG010D	8/10/17	AIR TEMPERATURE	25.10	°C
ZBG010D	2/13/17	FLOW RATE	0.20	gpm
ZBG010D	8/10/17	FLOW RATE	0.20	gpm
ZBG010D	2/13/17	PH	4.80	pH
ZBG010D	8/10/17	PH	5.40	pH
ZBG010D	2/13/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG010D	8/10/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG010D	2/13/17	SPECIFIC CONDUCTANCE	19.00	µS/cm
ZBG010D	8/10/17	SPECIFIC CONDUCTANCE	23.00	µS/cm

WELL	DATE	ANALYTE	VALUE	UNITS
ZBG010D	2/13/17	TOTAL ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG010D	8/10/17	TOTAL ALKALINITY (AS CaCO ₃)	14.00	mg/L
ZBG010D	2/13/17	TURBIDITY	0.30	NTU
ZBG010D	8/10/17	TURBIDITY	0.40	NTU
ZBG010D	2/13/17	VOLUME PURGED	1.00	gal
ZBG010D	8/10/17	VOLUME PURGED	3.00	gal
ZBG010D	2/13/17	WATER TEMPERATURE	19.70	°C
ZBG010D	8/10/17	WATER TEMPERATURE	20.40	°C
ZBG011D	2/13/17	AIR TEMPERATURE	12.10	°C
ZBG011D	8/10/17	AIR TEMPERATURE	24.70	°C
ZBG011D	2/13/17	FLOW RATE	0.20	gpm
ZBG011D	8/10/17	FLOW RATE	0.20	gpm
ZBG011D	2/13/17	PH	5.50	pH
ZBG011D	8/10/17	PH	5.90	pH
ZBG011D	2/13/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG011D	8/10/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG011D	2/13/17	SPECIFIC CONDUCTANCE	44.00	µS/cm
ZBG011D	8/10/17	SPECIFIC CONDUCTANCE	41.00	µS/cm
ZBG011D	2/13/17	TOTAL ALKALINITY (AS CaCO ₃)	7.00	mg/L
ZBG011D	8/10/17	TOTAL ALKALINITY (AS CaCO ₃)	18.00	mg/L
ZBG011D	2/13/17	TURBIDITY	0.20	NTU
ZBG011D	8/10/17	TURBIDITY	0.40	NTU
ZBG011D	2/13/17	VOLUME PURGED	1.00	gal
ZBG011D	8/10/17	VOLUME PURGED	3.00	gal
ZBG011D	2/13/17	WATER TEMPERATURE	19.60	°C
ZBG011D	8/10/17	WATER TEMPERATURE	20.50	°C
ZBG012D	2/9/17	AIR TEMPERATURE	12.50	°C
ZBG012D	8/8/17	AIR TEMPERATURE	24.40	°C
ZBG012D	2/9/17	FLOW RATE	0.20	gpm
ZBG012D	8/8/17	FLOW RATE	0.20	gpm
ZBG012D	2/9/17	PH	6.90	pH
ZBG012D	8/8/17	PH	7.70	pH
ZBG012D	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG012D	8/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG012D	2/9/17	SPECIFIC CONDUCTANCE	209.00	µS/cm
ZBG012D	8/8/17	SPECIFIC CONDUCTANCE	168.00	µS/cm
ZBG012D	2/9/17	TOTAL ALKALINITY (AS CaCO ₃)	69.00	mg/L
ZBG012D	8/8/17	TOTAL ALKALINITY (AS CaCO ₃)	90.00	mg/L
ZBG012D	2/9/17	TURBIDITY	0.90	NTU
ZBG012D	8/8/17	TURBIDITY	0.80	NTU
ZBG012D	2/9/17	VOLUME PURGED	3.00	gal
ZBG012D	8/8/17	VOLUME PURGED	3.00	gal
ZBG012D	2/9/17	WATER TEMPERATURE	19.00	°C
ZBG012D	8/8/17	WATER TEMPERATURE	20.00	°C
ZBG013D	2/9/17	AIR TEMPERATURE	13.10	°C
ZBG013D	8/8/17	AIR TEMPERATURE	26.70	°C
ZBG013D	2/9/17	FLOW RATE	0.20	gpm
ZBG013D	8/8/17	FLOW RATE	0.20	gpm

WELL	DATE	ANALYTE	VALUE	UNITS
ZBG013D	2/9/17	PH	8.00	pH
ZBG013D	8/8/17	PH	8.00	pH
ZBG013D	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG013D	8/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG013D	2/9/17	SPECIFIC CONDUCTANCE	172.00	µS/cm
ZBG013D	8/8/17	SPECIFIC CONDUCTANCE	160.00	µS/cm
ZBG013D	2/9/17	TOTAL ALKALINITY (AS CaCO ₃)	90.00	mg/L
ZBG013D	8/8/17	TOTAL ALKALINITY (AS CaCO ₃)	80.00	mg/L
ZBG013D	2/9/17	TURBIDITY	0.40	NTU
ZBG013D	8/8/17	TURBIDITY	0.50	NTU
ZBG013D	2/9/17	VOLUME PURGED	3.00	gal
ZBG013D	8/8/17	VOLUME PURGED	3.00	gal
ZBG013D	2/9/17	WATER TEMPERATURE	19.60	°C
ZBG013D	8/8/17	WATER TEMPERATURE	20.20	°C
ZBG014D	2/13/17	AIR TEMPERATURE	15.20	°C
ZBG014D	8/10/17	AIR TEMPERATURE	26.10	°C
ZBG014D	2/13/17	FLOW RATE	0.20	gpm
ZBG014D	8/10/17	FLOW RATE	0.20	gpm
ZBG014D	2/13/17	PH	6.90	pH
ZBG014D	8/10/17	PH	7.70	pH
ZBG014D	2/13/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG014D	8/10/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG014D	2/13/17	SPECIFIC CONDUCTANCE	148.00	µS/cm
ZBG014D	8/10/17	SPECIFIC CONDUCTANCE	143.00	µS/cm
ZBG014D	2/13/17	TOTAL ALKALINITY (AS CaCO ₃)	63.00	mg/L
ZBG014D	8/10/17	TOTAL ALKALINITY (AS CaCO ₃)	70.00	mg/L
ZBG014D	2/13/17	TURBIDITY	0.30	NTU
ZBG014D	8/10/17	TURBIDITY	0.30	NTU
ZBG014D	2/13/17	VOLUME PURGED	2.00	gal
ZBG014D	8/10/17	VOLUME PURGED	3.00	gal
ZBG014D	2/13/17	WATER TEMPERATURE	19.30	°C
ZBG014D	8/10/17	WATER TEMPERATURE	20.10	°C
ZBG015D	2/14/17	AIR TEMPERATURE	15.30	°C
ZBG015D	8/8/17	AIR TEMPERATURE	30.10	°C
ZBG015D	2/14/17	FLOW RATE	0.20	gpm
ZBG015D	8/8/17	FLOW RATE	0.20	gpm
ZBG015D	2/14/17	PH	5.70	pH
ZBG015D	8/8/17	PH	5.70	pH
ZBG015D	2/14/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG015D	8/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO ₃)	0.00	mg/L
ZBG015D	2/14/17	SPECIFIC CONDUCTANCE	41.00	µS/cm
ZBG015D	8/8/17	SPECIFIC CONDUCTANCE	46.00	µS/cm
ZBG015D	2/14/17	TOTAL ALKALINITY (AS CaCO ₃)	7.00	mg/L
ZBG015D	8/8/17	TOTAL ALKALINITY (AS CaCO ₃)	6.00	mg/L
ZBG015D	2/14/17	TURBIDITY	0.30	NTU
ZBG015D	8/8/17	TURBIDITY	0.70	NTU
ZBG015D	2/14/17	VOLUME PURGED	2.00	gal
ZBG015D	8/8/17	VOLUME PURGED	3.00	gal

WELL	DATE	ANALYTE	VALUE	UNITS
ZBG015D	2/14/17	WATER TEMPERATURE	18.80	°C
ZBG015D	8/8/17	WATER TEMPERATURE	19.50	°C
ZBG016C	2/9/17	AIR TEMPERATURE	11.00	°C
ZBG016C	8/8/17	AIR TEMPERATURE	32.50	°C
ZBG016C	2/9/17	FLOW RATE	0.20	gpm
ZBG016C	8/8/17	FLOW RATE	0.20	gpm
ZBG016C	2/9/17	PH	5.40	pH
ZBG016C	8/8/17	PH	5.50	pH
ZBG016C	2/9/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG016C	8/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG016C	2/9/17	SPECIFIC CONDUCTANCE	28.00	µS/cm
ZBG016C	8/8/17	SPECIFIC CONDUCTANCE	26.00	µS/cm
ZBG016C	2/9/17	TOTAL ALKALINITY (AS CaCO3)	3.00	mg/L
ZBG016C	8/8/17	TOTAL ALKALINITY (AS CaCO3)	8.00	mg/L
ZBG016C	2/9/17	TURBIDITY	0.20	NTU
ZBG016C	8/8/17	TURBIDITY	0.40	NTU
ZBG016C	2/9/17	VOLUME PURGED	2.00	gal
ZBG016C	8/8/17	VOLUME PURGED	2.00	gal
ZBG016C	2/9/17	WATER TEMPERATURE	19.30	°C
ZBG016C	8/8/17	WATER TEMPERATURE	19.20	°C
ZBG016D	2/9/17	AIR TEMPERATURE	13.40	°C
ZBG016D	8/8/17	AIR TEMPERATURE	32.50	°C
ZBG016D	2/9/17	VOLUME PURGED	0.00	gal
ZBG016D	8/8/17	VOLUME PURGED	0.00	gal
ZBG017D	4/18/17	AIR TEMPERATURE	24.60	°C
ZBG017D	8/10/17	AIR TEMPERATURE	23.80	°C
ZBG017D	4/18/17	FLOW RATE	1.50	gpm
ZBG017D	8/10/17	FLOW RATE	0.20	gpm
ZBG017D	4/18/17	PH	4.60	pH
ZBG017D	8/10/17	PH	4.20	pH
ZBG017D	4/18/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG017D	8/10/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG017D	4/18/17	SPECIFIC CONDUCTANCE	26.00	µS/cm
ZBG017D	8/10/17	SPECIFIC CONDUCTANCE	19.00	µS/cm
ZBG017D	4/18/17	TOTAL ALKALINITY (AS CaCO3)	9.00	mg/L
ZBG017D	8/10/17	TOTAL ALKALINITY (AS CaCO3)	10.00	mg/L
ZBG017D	4/18/17	TURBIDITY	1.80	NTU
ZBG017D	8/10/17	TURBIDITY	1.40	NTU
ZBG017D	4/18/17	VOLUME PURGED	0.00	gal
ZBG017D	8/10/17	VOLUME PURGED	3.00	gal
ZBG017D	4/18/17	WATER TEMPERATURE	21.00	°C
ZBG017D	8/10/17	WATER TEMPERATURE	20.80	°C
ZBG018D	4/19/17	AIR TEMPERATURE	20.20	°C
ZBG018D	8/10/17	AIR TEMPERATURE	24.20	°C
ZBG018D	4/19/17	FLOW RATE	1.30	gpm
ZBG018D	8/10/17	FLOW RATE	0.20	gpm
ZBG018D	4/19/17	PH	4.80	pH
ZBG018D	8/10/17	PH	4.40	pH

WELL	DATE	ANALYTE	VALUE	UNITS
ZBG018D	4/19/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG018D	8/10/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG018D	4/19/17	SPECIFIC CONDUCTANCE	26.00	µS/cm
ZBG018D	8/10/17	SPECIFIC CONDUCTANCE	30.00	µS/cm
ZBG018D	4/19/17	TOTAL ALKALINITY (AS CaCO3)	3.00	mg/L
ZBG018D	8/10/17	TOTAL ALKALINITY (AS CaCO3)	9.00	mg/L
ZBG018D	4/19/17	TURBIDITY	0.20	NTU
ZBG018D	8/10/17	TURBIDITY	1.20	NTU
ZBG018D	4/19/17	VOLUME PURGED	0.00	gal
ZBG018D	8/10/17	VOLUME PURGED	3.00	gal
ZBG018D	4/19/17	WATER TEMPERATURE	19.80	°C
ZBG018D	8/10/17	WATER TEMPERATURE	19.90	°C
ZBG019D	4/20/17	AIR TEMPERATURE	24.10	°C
ZBG019D	8/10/17	AIR TEMPERATURE	23.60	°C
ZBG019D	4/20/17	FLOW RATE	1.30	gpm
ZBG019D	8/10/17	FLOW RATE	0.20	gpm
ZBG019D	4/20/17	PH	4.10	pH
ZBG019D	8/10/17	PH	4.80	pH
ZBG019D	4/20/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG019D	8/10/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG019D	4/20/17	SPECIFIC CONDUCTANCE	83.00	µS/cm
ZBG019D	8/10/17	SPECIFIC CONDUCTANCE	77.00	µS/cm
ZBG019D	4/20/17	TOTAL ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG019D	8/10/17	TOTAL ALKALINITY (AS CaCO3)	7.00	mg/L
ZBG019D	4/20/17	TURBIDITY	0.20	NTU
ZBG019D	8/10/17	TURBIDITY	1.20	NTU
ZBG019D	4/20/17	VOLUME PURGED	0.00	gal
ZBG019D	8/10/17	VOLUME PURGED	2.00	gal
ZBG019D	4/20/17	WATER TEMPERATURE	20.10	°C
ZBG019D	8/10/17	WATER TEMPERATURE	19.80	°C
ZBG020D	5/8/17	AIR TEMPERATURE	25.40	°C
ZBG020D	8/8/17	AIR TEMPERATURE	29.80	°C
ZBG020D	5/8/17	FLOW RATE	0.10	gpm
ZBG020D	8/8/17	FLOW RATE	0.20	gpm
ZBG020D	5/8/17	PH	5.70	pH
ZBG020D	8/8/17	PH	4.00	pH
ZBG020D	5/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG020D	8/8/17	PHENOLPHTHALEIN ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG020D	5/8/17	SPECIFIC CONDUCTANCE	43.00	µS/cm
ZBG020D	8/8/17	SPECIFIC CONDUCTANCE	44.00	µS/cm
ZBG020D	5/8/17	TOTAL ALKALINITY (AS CaCO3)	4.00	mg/L
ZBG020D	8/8/17	TOTAL ALKALINITY (AS CaCO3)	0.00	mg/L
ZBG020D	5/8/17	TURBIDITY	0.40	NTU
ZBG020D	8/8/17	TURBIDITY	0.60	NTU
ZBG020D	5/8/17	VOLUME PURGED	0.00	gal
ZBG020D	8/8/17	VOLUME PURGED	1.00	gal
ZBG020D	5/8/17	WATER TEMPERATURE	25.40	°C
ZBG020D	8/8/17	WATER TEMPERATURE	21.10	°C

Table 3 Notes:

°C = Degrees Celsius

gal = gallons

gpm = gallons per minute

µS/cm = microsiemens per centimeter

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

pH = negative log of the hydrogen ion concentration ($-\log[H^+]$)

Table 4. Water Elevations for Saltstone Wells (2017)

WELL	REFERENCE ELEVATION (ft-msl)	DATE	DRY	WATER DEPTH (ft-TOC)	WATER ELEVATION (ft-msl)	SCREEN ZONE ELEVATION (ft-msl)	AQUIFER
ZBG 1	291.40	02/09/17	N	56.1	235.28	220 - 240.1	UAZ-UTRA
ZBG 3	272.63	02/14/17	N	46.9	225.73	204 - 214	LAZ-UTRA
ZBG 4	274.11	02/09/17	N	48.5	225.61	205.44 - 215.44	LAZ-UTRA
ZBG 5	272.33	02/09/17	N	43.3	229.03	203.77 - 213.77	LAZ-UTRA
ZBG 6	288.03	02/09/17	N	52.2	235.83	211 - 226	UAZ-UTRA
ZBG 7	287.35	02/09/17	N	51.2	236.15	210.24 - 225.24	UAZ-UTRA
ZBG 8	288.42	02/09/17	N	52.0	236.42	213.02 - 228.02	UAZ-UTRA
ZBG002C	278.56	02/09/17	N	53.4	225.16	195.83 - 205.83	LAZ-UTRA
ZBG002D	278.52	02/14/17	N	52.3	226.22	215.13 - 225.13	UAZ-UTRA
ZBG009D	275.58	02/13/17	N	51.3	224.28	197.7 - 212.7	LAZ-UTRA
ZBG010D	277.32	02/13/17	N	54.7	222.62	199.5 - 214.5	LAZ-UTRA
ZBG011D	280.71	02/13/17	N	56.4	224.31	202.8 - 217.8	LAZ-UTRA
ZBG012D	261.97	02/09/17	N	39.6	222.37	178.7 - 193.7	LAZ-UTRA
ZBG013D	262.48	02/09/17	N	38.0	224.48	179.7 - 194.7	LAZ-UTRA
ZBG014D	267.58	02/13/17	N	43.6	223.98	175.05 - 190.05	LAZ-UTRA
ZBG015D	297.97	02/14/17	N	60.7	237.27	214.31 - 234.31	UAZ-UTRA
ZBG016C	255.53	02/09/17	N	39.4	216.10	197.69 - 207.69	LAZ-UTRA
ZBG016D	256.10	02/09/17	Y	ND	#N/A	226.25 - 236.25	UAZ-UTRA
ZBG017D	277.79	04/18/17	N	55.02	225.36	222.9 - 212.9	UAZ-UTRA
ZBG018D	273.62	04/19/17	N	49.32	224.32	215.1 - 205.1	UAZ-UTRA
ZBG019D	285.47	04/20/17	N	60.02	228.33	218.3 - 208.3	UAZ-UTRA
ZBG020D	271.85	05/08/17	N	44.26	230.25	226.19 - 216.19	UAZ-UTRA
ZBG 1	291.40	08/08/17	N	56.5	234.90	220 - 240.1	UAZ-UTRA
ZBG 3	272.63	08/07/17	N	48.1	224.53	204 - 214	LAZ-UTRA
ZBG 4	274.11	08/07/17	N	48.8	225.31	205.44 - 215.44	LAZ-UTRA
ZBG 5	272.33	08/07/17	N	49.1	223.23	203.77 - 213.77	LAZ-UTRA
ZBG 6	288.03	08/07/17	N	52.4	235.63	211 - 226	UAZ-UTRA
ZBG 7	287.35	08/07/17	N	51.3	236.05	210.24 - 225.24	UAZ-UTRA
ZBG 8	288.42	08/08/17	N	52.0	236.42	213.02 - 228.02	UAZ-UTRA
ZBG002C	278.56	08/07/17	N	55.6	222.96	195.83 - 205.83	LAZ-UTRA
ZBG002D	278.52	08/08/17	N	53.3	225.22	215.13 - 225.13	UAZ-UTRA
ZBG009D	275.58	08/10/17	N	53.8	221.78	197.7 - 212.7	LAZ-UTRA
ZBG010D	277.32	08/10/17	N	54.8	222.52	199.5 - 214.5	LAZ-UTRA
ZBG011D	280.71	08/10/17	N	58.6	222.11	202.8 - 217.8	LAZ-UTRA
ZBG012D	261.97	08/08/17	N	44.5	217.47	178.7 - 193.7	LAZ-UTRA
ZBG013D	262.48	08/08/17	N	45.7	216.78	179.7 - 194.7	LAZ-UTRA
ZBG014D	267.58	08/10/17	N	48.7	218.88	175.05 - 190.05	LAZ-UTRA
ZBG015D	297.97	08/08/17	N	61.0	236.97	214.31 - 234.31	UAZ-UTRA
ZBG016C	255.53	08/08/17	N	41.7	213.83	197.69 - 207.69	LAZ-UTRA
ZBG016D	256.10	08/08/17	Y	ND	ND	226.25 - 236.25	UAZ-UTRA
ZBG017D	277.79	08/10/17	N	55.5	222.29	213 - 223	UAZ-UTRA
ZBG018D	273.62	08/10/17	N	50.4	223.22	205.12 - 215.12	UAZ-UTRA
ZBG019D	285.47	08/10/17	N	61.1	224.37	208.4 - 218.4	UAZ-UTRA
ZBG020D	271.85	08/08/17	N	41.7	230.15	216 - 226	UAZ-UTRA

Table 4 Notes:

ft-TOC = feet – Top of Casing (Reference Elevation)

ft-msl = feet above mean sea level

N = No

ND = No Data

Y = Yes

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