LMS/SAL/S18773

Environmental Monitoring Report Salmon, Mississippi, Site 2017

September 2018

Available for sale to the public from:

U.S. Department of Commerce
National Technical Information Service
5301 Shawnee Road
Alexandria, VA 22312
Telephone: (800) 553-6847
Fax: (703) 605-6900
E-mail: orders@ntis.gov
Online Ordering https://classic.ntis.gov/help/order-methods/#online

Available electronically at https://www.osti.gov/scitech/

Available for a processing fee to U.S. Department of Energy and its contractors, in paper, from:

U.S. Department of Energy
Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, TN 37831-0062
Phone: (865) 576-8401
Fax: (865) 576-5728
Email: reports@adonis.osti.gov

Contents

Figures

Tables

Appendixes

Abbreviations

AOC	area of concern
As	arsenic
Ba	barium
Cr	chromium
DCE	dichloroethene
DOE	U.S. Department of Energy
ft	feet
GEMS	Geospatial Environmental Mapping System
LM	Office of Legacy Management
MCL	maximum contaminant level
µg/L	micrograms per liter
mg/L	milligrams per liter
MSL	mean sea level
OM	order of magnitude
Pb	lead
pCi/L	picocuries per liter
REECo	Reynolds Engineering & Electrical Company, Inc.
RI	remedial investigation
SA	source area
SGZ	surface ground zero
TCE	trichloroethene
VOCs	volatile organic compounds

This page intentionally left blank

Executive Summary

This report presents the monitoring results for groundwater and surface water samples collected in October 2017 by the U.S. Department of Energy (DOE) Office of Legacy Management for the Salmon, Mississippi, Site.

The U.S. Atomic Energy Commission (AEC), a predecessor agency to DOE, conducted a series of underground detonations in the Tatum Salt Dome beneath the Salmon site between 1964 and 1970 to study seismic signatures. Groundwater sampling at the site is conducted to monitor shallow groundwater that became contaminated during AEC use of the site, contamination within the shot cavity, and contamination in the Aquifer 5 injection well. Surface water sampling is conducted to ensure no contaminants are leaving the site.

No contamination above maximum contaminant levels (MCLs) was detected in surface water leaving the site. Concentrations of volatile organic compounds (VOCs) continue to trend downward, and only two wells have VOC concentrations that exceed MCLs. Tritium concentrations in all wells are below the MCL, and the tritium continues to attenuate and to decline as a result of radioactive decay. By 2060, tritium at all shallow groundwater monitoring locations is projected to decay to levels below the standard method detection limit (300 to 400 picocuries per liter). During the current reporting period arsenic was present in groundwater above the respective MCL at a few locations. Concentrations are stable (with some temporal variability), with no well-defined trends. The occurrence of arsenic varies by location and unit with no well-defined pattern. The source of the arsenic and other metals at the site is unclear. Some may be naturally occurring or related to the use of drilling muds. Monitoring of deeper aquifers shows no indication of leakage from either the test cavity or the injection well.

This page intentionally left blank

1.0 Introduction

This report presents monitoring results for samples collected October 23–25, 2017, by the U.S. Department of Energy (DOE) Office of Legacy Management (LM) for the Salmon, Mississippi, Site. The State of Mississippi (the State) owns the surface real estate at the site, and the deed to the property includes certain restrictions related to subsurface penetration. The State is the surface operator; the Mississippi Forestry Commission is its agent. The federal government owns the monitoring wells, the monument at surface ground zero (SGZ), and the subsurface real estate, including minerals and contamination remaining from underground tests. LM has responsibility for the long-term surveillance of the subsurface real estate, shares right-of-entry easements with the State, and retains rights related to subsurface monitoring.

This annual report and previous reports are available on the LM public website at https://www.lm.doe.gov/salmon/Sites.aspx. Data collected during this and previous monitoring events are available on the Geospatial Environmental Mapping System (GEMS) website at https://gems.lm.doe.gov/#site=SAL.

2.0 Site Location and Background

The Salmon site consists of 1470 acres in Lamar County, Mississippi, approximately 10 miles west of Purvis, Mississippi, and about 21 miles southwest of Hattiesburg, Mississippi (Figure 1). The U.S. Atomic Energy Commission (AEC), a predecessor agency to DOE, conducted a series of underground detonations in the Tatum Salt Dome beneath the site to study seismic signatures. Figure 2 shows the extent of the salt dome at about 2500 feet (ft) below ground surface. Two nuclear tests (Project Dribble) and two gas-explosive tests (Project Miracle Play) were conducted in the salt dome between 1964 and 1970. Salmon, the first nuclear test, was conducted on October 22, 1964, and created a cavity approximately 2710 ft below ground surface (Figure 3). The second nuclear test, Sterling, was conducted on December 3, 1966. The Sterling test and the two gas explosions—Diode Tube on February 2, 1969, and Humid Water on April 19, 1970—were all conducted in the cavity created by the Salmon test. No radioactivity was released to the surface during the four tests. Residual radioactivity from Project Dribble is contained within the cavity walls and the cavity itself. The plasticity and impermeability of the surrounding salt formation provide sufficient geologic isolation to prevent migration of contaminants.

Reentry holes were drilled into the detonation cavity to collect scientific information and determine the effects of each explosion. These drilling operations generated the largest volume of waste at the site, including radioactively contaminated drill cuttings and drilling fluids. In addition, support activities generated wastes other than radioactively contaminated materials as part of the testing operations. Test site support operations required fuel, electricity, sanitation, waste storage, waste disposal, and use of hazardous materials. Waste materials were temporarily disposed of in several mud pits and burial pits across the site.

Radioactive wastes, including contaminated soil and water, were disposed of via reentry wells in the cavity left by the tests. The reentry wells were plugged after the waste was disposed (DOE 1999). The HT-2 injection well in the southwest corner of the site was used following the first nuclear test to dispose of radiologically contaminated liquid wastes into Aquifer 5; it was plugged during site cleanup operations.

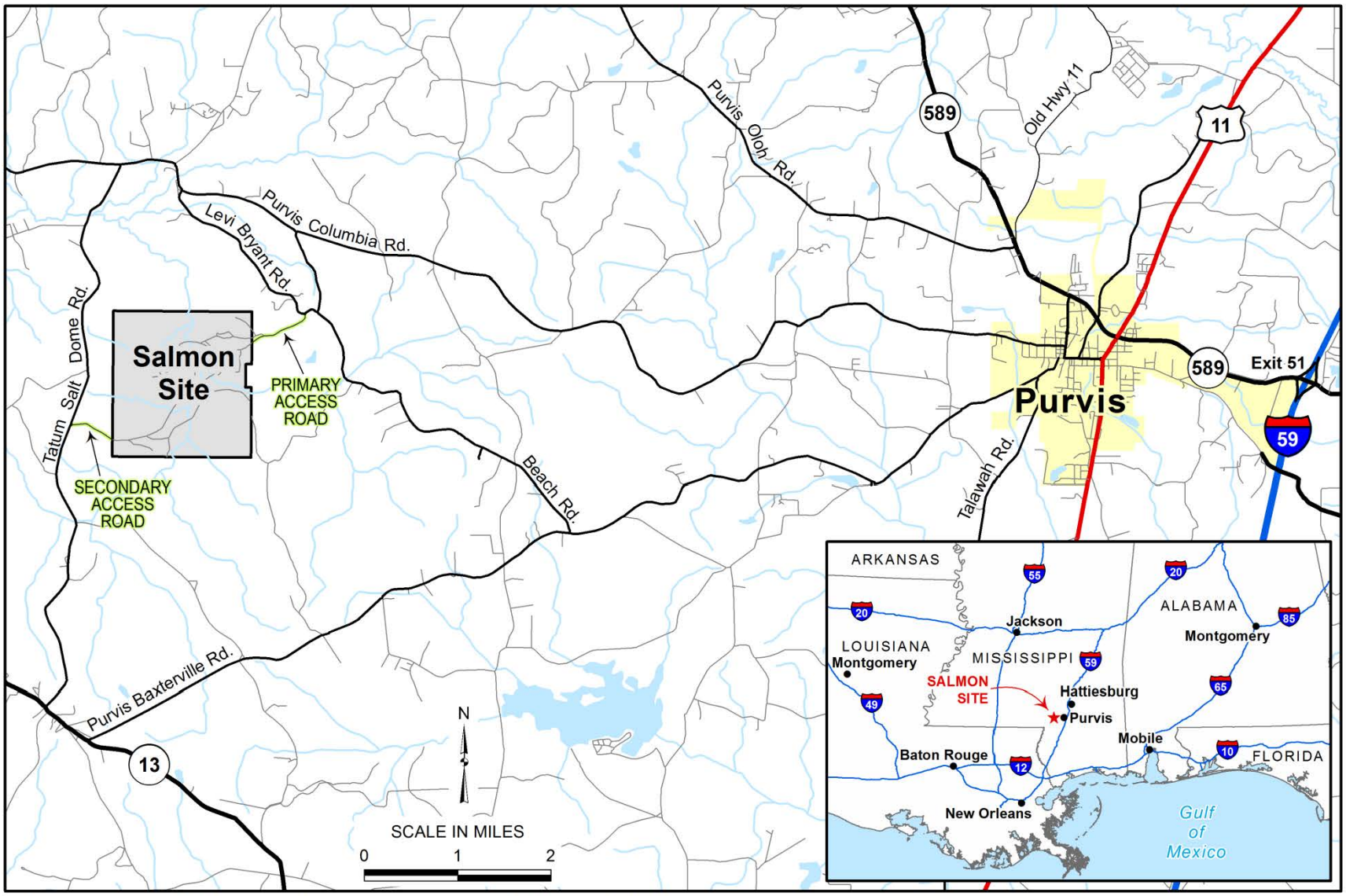


Figure 1. Salmon Site and Surrounding Region

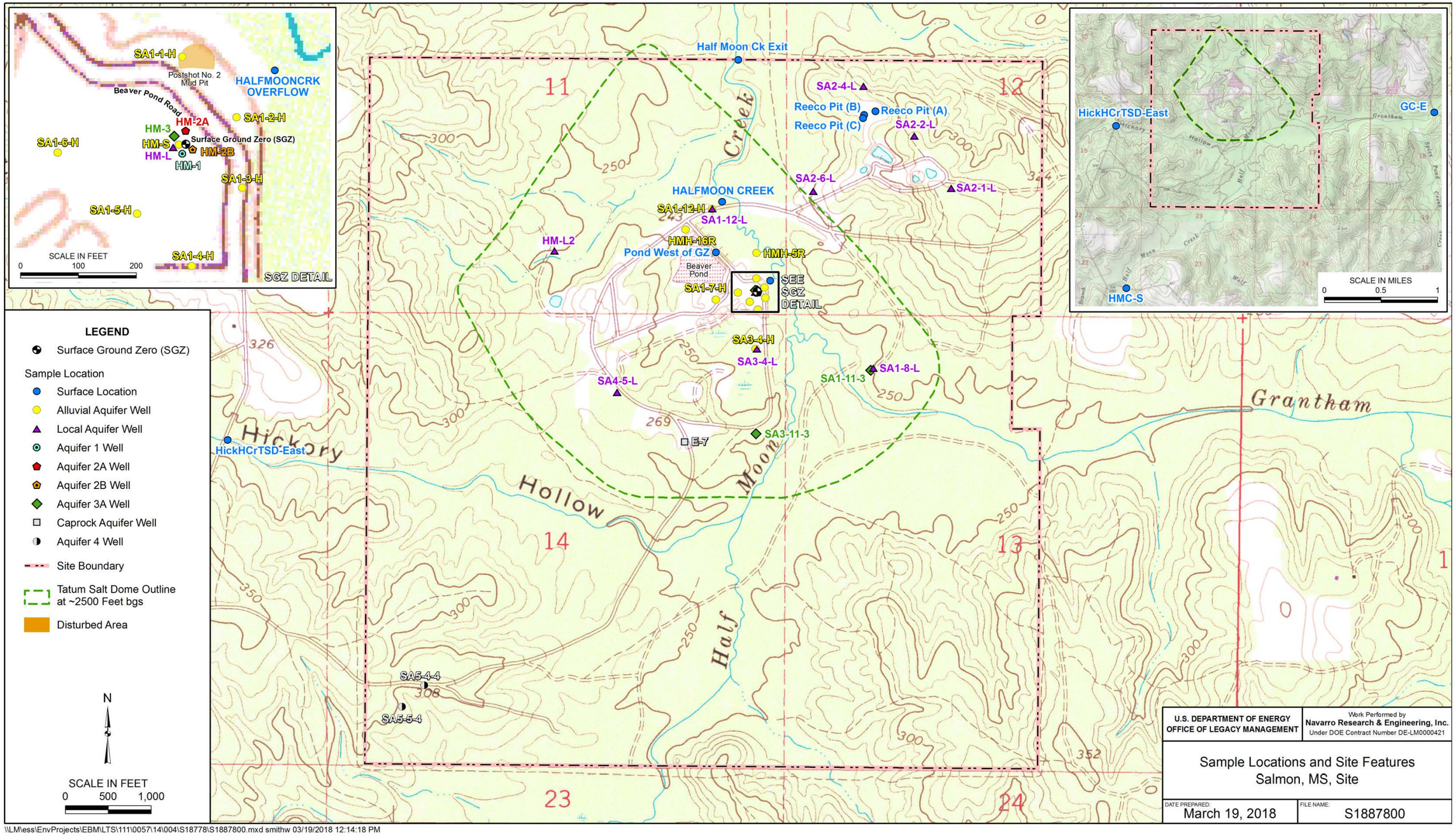


Figure 2. Salmon Site Features and Monitoring Locations

This page intentionally left blank

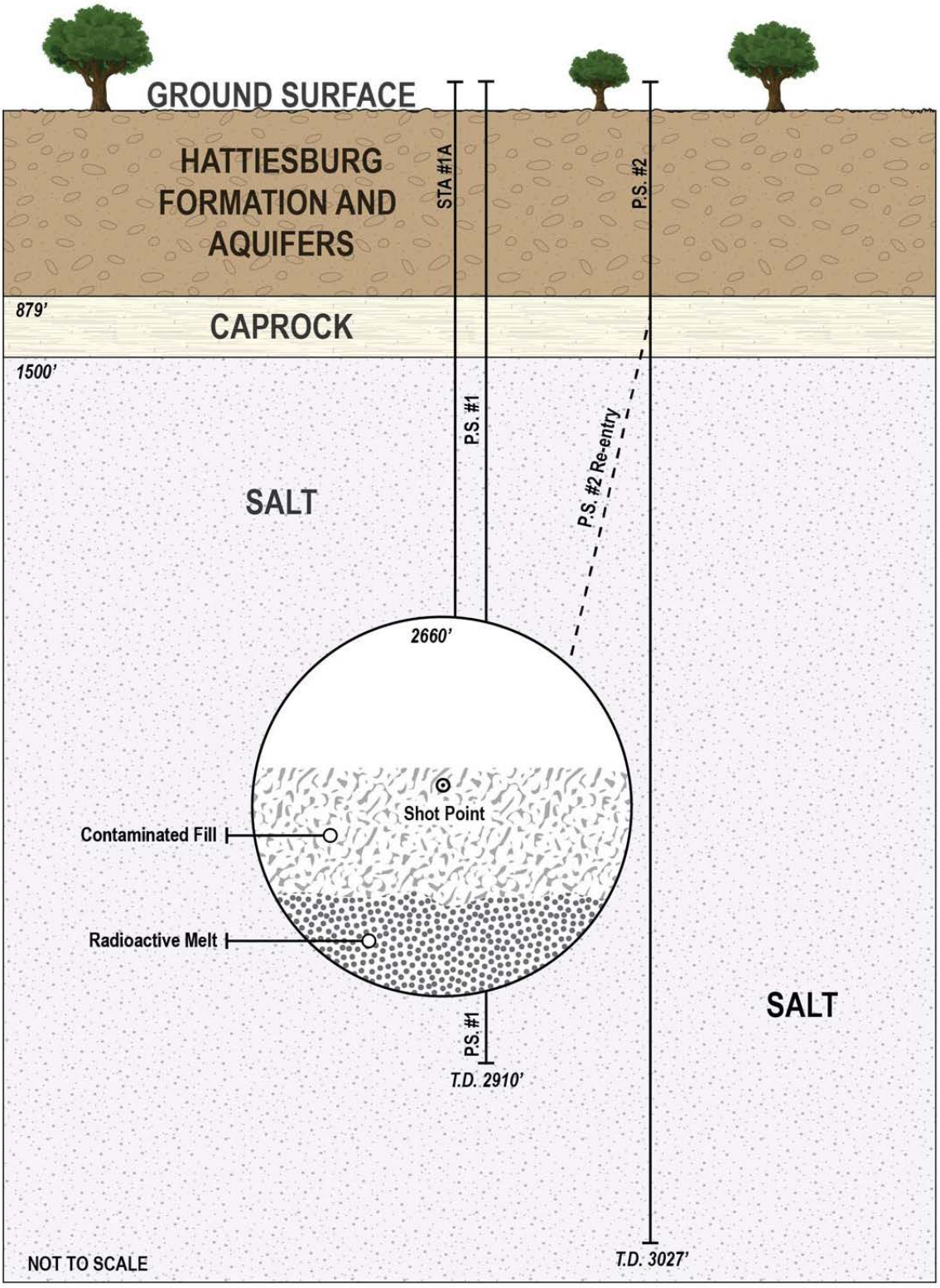


Figure 3. Cross-Sectional Depiction of the Shot Cavity After Surface Decommissioning

Significant cleanup operations were conducted in 1972. During this cleanup, soil contaminated with drilling fluids from drill-back operations was converted to slurry and injected into the test cavity. Nonradioactive wastes were disposed of in onsite pits that were subsequently covered with clean soil and graded. All test boreholes for emplacement, drill back, and injection and all other wells were plugged and abandoned in accordance with State of Mississippi requirements.

A remedial investigation (RI)/feasibility study for the site was started in 1992 (DOE 1992). During the RI the site was divided into six geographically distinct source areas (SAs) based on the historical activities conducted in the different areas of the site. A number of areas of concern (AOCs) were identified within each source area based on historical site activities. Additional investigations of the site were focused on identifying any residual contamination left at the AOCs within each SA.

Additional data were collected during the 1990s, and a subsequent RI report was prepared in 1999 (DOE 1999). As part of the 1999 RI, sampling of soil and groundwater was conducted across the site. Samples were analyzed for volatile organic compounds (VOCs), radionuclides, and metals. The 1999 RI discusses the site in terms of operable units, which were defined as geographical units with the same potential source of contamination that remained after site decommissioning. These residual sources of contamination are different from the historical source areas previously identified, as discussed below.

Three operable units were established in the 1999 RI based on three primary sources of residual site contamination. Operable Unit 1 includes the surface soil and the shallow aquifer system that were affected mainly by drilling activities at the surface (e.g., mud pits, drill cuttings), primarily near SGZ. Operable Unit 2 includes the test cavity and the overlying aquifers, particularly those at intermediate depths, and includes constituents produced by the nuclear test itself and materials disposed of in the cavity during decommissioning. Operable Unit 3 includes the injection well and deep aquifers and liquid radioactive wastes that were disposed of in the deep subsurface following the first nuclear test. The monitoring approach and results discussed in this report are organized generally according to the operable units recognized in the 1999 RI.

3.0 Geologic and Hydrologic Setting

3.1 Geologic Setting

Tatum Dome is a salt dome in the Mississippi Interior Salt Basin. The dome consists of a salt core overlain by caprock composed of limestone and anhydrite (Figure 4). The salt consists of roughly 90% halite (sodium chloride) and 10% anhydrite (calcium sulfate). The anhydrite caprock is 450 to 600 ft thick and extends upward to about 1000 ft below ground surface. The caprock is overlain by the Catahoula Sandstone of Oligocene age; the Catahoula is 100 to 200 ft thick and is overlain by the Pascagoula–Hattiesburg clays of Miocene age (Hattiesburg Formation), which crop out regionally in the lower stream valleys and also extend across the dome. The Hattiesburg Formation is 550 to 750 ft thick. The surficial material at the Salmon site consists of the Citronelle Formation, which is present in the highlands (Figure 4); sporadic terrace deposits on the slopes; and alluvium of Pliocene to Pleistocene to recent age in the lowlands. The terrace deposits and alluvium consist of interbedded gravels, sands, and silty clays about 150 ft thick. The Citronelle crops out on the slopes and tops of the hills in the site area.

The Cook Mountain limestone and the overlying Vicksburg Group are stratigraphic units below the Catahoula Sandstone and are both pierced by the dome. The Tatum Dome appears to have no topographic expression.

3.2 Hydrologic Setting

Aquifers containing fresh water extend from near the surface to about 1400 ft below mean sea level (MSL) in the Tatum Dome area. Because the salt dome has locally modified the water quality so that fresh water over the dome extends only to about 700 ft below MSL (Figure 4), some aquifers that contain saline water over the dome contain fresh water away from the dome's influence. There are multiple freshwater aquifers, including two surficial aquifers (the Alluvial Aquifer and surficial waters in the Citronelle Formation) and six deeper aquifers (Local, 1, 2a, 2b, 3a, and 3b). These are underlain by one brackish aquifer (4) and at least one underlying saline aquifer (5) in the strata surrounding the Tatum Salt Dome (Figure 4). The oil industry has used Aquifer 5 for brine injection since 1950 at the Baxterville oil field 6 miles southwest of the Salmon site.

Fresh, brackish, and saline waters are defined as waters containing total dissolved solids concentrations of less than 1000 milligrams per liter (mg/L), 1000 to 5000 mg/L, and more than 5000 mg/L, respectively. The freshwater surficial aquifers and Local Aquifer are discontinuous. The deeper freshwater aquifers (1, 2a, 2b, 3a, and 3b) are horizontally extensive, although they may be locally offset or interrupted by faults near the dome (USGS 1971). Many water supply wells in Lamar County use groundwater from one or more of the deeper freshwater aquifers. Water is also present in fractures in the caprock and is referred to as the Caprock Aquifer.

Wells in the current monitoring network (Figure 2) monitor most of the freshwater aquifers as well as Aquifer 4 and the Caprock Aquifer. Thirteen monitoring wells are completed in the Alluvial Aquifer; 10 in the Local Aquifer; one in each of Aquifers 1, 2a, and 2b; three in Aquifer 3a; two in Aquifer 4; and one in the Caprock Aquifer. No wells are completed in Aquifer 5, Aquifer 3b, or the Citronelle Formation.

3.3 Site Conceptual Model and Monitoring Approach

Three primary contaminant source zones have been identified at the site based on the site history, results of previous site characterization, and monitoring results. The Alluvial and Local Aquifers near SGZ have areas of remnant contamination from surface operations and drill-back wastes temporarily stored in mud pits. The detonation cavity has contamination created by the nuclear tests and also was used for injection of surface wastes. Aquifer 5 was used for the disposal of liquid radioactive wastes. The site monitoring program monitors for the potential migration of contaminants from these source areas.

Groundwater flows in response to water level (head) gradients in site aquifers. There is a downward vertical gradient between aquifers near SGZ. The gradient decreases with depth to essentially no gradient, then becomes a slight upward gradient from Aquifer 3 to Aquifer 2B. This is demonstrated by the water elevations in the group of SGZ wells that are screened in successively deeper aquifers (Figure 5 and Figure 6). The low permeability of the confining layers between aquifers at the site causes the head differences and effectively limits vertical migration.

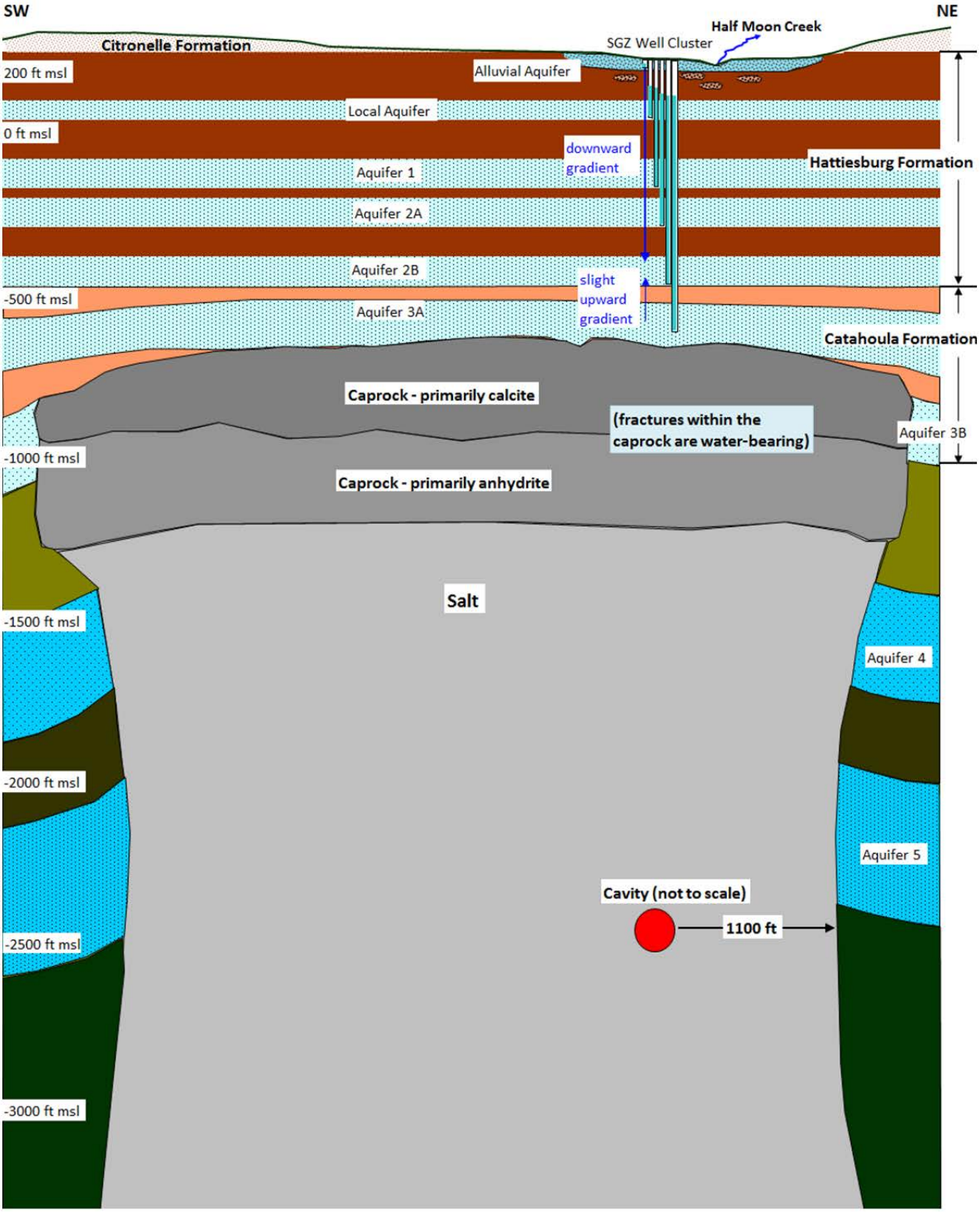


Figure 4. Conceptual Model of the Relationship of the Dome, Shot Cavity, and Surface Ground Zero Well Cluster

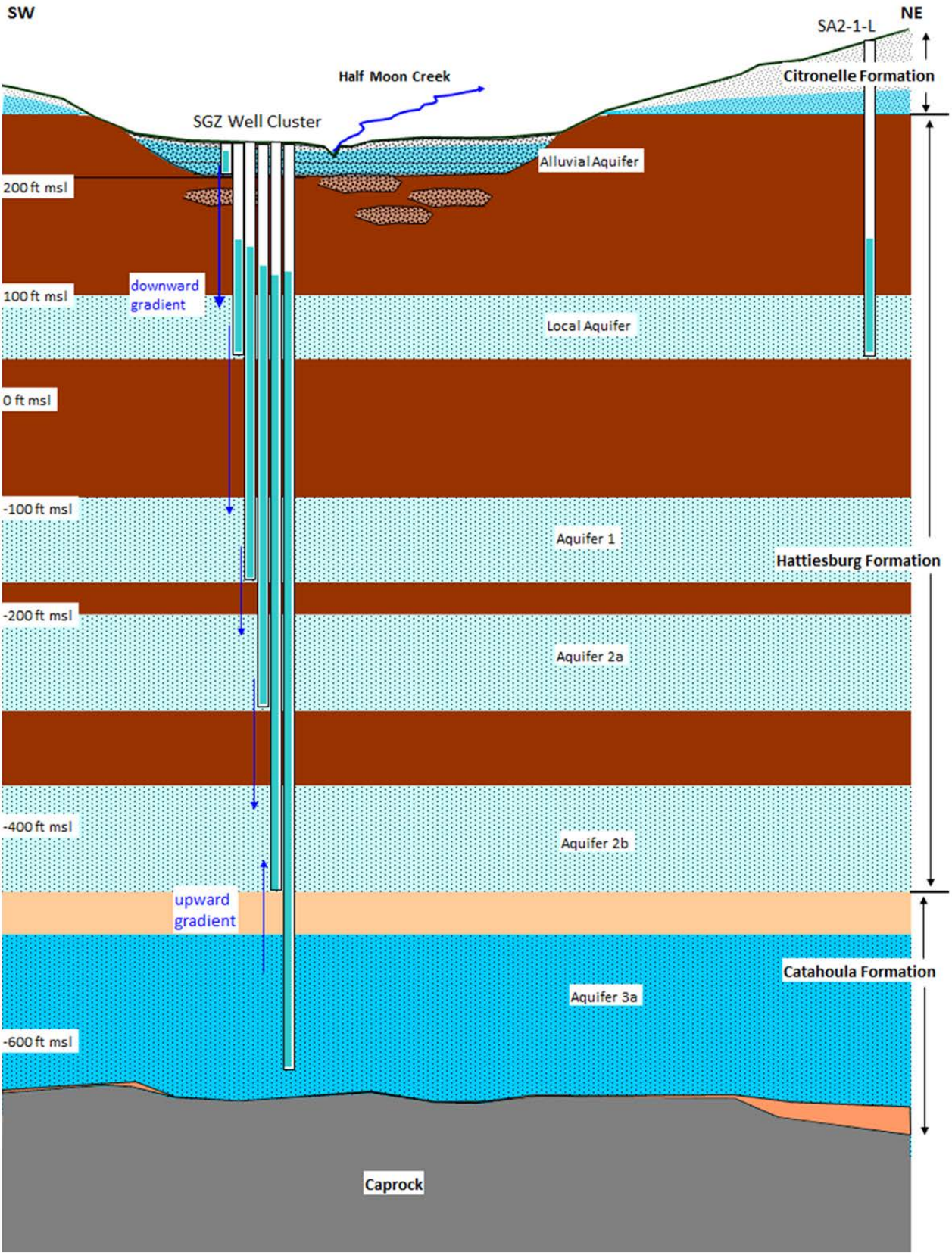
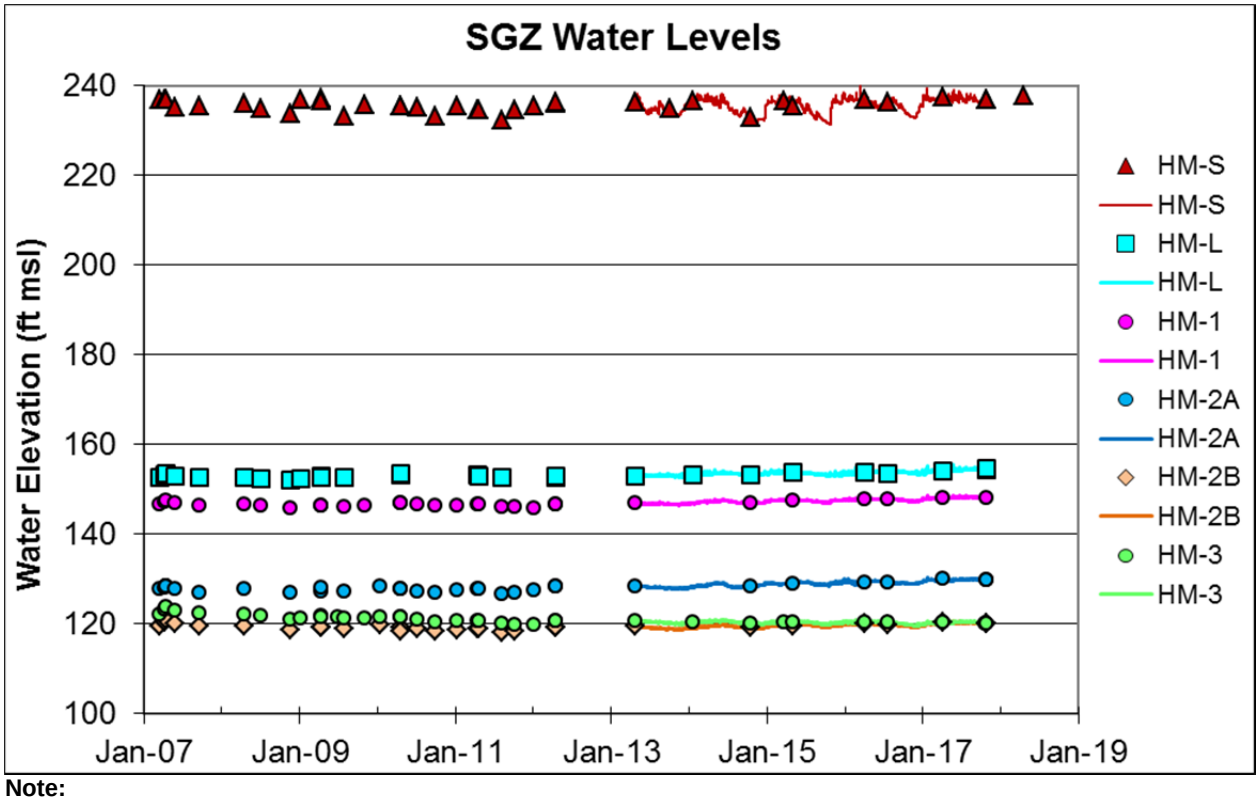


Figure 5. Conceptual Model of the Surface Ground Zero Well Cluster



Note:
Discrete symbols are manual readings, and lines are from transducer data recorded every 2 hours.

Figure 6. Surface Ground Zero Wells Water Elevations

Conduits, such as degrading cement around wellbores or unidentified sand lenses within the confining layers, increase the potential for vertical migration. The aquifer test conducted on HM-L (Local Aquifer well at SGZ) in 1979 pulled near-surface tritium contamination into the underlying Local Aquifer (DOE 1980). The travel path was assumed to be along the wellbore interfaces (casing/cement and cement/formation) of the multiple wells at SGZ that breach the confining layer separating the Alluvial and Local Aquifers. The presence of previously unidentified sand lenses in the Local Aquifer confining unit was confirmed by well SA1-12-L (installed north of SGZ in 2014), which was screened in a sand lens above the Local Aquifer. The water elevations in SA1-12-L behave like those screened in the Local Aquifer but are 15 to 20 ft higher than what would be expected for that location. The downward gradient from the shallow to the deeper aquifers would also impede upward migration from the cavity if water were to leak into the aquifers over the dome.

The largest head difference and strongest downward gradient is between the surficial Alluvial Aquifer and the underlying Local Aquifer, where there is an approximate 80 ft head difference across the intervening confining layer (average head of about 235 ft MSL in the Alluvial Aquifer and about 155 ft MSL in the underlying Local Aquifer). There is a 60 ft head difference between the Alluvial Aquifer and the sand lens above the Local Aquifer that SA1-12-L is screened across. The average head level in Aquifer 1 is about 148 ft; in Aquifer 2A it is 130 ft; and in Aquifer 2B and Aquifer 3 it is about 120 ft MSL. The head level in Aquifer 4 (133 ft MSL in the two wells 1.2 miles southwest of SGZ) is higher than the head level in Aquifer 3 by about 13 ft, implying that the upward vertical gradient at depth increases with depth. Aquifers below Aquifer 3 are not

present over the dome (the Aquifer 4 wells are 1.2 miles southwest of SGZ), and there are no Aquifer 1, 2, or 3 wells off the dome.

The potential for lateral migration of contaminants is primarily dependent on horizontal gradients and permeability within an aquifer. The alluvial monitoring network consists of wells near and downgradient of the source areas and a surface water location downstream of where any plume would enter Half Moon Creek. The horizontal gradients in the Alluvial Aquifer range from 0.001 to 0.01, with the steepest gradients occurring near streams. The potentiometric map of the Alluvial Aquifer was constructed using October 2017 data (Figure 7) and indicates the same flow directions as the April 2016 map.

Groundwater flows from higher topographic areas toward the streams, past the potential source areas, and into Half Moon Creek. Surface water entering and exiting the site is also monitored for contamination (Figure 2). Water levels in Alluvial Aquifer wells typically vary up to 5 ft or more from lows in the fall to highs in the spring (Figure 8).

Horizontal gradients and flow directions in the Local Aquifer are difficult to determine with available data but appear to be low (<0.001) and toward SGZ (Figure 9). Three new Local Aquifer wells and one new Alluvial Aquifer well were installed in September 2014 to improve the water elevation dataset and to provide additional locations to monitor for any contamination in the Local Aquifer. As previously mentioned, SA1-12-L, classified as a Local Aquifer well, is actually screened in a sand lens just above the Local Aquifer.

Four locations at the site now have both an Alluvial Aquifer and a Local Aquifer well, allowing aquifer interactions to be assessed. Water elevations in Local Aquifer wells respond quickly to changes in the Alluvial Aquifer. The 5 ft seasonal variability observed in the Alluvial Aquifer is transmitted to the Local Aquifer wells, though with a maximum magnitude of about 1 ft (Figure 8).

Water elevations in the three Aquifer 3 wells suggest a gentle 0.001 gradient from SGZ to the south. There are an insufficient number of wells in Aquifers 1, 2A, 2B, and 4 to calculate horizontal gradients in those aquifers.

2017 Monitoring Plan

The monitoring approach for the shallow aquifer is designed to monitor tritium and VOCs to observe (1) continued natural attenuation, (2) downgradient movement of contaminants, (3) any movement from the Alluvial Aquifer to the Local Aquifer, (4) any discharge from alluvium to surface water, and (5) to monitor site periphery to make sure no unacceptable contamination is entering or leaving the site. The monitoring program for the 2017 Salmon site reporting period is summarized in Table 1.

The monitoring approach for the deeper sources is designed to monitor for upward radionuclide migration. The wells at SGZ monitor near the emplacement well and drill-back well for upward migration from the cavity to successively shallower aquifers. The deep wells 1.2 miles southwest of SGZ monitor Aquifer 4 for upward leakage of the radionuclide waste injected in underlying Aquifer 5.

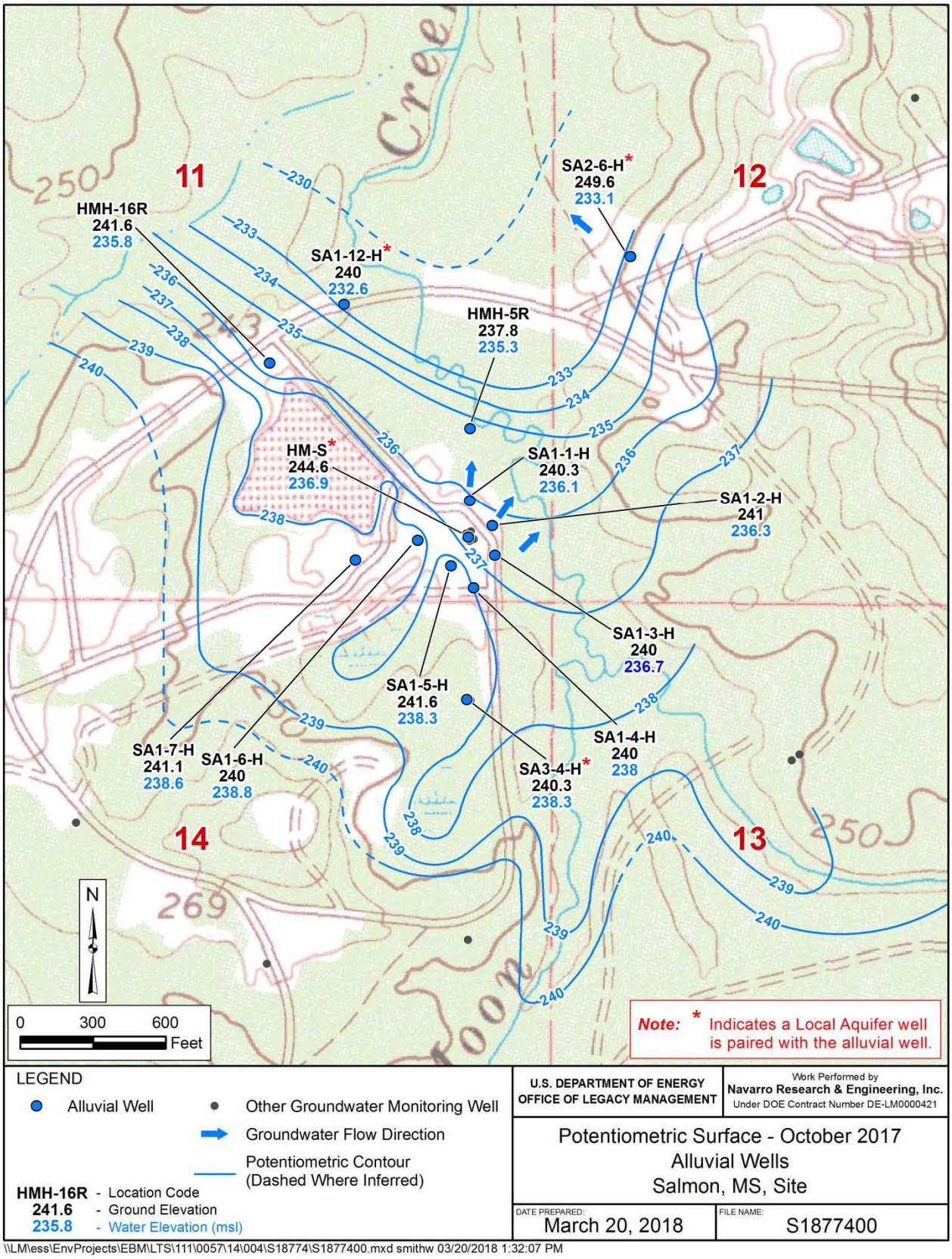


Figure 7. Alluvial Aquifer Potentiometric Surface — October 2017

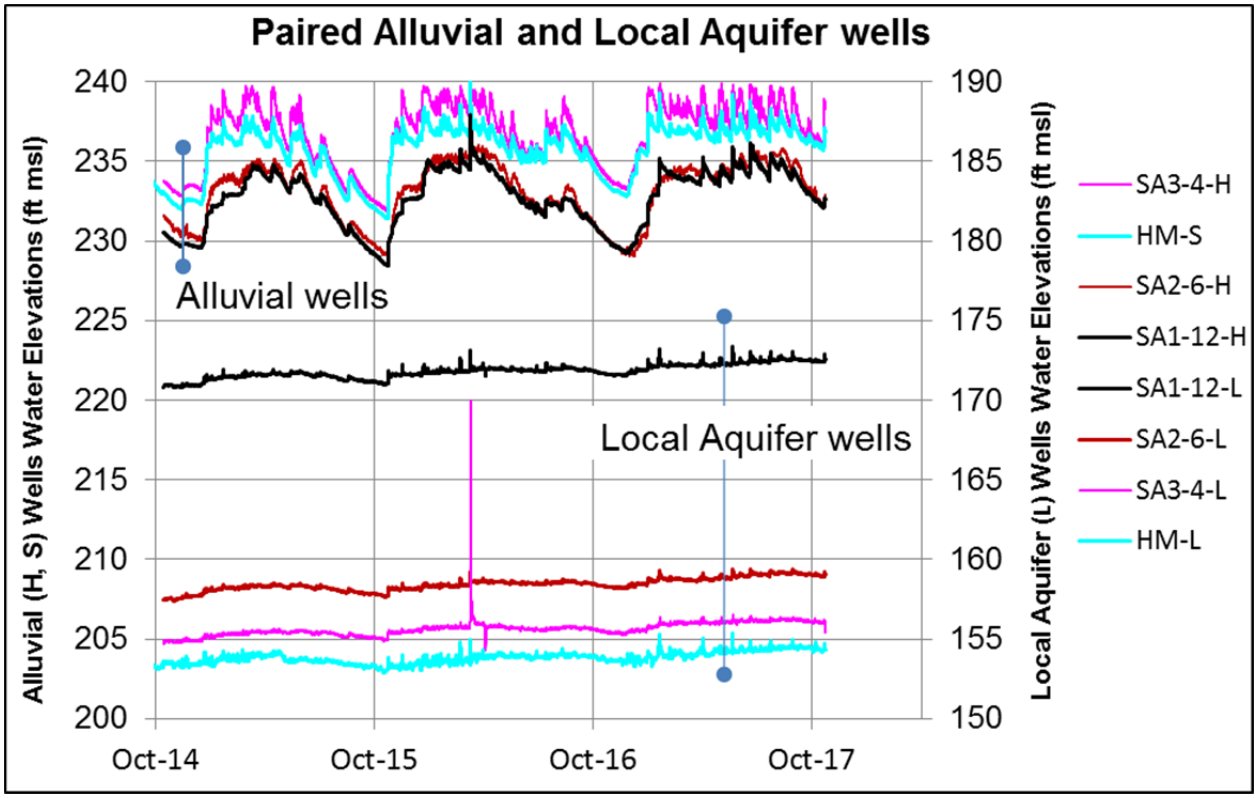


Figure 8. Water Elevations in Alluvial Aquifer (Indicated by Top Blue Bar and Primary Vertical Axis) and Local Aquifer Wells (Indicated by Lower Blue Bar and Secondary Vertical Axis) at the Same Location

Water levels were measured in all 32 site monitoring wells during the 2017 sampling event. These data are supplemented by measurements conducted by the Mississippi Department of Health during quarterly sampling of selected wells. Pressure transducers that collect water levels every 2 hours are installed in 18 site monitoring wells to assess short-term and seasonal variations, interaction among aquifers, and the relative variability of each aquifer. The transducers are installed in the six SGZ wells that are screened in each of the aquifers above the dome, nine Local Aquifer wells, the four Alluvial Aquifer wells paired at locations with Local Aquifer wells, and well SA5-4-4 screened in Aquifer 4. The transducers will be discontinued as their batteries are depleted, but they are expected to continue for several years past 2017, thus providing several years of seasonal variations. The water elevation data are used to confirm horizontal gradients and flow directions within the shallow aquifers and vertical gradients between all site aquifers.

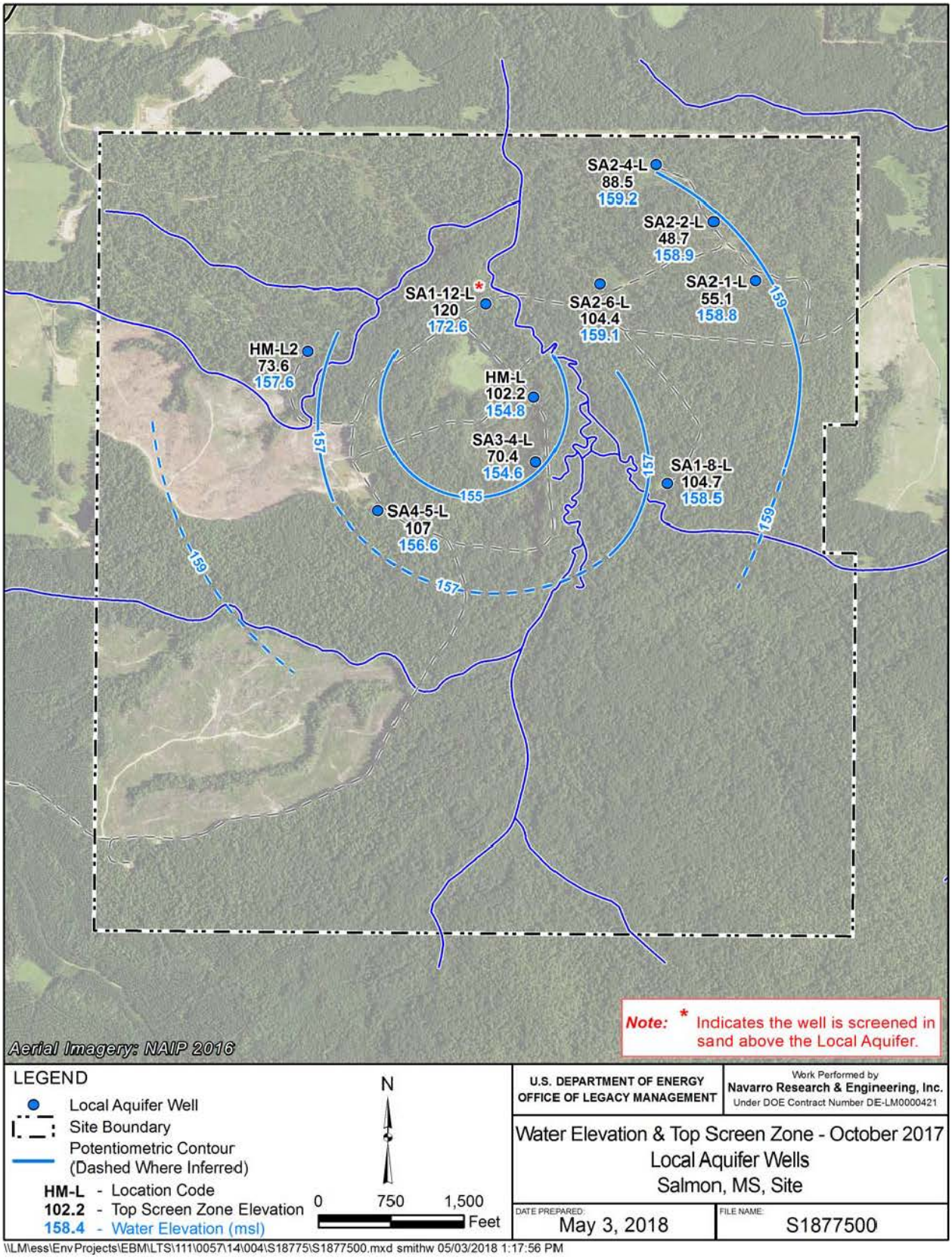


Figure 9. Local Aquifer Water Elevations — October 2017

Table 1. Water Samples Collected at the Salmon, Mississippi, Site, 2017

Source	Name	Aquifer	Total Depth (ft)	VOC	Metals[a]	Tritium[b]	Water Level[c]
Shallow Sources (Operable Unit 1)	***Wells***						
	SA1-1-H	Alluvial	30	X	X	X	X
	SA1-2-H	Alluvial	30	X	X	X	X
	SA1-3-H	Alluvial	30	X	X	X	X
	SA1-4-H	Alluvial	30	X	X	X	X
	SA1-5-H	Alluvial	30	X	X	X	X
	SA1-6-H	Alluvial	23	X	X	X	X
	SA1-7-H	Alluvial	30	X	X	X	X
	SA1-8-L	Local	195		X	X	XT
	SA1-12-H	Alluvial	30	X	X	X	XT
	SA1-12-L	Local	172	X		X	XT
	SA2-1-L	Local	349		X	X	X
	SA2-2-L	Local	340		X	X	XT
	SA2-4-L	Local	250		X	X	XT
	SA2-6-H	Alluvial	47	X		X	XT
	SA2-6-L	Local	197	X		X	XT
	SA3-4-H	Alluvial	30	X	X	X	XT
	SA3-4-L	Local	197	X		X	XT
	HMH-5R	Alluvial	30	X	X	X	X
	HMH-16R	Alluvial	30	X	X	X	X
	HM-S[d]	Alluvial	30	X	X	X	XT
	HM-L[d]	Local	204	X	X	X	XT
	HM-L2	Local	200		X	X	XT
	SA4-5-L	Local	180		X	X	XT
	Surface Water Locations						
	HALFMOON CREEK	NA	NA		X	X	NA
	HALFMOONCR KOVERFLOW	NA	NA		X	X	NA
	Pond West of GZ	NA	NA		X	X	NA
	Half Moon Cr Exit	NA	NA		X	X	NA
	HMC-S	NA	NA			X	NA
	HickHCrTSD-East	NA	NA			X	NA
	GC-E (Grantham Cr East)	NA	NA		X	X	NA
Test Cavity (Operable Unit 2)	HM-1	1	415			X	XT
	HM-2A	2a	537			X	XT
	HM-2B	2b	700			X	XT
	HM-3	3a	875		X	X	XT
	E-7	Caprock	934			X	X

Table 1. Water-Samples Collected at the Salmon, Mississippi, Site, 2017 (continued)

Source	Name	Aquifer	Total Depth (ft)	VOC	Metals[a]	Tritium[b]	Water Level[c]
Aquifer 5 (Operable Unit 3)	SA5-4-4	4	2099			X	XT
	SA5-5-4	4	2081			X	X
Other	***Wells***						
	SA1-11-3	3a	924		X	X	X
	SA3-11-3	3a	861		X	X	X
	Surface Water Locations						
	REECo Pit (A)	NA	NA		X	X	
	REECo Pit (B)	NA	NA		X	X	
	REECo Pit (C)	NA	NA		X	X	

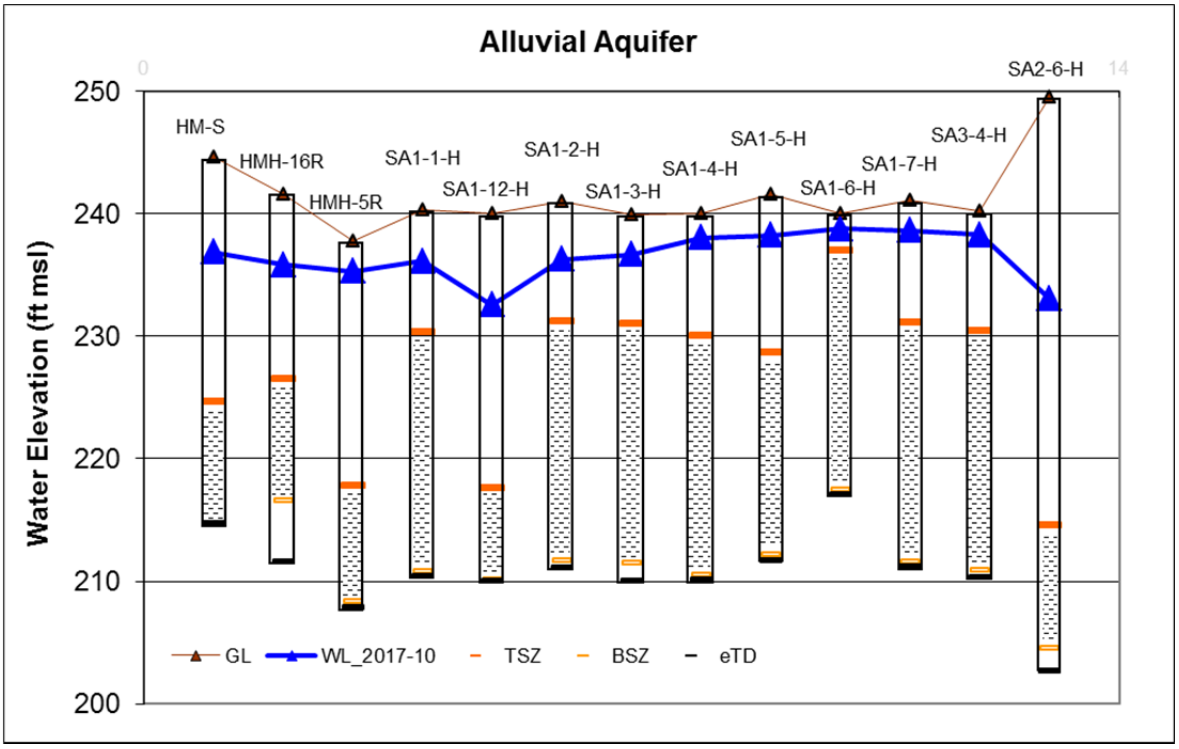
Notes:
[a] Metals = arsenic, barium, chromium, lead
[b] Analyze 25% of the tritium samples by the enriched tritium method.
[c] "XT" in this column indicates this well has a transducer; data collection will discontinue as transducer batteries are depleted.
[d] Wells HM-S and HM-L are part of the SGZ well cluster, but current contamination is from a shallow surface source.

Abbreviation:
NA = not applicable

4.0 Monitoring Results of Shallow Source Areas

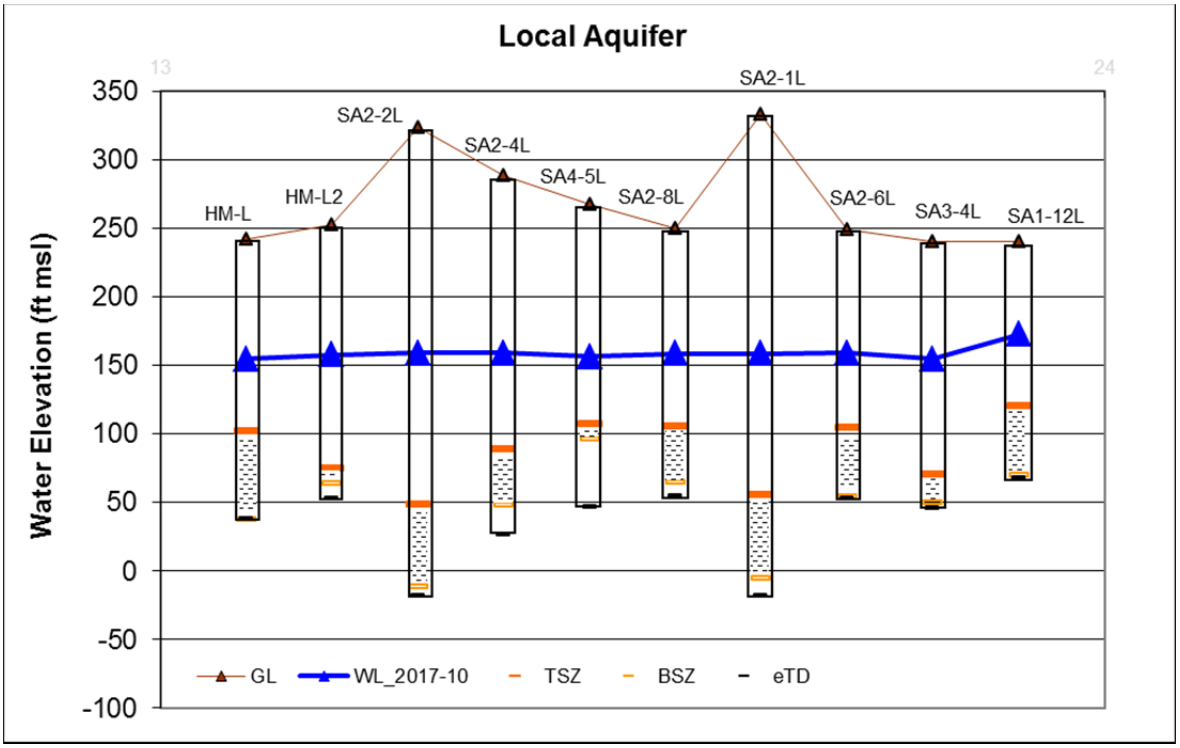
4.1 Groundwater Flow Affecting Shallow Source Areas

The head levels measured in the Alluvial and Local Aquifers in October 2017 (Figure 10 and Figure 11) are consistent with past observations (Figure 12 and Figure 13). Head levels in the Alluvial Aquifer are lowest downstream and near Half Moon Creek (flows to the north). The seasonal head variability for the Alluvial Aquifer can best be seen in the water levels of wells with transducers (Figure 8) rather than the discrete measurement hydrographs that are not monitored frequently enough to capture detailed seasonality. Water levels in all Alluvial Aquifer wells respond like those near SGZ (Figure 12). The transducer data from one of the alluvial wells (HM-S) was included on Figure 12 to show the disparity between infrequent water level readings and the every-2-hour transducer data. Seasonal variability of Local Aquifer head levels (high in the spring and low in the fall) is less pronounced than those of wells screened in the alluvium. All Local Aquifer wells are equipped with transducers except SA2-1-L.



Abbreviations: TSZ (top of screen zone), BSZ (bottom of screen zone), eTD (elevation total depth)
GL (ground level), WL (water level)

Figure 10. Alluvial Aquifer Wells Relative Water Elevations — October 2017



Abbreviations: TSZ (top of screen zone), BSZ (bottom of screen zone), eTD (elevation total depth)
GL (ground level), WL (water level)

Figure 11. Local Aquifer Wells Water Elevations — October 2017

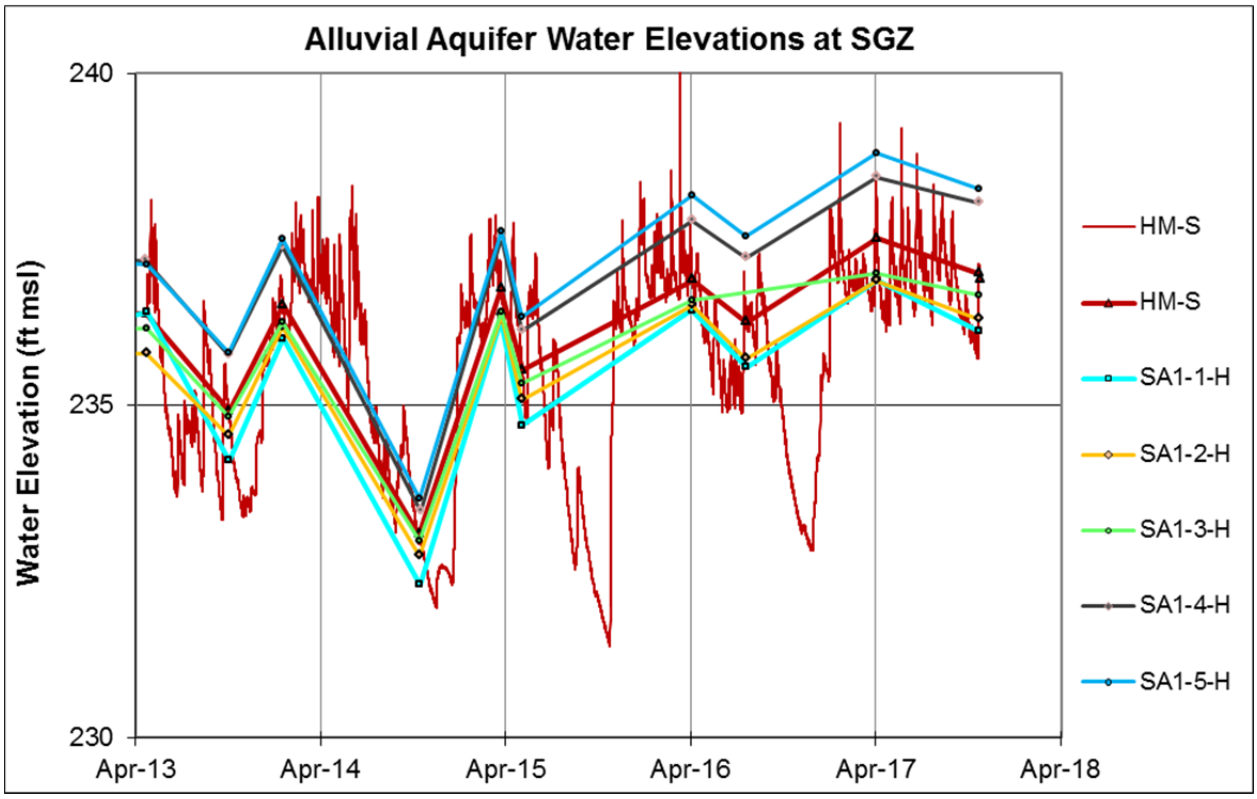


Figure 12. Surface Ground Zero Alluvial Aquifer Wells Water Elevations

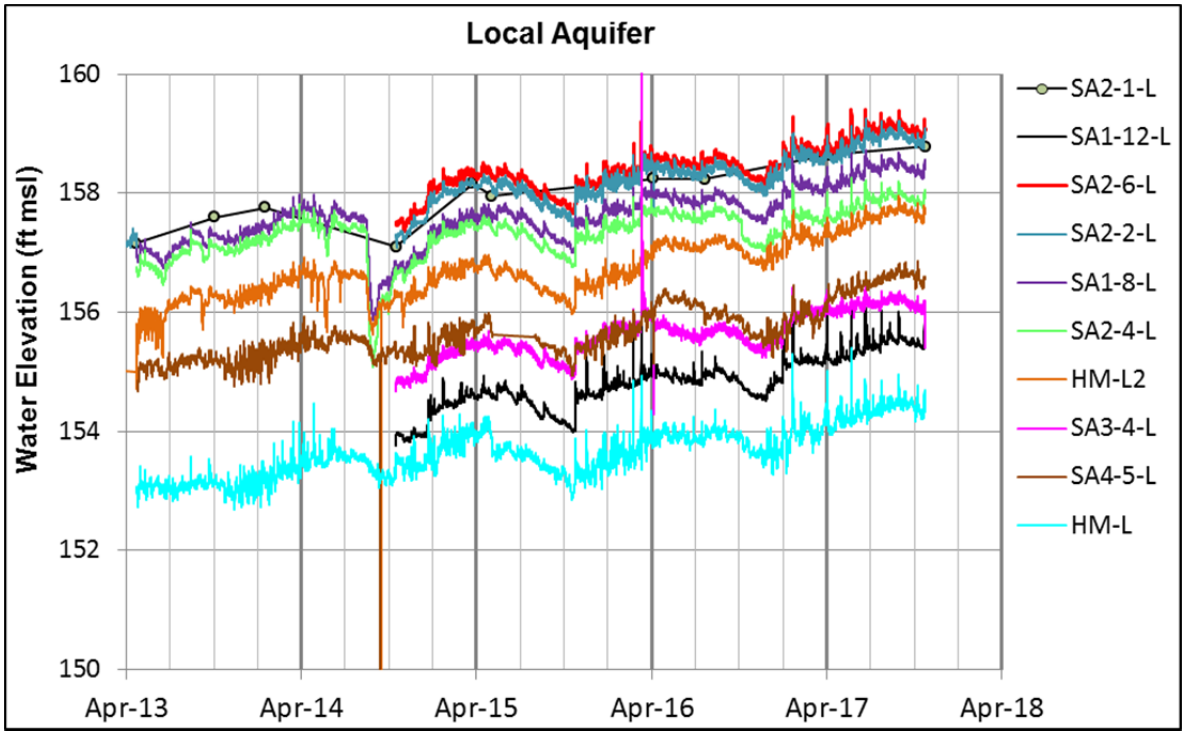


Figure 13. Local Aquifer Wells Water Elevations

Three additional Local Aquifer wells were installed in September 2014 (see Appendix C for details) to increase the data available for flow interpretations. It was suspected that the potential existed for Local Aquifer flow directions to be similar to those in the Alluvial Aquifer, toward Half Moon Creek from the high areas west and east of SGZ, then overall to the north. Results appear to support inward flow at the site toward SGZ. Well HM-L at SGZ continues to have the lowest Local Aquifer water elevation. The well that would have confirmed that there was or was not a horizontal gradient to the north (SA1-12-L) was screened over a shallower sand lens that was better developed at this location than in other Local Aquifer wells (see Appendix C for details). The water elevation at SA1-12-L is 15 to 20 ft higher than what would be expected for a well screened solely in the Local Aquifer (Figure 14). This was unfortunate from a flow perspective but beneficial in that it confirms the presence of additional sand lenses in the confining unit that separates the Alluvial and Local Aquifers, at least north of SGZ and almost directly below Half Moon Creek. It also provides a good analyte monitoring location in a relatively higher stratigraphic position than other Local Aquifer wells.

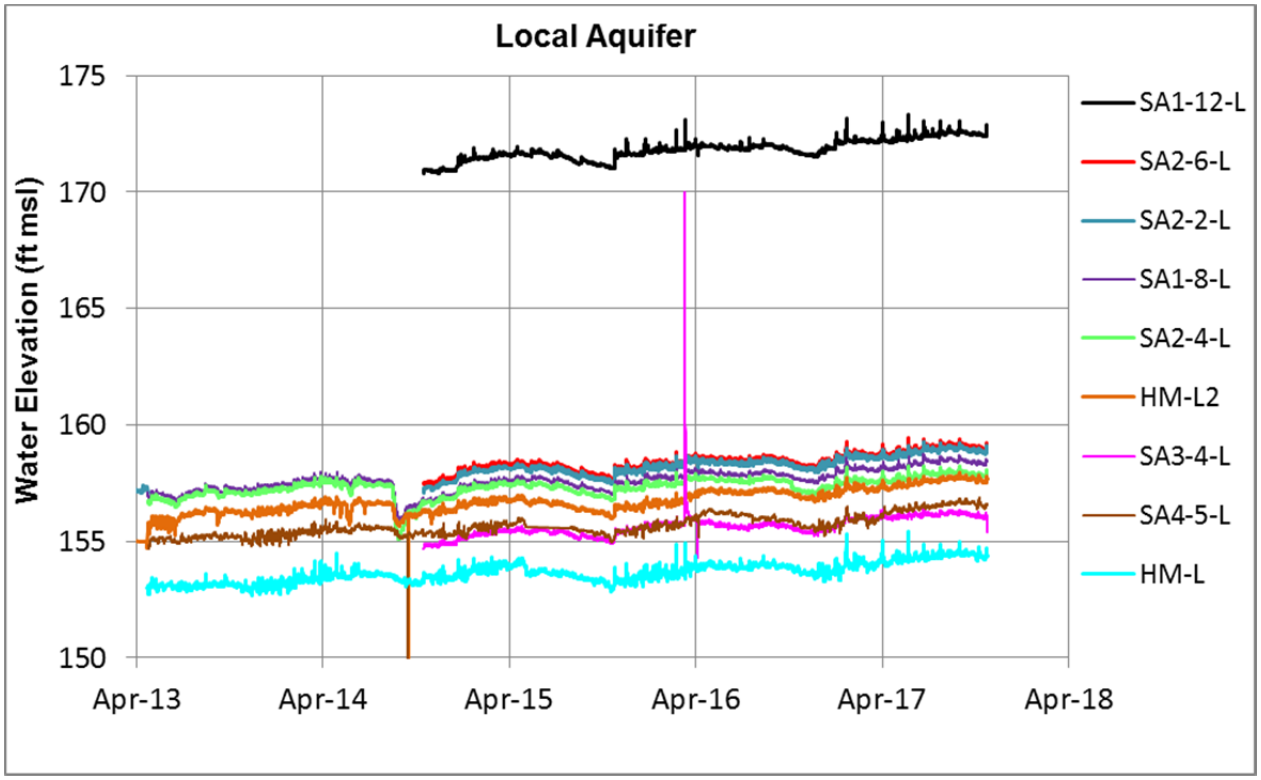


Figure 14. Local Aquifer Wells Water Elevations — Vertical Scale Expanded for SA1-12-L

4.2 Analytical Results for the Shallow Source Areas

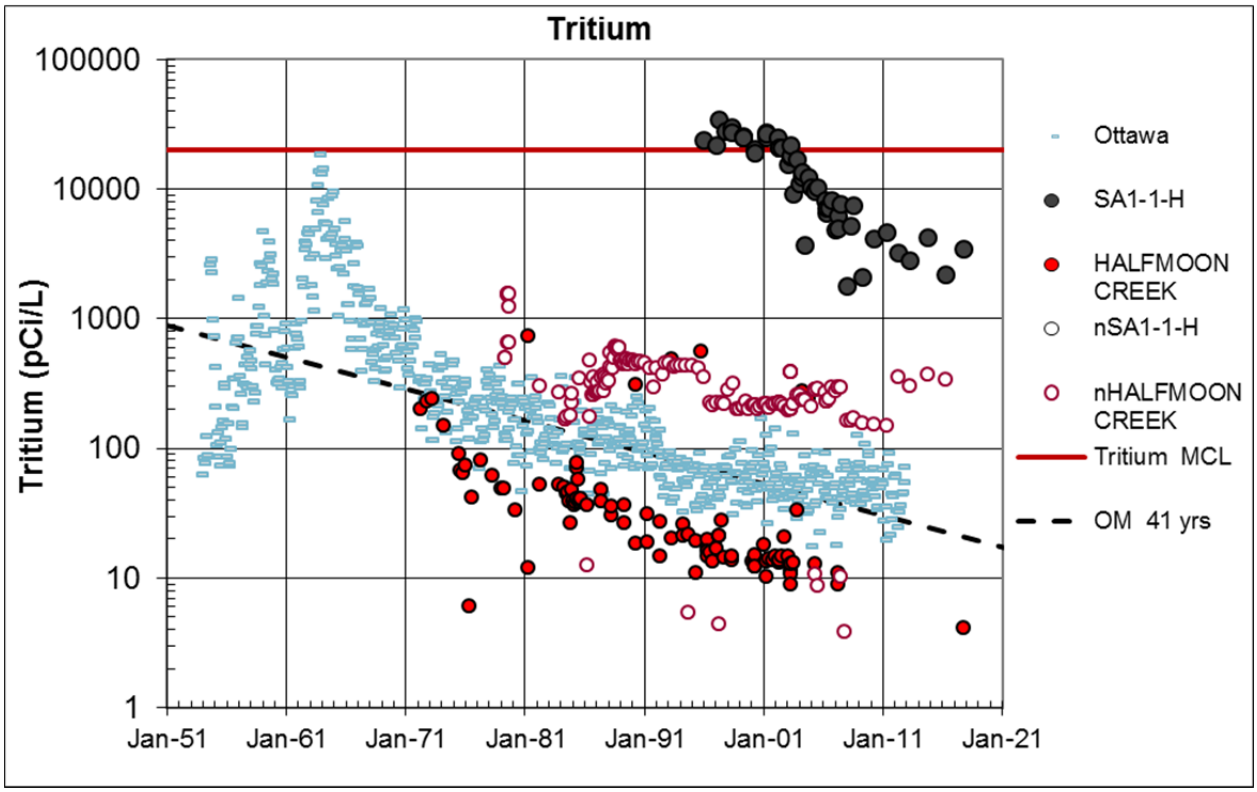
Tritium and trichloroethene (TCE), along with TCE degradation products *cis*-1,2- dichloroethene (DCE) and vinyl chloride, have been observed in shallow groundwater near SGZ. As described in Section 3.3, all tritium contamination near SGZ is attributed to wastes from drill-back operations and not upward migration from the test cavity. No significant concentrations of tritium or TCE have been detected in groundwater outside the SGZ area or above background levels in surface water with the exception of the Half Moon Creek overflow pond, which is

located between the well cluster at SGZ and Half Moon Creek (Figure 2). The primary source is believed to be Mud Pit #2, located adjacent to SA1-1-H, the well with the highest tritium concentration (Figure 16). Mud Pit #2 was used during drill-back operations into the test cavity.

The tritium concentration in precipitation that resulted from atmospheric testing through the early 1960s is plotted for reference on the following Alluvial Aquifer tritium concentration charts (Figure 15, Figure 17, Figure 18, Figure 24, and Figure 26). Data are available at the webpage for Global Network of Isotopes in Precipitation (http://www-naweb.iaea.org/napc/ih/IHS_resources_gnip.html). Ottawa, Canada, has the longest record and is representative of the Northern Hemisphere. The Ottawa tritium data are presented on Figure 15 along with the results from SA1-1-H (the well with the highest tritium concentration at the site) and the Half Moon Creek surface water sampling location.

Tritium has been below its 20,000 picocuries per liter (pCi/L)[1] MCL at all site locations since 2004. Locations with elevated concentrations (Figure 17) in the Alluvial Aquifer are declining faster than the rate of decay[2] and are decreasing about an order of magnitude (OM) every 18 years. Tritium naturally decays an OM every 41 years. The accelerated rate of decline is due to dilution by infiltration and horizontally migrating uncontaminated groundwater. Tritium concentrations in the Half Moon Creek overflow pond are also decreasing an OM every 18 years and have been below the standard method detection limit (typically between 300 to 400 pCi/L) since 2007 (Figure 18). Tritium appears to be seasonally affected in higher-concentration wells SA1-1-H and HMH-5R, with elevated concentrations in the fall when there is less dilution (Figure 17 shows October 2014 and October 2017 results). The TCE results for these wells are also elevated during fall sampling events. Site studies showed that shallow groundwater at SGZ discharged into the overflow pond (DOE 1978). The pond was also used for discharge of purge water from monitoring wells.

[1] Tritium activity will be referred to as tritium concentration throughout the document to be consistent with other analytes.
[2] The half-life of tritium is 12.3 years or a 41 year order-of-magnitude life.



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 15. Tritium Concentrations — Ottawa, Canada, Precipitation Plotted with Results from Highest-Concentration Well at the Site and Half Moon Creek

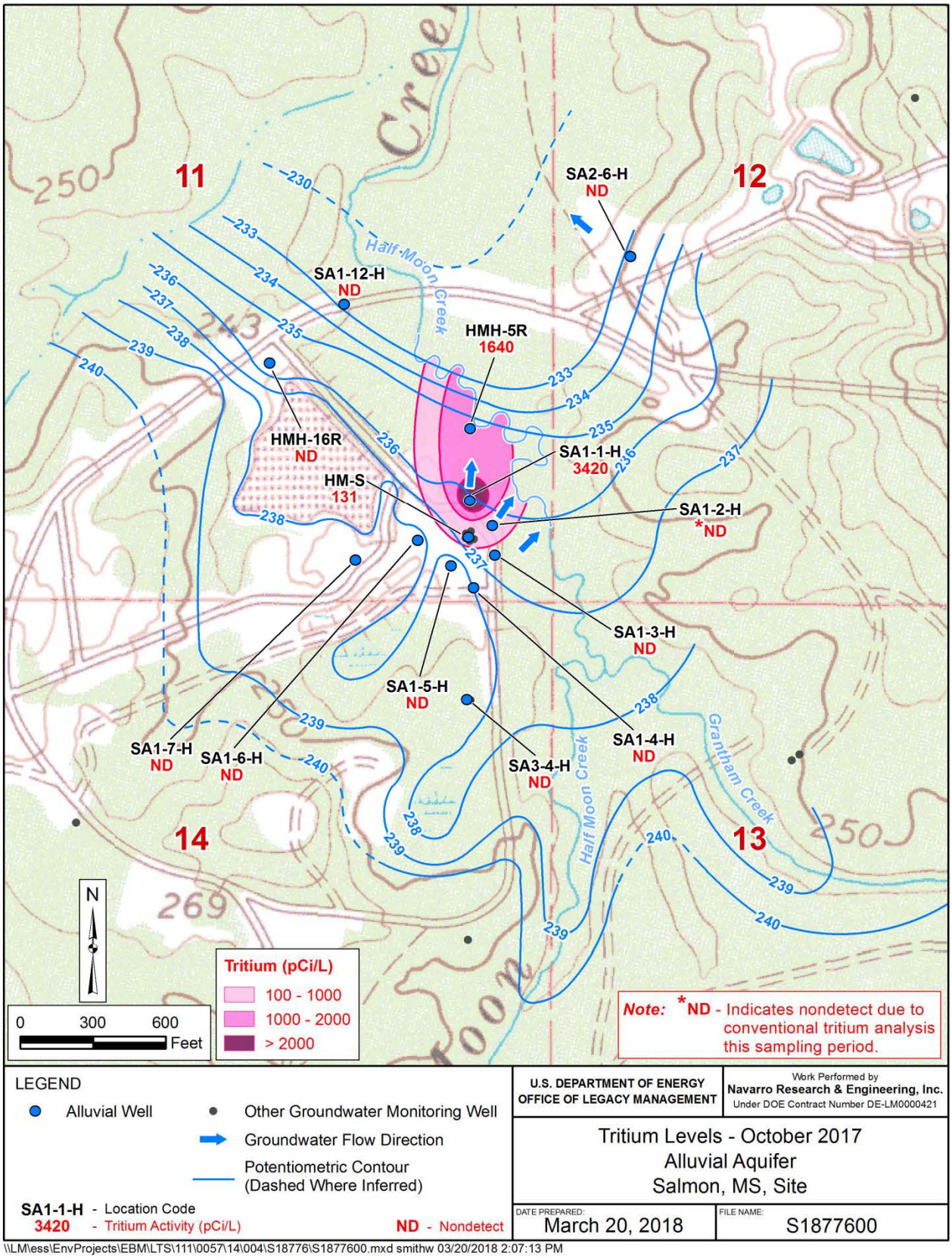
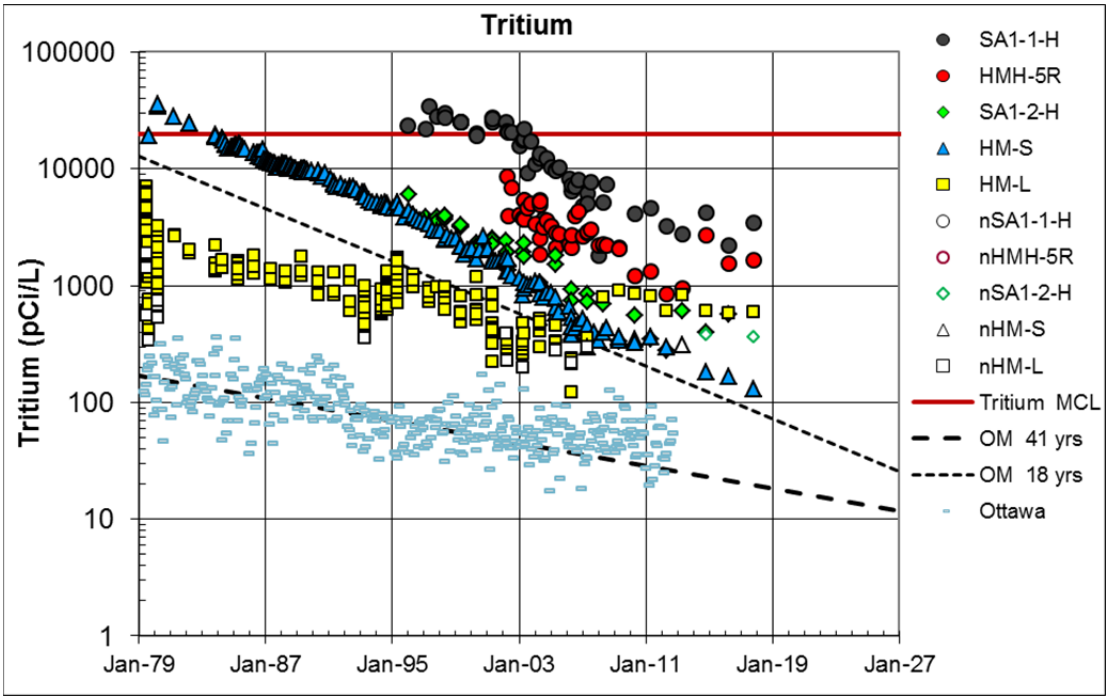
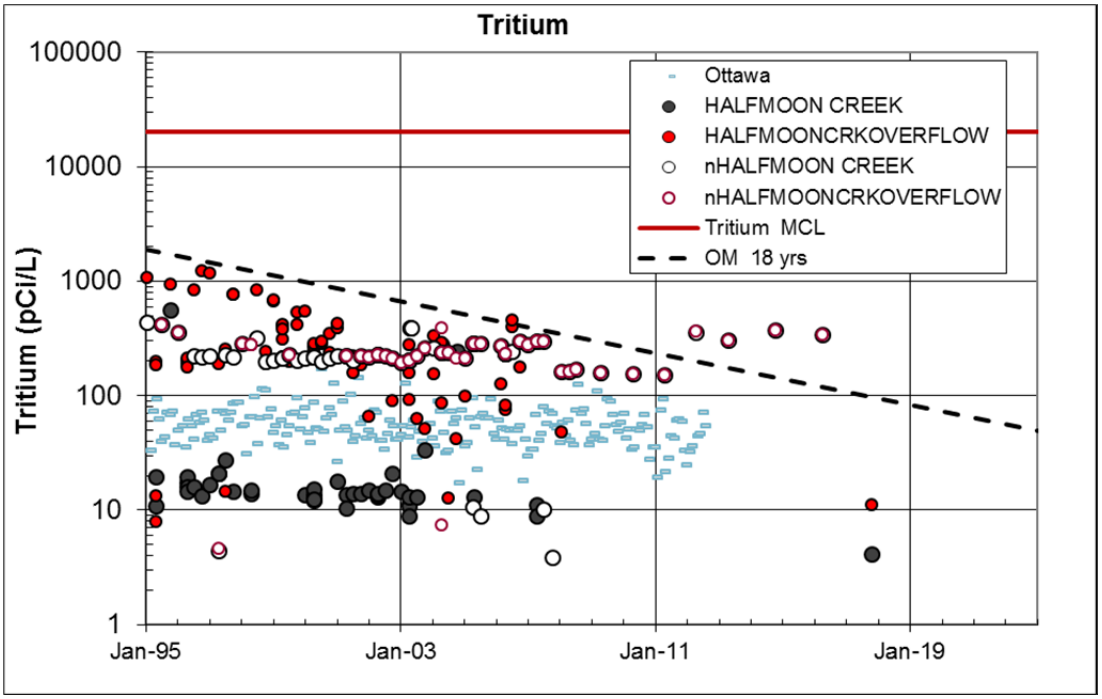


Figure 16. Tritium Concentrations — Alluvial Aquifer



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 17. Wells with Elevated Tritium Concentrations



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

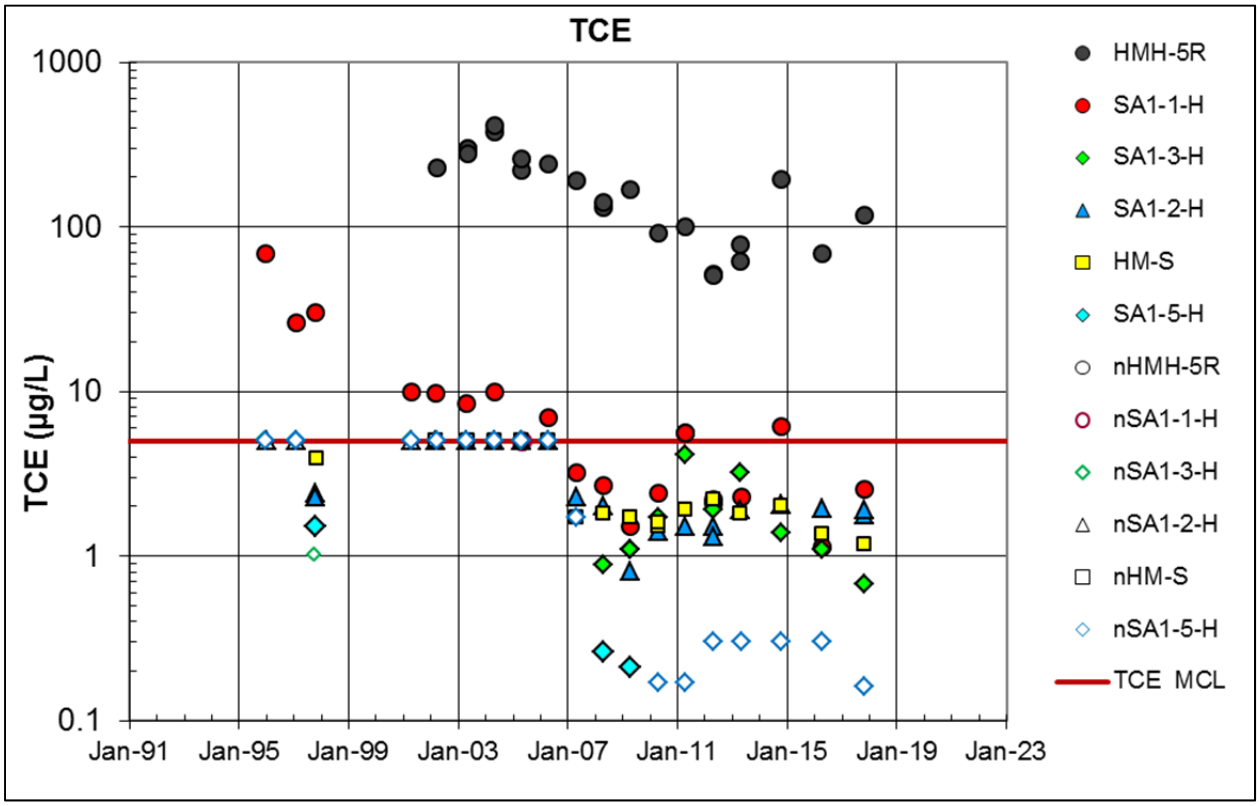
Figure 18. Half Moon Creek Overflow Tritium Concentrations

Tritium is also found in the Local Aquifer at SGZ in well HM-L and is attributed to downward movement from the surficial aquifer, likely due to downward migration during drilling and aquifer testing activities at SGZ. TCE has also been detected at low levels (below the 5 micrograms per liter [µg/L] MCL) in Local Aquifer well HM-L at SGZ. The migration path for these contaminants is believed to be along one or several of the numerous boreholes at SGZ. It is also possible that there are unidentified sand lenses in the confining layer separating the Alluvial and Local Aquifers that provide a hydraulic connection between the two units. No tritium (or TCE) has been observed in the aquifers between the test cavity and the Local Aquifer. Appendix A contains analytical data collected in 2017 for all the monitoring wells.

TCE is present above the 5 µg/L MCL in well HMH-5R near SGZ; it was detected at 194 µg/L in October 2014, 69 µg/L in April 2016, and 118 µg/L in October 2017 (Figure 19). TCE concentrations are seasonally affected (higher concentrations when water levels are lower in the late summer and fall) based on recent spring and fall sampling results from HMH-5R and SA1-1-H (Figure 19). On the map of TCE concentrations above the MCL (Figure 20), the small plume surrounding HMH-5R would expand to include SA1-1-H based on the fall 2014 data (a size similar to the plume of elevated tritium concentrations [Figure 16]). The October 2017 TCE result from SA1-1-H was elevated (2.5 µg/L) though less than the 5 µg/L MCL. TCE, like tritium, is decreasing over time due to degradation and dilution.

The presence of degradation product *cis*-1,2-DCE, which in turn degrades to vinyl chloride, confirms that TCE is degrading and is also being diluted. Concentrations of *cis*-1,2-DCE are occasionally at or above the 70 µg/L MCL in wells HMH-5R and SA1-3-H (Figure 21), exhibiting the same seasonal effect as TCE and tritium. Vinyl chloride has been detected in wells SA1-3-H and SA1-2-H (Figure 22).

The contamination in the Alluvial Aquifer is migrating with groundwater flow to Half Moon Creek as evidenced by the tritium and TCE plume maps shown in Figure 16 and Figure 20, respectively. This is effectively attenuating the source areas over time with no measurable impact to the environment. There is no indication that discharge of groundwater to surface water has had an impact on surface water quality. VOCs have not been detected in downstream Half Moon Creek sampling locations, and tritium levels have been consistently below those observed in precipitation (Figure 26). Analyte results from stream samples entering the site are similar to those of the Half Moon Creek location leaving the site; there are no site-related impacts to surface water leaving the site boundary. Analytical data for surface water locations are included in Appendix B.



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 19. TCE Concentrations

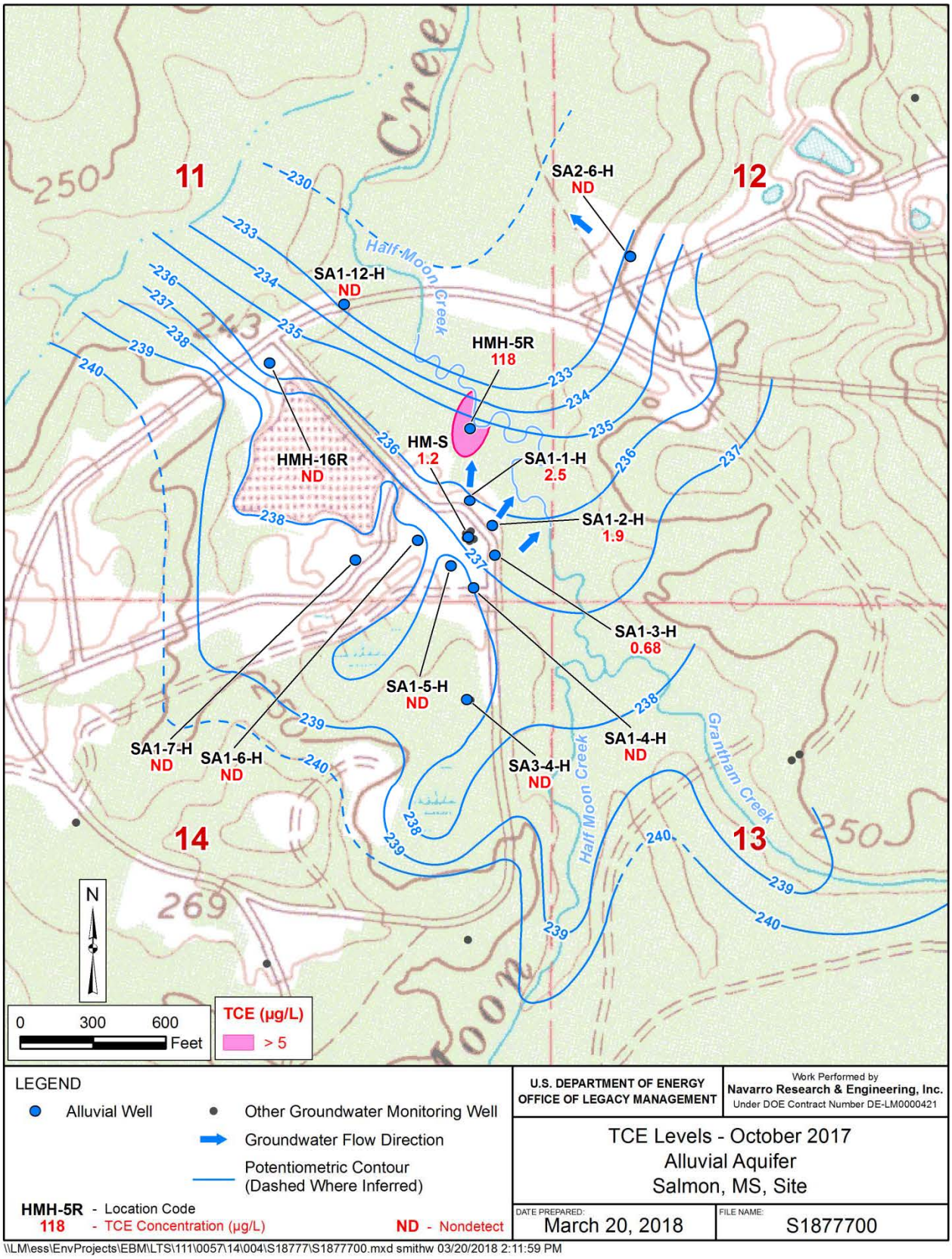
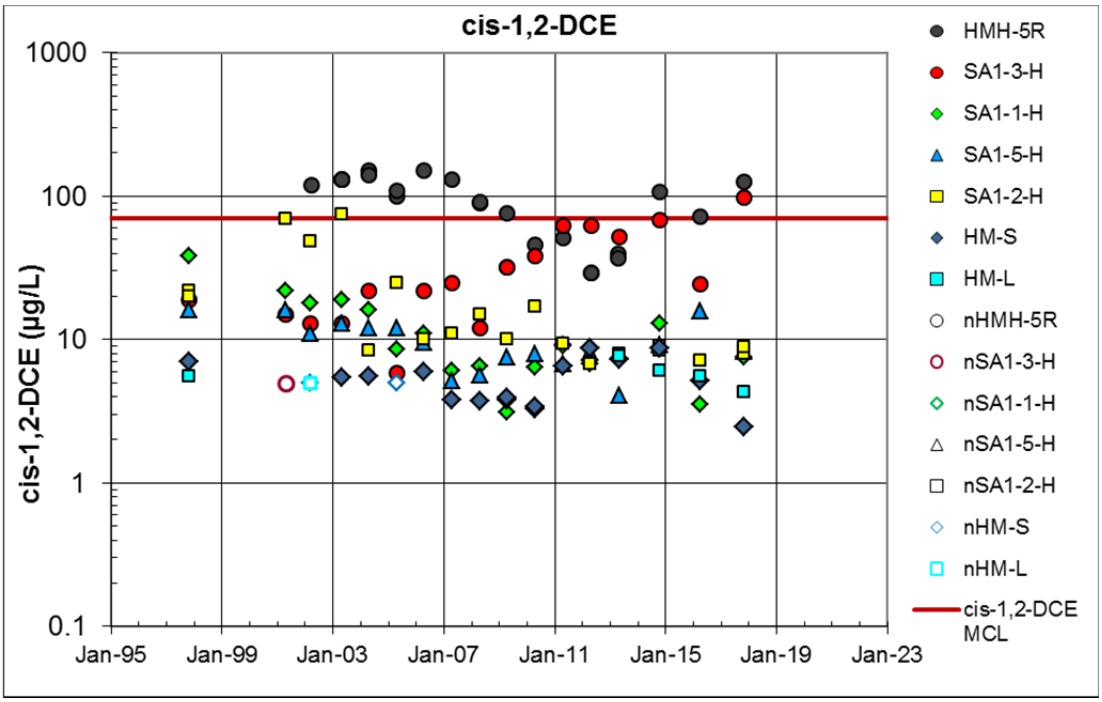
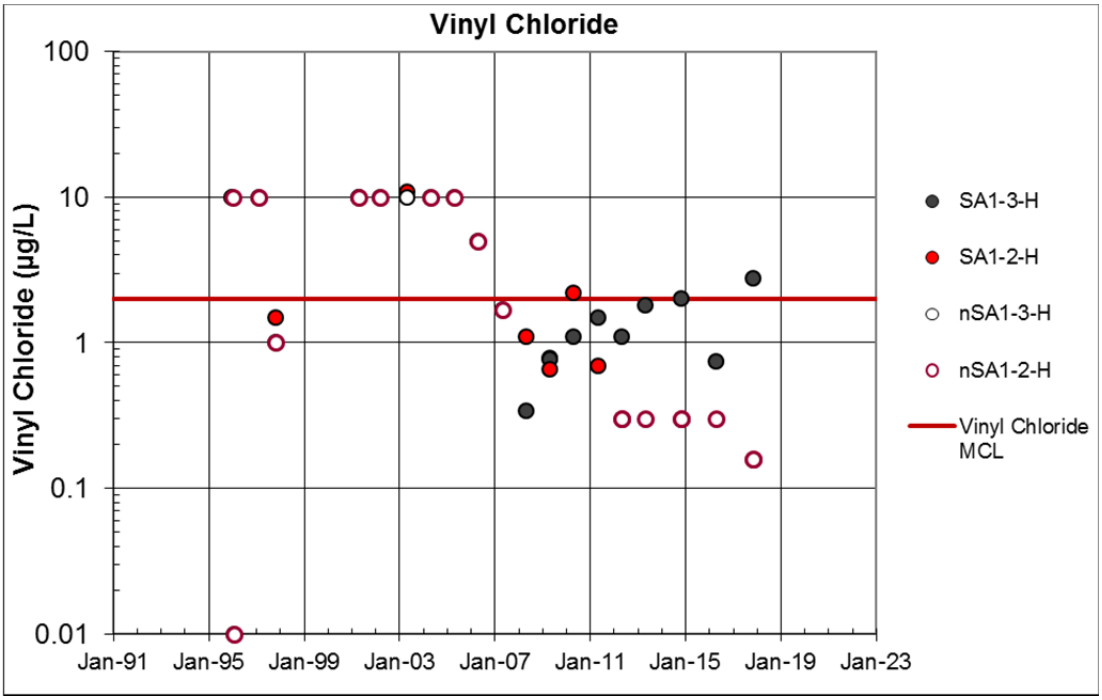


Figure 20. TCE Concentrations — Alluvial Aquifer



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 21. Wells with Elevated cis*-1,2-DCE Concentrations*



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 22. Wells with Vinyl Chloride Detections

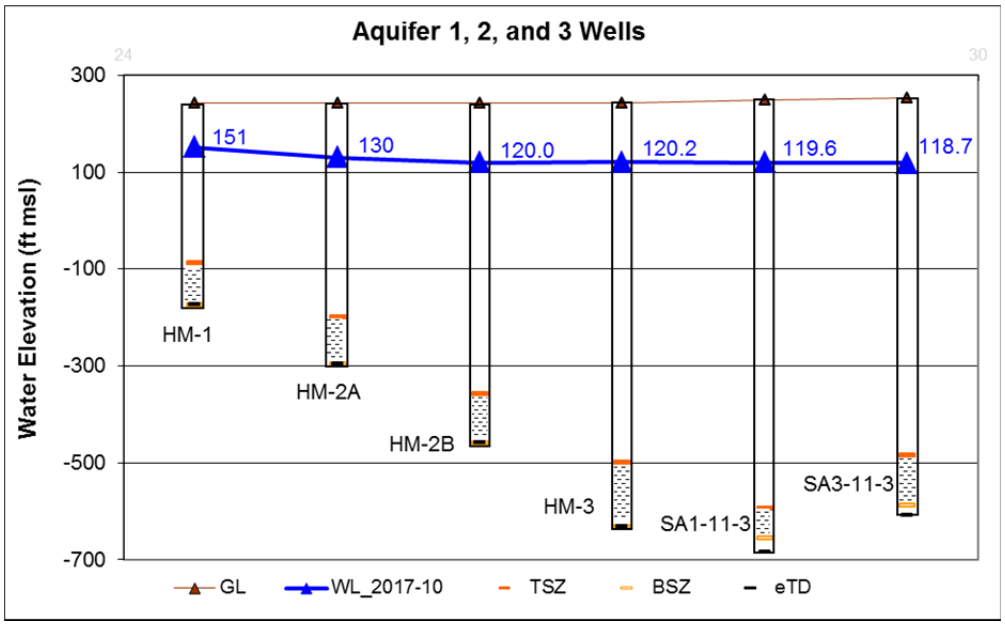
5.0 Monitoring Results of the Test Cavity

5.1 Migration of Test Cavity Contamination

The remaining radionuclides in the test cavity are hydraulically isolated within the salt dome (Figure 4). The only feasible migration pathways are the emplacement and postshot reentry well boreholes (Figure 3). Previous studies have been conducted to evaluate the potential for migration of contaminants from the test cavity. A hydrologic study conducted at the site in the late 1970s investigated the potential interactions of the different aquifers (DOE 1980) overlying the cavity. This involved installing a cluster of six wells at SGZ to monitor each aquifer above the salt dome. As previously stated, results indicated no evidence of upward leakage from the test cavity, and all surficial tritium was attributed to drill-back operations. Subsequent monitoring continues to support this conclusion.

The salt comprising the dome is relatively plastic; over time, it is expected to fill the cavity and seal the boreholes, isolating the contamination. As this occurs, there is the potential for contamination to be pushed upward. If this happens, tritium is expected to be the first radionuclide detected because of its mobility and because it was produced in significant quantities by the detonation. Samples are regularly collected and analyzed for tritium from the SGZ well cluster (near the emplacement and reentry boreholes), which has wells screened in Aquifers 1, 2A, 2B, and 3 (wells HM-1, HM-2A, HM-2B, HM-3). Caprock well E-7 is also monitored even though it is 2000 ft southwest of SGZ.

If contamination were to leak from the cavity, the downward vertical gradient would impede upward migration to shallower aquifers (Figure 23). The horizontal gradient in the lowest aquifer, Aquifer 3, is gentle and to the south, toward wells SA3-11-3 (about 1700 ft south of SGZ) and SA1-11-3 (about 1600 ft southeast of SGZ) (Figure 2).



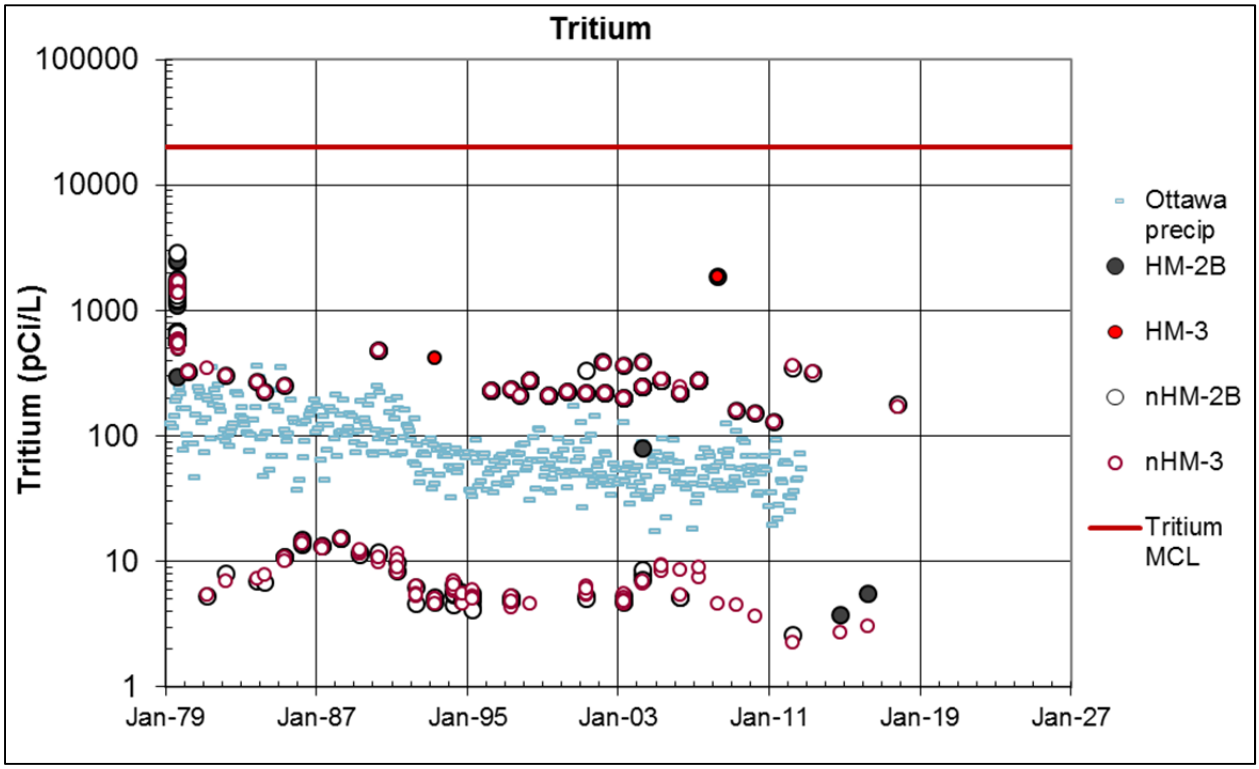
Abbreviations: TSZ (top of screen zone), BSZ (bottom of screen zone), eTD (elevation total depth), GL (ground level), WL (water level)

Figure 23. Water Elevations in Aquifer 1, 2, and 3 Wells — April 2016

5.2 Analytical Results for Test Cavity Monitoring

Tritium monitoring was conducted at five monitoring wells above the dome (HM-L, HM-1, HM-2A, HM-2B, HM-3) to detect leakage from the test cavity. Tritium levels are typically below the detection limit, even using the enriched method (detection limit of 5 to 10 pCi/L), in all deeper aquifer well samples. Tritium is naturally occurring at less than 5 pCi/L (IAEA 2017). Water in the deeper aquifers predates atmospheric test–related tritium in precipitation. Tritium in those aquifers was introduced by drilling. Tritium was observed at elevated levels in samples collected in April 2008 from wells HM-2b (Aquifer 2b) and HM-3 (Aquifer 3b). The results are believed to be in error because analysis of duplicate samples collected by the Mississippi State Department of Health were all below the detection limit, which is consistent with historical sample results (Figure 24). The results for well HM-3 and HM-2b are presented on Figure 24 to illustrate the low levels of tritium in the deeper aquifers. Tritium results in horizontally downgradient Aquifer 3 wells (SA1-11-3 and SA3-11-3) have all been below detection (Figure 25).

Select samples at the Salmon site are being analyzed for Cl-36 (301,000 year half-life) as a possible long-term replacement for tritium (12.3 year half-life) as the indicator for contaminant migration from the test cavity. Results will be used to establish a baseline and will be evaluated as a potential substitute for tritium in the future.



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 24. Deep Aquifer Wells with Tritium Detections

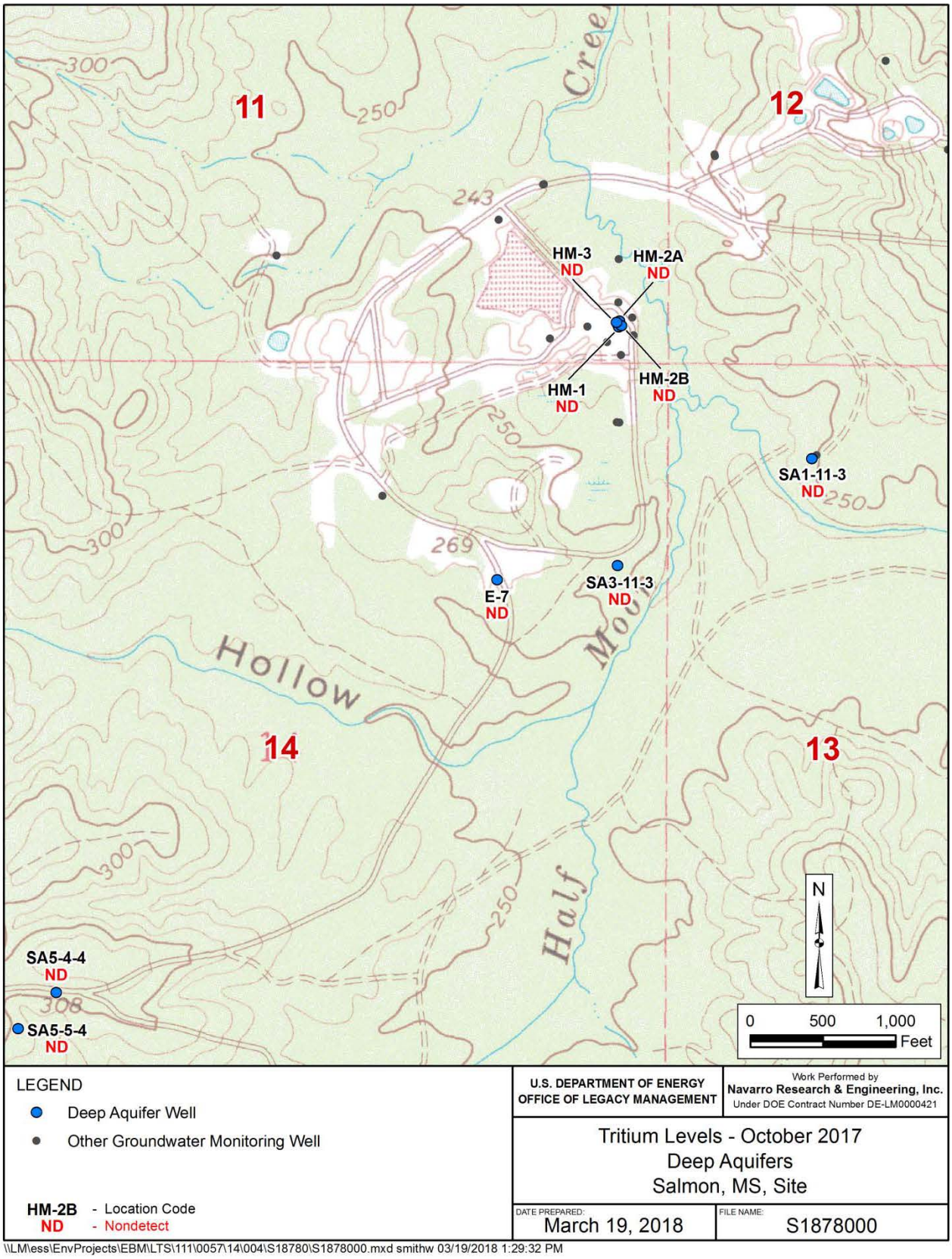


Figure 25. Tritium in Deep Wells

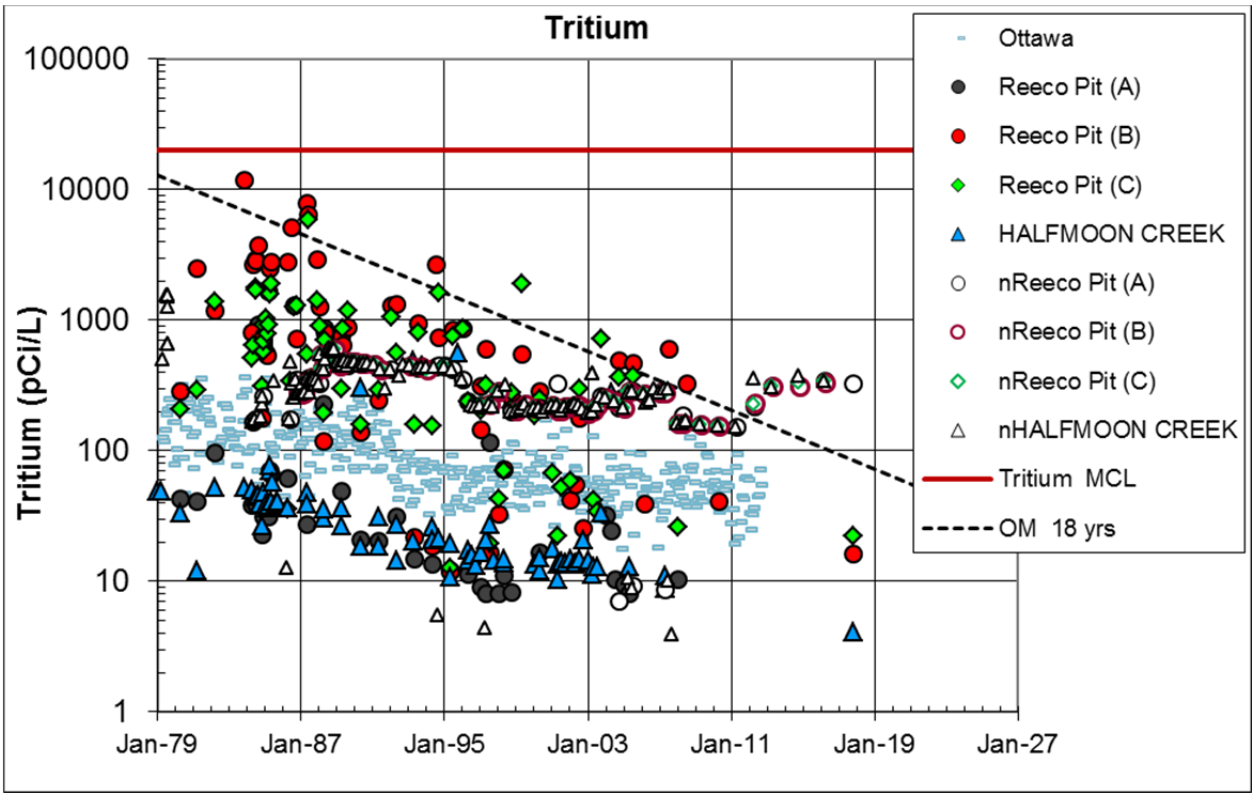
6.0 Monitoring Results of the Aquifer 5 Waste Injection

Waste materials injected into Aquifer 5 for disposal are of the same nature as the materials in the test cavity. The injection well was plugged in 1971, and there are no Aquifer 5 monitoring wells. Two wells in overlying Aquifer 4 are monitored for upward migration of tritium and chlorine-36, a monitoring approach similar to that of the test cavity. Tritium data provide no evidence of upward contaminant movement from Aquifer 5 into overlying Aquifer 4. The relative position of Aquifer 5, Aquifer 4, and the dome can be seen on Figure 4.

7.0 Other Site Monitoring

7.1 REECo Pits

Elevated tritium concentrations have also been observed in seeps near the REECo pits area, on the ridge northeast of Half Moon Creek (Figure 2). This area is where former waste burial disposal pits used by Reynolds Electrical & Engineering Company, Inc. (REECo) during site remediation are located. The seeps occur near where the hillslope exposes the contact of the confining unit and the overlying saturated Citronelle Formation Aquifer (Figure 5). The tritium levels in the REECo pits seeps have been below the 20,000 pCi/L MCL since 1979 and have been declining at a rate of an OM every 18 years (Figure 26). Sample results have been below detection using the conventional method of analysis for the past 6 years.



Note:
Open symbols preceded by an “n” in the legend are nondetect results plotted at the detection limit when present.

Figure 26. Tritium Concentrations in the REECo Pits

Two of the wells installed for additional hydraulic control in 2014 (SA2-6-H and SA2-6-L) are downslope and downgradient from the REECo pits (Figure 2). The sample results (October 2014 and April 2016) from these wells have been below the enriched method detection limit except for one result (October 17, 2014) of 4.6 pCi/L (Appendix A). The October 2017 sample results were below the detection limit of the standard tritium analysis method.

7.2 Metals

Elevated metals concentrations were identified in both shallow soils and groundwater during the RI that occurred in the early 1990s (DOE 1999). Wells with one or more metals exceeding their respective MCLs since the site transitioned to LM in 2006 are summarized in Table 2.

Table 2. Summary of Wells Exceeding an MCL for Metals

Well	Aquifer	Constituent Exceeding MCL	Year(s) Exceeded
SA1-3-H	Alluvial	As	2008–2017
SA1-6-H	Alluvial	As, Pb[a]	2007
SA1-7-H	Alluvial	As	2010–2017
HM-3	Aquifer 3b	Cr	2007–2014
SA2-1-L	Local	As	2007, 2017
SA2-4-L	Local	As	2017
SA4-5-L	Local	Ba	2008–2013

[a] Benchmark for Pb is an action level, not an MCL.

Abbreviations:
As = arsenic
Ba = barium
Cr = chromium
Pb = lead

Although arsenic was the most common metal with elevated concentrations, no site-related source was identified for arsenic. No records indicate that AEC used arsenic, or chemicals containing arsenic, in significant quantities at the site. Sulfur deposits in the caprock have been solution-mined in the past from several wells at the site. Major constituents of the caprock are anhydrite and gypsum (calcium sulfate and hydrated calcium sulfate). Arsenic is often associated with sulfides, as are several other metals observed at the site (e.g., lead [Pb], zinc). It was concluded during the site RI that these constituents are likely naturally occurring (DOE 1999). Despite this conclusion, monitoring for these constituents has continued.

The distribution of arsenic detected in soil and water samples since the initial investigation conducted in the 1990s does not indicate there are distinct sources or plumes at the site. For instance, some of the elevated concentrations observed in Local Aquifer wells are on the ridge northeast of SGZ, on the opposite side of Half Moon Creek (Figure 27).

In 2017, metals (As, barium [Ba], chromium [Cr], Pb) were analyzed in samples collected from the Alluvial Aquifer wells, the Local Aquifer wells, surface locations, and Aquifer 3a. These metals were chosen because they had been detected more frequently or have exceeded their MCL in recent years. 2017 monitoring results are discussed in this section.

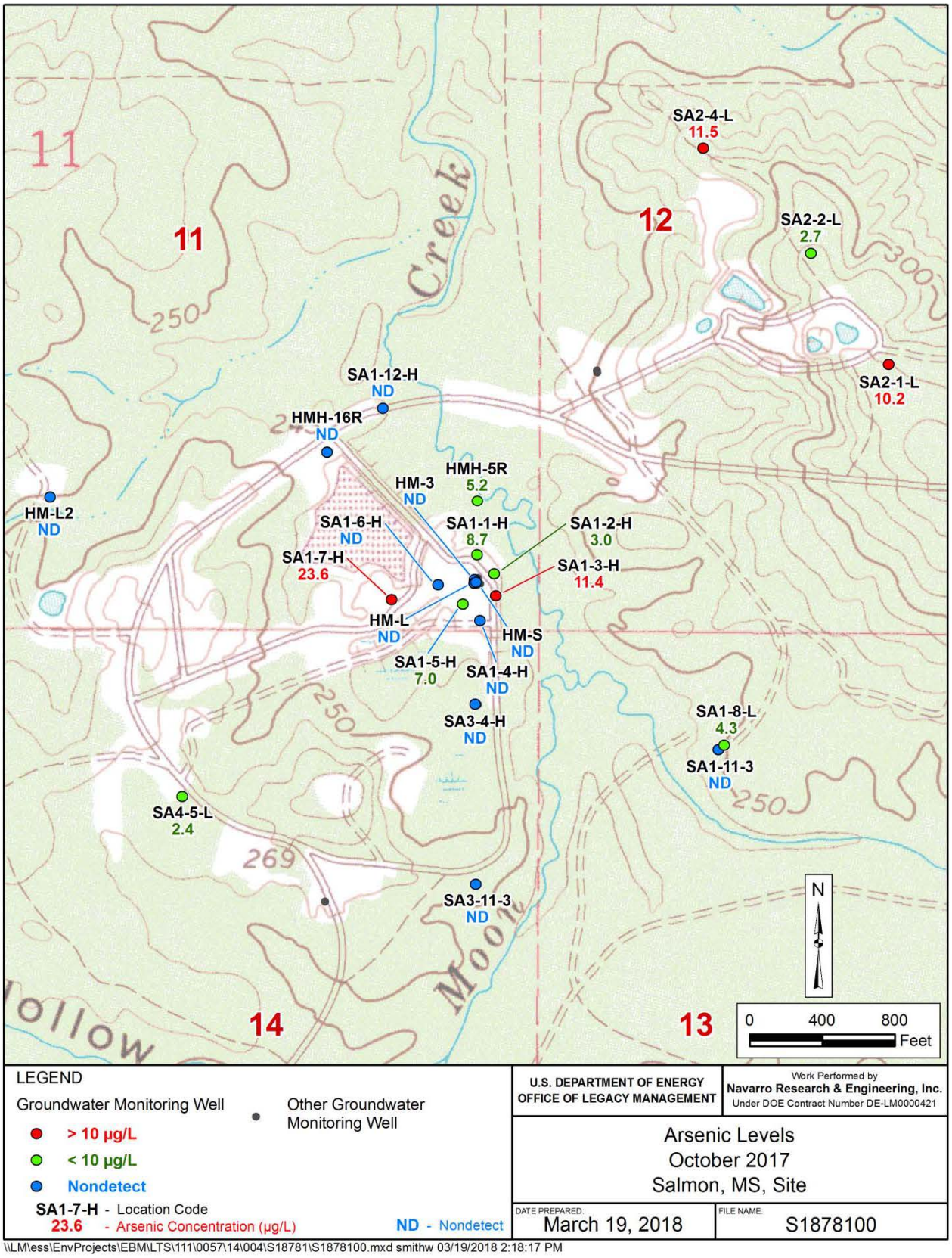
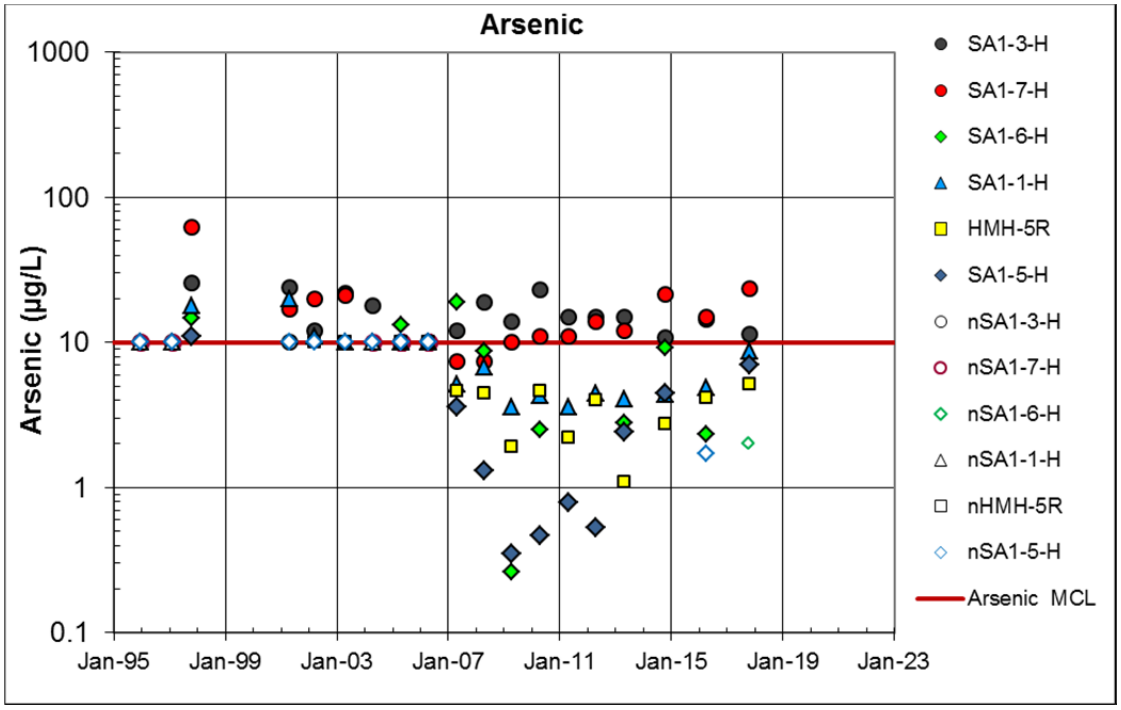


Figure 27. Arsenic Distribution in Groundwater

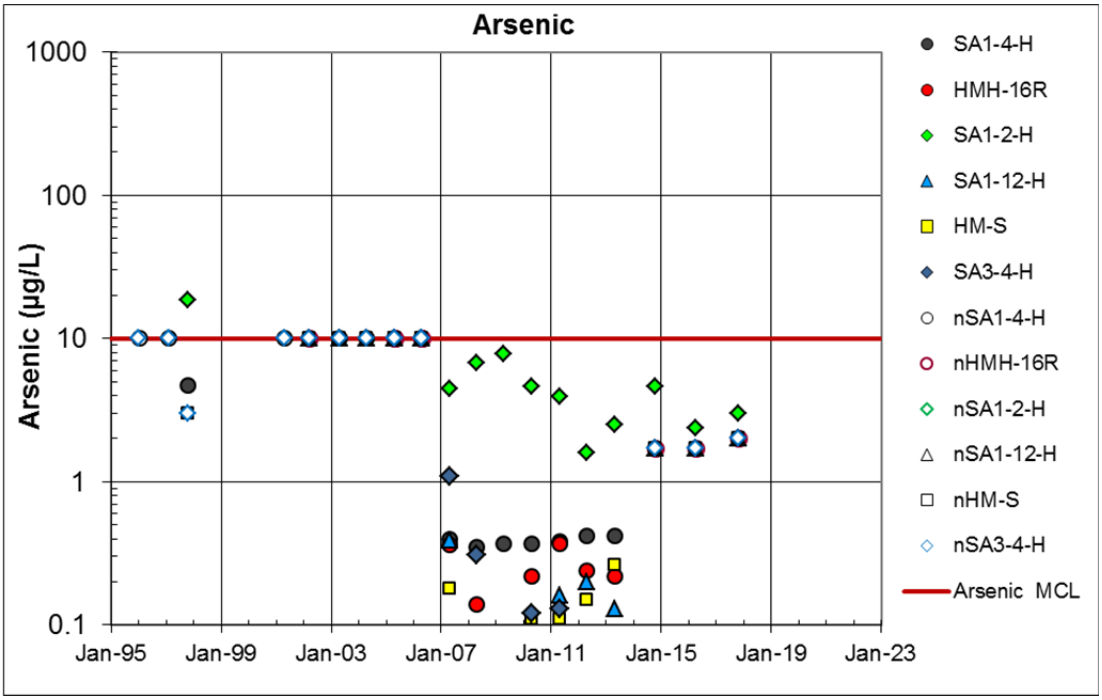
Several alluvial wells have arsenic concentrations that fluctuate at levels slightly above the MCL (e.g., SA1-3-H, SA1-7H, SA1-6-H) (Figure 28 and Figure 29). Arsenic concentrations from these wells do not display increasing or decreasing trends but appear to be relatively stable. LM took over the site in 2007 and continued collecting environmental samples previously collected by the U.S. Environmental Protection Agency. The apparent shifts in concentration for some constituents and wells are likely due to changes in sampling techniques and analytical laboratories. Although arsenic above the MCL was observed during the RI for some other alluvial wells, concentrations for most of these have remained below the MCL for the past decade. Arsenic concentrations in groundwater samples collected from monitoring wells SA2-1-L and SA2-4-L completed in the Local Aquifer have consistently been around the MCL (Figure 30). Arsenic concentrations in groundwater samples collected from the other Local Aquifer and deeper aquifer wells have generally been detected at levels well below the MCL (Figure 31). Surface water concentrations of arsenic are also very low (Figure 32).

Chromium has been consistently observed at concentrations around the MCL for one site well (HM-3) (Figure 33). Barium levels for a different well (SA4-5-L) (Figure 36) have also been observed around its MCL (SA4-5-L is near a storage area). Similar to arsenic, no increasing or decreasing trends or other discernible patterns are noted for Cr or Ba (Figure 33–Figure 36). No specific sources have been identified for these constituents, and no elevated concentrations have been observed in any other wells. These metals are commonly associated with drilling wastes but also occur naturally. It is possible that the Cr associated with well HM-3 may be derived from the well casing, although Cr has also been attributed to chrome lignosulfonate, which is a known additive to drilling muds (EPA 1991). Barite is a common additive to drilling mud and has been identified as a possible source of the elevated Ba in well SA4-5-L.



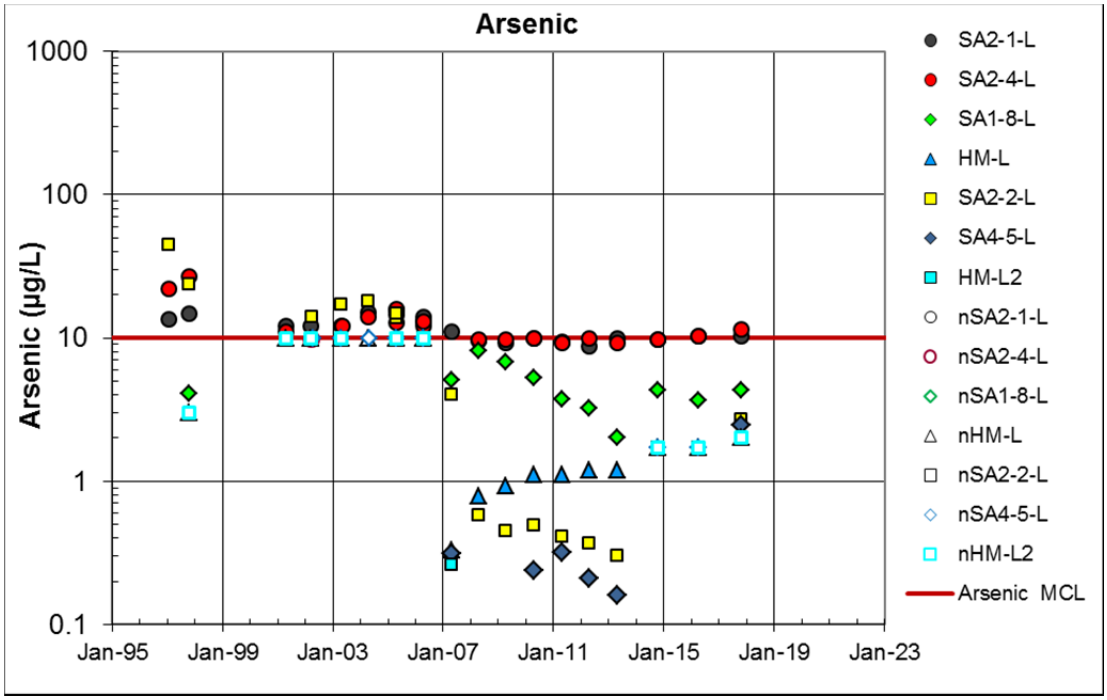
Note:
Symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit.

Figure 28. Alluvial Aquifer Wells Time-Concentration Plot of Wells with Higher Arsenic Concentrations



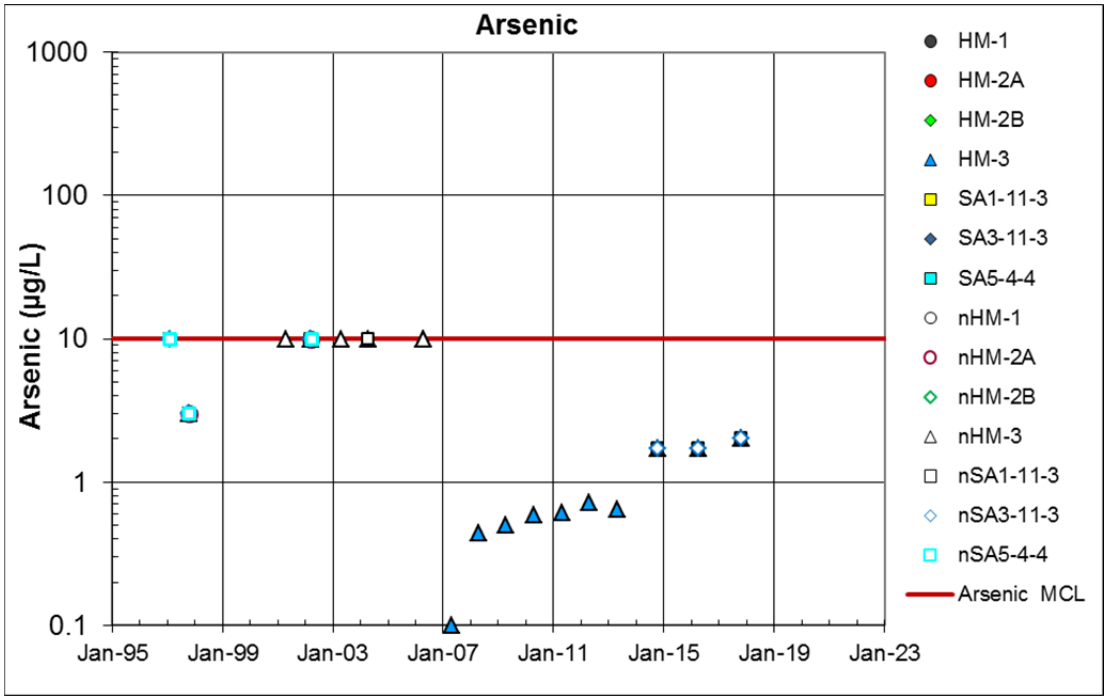
Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 29. Alluvial Aquifer Wells Time-Concentration Plot of Wells with Lower Arsenic Concentrations



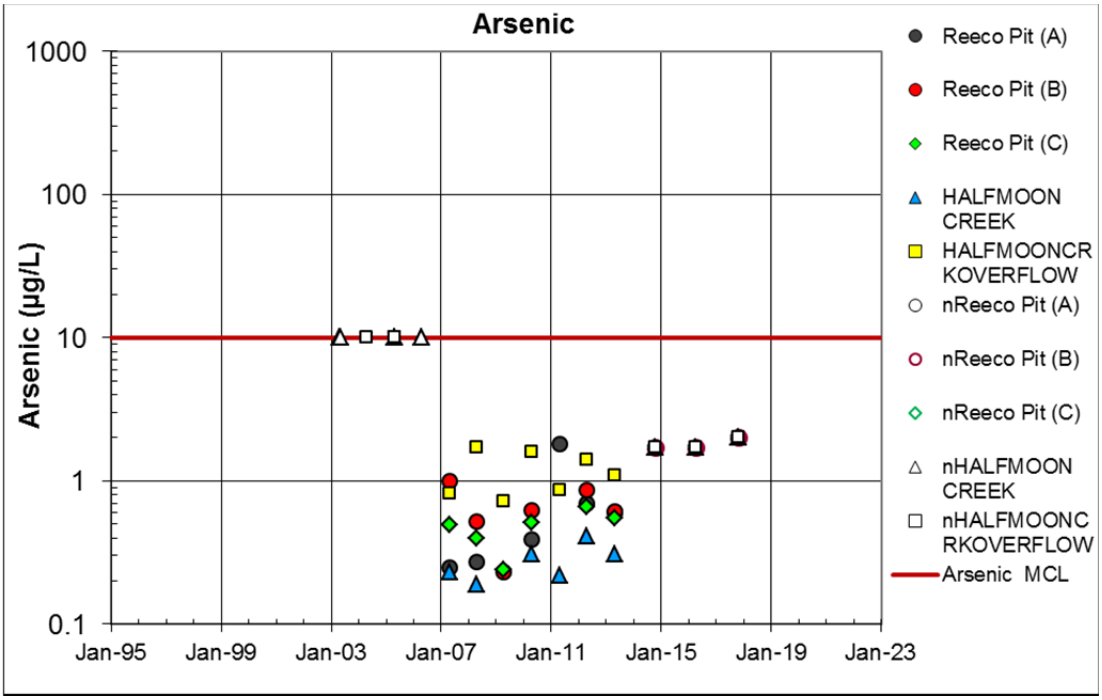
Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 30. Local Aquifer Wells Time-Concentration Plot of Arsenic



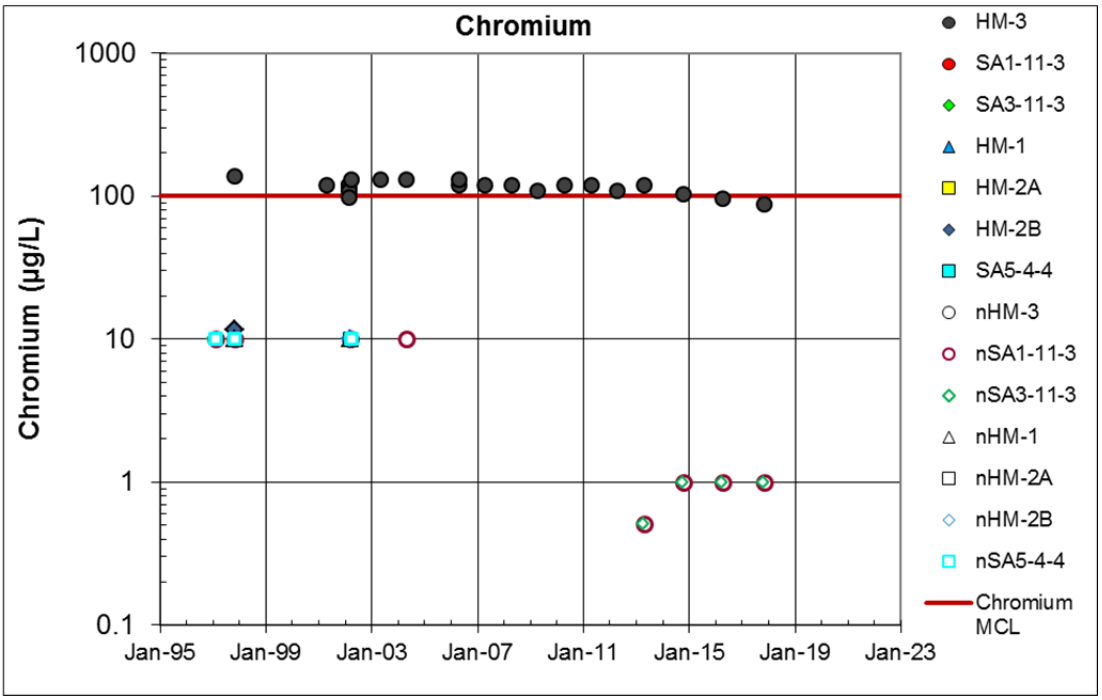
Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 31. Deeper Aquifer Wells Time-Concentration Plot of Arsenic



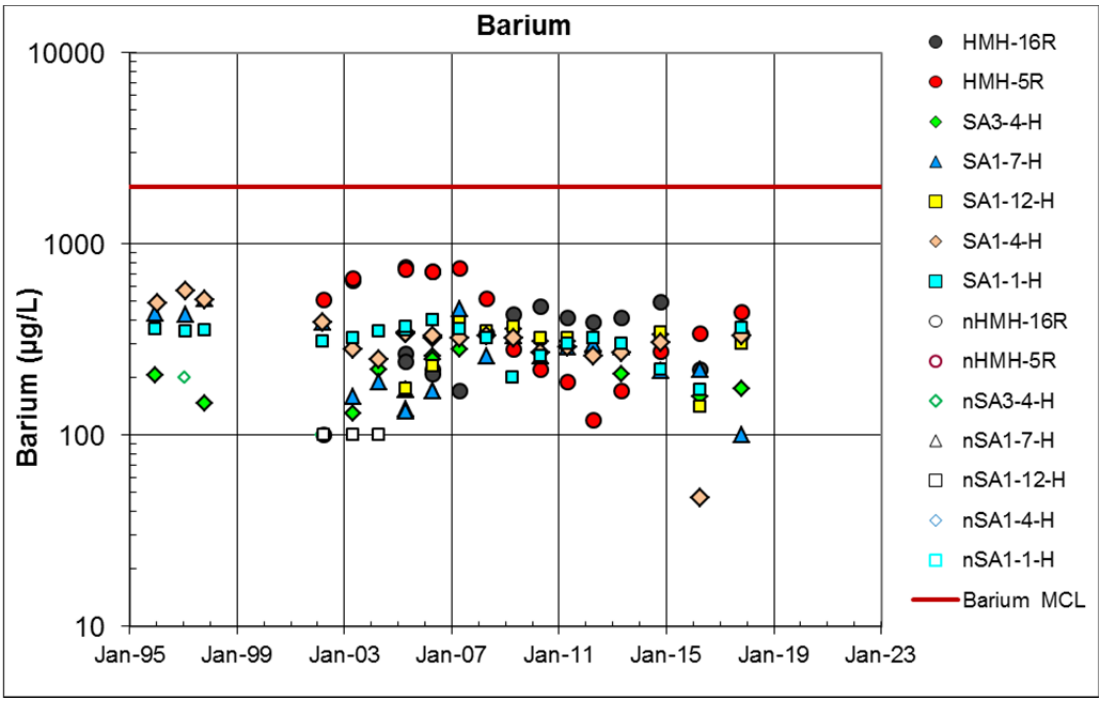
Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 32. Surface Water Time-Concentration Plot of Arsenic



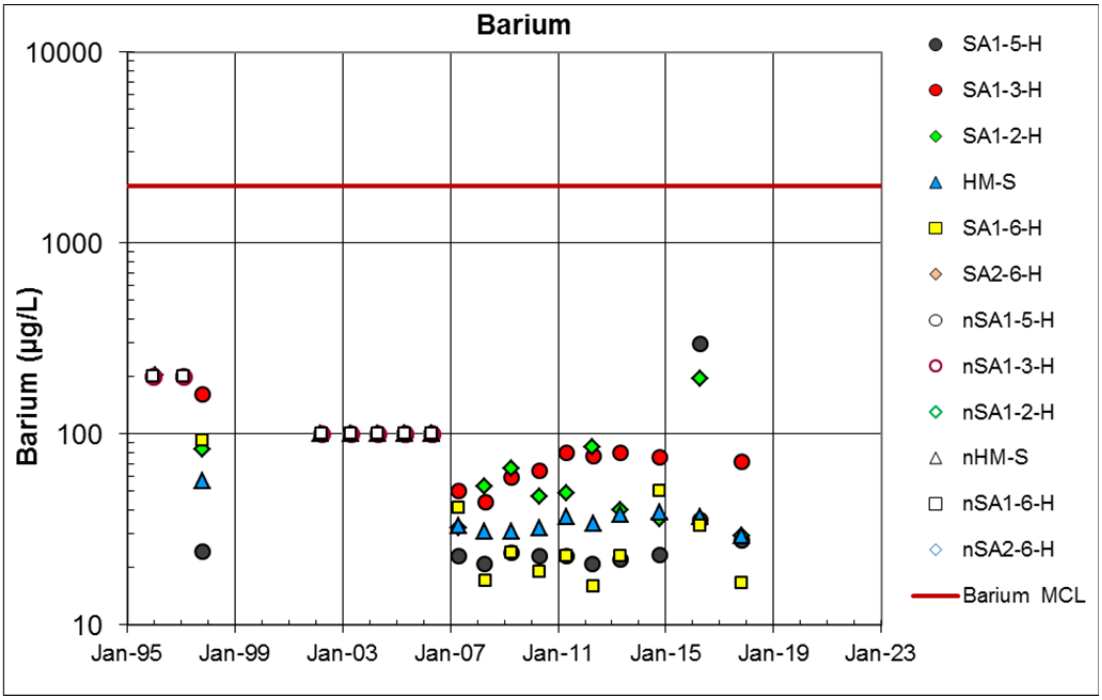
Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 33. Deeper Aquifer Wells Time-Concentration Plot of Chromium



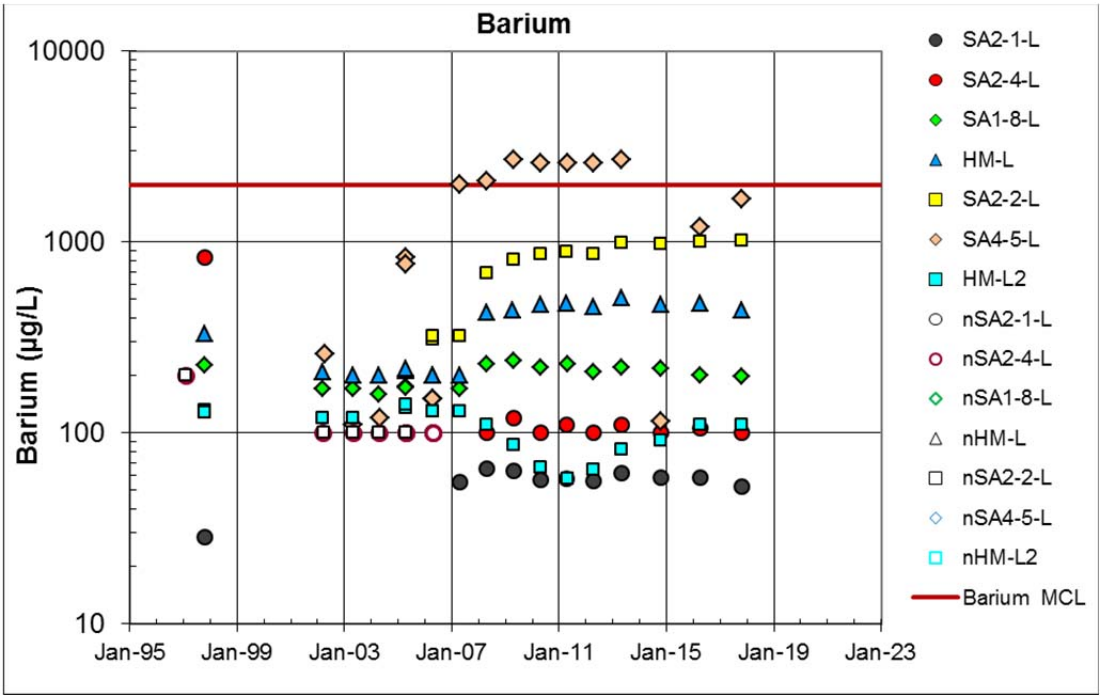
Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 34. Alluvial Aquifer Wells Time-Concentration Plot of Barium in Wells with Higher Concentrations



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 35. Alluvial Aquifer Wells Time-Concentration Plots of Barium in Wells with Lower Concentrations



Note:
Open symbols preceded by an "n" in the legend are nondetect results plotted at the detection limit when present.

Figure 36. Local Aquifer Wells Time-Concentration Plot of Barium

8.0 Summary and Recommendations

Sampling of groundwater and surface water at the site is conducted to monitor the shallow groundwater contamination left from site activities, contamination within the shot cavity, and contamination in the Aquifer 5 injection well. No contamination above MCLs was detected in surface water leaving the site. Concentrations of VOCs continue to trend downward, and only two wells have VOC concentrations that exceed MCLs. Tritium concentrations in all wells are below the MCL, and it continues to attenuate and to decline as a result of radioactive decay. By 2060, tritium at all shallow monitoring locations will have decayed to levels below the standard method detection limit (300 to 400 pCi/L). During the current reporting period arsenic was present in groundwater above the respective MCL at a few locations. Concentrations are stable (with some temporal variability) with no well-defined trends. The occurrence of arsenic varies by location and unit with no well-defined pattern. The source of the arsenic and other metals at the site is unclear. Some may be naturally occurring or related to the use of drilling muds. Monitoring of deeper aquifers shows no indication of leakage from either the test cavity or the injection well.

Metals results were consistent with previous sampling rounds and metals analysis should be discontinued as recommended in the 2014–2016 monitoring report. VOC sampling at selected locations should be conducted until the TCE in well HMH-5R is below the MCL, which is predicted to be within the next decade or so (DOE 2014).

9.0 References

DOE (U.S. Department of Energy), 1978. *Special Study, Tatum Dome Test Site, Lamar County, Mississippi, Final Report*, NVO-200, October.

DOE (U.S. Department of Energy), 1980. *The Tatum Dome Project Lamar County, Mississippi*, NVO-225, August.

DOE (U.S. Department of Energy), 1992. *Remedial Investigation and Feasibility Study of the Tatum Dome Test Site, Lamar County, Mississippi*, June.

DOE (U.S. Department of Energy), 1999. *Salmon Site Remedial Investigation Report, Volume 1, Revision 1*, DOE/NV–494–VOL 1/REV 1, September.

DOE (U.S. Department of Energy), 2014. *Groundwater Sampling and Analysis Report, Salmon, Mississippi, Site Calendar Year 2013*, LMS/SAL/S10376, Office of Legacy Management, March.

EPA (U.S. Environmental Protection Agency), 1991. "The Effects of Well Casing Material on Ground Water Quality," *Ground-Water Issue*, EPA/540/4-91/005, Office of Research and Development/Office of Solid Waste and Emergency Response, October.

IAEA (International Atomic Energy Agency), 2017. *Global Network of Isotopes in Precipitation*, Water Resources Programme, accessed November 29, 2017, available at: http://www-naweb.iaea.org/napc/ih/IHS_resources_gnip.html.

USGS (U.S. Geological Survey), 1971. *Geohydrology of Tatum Salt Dome Area, Lamar and Marion Counties, Mississippi*, VUF-1023, August.

Appendix A

Surface Water Monitoring Results

This page intentionally left blank

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:05:27 AM

PARAMETER	UNITS	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Alkalinity, Bicarbonate (HCO3) as CaCO3										
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	GC-E	10/24/2017	(N)F	2.2	J		#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	Half Moon Ck Exit	10/24/2017	(N)F	2.59	J		#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	HALFMOON CREEK	10/24/2017	(N)F	2.4	J		#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	5.59			#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	HickHCrTSD-East	10/24/2017	(N)F	2.59	J		#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	HMC-S	10/24/2017	(N)F	2.79	J		#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	Pond West of GZ	10/24/2017	(N)F	6.59			#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	Reeco Pit (A)	10/24/2017	(N)F	8.78			#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	Reeco Pit (B)	10/24/2017	(N)F	44.3			#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	mg/L	Reeco Pit (C)	10/24/2017	(N)F	39.7			#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3										
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	GC-E	10/24/2017	(N)F	1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	Half Moon Ck Exit	10/24/2017	(N)F	1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	HALFMOON CREEK	10/24/2017	(N)F	1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	HickHCrTSD-East	10/24/2017	(N)F	1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	HMC-S	10/24/2017	(N)F	1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	Pond West of GZ	10/24/2017	(N)F	1.45	U		#	0.725	-

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:05:27 AM

PARAMETER	UNITS	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	Reeco Pit (A)	10/24/2017	(N)F	1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	Reeco Pit (B)	10/24/2017	(N)F	1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	mg/L	Reeco Pit (C)	10/24/2017	(N)F	1.45	U		#	0.725	-
Arsenic										
Arsenic	mg/L	GC-E	10/24/2017	(T)F	0.002	U		#	0.002	-
Arsenic	mg/L	Half Moon Ck Exit	10/24/2017	(T)F	0.002	U		#	0.002	-
Arsenic	mg/L	HALFMOON CREEK	10/24/2017	(T)F	0.002	U		#	0.002	-
Arsenic	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(T)F	0.002	U		#	0.002	-
Arsenic	mg/L	HickHCrTSD-East	10/24/2017	(T)F	0.002	U		#	0.002	-
Arsenic	mg/L	HMC-S	10/24/2017	(T)F	0.002	U		#	0.002	-
Arsenic	mg/L	Pond West of GZ	10/24/2017	(D)F	0.002	U		#	0.002	-
Arsenic	mg/L	Reeco Pit (A)	10/24/2017	(D)F	0.002	U		#	0.002	-
Arsenic	mg/L	Reeco Pit (B)	10/24/2017	(T)F	0.002	U		#	0.002	-
Arsenic	mg/L	Reeco Pit (C)	10/24/2017	(T)F	0.002	U		#	0.002	-
Barium										
Barium	mg/L	GC-E	10/24/2017	(T)F	0.0321			#	0.001	-
Barium	mg/L	Half Moon Ck Exit	10/24/2017	(T)F	0.0291			#	0.001	-
Barium	mg/L	HALFMOON CREEK	10/24/2017	(T)F	0.0286			#	0.001	-
Barium	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(T)F	0.0375			#	0.001	-
Barium	mg/L	HickHCrTSD-East	10/24/2017	(T)F	0.0307			#	0.001	-
Barium	mg/L	HMC-S	10/24/2017	(T)F	0.0278			#	0.001	-
Barium	mg/L	Pond West of GZ	10/24/2017	(D)F	0.0222			#	0.001	-
Barium	mg/L	Reeco Pit (A)	10/24/2017	(D)F	0.0345			#	0.001	-
Barium	mg/L	Reeco Pit (B)	10/24/2017	(T)F	0.0316			#	0.001	-
Barium	mg/L	Reeco Pit (C)	10/24/2017	(T)F	0.0245			#	0.001	-
Calcium										
Calcium	mg/L	GC-E	10/24/2017	(T)F	0.788			#	0.05	-
Calcium	mg/L	Half Moon Ck Exit	10/24/2017	(T)F	0.67			#	0.05	-

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:05:27 AM

PARAMETER	UNITS	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Calcium	mg/L	HALFMOON CREEK	10/24/2017	(T)F	0.659			#	0.05	-
Calcium	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(T)F	6.08			#	0.05	-
Calcium	mg/L	HickHCrTSD-East	10/24/2017	(T)F	0.715			#	0.05	-
Calcium	mg/L	HMC-S	10/24/2017	(T)F	0.642			#	0.05	-
Calcium	mg/L	Pond West of GZ	10/24/2017	(D)F	2.26			#	0.05	-
Calcium	mg/L	Reeco Pit (A)	10/24/2017	(D)F	2.89			#	0.05	-
Calcium	mg/L	Reeco Pit (B)	10/24/2017	(T)F	13.4			#	0.05	-
Calcium	mg/L	Reeco Pit (C)	10/24/2017	(T)F	11.1			#	0.05	-
Chloride										
Chloride	mg/L	GC-E	10/24/2017	(N)F	3.12			#	0.067	-
Chloride	mg/L	Half Moon Ck Exit	10/24/2017	(N)F	3.17			#	0.067	-
Chloride	mg/L	HALFMOON CREEK	10/24/2017	(N)F	3.12			#	0.067	-
Chloride	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	8.23			#	0.067	-
Chloride	mg/L	HickHCrTSD-East	10/24/2017	(N)F	2.45			#	0.067	-
Chloride	mg/L	HMC-S	10/24/2017	(N)F	3.08			#	0.067	-
Chloride	mg/L	Pond West of GZ	10/24/2017	(N)F	2.47			#	0.067	-
Chloride	mg/L	Reeco Pit (A)	10/24/2017	(N)F	3.55			#	0.067	-
Chloride	mg/L	Reeco Pit (B)	10/24/2017	(N)F	9.97			#	0.067	-
Chloride	mg/L	Reeco Pit (C)	10/24/2017	(N)F	13.7			#	0.067	-
Chromium										
Chromium	mg/L	GC-E	10/24/2017	(T)F	0.001	U		#	0.001	-
Chromium	mg/L	Half Moon Ck Exit	10/24/2017	(T)F	0.001	U		#	0.001	-
Chromium	mg/L	HALFMOON CREEK	10/24/2017	(T)F	0.001	U		#	0.001	-
Chromium	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(T)F	0.0023	B		#	0.001	-
Chromium	mg/L	HickHCrTSD-East	10/24/2017	(T)F	0.001	U		#	0.001	-
Chromium	mg/L	HMC-S	10/24/2017	(T)F	0.001	U		#	0.001	-
Chromium	mg/L	Pond West of GZ	10/24/2017	(D)F	0.001	U		#	0.001	-
Chromium	mg/L	Reeco Pit (A)	10/24/2017	(D)F	0.001	U		#	0.001	-
Chromium	mg/L	Reeco Pit (B)	10/24/2017	(T)F	0.00142	B		#	0.001	-
Chromium	mg/L	Reeco Pit (C)	10/24/2017	(T)F	0.0012	B		#	0.001	-

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:05:27 AM

PARAMETER	UNITS	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Dissolved Oxygen										
Dissolved Oxygen	mg/L	GC-E	10/24/2017	(N)F	7.37			#	-	-
Dissolved Oxygen	mg/L	Half Moon Ck Exit	10/24/2017	(N)F	9.42			#	-	-
Dissolved Oxygen	mg/L	HALFMOON CREEK	10/24/2017	(N)F	9.63			#	-	-
Dissolved Oxygen	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	5.95			#	-	-
Dissolved Oxygen	mg/L	HickHCrTSD-East	10/24/2017	(N)F	5.25			#	-	-
Dissolved Oxygen	mg/L	HMC-S	10/24/2017	(N)F	8.51			#	-	-
Dissolved Oxygen	mg/L	Pond West of GZ	10/24/2017	(N)F	6.4			#	-	-
Dissolved Oxygen	mg/L	Reeco Pit (A)	10/24/2017	(N)F	4.4			#	-	-
Dissolved Oxygen	mg/L	Reeco Pit (B)	10/24/2017	(N)F	4.5			#	-	-
Dissolved Oxygen	mg/L	Reeco Pit (C)	10/24/2017	(N)F	7.38			#	-	-
Lead										
Lead	mg/L	GC-E	10/24/2017	(T)F	0.0005	U		#	0.0005	-
Lead	mg/L	Half Moon Ck Exit	10/24/2017	(T)F	0.0005	U		#	0.0005	-
Lead	mg/L	HALFMOON CREEK	10/24/2017	(T)F	0.0005	U		#	0.0005	-
Lead	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(T)F	0.000533	B		#	0.0005	-
Lead	mg/L	HickHCrTSD-East	10/24/2017	(T)F	0.0005	U		#	0.0005	-
Lead	mg/L	HMC-S	10/24/2017	(T)F	0.0005	U		#	0.0005	-
Lead	mg/L	Pond West of GZ	10/24/2017	(D)F	0.0005	U		#	0.0005	-
Lead	mg/L	Reeco Pit (A)	10/24/2017	(D)F	0.0005	U		#	0.0005	-
Lead	mg/L	Reeco Pit (B)	10/24/2017	(T)F	0.0005	U		#	0.0005	-
Lead	mg/L	Reeco Pit (C)	10/24/2017	(T)F	0.0005	U		#	0.0005	-
Magnesium										
Magnesium	mg/L	GC-E	10/24/2017	(T)F	0.633			#	0.11	-
Magnesium	mg/L	Half Moon Ck Exit	10/24/2017	(T)F	0.544			#	0.11	-
Magnesium	mg/L	HALFMOON CREEK	10/24/2017	(T)F	0.586			#	0.11	-
Magnesium	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(T)F	0.734			#	0.11	-
Magnesium	mg/L	HickHCrTSD-East	10/24/2017	(T)F	0.375			#	0.11	-
Magnesium	mg/L	HMC-S	10/24/2017	(T)F	0.529			#	0.11	-
Magnesium	mg/L	Pond West of GZ	10/24/2017	(D)F	0.506			#	0.11	-

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:05:27 AM

PARAMETER	UNITS	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Magnesium	mg/L	Reeco Pit (A)	10/24/2017	(D)F	0.651			#	0.11	-
Magnesium	mg/L	Reeco Pit (B)	10/24/2017	(T)F	1.3			#	0.11	-
Magnesium	mg/L	Reeco Pit (C)	10/24/2017	(T)F	1.32			#	0.11	-
Oxidation Reduction Potential										
Oxidation Reduction Potential	mV	GC-E	10/24/2017	(N)F	130.6			#	-	-
Oxidation Reduction Potential	mV	Half Moon Ck Exit	10/24/2017	(N)F	147			#	-	-
Oxidation Reduction Potential	mV	HALFMOON CREEK	10/24/2017	(N)F	186			#	-	-
Oxidation Reduction Potential	mV	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	184			#	-	-
Oxidation Reduction Potential	mV	HickHCrTSD-East	10/24/2017	(N)F	152			#	-	-
Oxidation Reduction Potential	mV	HMC-S	10/24/2017	(N)F	158			#	-	-
Oxidation Reduction Potential	mV	Pond West of GZ	10/24/2017	(N)F	138			#	-	-
Oxidation Reduction Potential	mV	Reeco Pit (A)	10/24/2017	(N)F	193			#	-	-
Oxidation Reduction Potential	mV	Reeco Pit (B)	10/24/2017	(N)F	165			#	-	-
Oxidation Reduction Potential	mV	Reeco Pit (C)	10/24/2017	(N)F	119			#	-	-
pH										
pH	SU	GC-E	10/24/2017	(N)F	5.73			#	-	-
pH	SU	Half Moon Ck Exit	10/24/2017	(N)F	6.77			#	-	-
pH	SU	HALFMOON CREEK	10/24/2017	(N)F	6.14			#	-	-
pH	SU	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	5.73			#	-	-
pH	SU	HickHCrTSD-East	10/24/2017	(N)F	5.35			#	-	-
pH	SU	HMC-S	10/24/2017	(N)F	5.69			#	-	-
pH	SU	Pond West of GZ	10/24/2017	(N)F	5.89			#	-	-
pH	SU	Reeco Pit (A)	10/24/2017	(N)F	5.6			#	-	-
pH	SU	Reeco Pit (B)	10/24/2017	(N)F	6.51			#	-	-
pH	SU	Reeco Pit (C)	10/24/2017	(N)F	6.81			#	-	-
Potassium										
Potassium	mg/L	GC-E	10/24/2017	(T)F	0.992			#	0.05	-
Potassium	mg/L	Half Moon Ck Exit	10/24/2017	(T)F	0.671			#	0.05	-
Potassium	mg/L	HALFMOON CREEK	10/24/2017	(T)F	0.775			#	0.05	-

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:05:27 AM

PARAMETER	UNITS	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Potassium	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(T)F	0.666			#	0.05	-
Potassium	mg/L	HickHCrTSD-East	10/24/2017	(T)F	0.322			#	0.05	-
Potassium	mg/L	HMC-S	10/24/2017	(T)F	0.669			#	0.05	-
Potassium	mg/L	Pond West of GZ	10/24/2017	(D)F	0.156			#	0.05	-
Potassium	mg/L	Reeco Pit (A)	10/24/2017	(D)F	0.473			#	0.05	-
Potassium	mg/L	Reeco Pit (B)	10/24/2017	(T)F	0.465			#	0.05	-
Potassium	mg/L	Reeco Pit (C)	10/24/2017	(T)F	0.46			#	0.05	-
Sodium										
Sodium	mg/L	GC-E	10/24/2017	(T)F	2.05			#	0.1	-
Sodium	mg/L	Half Moon Ck Exit	10/24/2017	(T)F	1.83			#	0.1	-
Sodium	mg/L	HALFMOON CREEK	10/24/2017	(T)F	1.9			#	0.1	-
Sodium	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(T)F	5.57			#	0.1	-
Sodium	mg/L	HickHCrTSD-East	10/24/2017	(T)F	1.63			#	0.1	-
Sodium	mg/L	HMC-S	10/24/2017	(T)F	1.67			#	0.1	-
Sodium	mg/L	Pond West of GZ	10/24/2017	(D)F	1.44			#	0.1	-
Sodium	mg/L	Reeco Pit (A)	10/24/2017	(D)F	3.19			#	0.1	-
Sodium	mg/L	Reeco Pit (B)	10/24/2017	(T)F	9.9			#	0.1	-
Sodium	mg/L	Reeco Pit (C)	10/24/2017	(T)F	12.8			#	0.1	-
Specific Conductance										
Specific Conductance	uS/cm	GC-E	10/24/2017	(N)F	23			#	-	-
Specific Conductance	uS/cm	Half Moon Ck Exit	10/24/2017	(N)F	21			#	-	-
Specific Conductance	uS/cm	HALFMOON CREEK	10/24/2017	(N)F	22			#	-	-
Specific Conductance	uS/cm	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	76			#	-	-
Specific Conductance	uS/cm	HickHCrTSD-East	10/24/2017	(N)F	20			#	-	-
Specific Conductance	uS/cm	HMC-S	10/24/2017	(N)F	21			#	-	-
Specific Conductance	uS/cm	Pond West of GZ	10/24/2017	(N)F	27			#	-	-
Specific Conductance	uS/cm	Reeco Pit (A)	10/24/2017	(N)F	42			#	-	-
Specific Conductance	uS/cm	Reeco Pit (B)	10/24/2017	(N)F	120			#	-	-
Specific Conductance	uS/cm	Reeco Pit (C)	10/24/2017	(N)F	126			#	-	-

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:05:27 AM

PARAMETER	UNITS	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Sulfate										
Sulfate	mg/L	GC-E	10/24/2017	(N)F	0.576			#	0.133	-
Sulfate	mg/L	Half Moon Ck Exit	10/24/2017	(N)F	0.593			#	0.133	-
Sulfate	mg/L	HALFMOON CREEK	10/24/2017	(N)F	0.55			#	0.133	-
Sulfate	mg/L	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	10.7			#	0.133	-
Sulfate	mg/L	HickHCrTSD-East	10/24/2017	(N)F	0.357	J		#	0.133	-
Sulfate	mg/L	HMC-S	10/24/2017	(N)F	0.665	U		#	0.133	-
Sulfate	mg/L	Pond West of GZ	10/24/2017	(N)F	0.216	J		#	0.133	-
Sulfate	mg/L	Reeco Pit (A)	10/24/2017	(N)F	3.46			#	0.133	-
Sulfate	mg/L	Reeco Pit (B)	10/24/2017	(N)F	3.73			#	0.133	-
Sulfate	mg/L	Reeco Pit (C)	10/24/2017	(N)F	3.95			#	0.133	-
Temperature										
Temperature	C	GC-E	10/24/2017	(N)F	17.41			#	-	-
Temperature	C	Half Moon Ck Exit	10/24/2017	(N)F	15.67			#	-	-
Temperature	C	HALFMOON CREEK	10/24/2017	(N)F	16.63			#	-	-
Temperature	C	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	18.32			#	-	-
Temperature	C	HickHCrTSD-East	10/24/2017	(N)F	17.39			#	-	-
Temperature	C	HMC-S	10/24/2017	(N)F	16.29			#	-	-
Temperature	C	Pond West of GZ	10/24/2017	(N)F	16.17			#	-	-
Temperature	C	Reeco Pit (A)	10/24/2017	(N)F	18.09			#	-	-
Temperature	C	Reeco Pit (B)	10/24/2017	(N)F	17.53			#	-	-
Temperature	C	Reeco Pit (C)	10/24/2017	(N)F	17.33			#	-	-
Tritium										
Tritium	pCi/L	GC-E	10/24/2017	(N)F	6.991		J	#	2.443	± 2.63
Tritium	pCi/L	Half Moon Ck Exit	10/24/2017	(N)F	5.968		J	#	2.376	± 2.355
Tritium	pCi/L	HALFMOON CREEK	10/24/2017	(N)F	4.101		J	#	2.912	± 2.186
Tritium	pCi/L	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	11.065			#	2.294	± 3.658
Tritium	pCi/L	HickHCrTSD-East	10/24/2017	(N)F	107	U		#	169	± 104
Tritium	pCi/L	HMC-S	10/24/2017	(N)F	-27.6	U		#	165	± 94.1
Tritium	pCi/L	Pond West of GZ	10/24/2017	(N)F	44	U		#	170	± 99.9

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:05:27 AM

PARAMETER	UNITS	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Tritium	pCi/L	Reeco Pit (A)	10/24/2017	(N)F	-50.5	U		#	326	± 180
Tritium	pCi/L	Reeco Pit (B)	10/24/2017	(N)F	16.012			#	2.027	± 4.986
Tritium	pCi/L	Reeco Pit (C)	10/24/2017	(N)F	22.219			#	2.853	± 6.926
Turbidity										
Turbidity	NTU	GC-E	10/24/2017	(N)F	1.43			#	-	-
Turbidity	NTU	Half Moon Ck Exit	10/24/2017	(N)F	3.47			#	-	-
Turbidity	NTU	HALFMOON CREEK	10/24/2017	(N)F	3.87			#	-	-
Turbidity	NTU	HALFMOONCRK OVERFLOW	10/24/2017	(N)F	8.98			#	-	-
Turbidity	NTU	HickHCrTSD-East	10/24/2017	(N)F	1.86			#	-	-
Turbidity	NTU	HMC-S	10/24/2017	(N)F	4.01			#	-	-
Turbidity	NTU	Pond West of GZ	10/24/2017	(N)F	16.7			#	-	-
Turbidity	NTU	Reeco Pit (A)	10/24/2017	(N)F	12.9			#	-	-
Turbidity	NTU	Reeco Pit (B)	10/24/2017	(N)F	9.11			#	-	-
Turbidity	NTU	Reeco Pit (C)	10/24/2017	(N)F	6.4			#	-	-

DATA QUALIFIERS:

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated Value.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).

P	> 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
S	Result determined by method of standard addition (MSA).
U	Parameter analyzed for but was not detected.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X	Laboratory defined qualifier, see case narrative.
Y	Laboratory defined qualifier, see case narrative.
Z	Laboratory defined qualifier, see case narrative.

SAMPLE TYPES:
(T) Total (for metal concentrations)
(D) Dissolved (for dissolved or filtered metal concentrations)
(N) Organic (or other) constituents for which neither total nor dissolved is applicable

Type Codes: F-Field Sample R-Replicate FR-Field Sample with Replicates
D-Duplicate N-Not Known S-Split Sample

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

This page intentionally left blank

Appendix B

Groundwater Monitoring Results

This page intentionally left blank

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Alkalinity, Bicarbonate (HCO3) as CaCO3													
Alkalinity, Bicarbonate (HCO3) as CaCO3	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(N)F			3.79	J		#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	E-7	WL	mg/L	10/24/2017	(N)F	CK		291		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HM-1	WL	mg/L	10/23/2017	(N)F	A1		74.9		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HM-2A	WL	mg/L	10/25/2017	(N)F	2A		61.3		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HM-2B	WL	mg/L	10/25/2017	(N)F	2B		70.3		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HM-3	WL	mg/L	10/23/2017	(N)F	3A		263		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HMH-16R	WL	mg/L	10/25/2017	(N)F	AL		246		FQ	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HMH-5R	WL	mg/L	10/25/2017	(N)F	AL		55.7		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HM-L	WL	mg/L	10/23/2017	(N)F	LA		18.2		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HM-L2	WL	mg/L	10/25/2017	(N)F	LA		201		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	HM-S	WL	mg/L	10/23/2017	(N)F	AL		98.2		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(N)F			42.3			#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-11-3	WL	mg/L	10/25/2017	(N)F	3A		214		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-12-H	WL	mg/L	10/25/2017	(N)F	AL		103		FQ	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-12-L	WL	mg/L	10/25/2017	(N)F	LA		196		FQ	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-1-H	WL	mg/L	10/23/2017	(N)F	AL		97.2		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-2-H	WL	mg/L	10/23/2017	(N)D	AL		103		F	#	0.725	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-2-H	WL	mg/L	10/23/2017	(N)F	AL		95.4		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-3-H	WL	mg/L	10/23/2017	(N)F	AL		276		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-4-H	WL	mg/L	10/23/2017	(N)F	AL		52.9		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-5-H	WL	mg/L	10/23/2017	(N)F	AL		119		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-6-H	WL	mg/L	10/23/2017	(N)F	AL		12		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-7-H	WL	mg/L	10/24/2017	(N)F	AL		115		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-7-H	WL	mg/L	10/24/2017	(N)D	AL		109		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA1-8-L	WL	mg/L	10/24/2017	(N)F	LA		93.6		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA2-1-L	WL	mg/L	10/24/2017	(N)F	LA		62.1		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA2-2-L	WL	mg/L	10/24/2017	(N)F	LA		2.9	U	FQ	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA2-4-L	WL	mg/L	10/24/2017	(N)F	LA		104		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA2-6-H	WL	mg/L	10/25/2017	(N)F	AL		39.9		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA2-6-L	WL	mg/L	10/25/2017	(N)F	LA		36.9		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA3-11-3	WL	mg/L	10/24/2017	(N)F	3A		35.3		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA3-4-H	WL	mg/L	10/24/2017	(N)F	AL		177		F	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA3-4-L	WL	mg/L	10/24/2017	(N)F	LA		99.4		FQ	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA4-5-L	WL	mg/L	10/24/2017	(N)D	LA		2.9	U	FQ	#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA4-5-L	WL	mg/L	10/24/2017	(N)F	LA		2.9	U	FQ	#	0.725	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA5-4-4	WL	mg/L	10/23/2017	(N)F	A4		442			#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	SA5-5-4	WL	mg/L	10/23/2017	(N)F	A4		462			#	0.725	-
Alkalinity, Bicarbonate (HCO3) as CaCO3	Well North Lumberton	WL	mg/L	10/24/2017	(N)F			82.4			#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3													
Alkalinity, Carbonate (CO3) as CaCO3	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(N)F			1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	E-7	WL	mg/L	10/24/2017	(N)F	CK		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HM-1	WL	mg/L	10/23/2017	(N)F	A1		16.8		F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HM-2A	WL	mg/L	10/25/2017	(N)F	2A		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HM-2B	WL	mg/L	10/25/2017	(N)F	2B		95.8		F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HM-3	WL	mg/L	10/23/2017	(N)F	3A		116		F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HMH-16R	WL	mg/L	10/25/2017	(N)F	AL		1.45	U	FQ	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HMH-5R	WL	mg/L	10/25/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HM-L	WL	mg/L	10/23/2017	(N)F	LA		4.79		F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HM-L2	WL	mg/L	10/25/2017	(N)F	LA		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	HM-S	WL	mg/L	10/23/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(N)F			1.45	U		#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-11-3	WL	mg/L	10/25/2017	(N)F	3A		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-12-H	WL	mg/L	10/25/2017	(N)F	AL		1.45	U	FQ	#	0.725	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Alkalinity, Carbonate (CO3) as CaCO3	SA1-12-L	WL	mg/L	10/25/2017	(N)F	LA		1.45	U	FQ	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-1-H	WL	mg/L	10/23/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-2-H	WL	mg/L	10/23/2017	(N)D	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-2-H	WL	mg/L	10/23/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-3-H	WL	mg/L	10/23/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-4-H	WL	mg/L	10/23/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-5-H	WL	mg/L	10/23/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-6-H	WL	mg/L	10/23/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-7-H	WL	mg/L	10/24/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-7-H	WL	mg/L	10/24/2017	(N)D	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA1-8-L	WL	mg/L	10/24/2017	(N)F	LA		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA2-1-L	WL	mg/L	10/24/2017	(N)F	LA		22.4		F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA2-2-L	WL	mg/L	10/24/2017	(N)F	LA		52.2		FQ	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA2-4-L	WL	mg/L	10/24/2017	(N)F	LA		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA2-6-H	WL	mg/L	10/25/2017	(N)F	AL		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA2-6-L	WL	mg/L	10/25/2017	(N)F	LA		1.45	U	F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA3-11-3	WL	mg/L	10/24/2017	(N)F	3A		14.4		F	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA3-4-H	WL	mg/L	10/24/2017	(N)F	AL		1.45	U	F	#	0.725	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Alkalinity, Carbonate (CO3) as CaCO3	SA3-4-L	WL	mg/L	10/24/2017	(N)F	LA		1.45	U	FQ	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA4-5-L	WL	mg/L	10/24/2017	(N)D	LA		48.1		FQ	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA4-5-L	WL	mg/L	10/24/2017	(N)F	LA		44.1		FQ	#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA5-4-4	WL	mg/L	10/23/2017	(N)F	A4		49.5			#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	SA5-5-4	WL	mg/L	10/23/2017	(N)F	A4		44.7			#	0.725	-
Alkalinity, Carbonate (CO3) as CaCO3	Well North Lumberton	WL	mg/L	10/24/2017	(N)F			1.45	U		#	0.725	-
Arsenic													
Arsenic	HM-3	WL	mg/L	10/23/2017	(T)F	3A		0.002	U	F	#	0.002	-
Arsenic	HMH-16R	WL	mg/L	10/25/2017	(T)F	AL		0.002	U	FQ	#	0.002	-
Arsenic	HMH-5R	WL	mg/L	10/25/2017	(T)F	AL		0.00519		F	#	0.002	-
Arsenic	HM-L	WL	mg/L	10/23/2017	(T)F	LA		0.002	U	F	#	0.002	-
Arsenic	HM-L2	WL	mg/L	10/25/2017	(T)F	LA		0.002	U	F	#	0.002	-
Arsenic	HM-S	WL	mg/L	10/23/2017	(T)F	AL		0.002	U	F	#	0.002	-
Arsenic	SA1-11-3	WL	mg/L	10/25/2017	(T)F	3A		0.002	U	F	#	0.002	-
Arsenic	SA1-12-H	WL	mg/L	10/25/2017	(T)F	AL		0.002	U	FQ	#	0.002	-
Arsenic	SA1-1-H	WL	mg/L	10/23/2017	(T)F	AL		0.0087		F	#	0.002	-
Arsenic	SA1-2-H	WL	mg/L	10/23/2017	(D)D	AL		0.00297	B	F	#	0.002	-
Arsenic	SA1-2-H	WL	mg/L	10/23/2017	(D)F	AL		0.00302	B	F	#	0.002	-
Arsenic	SA1-3-H	WL	mg/L	10/23/2017	(D)F	AL		0.0114		F	#	0.002	-
Arsenic	SA1-4-H	WL	mg/L	10/23/2017	(T)F	AL		0.002	U	F	#	0.002	-
Arsenic	SA1-5-H	WL	mg/L	10/23/2017	(D)F	AL		0.00696		F	#	0.002	-
Arsenic	SA1-6-H	WL	mg/L	10/23/2017	(D)F	AL		0.002	U	F	#	0.002	-
Arsenic	SA1-7-H	WL	mg/L	10/24/2017	(T)F	AL		0.0236		F	#	0.002	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Arsenic	SA1-7-H	WL	mg/L	10/24/2017	(T)D	AL		0.025		F	#	0.002	-
Arsenic	SA1-8-L	WL	mg/L	10/24/2017	(T)F	LA		0.00431	B	F	#	0.002	-
Arsenic	SA2-1-L	WL	mg/L	10/24/2017	(T)F	LA		0.0102		F	#	0.002	-
Arsenic	SA2-2-L	WL	mg/L	10/24/2017	(T)F	LA		0.00271	B	FQ	#	0.002	-
Arsenic	SA2-4-L	WL	mg/L	10/24/2017	(T)F	LA		0.0115		F	#	0.002	-
Arsenic	SA3-11-3	WL	mg/L	10/24/2017	(T)F	3A		0.002	U	F	#	0.002	-
Arsenic	SA3-4-H	WL	mg/L	10/24/2017	(T)F	AL		0.002	U	F	#	0.002	-
Arsenic	SA4-5-L	WL	mg/L	10/24/2017	(T)D	LA		0.00223	B	FQ	#	0.002	-
Arsenic	SA4-5-L	WL	mg/L	10/24/2017	(T)F	LA		0.00244	B	FQ	#	0.002	-
Barium													
Barium	HM-3	WL	mg/L	10/23/2017	(T)F	3A		0.209		F	#	0.001	-
Barium	HMH-16R	WL	mg/L	10/25/2017	(T)F	AL		0.334		FQ	#	0.001	-
Barium	HMH-5R	WL	mg/L	10/25/2017	(T)F	AL		0.439		F	#	0.001	-
Barium	HM-L	WL	mg/L	10/23/2017	(T)F	LA		0.437		F	#	0.001	-
Barium	HM-L2	WL	mg/L	10/25/2017	(T)F	LA		0.111		F	#	0.001	-
Barium	HM-S	WL	mg/L	10/23/2017	(T)F	AL		0.0292		F	#	0.001	-
Barium	SA1-11-3	WL	mg/L	10/25/2017	(T)F	3A		0.13		F	#	0.001	-
Barium	SA1-12-H	WL	mg/L	10/25/2017	(T)F	AL		0.302		FQ	#	0.001	-
Barium	SA1-1-H	WL	mg/L	10/23/2017	(T)F	AL		0.365		F	#	0.001	-
Barium	SA1-2-H	WL	mg/L	10/23/2017	(D)D	AL		0.0278		F	#	0.001	-
Barium	SA1-2-H	WL	mg/L	10/23/2017	(D)F	AL		0.0291		F	#	0.001	-
Barium	SA1-3-H	WL	mg/L	10/23/2017	(D)F	AL		0.0711		F	#	0.001	-
Barium	SA1-4-H	WL	mg/L	10/23/2017	(T)F	AL		0.329		F	#	0.001	-
Barium	SA1-5-H	WL	mg/L	10/23/2017	(D)F	AL		0.0276		F	#	0.001	-
Barium	SA1-6-H	WL	mg/L	10/23/2017	(D)F	AL		0.0166		F	#	0.001	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Barium	SA1-7-H	WL	mg/L	10/24/2017	(T)F	AL		0.1		F	#	0.001	-
Barium	SA1-7-H	WL	mg/L	10/24/2017	(T)D	AL		0.0941		F	#	0.001	-
Barium	SA1-8-L	WL	mg/L	10/24/2017	(T)F	LA		0.199		F	#	0.001	-
Barium	SA2-1-L	WL	mg/L	10/24/2017	(T)F	LA		0.0525		F	#	0.001	-
Barium	SA2-2-L	WL	mg/L	10/24/2017	(T)F	LA		1.02		FQ	#	0.001	-
Barium	SA2-4-L	WL	mg/L	10/24/2017	(T)F	LA		0.1		F	#	0.001	-
Barium	SA3-11-3	WL	mg/L	10/24/2017	(T)F	3A		0.0376		F	#	0.001	-
Barium	SA3-4-H	WL	mg/L	10/24/2017	(T)F	AL		0.176		F	#	0.001	-
Barium	SA4-5-L	WL	mg/L	10/24/2017	(T)D	LA		1.71		FQ	#	0.001	-
Barium	SA4-5-L	WL	mg/L	10/24/2017	(T)F	LA		1.69		FQ	#	0.001	-
Calcium													
Calcium	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(T)F			0.629			#	0.05	-
Calcium	E-7	WL	mg/L	10/24/2017	(T)F	CK		114		F	#	0.05	-
Calcium	HM-1	WL	mg/L	10/23/2017	(T)F	A1		13.6		F	#	0.05	-
Calcium	HM-2A	WL	mg/L	10/25/2017	(T)F	2A		8.37		F	#	0.05	-
Calcium	HM-2B	WL	mg/L	10/25/2017	(T)F	2B		2.49		F	#	0.05	-
Calcium	HM-3	WL	mg/L	10/23/2017	(T)F	3A		2.47		F	#	0.05	-
Calcium	HMH-16R	WL	mg/L	10/25/2017	(T)F	AL		98.3		FQ	#	0.05	-
Calcium	HMH-5R	WL	mg/L	10/25/2017	(T)F	AL		23.6		F	#	0.05	-
Calcium	HM-L	WL	mg/L	10/23/2017	(T)F	LA		55.3		F	#	0.05	-
Calcium	HM-L2	WL	mg/L	10/25/2017	(T)F	LA		40.6		F	#	0.05	-
Calcium	HM-S	WL	mg/L	10/23/2017	(T)F	AL		48.4		F	#	0.05	-
Calcium	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(T)F			0.753			#	0.05	-
Calcium	SA1-11-3	WL	mg/L	10/25/2017	(T)F	3A		29.4		F	#	0.05	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Calcium	SA1-12-H	WL	mg/L	10/25/2017	(T)F	AL		27.9		FQ	#	0.05	-
Calcium	SA1-12-L	WL	mg/L	10/25/2017	(T)F	LA		20.1		FQ	#	0.05	-
Calcium	SA1-1-H	WL	mg/L	10/23/2017	(T)F	AL		32.6		F	#	0.05	-
Calcium	SA1-2-H	WL	mg/L	10/23/2017	(D)D	AL		72.4		F	#	0.05	-
Calcium	SA1-2-H	WL	mg/L	10/23/2017	(D)F	AL		79.6		F	#	0.05	-
Calcium	SA1-3-H	WL	mg/L	10/23/2017	(D)F	AL		404		F	#	0.05	-
Calcium	SA1-4-H	WL	mg/L	10/23/2017	(T)F	AL		8.76		F	#	0.05	-
Calcium	SA1-5-H	WL	mg/L	10/23/2017	(D)F	AL		160		F	#	0.05	-
Calcium	SA1-6-H	WL	mg/L	10/23/2017	(D)F	AL		1.35		F	#	0.05	-
Calcium	SA1-7-H	WL	mg/L	10/24/2017	(T)F	AL		16.9		F	#	0.05	-
Calcium	SA1-7-H	WL	mg/L	10/24/2017	(T)D	AL		16.7		F	#	0.05	-
Calcium	SA1-8-L	WL	mg/L	10/24/2017	(T)F	LA		16.2		F	#	0.05	-
Calcium	SA2-1-L	WL	mg/L	10/24/2017	(T)F	LA		7.29		F	#	0.05	-
Calcium	SA2-2-L	WL	mg/L	10/24/2017	(T)F	LA		610		FQ	#	0.05	-
Calcium	SA2-4-L	WL	mg/L	10/24/2017	(T)F	LA		11.4		F	#	0.05	-
Calcium	SA2-6-H	WL	mg/L	10/25/2017	(T)F	AL		3.85		F	#	0.05	-
Calcium	SA2-6-L	WL	mg/L	10/25/2017	(T)F	LA		11.5		F	#	0.05	-
Calcium	SA3-11-3	WL	mg/L	10/24/2017	(T)F	3A		422		F	#	0.05	-
Calcium	SA3-4-H	WL	mg/L	10/24/2017	(T)F	AL		50.6		F	#	0.05	-
Calcium	SA3-4-L	WL	mg/L	10/24/2017	(T)F	LA		11.1		FQ	#	0.05	-
Calcium	SA4-5-L	WL	mg/L	10/24/2017	(T)D	LA		470		FQ	#	0.05	-
Calcium	SA4-5-L	WL	mg/L	10/24/2017	(T)F	LA		452		FQ	#	0.05	-
Calcium	SA5-4-4	WL	mg/L	10/23/2017	(T)F	A4		5.49			#	0.05	-
Calcium	SA5-5-4	WL	mg/L	10/23/2017	(T)F	A4		3.47			#	0.05	-
Calcium	Well North Lumberton	WL	mg/L	10/24/2017	(T)F			2.95			#	0.05	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Chloride													
Chloride	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(N)F			3.15			#	0.067	-
Chloride	E-7	WL	mg/L	10/24/2017	(N)F	CK		303		F	#	0.067	-
Chloride	HM-1	WL	mg/L	10/23/2017	(N)F	A1		14.9		F	#	0.067	-
Chloride	HM-2A	WL	mg/L	10/25/2017	(N)F	2A		5.93		F	#	0.067	-
Chloride	HM-2B	WL	mg/L	10/25/2017	(N)F	2B		14.2		F	#	0.067	-
Chloride	HM-3	WL	mg/L	10/23/2017	(N)F	3A		156		F	#	0.067	-
Chloride	HMH-16R	WL	mg/L	10/25/2017	(N)F	AL		154		FQ	#	0.067	-
Chloride	HMH-5R	WL	mg/L	10/25/2017	(N)F	AL		198		F	#	0.067	-
Chloride	HM-L	WL	mg/L	10/23/2017	(N)F	LA		159		F	#	0.067	-
Chloride	HM-L2	WL	mg/L	10/25/2017	(N)F	LA		9.97		F	#	0.067	-
Chloride	HM-S	WL	mg/L	10/23/2017	(N)F	AL		87		F	#	0.067	-
Chloride	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(N)F			3.16			#	0.067	-
Chloride	SA1-11-3	WL	mg/L	10/25/2017	(N)F	3A		76.4		F	#	0.067	-
Chloride	SA1-12-H	WL	mg/L	10/25/2017	(N)F	AL		26.3		FQ	#	0.067	-
Chloride	SA1-12-L	WL	mg/L	10/25/2017	(N)F	LA		4.36		FQ	#	0.067	-
Chloride	SA1-1-H	WL	mg/L	10/23/2017	(N)F	AL		95.4		F	#	0.067	-
Chloride	SA1-2-H	WL	mg/L	10/23/2017	(N)D	AL		289		F	#	0.067	-
Chloride	SA1-2-H	WL	mg/L	10/23/2017	(N)F	AL		292		F	#	0.067	-
Chloride	SA1-3-H	WL	mg/L	10/23/2017	(N)F	AL		191		F	#	0.067	-
Chloride	SA1-4-H	WL	mg/L	10/23/2017	(N)F	AL		60.6		F	#	0.067	-
Chloride	SA1-5-H	WL	mg/L	10/23/2017	(N)F	AL		79.6		F	#	0.067	-
Chloride	SA1-6-H	WL	mg/L	10/23/2017	(N)F	AL		2.64		F	#	0.067	-
Chloride	SA1-7-H	WL	mg/L	10/24/2017	(N)F	AL		27.6		F	#	0.067	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Chloride	SA1-7-H	WL	mg/L	10/24/2017	(N)D	AL		26.4		F	#	0.067	-
Chloride	SA1-8-L	WL	mg/L	10/24/2017	(N)F	LA		3.2		F	#	0.067	-
Chloride	SA2-1-L	WL	mg/L	10/24/2017	(N)F	LA		3.41		F	#	0.067	-
Chloride	SA2-2-L	WL	mg/L	10/24/2017	(N)F	LA		0.627		FQ	#	0.067	-
Chloride	SA2-4-L	WL	mg/L	10/24/2017	(N)F	LA		4.48		F	#	0.067	-
Chloride	SA2-6-H	WL	mg/L	10/25/2017	(N)F	AL		1.96		F	#	0.067	-
Chloride	SA2-6-L	WL	mg/L	10/25/2017	(N)F	LA		27.1		F	#	0.067	-
Chloride	SA3-11-3	WL	mg/L	10/24/2017	(N)F	3A		832		F	#	0.067	-
Chloride	SA3-4-H	WL	mg/L	10/24/2017	(N)F	AL		38.9		F	#	0.067	-
Chloride	SA3-4-L	WL	mg/L	10/24/2017	(N)F	LA		7.65		FQ	#	0.067	-
Chloride	SA4-5-L	WL	mg/L	10/24/2017	(N)D	LA		32.5		FQ	#	0.067	-
Chloride	SA4-5-L	WL	mg/L	10/24/2017	(N)F	LA		34.8		FQ	#	0.067	-
Chloride	SA5-4-4	WL	mg/L	10/23/2017	(N)F	A4		1320			#	0.067	-
Chloride	SA5-5-4	WL	mg/L	10/23/2017	(N)F	A4		820			#	0.067	-
Chloride	Well North Lumberton	WL	mg/L	10/24/2017	(N)F			2.42			#	0.067	-
Chromium													
Chromium	HM-3	WL	mg/L	10/23/2017	(T)F	3A		0.0877		F	#	0.001	-
Chromium	HMH-16R	WL	mg/L	10/25/2017	(T)F	AL		0.001	U	FQ	#	0.001	-
Chromium	HMH-5R	WL	mg/L	10/25/2017	(T)F	AL		0.001	U	F	#	0.001	-
Chromium	HM-L	WL	mg/L	10/23/2017	(T)F	LA		0.001	U	F	#	0.001	-
Chromium	HM-L2	WL	mg/L	10/25/2017	(T)F	LA		0.001	U	F	#	0.001	-
Chromium	HM-S	WL	mg/L	10/23/2017	(T)F	AL		0.001	U	F	#	0.001	-
Chromium	SA1-11-3	WL	mg/L	10/25/2017	(T)F	3A		0.001	U	F	#	0.001	-
Chromium	SA1-12-H	WL	mg/L	10/25/2017	(T)F	AL		0.001	U	FQ	#	0.001	-
Chromium	SA1-1-H	WL	mg/L	10/23/2017	(T)F	AL		0.001	U	F	#	0.001	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:08 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Chromium	SA1-2-H	WL	mg/L	10/23/2017	(D)D	AL		0.001	U	F	#	0.001	-
Chromium	SA1-2-H	WL	mg/L	10/23/2017	(D)F	AL		0.001	U	F	#	0.001	-
Chromium	SA1-3-H	WL	mg/L	10/23/2017	(D)F	AL		0.00885		F	#	0.001	-
Chromium	SA1-4-H	WL	mg/L	10/23/2017	(T)F	AL		0.001	U	F	#	0.001	-
Chromium	SA1-5-H	WL	mg/L	10/23/2017	(D)F	AL		0.001	U	F	#	0.001	-
Chromium	SA1-6-H	WL	mg/L	10/23/2017	(D)F	AL		0.001	U	F	#	0.001	-
Chromium	SA1-7-H	WL	mg/L	10/24/2017	(T)F	AL		0.001	U	F	#	0.001	-
Chromium	SA1-7-H	WL	mg/L	10/24/2017	(T)D	AL		0.001	U	F	#	0.001	-
Chromium	SA1-8-L	WL	mg/L	10/24/2017	(T)F	LA		0.001	U	F	#	0.001	-
Chromium	SA2-1-L	WL	mg/L	10/24/2017	(T)F	LA		0.001	U	F	#	0.001	-
Chromium	SA2-2-L	WL	mg/L	10/24/2017	(T)F	LA		0.0144		FQ	#	0.001	-
Chromium	SA2-4-L	WL	mg/L	10/24/2017	(T)F	LA		0.001	U	F	#	0.001	-
Chromium	SA3-11-3	WL	mg/L	10/24/2017	(T)F	3A		0.001	U	F	#	0.001	-
Chromium	SA3-4-H	WL	mg/L	10/24/2017	(T)F	AL		0.001	U	F	#	0.001	-
Chromium	SA4-5-L	WL	mg/L	10/24/2017	(T)D	LA		0.0497		FQ	#	0.001	-
Chromium	SA4-5-L	WL	mg/L	10/24/2017	(T)F	LA		0.0494		FQ	#	0.001	-
cis-1,2-Dichloroethene													
cis-1,2-Dichloroethene	HMH-16R	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	FQ	#	0.16	-
cis-1,2-Dichloroethene	HMH-5R	WL	ug/L	10/25/2017	(N)F	AL		125		F	#	0.16	-
cis-1,2-Dichloroethene	HM-L	WL	ug/L	10/23/2017	(N)F	LA		4.33		F	#	0.16	-
cis-1,2-Dichloroethene	HM-S	WL	ug/L	10/23/2017	(N)F	AL		2.46		F	#	0.16	-
cis-1,2-Dichloroethene	SA1-12-H	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	FQ	#	0.16	-
cis-1,2-Dichloroethene	SA1-12-L	WL	ug/L	10/25/2017	(N)F	LA		0.16	U	FQ	#	0.16	-
cis-1,2-Dichloroethene	SA1-1-H	WL	ug/L	10/23/2017	(N)F	AL		7.54		F	#	0.16	-
cis-1,2-Dichloroethene	SA1-2-H	WL	ug/L	10/23/2017	(N)D	AL		7.9		F	#	0.16	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
cis-1,2-Dichloroethene	SA1-2-H	WL	ug/L	10/23/2017	(N)F	AL		8.88		F	#	0.16	-
cis-1,2-Dichloroethene	SA1-3-H	WL	ug/L	10/23/2017	(N)F	AL		98		F	#	0.16	-
cis-1,2-Dichloroethene	SA1-4-H	WL	ug/L	10/23/2017	(N)F	AL		0.34	J	F	#	0.16	-
cis-1,2-Dichloroethene	SA1-5-H	WL	ug/L	10/23/2017	(N)F	AL		8.24		F	#	0.16	-
cis-1,2-Dichloroethene	SA1-6-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
cis-1,2-Dichloroethene	SA1-7-H	WL	ug/L	10/24/2017	(N)F	AL		0.16	U	F	#	0.16	-
cis-1,2-Dichloroethene	SA1-7-H	WL	ug/L	10/24/2017	(N)D	AL		0.16	U	F	#	0.16	-
cis-1,2-Dichloroethene	SA2-6-H	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	F	#	0.16	-
cis-1,2-Dichloroethene	SA2-6-L	WL	ug/L	10/25/2017	(N)F	LA		0.16	U	F	#	0.16	-
cis-1,2-Dichloroethene	SA3-4-H	WL	ug/L	10/24/2017	(N)F	AL		0.16	U	F	#	0.16	-
cis-1,2-Dichloroethene	SA3-4-L	WL	ug/L	10/24/2017	(N)F	LA		0.16	U	FQ	#	0.16	-
Dissolved Oxygen													
Dissolved Oxygen	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(N)F			8.71			#	-	-
Dissolved Oxygen	E-7	WL	mg/L	10/24/2017	(N)F	CK		0.16		F	#	-	-
Dissolved Oxygen	HM-1	WL	mg/L	10/23/2017	(N)F	A1		0.24		F	#	-	-
Dissolved Oxygen	HM-2A	WL	mg/L	10/25/2017	(N)F	2A		0.41		F	#	-	-
Dissolved Oxygen	HM-2B	WL	mg/L	10/25/2017	(N)F	2B		0.32		F	#	-	-
Dissolved Oxygen	HM-3	WL	mg/L	10/23/2017	(N)F	3A		0.27		F	#	-	-
Dissolved Oxygen	HMH-16R	WL	mg/L	10/25/2017	(N)F	AL		0.55		FQ	#	-	-
Dissolved Oxygen	HMH-5R	WL	mg/L	10/25/2017	(N)F	AL		0.72		F	#	-	-
Dissolved Oxygen	HM-L	WL	mg/L	10/23/2017	(N)F	LA		0.58		F	#	-	-
Dissolved Oxygen	HM-L2	WL	mg/L	10/25/2017	(N)F	LA		1.9		F	#	-	-
Dissolved Oxygen	HM-S	WL	mg/L	10/23/2017	(N)F	AL		0.35		F	#	-	-
Dissolved Oxygen	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(N)F			2.8			#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Dissolved Oxygen	SA1-11-3	WL	mg/L	10/25/2017	(N)F	3A		0.57		F	#	-	-
Dissolved Oxygen	SA1-12-H	WL	mg/L	10/25/2017	(N)F	AL		1.58		FQ	#	-	-
Dissolved Oxygen	SA1-12-L	WL	mg/L	10/25/2017	(N)F	LA		2.23		FQ	#	-	-
Dissolved Oxygen	SA1-1-H	WL	mg/L	10/23/2017	(N)F	AL		0.84		F	#	-	-
Dissolved Oxygen	SA1-2-H	WL	mg/L	10/23/2017	(N)F	AL		0.85		F	#	-	-
Dissolved Oxygen	SA1-3-H	WL	mg/L	10/23/2017	(N)F	AL		0.74		F	#	-	-
Dissolved Oxygen	SA1-4-H	WL	mg/L	10/23/2017	(N)F	AL		0.64		F	#	-	-
Dissolved Oxygen	SA1-5-H	WL	mg/L	10/23/2017	(N)F	AL		1.07		F	#	-	-
Dissolved Oxygen	SA1-6-H	WL	mg/L	10/23/2017	(N)F	AL		0.65		F	#	-	-
Dissolved Oxygen	SA1-7-H	WL	mg/L	10/24/2017	(N)F	AL		1.24		F	#	-	-
Dissolved Oxygen	SA1-8-L	WL	mg/L	10/24/2017	(N)F	LA		0.57		F	#	-	-
Dissolved Oxygen	SA2-1-L	WL	mg/L	10/24/2017	(N)F	LA		2.3		F	#	-	-
Dissolved Oxygen	SA2-2-L	WL	mg/L	10/24/2017	(N)F	LA		6.49		FQ	#	-	-
Dissolved Oxygen	SA2-4-L	WL	mg/L	10/24/2017	(N)F	LA		0.53		F	#	-	-
Dissolved Oxygen	SA2-6-H	WL	mg/L	10/25/2017	(N)F	AL		2.29		F	#	-	-
Dissolved Oxygen	SA2-6-L	WL	mg/L	10/25/2017	(N)F	LA		2.04		F	#	-	-
Dissolved Oxygen	SA3-11-3	WL	mg/L	10/24/2017	(N)F	3A		0.45		F	#	-	-
Dissolved Oxygen	SA3-4-H	WL	mg/L	10/24/2017	(N)F	AL		1.17		F	#	-	-
Dissolved Oxygen	SA3-4-L	WL	mg/L	10/24/2017	(N)F	LA		4.31		FQ	#	-	-
Dissolved Oxygen	SA4-5-L	WL	mg/L	10/24/2017	(N)F	LA		7.01		FQ	#	-	-
Dissolved Oxygen	SA5-4-4	WL	mg/L	10/23/2017	(N)F	A4		0.19			#	-	-
Dissolved Oxygen	SA5-5-4	WL	mg/L	10/23/2017	(N)F	A4		0.11			#	-	-
Dissolved Oxygen	Well North Lumberton	WL	mg/L	10/24/2017	(N)F			4.6			#	-	-
Lead													
Lead	HM-3	WL	mg/L	10/23/2017	(T)F	3A		0.00104	B	F	#	0.0005	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Lead	HMH-16R	WL	mg/L	10/25/2017	(T)F	AL		0.0005	U	FQ	#	0.0005	-
Lead	HMH-5R	WL	mg/L	10/25/2017	(T)F	AL		0.00106	B	F	#	0.0005	-
Lead	HM-L	WL	mg/L	10/23/2017	(T)F	LA		0.0005	U	F	#	0.0005	-
Lead	HM-L2	WL	mg/L	10/25/2017	(T)F	LA		0.0005	U	F	#	0.0005	-
Lead	HM-S	WL	mg/L	10/23/2017	(T)F	AL		0.00055	B	F	#	0.0005	-
Lead	SA1-11-3	WL	mg/L	10/25/2017	(T)F	3A		0.0005	U	F	#	0.0005	-
Lead	SA1-12-H	WL	mg/L	10/25/2017	(T)F	AL		0.0005	U	FQ	#	0.0005	-
Lead	SA1-1-H	WL	mg/L	10/23/2017	(T)F	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-2-H	WL	mg/L	10/23/2017	(D)D	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-2-H	WL	mg/L	10/23/2017	(D)F	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-3-H	WL	mg/L	10/23/2017	(D)F	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-4-H	WL	mg/L	10/23/2017	(T)F	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-5-H	WL	mg/L	10/23/2017	(D)F	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-6-H	WL	mg/L	10/23/2017	(D)F	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-7-H	WL	mg/L	10/24/2017	(T)F	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-7-H	WL	mg/L	10/24/2017	(T)D	AL		0.0005	U	F	#	0.0005	-
Lead	SA1-8-L	WL	mg/L	10/24/2017	(T)F	LA		0.0005	U	F	#	0.0005	-
Lead	SA2-1-L	WL	mg/L	10/24/2017	(T)F	LA		0.0005	U	F	#	0.0005	-
Lead	SA2-2-L	WL	mg/L	10/24/2017	(T)F	LA		0.00293		FQ	#	0.0005	-
Lead	SA2-4-L	WL	mg/L	10/24/2017	(T)F	LA		0.0005	U	F	#	0.0005	-
Lead	SA3-11-3	WL	mg/L	10/24/2017	(T)F	3A		0.0005	U	F	#	0.0005	-
Lead	SA3-4-H	WL	mg/L	10/24/2017	(T)F	AL		0.0005	U	F	#	0.0005	-
Lead	SA4-5-L	WL	mg/L	10/24/2017	(T)D	LA		0.00141	B	FQ	#	0.0005	-
Lead	SA4-5-L	WL	mg/L	10/24/2017	(T)F	LA		0.00135	B	FQ	#	0.0005	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Magnesium													
Magnesium	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(T)F			0.492			#	0.11	-
Magnesium	E-7	WL	mg/L	10/24/2017	(T)F	CK		1.02		F	#	0.11	-
Magnesium	HM-1	WL	mg/L	10/23/2017	(T)F	A1		0.43		F	#	0.11	-
Magnesium	HM-2A	WL	mg/L	10/25/2017	(T)F	2A		1.34		F	#	0.11	-
Magnesium	HM-2B	WL	mg/L	10/25/2017	(T)F	2B		0.292	B	F	#	0.11	-
Magnesium	HM-3	WL	mg/L	10/23/2017	(T)F	3A		0.304		F	#	0.11	-
Magnesium	HMH-16R	WL	mg/L	10/25/2017	(T)F	AL		23.8		FQ	#	0.11	-
Magnesium	HMH-5R	WL	mg/L	10/25/2017	(T)F	AL		8.09		F	#	0.11	-
Magnesium	HM-L	WL	mg/L	10/23/2017	(T)F	LA		0.832		F	#	0.11	-
Magnesium	HM-L2	WL	mg/L	10/25/2017	(T)F	LA		6.36		F	#	0.11	-
Magnesium	HM-S	WL	mg/L	10/23/2017	(T)F	AL		6.94		F	#	0.11	-
Magnesium	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(T)F			0.304			#	0.11	-
Magnesium	SA1-11-3	WL	mg/L	10/25/2017	(T)F	3A		2.64		F	#	0.11	-
Magnesium	SA1-12-H	WL	mg/L	10/25/2017	(T)F	AL		8.14		FQ	#	0.11	-
Magnesium	SA1-12-L	WL	mg/L	10/25/2017	(T)F	LA		4.16		FQ	#	0.11	-
Magnesium	SA1-1-H	WL	mg/L	10/23/2017	(T)F	AL		9.45		F	#	0.11	-
Magnesium	SA1-2-H	WL	mg/L	10/23/2017	(D)D	AL		11.6		F	#	0.11	-
Magnesium	SA1-2-H	WL	mg/L	10/23/2017	(D)F	AL		12.8		F	#	0.11	-
Magnesium	SA1-3-H	WL	mg/L	10/23/2017	(D)F	AL		8.27		F	#	0.11	-
Magnesium	SA1-4-H	WL	mg/L	10/23/2017	(T)F	AL		3.53		F	#	0.11	-
Magnesium	SA1-5-H	WL	mg/L	10/23/2017	(D)F	AL		6.3		F	#	0.11	-
Magnesium	SA1-6-H	WL	mg/L	10/23/2017	(D)F	AL		0.426		F	#	0.11	-
Magnesium	SA1-7-H	WL	mg/L	10/24/2017	(T)F	AL		1.73		F	#	0.11	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Magnesium	SA1-7-H	WL	mg/L	10/24/2017	(T)D	AL		1.68		F	#	0.11	-
Magnesium	SA1-8-L	WL	mg/L	10/24/2017	(T)F	LA		3.96		F	#	0.11	-
Magnesium	SA2-1-L	WL	mg/L	10/24/2017	(T)F	LA		1.22		F	#	0.11	-
Magnesium	SA2-2-L	WL	mg/L	10/24/2017	(T)F	LA		0.11	U	FQ	#	0.11	-
Magnesium	SA2-4-L	WL	mg/L	10/24/2017	(T)F	LA		1.99		F	#	0.11	-
Magnesium	SA2-6-H	WL	mg/L	10/25/2017	(T)F	AL		1.04		F	#	0.11	-
Magnesium	SA2-6-L	WL	mg/L	10/25/2017	(T)F	LA		3.03		F	#	0.11	-
Magnesium	SA3-11-3	WL	mg/L	10/24/2017	(T)F	3A		1.19		F	#	0.11	-
Magnesium	SA3-4-H	WL	mg/L	10/24/2017	(T)F	AL		9.14		F	#	0.11	-
Magnesium	SA3-4-L	WL	mg/L	10/24/2017	(T)F	LA		1.41		FQ	#	0.11	-
Magnesium	SA4-5-L	WL	mg/L	10/24/2017	(T)D	LA		0.11	U	FQ	#	0.11	-
Magnesium	SA4-5-L	WL	mg/L	10/24/2017	(T)F	LA		0.11	U	FQ	#	0.11	-
Magnesium	SA5-4-4	WL	mg/L	10/23/2017	(T)F	A4		0.793			#	0.11	-
Magnesium	SA5-5-4	WL	mg/L	10/23/2017	(T)F	A4		1.03			#	0.11	-
Magnesium	Well North Lumberton	WL	mg/L	10/24/2017	(T)F			0.677			#	0.11	-
Oxidation Reduction Potential													
Oxidation Reduction Potential	Bx.Cty WL #370007-04	WL	mV	10/24/2017	(N)F			138			#	-	-
Oxidation Reduction Potential	E-7	WL	mV	10/24/2017	(N)F	CK		-312.1		F	#	-	-
Oxidation Reduction Potential	HM-1	WL	mV	10/23/2017	(N)F	A1		-82.5		F	#	-	-
Oxidation Reduction Potential	HM-2A	WL	mV	10/25/2017	(N)F	2A		-146.9		F	#	-	-
Oxidation Reduction Potential	HM-2B	WL	mV	10/25/2017	(N)F	2B		-275		F	#	-	-
Oxidation Reduction Potential	HM-3	WL	mV	10/23/2017	(N)F	3A		-197		F	#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Oxidation Reduction Potential	HMH-16R	WL	mV	10/25/2017	(N)F	AL		0.7		FQ	#	-	-
Oxidation Reduction Potential	HMH-5R	WL	mV	10/25/2017	(N)F	AL		16.1		F	#	-	-
Oxidation Reduction Potential	HM-L	WL	mV	10/23/2017	(N)F	LA		-11.8		F	#	-	-
Oxidation Reduction Potential	HM-L2	WL	mV	10/25/2017	(N)F	LA		31.1		F	#	-	-
Oxidation Reduction Potential	HM-S	WL	mV	10/23/2017	(N)F	AL		-21		F	#	-	-
Oxidation Reduction Potential	Purvis Cty Supply WL	WL	mV	10/24/2017	(N)F			52			#	-	-
Oxidation Reduction Potential	SA1-11-3	WL	mV	10/25/2017	(N)F	3A		-307.3		F	#	-	-
Oxidation Reduction Potential	SA1-12-H	WL	mV	10/25/2017	(N)F	AL		-119.7		FQ	#	-	-
Oxidation Reduction Potential	SA1-12-L	WL	mV	10/25/2017	(N)F	LA		-94.5		FQ	#	-	-
Oxidation Reduction Potential	SA1-1-H	WL	mV	10/23/2017	(N)F	AL		-82.7		F	#	-	-
Oxidation Reduction Potential	SA1-2-H	WL	mV	10/23/2017	(N)F	AL		-11.4		F	#	-	-
Oxidation Reduction Potential	SA1-3-H	WL	mV	10/23/2017	(N)F	AL		-85.1		F	#	-	-
Oxidation Reduction Potential	SA1-4-H	WL	mV	10/23/2017	(N)F	AL		35.9		F	#	-	-
Oxidation Reduction Potential	SA1-5-H	WL	mV	10/23/2017	(N)F	AL		15.4		F	#	-	-
Oxidation Reduction Potential	SA1-6-H	WL	mV	10/23/2017	(N)F	AL		132.6		F	#	-	-
Oxidation Reduction Potential	SA1-7-H	WL	mV	10/24/2017	(N)F	AL		-7.4		F	#	-	-
Oxidation Reduction Potential	SA1-8-L	WL	mV	10/24/2017	(N)F	LA		-90.8		F	#	-	-
Oxidation Reduction Potential	SA2-1-L	WL	mV	10/24/2017	(N)F	LA		18.6		F	#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Oxidation Reduction Potential	SA2-2-L	WL	mV	10/24/2017	(N)F	LA		-108.8		FQ	#	-	-
Oxidation Reduction Potential	SA2-4-L	WL	mV	10/24/2017	(N)F	LA		149.8		F	#	-	-
Oxidation Reduction Potential	SA2-6-H	WL	mV	10/25/2017	(N)F	AL		33.8		F	#	-	-
Oxidation Reduction Potential	SA2-6-L	WL	mV	10/25/2017	(N)F	LA		-41.8		F	#	-	-
Oxidation Reduction Potential	SA3-11-3	WL	mV	10/24/2017	(N)F	3A		-266.1		F	#	-	-
Oxidation Reduction Potential	SA3-4-H	WL	mV	10/24/2017	(N)F	AL		52		F	#	-	-
Oxidation Reduction Potential	SA3-4-L	WL	mV	10/24/2017	(N)F	LA		48.6		FQ	#	-	-
Oxidation Reduction Potential	SA4-5-L	WL	mV	10/24/2017	(N)F	LA		-205.4		FQ	#	-	-
Oxidation Reduction Potential	SA5-4-4	WL	mV	10/23/2017	(N)F	A4		-208			#	-	-
Oxidation Reduction Potential	SA5-5-4	WL	mV	10/23/2017	(N)F	A4		-233.9			#	-	-
Oxidation Reduction Potential	Well North Lumberton	WL	mV	10/24/2017	(N)F			20			#	-	-
pH													
pH	Bx.Cty WL #370007-04	WL	SU	10/24/2017	(N)F			5.32			#	-	-
pH	E-7	WL	SU	10/24/2017	(N)F	CK		7.27		F	#	-	-
pH	HM-1	WL	SU	10/23/2017	(N)F	A1		8.97		F	#	-	-
pH	HM-2A	WL	SU	10/25/2017	(N)F	2A		7.28		F	#	-	-
pH	HM-2B	WL	SU	10/25/2017	(N)F	2B		9.73		F	#	-	-
pH	HM-3	WL	s.u.	10/23/2017	(N)F	3A		9.36		F	#	-	-
pH	HMH-16R	WL	SU	10/25/2017	(N)F	AL		6.87		FQ	#	-	-
pH	HMH-5R	WL	SU	10/25/2017	(N)F	AL		5.73		F	#	-	-
pH	HM-L	WL	SU	10/23/2017	(N)F	LA		8.84		F	#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
pH	HM-L2	WL	SU	10/25/2017	(N)F	LA		7.51		F	#	-	-
pH	HM-S	WL	SU	10/23/2017	(N)F	AL		5.93		F	#	-	-
pH	Purvis Cty Supply WL	WL	SU	10/24/2017	(N)F			6.44			#	-	-
pH	SA1-11-3	WL	SU	10/25/2017	(N)F	3A		8.25		F	#	-	-
pH	SA1-12-H	WL	SU	10/25/2017	(N)F	AL		7.36		FQ	#	-	-
pH	SA1-12-L	WL	SU	10/25/2017	(N)F	LA		7.59		FQ	#	-	-
pH	SA1-1-H	WL	SU	10/23/2017	(N)F	AL		6.28		F	#	-	-
pH	SA1-2-H	WL	SU	10/23/2017	(N)F	AL		5.85		F	#	-	-
pH	SA1-3-H	WL	SU	10/23/2017	(N)F	AL		6.44		F	#	-	-
pH	SA1-4-H	WL	SU	10/23/2017	(N)F	AL		5.62		F	#	-	-
pH	SA1-5-H	WL	SU	10/23/2017	(N)F	AL		5.83		F	#	-	-
pH	SA1-6-H	WL	SU	10/23/2017	(N)F	AL		5.17		F	#	-	-
pH	SA1-7-H	WL	SU	10/24/2017	(N)F	AL		5.75		F	#	-	-
pH	SA1-8-L	WL	SU	10/24/2017	(N)F	LA		7.48		F	#	-	-
pH	SA2-1-L	WL	SU	10/24/2017	(N)F	LA		9.04		F	#	-	-
pH	SA2-2-L	WL	SU	10/24/2017	(N)F	LA		12.41		FQ	#	-	-
pH	SA2-4-L	WL	SU	10/24/2017	(N)F	LA		8.21		F	#	-	-
pH	SA2-6-H	WL	SU	10/25/2017	(N)F	AL		6.52		F	#	-	-
pH	SA2-6-L	WL	SU	10/25/2017	(N)F	LA		6.29		F	#	-	-
pH	SA3-11-3	WL	SU	10/24/2017	(N)F	3A		8.69		F	#	-	-
pH	SA3-4-H	WL	SU	10/24/2017	(N)F	AL		6.61		F	#	-	-
pH	SA3-4-L	WL	SU	10/24/2017	(N)F	LA		6.88		FQ	#	-	-
pH	SA4-5-L	WL	SU	10/24/2017	(N)F	LA		12.2		FQ	#	-	-
pH	SA5-4-4	WL	s.u.	10/23/2017	(N)F	A4		8.58			#	-	-
pH	SA5-5-4	WL	SU	10/23/2017	(N)F	A4		8.63			#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
pH	Well North Lumberton	WL	SU	10/24/2017	(N)F			6.96			#	-	-
Potassium													
Potassium	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(T)F			0.429			#	0.05	-
Potassium	E-7	WL	mg/L	10/24/2017	(T)F	CK		2.23		F	#	0.05	-
Potassium	HM-1	WL	mg/L	10/23/2017	(T)F	A1		3.14		F	#	0.05	-
Potassium	HM-2A	WL	mg/L	10/25/2017	(T)F	2A		3.84		F	#	0.05	-
Potassium	HM-2B	WL	mg/L	10/25/2017	(T)F	2B		3.16		F	#	0.05	-
Potassium	HM-3	WL	mg/L	10/23/2017	(T)F	3A		4.77		F	#	0.05	-
Potassium	HMH-16R	WL	mg/L	10/25/2017	(T)F	AL		4.08		FQ	#	0.05	-
Potassium	HMH-5R	WL	mg/L	10/25/2017	(T)F	AL		2.21		F	#	0.05	-
Potassium	HM-L	WL	mg/L	10/23/2017	(T)F	LA		7.7		F	#	0.05	-
Potassium	HM-L2	WL	mg/L	10/25/2017	(T)F	LA		2.84		F	#	0.05	-
Potassium	HM-S	WL	mg/L	10/23/2017	(T)F	AL		3.98		F	#	0.05	-
Potassium	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(T)F			1.86			#	0.05	-
Potassium	SA1-11-3	WL	mg/L	10/25/2017	(T)F	3A		3.82		F	#	0.05	-
Potassium	SA1-12-H	WL	mg/L	10/25/2017	(T)F	AL		2.47		FQ	#	0.05	-
Potassium	SA1-12-L	WL	mg/L	10/25/2017	(T)F	LA		2.07		FQ	#	0.05	-
Potassium	SA1-1-H	WL	mg/L	10/23/2017	(T)F	AL		2.23		F	#	0.05	-
Potassium	SA1-2-H	WL	mg/L	10/23/2017	(D)D	AL		4.82		F	#	0.05	-
Potassium	SA1-2-H	WL	mg/L	10/23/2017	(D)F	AL		5.28		F	#	0.05	-
Potassium	SA1-3-H	WL	mg/L	10/23/2017	(D)F	AL		11.8		F	#	0.05	-
Potassium	SA1-4-H	WL	mg/L	10/23/2017	(T)F	AL		1.83		F	#	0.05	-
Potassium	SA1-5-H	WL	mg/L	10/23/2017	(D)F	AL		2.89		F	#	0.05	-
Potassium	SA1-6-H	WL	mg/L	10/23/2017	(D)F	AL		0.493		F	#	0.05	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Potassium	SA1-7-H	WL	mg/L	10/24/2017	(T)F	AL		0.78		F	#	0.05	-
Potassium	SA1-7-H	WL	mg/L	10/24/2017	(T)D	AL		0.776		F	#	0.05	-
Potassium	SA1-8-L	WL	mg/L	10/24/2017	(T)F	LA		2.08		F	#	0.05	-
Potassium	SA2-1-L	WL	mg/L	10/24/2017	(T)F	LA		4.78		F	#	0.05	-
Potassium	SA2-2-L	WL	mg/L	10/24/2017	(T)F	LA		8.05		FQ	#	0.05	-
Potassium	SA2-4-L	WL	mg/L	10/24/2017	(T)F	LA		2.24		F	#	0.05	-
Potassium	SA2-6-H	WL	mg/L	10/25/2017	(T)F	AL		1.55		F	#	0.05	-
Potassium	SA2-6-L	WL	mg/L	10/25/2017	(T)F	LA		2.11		F	#	0.05	-
Potassium	SA3-11-3	WL	mg/L	10/24/2017	(T)F	3A		11		F	#	0.05	-
Potassium	SA3-4-H	WL	mg/L	10/24/2017	(T)F	AL		2.35		F	#	0.05	-
Potassium	SA3-4-L	WL	mg/L	10/24/2017	(T)F	LA		1.2		FQ	#	0.05	-
Potassium	SA4-5-L	WL	mg/L	10/24/2017	(T)D	LA		9.07		FQ	#	0.05	-
Potassium	SA4-5-L	WL	mg/L	10/24/2017	(T)F	LA		8.89		FQ	#	0.05	-
Potassium	SA5-4-4	WL	mg/L	10/23/2017	(T)F	A4		2.4			#	0.05	-
Potassium	SA5-5-4	WL	mg/L	10/23/2017	(T)F	A4		2.61			#	0.05	-
Potassium	Well North Lumberton	WL	mg/L	10/24/2017	(T)F			1.31			#	0.05	-
Sodium													
Sodium	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(T)F			2.19			#	0.1	-
Sodium	E-7	WL	mg/L	10/24/2017	(T)F	CK		295		F	#	0.1	-
Sodium	HM-1	WL	mg/L	10/23/2017	(T)F	A1		30.5		F	#	0.1	-
Sodium	HM-2A	WL	mg/L	10/25/2017	(T)F	2A		15.4		F	#	0.1	-
Sodium	HM-2B	WL	mg/L	10/25/2017	(T)F	2B		94.5		F	#	0.1	-
Sodium	HM-3	WL	mg/L	10/23/2017	(T)F	3A		241		F	#	0.1	-
Sodium	HMH-16R	WL	mg/L	10/25/2017	(T)F	AL		56.7		FQ	#	0.1	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Sodium	HMH-5R	WL	mg/L	10/25/2017	(T)F	AL		76.7		F	#	0.1	-
Sodium	HM-L	WL	mg/L	10/23/2017	(T)F	LA		51.8		F	#	0.1	-
Sodium	HM-L2	WL	mg/L	10/25/2017	(T)F	LA		45.8		F	#	0.1	-
Sodium	HM-S	WL	mg/L	10/23/2017	(T)F	AL		112		F	#	0.1	-
Sodium	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(T)F			18.9			#	0.1	-
Sodium	SA1-11-3	WL	mg/L	10/25/2017	(T)F	3A		167		F	#	0.1	-
Sodium	SA1-12-H	WL	mg/L	10/25/2017	(T)F	AL		19		FQ	#	0.1	-
Sodium	SA1-12-L	WL	mg/L	10/25/2017	(T)F	LA		70.2		FQ	#	0.1	-
Sodium	SA1-1-H	WL	mg/L	10/23/2017	(T)F	AL		50.5		F	#	0.1	-
Sodium	SA1-2-H	WL	mg/L	10/23/2017	(D)D	AL		211		F	#	0.1	-
Sodium	SA1-2-H	WL	mg/L	10/23/2017	(D)F	AL		221		F	#	0.1	-
Sodium	SA1-3-H	WL	mg/L	10/23/2017	(D)F	AL		203		F	#	0.1	-
Sodium	SA1-4-H	WL	mg/L	10/23/2017	(T)F	AL		28.6		F	#	0.1	-
Sodium	SA1-5-H	WL	mg/L	10/23/2017	(D)F	AL		83.7		F	#	0.1	-
Sodium	SA1-6-H	WL	mg/L	10/23/2017	(D)F	AL		2.14		F	#	0.1	-
Sodium	SA1-7-H	WL	mg/L	10/24/2017	(T)F	AL		35.5		F	#	0.1	-
Sodium	SA1-7-H	WL	mg/L	10/24/2017	(T)D	AL		34.8		F	#	0.1	-
Sodium	SA1-8-L	WL	mg/L	10/24/2017	(T)F	LA		15.8		F	#	0.1	-
Sodium	SA2-1-L	WL	mg/L	10/24/2017	(T)F	LA		44.7		F	#	0.1	-
Sodium	SA2-2-L	WL	mg/L	10/24/2017	(T)F	LA		24.5		FQ	#	0.1	-
Sodium	SA2-4-L	WL	mg/L	10/24/2017	(T)F	LA		41.9		F	#	0.1	-
Sodium	SA2-6-H	WL	mg/L	10/25/2017	(T)F	AL		4.31		F	#	0.1	-
Sodium	SA2-6-L	WL	mg/L	10/25/2017	(T)F	LA		9.93		F	#	0.1	-
Sodium	SA3-11-3	WL	mg/L	10/24/2017	(T)F	3A		497		F	#	0.1	-
Sodium	SA3-4-H	WL	mg/L	10/24/2017	(T)F	AL		10.3		F	#	0.1	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Sodium	SA3-4-L	WL	mg/L	10/24/2017	(T)F	LA		32.2		FQ	#	0.1	-
Sodium	SA4-5-L	WL	mg/L	10/24/2017	(T)D	LA		29.5		FQ	#	0.1	-
Sodium	SA4-5-L	WL	mg/L	10/24/2017	(T)F	LA		28.5		FQ	#	0.1	-
Sodium	SA5-4-4	WL	mg/L	10/23/2017	(T)F	A4		835			#	0.1	-
Sodium	SA5-5-4	WL	mg/L	10/23/2017	(T)F	A4		575			#	0.1	-
Sodium	Well North Lumberton	WL	mg/L	10/24/2017	(T)F			31.2			#	0.1	-
Specific Conductance													
Specific Conductance	Bx.Cty WL #370007-04	WL	uS/cm	10/24/2017	(N)F			29			#	-	-
Specific Conductance	E-7	WL	uS/cm	10/24/2017	(N)F	CK		2026		F	#	-	-
Specific Conductance	HM-1	WL	uS/cm	10/23/2017	(N)F	A1		212		F	#	-	-
Specific Conductance	HM-2A	WL	uS/cm	10/25/2017	(N)F	2A		144		F	#	-	-
Specific Conductance	HM-2B	WL	uS/cm	10/25/2017	(N)F	2B		459		F	#	-	-
Specific Conductance	HM-3	WL	umhos/cm	10/23/2017	(N)F	3A		1198		F	#	-	-
Specific Conductance	HMH-16R	WL	uS/cm	10/25/2017	(N)F	AL		936		FQ	#	-	-
Specific Conductance	HMH-5R	WL	uS/cm	10/25/2017	(N)F	AL		776		F	#	-	-
Specific Conductance	HM-L	WL	uS/cm	10/23/2017	(N)F	LA		623		F	#	-	-
Specific Conductance	HM-L2	WL	uS/cm	10/25/2017	(N)F	LA		419		F	#	-	-
Specific Conductance	HM-S	WL	uS/cm	10/23/2017	(N)F	AL		903		F	#	-	-
Specific Conductance	Purvis Cty Supply WL	WL	uS/cm	10/24/2017	(N)F			103			#	-	-
Specific Conductance	SA1-11-3	WL	uS/cm	10/25/2017	(N)F	3A		1013		F	#	-	-
Specific Conductance	SA1-12-H	WL	uS/cm	10/25/2017	(N)F	AL		340		FQ	#	-	-
Specific Conductance	SA1-12-L	WL	uS/cm	10/25/2017	(N)F	LA		411		FQ	#	-	-
Specific Conductance	SA1-1-H	WL	uS/cm	10/23/2017	(N)F	AL		580		F	#	-	-
Specific Conductance	SA1-2-H	WL	uS/cm	10/23/2017	(N)F	AL		1702		F	#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Specific Conductance	SA1-3-H	WL	uS/cm	10/23/2017	(N)F	AL		2439		F	#	-	-
Specific Conductance	SA1-4-H	WL	uS/cm	10/23/2017	(N)F	AL		328		F	#	-	-
Specific Conductance	SA1-5-H	WL	uS/cm	10/23/2017	(N)F	AL		1127		F	#	-	-
Specific Conductance	SA1-6-H	WL	uS/cm	10/23/2017	(N)F	AL		51		F	#	-	-
Specific Conductance	SA1-7-H	WL	uS/cm	10/24/2017	(N)F	AL		450		F	#	-	-
Specific Conductance	SA1-8-L	WL	uS/cm	10/24/2017	(N)F	LA		201		F	#	-	-
Specific Conductance	SA2-1-L	WL	uS/cm	10/24/2017	(N)F	LA		277		F	#	-	-
Specific Conductance	SA2-2-L	WL	uS/cm	10/24/2017	(N)F	LA		6970		FQ	#	-	-
Specific Conductance	SA2-4-L	WL	uS/cm	10/24/2017	(N)F	LA		271		F	#	-	-
Specific Conductance	SA2-6-H	WL	uS/cm	10/25/2017	(N)F	AL		73		F	#	-	-
Specific Conductance	SA2-6-L	WL	uS/cm	10/25/2017	(N)F	LA		205		F	#	-	-
Specific Conductance	SA3-11-3	WL	uS/cm	10/24/2017	(N)F	3A		4607		F	#	-	-
Specific Conductance	SA3-4-H	WL	uS/cm	10/24/2017	(N)F	AL		390		F	#	-	-
Specific Conductance	SA3-4-L	WL	uS/cm	10/24/2017	(N)F	LA		257		FQ	#	-	-
Specific Conductance	SA4-5-L	WL	uS/cm	10/24/2017	(N)F	LA		5498		FQ	#	-	-
Specific Conductance	SA5-4-4	WL	umhos/cm	10/23/2017	(N)F	A4		4774			#	-	-
Specific Conductance	SA5-5-4	WL	uS/cm	10/23/2017	(N)F	A4		3460			#	-	-
Specific Conductance	Well North Lumberton	WL	uS/cm	10/24/2017	(N)F			164			#	-	-
Sulfate													
Sulfate	Bx.Cty WL #370007-04	WL	mg/L	10/24/2017	(N)F			0.345	J		#	0.133	-
Sulfate	E-7	WL	mg/L	10/24/2017	(N)F	CK		283		F	#	0.133	-
Sulfate	HM-1	WL	mg/L	10/23/2017	(N)F	A1		1.85		F	#	0.133	-
Sulfate	HM-2A	WL	mg/L	10/25/2017	(N)F	2A		0.312	J	F	#	0.133	-
Sulfate	HM-2B	WL	mg/L	10/25/2017	(N)F	2B		42.4		F	#	0.133	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Sulfate	HM-3	WL	mg/L	10/23/2017	(N)F	3A		4.66		F	#	0.133	-
Sulfate	HMH-16R	WL	mg/L	10/25/2017	(N)F	AL		13.8		FQ	#	0.133	-
Sulfate	HMH-5R	WL	mg/L	10/25/2017	(N)F	AL		5.15		F	#	0.133	-
Sulfate	HM-L	WL	mg/L	10/23/2017	(N)F	LA		21.9		F	#	0.133	-
Sulfate	HM-L2	WL	mg/L	10/25/2017	(N)F	LA		22.9		F	#	0.133	-
Sulfate	HM-S	WL	mg/L	10/23/2017	(N)F	AL		212		F	#	0.133	-
Sulfate	Purvis Cty Supply WL	WL	mg/L	10/24/2017	(N)F			7.56			#	0.133	-
Sulfate	SA1-11-3	WL	mg/L	10/25/2017	(N)F	3A		162		F	#	0.133	-
Sulfate	SA1-12-H	WL	mg/L	10/25/2017	(N)F	AL		4.95		FQ	#	0.133	-
Sulfate	SA1-12-L	WL	mg/L	10/25/2017	(N)F	LA		12.3		FQ	#	0.133	-
Sulfate	SA1-1-H	WL	mg/L	10/23/2017	(N)F	AL		13.2		F	#	0.133	-
Sulfate	SA1-2-H	WL	mg/L	10/23/2017	(N)D	AL		308		F	#	0.133	-
Sulfate	SA1-2-H	WL	mg/L	10/23/2017	(N)F	AL		313		F	#	0.133	-
Sulfate	SA1-3-H	WL	mg/L	10/23/2017	(N)F	AL		918		F	#	0.133	-
Sulfate	SA1-4-H	WL	mg/L	10/23/2017	(N)F	AL		2.49		F	#	0.133	-
Sulfate	SA1-5-H	WL	mg/L	10/23/2017	(N)F	AL		391		F	#	0.133	-
Sulfate	SA1-6-H	WL	mg/L	10/23/2017	(N)F	AL		2.22		F	#	0.133	-
Sulfate	SA1-7-H	WL	mg/L	10/24/2017	(N)F	AL		46.7		F	#	0.133	-
Sulfate	SA1-7-H	WL	mg/L	10/24/2017	(N)D	AL		46.3		F	#	0.133	-
Sulfate	SA1-8-L	WL	mg/L	10/24/2017	(N)F	LA		2.01		F	#	0.133	-
Sulfate	SA2-1-L	WL	mg/L	10/24/2017	(N)F	LA		57		F	#	0.133	-
Sulfate	SA2-2-L	WL	mg/L	10/24/2017	(N)F	LA		7.19	J	FQ	#	0.133	-
Sulfate	SA2-4-L	WL	mg/L	10/24/2017	(N)F	LA		31.2		F	#	0.133	-
Sulfate	SA2-6-H	WL	mg/L	10/25/2017	(N)F	AL		6.1		F	#	0.133	-
Sulfate	SA2-6-L	WL	mg/L	10/25/2017	(N)F	LA		6.77		F	#	0.133	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Sulfate	SA3-11-3	WL	mg/L	10/24/2017	(N)F	3A		1050		F	#	0.133	-
Sulfate	SA3-4-H	WL	mg/L	10/24/2017	(N)F	AL		37.2		F	#	0.133	-
Sulfate	SA3-4-L	WL	mg/L	10/24/2017	(N)F	LA		9.4		FQ	#	0.133	-
Sulfate	SA4-5-L	WL	mg/L	10/24/2017	(N)D	LA		5.73		FQ	#	0.133	-
Sulfate	SA4-5-L	WL	mg/L	10/24/2017	(N)F	LA		6.39		FQ	#	0.133	-
Sulfate	SA5-4-4	WL	mg/L	10/23/2017	(N)F	A4		15.9			#	0.133	-
Sulfate	SA5-5-4	WL	mg/L	10/23/2017	(N)F	A4		3.27			#	0.133	-
Sulfate	Well North Lumberton	WL	mg/L	10/24/2017	(N)F			4.97			#	0.133	-
Temperature													
Temperature	Bx.Cty WL #370007-04	WL	C	10/24/2017	(N)F			19.43			#	-	-
Temperature	E-7	WL	C	10/24/2017	(N)F	CK		20.68		F	#	-	-
Temperature	HM-1	WL	C	10/23/2017	(N)F	A1		21.29		F	#	-	-
Temperature	HM-2A	WL	C	10/25/2017	(N)F	2A		22.53		F	#	-	-
Temperature	HM-2B	WL	C	10/25/2017	(N)F	2B		21.21		F	#	-	-
Temperature	HM-3	WL	C	10/23/2017	(N)F	3A		23.21		F	#	-	-
Temperature	HMH-16R	WL	C	10/25/2017	(N)F	AL		20.61		FQ	#	-	-
Temperature	HMH-5R	WL	C	10/25/2017	(N)F	AL		18.44		F	#	-	-
Temperature	HM-L	WL	C	10/23/2017	(N)F	LA		21.55		F	#	-	-
Temperature	HM-L2	WL	C	10/25/2017	(N)F	LA		19.38		F	#	-	-
Temperature	HM-S	WL	C	10/23/2017	(N)F	AL		22.17		F	#	-	-
Temperature	Purvis Cty Supply WL	WL	C	10/24/2017	(N)F			24.9			#	-	-
Temperature	SA1-11-3	WL	C	10/25/2017	(N)F	3A		19.73		F	#	-	-
Temperature	SA1-12-H	WL	C	10/25/2017	(N)F	AL		19.54		FQ	#	-	-
Temperature	SA1-12-L	WL	C	10/25/2017	(N)F	LA		17.41		FQ	#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Temperature	SA1-1-H	WL	C	10/23/2017	(N)F	AL		21.67		F	#	-	-
Temperature	SA1-2-H	WL	C	10/23/2017	(N)F	AL		20.1		F	#	-	-
Temperature	SA1-3-H	WL	C	10/23/2017	(N)F	AL		20.52		F	#	-	-
Temperature	SA1-4-H	WL	C	10/23/2017	(N)F	AL		21.07		F	#	-	-
Temperature	SA1-5-H	WL	C	10/23/2017	(N)F	AL		20.02		F	#	-	-
Temperature	SA1-6-H	WL	C	10/23/2017	(N)F	AL		21.88		F	#	-	-
Temperature	SA1-7-H	WL	C	10/24/2017	(N)F	AL		20.75		F	#	-	-
Temperature	SA1-8-L	WL	C	10/24/2017	(N)F	LA		19.86		F	#	-	-
Temperature	SA2-1-L	WL	C	10/24/2017	(N)F	LA		20.25		F	#	-	-
Temperature	SA2-2-L	WL	C	10/24/2017	(N)F	LA		20.36		FQ	#	-	-
Temperature	SA2-4-L	WL	C	10/24/2017	(N)F	LA		20.6		F	#	-	-
Temperature	SA2-6-H	WL	C	10/25/2017	(N)F	AL		21.04		F	#	-	-
Temperature	SA2-6-L	WL	C	10/25/2017	(N)F	LA		21.36		F	#	-	-
Temperature	SA3-11-3	WL	C	10/24/2017	(N)F	3A		20.44		F	#	-	-
Temperature	SA3-4-H	WL	C	10/24/2017	(N)F	AL		20.33		F	#	-	-
Temperature	SA3-4-L	WL	C	10/24/2017	(N)F	LA		18.61		FQ	#	-	-
Temperature	SA4-5-L	WL	C	10/24/2017	(N)F	LA		19.96		FQ	#	-	-
Temperature	SA5-4-4	WL	C	10/23/2017	(N)F	A4		24.65			#	-	-
Temperature	SA5-5-4	WL	C	10/23/2017	(N)F	A4		25.91			#	-	-
Temperature	Well North Lumberton	WL	C	10/24/2017	(N)F			21.93			#	-	-
Trichloroethene													
Trichloroethene	HMH-16R	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	FQ	#	0.16	-
Trichloroethene	HMH-5R	WL	ug/L	10/25/2017	(N)F	AL		118		F	#	0.16	-
Trichloroethene	HM-L	WL	ug/L	10/23/2017	(N)F	LA		0.98	J	F	#	0.16	-
Trichloroethene	HM-S	WL	ug/L	10/23/2017	(N)F	AL		1.17		F	#	0.16	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Trichloroethene	SA1-12-H	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	FQ	#	0.16	-
Trichloroethene	SA1-12-L	WL	ug/L	10/25/2017	(N)F	LA		0.16	U	FQ	#	0.16	-
Trichloroethene	SA1-1-H	WL	ug/L	10/23/2017	(N)F	AL		2.52		F	#	0.16	-
Trichloroethene	SA1-2-H	WL	ug/L	10/23/2017	(N)D	AL		1.77		F	#	0.16	-
Trichloroethene	SA1-2-H	WL	ug/L	10/23/2017	(N)F	AL		1.92		F	#	0.16	-
Trichloroethene	SA1-3-H	WL	ug/L	10/23/2017	(N)F	AL		0.68	J	F	#	0.16	-
Trichloroethene	SA1-4-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
Trichloroethene	SA1-5-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
Trichloroethene	SA1-6-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
Trichloroethene	SA1-7-H	WL	ug/L	10/24/2017	(N)F	AL		0.16	U	F	#	0.16	-
Trichloroethene	SA1-7-H	WL	ug/L	10/24/2017	(N)D	AL		0.16	U	F	#	0.16	-
Trichloroethene	SA2-6-H	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	F	#	0.16	-
Trichloroethene	SA2-6-L	WL	ug/L	10/25/2017	(N)F	LA		0.16	U	F	#	0.16	-
Trichloroethene	SA3-4-H	WL	ug/L	10/24/2017	(N)F	AL		0.16	U	F	#	0.16	-
Trichloroethene	SA3-4-L	WL	ug/L	10/24/2017	(N)F	LA		0.16	U	FQ	#	0.16	-
Tritium													
Tritium	E-7	WL	pCi/L	10/24/2017	(N)F	CK		1.264	U	F	#	2.407	± 1.484
Tritium	HM-1	WL	pCi/L	10/23/2017	(N)F	A1		-22.1	U	F	#	168	± 96.1
Tritium	HM-2A	WL	pCi/L	10/25/2017	(N)F	2A		116	U	F	#	315	± 186
Tritium	HM-2B	WL	pCi/L	10/25/2017	(N)F	2B		-1.25	U	F	#	179	± 103
Tritium	HM-3	WL	pCi/L	10/23/2017	(N)F	3A		-9.85	U	F	#	170	± 97.5
Tritium	HMH-16R	WL	pCi/L	10/25/2017	(N)F	AL		-47.7	U	FQ	#	169	± 96
Tritium	HMH-5R	WL	pCi/L	10/25/2017	(N)F	AL		1640		F	#	327	± 417
Tritium	HM-L	WL	pCi/L	10/23/2017	(N)F	LA		588		FJ	#	328	± 244
Tritium	HM-L2	WL	pCi/L	10/25/2017	(N)F	LA		-24.7	U	F	#	165	± 94.6

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:09 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Tritium	HM-S	WL	pCi/L	10/23/2017	(N)F	AL		131.134		F	#	2.438	± 38.747
Tritium	SA1-11-3	WL	pCi/L	10/25/2017	(N)F	3A		-74.6	U	F	#	334	± 182
Tritium	SA1-12-H	WL	pCi/L	10/25/2017	(N)F	AL		59.6	U	FQ	#	169	± 100
Tritium	SA1-12-L	WL	pCi/L	10/25/2017	(N)F	LA		-6	U	FQ	#	260	± 143
Tritium	SA1-1-H	WL	pCi/L	10/23/2017	(N)F	AL		3420		F	#	323	± 744
Tritium	SA1-2-H	WL	pCi/L	10/23/2017	(N)F	AL		249	U	F	#	366	± 226
Tritium	SA1-3-H	WL	pCi/L	10/23/2017	(N)F	AL		175	U	F	#	275	± 169
Tritium	SA1-4-H	WL	pCi/L	10/23/2017	(N)F	AL		-55.7	U	F	#	262	± 140
Tritium	SA1-5-H	WL	pCi/L	10/23/2017	(N)F	AL		-25.8	U	F	#	269	± 147
Tritium	SA1-6-H	WL	pCi/L	10/23/2017	(N)F	AL		21.9	U	F	#	273	± 153
Tritium	SA1-7-H	WL	pCi/L	10/24/2017	(N)F	AL		-55.6	U	F	#	304	± 170
Tritium	SA1-7-H	WL	pCi/L	10/24/2017	(N)D	AL		8.14	U	F	#	303	± 173
Tritium	SA1-8-L	WL	pCi/L	10/24/2017	(N)F	LA		129	U	F	#	307	± 183
Tritium	SA2-1-L	WL	pCi/L	10/24/2017	(N)F	LA		81.5	U	F	#	296	± 173
Tritium	SA2-2-L	WL	pCi/L	10/24/2017	(N)F	LA		-10.3	U	FQ	#	303	± 172
Tritium	SA2-4-L	WL	pCi/L	10/24/2017	(N)F	LA		-51.5	U	F	#	303	± 170
Tritium	SA2-6-H	WL	pCi/L	10/25/2017	(N)F	AL		-5.34	U	F	#	308	± 175
Tritium	SA2-6-L	WL	pCi/L	10/25/2017	(N)F	LA		21.4	U	F	#	307	± 175
Tritium	SA3-11-3	WL	pCi/L	10/24/2017	(N)F	3A		-52.6	U	F	#	307	± 172
Tritium	SA3-4-H	WL	pCi/L	10/24/2017	(N)F	AL		-76.4	U	F	#	301	± 167
Tritium	SA3-4-L	WL	pCi/L	10/24/2017	(N)F	LA		-30.2	U	FQ	#	297	± 167
Tritium	SA4-5-L	WL	pCi/L	10/24/2017	(N)D	LA		20.8	U	FQ	#	311	± 178
Tritium	SA4-5-L	WL	pCi/L	10/24/2017	(N)F	LA		28.9	U	FQ	#	297	± 171
Tritium	SA5-4-4	WL	pCi/L	10/23/2017	(N)F	A4		69.1	U		#	304	± 177
Tritium	SA5-5-4	WL	pCi/L	10/23/2017	(N)F	A4		82.6	U		#	304	± 177

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:10 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Turbidity													
Turbidity	Bx.Cty WL #370007-04	WL	NTU	10/24/2017	(N)F			1.4			#	-	-
Turbidity	E-7	WL	NTU	10/24/2017	(N)F	CK		2.02		F	#	-	-
Turbidity	HM-1	WL	NTU	10/23/2017	(N)F	A1		1.02		F	#	-	-
Turbidity	HM-2A	WL	NTU	10/25/2017	(N)F	2A		1.49		F	#	-	-
Turbidity	HM-2B	WL	NTU	10/25/2017	(N)F	2B		1.46		F	#	-	-
Turbidity	HM-3	WL	NTU	10/23/2017	(N)F	3A		2.8		F	#	-	-
Turbidity	HMH-16R	WL	NTU	10/25/2017	(N)F	AL		5.85		FQ	#	-	-
Turbidity	HMH-5R	WL	NTU	10/25/2017	(N)F	AL		2.79		F	#	-	-
Turbidity	HM-L	WL	NTU	10/23/2017	(N)F	LA		0.35		F	#	-	-
Turbidity	HM-L2	WL	NTU	10/25/2017	(N)F	LA		1		F	#	-	-
Turbidity	HM-S	WL	NTU	10/23/2017	(N)F	AL		1.59		F	#	-	-
Turbidity	Purvis Cty Supply WL	WL	NTU	10/24/2017	(N)F			0.81			#	-	-
Turbidity	SA1-11-3	WL	NTU	10/25/2017	(N)F	3A		1.66		F	#	-	-
Turbidity	SA1-12-H	WL	NTU	10/25/2017	(N)F	AL		1.67		FQ	#	-	-
Turbidity	SA1-12-L	WL	NTU	10/25/2017	(N)F	LA		4.12		FQ	#	-	-
Turbidity	SA1-1-H	WL	NTU	10/23/2017	(N)F	AL		1.43		F	#	-	-
Turbidity	SA1-2-H	WL	NTU	10/23/2017	(N)F	AL		13.7		F	#	-	-
Turbidity	SA1-3-H	WL	NTU	10/23/2017	(N)F	AL		16.2		F	#	-	-
Turbidity	SA1-4-H	WL	NTU	10/23/2017	(N)F	AL		3		F	#	-	-
Turbidity	SA1-5-H	WL	NTU	10/23/2017	(N)F	AL		15.3		F	#	-	-
Turbidity	SA1-6-H	WL	NTU	10/23/2017	(N)F	AL		123		F	#	-	-
Turbidity	SA1-7-H	WL	NTU	10/24/2017	(N)F	AL		6.1		F	#	-	-
Turbidity	SA1-8-L	WL	NTU	10/24/2017	(N)F	LA		6.37		F	#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:10 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Turbidity	SA2-1-L	WL	NTU	10/24/2017	(N)F	LA		0.28		F	#	-	-
Turbidity	SA2-2-L	WL	NTU	10/24/2017	(N)F	LA		0.5		FQ	#	-	-
Turbidity	SA2-4-L	WL	NTU	10/24/2017	(N)F	LA		0.94		F	#	-	-
Turbidity	SA2-6-H	WL	NTU	10/25/2017	(N)F	AL		0.69		F	#	-	-
Turbidity	SA2-6-L	WL	NTU	10/25/2017	(N)F	LA		2.06		F	#	-	-
Turbidity	SA3-11-3	WL	NTU	10/24/2017	(N)F	3A		1.61		F	#	-	-
Turbidity	SA3-4-H	WL	NTU	10/24/2017	(N)F	AL		1.25		F	#	-	-
Turbidity	SA3-4-L	WL	NTU	10/24/2017	(N)F	LA		4.37		FQ	#	-	-
Turbidity	SA4-5-L	WL	NTU	10/24/2017	(N)F	LA		2.77		FQ	#	-	-
Turbidity	SA5-4-4	WL	NTU	10/23/2017	(N)F	A4		2.14			#	-	-
Turbidity	SA5-5-4	WL	NTU	10/23/2017	(N)F	A4		3.9			#	-	-
Turbidity	Well North Lumberton	WL	NTU	10/24/2017	(N)F			0.99			#	-	-
Vinyl chloride													
Vinyl chloride	HMH-16R	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	FQ	#	0.16	-
Vinyl chloride	HMH-5R	WL	ug/L	10/25/2017	(N)F	AL		0.32	U	F	#	0.16	-
Vinyl chloride	HM-L	WL	ug/L	10/23/2017	(N)F	LA		0.16	U	F	#	0.16	-
Vinyl chloride	HM-S	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA1-12-H	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	FQ	#	0.16	-
Vinyl chloride	SA1-12-L	WL	ug/L	10/25/2017	(N)F	LA		0.16	U	FQ	#	0.16	-
Vinyl chloride	SA1-1-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA1-2-H	WL	ug/L	10/23/2017	(N)D	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA1-2-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA1-3-H	WL	ug/L	10/23/2017	(N)F	AL		2.79		F	#	0.16	-
Vinyl chloride	SA1-4-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA1-5-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:10 AM

PARAMETER	LOCATION CODE/TYPE		UNITS	SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Vinyl chloride	SA1-6-H	WL	ug/L	10/23/2017	(N)F	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA1-7-H	WL	ug/L	10/24/2017	(N)F	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA1-7-H	WL	ug/L	10/24/2017	(N)D	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA2-6-H	WL	ug/L	10/25/2017	(N)F	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA2-6-L	WL	ug/L	10/25/2017	(N)F	LA		0.16	U	F	#	0.16	-
Vinyl chloride	SA3-4-H	WL	ug/L	10/24/2017	(N)F	AL		0.16	U	F	#	0.16	-
Vinyl chloride	SA3-4-L	WL	ug/L	10/24/2017	(N)F	LA		0.16	U	FQ	#	0.16	-

ZONES OF COMPLETION:

2A	PASCAGOULA/HATTIESBURG FORMATION; AQUIFER 2A
2B	PASCAGOULA/HATTIESBURG FORMATION; AQUIFER 2B
3A	CATAHOULA SANDSTONE; AQUIFER 3A
A1	PASCAGOULA/HATTIESBURG FORMATION; AQUIFER 1
A4	CHICKASAWHAY LIMESTONE; AQUIFER 4
AL	ALLUVIUM
CK	CAPROCK AQUIFER
LA	PASCAGOULA/HATTIESBURG FORMATION; LOCAL AQUIFER

LOCATION TYPE:

WL	WELL

DATA QUALIFIERS:

F	Low flow sampling method used.
G	Possible grout contamination, pH > 9.
J	Estimated Value.
L	Less than 3 bore volumes purged prior to sampling.
N	Tentatively identified compund (TIC).
Q	Qualitative result due to sampling technique
R	Unusable result.
U	Parameter analyzed for but was not detected.

X	Location is undefined.

LAB QUALIFIERS:

*	Replicate analysis not within control limits.
+	Correlation coefficient for MSA < 0.995.
>	Result above upper detection limit.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
C	Pesticide result confirmed by GC-MS.
D	Analyte determined in diluted sample.
E	Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
H	Holding time expired, value suspect.
I	Increased detection limit due to required dilution.
J	Estimated Value.
M	GFAA duplicate injection precision not met.
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
P	> 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
S	Result determined by method of standard addition (MSA).
U	Parameter analyzed for but was not detected.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X	Laboratory defined qualifier, see case narrative.
Y	Laboratory defined qualifier, see case narrative.
Z	Laboratory defined qualifier, see case narrative.

SAMPLE TYPES:

Fraction:
(T) Total (for metal concentrations)
(D) Dissolved (for dissolved or filtered metal concentrations)
(N) Organic (or other) constituents for which neither total nor dissolved is applicable

Type Codes:
F-Field Sample R-Replicate FR-Field Sample with Replicates
D-Duplicate N-Not Known S-Split Sample

FLOW CODES:

B	BACKGROUND	C	CROSS GRADIENT	D	DOWN GRADIENT
F	OFF-SITE	N	UNKNOWN	O	ON-SITE
U	UPGRADIENT				

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE SAL01, Salmon Site

REPORT DATE: 4/3/2018 10:01:10 AM

QA QUALIFIER: # = validated according to Quality Assurance guidelines.