

## **December 2020 Semi-Annual Progress Report**

Intermountain Generating Facility  
Delta, Utah



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Project No.: 203709098

December 22, 2020

# Sign-off Sheet and Signatures of Environmental Professionals

This document was prepared by Stantec Consulting Services Inc. ("Stantec") for Intermountain Power Service Corporation (the "Client"). The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

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# DECEMBER 2020 SEMI-ANNUAL PROGRESS REPORT

## EXECUTIVE SUMMARY

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### 1.0 EXECUTIVE SUMMARY

#### 1.1 PURPOSE OF THIS REPORT

On behalf of Intermountain Power Service Corporation (“IPSC”), Stantec Consulting Services Inc. (“Stantec”) has prepared this progress report to summarize recent investigative and remedial design activities intended to further assess and design corrective measures required by the United States Environmental Protection Agency’s 2015 Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities, 40 CFR 257 Subpart D (the “Federal CCR Rule”)(and the corresponding Utah CCR Rule at Utah Admin. Code R315-319 (the “State CCR Rule”)(collectively, the “CCR Rules”). Activities summarized herein were implemented during and subsequent to IPSC’s preparation of its June 2020 Semi-Annual Progress Report.

Following the May 2020 semi-annual sampling event, IPSC and Stantec coordinated the installation, development, pump-testing, surveying, and sampling of 25 supplemental groundwater monitoring wells that were intended to investigate the location and hydrogeologic characteristics of the estimated down-gradient leading edges of Total Dissolved Solids (TDS) plumes located down-gradient (southwest) of the Bottom Ash and Waste Water Basins. No supplemental wells were deemed necessary down-gradient of the Combustion By-Products Landfill, as all CCR constituent concentrations quantified to date represent typical Background concentrations. This report presents a summary of recent activities and the quantitative analytical results associated with IPSC’s October 2020 sampling of CCR compliance monitoring wells, including the 25 new wells.

IPSC has prepared this report to “provide a semi-annual summary describing the progress in selecting and designing a (groundwater) remedy,” as specified by CCR Rule §257.97(a) and UDEQ Rule R315-319-97(a). This report details IPSC’s Fall 2020 semi-annual groundwater sampling results and ongoing activities designed to further assess and design corrective measures specified by the CCR Rule and IPSC’s Groundwater Discharge Permit.

#### 1.2 BACKGROUND

IPSC historical reports presented IPSC’s approach for addressing requirements specified by the CCR Rules as well as the facility’s Utah Department of Environmental Quality (“UDEQ”), Division of Water Quality (“DWQ”) Groundwater Discharge Permit No. UGW270004, effective May 24, 2016. The DWQ has regulatory oversight for IPSC’s compliance with its Groundwater Discharge Permit.

The UDEQ Division of Waste Management and Radiation Control (“DWMRC”) also has regulatory oversight pursuant to the State CCR Rule, under which DWMRC issued a separate permit for the CCR Units, Permit No. SW419. The CCR Rules apply to each of IPSC’s three (3) CCR units (reference Figures 1 and 2 for regional and site-specific, location maps):





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- Combustion By-Products Landfill ("CB Landfill"),
- Bottom Ash Basin [surface impoundment underlain by 80-mil High Density Polyethylene (HDPE) liner], and
- Waste Water Basin (surface impoundment underlain by 80-mil HDPE liner).

As reported in IPSC's historical reports, the most recent of which included IPSC's November 2020 Demonstration of Requirements for Alternative Closure Deadline under 40 C.F.R. §257.103(f)(2) report and IPSC's November 2020 Amended Assessment of Corrective Measures report, groundwater monitoring associated with IPSC's Groundwater Discharge Permit indicated there was a plume of TDS-impacted groundwater located down-gradient (southwest) of the Bottom Ash Basin in excess of IPSC's DWQ permit action level of 1,100 milligrams per liter (mg/L; i.e. parts per million-ppm). DWQ permit monitoring indicated that the TDS plume was located well within IGF property boundaries and posed no on- or off-site risk to human health.

The DWQ and IPSC agreed that IPSC would implement a phased groundwater investigation and recovery program that focused initially on removal of TDS-impacted groundwater from areas located in relatively close proximity to the Bottom Ash Basin, utilizing recovery wells WR-101, WR-102, and WR-103 (reference Figure 3 for well locations). Sequential installation of additional groundwater monitoring wells, including sampling and pump-testing of wells that were associated with CCR Rule compliance, would be used to help delineate more precisely the location and orientation of the down-gradient leading edge of the TDS plume. Supplemental groundwater recovery wells would be installed for recovery of TDS-impacted groundwater located near the down-gradient leading edge of the TDS plume.

Stantec developed a groundwater fate and transport model to help locate supplemental recovery and monitoring wells for more precise TDS plume characterization and delineation, as well as to help design an expanded groundwater recovery program that would intercept TDS-impacted groundwater near the down-gradient leading edge of the TDS plume located southwest of the Bottom Ash Basin. CCR Rule Assessment Monitoring also identified TDS plumes located southwest and west of the Waste Water Basin. Water quality data to date indicate that CCR constituent concentrations, including TDS, in monitoring wells associated with the CB Landfill are representative of Background concentrations.

Sequentially, IPSC and Stantec installed additional monitoring wells in pursuit of more definitive locating and delineation of TDS plumes located down-gradient of the two surface impoundments. An additional 25 wells were installed during May 2020 as part of the most recent delineation effort. All 25 wells were constructed such that each well can be used for groundwater recovery, if needed.

DWQ Groundwater Discharge Permit and CCR Rule groundwater quality data to date indicate that TDS has migrated farther down-gradient of the two surface impoundments than other CCR constituents, including Appendix IV metals. Currently, the TDS plumes and other CCR constituents in groundwater pose no risk to on- or off-site human health.

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Historically, groundwater quality monitoring data at the boundaries and down-gradient of the CB Landfill did not identify any Statistically Significant Level (SSL) above the Groundwater Protection Standard (GWPS) in any monitoring well for any CCR constituent. Historical CCR Appendix IV constituent water quality data indicated the following SSLs at the two CCR-regulated surface impoundments (reference Figure 3 for well locations):

<u>CCR Unit</u>	<u>Well</u>	<u>App. IV Constituent</u>	<u>LCL Concentration *</u>	<u>GWPS Concentration *</u>
CB Landfill		No Exceedances		
Bottom Ash Basin	BAC-2	Molybdenum	0.1506	0.1
	BAC-3	Lithium	0.812	0.7415
Waste Water Basin	WWC-1	Arsenic	0.01496	0.01275
	WWC-2	Arsenic	0.01415	0.01275
	WWC-3	Arsenic	0.02045	0.01275

\* all concentrations in milligrams per liter; i.e., mg/L

Although it is documented throughout Utah and in proximity to the site that Arsenic and Lithium can be present naturally at elevated concentrations, IPSC will continue monitoring these and other CCR constituents in groundwater as part of its routine groundwater monitoring program. As additional groundwater quality data are generated, CCR constituent concentrations will be evaluated statistically in accordance with CCR Rule requisites.

Individual sample results of CCR constituent concentrations above the GWPS are not necessarily a demonstration of a SSL above the GWPS. The lower confidence limit (LCL) of the mean CCR constituent concentration at the last sampling event must exceed the GWPS to demonstrate a SSL. If individual constituent concentrations exceed GWPSs, then CCR Rule Assessment Monitoring is to continue at that specific CCR unit – as was conducted during 2019 and 2020 and will continue for the foreseeable future.

Since TDS has migrated farther down-gradient from the surface impoundments than other CCR constituents, TDS is being used as the leading indicator parameter of impacted groundwater quality for evaluating a suitable groundwater remediation approach. IPSC and Stantec anticipate that the recovery of TDS-impacted groundwater at select recovery wells will also intercept metal constituents that might be present, as TDS is expected to continue to migrate at a faster rate than dissolved metals in the clay-rich aquifer that underlies the property.

### 1.3 NEXT-STEP ACTIVITIES, INCLUDING ASSESSMENT OF CORRECTIVE MEASURES

IPSC received the analytical laboratory reports associated with the October 2020 sampling event during the first week of December 2020. IPSC and Stantec are currently evaluating the analytical results to help refine our understanding of hydrogeologic and water quality characteristics and update our Conceptual Site Model. Currently, Stantec is conducting statistical analysis of historical and most recent Appendix IV analytical results to estimate Background concentrations, GWPS concentrations, LCLs, and potential SSL in CCR constituent



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concentrations in groundwater located near and down-gradient of all three CCR-regulated units. The findings of the SSL evaluation will be discussed in detail within IPSC's Annual Summary Report that will be posted on IPSC's public website before January 22, 2021.

Stantec is utilizing the SSL results, recent monitoring well pump-test data, and October 2020 groundwater monitoring data to update its groundwater flow and transport model to help design an expanded groundwater recovery program that will supplement the existing recovery wells in pursuit of enhanced CCR constituent plume remediation and ongoing protection of human health. The results of the updated model will be used to help finalize design of an expanded ground water recovery network in pursuit of containment of CCR constituent plumes located down-gradient of the Bottom Ash and Waste Water Basins. Final design will be documented within a forthcoming Selection of Remedy Report.

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### SUMMER AND FALL 2020 MONITORING ACTIVITIES

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## 2.0 SUMMER AND FALL 2020 MONITORING ACTIVITIES

### 2.1 MAY THROUGH JULY 2020 INSTALLATION, DEVELOPMENT, SURVEYING, AND PUMP-TESTING OF 25 NEW MONITORING (RECOVERY, IF NEEDED) WELLS

During and following the May 2020 semi-annual sampling event, IPSC and Stantec coordinated the installation, development, pump-testing, surveying, and sampling of 25 supplemental groundwater monitoring wells that were intended to investigate the location and hydrogeologic characteristics of the down-gradient leading edges of TDS plumes located down-gradient of the Bottom Ash and Waste Water Basins. The 25 new wells were drilled, installed, and developed during May 2020 by Cascade Drilling, LP of Salt Lake City, Utah, a Utah-certified, water well drilling firm. Stantec hydrogeologists observed Cascade field activities and prepared well-specific drilling logs and schematic well construction diagrams.

Figure 3 identifies the locations of all CCR monitoring wells including the 25 new wells, namely: wells BAC-18 through BAC-38 located down-gradient of (southwest) the Bottom Ash Basin and wells WWC-14 through WWC-17 located down-gradient (south/southwest) of the Waste Water Basin. Figure 3 also presents October 2020 water level measurement data and interpreted groundwater potentiometric lines (mean sea level elevations) associated with the Fall 2020 semi-annual monitoring event.

Each 6-inch diameter, 76- to 88-feet deep well was drilled, installed, and developed by the sonic drilling method in similar fashion as previous, historical wells at the site. Each well includes 20- to 25-feet of well screen, so that each well might be used for groundwater recovery, if needed.

Typically, once each boring was advanced approximately 20 to 25 feet into the uppermost saturated soils, a monitoring well was constructed within each respective borehole. Each groundwater monitoring well was comprised of 6-inch diameter, flush-threaded, Schedule 40 polyvinyl chloride (PVC) pipe with a solid, PVC end-cap. The bottom 20 to 25 feet of each well was comprised of 6-inch diameter, flush-threaded, 0.02-slotted, Schedule 40 PVC well screen.

Following installation of each well, 16/30 washed, silica sand was emplaced around the well screen from the bottom of the borehole to an approximate height of several feet above the top of the well screen interval. An approximate five to seven feet thick, bentonite pellet seal was added on top of the sand pack material. Then, a cement-bentonite (typically, 10:1 ratio) grout was tremie-slurried from the top of the bentonite pellet seal to an approximate height of two feet below grade. A 5-ft. long, 6-inch diameter, steel, protective casing/monument was emplaced in concrete around each wellhead, with an approximate 2.5-ft. stick-up above natural grade. Each PVC well was furnished with a locking, expandable well cap and lock.

Following well installations, each well was developed by a dedicated well development drill rig. Typically, the rig removed water from each well by means of bailing followed by air-lift. Well water was removed from each well, until return water was relatively clear and free of fine-

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grained, formational materials. The ground surface and the top of each wellhead were surveyed in relation to one another and the same on-site, mean sea level benchmark used for surveying the tops of other historical monitoring wells.

All well drilling, soil sampling, well installation, and well development activities were performed in accordance with measures outlined within IPSC's November 2015 Ground Water Sampling and Analysis Plan and CCR Units Ground Water Monitoring Well Design and Installation Summary Report, copies of which are posted on IPSC's public website. Copies of drilling logs and well construction diagrams for each of the 25 new wells and all other CCR Rule monitoring wells are presented in Attachment 1 herein. Table 1 presents well construction details pertaining to all CCR wells.

During May and June 2020, each of the 25 wells was pump-tested by the drilling firm for at least two to three hours following development to estimate generalized well yields. Several wells were pump-tested during June and July 2020 by Stantec for timeframes between a few hours to 24 hours per well to help investigate more accurately localized hydraulic characteristics including well yields, specific capacities, and radial cones of influence/capture zones.

Stantec's pump-tests were conducted using dedicated, submersible pumps, portable power generators, and dedicated, electronic down-hole pressure transducers for continuous measurement and recording of water levels in pumping and nearby-surrounding monitoring wells. Currently, pump-test results, forthcoming SSL estimations, and October 2020 analytical results are being evaluated through update of Stantec's groundwater fate and transport model to help finalize design of an expanded ground water recovery network in pursuit of containment of CCR constituent plumes located down-gradient of the Bottom Ash and Waste Water Basins.

### 2.2 OCTOBER 2020 CCR COMPLIANCE SAMPLING PROGRAM AND RESULTS

All CCR compliance wells, including the 25 newly-installed wells, were purged and sampled during October 2020. Samples were submitted to American West Analytical Laboratories, Inc. (AWAL), a Utah-certified, analytical laboratory. IPSC received the analytical laboratory reports during the first week of December 2020. All well purging and sampling activities were performed in accordance with measures outlined within IPSC's November 2015 Ground Water Sampling and Analysis Plan and CCR Units Ground Water Monitoring Well Design and Installation Summary Report, copies of which are posted on IPSC's public website.

It must be noted that IPSC inadvertently did not include radionuclide analysis on the October 2020 Chain-of-Custody and did not recognize the oversight until recently. IPSC has resampled CCR monitoring wells for radionuclides, the results of which will be included within IPSC's January 2021 Annual Summary Report.

Figure 3 presents a potentiometric map based on water level measurements collected at CCR monitoring wells during October 2020. Groundwater potentiometric and apparent flow direction characteristics remain relatively similar to those observed historically. The predominant groundwater flow direction in relatively close proximity to the Bottom Ash Basin and the Waste



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SUMMER AND FALL 2020 MONITORING ACTIVITIES

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Water Basin is generally toward the southwest, with a more westerly component of flow due west of the western boundary of the Waste Water Basin. Groundwater flow in the vicinity of the CB Landfill is generally from the east toward the west.

Figure 4 presents the TDS analytical results associated with the October 2020 sampling event. Figure 5 presents Stantec's generalized estimation of the locations of 1,100 mg/L TDS iso-concentration lines, the action level for TDS prescribed by IPSC's Groundwater Discharge Permit. Attachment 2 presents a summary of all water level measurement and analytical laboratory results to date, including the October 2020 results.

As observed in the past, groundwater quality monitoring data at the boundaries and down-gradient of the CB Landfill are deemed representative of Background water quality conditions. The quantitative analytical results associated with monitoring of the two surface impoundments are relatively similar to those observed during past monitoring events including the previous sampling event of May 2020. However, there was an increase in TDS concentration (1,890 mg/L) at well WWC-9 located down-gradient of the Waste Water Basin, when compared to the June 2020 TDS result of 652 mg/L. Since initial sampling of the well in April 2019, TDS concentrations in well WWC-9 had been below the Groundwater Discharge Permit action level of 1,100 mg/L.

Of the 25 newly-installed wells, the only wells to exhibit TDS concentrations at, or in excess of, the 1,100 mg/L Groundwater Discharge Permit action level were as follows (reference Figure 4):

- WWC-14 (3,350 mg/L) and WWC-15 (1,100 mg/L), both located down-gradient of the Waste Water Basin

and

- BAC-29 (1,550 mg/L) and BAC-30 (1,300 mg/L), both located down-gradient of the Bottom Ash Basin.

Future water quality monitoring will be used to gauge whether these specific wells exhibit elevated TDS concentrations or not. There have been anomalous instances in the past, when a TDS concentration in one or more wells was quantified to exceed the 1,100 mg/L action level and then quantified to be below the action level during numerous, subsequent sampling events.

Upon reviews of the upcoming statistical analysis results and updated groundwater fate and transport flow model, IPSC will evaluate if additional groundwater monitoring and/or recovery wells might be warranted for more definitive CCR constituent plume delineation and/or containment. Future IPSC reporting will document IPSC's findings and conclusions.

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### ONGOING CORRECTIVE ACTIONS AND PROGRESS TOWARD SELECTING EXPANDED GROUNDWATER CORRECTIVE ACTION REMEDY

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## 3.0 ONGOING CORRECTIVE ACTIONS AND PROGRESS TOWARD SELECTING EXPANDED GROUNDWATER CORRECTIVE ACTION REMEDY

### 3.1 ONGOING GROUNDWATER RECOVERY AT EXISTING RECOVERY WELLS WR-101, WR-102, AND WR-103

IPSC intends to continue operation of existing groundwater recovery wells WR-101, WR-102, and WR-103. The three wells are recovering TDS-impacted groundwater from the generalized middle of the estimated TDS plume that is migrating southwest of the Bottom Ash Basin. Continued removal of TDS-impacted groundwater from each of these three wells is helping reduce the total mass of CCR constituents within the uppermost aquifer beneath areas of the site located down-gradient of, and in close proximity to, the Bottom Ash Basin.

### 3.2 ONGOING ASSESSMENT OF CORRECTIVE MEASURES AND DESIGN OF ENHANCED GROUNDWATER REMEDY

Groundwater quality data to date indicate that TDS has migrated farther down-gradient of the two surface impoundments than other CCR constituents, including Appendix IV metals. TDS is therefore being used as the leading indicator parameter of impacted groundwater quality for evaluating a suitable groundwater remediation approach. As discussed in detail within IPSC's November 2020 Demonstration of Requirements for Alternative Closure Deadline under 40 C.F.R. §257.103(f)(2) report and IPSC's November 2020 Amended Assessment of Corrective Measures report, IPSC and Stantec anticipate that recovery of TDS-impacted groundwater at select recovery wells will also intercept metal constituents that might be present, as TDS is expected to continue to migrate at a faster rate than dissolved metals in the clay-rich aquifer that underlies the property.

In summary, groundwater will be recovered by means of dedicated, submersible pumps in recovery wells, as being implemented currently at existing recovery wells WR-101, WR-102, and WR-103. Each wellhead will be interconnected with a buried trunkline that will discharge recovered groundwater to the 80-mil, HDPE-lined Ash Recycle Basin located immediately south of the Bottom Ash Basin. The recovery network will be integrated with the existing recovery system and include all necessary equipment and appurtenances to transfer recovered groundwater from the wells to the Ash Recycle Basin and permit future monitoring and sampling of all the recovery wells.

Currently, Stantec is evaluating water quality data, including the most recent October 2020 results, to estimate Appendix IV CCR constituent Background concentrations, GWPS concentrations, LCLs, and potential SSLs in CCR constituent concentrations in groundwater located near and down-gradient of all three CCR-regulated units. Stantec is also utilizing recent monitoring well pump-test data and October 2020 groundwater monitoring data to update its groundwater flow and transport model to help design an expanded groundwater recovery





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ONGOING CORRECTIVE ACTIONS AND PROGRESS TOWARD SELECTING EXPANDED GROUNDWATER  
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program that will supplement the existing recovery wells in pursuit of enhanced CCR constituent plume remediation and ongoing protection of human health.

Upon review of the forthcoming SSL and modeling results, IPSC and Stantec will finalize design of an expanded ground water recovery network for containment of CCR constituent plumes located down-gradient of the Bottom Ash and Waste Water Basins. Currently, Stantec is providing advisory services to IPSC related to conceptual design elements for enhanced TDS plume control and associated groundwater recovery. Design elements include, for instance:

- Finalizing basis of design;
- Process flow diagram supported by a hydraulic pumping and conveyance model;
- Preliminary piping and instrumentation (P&ID) drawings; and
- Typical recovery well completion detail.

Following IPSC review and comment on the preliminary design, the project will be advanced to a Pre-Final (90-percent) level design. The Pre-Final Design (PFD) will build upon the deliverables associated with the preliminary design and will include the following:

- Finalized PFD of the system;
- Finalized P&IDs;
- Finalized hydraulic model of the pumping and conveyance system;
- Typical design details for the recovery wells and surface completions;
- Underground yard piping;
- Control philosophy for the system;
- Electrical single-line and termination drawings; and
- Equipment and construction specifications.

Currently, IPSC and Stantec anticipate reporting the results of the Appendix IV CCR constituent Background and GWPS concentrations, LCLs, and SSL estimations within IPSC's forthcoming January 2021 Annual Summary Report. Following January 2021 review of the SSL results and update of Stantec's groundwater fate and transport model, then IPSC and Stantec will finalize selection and design of a groundwater remedy (anticipated to be during Spring 2021). Final selection and design of the groundwater remedy will be documented in a Remedy Selection Report. IPSC will continue to conduct and report its routine, semi-annual groundwater monitoring and remediation program in formal Summary Reports, as well.



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As part of IPSC's ongoing CCR Rule and DWQ Groundwater Discharge Permit compliance programs, IPSC intends to monitor water quality to help gauge the success of the proposed groundwater recovery network. IPSC is prepared to install additional groundwater monitoring and recovery wells, if and where necessary, in the event that additional CCR constituent delineation is deemed warranted and/or if additional mitigation is needed to eliminate unacceptable risks to human health and the environment.

As detailed within IPSC's November 2020 Demonstration of Requirements for Alternative Closure Deadline under 40 C.F.R. §257.103(f)(2), the CCR constituent plumes pose no risk to on- and off-site human health. Given the vast real property acreage (4,614-acres) that is owned by the owner of the IGF, Intermountain Power Agency (IPA), as well as the relatively significant distances to off-site potential receptors who might use groundwater for potable and/or non-potable uses (approximately 2.5-miles away), IPSC anticipates that it can implement supplemental plume control measures so as to mitigate any such future potential exposures in a prompt and timely manner.

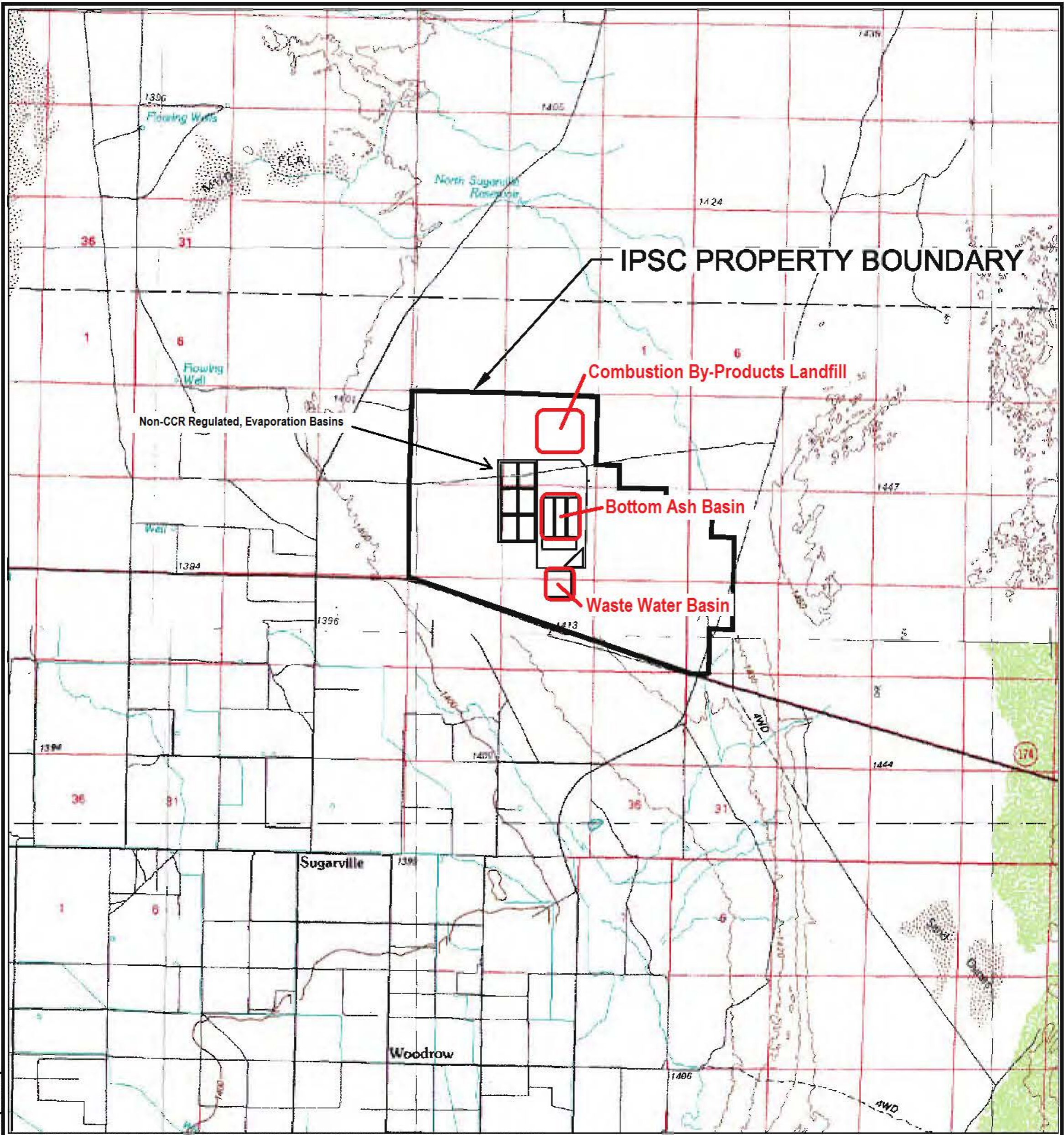
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## Figure 1 General Site Location Map



drawings\ipsc-04\Fig2 Site Topographic Map.dwg



BASE FROM USGS 1:100,000 SCALE METRIC TOPOGRAPHIC MAPS: LYNN DAL, UTAH, 1979 AND DELTA, UTAH, 1989.



**CCR-Regulated Units  
DELTA, UTAH**

**FIGURE 1  
SITE TOPOGRAPHIC MAP**



DESIGN BY JR DRAWN BY CP CH'D BY SCALE 1"=1000'

DATE DRAWN 1-26-17

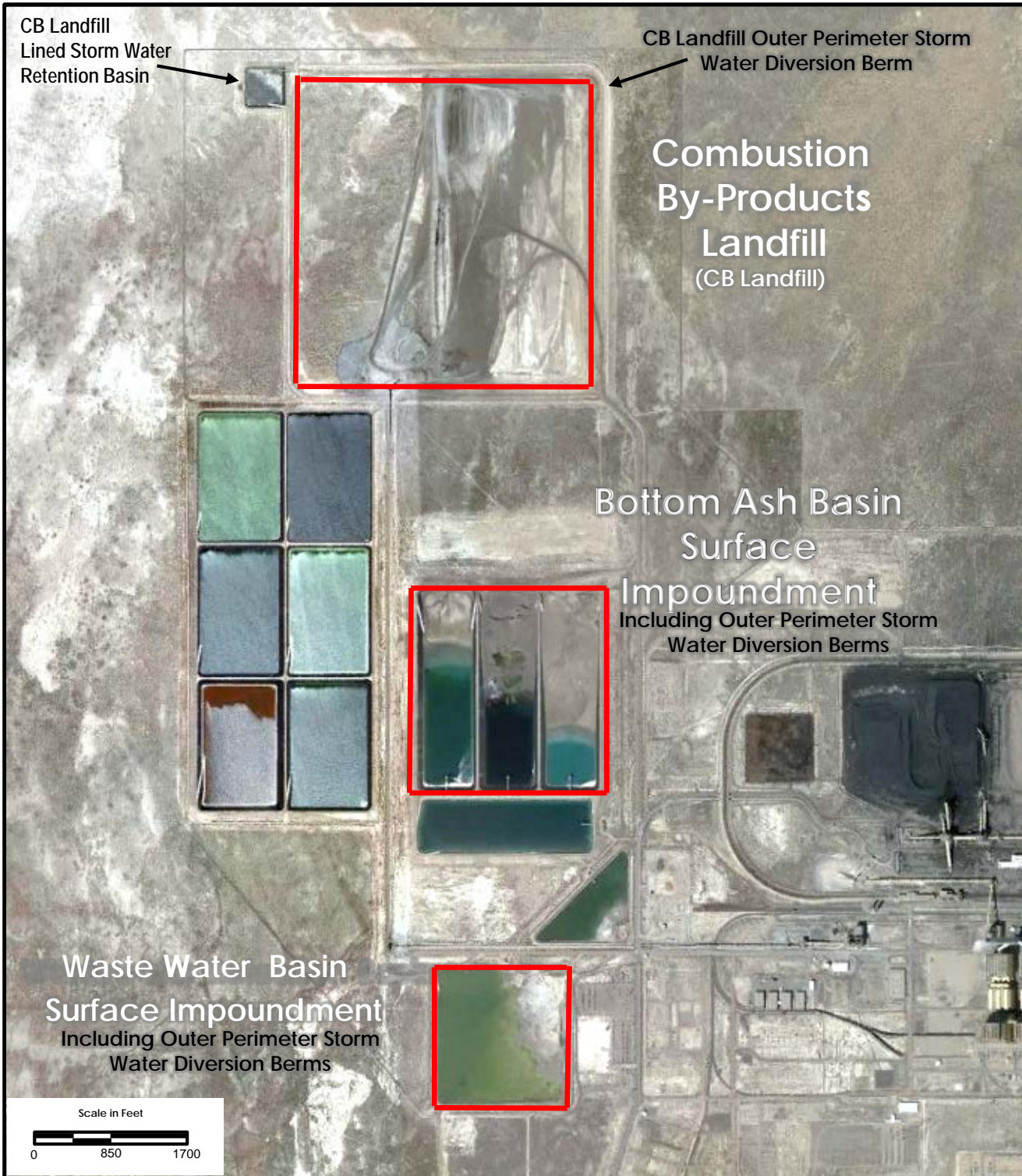
REVISION



# DECEMBER 2020 SEMI-ANNUAL PROGRESS REPORT

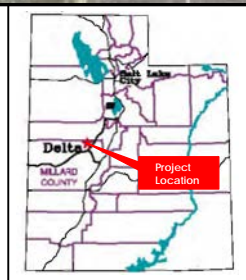
December 22, 2020

## Figure 2. CCR Units Location Map



**Legend**

CCR Unit



**INTERMOUNTAIN GENERATING FACILITY**

**FIGURE 2**  
**Site-Specific Location Map**

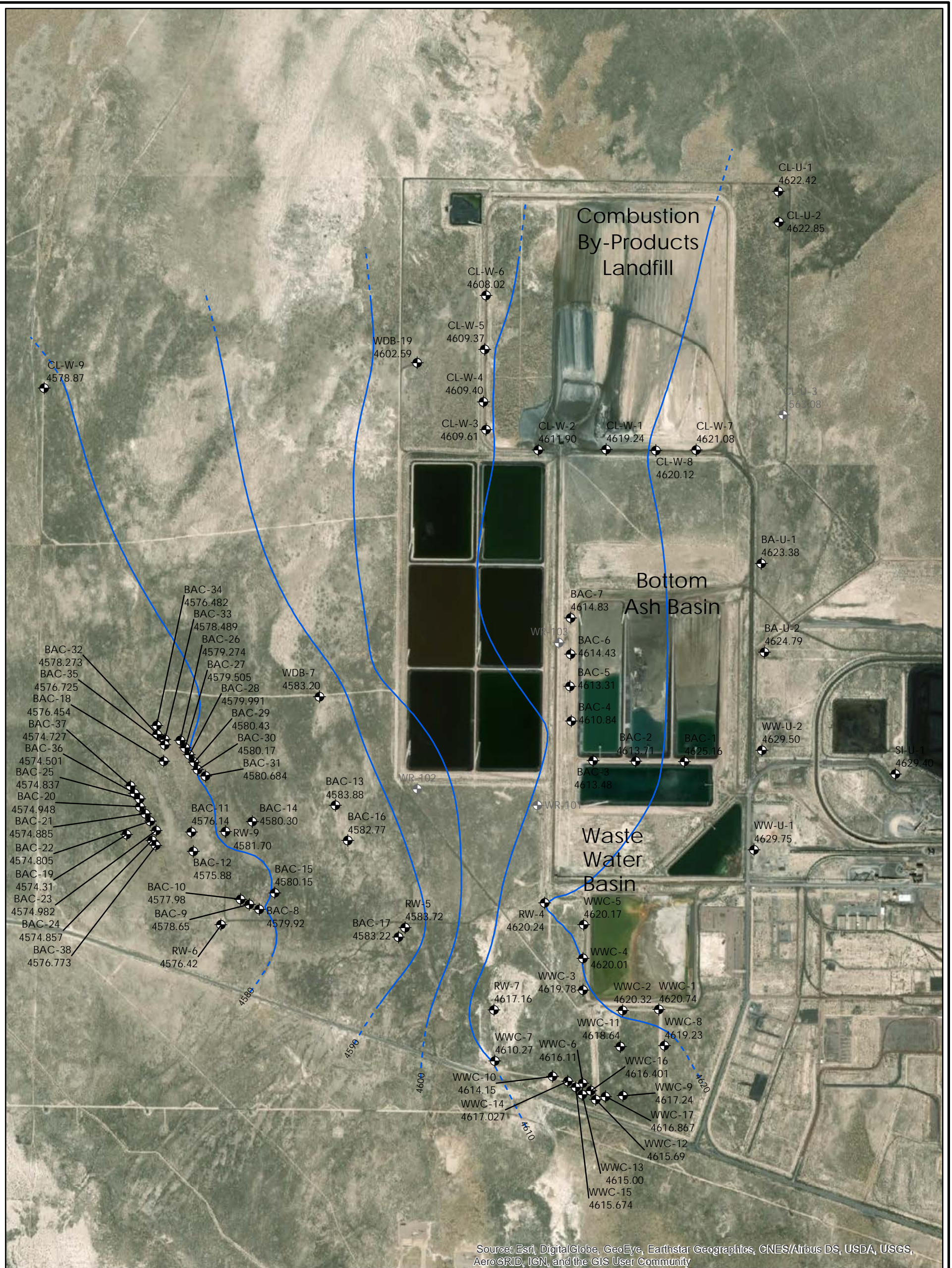
DRAWN BY: JR	DATE DRAWN: 9/30/2016
SCALE: 1 in. approx. 1700 ft.	
PROJECT: 203709098.409	

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Figure 3 October 2020 Groundwater Potentiometric Map





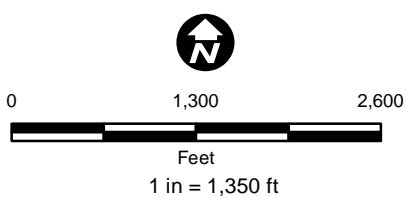
**LEGEND:**

◆ MONITORING WELL (GREYED WHEN NOT USED FOR CONTOURING)

~ GROUNDWATER CONTOUR

**NOTE:**

- 1) DATA COLLECTED OCTOBER 2020
- 2) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL



FOR:  
INTERMOUNTAIN POWER SERVICE CORP.  
INTERMOUNTAIN GENERATION FACILITY  
DELTA, UTAH

**OCTOBER 20, 2020  
POTENTIOMETRIC MAP AND  
GROUNDWATER FLOW MAP**

FIGURE:

**3**

JOB NUMBER:  
203709098

DRAWN BY:  
CK

CHECKED BY:  
JR

APPROVED BY:  
JR

DATE:  
11/18/20

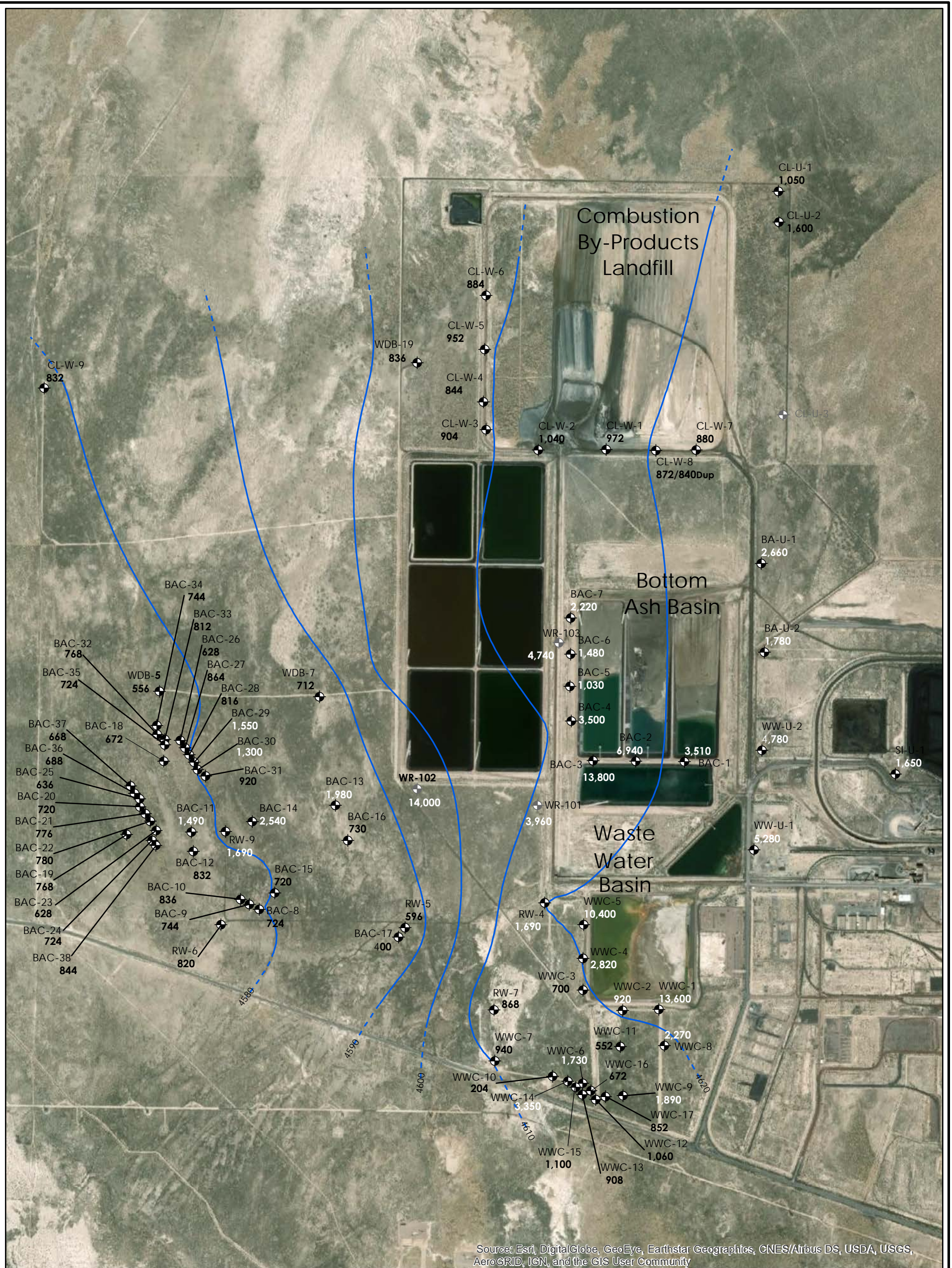


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Figure 4 October 2020 TDS Concentrations Map



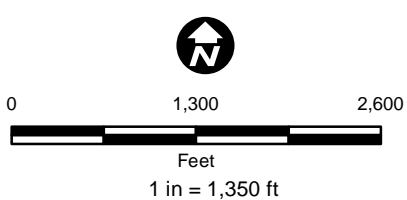


**LEGEND:**

-  MONITORING WELL (GREYED WHEN NOT USED FOR CONTOURING)
- 568 Total Dissolved Solids (TDS) MILLIGRAMS PER LITER (mg/L)      NS - Not Sampled
-  GROUNDWATER CONTOUR

**NOTE:**

- 1) DATA COLLECTED OCTOBER 2020
- 2) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL
- 3) NS = NOT SAMPLED



FOR:  
INTERMOUNTAIN POWER SERVICE CORP.  
INTERMOUNTAIN GENERATION FACILITY  
DELTA, UTAH

**TDS CONCENTRATIONS**  
**OCTOBER 2020**  
SUPERIMPOSED ATOP OCTOBER 2020  
POTENTIOMETRIC MAP AND GROUNDWATER  
FLOW MAP

FIGURE:

**4**

JOB NUMBER:  
203709098

DRAWN BY:  
CK

CHECKED BY:  
JR

APPROVED BY:  
JR

DATE:  
11/18/20

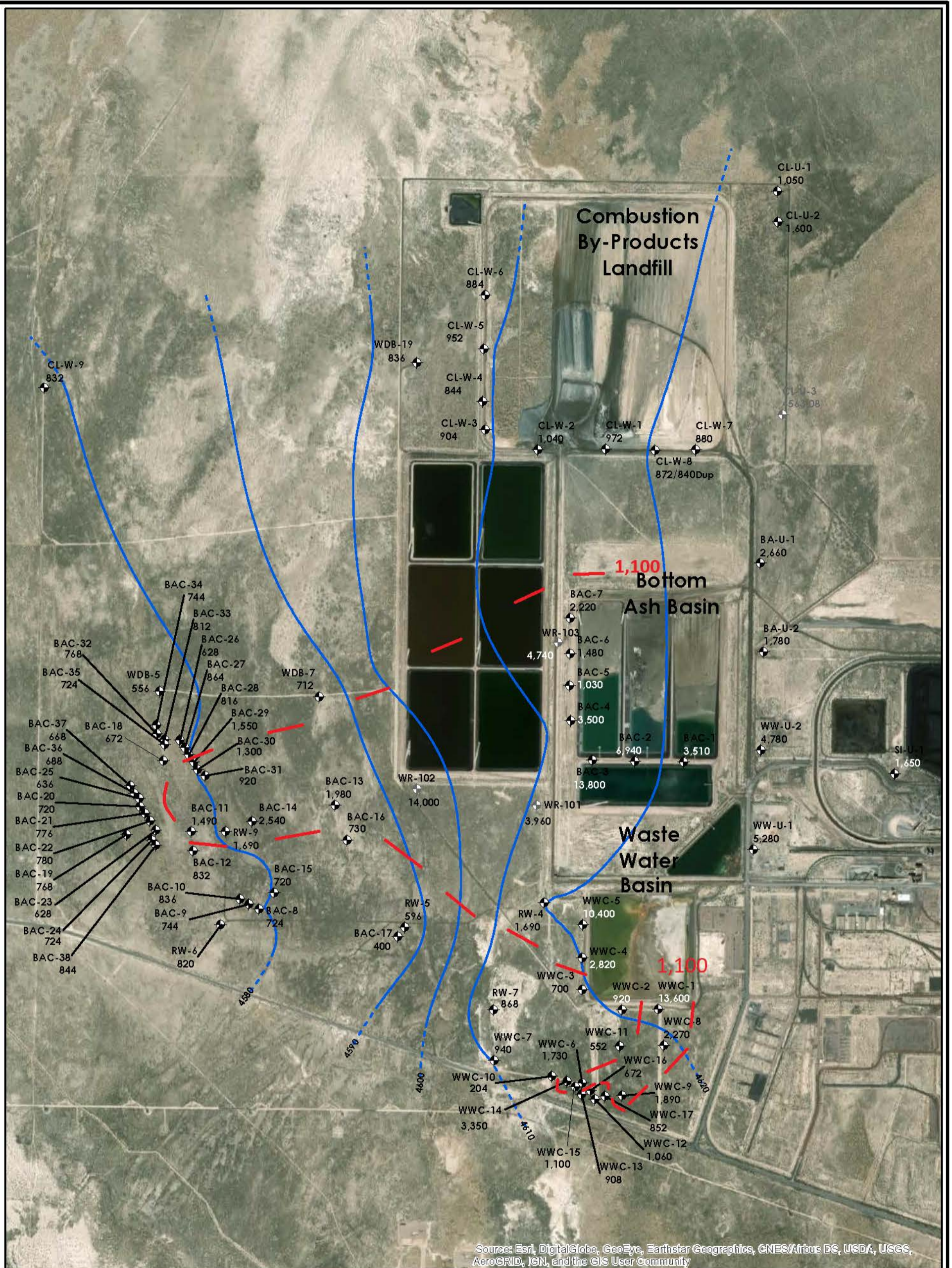


## DECEMBER 2020 SEMI-ANNUAL PROGRESS REPORT

December 22, 2020

Figure 5 October 2020 TDS 1,100 mg/L Iso-Concentration Map





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

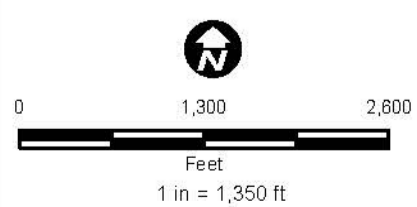
**LEGEND:**

- MONITORING WELL (GREYED WHEN NOT USED FOR CONTOURING)
- 568 Total Dissolved Solids (TDS) MILLIGRAMS PER LITER (mg/L)      NS - Not Sampled
- GROUNDWATER CONTOUR

**NOTE:**

- 1) DATA COLLECTED OCTOBER 2020
- 2) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL
- 3) NS = NOT SAMPLED

**Estimated 1,100 mg/L TDS Iso-Concentration Line**



	FOR:		<b>TDS CONCENTRATIONS</b> OCTOBER 20, 2020 SUPERIMPOSED A TOP POTENTIOMETRIC MAP AND GROUNDWATER FLOW MAP		FIGURE:  <b>5</b>				
	INTERMOUNTAIN POWER SERVICE CORP. INTERMOUNTAIN GENERATION FACILITY DELTA, UTAH								
JOB NUMBER:	203709098	DRAWN BY:	CK	CHECKED BY:	JR	APPROVED BY:	JR	DATE:	11/18/20



# DECEMBER 2020 SEMI-ANNUAL PROGRESS REPORT

December 22, 2020

## TABLE 1 GROUNDWATER MONITORING WELL CONSTRUCTION DETAILS

Table 1  
Well Construction Summary  
Intermountain Generating Facility  
Delta, Utah

MONITOR WELL I.D.	DATE COMPLETED	WELL DIAMETER / MATERIAL	TOTAL DEPTH (feet BGS)	WELL SCREENING INTERVAL (feet BGS)	TOP OF PVC CASING ELEVATION (feet MSL)
<b>Combustion By-Products Landfill Wells</b>					
CLW-1	5/12/2015	4-inch PVC	65	55-65	4653.46
CLW-2	5/14/2015	4-inch PVC	80	70-80	4648.17
CLW-3	5/13/2015	4-inch PVC	80	70-80	4644.03
CLW-4	5/26/2015	4-inch PVC	82	72-82	4642.88
CLW-5	7/27/2015	4-inch PVC	82	72-82	4640.99
CLW-6	7/26/2015	4-inch PVC	88	78-88	4639.63
CLW-7	7/24/2015	4-inch PVC	72	52-72	4659.34
CLW-8	7/24/2015	4-inch PVC	72	62-72	4655.63
CLW-9	3/25/2018	4-inch PVC	97	87-97	4615.615
CL-U-1	7/23/2015	4-inch PVC	80	68-78	4657.48
CL-U-2	7/22/2015	4-inch PVC	80	70-80	4663.48
CL-U-3	3/27/2018	4-inch PVC	77	67-77	4665.367
<b>Bottom Ash Basin Wells</b>					
BAC-1	7/31/2015	4-inch PVC	70	60-70	4668.70
BAC-2	7/29/2015	4-inch PVC	65	55-65	4668.72
BAC-3	7/28/2015	4-inch PVC	72	52-72	4668.84
BAC-4	8/10/2015	4-inch PVC	75	55-75	4649.45
BAC-5	8/9/2015	4-inch PVC	68	58-68	4649.67
BAC-6	8/8/2015	4-inch PVC	65	55-65	4648.15
BAC-7	8/7/2015	4-inch PVC	67	57-68	4650.09
BAC-8	4/29/2019	6-inch PVC	77	52-77	4626.42
BAC-9	5/1/2019	6-inch PVC	77	52-77	4626.27
BAC-10	5/3/2019	6-inch PVC	87	62-87	4626.27
BAC-11	12/7/2019	6-inch PVC	75	50-75	4624.96
BAC-12	12/6/2019	6-inch PVC	78	53-78	4625.055
BAC-13	11/18/2019	6-inch PVC	90	65-90	4629.834
BAC-14	12/4/2019	6-inch PVC	78	53-78	4627.506
BAC-15	12/9/2019	6-inch PVC	75	50-75	4626.494
BAC-16	11/21/2019	6-inch PVC	89	64-89	4630.426

Table 1  
Well Construction Summary  
Intermountain Generating Facility  
Delta, Utah

MONITOR WELL I.D.	DATE COMPLETED	WELL DIAMETER / MATERIAL	TOTAL DEPTH (feet BGS)	WELL SCREENING INTERVAL (feet BGS)	TOP OF PVC CASING ELEVATION (feet MSL)
BAC-17	12/10/2019	6-inch PVC	81	56-81	4629.648
BAC-18	5/8/2020	6-inch PVC	78	53-78	4621.504
BAC-19	5/9/2020	6-inch PVC	78	58-78	4615.62
BAC-20	5/9/202	6-inch PVC	78	53-78	4617.848
BAC-21	5/10/2020	6-inch PVC	88	61-88	4619.625
BAC-22	5/10/2020	6-inch PVC	78	53-78	4619.905
BAC-23	5/11/2020	6-inch PVC	78	53-78	4619.582
BAC-24	5/12/2020	6-inch PVC	76	51-76	4619.207
BAC-25	5/12/2020	6-inch PVC	78	53-78	4619.327
BAC-26	5/13/2020	6-inch PVC	78	53-78	4627.704
BAC-27	5/13/2020	6-inch PVC	78	53-78	4627.355
BAC-28	5/14/2020	6-inch PVC	78	53-78	4625.411
BAC-29	5/15/2020	6-inch PVC	78	53-78	4625.29
BAC-30	5/142020	6-inch PVC	78	53-78	4624.88
BAC-31	5/15/2020	6-inch PVC	78	53-78	4625.024
BAC-32	5/192020	6-inch PVC	78	53-78	4626.583
BAC-33	5/18/2020	6-inch PVC	78	53-78	4626.629
BAC-34	5/21/2020	6-inch PVC	78	53-78	4624.702
BAC-35	5/282020	6-inch PVC	78	53-78	4624.805
BAC-36	5/30/2020	6-inch PVC	78	53-78	4619.231
BAC-37	5/29/2020	6-inch PVC	78	53-78	4618.397
BAC-38	5/31/2020	6-inch PVC	78	53-78	4619.593
BA-U-1	7/24/2015	4-inch PVC	55	45-55	4665.73
BA-U-2	7/25/2015	4-inch PVC	70	60-70	4661.33

Table 1  
Well Construction Summary  
Intermountain Generating Facility  
Delta, Utah

MONITOR WELL I.D.	DATE COMPLETED	WELL DIAMETER / MATERIAL	TOTAL DEPTH (feet BGS)	WELL SCREENING INTERVAL (feet BGS)	TOP OF PVC CASING ELEVATION (feet MSL)
<b>Wastewater Basin Wells</b>					
WWC-1	7/26/2015	4-inch PVC	60	48-58	4644.72
WWC-2	7/27/2015	4-inch PVC	70	60-70	4645.11
WWC-3	7/30/2015	4-inch PVC	65	55-65	4638.90
WWC-4	7/29/2015	4-inch PVC	75	65-75	4640.58
WWC-5	7/28/22015	4-inch PVC	74	64-74	4641.75
WWC-6	3/24/2018	4-inch PVC	87	67-77	4635.945
WWC-7	3/22/2018	4-inch PVC	87	77-87	4630.487
WWC-8	4/25/2019	6-inch PVC	96	71-96	4647.799
WWC-9	4/28/2019	6-inch PVC	87	62-87	4642.58
WWC-10	4/26/2019	6-inch PVC	87	62-87	4633.72
WWC-11	11/16/2019	6-inch PVC	90	65-90	4641.919
WWC-12	11/12/2019	6-inch PVC	90	65-90	4636.661
WWC-13	11/15/2019	6-inch PVC	90	65-90	4635.128
WWC-14	5/6/2020	6-inch PVC	85	60-85	4635.927
WWC-15	5/6/2020	6-inch PVC	88	63-88	4636.864
WWC-16	5/7/2020	6-inch PVC	88	63-88	4635.921
WWC-17	5/8/2020	6-inch PVC	88	63-88	4641.487
SI-U-1	8/12/2015	4-inch PVC	79	69-79	4664.59
WW-U-1	8/11/2015	4-inch PVC	70	60-70	4665.03
WW-U-2	8/11/2015	4-inch PVC	75	65-75	4665.46
<b>Groundwater Discharge Permit Groundwater Recovery Wells</b>					
WR-101	2/11/2007	6-inch PVC	66	46-66	4646.28
WR-102	3/3/2009	6-inch PVC	57	37-57	4637.62
WR-103	3/31/2009	6-inch PVC	55	35-55	4649.82

Below Ground Surface

MSL = Mean Sea Level

# DECEMBER 2020 SEMI-ANNUAL PROGRESS REPORT

December 22, 2020

## ATTACHMENT 1      DRILLING LOGS AND WELL SCHEMATIC DIAGRAMS



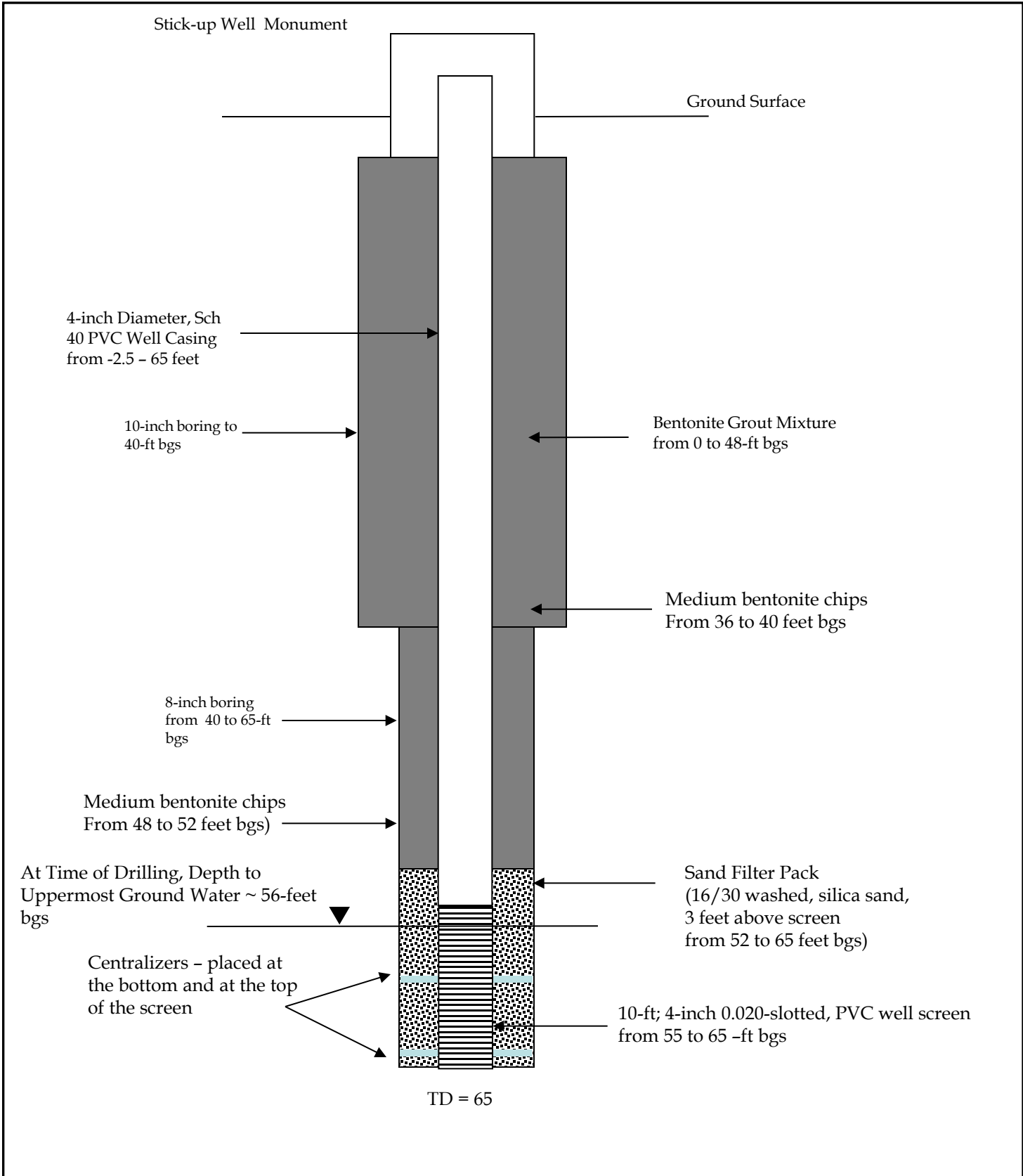
Boring Logs  
 IPSC  
 Delta, Utah

CLW-1

Interval (feet)	Drilling Method	Sample Description
		5/11/2015
0-3	10" Sonic	Brown fine grained Sand with gravel, dry
3-6	10" Sonic	Light to Dark Brown fine to medium grained Sand, no gravel present, dry
6-8	10" Sonic	Light Brown fine grained Sand
8-11.5	10" Sonic	Grayish white fine grained Sand, gravels present, rounded, dry
11.5-13.5	10" Sonic	Tan SILT with clay matrix, slightly moist
13.5-17	10" Sonic	Grayish Tan CLAY with small amount of silt present, slightly moist
17-23	10" Sonic	Grayish Tan SILT with fine grain sand present, trace amounts of clay, slightly moist
23-27	10" Sonic	Tannish Gray CLAY, denser, dry
27-32	10" Sonic	Tan CLAY, slightly moist
32-35	10" Sonic	Tan CLAY, denser material, slightly moist
		5/12/2015
35-48	10" Sonic to 40 feet	Tannish gray CLAY, moist
48-51	8" Sonic	Tannish gray CLAY, moist, softer
51-52	8" Sonic	Orangish, Brown, black fine grained Sand, moist
52-54	8" Sonic	Orangish, Brown, Red CLAY, slightly moist
54-56	8" Sonic	Orangish Brown CLAY with a fine grained sand matrix, slightly moist
56-62	8" Sonic	Light Brown fine grained Sand, saturated
62-63	8" Sonic	Light Brown CLAY, slightly moist
63-63.5	8" Sonic	Fine to medium grained Sand, slightly moist
63.5-64	8" Sonic	Light Brown CLAY, dry to slightly moist
64-65	8" Sonic	Light Brown fine grained Sand with clay matrix, moist

TD = 65; PVC 4-inch screen from 55 to 65; PVC 4-inch riser from -2.5 to 55

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick



**Stantec**

ISPC- CB LANDFILL AREA  
DELTA, UTAH

Figure 1 - CLW-1 Schematic

Design by

Drawn by

Scale

Date Drawn

Last Revision  
Date

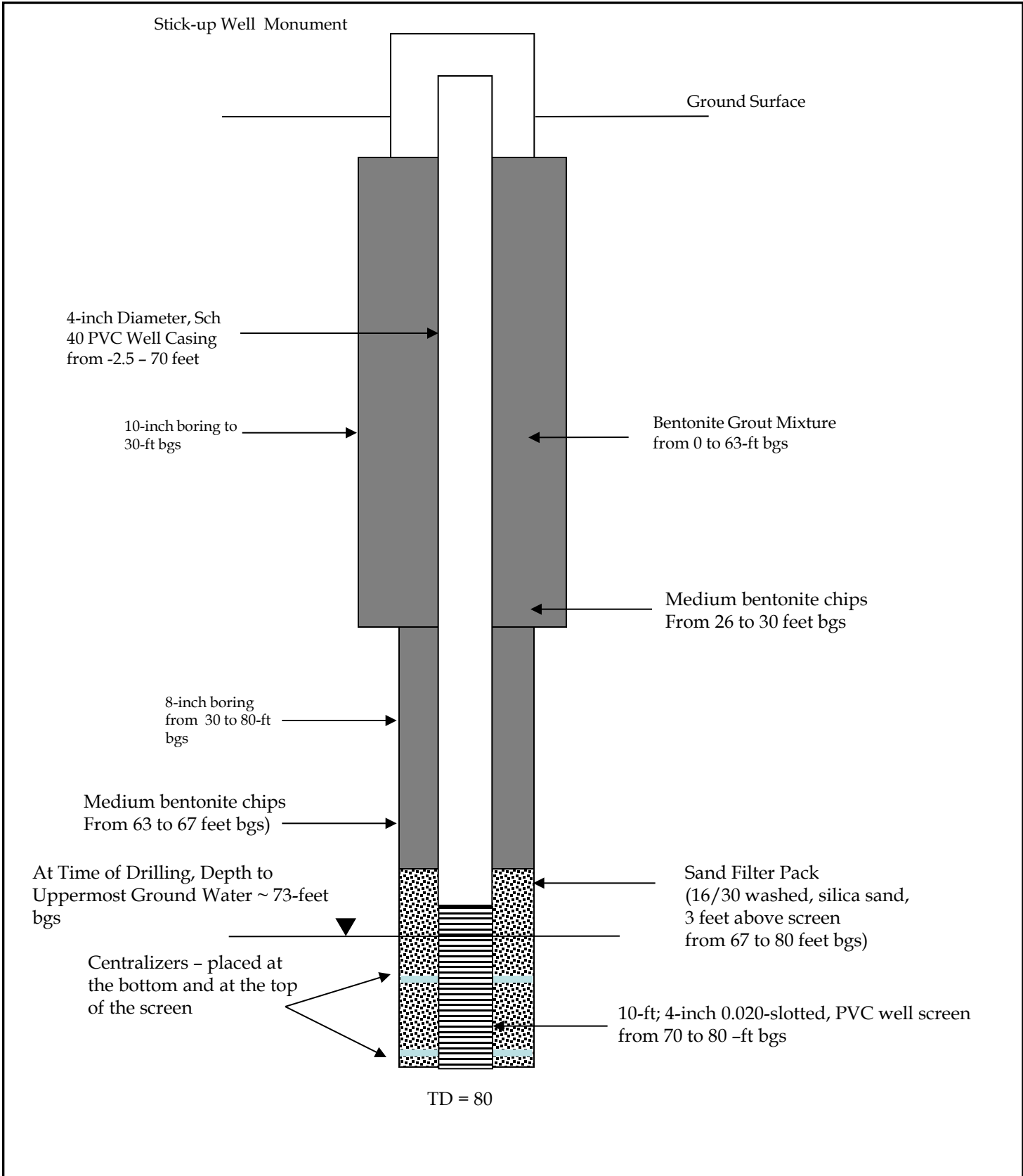
Boring Logs  
 IPSC  
 Delta, Utah

CLW-2

Interval (feet)	Drilling Method	Sample Description
		5/14/2015
0-8	10" Sonic	Brown fine grained Sand, clay present with gravel, dry
8-10	10" Sonic	Light to Dark Brown medium to course grained SAND, gravel present, dry
10-17	10" Sonic	Light Brown to Brown clayey SILT, slightly moist
17-25	10" Sonic	Light Brown Silty CLAY, moist
25-46	10" Sonic to 30 feet	Brown CLAY, slightly moist, from 40 to 45 feet transitioned to a Tan to Light Gray color
46-46.5	8" Sonic	Very moist to saturated zone, very soft clay , very sticky
46.5-50	8" Sonic	Light Gray CLAY, moist
50-51	8" Sonic	Tan to Light Gray with Orange zones, CLAY, slightly moist
51-51.5	8" Sonic	Very moist zone, CLAY
62	8" Sonic	Transitioning to a Orangish Red CLAY, Slightly moist
66-66.5	8" Sonic	Moist zone, transitioning from an Orangish Red to a Brown CLAY
66.5-73	8" Sonic	Reddish brown fine grained Sand with a clay matrix, very moist
73-80	8" Sonic	Brown fine gained Sand, trace amounts of clay, saturated.

TD = 80; PVC 4-inch screen from 70 to 80; PVC 4-inch riser from -2.5 to 70

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick



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Figure 1 - CLW-2 Schematic

Design by

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Scale

Date Drawn

Last Revision  
Date

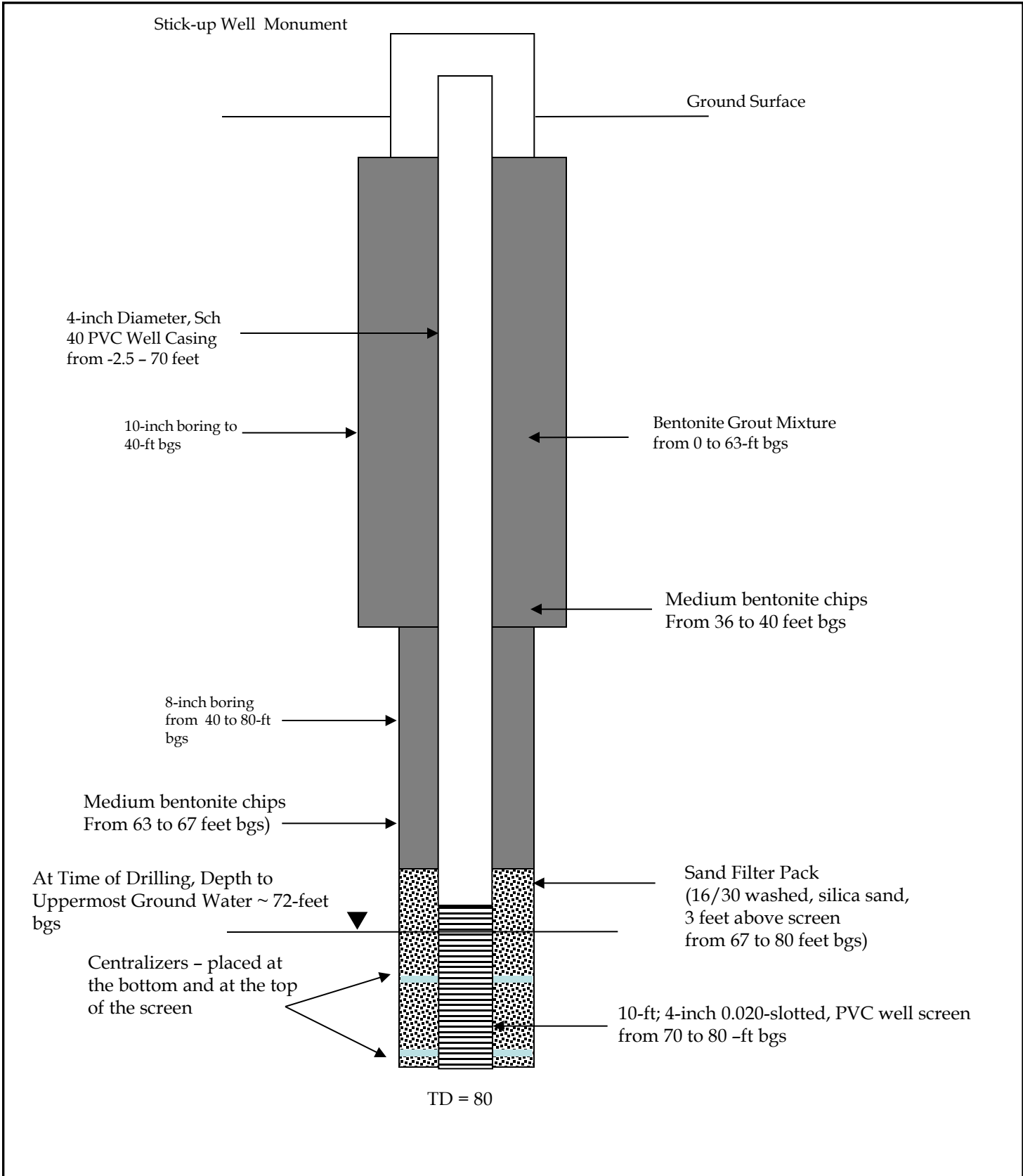
Boring Logs  
 IPSC  
 Delta, Utah

CLW-3

Interval (feet)	Drilling Method	Drill Time	Sample Description
			5/13/2015
0-3	10" Sonic		Brown fine grained Sand , clay present with gravel, dry
3-6	10" Sonic		Light to Dark Brown fine to medium grained Sand, no gravel present, dry
6-11	10" Sonic		Grayish White fine grained Sand, gravels present, rounded, dry
11-13	10" Sonic		Brownish Orange SILT, with fine grained sand present, soft
13-16	10" Sonic		Tannish Gray SILT with a clay present, very moist, sticky
16-21	10" Sonic		Tannish Gray SILT with a clay matrix, very moist, sticky
21-24	10" Sonic		Light Gray CLAY, with silt present, very moist
24-33	10" Sonic		Light Gray to Orange CLAY, with silt present, slightly moist
32-40	10" Sonic to 40 feet		Tan CLAY, denser material, slightly moist
40-66	8" Sonic		Tan to Light Brown CLAY, slightly moist to Dry
63	8" Sonic		Transiting into a Darker Gray CLAY, Moist
66-72	8" Sonic		Very moist to saturated, clay very plastic, firm and sticky
72-73	8" Sonic		Dark Gray fine to medium grained Sand, saturated
73-74	8" Sonic		Dark Gray CLAY, sticky firm, very moist
74-80	8" Sonic		Dark Gray fine to medium grained Sand, saturated

TD = 80; PVC 4-inch screen from 70 to 80; PVC 4-inch riser from -2.5 to 70

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick



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DELTA, UTAH

Figure 1 - CLW-3 Schematic

Design by

Drawn by

Scale

Date Drawn

Last Revision  
Date

Boring Logs  
 IPSC  
 Delta, Utah

CLW-4

Interval (feet)	Drilling Method	Sample Description
		7/24/2015
0-2	10" Sonic	Light Brown fine grained Sands with silts and gravel, dry
2-5	10" Sonic	Light Brown fine grained Sands, dry
5-11	10" Sonic	Light Brown to gray fine grained SAND, dry to slightly moist
11-13	10" Sonic	Light Brown silty CLAY, slightly moist, good plasticity
13-14	10" Sonic	Light Brown fine grained SAND, with clays present, poor plasticity, dry
14-16	10" Sonic	Light Brown clayey SILT, dry
16-18	10" Sonic	Light Brown to Brown silty CLAY, slightly moist, good plasticity
18-21	10" Sonic	Light Brown to Gray silty CLAY, slightly moist to moist, good plasticity
21-24	10" Sonic	Brownish Gray CLAY, moist, high plasticity
34-32	10" Sonic	Brownish Gray CLAY, moist to very moist, high plasticity
32-53	10" Sonic to 39 feet	Brownish Gray CLAY, denser, slightly moist,
		44 - thin layer of brownish orange fine grained sand
		47 - transitioning into a gray clay
		49 - thin layer of brownish orange fine grained sand
53-55	8" Sonic	Brownish Gray CLAY, dense, very plastic, slightly moist
55-73	8" Sonic	Brown CLAY, very plastic, slightly moist
73-82	8" Sonic	Brown fine grained SAND with a clay matrix, saturated

TD = 82; PVC 4-inch screen from 72 to 82; PVC 4-inch riser from -2.5 to 72

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick

Above-grade, 5-feet. long, 6-in. dia., steel Wellhead Protective Monument  
~ 2.5-feet. stick-up

Ground Surface

4-inch Diameter, Sch 40 PVC Well Casing from -2.0 - 82 feet

10-inch dia. boring to 39-feet bgs

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 63-feet below ground surface (bgs)

Medium bentonite chips From 35 to 39 feet bgs

8-inch boring from 39 to 82-feet bgs

Medium bentonite chips From 63 to 69 feet bgs)

Sand Filter Pack (16/30 washed, silica sand, 3 feet above screen from 69 to 82 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 73-feet bgs

Centralizers - placed at the bottom and at the top of the screen

10-feet; 4-inch 0.020-slotted, PVC well screen from 72 to 82 -feet bgs

Total Depth (TD) = 82 feet bgs



ISPC- CB LANDFILL AREA  
DELTA, UTAH

CLW-4 Schematic

Date Drawn  
9/1/15

Design by

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Scale

Last Revision  
Date



Boring Logs  
 IPSC  
 Delta, Utah

CLW-5

Interval (feet)	Drilling Method	Sample Description
		7/26/2015
0-3	10" Sonic	Light Brown fine grained Sands with silts and gravel, dry
3-4	10" Sonic	Gravels with medium to fine grand sands, moist
4-7.5	10" Sonic	Light Brown sitly CLAY, slightly moist, good plasticity
7.5-10	10" Sonic	Light Brown fine to medium grained SAND, dry
10-12	10" Sonic	Light Brown to Gray fine to medium grained SAND, gravels present, slightly moist
12-13	10" Sonic	Light Brown clayey SILT, slightly moist,
13-15	10" Sonic	Brown fine to medium grained SAND, wht clays and silts, slightly moist
		7/27/2015
15-22	10" Sonic	Brown silty CLAY, slightly moist, good plasticity
22-32	10" Sonic	Light Brown CLAY, moistgood plasticity
32-38	10" Sonic	Brown CLAY, slightly moist, high plasticity
38-40	10" Sonic to 39 feet	Light Gray CLAY, slightly moist, hight plasticity
40-44	8" Sonic	Light Brown to Brown CLAY, slightly moist, high plasticity
44-52	8" Sonic	Light Gray CLAY, hight plasticity, slighly moist
52-53	8" Sonic	Brown CLAY, high plasticity, slightly moist
53-55	8" Sonic	Gray CLAY, high plasticity, slightly moist
55-72	8" Sonic	Gray CLAY, high plasticity, moist
72-74	8" Sonic	Gray fine grained SAND, with clay matrix, moist to saturated
74-75	8" Sonic	Gray CLAY with fine grained sandy matrix, poor plasticity, moist
75-78	8" Sonic	Gray fine grained SAND wht a clayey matrix, poor plasticity, saturated
78-80	8" Sonic	Gray CLAY with fine grained sandy matrix, poor plasticity, moist
80-82	8" Sonic	Gray fine grained SAND wht a clayey matrix, poor plasticity, saturated

TD = 82; PVC 4-inch screen from 72 to 82; PVC 4-inch riser from -2.5 to 72

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick

Above-grade, 5-feet long, 6-in. dia., steel Wellhead Protective Monument  
~ 2.5-feet stick-up

Ground Surface

4-inch Diameter, Sch 40 PVC Well Casing from -2.0 - 82 feet

10-inch dia. boring to 39-feet bgs

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 65-feet below ground surface (bgs)

Medium bentonite chips From 35 to 39 feet bgs

8-inch boring from 39 to 82-feet bgs

Medium bentonite chips From 65 to 69 feet bgs)

Sand Filter Pack (16/30 washed, silica sand, 3 feet above screen from 69 to 82 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 72-feet bgs

Centralizers - placed at the bottom and at the top of the screen

10-feet; 4-inch 0.020-slotted, PVC well screen from 72 to 82 -feet bgs

Total Depth (TD) = 82 feet bgs



ISPC- CB LANDFILL AREA  
DELTA, UTAH

CLW-5 Schematic

Date Drawn  
9/1/15

Design by

Drawn by TH

Scale

Last Revision  
Date

Boring Logs  
 IPSC  
 Delta, Utah

CLW-6

Interval (feet)	Drilling Method	Sample Description
		7/26/2015
0-3	10" Sonic	Light Brown fine grained Sands with silts and gravel, dry
3-5	10" Sonic	Light Brown silty fine grained SAND, dry
5-7	10" Sonic	Light Brown fine grained sandy SILT, dry
7-12	10" Sonic	Light Brown fine to medium grained SAND, dry
12-15	10" Sonic	Light Brown fine grained sand, with a clay matrix, dry
15-21	10" Sonic	Light Brown to Brown clayey SILT, slightly moist, poor plasticity
21-22	10" Sonic	Light Brown fine grained sand, with a clay matrix, dry
21-23		Light Brown to Brown clayey SILT, slightly moist, poor plasticity
23-32	10" Sonic	Light Brown CLAY, moist, sticky, high plasticity
32-38	10" Sonic	Light Brown to Gray CLAY, moist, high plasticity
38-47	10" Sonic	Light Gray to Gray CLAY, slightly moist, high plasticity
47-55	10" Sonic to 39 feet	Transitioned to a Brownish gray CLAY, high plasticity, slight moist
55-72	8" Sonic	Brown CLAY, high plasticity, slightly moist
		58 - 58.5 very moist to saturated, 59 - slightly moist
72-78	8" Sonic	Gray CLAY, very moist, high plasticity
78-82	8" Sonic	Gray fine grained SAND with a clay matrix, poor plasticity, saturated
82-84	8" Sonic	Gray CLAY, high plasticity, very moist
84-85	8" Sonic	Gray fine grained SAND with a clay matrix, poor plasticity, saturated
85-88	8" Sonic	Gray CLAY, high plasticity, very moist

TD = 88; PVC 4-inch screen from 78 to 88; PVC 4-inch riser from -2.5 to 78

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick

Above-grade, 5-feet long, 6-in. dia., steel Wellhead Protective Monument  
~ 2.5-feet stick-up

Ground Surface

4-inch Diameter, Sch 40 PVC Well Casing from -2.0 - 82 feet

10-inch dia. boring to 39-feet bgs

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 70-feet below ground surface (bgs)

Medium bentonite chips From 35 to 39 feet bgs

8-inch boring from 39 to 88-feet bgs

Medium bentonite chips From 70 to 74 feet bgs)

Sand Filter Pack (16/30 washed, silica sand, 4 feet above screen from 74 to 88 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 78-feet bgs

Centralizers - placed at the bottom and at the top of the screen

10-feet; 4-inch 0.020-slotted, PVC well screen from 78 to 88 -feet bgs

Total Depth (TD) = 88 feet bgs



ISPC- CB LANDFILL AREA  
DELTA, UTAH

CLW-6 Schematic

Date Drawn  
9/1/15

Design by

Drawn by

TH

Scale

Last Revision  
Date

Boring Logs  
 IPSC  
 Delta, Utah

CLW-7

Interval (feet)	Drilling Method	Sample Description
		7/24/2015
0-8	10" Sonic	Light Brown fine grained Sands with silts and gravel, angular, Dry
8-12	10" Sonic	Light Brown fine grained Sands with silts and clay, No gravel, Dry
12-15	10" Sonic	Tan SILT with a clay matrix, Dry
15-17	10" Sonic	Light Brown to Gray CLAY, medium plasticity, silty present, Dry
17-22	10" Sonic	Light Brown Clayey SILT, slightly moist
22-24	10" Sonic	Light Brown to Grayish silty CLAY, Dry
24-32	10" Sonic	Light Brown to Grayish CLAY, Brown silts and fine grained sands present, , Dry
32-40	10" Sonic to 39 feet	Light Brown CLAY, slightly moist, became denser at 35 feet
40-43	8" Sonic	Light Brown to Grayish CLAY, very dense, slightly moist
43-48	8" Sonic	Gray CLAY, slightly moist, some layers of a brown fine grained sand present every 3 to 4 inches along the core
48-50	8" Sonic	Gray CLAY, slightly moist, some Iron Oxide present
50-51.5	8" Sonic	Brown fine to medium grained SANDS, saturated
51.5-58	8" Sonic	Brown CLAY, moist to slightly moist
58-58.5	8" Sonic	Brown fine grained SANDS, with a clay matrix, saturated
58.5-61	8" Sonic	Brown CLAY, moist to slightly moist
61-68	8" Sonic	Brown fine to medium grained SANDS, saturated
68-70	8" Sonic	Brown CLAY, moist to slightly moist
70-72	8" Sonic	Brown fine to medium grained SANDS, saturated

TD = 72; PVC 4-inch screen from 52 to 72; PVC 4-inch riser from -2.5 to 52

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick

Above-grade, 5-feet long, 6-in. dia., steel Wellhead Protective Monument  
~ 2.5-feet stick-up

Ground Surface

4-inch Diameter, Sch 40 PVC Well Casing from -2.0 - 70 feet

10-inch dia. boring to 39-feet bgs

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 45-feet below ground surface (bgs)

Medium bentonite chips From 35 to 39 feet bgs

8-inch boring from 39 to 72-feet bgs

Medium bentonite chips From 45 to 49 feet bgs)

Sand Filter Pack (16/30 washed, silica sand, 3 feet above screen from 49 to 72 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 52-feet bgs

Centralizers - placed at the bottom and at the top of the screen

10-feet; 4-inch 0.020-slotted, PVC well screen from 52 to 72 -feet bgs

Total Depth (TD) = 72 feet bgs



ISPC- CB LANDFILL AREA  
DELTA, UTAH

CLW-7 Schematic

Date Drawn  
9/1/15

Design by

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Scale

Last Revision  
Date

Boring Logs  
 IPSC  
 Delta, Utah

CLW-8

Interval (feet)	Drilling Method	Sample Description
		7/24/2015
0-3	10" Sonic	Light Brown fine grained Sands with silts and gravel, dry
3-5	10" Sonic	Light Brown fine grained Sands, slightly moist
5-7	10" Sonic	Tannish white fine grained Sand, with smooth, rounded pebbles, slightly moist
7-10	10" Sonic	Tannish white silty, fine grained Sand, slightly moist
10-13	10" Sonic	Tan SILT with a clay matrix, slightly most, slightly plastic
13-15	10" Sonic	Tan Clayey SILT, dry, plastic
15-18	10" Sonic	Light Brown to tan silty CLAY, slightly moist, good plasticity
18-24	10" Sonic	Light Brown CLAY with silts present, slightly moist, good plasticity
24-32	10" Sonic	Brown silty CLAY, slightly moist, good plasticity
32-37	10" Sonic	Brown CLAY, dence, dry to slighthly moist, very plastic
37-52	10" Sonic to 39 feet	Transitioned fomrthe Brown CLAY to a Gray CLAY, with interbeds of brown fine gran sand layers, highly plastic, slihgltly moist
52-62	8" Sonic	Brown fine grained SAND with a clay matrix, saturated

TD = 62; PVC 4-inch screen from 52 to 62; PVC 4-inch riser from -2.5 to 52

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick

Above-grade, 5-ft. long, 6-in. dia., steel Wellhead Protective Monument  
~ 2.5-ft. stick-up

Ground Surface

4-inch Diameter, Sch 40 PVC Well Casing from -2.0 - 62 feet

10-inch dia. boring to 39-ft bgs

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 45-ft below ground surface (bgs)

Medium bentonite chips From 35 to 39 feet bgs

8-inch boring from 39 to 72-ft bgs

Medium bentonite chips From 45 to 49 feet bgs)

Sand Filter Pack (16/30 washed, silica sand, 3 feet above screen from 49 to 62 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 52-ft bgs

Centralizers - placed at the bottom and at the top of the screen

10-ft; 4-inch 0.020-slotted, PVC well screen from 52 to 62 -ft bgs

Total Depth (TD) = 62 feet bgs



ISPC- CB LANDFILL AREA  
DELTA, UTAH

CLW-8 Schematic

Date Drawn  
9/1/15

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Scale

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Date



CL-U-1

Interval (feet)	Drilling Method	USCS	Sample Description
7/22/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2	8" Sonic	SP/SM	SAND with silt:
2-2.5	8" Sonic	SM/ML	Silty SAND/Sandy Silt:
2.5-5	8" Sonic	SM	Silty SAND:
5-6	8" Sonic	CL	CLAY:
6-7.5	8" Sonic	SM/ML	Silty SAND/Sandy SILT with clay:
7.5-10	8" Sonic	CH	CLAY:
10-11	8" Sonic		CLAY:
11-12.5	8" Sonic		CLAY:
12.5-13.5	8" Sonic		CLAY:
13.5-15	8" Sonic	ML	Sandy SILT:
15-16.5	8" Sonic	SP/SM	SAND with silt:
16.5-17.5	8" Sonic	SM	Silty SAND:
17.5-20	8" Sonic	SP	SAND:
20-21	8" Sonic		SAND:
21-22	8" Sonic	ML	Sandy SILT:
22-23	8" Sonic	SP	SAND:
23-24	8" Sonic	ML	Sandy SILT:
24-25	8" Sonic	SP	SAND:
25-26	8" Sonic	ML	Sandy SILT:
26-28	8" Sonic		Sandy SILT:
28-30	8" Sonic		SILT with clay:
30-32	8" Sonic		Sandy SILT:
32-34	8" Sonic	SP	SAND:
34-35	8" Sonic	ML	Sandy SILT with clay:
35-40	8" Sonic	CL	CLAY:
40-42	8" Sonic	ML	SILT with clay:
42-45	8" Sonic	CH	CLAY:
45-55	8" Sonic		CLAY:
55-65	8" Sonic		CLAY:
7/23/2015			
65-66.5	8" Sonic	CH	Sandy CLAY:
66.5-67.5	8" Sonic	SP/SM	SAND with silt:
67.5-72.5	8" Sonic		SAND with silt:
72.5-73.5	8" Sonic	SP	SAND:
73.5-75	8" Sonic	SC	Clayey SAND:
75-76.5	8" Sonic	SW	SAND:
76.5-79	8" Sonic	SP	SAND:
79-80	8" Sonic	CH	CLAY:

TD = 80'; PVC 4-inch screen from 68 to 78; PVC 4-inch riser from -2.5 to 68

Drilling Method: Guspech GS24-300RS 8" Rotasonic

Drilling Company - Cascade Drilling

Driller - Daniel Dodge

Geologist - Michael Sauerwein

Above-grade, 5-feet. long, 8-in. dia., steel Wellhead Protective Monument set in a 2X2 Concrete Pad ~ 2.5-feet. stick-up

Ground Surface

8-inch diameter, from 0 to 80-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 68 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 0 to 61.5-feet bgs

At Time of Drilling, Depth to main Groundwater: ~ 66.5-feet bgs

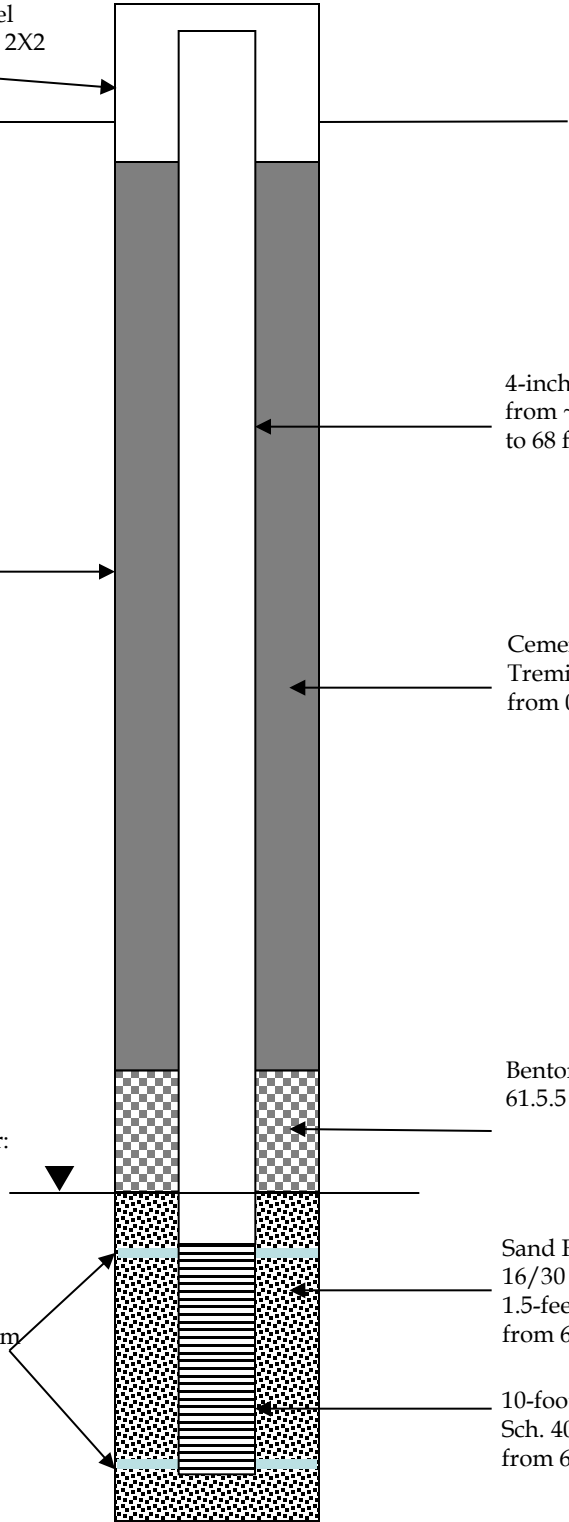
Bentonite medium chips, from 61.5 to 66.5 feet bgs

Centralizers - placed at the bottom and the top of the well screen.

Sand Filter Pack: 16/30 washed silica sand, 1.5-feet above screen from 66.5 to 80 feet bgs

10-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 68 to 78 feet bgs

Total Depth (TD) = 80 feet bgs



IPSC – COMBUSTION BYPRODUCT LANDFILL AREA  
DELTA, UTAH

Well CL-U-1 Schematic

Date Drawn  
7/23/15

Design by

Drawn by

MS

Scale

Last Revision  
Date

Boring Logs  
 IPSC  
 Delta, Utah

CLU-2

Interval (feet)	Drilling Method	Sample Description
		7/22/2015
0-6	8" Sonic	Light Brown fine grained SAND with silt, dry
6-7.5	8" Sonic	Light Brown to Tan CLAY with silt, slightly moist
7.5-13	8" Sonic	Light Brown fine grained SAND with silt, dry
13-16	8" Sonic	Brown fine grained SAND with clayey matrix, slightly moist, some plasticity
16-24	8" Sonic	Light Brown fine grained SAND, dry
24-35	8" Sonic	Light Brown clayey SILT, dry
35-44	8" Sonic	Light Brown Silty CLAY, dry, good plasticity
44-48	8" Sonic	Gray Clayey SILT, dry, slightly plastic
48-49	8" Sonic	Brownish Orange CLAY, with a silty matrix, dry, good plasticity
49-60	8" Sonic	Brownish Orange CLAY, slightly moist
	8" Sonic	53-55 soil becomes slightly moist and Iron Oxide present
	8" Sonic	57-61 soil is dry
61-67	8" Sonic	Brownish Gray CLAY, at 61 feet very moist, very plastic
67-70	8" Sonic	Gray CLAY, moist, very plastic
70-75	8" Sonic	Gray fine to medium grained SAND, saturated, nonplastic
75-77	8" Sonic	Greenish Gray to Brown Clay fine grained SAND with a CLAY matrix, saturated
77-80	8" Sonic	Brownish Gray, fine to medium grained SAND, saturated

TD = 80; PVC 4-inch screen from 70 to 80; PVC 4-inch riser from -2.5 to 70

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick

Above-grade, 5-feet long, 8-in. dia., steel Wellhead Protective Monument ~ 2.5-feet stick-up

Ground Surface

4-inch Diameter, Sch. 40 PVC Well Casing from ~ 2.0 - 80 feet bgs

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 63-feet below ground surface (bgs)

8-inch boring from 0 to 80-feet bgs

Medium bentonite chips From 63 to 67 feet bgs)

Sand Filter Pack (16/30 washed, silica sand, 3 feet above screen from 67 to 80 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 70-fbgs

Centralizers placed ~ the bottom and the top of the well screen

10-feet; 4-inch 0.020-slotted, PVC well screen from 70 to 80-feet bgs

Total Depth (TD) = 80 feet bgs



IPSC- CB LANDFILL AREA  
DELTA, UTAH

Well CLU-2 Schematic

Date Drawn  
9/1/15

Design by

Drawn by

TH

Scale

Last Revision  
Date

Boring Logs  
 ISPC  
 Delta, Utah

CL-U-3

Interval (feet)	Drilling Method	USCS	Sample Description
3/26/2018			
0-2	8" Sonic	SW	Sand, silt and clay
2-14	8" Sonic	SP	Sand, poorly graded, dry
14-17	8" Sonic	MH	Silt, dry
17-18	8" Sonic	MH	Silt with trace clay, dry
18-27.5	8" Sonic	MH	Silt, dry
27.5-37	8" Sonic	CH	Clay, silt stringers every 3-10", red mottling, moist
37-48	8" Sonic	CH	Clay, distance between silt stringers increasing to 10-18"
48-57	8" Sonic	CH	Clay, massively bedded
57-64	8" Sonic	CH	Clay, massively bedded
64-65	8" Sonic	SP	Sand, medium-grain, saturated
65-66	8" Sonic	MH	Silt, saturated
66-67	8" Sonic	SP	Sand, saturated
67-74	8" Sonic	SP	Sand, saturated
74-75	8" Sonic	CH	Clay
75-77	8" Sonic	SP	Sand, saturated

TD = 77; screen 67-77; sand 62-7; plug 57-62; grout to surface; centralizers 66.5 and 76.5

Drilling Method: Sonic

Drilling Company - Cascade Drilling

Driller - David Donnely

Geologist - Tom Fendler



Flush-mount, Wellhead Protective Vault, 8-inch diameter, steel lid

Ground Surface

Concrete Apron

Borehole:  
8-inch diameter,  
from 0 to 77-feet bgs

4-inch diameter, Sch. 40 PVC,  
from ~ 0.25 - 67 feet bgs

Cement-Bentonite (~ 10:1) Grout,  
Tremie-Pipe Slurry,  
from 0 to 57-feet bgs

Bentonite medium chips, from 57  
to 62 feet bgs

At Time of Drilling, Depth to  
Uppermost Ground Water ~ 65 to 70-  
feet bgs

Sand Filter Pack:  
(16/30 washed silica sand,  
2-feet above screen  
from 62 to 77 feet bgs)

Centralizers placed ~ the bottom  
and the top of the well screen.

10-foot length; 4-inch diameter  
Sch. 40 PVC, 0.020" -slotted,  
from 67 to 77 feet bgs

Total Depth (TD) = 77 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT AREA  
DELTA, UTAH

Well CL-U-3 Schematic

Date Drawn	10/24/1
Last Revision	8
Date	

Design by

Drawn by

JR

Scale

BAC-1

Interval (feet)	Drilling Method	USCS	Sample Description
7/31/2015			
0-0.75	8" Sonic	Concrete	Surface - concrete soil mixture
0.75-2.5	8" Sonic	SM	Silty SAND:
2.5-3.25	8" Sonic		Silty SAND:
3.25-5	8" Sonic	SP/SM	SAND with silt:
5-12.5	8" Sonic		SAND with silt:
12.5-13.5	8" Sonic		SAND with silt:
13.5-14.5	8" Sonic	ML	Sandy SILT:
14.5-15	8" Sonic		Sandy SILT:
15-17.5	8" Sonic	SP	SAND:
17.5-19	8" Sonic	SP/SW	SAND:
19-20	8" Sonic	SP/SM	SAND with silt:
20-21.5	8" Sonic	SP	SAND:
21.5-22.5	8" Sonic	ML	Sandy SILT:
22.5-24	8" Sonic		Sandy SILT:
24-25	8" Sonic	SP	SAND:
25-26.75	8" Sonic	SM	Silty SAND:
26.75-27.5	8" Sonic	SP	SAND:
27.5-28.5	8" Sonic		SAND:
28.5-30	8" Sonic	SM	Silty SAND:
30-31.5	8" Sonic	SP	SAND:
31.5-32.25	8" Sonic	SM	Silty SAND:
32.25-33.75	8" Sonic	SP/SM	SAND with silt:
33.75-35	8" Sonic	SM	Silty SAND:
35-36	8" Sonic	SP/SM	SAND with silt:
36-37.5	8" Sonic	SM	Silty SAND:
37.5-38	8" Sonic	SP/SM	SAND with silt:
38-38.5	8" Sonic	SM	Silty SAND:
38.5-40	8" Sonic	ML	Sandy SILT:
40-42.5	8" Sonic	SC	Clayey SAND:
42.5-43.5	8" Sonic	CL	Sandy CLAY:
43.5-44.5	8" Sonic		Sandy CLAY:
44.5-45	8" Sonic		Sandy CLAY:
45-46	8" Sonic		Sandy CLAY:
46-47	8" Sonic		Sandy CLAY:
47-47.75	8" Sonic	SW	SAND:
47.75-48.5	8" Sonic	CH	Sandy CLAY:
48.5-50	8" Sonic		Sandy CLAY:
50-51.5	8" Sonic		CLAY:
51.5-53.5	8" Sonic		Sandy CLAY:
53.5-56	8" Sonic		CLAY:
56-57.5	8" Sonic		Sandy CLAY:
57.5-58	8" Sonic	SC	Clayey SAND:
58-59.5	8" Sonic	CH	CLAY:
59.5-60	8" Sonic	SC	Clayey SAND:
60-64.5	8" Sonic	SM	Silty SAND with clay:
64.5-65.5	8" Sonic	SC	Clayey SAND:
65.5-67.5	8" Sonic	SP	SAND:
67.5-70	8" Sonic	SW	SAND:

TD = 70'; PVC 4-inch screen from 60 to 70'; PVC 4-inch riser from 0 to 60  
Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Daniel Dodge  
Geologist - Michael Sauerwein

Flush-mount, Wellhead Protective Vault, 8-inch diameter, steel lid

Ground Surface

Concrete Apron

Borehole:  
8-inch diameter,  
from 0 to 70-feet bgs

4-inch diameter, Sch. 40 PVC,  
from ~ 0.25 - 60 feet bgs

Cement-Bentonite (~ 10:1) Grout,  
Tremie-Pipe Slurry,  
from 0 to 53-feet bgs

Bentonite medium chips, from 53  
to 58 feet bgs

At Time of Drilling, Depth to  
Uppermost Ground Water ~ 60-feet  
bgs

Centralizers placed ~ the bottom  
and the top of the well screen.

Sand Filter Pack:  
(16/30 washed silica sand,  
2-feet above screen  
from 58 to 70 feet bgs)

10-foot length; 4-inch diameter  
Sch. 40 PVC, 0.020"-slotted,  
from 60 to 70 feet bgs

Total Depth (TD) = 70 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT AREA  
DELTA, UTAH

Well BAC-1 Schematic

Date Drawn  
7/31/15

Design by

Drawn by

MS

Scale

Last Revision  
Date

Boring Logs  
 IPSC  
 Delta, Utah

BAC-2

Interval (feet)	Drilling Method	Sample Description
		7/29/2015
0-6	8" Sonic	Light Brown fine grained Sand, gravels, dry
6-12	8" Sonic	Light Brown fine grained SAND, moist
12-18	8" Sonic	Light Brown fine to medium grained sand, dry
18-23	8" Sonic	Light Brown fine to medium grained sand, with a clay matrix, dry
23-24	8" Sonic	Light Brown fine to medium grained sand, very moist, trace amount of clay
24-26	8" Sonic	Brown fine to medium grained sand, slightly moist
26-30	8" Sonic	Brown fine to medium grained sand, with gravels present, slightly moist
30-33	8" Sonic	Light Brown fine grained sand, slightly moist
33-34	8" Sonic	Light Brown CLAY, very moist, high plasticity
34-36	8" Sonic	Light Brown fine grained sand, with a clay matrix, moist
36-38	8" Sonic	Light Brown Silty CLAY, moderately plastic, slightly moist
38-40	8" Sonic	Brownish Red silty CLAY, good plasticity, slightly moist
40-41	8" Sonic	Brown fine grained SAND, saturated
41-42	8" Sonic	Brown SILT with a clay matrix, slightly moist
42-52	8" Sonic	Reddish brown CLAY, high plasticity, dry to slightly moist
52-55	8" Sonic	Reddish brown CLAY, high plasticity, dry to slightly moist, very dense
55-56	8" Sonic	Brown fine grained SAND with a clay matrix very moist to saturated
56-57	8" Sonic	Reddish brown CLAY, high plasticity, slightly moist to moist
57-65	8" Sonic	Brown fine grained SAND with a clay matrix, saturated

TD = 65; PVC 4-inch screen from 55 to 65; PVC 4-inch riser from -2.5 to 55

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick

Above-grade, 5-feet long, 6-in. dia., steel Wellhead Protective Monument  
 ~ 2.5-feet stick-up

Ground Surface

4-inch Diameter, Sch 40 PVC Well Casing from -2.0 - 65 feet

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 48-feet below ground surface (bgs)

8-inch boring from 0 to 65-feet bgs

Medium bentonite chips From 48 to 52 feet bgs

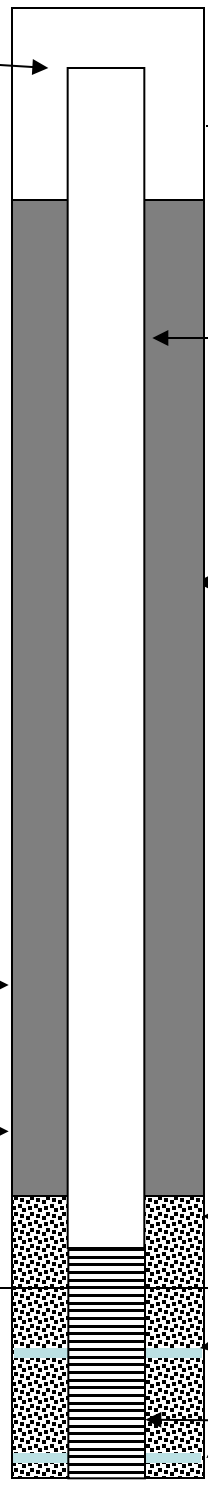
Sand Filter Pack (16/30 washed, silica sand, 3 feet above screen from 52 to 65 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 56-feet bgs

Centralizers - placed at the bottom and at the top of the screen

10-feet; 4-inch 0.020-slotted, PVC well screen from 55 to 65 -feet bgs

Total Depth (TD) = 65 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT  
 DELTA, UTAH

BAC-2 Schematic

Date Drawn  
 9/1/15

Design by

Drawn by TH

Scale

Last Revision  
 Date



Boring Logs  
 IPSC  
 Delta, Utah

BAC-3

Interval (feet)	Drilling Method	Sample Description
		7/28/2015
0-8.5	8" Sonic	Light Brown fine grained Sand, dry
8.5-11	8" Sonic	Light Brown fine to medium grained SAND, moist
11-14	8" Sonic	Light Brown fine grained sand, with a clay matrix, dry
14-17	8" Sonic	Gravels with fine to medium grained SAND, slightly moist
17-20	8" Sonic	Brown fine grained sand, slightly moist
20-22	8" Sonic	Brown fine to medium grained sand, with a clay matrix, slightly moist
22-26	8" Sonic	Brown fine to medium grained sand, with a clay matrix, moist
26-30	8" Sonic	Brown fine grained sand, moist
30-43	8" Sonic	Light Brown CLAY, slightly moist to moist, high plasticity
		30-33 Silty CLAY, poor plasticity
		33-35 Silty CLAY, moderately plastic
		35-43 very little silt present, high plasticity
43-45	8" Sonic	Transitioned to a Reddish Brown CLAY, dry, high plasticity
45-50	8" Sonic	Transitioned to a Brown CLAY, dry, high plasticity
50-55	8" Sonic	Light Brown CLAY, moist, high plasticity
55-58	8" Sonic	Light Brown fine grained SAND, with a clay matrix, slightly moist to moist
58-72	8" Sonic	Light Brown CLAY, with a sandy matrix medium to poor plasticity, moist

TD = 72; PVC 4-inch screen from 52 to 72; PVC 4-inch riser from -2.5 to 52

Drilling Company - Cascade Drilling  
 Driller - Rick Mallett  
 Geologist - Thomas Hedrick

Above-grade, 5-feet long, 6-in. dia., steel Wellhead Protective Monument  
~ 2.5-feet stick-up

Ground Surface

4-inch Diameter, Sch 40 PVC Well Casing from -2.0 - 72 feet

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 45-feet below ground surface (bgs)

8-inch boring from 0 to 72-feet bgs

Medium bentonite chips From 45 to 49 feet bgs

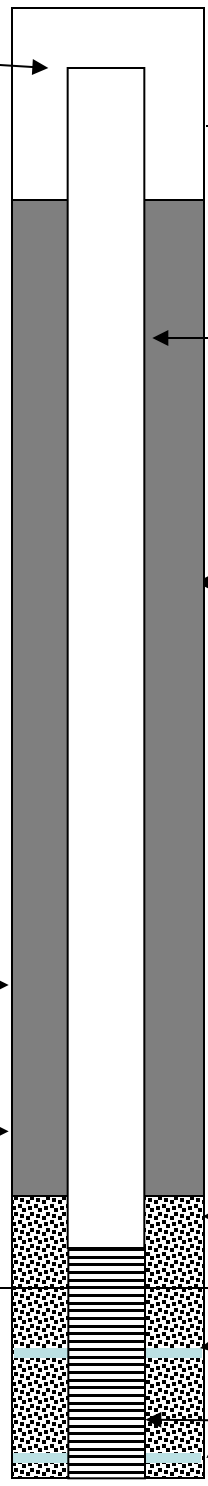
Sand Filter Pack (16/30 washed, silica sand, 3 feet above screen from 49 to 72 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 55-feet bgs

Centralizers - placed at the bottom and at the top of the screen

10-feet; 4-inch 0.020-slotted, PVC well screen from 52 to 72 -feet bgs

Total Depth (TD) = 72 feet bgs



ISPC- BOTTOM ASH SURFACE IMPOUNDMENT  
DELTA, UTAH

BAC-3 Schematic

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9/1/15

Design by

Drawn by TH

Scale

Last Revision  
Date

BAC-4

Interval (feet)	Drilling Method	USCS	Sample Description
8/10/2015			
0-0.5	8' Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2.5	8' Sonic	SP/SM	SAND with silt:
2.5-5	8' Sonic	SP	SAND:
5-9	8' Sonic		SAND:
9-10	8' Sonic	SP/SM	SAND with silt:
10-15	8' Sonic	SP	SAND:
15-17.5	8' Sonic	SP/SM	SAND with silt:
17.5-19	8' Sonic		SAND with silt:
19-2	8' Sonic	SC	Clayey SAND:
20-21	8' Sonic		Clayey SAND:
21-22	8' Sonic	CL	Sandy CLAY:
22-22.5	8' Sonic	ML	Sandy SILT:
22.5-25	8' Sonic	CL	Sandy CLAY:
25-32.5	8' Sonic	CH	CLAY:
32.5-33.75	8' Sonic	SP	SAND:
33.75-35	8' Sonic	SM	Silty SAND:
35-36.5	8' Sonic	SP/SM	SAND with silt:
36.5-37.5	8' Sonic		SAND with silt:
37.5-38	8' Sonic	SM	Silty SAND:
38-38.75	8' Sonic	CH	Sandy CLAY:
38.75-39	8' Sonic	SP/SM	SAND with silt:
39-40	8' Sonic	CH	Sandy CLAY:
40-42.5	8' Sonic	ML	Sandy SILT with clay:
42.5-43.5	8' Sonic	SM	Silty SAND and clay:
43.5-45	8' Sonic	CH	CLAY:
45-47.5	8' Sonic		CLAY:
47.5-48.5	8' Sonic		CLAY:
48.5-50	8' Sonic	ML	Clayey SILT with sand:
50-51.25	8' Sonic		Clayey SILT:
51.25-52.5	8' Sonic	CH	CLAY:
52.5-55	8' Sonic	SC	Clayey SAND:
55-56.5	8' Sonic	SM	Silty SAND:
56.5-57	8' Sonic	ML	Clayey SILT with sand:
57-57.5	8' Sonic	CH	CLAY:
57.5-58.5	8' Sonic		CLAY:
58.5-59.5	8' Sonic	ML	Clayey SILT with sand:
59.5-61	8' Sonic		Clayey SILT with sand:
61-64	8' Sonic		Clayey SILT with sand:
64-65	8' Sonic		Clayey SILT with sand:
65-65.5	8' Sonic	SM	Silty SAND:
65.5-67	8' Sonic	CL	Silty CLAY:
67-67.5	8' Sonic	ML	Clayey SILT:
67.5-69	8' Sonic	CH	CLAY:
69-69.5	8' Sonic		CLAY:
69.5-70	8' Sonic		CLAY:
70-72.5	8' Sonic	ML	Sandy SILT with clay:
72.5-74	8' Sonic	CH	Silty CLAY:
74-75	8' Sonic	SM	Silty SAND:

TD = 75'; PVC 4-inch screen from 55 to 75; PVC 4-inch riser from -2.5 to 55

Drilling Method: Prosonic T600, 8" Rotosonic

Drilling Company - Cascade Drilling

Driller - Rick Mallett

Geologist - Michael Sauerwein

Above-grade, 5-feet long, 8-in. dia., steel Wellhead Protective Monument set in a 2X2 Concrete Pad ~ 2.5-feet. stick-up

Ground Surface

Blank Well Casing Riser: 4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 55 feet below ground surface (bgs)

8-inch diameter, from 0 to 75-feet bgs

Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 0 to 48-feet below ground surface (bgs)

Bentonite medium chips, from 48 to 53 feet bgs

At Time of Drilling, Depth to Uppermost Ground Water ~ 55-feet bgs

Sand Filter Pack: (16/30 washed silica sand, 2-feet above screen from 53 to 75 feet bgs)

Centralizers placed ~ the bottom and the top of the well screen.

20-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 55 to 75 feet bgs

Total Depth (TD) = 75 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT  
DELTA, UTAH

Well BAC-4 Schematic

Date Drawn  
8/10/15

Design by

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Scale

Last Revision  
Date

BAC-5

Interval (feet)	Drilling Method	USCS	Sample Description
8/9/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2.5	8" Sonic	SP/SM	Gravelly SAND with silt:
2.5-3	8" Sonic	SP	SAND:
3-6.5	8" Sonic		SAND:
6.5-10	8" Sonic		SAND:
10-12.5	8" Sonic		SAND:
12.5-15	8" Sonic	SP/SM	SAND with silt:
15-19	8" Sonic	SM	Silty SAND:
19-19.5	8" Sonic	SC	Clayey SAND:
19.5-20	8" Sonic	SP/SM	SAND with silt:
20-22.5	8" Sonic	CL	Sandy CLAY:
22.5-23.75	8" Sonic		Sandy CLAY:
23.75-25	8" Sonic		Sandy CLAY:
25-27.5	8" Sonic		Sandy CLAY:
27.5-30	8" Sonic		CLAY:
30-32.5	8" Sonic	CL/CH	CLAY:
32.5-33.5	8" Sonic	SP	SAND:
33.5-35	8" Sonic		SAND:
35-36	8" Sonic	SC	Clayey SAND:
36-37.5	8" Sonic	ML	Sandy SILT:
37.5-38.5	8" Sonic		Sandy SILT:
38.5-40	8" Sonic	SM	Silty SAND with clay:
40-42.5	8" Sonic		Silty SAND:
42.5-44.25	8" Sonic		Silty SAND with clay:
44.25-45	8" Sonic	CH	CLAY:
45-46.5	8" Sonic		CLAY:
46.5-47.5	8" Sonic		CLAY:
47.5-49	8" Sonic		CLAY:
49-50.75	8" Sonic	SM	Silty SAND:
50.75-52.5	8" Sonic	CH	CLAY:
52.5-53.5	8" Sonic		CLAY:
53.5-55.5	8" Sonic	SP	SAND:
55.5-57.5	8" Sonic	CH	CLAY:
57.5-59	8" Sonic		CLAY:
59-60	8" Sonic	SM	Silty SAND with clay:
60-62.5	8" Sonic	SP	SAND:
62.5-63	8" Sonic	SC	Clayey SAND:
63-65	8" Sonic	SP	SAND:
65-65.75	8" Sonic	SC	Clayey SAND:
65.75-66.5	8" Sonic	CH	CLAY:
66.5-67.5	8" Sonic	SC	Clayey SAND:
67.5-69	8" Sonic	CH	CLAY:
69-70	8" Sonic		CLAY:

TD = 70; PVC 4-inch screen from 58 to 68; PVC 4-inch riser from -2.5 to 58  
Drilling Method: Prosonic T600, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Rick Mallett  
Geologist - Michael Sauerwein



Above-grade, 5-feet. long, 8-in. dia., steel Wellhead Protective Monument set in a 2X2 Concrete Pad ~ 2.5-feet. stick-up

Ground Surface

8-inch diameter, from 0 to 70-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 58 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 1 to 51-feet bgs

Bentonite medium chips, from 51 to 56 feet bgs

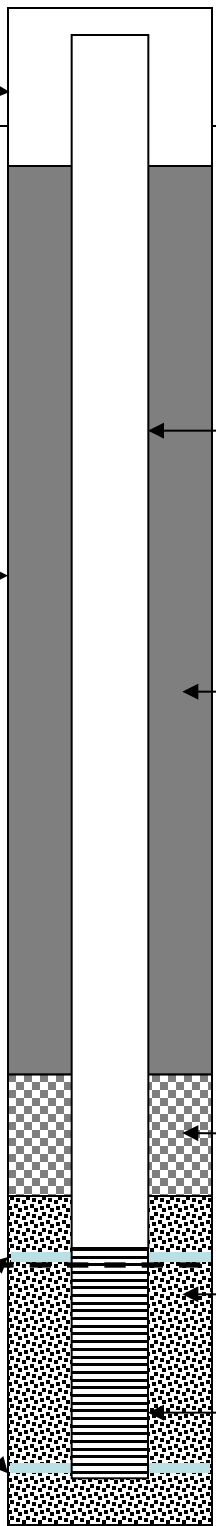
At Time of Drilling, Depth to Uppermost Ground Water ~ 59-feet bgs

Sand Filter Pack (16/30 washed silica sand, 2-feet above screen from 56 to 70 feet bgs)

Centralizers placed ~ the bottom and the top of the well screen.

Well Screen: 10-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 58 to 68 feet bgs

Total Depth (TD) = 70 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT  
DELTA, UTAH

Well BAC-5 Schematic

Date Drawn  
8/09/15

Design by

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MS

Scale

Last Revision  
Date

BAC-6

Interval (feet)	Drilling Method	USCS	Sample Description
8/8/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2.5	8" Sonic	SP/SM	Gravelly SAND with silt:
2.5-5	8" Sonic	SP	SAND:
5-6.5	8" Sonic	SP/SM	SAND with silt:
6.5-7.5	8" Sonic	SP	SAND:
7.5-10	8" Sonic		SAND:
10-13.5	8" Sonic		SAND:
13.5-15	8" Sonic	SM	Silty SAND:
15-16	8" Sonic	SP	SAND:
16-17.5	8" Sonic	SM	Silty SAND:
17.5-18.25	8" Sonic	SP/SM	SAND with silt:
18.25-18.75	8" Sonic	CL	Sandy CLAY:
18.75-20	8" Sonic	SC	Clayey SAND:
20-21.5	8" Sonic	CH	Sandy CLAY:
21.5-23	8" Sonic	SM	Silty SAND:
23-25	8" Sonic	CL	CLAY:
25-27.5	8" Sonic	CH	CLAY:
27.5-30	8" Sonic		CLAY:
30-32.5	8" Sonic		CLAY:
32.5-33.5	8" Sonic		CLAY:
33.5-35	8" Sonic	SW	SAND:
35-36	8" Sonic	SM	Silty SAND:
36-37.5	8" Sonic	SP/SM	SAND with silt:
37.5-38.5	8" Sonic	CH	CLAY:
38.5-40	8" Sonic	SM	Silty SAND with clay:
40-42.5	8" Sonic		Silty SAND:
42.5-43.5	8" Sonic	CH	Sandy CLAY:
43.5-45	8" Sonic		CLAY:
45-45.5	8" Sonic	SC	Clayey SAND:
45.5-47.5	8" Sonic	CH	CLAY:
47.5-48	8" Sonic	SP	SAND:
48-49.5	8" Sonic	SM	Silty SAND with clay:
49.5-50	8" Sonic	CH	Sandy CLAY:
50-52.5	8" Sonic		CLAY:
52.5-55	8" Sonic		CLAY:
55-56	8" Sonic	SM	Silty SAND:
56-60	8" Sonic	SW	SAND:
60-61	8" Sonic		SAND:
61-62.5	8" Sonic	CH	Sandy CLAY:
62.5-63.5	8" Sonic		CLAY:
63.5-65	8" Sonic	SC	Clayey SAND:

TD = 65; PVC 4-inch screen from 55 to 65; PVC 4-inch riser from -2.5 to 55  
Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Daniel Dodge  
Geologist - Michael Sauerwein

Above-grade, 5-feet long, 8-in. dia., steel Wellhead Protective Monument set in a 2X2 Concrete Pad ~ 2.5-feet stick-up

Ground Surface

8-inch diameter, from 0 to 65-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 55 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 1 to 48-feet bgs

At Time of Drilling, Depth to Uppermost Ground Water ~ 55-feet bgs

Bentonite medium chips, hydrated 5-foot length; from 48 to 53 feet bgs

Centralizers placed ~ the bottom and the top of the well screen.

Sand Filter Pack: 16/30 washed silica sand, 2-feet above screen from 53 to 65 feet bgs

10-foot; 4-inch 0.0200 Slotted, PVC well screen from 55 to 65 feet bgs

Total Depth (TD) = 65 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT  
DELTA, UTAH

Well BAC-6 Schematic

Date Drawn  
8/08/15

Design by

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Scale

Last Revision  
Date

BAC-7

Interval (feet)	Drilling Method	USCS	Sample Description
8/7/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2	8" Sonic	SP/SM	Gravelly SAND:
2-2.5	8" Sonic	SP	Gravelly SAND:
2.5-5	8" Sonic		SAND:
5-7	8" Sonic		SAND:
7-8.5	8" Sonic		SAND:
8.5-9	8" Sonic	SP/SM	SAND with silt:
9-9.5	8" Sonic	SP	SAND:
9.5-11	8" Sonic	SP/SM	SAND with silt:
11-13	8" Sonic		SAND with silt:
13-17	8" Sonic	SM	Silty SAND:
17-18.5	8" Sonic		Silty SAND:
18.5-19	8" Sonic	ML	Sandy SILT:
19-20.25	8" Sonic	SP/SM	SAND with silt:
20.25-22	8" Sonic	CL	Sandy CLAY:
22-24	8" Sonic		Sandy CLAY:
24-25	8" Sonic	SC	Clayey SAND:
25-27.5	8" Sonic	CH	CLAY:
27.5-36.5	8" Sonic		CLAY:
36.5-40	8" Sonic	SP	SAND:
40-41.25	8" Sonic		SAND:
41.25-43.75	8" Sonic	SP/SM	SAND with silt:
43.75-45	8" Sonic	CH	CLAY:
45-47.5	8" Sonic		CLAY:
47.5-49	8" Sonic		CLAY:
49-50	8" Sonic	SM	Silty SAND:
50-57.5	8" Sonic	CH	CLAY:
57.5-60	8" Sonic	SW	SAND:
60-62.5	8" Sonic		SAND:
62.5-64	8" Sonic	SP	SAND:
64-65	8" Sonic	CH	CLAY:
65-66.25	8" Sonic		Sandy CLAY:
66.25-67.5	8" Sonic		CLAY:
67.5-70	8" Sonic		CLAY:

TD = 70'; PVC 4-inch screen from 57 to 67; PVC 4-inch riser from -2.5 to 57  
Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Daniel Dodge  
Geologist - Michael Sauerwein

Above-grade, 5-feet. long, 8-in. dia., steel Wellhead Protective Monument set in a 2X2 Concrete Pad ~ 2.5-feet. stick-up

Ground Surface

8-inch diameter, from 0 to 70-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 57 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 0 to 50-feet bgs

Bentonite medium chips, from 50 to 55 feet bgs

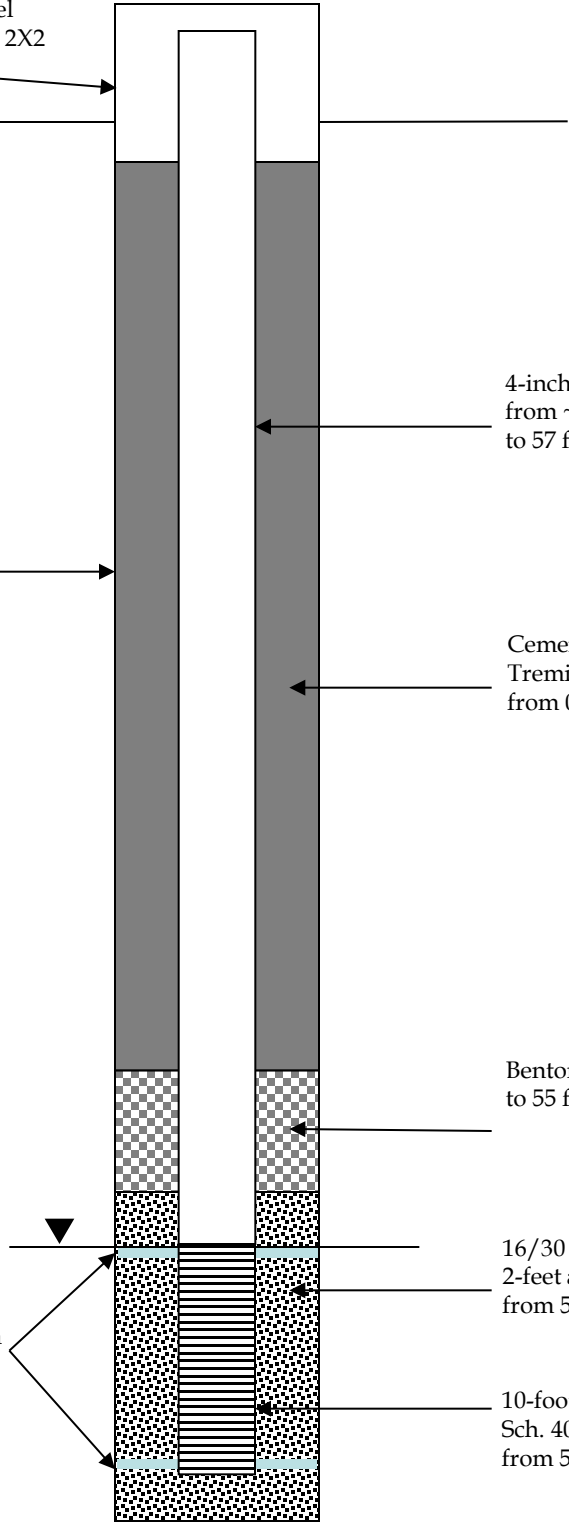
At Time of Drilling, Depth to Uppermost Ground Water ~ 57.5-feet bgs

16/30 washed silica sand, 2-feet above screen from 55 to 70 feet bgs

Centralizers placed ~ the bottom and the top of the well screen.

10-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 57 to 67 feet bgs

Total Depth (TD) = 70 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT  
DELTA, UTAH

Well BAC-7 Schematic

Date Drawn  
8/07/15

Design by

Drawn by

MS

Scale

Last Revision  
Date



**Project Name:** Intermountain Power Service Corporation

**Project No.:** 203709098

**Completion Date:** 2019-04-29

**Boring Monitor Well:** BAC-8

**Drilling Firm:** Cascade

**Driller:** Ryan Miller

**Boring Method:** Sonic

**Logged by:** Rich Pratt

**Boring Diameter:** 10 inches

**Depth to Water at Drilling:** 67 feet

**Depth to Water at Drilling (static at 24 hours):**  
45.59 feet

BAC-8

Interval (feet)	Description
0 - 1	Light brown fine-grained sand with clay, dry
1 - 13	Light brown clay with silt, dry
13 - 17	Light brown fine-grained sand with clay, dry
17 - 18	Light brown clay with sand, moist
18 - 19	Medium brown sand, saturated
19 - 21	Light brown clay with sand, moist
21 - 27	Light brown clay with sand, dry
27 - 28	Brown with red clay, moist
28 - 31	Brown clay, moist
31 - 34	Gray clay, moist
34 - 43	Brown clay, moist
43 - 56	Medium brown medium-grained sand, moist
56 - 56.5	Medium brown medium-grained sand with pebbles, moist
56.5 - 57	Medium brown medium-grained sand, moist
57 - 63	Brown clay, moist
63 - 65	Medium brown fine-grained sand, moist
65 - 66.5	Brown clay, moist
66.5 - 67	Medium brown fine-grained sand, moist
67 - 68	Medium brown fine-grained sand, saturated
68 - 69.5	Medium brown fine-grained sand
69.5 - 77	Red and brown clay

Well Completion materials and Depth Intervals (feet) Below Ground Surface

**Surface Completion:** Stick-up

**Top of 6 in. PVC Casing Elevation (Relative Datum Survey):** NA

**Casing, solid (6-inch PVC):** 0-52.62 feet

**Top of Manhole Cover (Relative Datum Survey):**  
NA

**Screen (6 inch, 0.02 slotted, PVC):** 52.62-77.62 feet

**Sand Pack:** 16/30 sand, 47.62-77.62 feet

**Bentonite Seal:** Hydrolyzed bentonite pellet seal  
40.62-47.62 feet



Top of PVC casing above ground surface ~ 2.38 feet. stick-up

Above-grade, 5-feet. long, 8-in. square, steel Wellhead Protective Monument ~ 3.25 feet. stick-up

Ground Surface

6-inch Diameter, Sch 40 PVC Well Casing from below top of casing - 80 feet

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 40.62 feet below ground surface (bgs)

10-inch boring from 0 to 77.62-feet bgs

Medium bentonite chips From 40.62 to 47.62 feet bgs

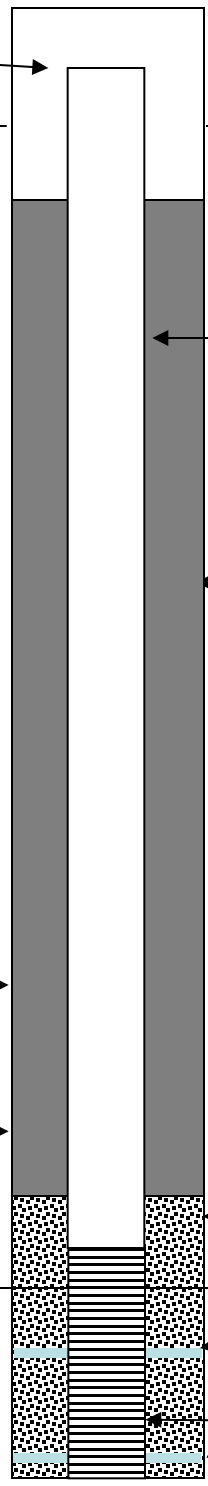
Sand Filter Pack (16/30 washed, silica sand, 5 feet above screen from 47.62 to 77.62 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 67 feet bgs

Centralizers - placed at the bottom and at 25-30 foot intervals

25-feet; 6-inch 0.020-slotted, PVC well screen from 52.62 to 77.62 feet bgs

Total Depth (TD) = 77.62 feet bgs



ISPC BOTTOM ASH SURFACE IMPOUNDMENT  
DELTA, UTAH

BAC-8 Schematic

Date Drawn  
6-4-19

Design by

Drawn by RP

Scale

Last Revision  
Date



**Project Name:** Intermountain Power Service Corporation

**Boring Monitor Well:** BAC-9

**Project No.:** 203709098

**Completion Date:** 2019-05-1

**Drilling Firm:** Cascade

**Boring Method:** Sonic

**Boring Diameter:** 10 inches

**Driller:** Ryan Miller

**Logged by:** John Russell

**Depth to Water at Drilling:** 60 feet

**Depth to Water at Drilling (static at 24 hours):**  
44.82 feet

BAC-9

Interval (feet)	Description
0 - 10	Light gray to brown silt with clay to clay with silt, dry
10 - 20	Light gray to brown silt, dry
20 - 30	Light brown silt, dry
30 - 44	Light brown silt, dry
44 - 50	Medium brown clay, dry
50 - 54	Light brown silt to clay with silt, moist
54 - 54.5	Medium brown silt with clay, moist
54.5 - 60	Light brown clay with silt, moist
60 - 77	Medium brown silt with clay and silt stringers, saturated

Well Completion materials and Depth Intervals (feet) Below Ground Surface

**Surface Completion:** Stick-up

**Casing, solid (6-inch PVC):** 0-53.11 feet

**Screen (6 inch, 0.02 slotted, PVC):** 53.11-78.11 feet

**Sand Pack:** 16/30 sand, 48.11-78.11 feet

**Bentonite Seal:** Hydrolyzed bentonite pellet seal  
41.11-48.11 feet

**Top of 6 in. PVC Casing Elevation (Relative Datum Survey):** NA

**Top of Manhole Cover (Relative Datum Survey):**  
NA

Top of PVC casing above ground surface ~ 1.98 feet. stick-up

Above-grade, 5-feet. long, 8-in. square, steel Wellhead Protective Monument ~ 2.57 feet. stick-up

Ground Surface

6-inch Diameter, Sch 40 PVC Well Casing from below top of casing - 78.11 feet

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 41.11 feet below ground surface (bgs)

10-inch boring from 0 to 78.11-feet bgs

Medium bentonite chips From 41.11 to 48.11 feet bgs

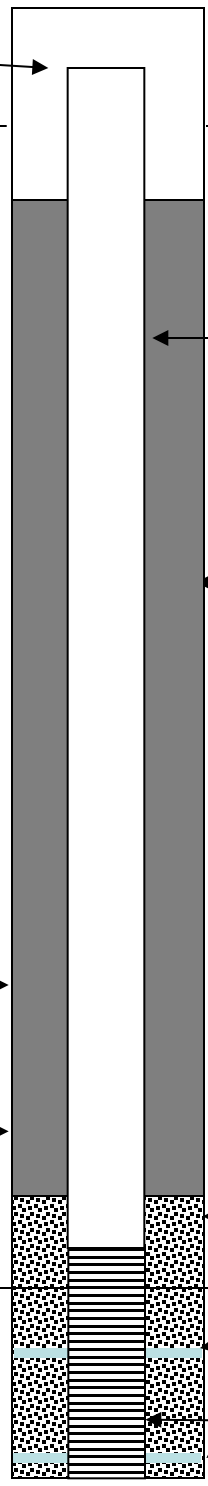
Sand Filter Pack (16/30 washed, silica sand, 5 feet above screen from 48.11 to 78.11 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 60 feet bgs

Centralizers - placed at the bottom and at 25-30 foot intervals

25-feet; 6-inch 0.020-slotted, PVC well screen from 53.11 to 78.11 feet bgs

Total Depth (TD) = 78.11 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT  
DELTA, UTAH

BAC-9 Schematic

Date Drawn  
6-4-19

Design by

Drawn by

RP

Scale

Last Revision  
Date



**Project Name:** Intermountain Power Service Corporation

**Boring Monitor Well:** BAC-10

**Project No.:** 203709098

**Completion Date:** 2019-05-3

**Drilling Firm:** Cascade

**Boring Method:** Sonic

**Boring Diameter:** 10 inches

**Driller:** Ryan Miller

**Logged by:** Rich Pratt

**Depth to Water at Drilling:** 69 feet

**Depth to Water at Drilling (static at 24 hours):** 63.1 feet

BAC-10

Interval (feet)	Description
0 - 1	Light brown silt, dry
1 - 3	Light brown silt with clay, dry
3 - 14	Light brown clay with silt, dry
14 - 17	Light brown fine-grained sand, dry
17 - 19	Light brown fine-grained sand with clay, moist
19 - 21	Light brown fine-grained sand with clay, moist
21 - 23	Light brown fine-grained sand, moist
23 - 25	Light brown fine-grained sand with clay, moist
25 - 26	Light brown fine-grained sand, moist
26 - 27	Light brown fine-grained sand with clay, moist
27 - 28	Light brown fine-grained sand, moist to moist
27 - 34	Light brown fine-grained sand, moist
34 - 34.5	Light brown silt with clay, dry
34.5 - 40.5	Red brown clay, dry
40.5 - 41	Medium brown medium grained sand, moist to moist
41 - 45	Medium brown clay, moist
45 - 46	Medium brown sand, moist to moist
46 - 48	Medium brown clay, moist
48 - 56.5	Red brown clay, moist
56.5 - 57	Gray clay, moist
57 - 62	Light brown clay, moist to moist
62 - 63	Medium brown medium grained sand, moist
63 - 64	Medium brown medium grained sand with clay, moist
64 - 69	Red, brown, and gray clay, moist
69 - 69.5	Medium brown sand, saturated
69.5 - 77	Red, brown, and gray clay
77 - 79	Medium brown clay with sand
79 - 81	Medium brown clay
81 - 85	Medium brown clay with sand

85 - 87	Medium brown clay, moist
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Well Completion materials and Depth Intervals (feet) Below Ground Surface

**Surface Completion:** Stick-up

**Casing, solid (6-inch PVC):** 0-62.95 feet

**Screen (6 inch, 0.02 slotted, PVC):** 62.95-87.95 feet

**Sand Pack:** 16/30 sand, 57.95-87.95 feet

**Bentonite Seal:** Hydrolyzed bentonite pellet seal  
50.95-57.95 feet

**Top of 6 in. PVC Casing Elevation (Relative Datum Survey):** NA

**Top of Manhole Cover (Relative Datum Survey):**  
NA

Top of PVC casing above ground surface ~ 2.15 feet. stick-up

Above-grade, 5-feet. long, 8-in. square, steel Wellhead Protective Monument ~ 3.0 feet. stick-up

Ground Surface

6-inch Diameter, Sch 40 PVC Well Casing from below top of casing - 90.10 feet

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 50.95 feet below ground surface (bgs)

10-inch boring from 0 to 87.95-feet bgs

Medium bentonite chips From 50.95 to 57.95 feet bgs

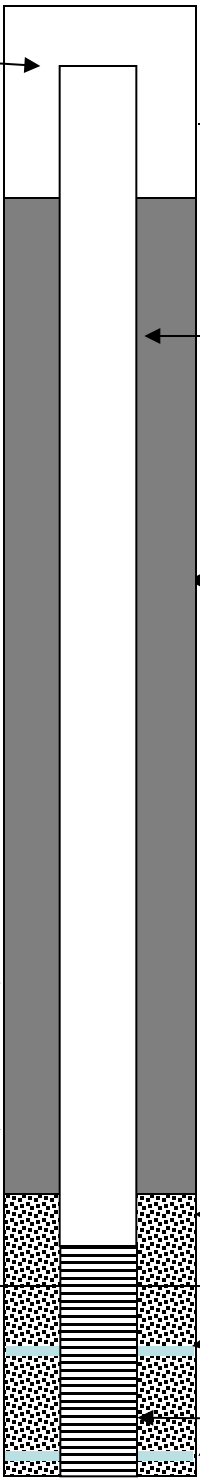
Sand Filter Pack (16/30 washed, silica sand, 5 feet above screen from 57.95 to 87.95 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 69 feet bgs

Centralizers - placed at the bottom and at 25-30 foot intervals

25-feet; 6-inch 0.020-slotted, PVC well screen from 62.95 to 87.95 feet bgs

Total Depth (TD) = 87.95 feet bgs



IPSC – BOTTOM ASH SURFACE IMPOUNDMENT  
DELTA, UTAH

BAC-10 Schematic

Date Drawn  
6-4-19

Design by

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RP

Scale

Last Revision  
Date





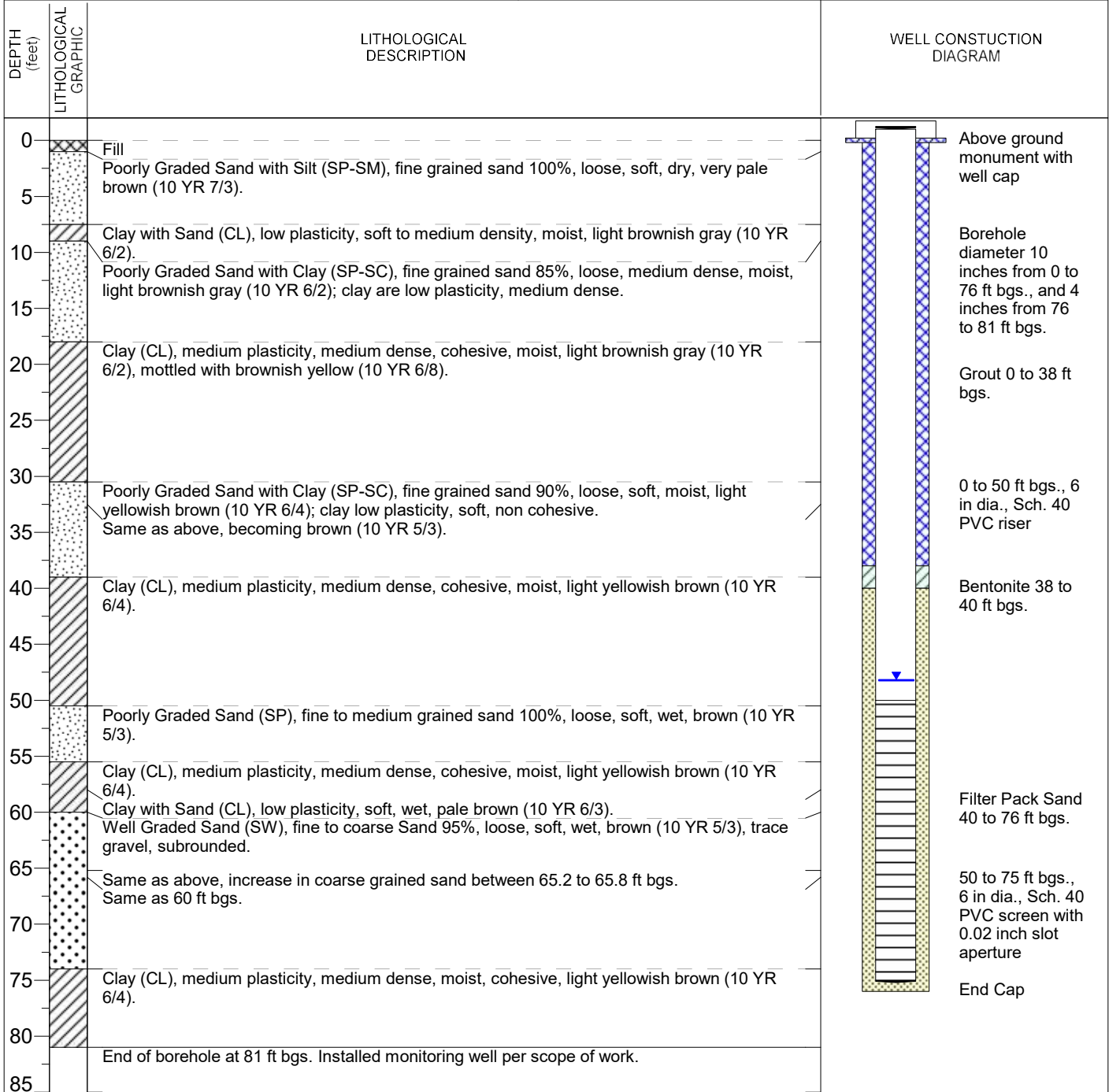
**MONITORNG WELL ID: BAC-11**

CLIENT Intermountain Power Service Corporation  
PROJECT Monitoring Well Installation  
SITE LOCATION Southwest of Bottom Ash Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
DRILLING METHOD: Sonic  
DRILLING EQUIPMENT: Pro Sonic 600 11-77287  
SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
10 inch sonic core barrel 0 to 91 ft bgs.

COORDINATE SYSTEM:  
EASTING:                               NORTHING:  
ELEVATION:                              BOREHOLE ANGLE: 90 degrees  
TOTAL DEPTH (ft.): 81               GROUNDWATER LEVEL (ft. btoc.): 48.21  
DATE STARTED: 12/6/2019   DATE FINISHED: 12/7/2019  
LOGGED BY: Michael Ward



Notes: bgs. = below ground surface   Sch. = Schedule  
dia. = diameter                               YR = Yellow-Red  
ft = feet



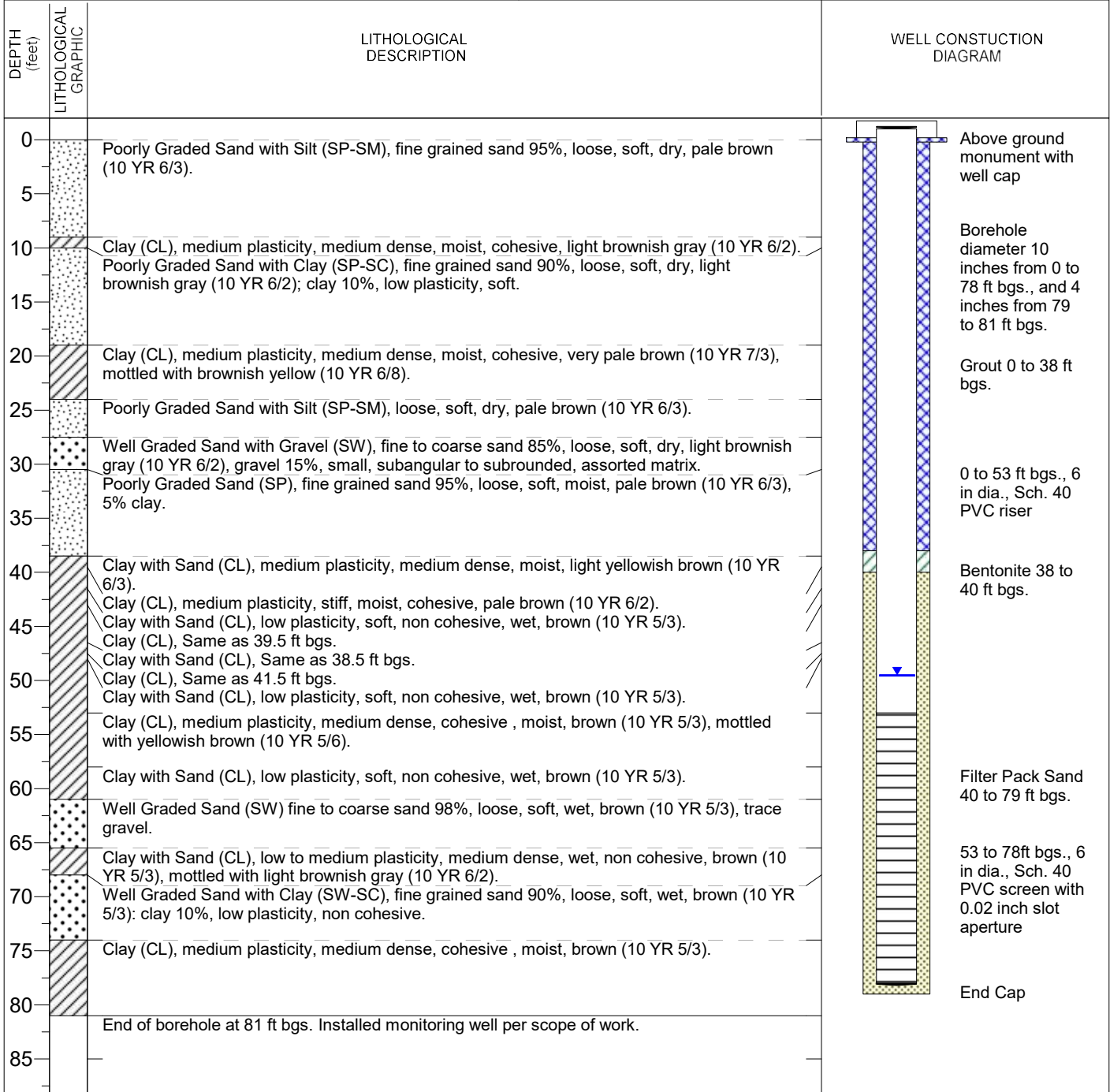
MONITORING WELL ID: **BAC-12**

CLIENT Intermountain Power Service Corporation  
PROJECT Monitoring Well Installation  
SITE LOCATION Southwest of Bottom Ash Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
DRILLING METHOD: Sonic  
DRILLING EQUIPMENT: Pro Sonic 600 11-77287  
SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
10 inch sonic core barrel 0 to 91 ft bgs.

COORDINATE SYSTEM:  
EASTING:                               NORTHING:  
ELEVATION:                           BOREHOLE ANGLE: 90 degrees  
TOTAL DEPTH (ft.): 81               GROUNDWATER LEVEL (ft. btoc.): 49.55  
DATE STARTED: 12/4/2019   DATE FINISHED: 12/6/2019  
LOGGED BY: Michael Ward



Notes: bgs. = below ground surface   Sch. = Schedule  
dia. = diameter                       YR = Yellow-Red  
ft = feet



MONITORING WELL ID: **BAC-13**

CLIENT Intermountain Power Service Corporation

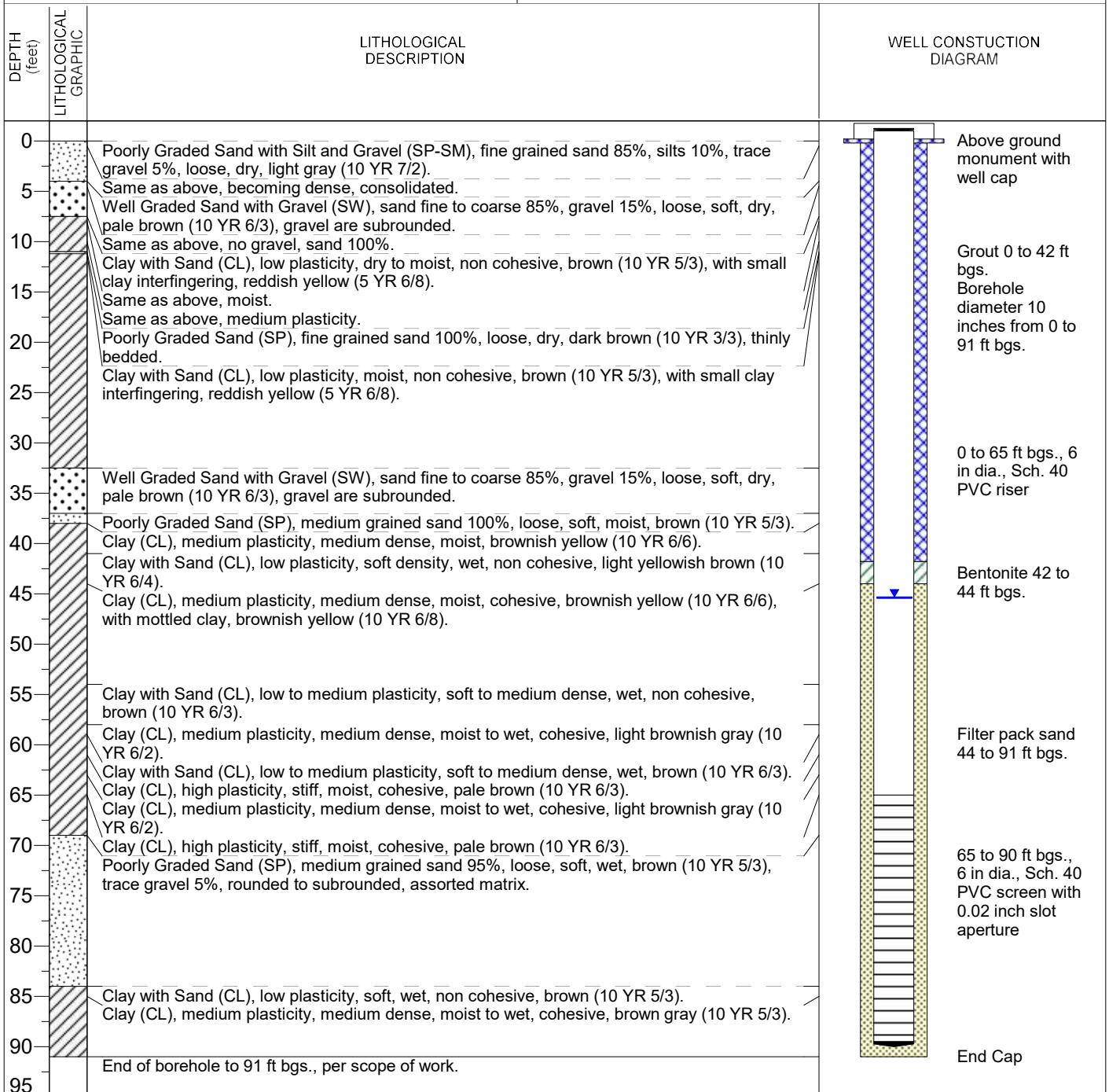
PROJECT Monitoring Well Installation

SITE LOCATION Southwest of Bottom Ash Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
DRILLING METHOD: Sonic  
DRILLING EQUIPMENT: Pro Sonic 600 11-77287  
SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
10 inch sonic core barrel 0 to 91 ft bgs.

COORDINATE SYSTEM:  
EASTING:                                      NORTHING:  
ELEVATION:                                    BOREHOLE ANGLE:     90 degrees  
TOTAL DEPTH (ft.) 91                      GROUNDWATER LEVEL (ft. btoc.): 45.38  
DATE STARTED: 11/16/2019 DATE FINISHED: 11/18/2019  
LOGGED BY: Michael Ward



Notes: bgs. = below ground surface     Sch. = Schedule  
dia. = diameter                             YR = Yellow-Red  
ft = feet



MONITORING WELL ID: **BAC-14**

CLIENT Intermountain Power Service Corporation

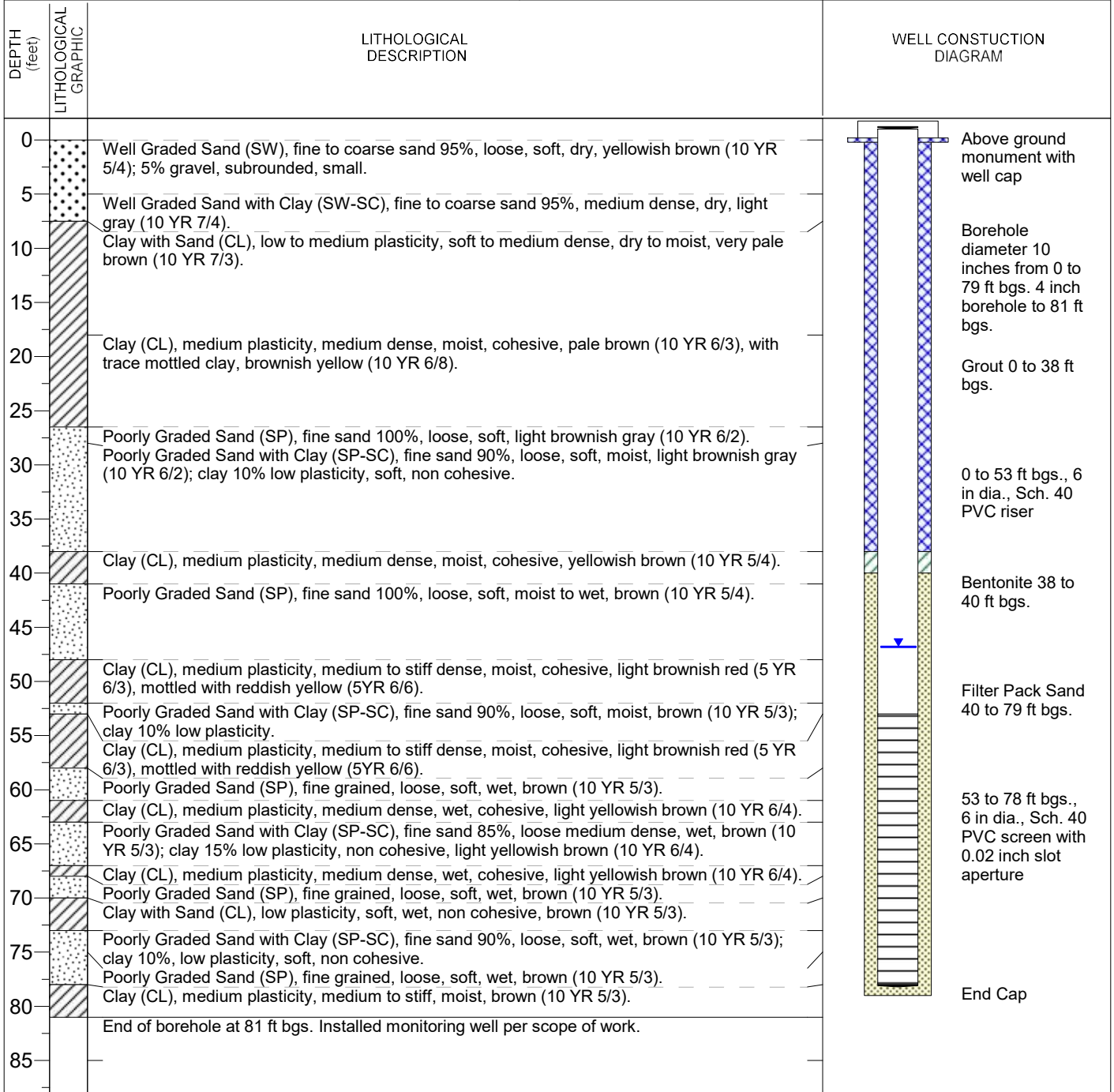
PROJECT Monitoring Well Installation

SITE LOCATION Southwest of Bottom Ash Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600 11-77287  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 81 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.

COORDINATE SYSTEM:  
 EASTING: NORTHING:  
 ELEVATION: BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.) 81 GROUNDWATER LEVEL (ft. btoc.): 46.81  
 DATE STARTED: 11/21/2019 DATE FINISHED: 12/4/2019  
 LOGGED BY: Michael Ward



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet





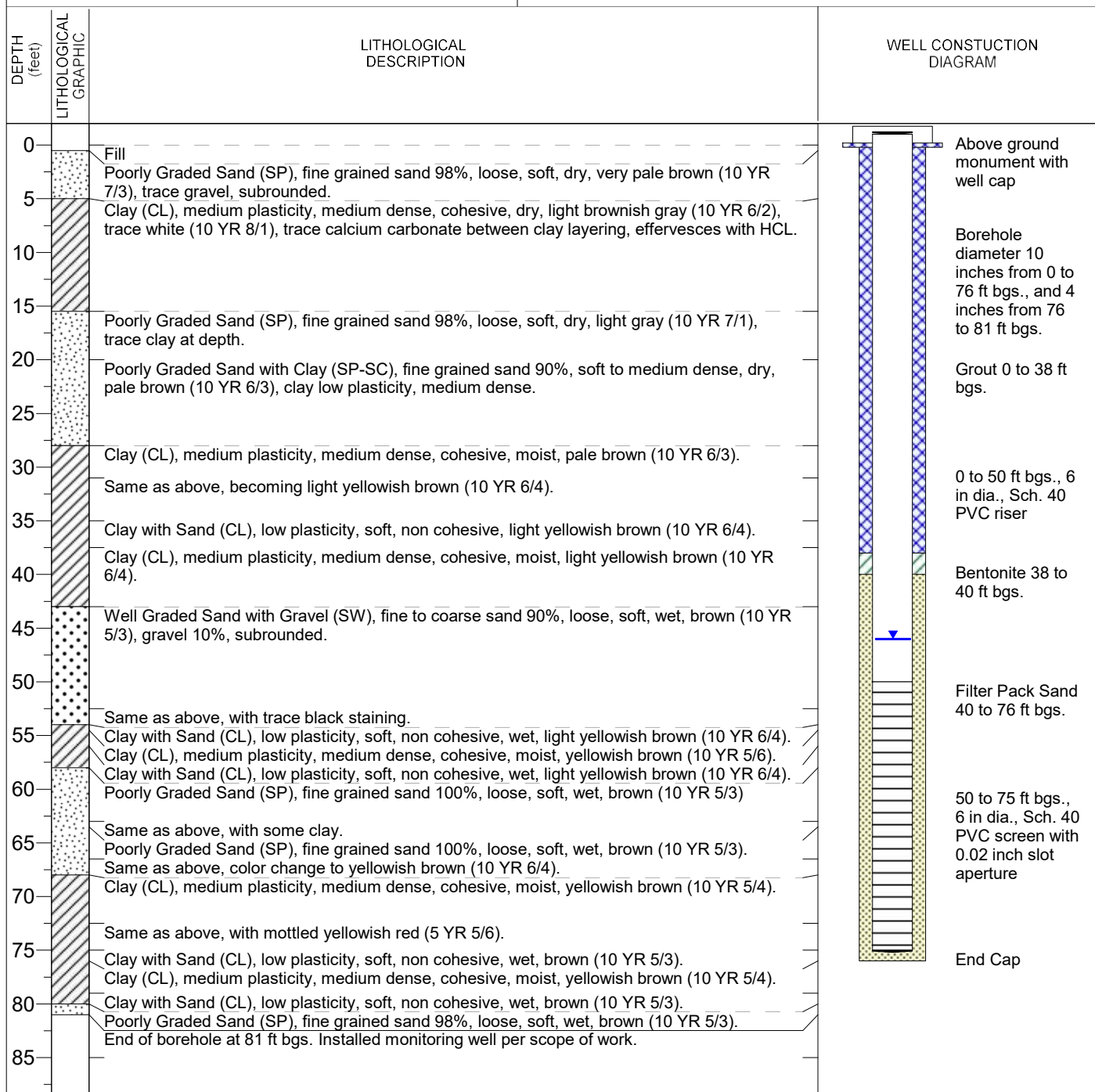
MONITORING WELL ID: **BAC-15**

CLIENT: Intermountain Power Service Corporation  
 PROJECT: Monitoring Well Installation  
 SITE LOCATION: Southwest of Bottom Ash Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600 11-77287  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
 10 inch sonic core barrel 0 to 91 ft bgs.

COORDINATE SYSTEM:  
 EASTING:    NORTHING:  
 ELEVATION:                                      BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 81                      GROUNDWATER LEVEL (ft. btoc.): 46.03  
 DATE STARTED: 12/7/2019   DATE FINISHED: 12/9/2019  
 LOGGED BY: Michael Ward



Notes: bgs. = below ground surface    Sch. = Schedule  
 dia. = diameter                      YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-16**

CLIENT Intermountain Power Service Corporation

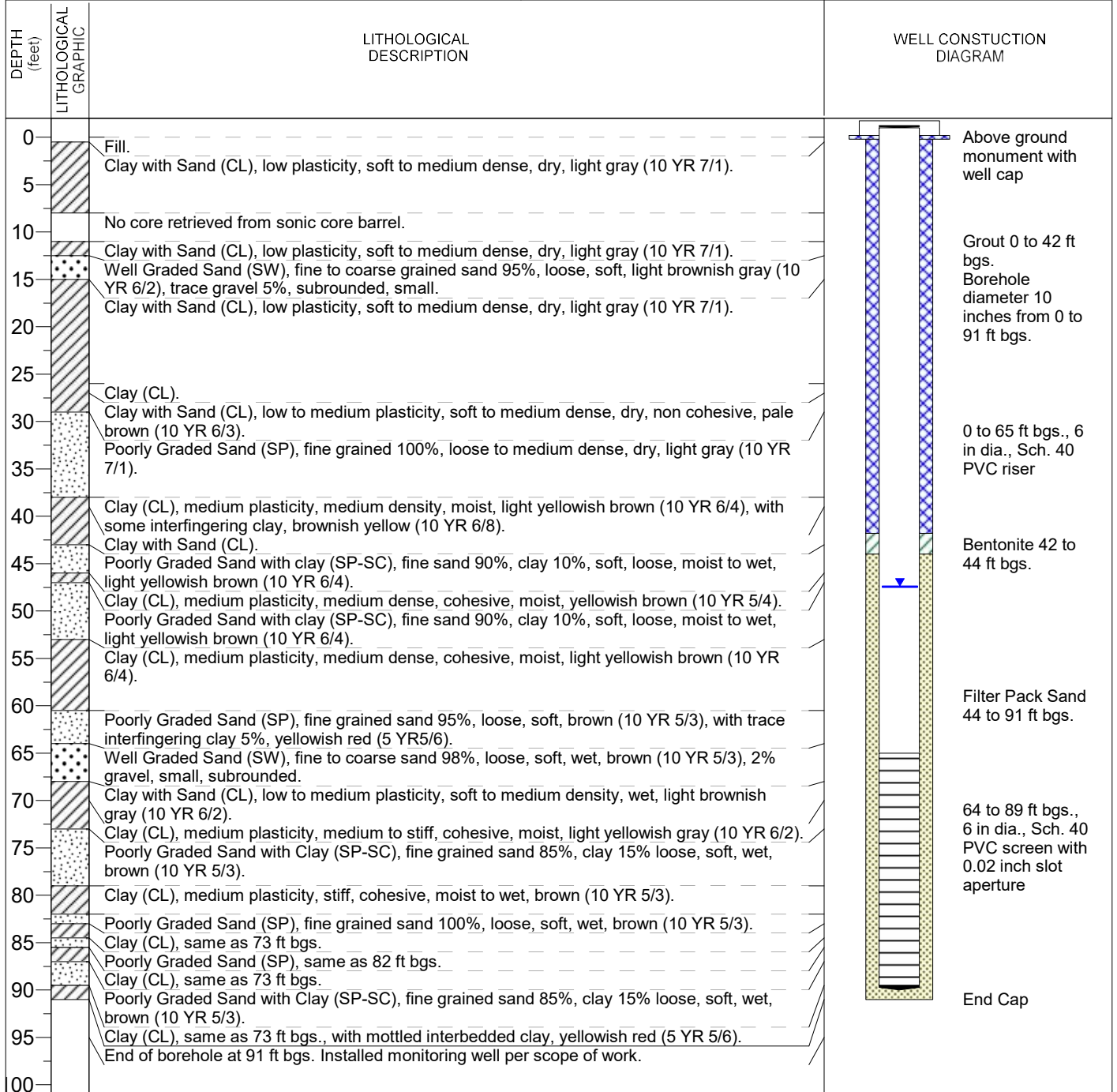
PROJECT Monitoring Well Installation

SITE LOCATION Southwest of Bottom Ash Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600 11-77287  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
 10 inch sonic core barrel 0 to 91 ft bgs.

COORDINATE SYSTEM:  
 EASTING:                               NORTHING:  
 ELEVATION:                           BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.) 91               GROUNDWATER LEVEL (ft. btoc.): 47.45  
 DATE STARTED: 11/18/2019 DATE FINISHED: 11/21/2019  
 LOGGED BY: Michael Ward



Notes: bgs. = below ground surface   Sch. = Schedule  
 dia. = diameter                       YR = Yellow-Red  
 ft = feet





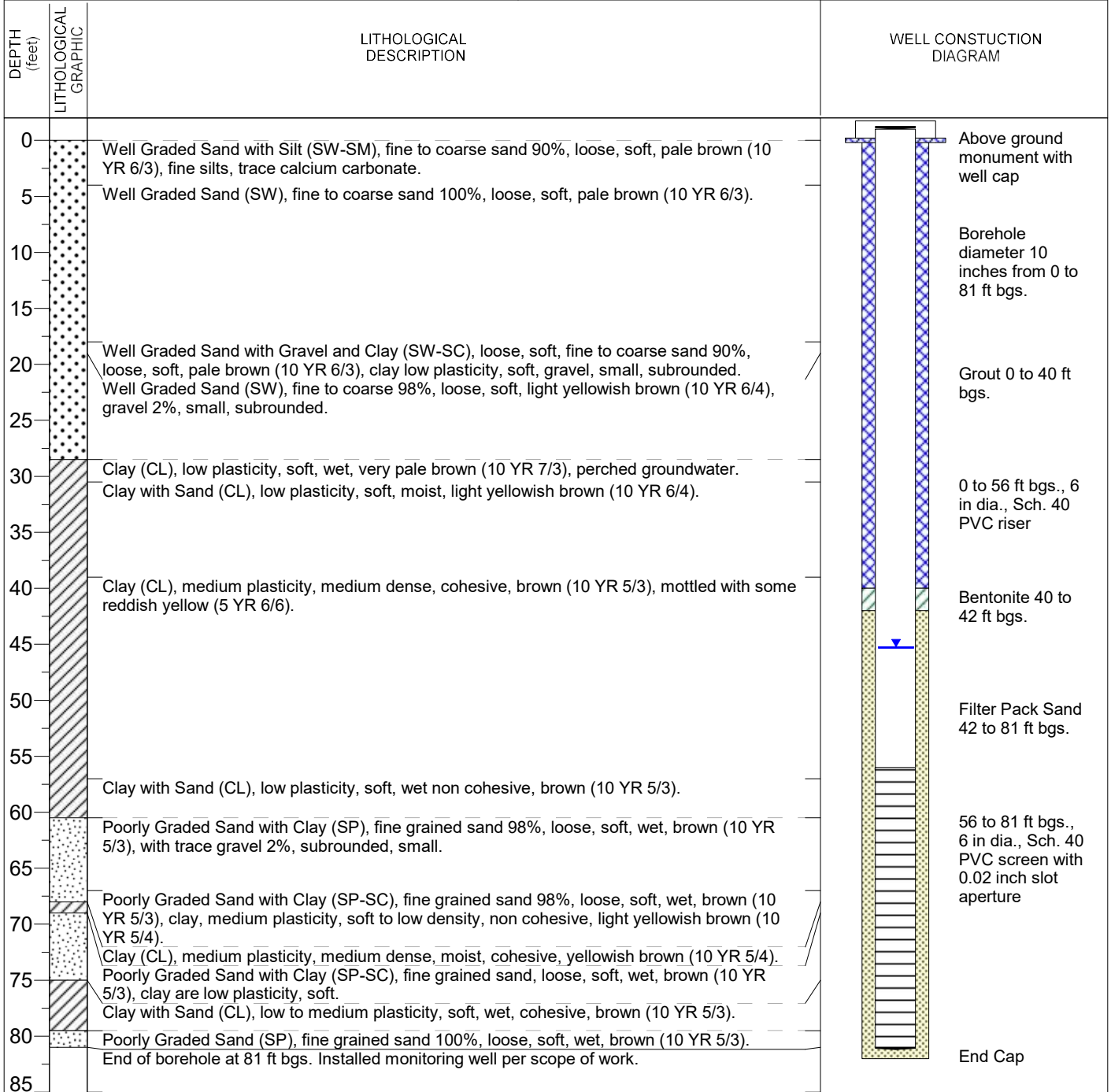
MONITORNG WELL ID: **BAC-17**

CLIENT: Intermountain Power Service Corporation  
 PROJECT: Monitoring Well Installation  
 SITE LOCATION: Southwest of Bottom Ash Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600 11-77287  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
 10 inch sonic core barrel 0 to 91 ft bgs.

COORDINATE SYSTEM:  
 EASTING: NORTHING:  
 ELEVATION: BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 82 GROUNDWATER LEVEL (ft. btoc.): 45.3  
 DATE STARTED: 12/12/9/2019 DATE FINISHED: 12/10/2019  
 LOGGED BY: Michael Ward



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-18**

CLIENT: Intermountain Power Service Corporation

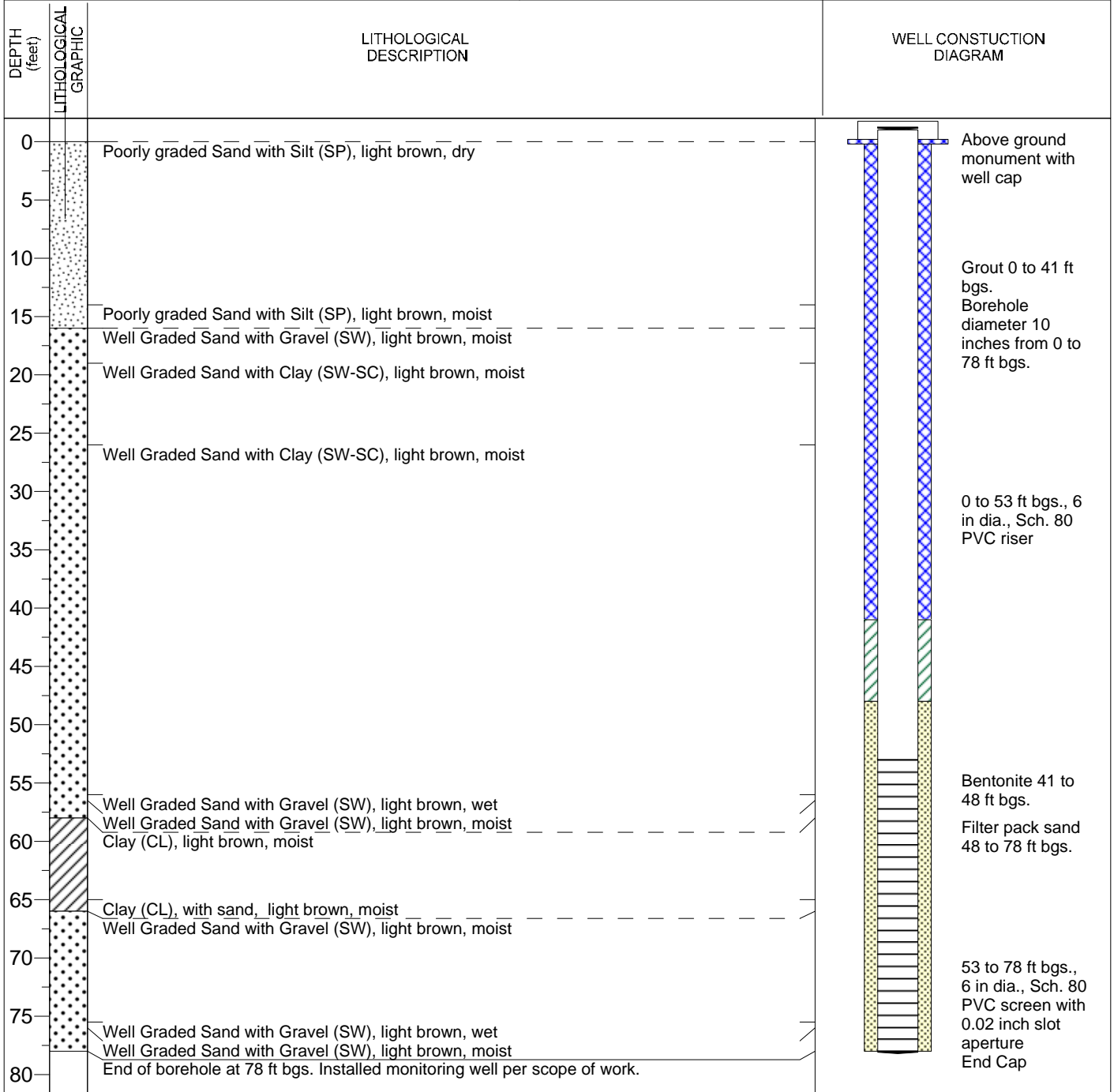
PROJECT: Monitoring Well Installation

SITE LOCATION: Down Gradient North



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING: NORTHING:  
 ELEVATION: BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78 GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/8/2020 DATE FINISHED: 5/9/2020  
 LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-19**

CLIENT: Intermountain Power Service Corporation

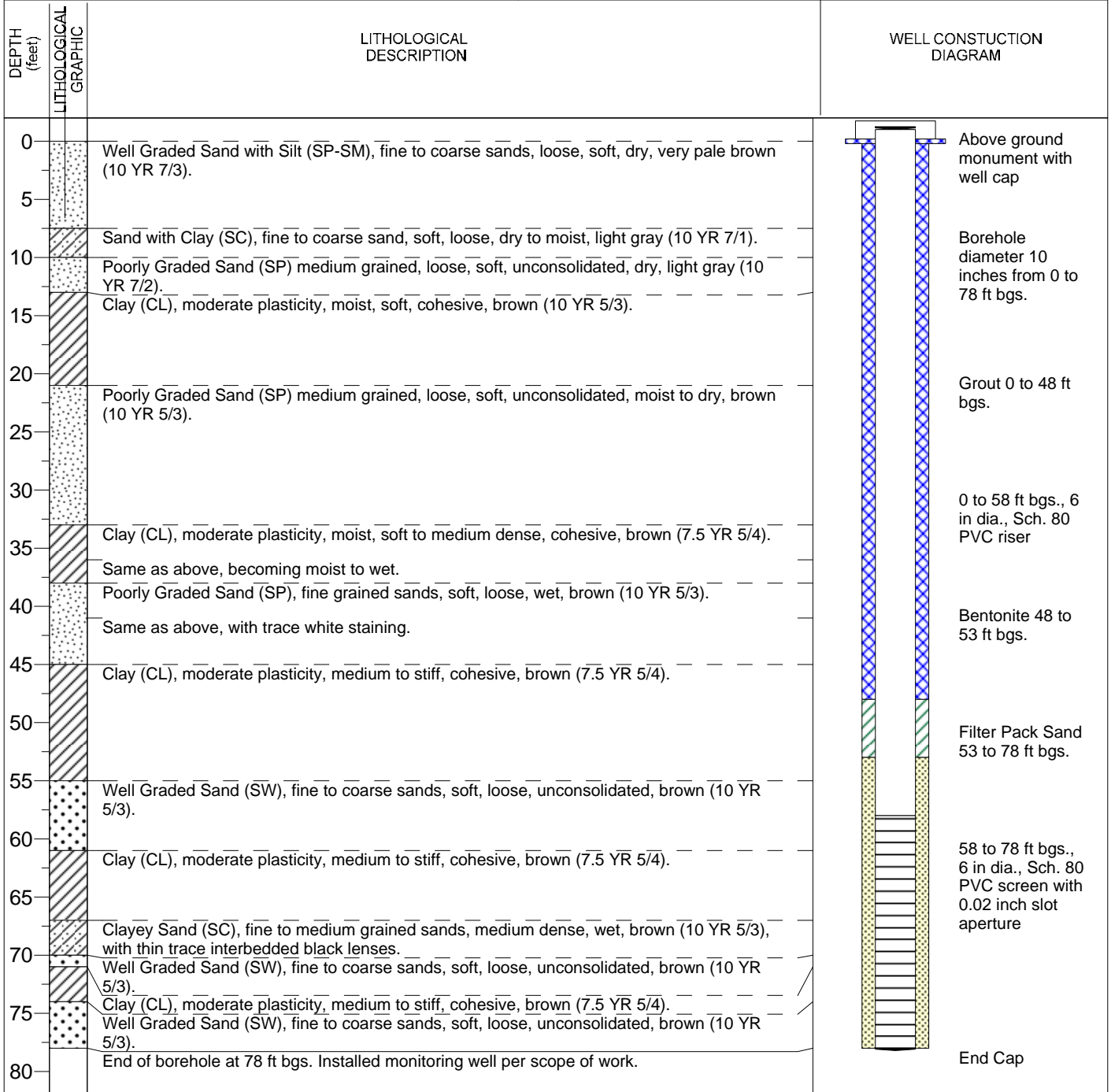
PROJECT: Monitoring Well Installation

SITE LOCATION: Down Gradient South



DRILLING CONTRACTOR: Cascade Drilling  
DRILLING METHOD: Sonic  
DRILLING EQUIPMENT: Pro Sonic 600  
SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
10 inch sonic core barrel 0 to 91 ft bgs.,

COORDINATE SYSTEM:  
EASTING: NORTHING:  
ELEVATION: BOREHOLE ANGLE: 90 degrees  
TOTAL DEPTH (ft.): 78 GROUNDWATER LEVEL (ft. btoc.):  
DATE STARTED: 5/9/2020 DATE FINISHED: 5/9/2020  
LOGGED BY: Michael Ward



Notes: bgs. = below ground surface Sch. = Schedule  
dia. = diameter YR = Yellow-Red  
ft = feet



MONITORING WELL ID: **BAC-20**

CLIENT: Intermountain Power Service Corporation

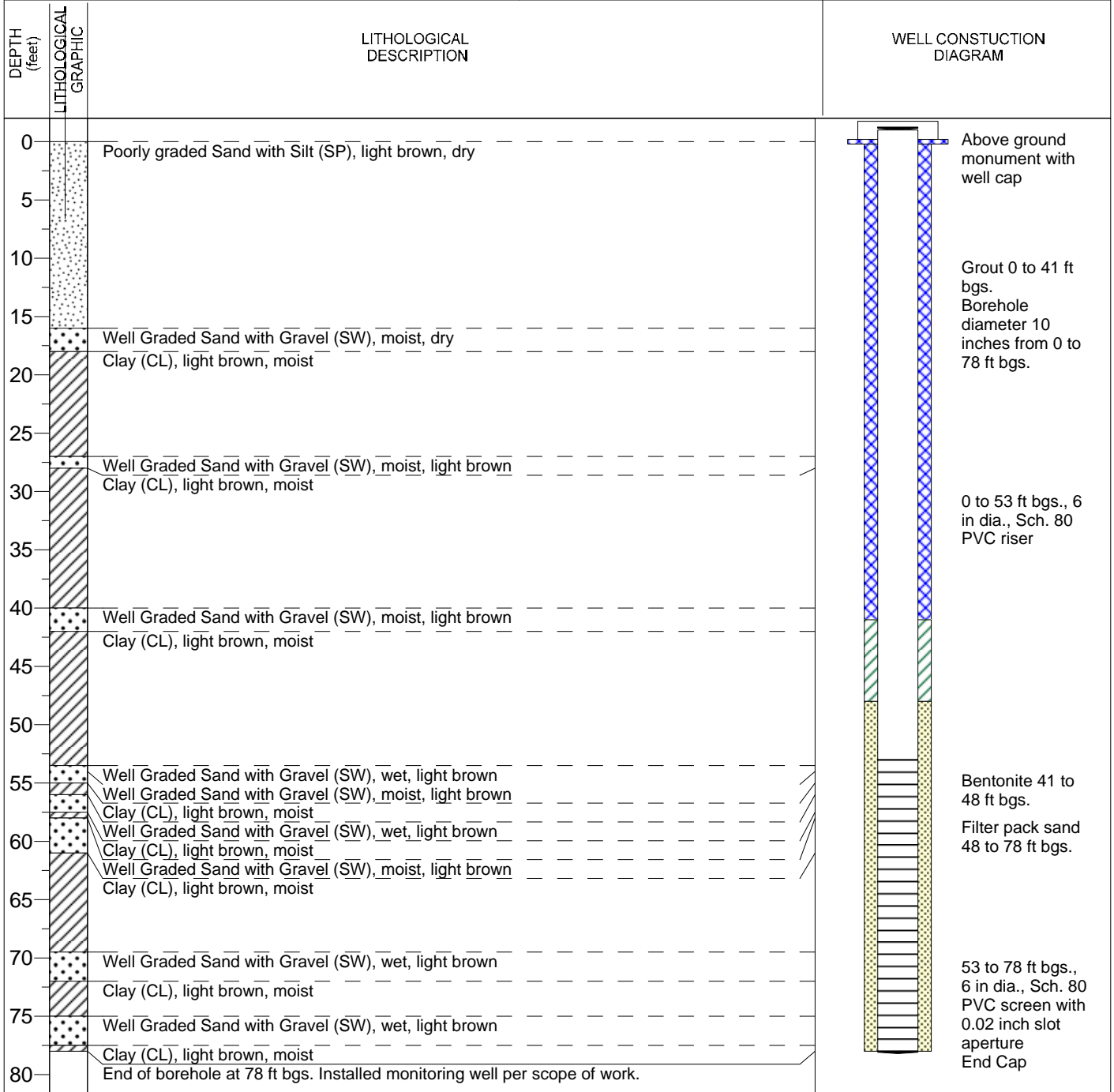
PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                        NORTHING:  
 ELEVATION:                      BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78                GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/9/2020    DATE FINISHED: 5/10/2020  
 LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface    Sch. = Schedule  
 dia. = diameter                        YR = Yellow-Red  
 ft = feet



MONITORING WELL ID: **BAC-21**

CLIENT: Intermountain Power Service Corporation

PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
 10 inch sonic core barrel 0 to 91 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                          NORTHING:  
 ELEVATION:                        BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 88          GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/10/2020      DATE FINISHED: 5/10/2020  
 LOGGED BY: Michael Ward

DEPTH (feet)	LITHOLOGICAL GRAPHIC	LITHOLOGICAL DESCRIPTION	WELL CONSTRUCTION DIAGRAM
0		Poorly Graded Sand with Silt (SP-SM), fine to coarse sand, loose, soft, unconsolidated, very pale brown (10 YR 7/3).	
5			
10		Sandy Clay (SC), fine to coarse sands, medium dense, dry, pale brown (10 YR 7/3).	
15		Clay (CL), low to medium plasticity, cohesive, medium dense, brown (10 YR 5/3).	
20			
25			
30		Well Graded Sand with Clay (SW-SC), fine grained sand, medium dense, dry to moist, very pale brown (10 YR 7/3).	
35		Clay (CL), medium plasticity, cohesive, medium dense, light brownish gray (10 YR 6/2).	
40		Well Graded Sand (SW), fine grained sand, loose, soft, brown (10 YR 5/3).	
45		Clay (CL), medium to high plasticity, stiff, cohesive, pale brown (10 YR 6/3).	
45		Same as above, becoming yellowish red (10 YR 5/4).	
50		Well Graded Sand (SW), fine grained sand, loose, soft, brown (10 YR 5/3).	
50		Clay (CL), medium to high plasticity, stiff, cohesive, pale brown (10 YR 6/3).	
55		Sandy Clay (SC), fine grained sand, loose to medium dense, wet, yellowish brown (10 YR 5/4).	
60		Clay (CL), medium plasticity, stiff, cohesive, light yellowish brown (10 YR 6/4).	
65		Sandy Clay (SC), fine grained sand, loose to medium dense, wet, yellowish brown (10 YR 5/4).	
70			
75			
80		Well Graded Sand (SW), medium grained sand, soft, loose, brown (10 YR 5/4).	
85		Clay (CL), medium plasticity, medium to stiff density, cohesive, light yellowish brown (10 YR 6/4).	
90		End of borehole at 88 ft bgs. Installed monitoring well per scope of work.	
95			

Notes: bgs. = below ground surface      Sch. = Schedule  
 dia. = diameter                              YR = Yellow-Red  
 ft = feet



MONITORING WELL ID: **BAC-22**

CLIENT: Intermountain Power Service Corporation

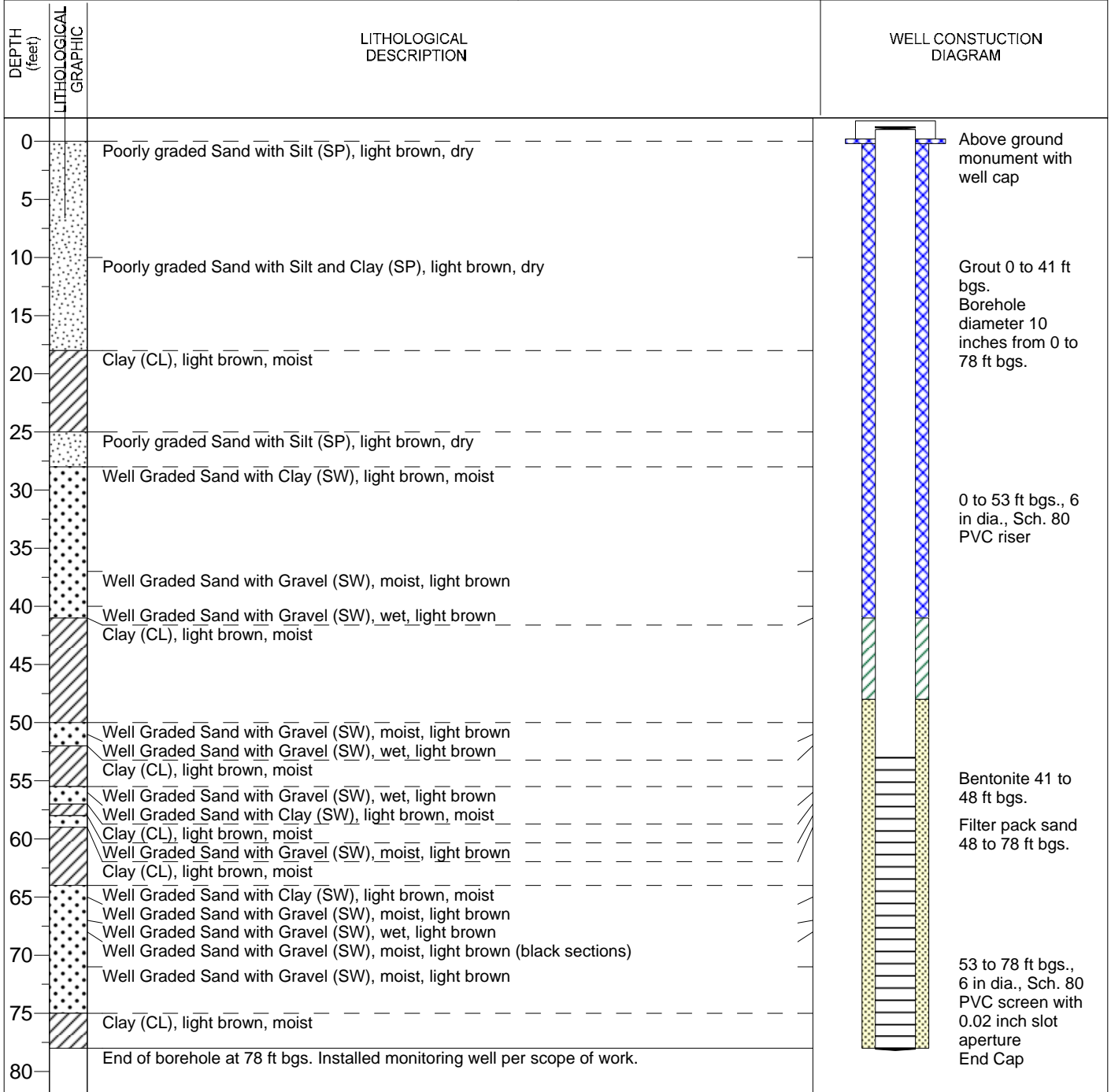
PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                               NORTHING:  
 ELEVATION:                           BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78               GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/10/2020   DATE FINISHED: 5/10/2020  
 LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface   Sch. = Schedule  
 dia. = diameter                       YR = Yellow-Red  
 ft = feet





MONITORING WELL ID: **BAC-23**

CLIENT: Intermountain Power Service Corporation

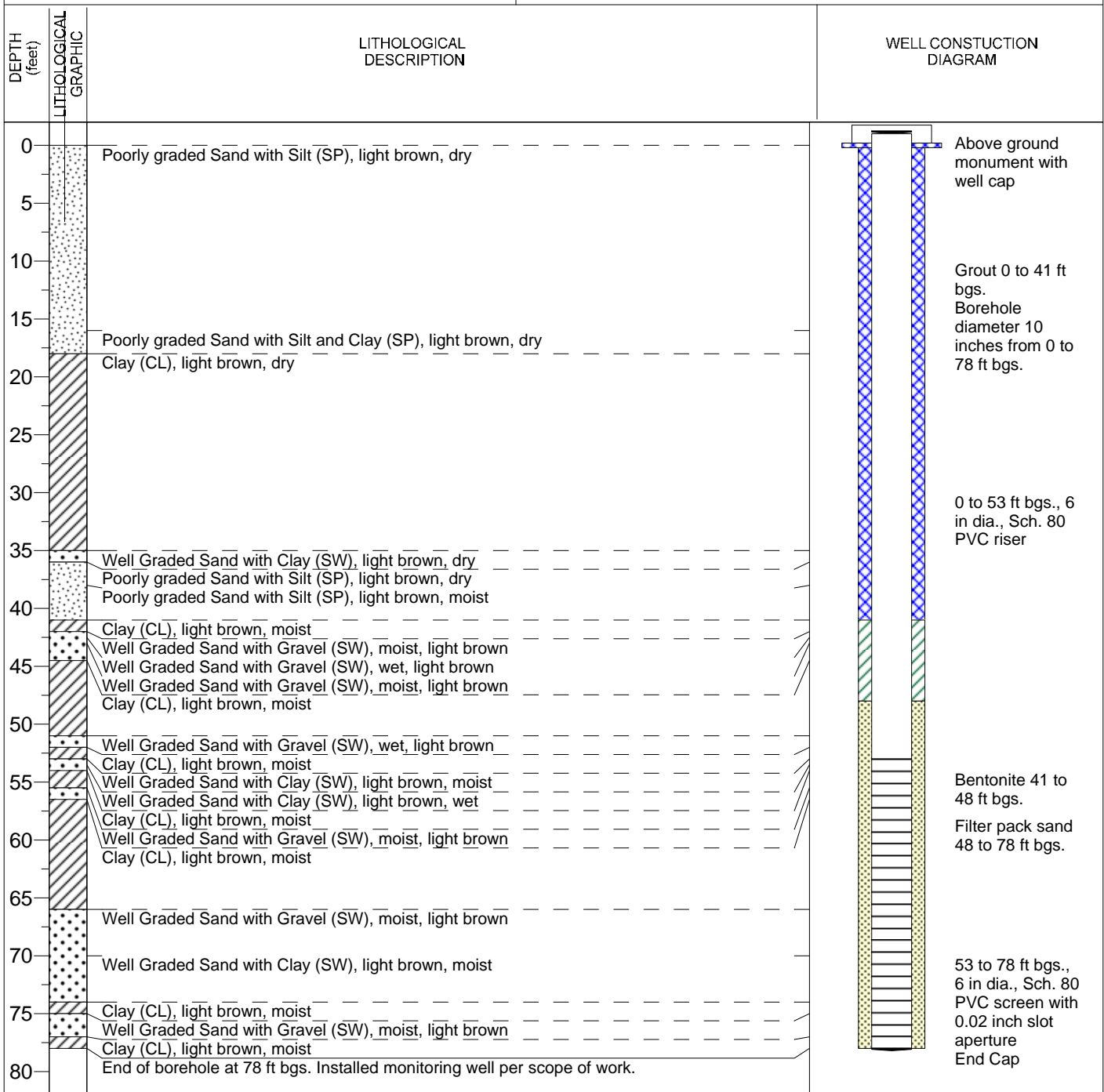
PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING: NORTHING:  
 ELEVATION: BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78 GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/11/2020 DATE FINISHED: 5/11/2020  
 LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet





MONITORING WELL ID: **BAC-24**

CLIENT: Intermountain Power Service Corporation

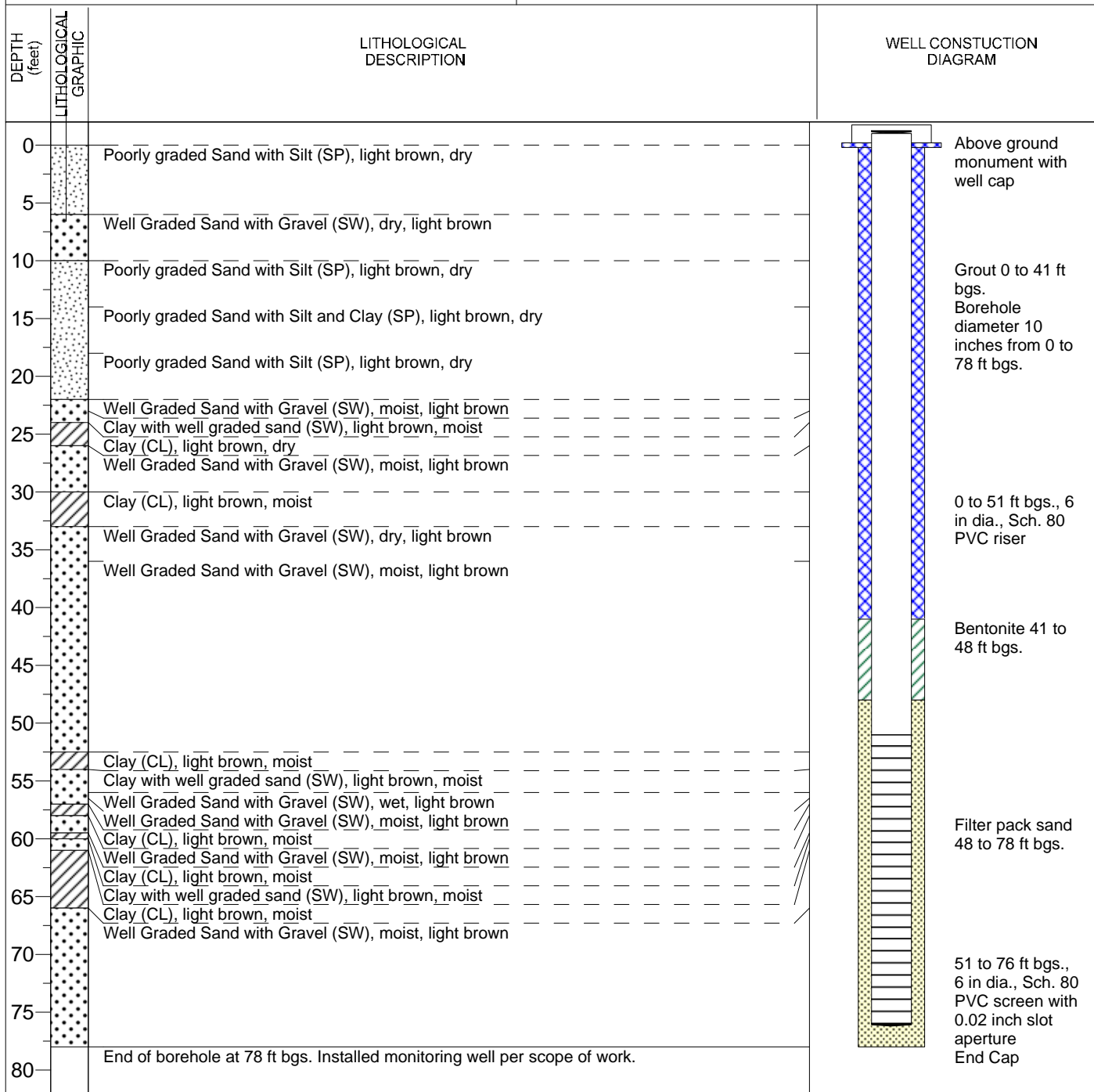
PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                                  NORTHING:  
 ELEVATION:                                BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 76.2                GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/12/2020              DATE FINISHED: 5/12/2020  
 LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-25**

CLIENT: Intermountain Power Service Corporation

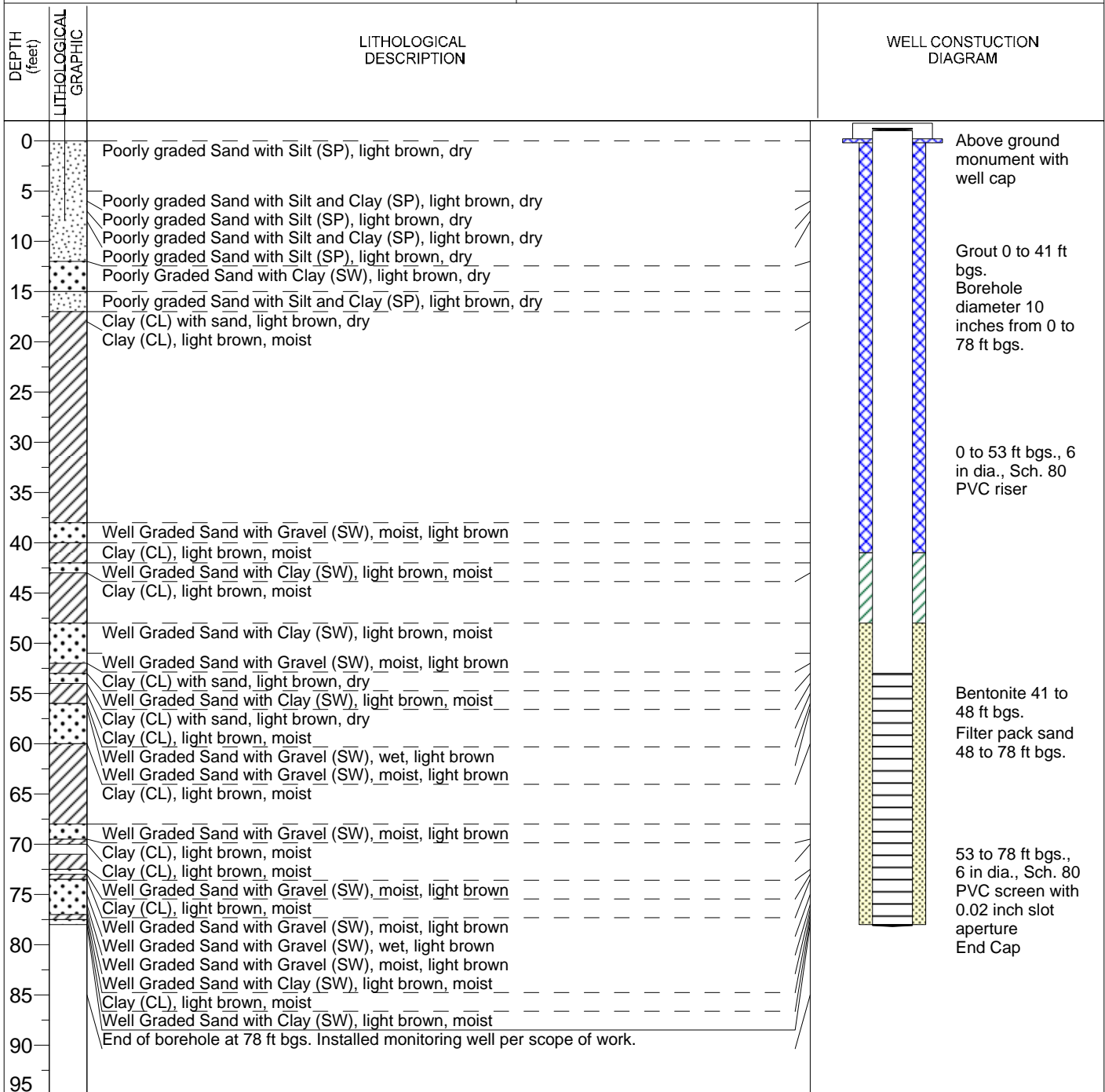
PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING: NORTHING:  
 ELEVATION: BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78 GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/12/2020 DATE FINISHED: 5/12/2020  
 LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-26**

CLIENT: Intermountain Power Service Corporation

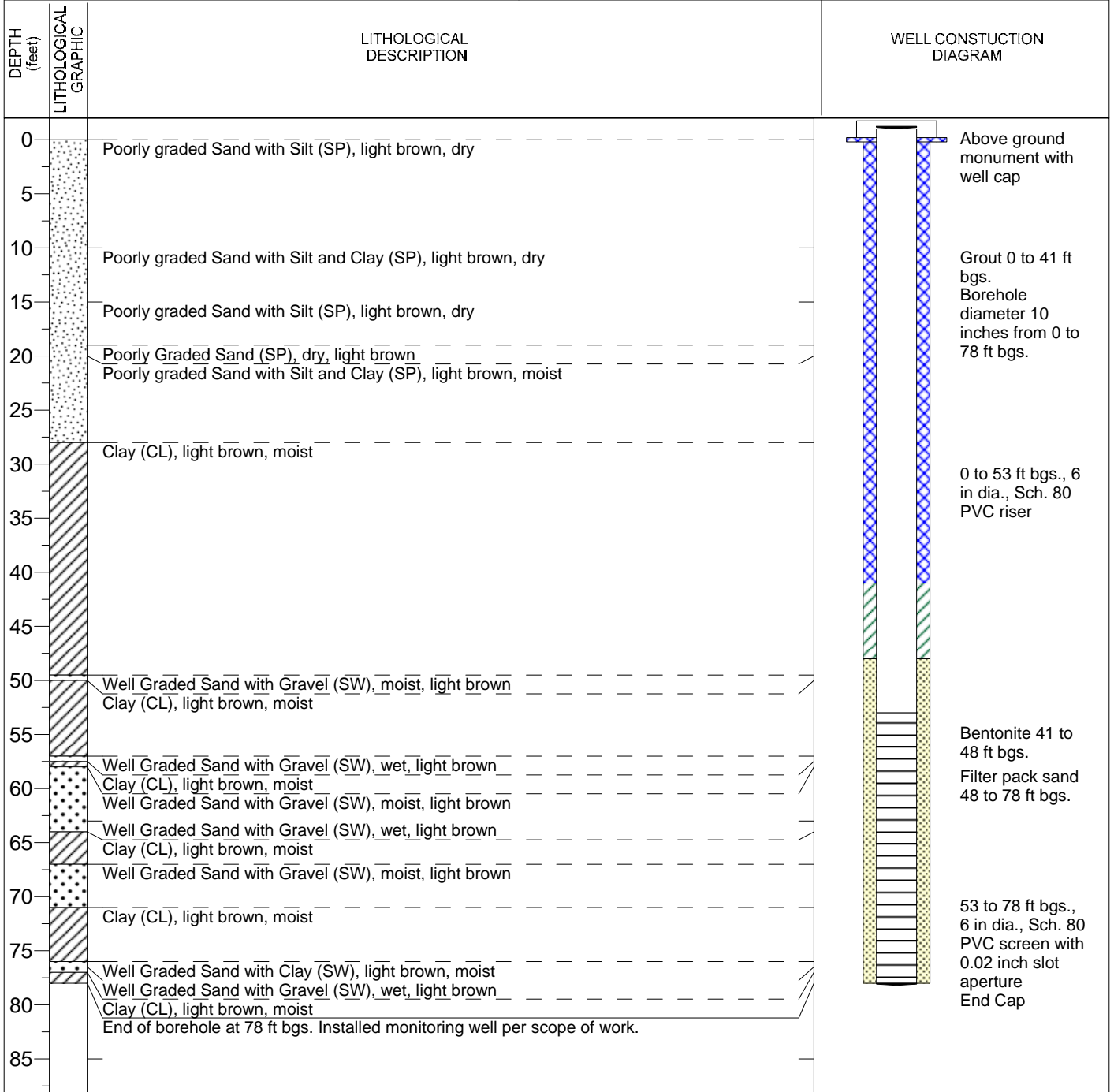


PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells

DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                               NORTHING:  
 ELEVATION:                           BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78           GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/13/2020   DATE FINISHED: 5/13/2020  
 LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-27**

CLIENT: Intermountain Power Service Corporation

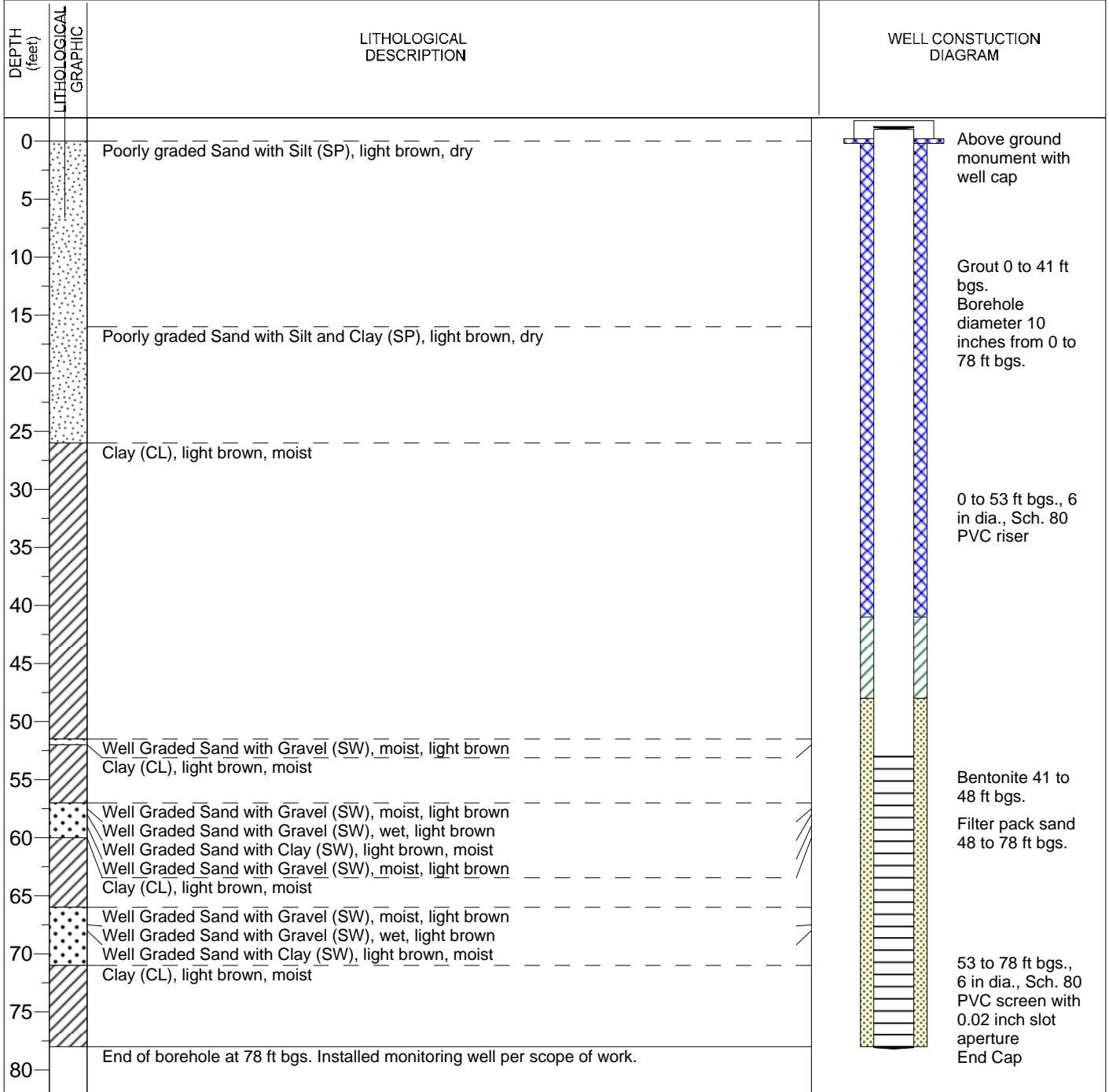
PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells



DRILLING CONTRACTOR: Cascade Drilling  
DRILLING METHOD: Sonic  
DRILLING EQUIPMENT: Pro Sonic 600  
SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
EASTING:    NORTHING:  
ELEVATION:    BOREHOLE ANGLE:      90 degrees  
TOTAL DEPTH (ft.): 78    GROUNDWATER LEVEL (ft. btoc.):  
DATE STARTED: 5/13/2020      DATE FINISHED: 5/13/2020  
LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface      Sch. = Schedule  
dia. = diameter                                  YR = Yellow-Red  
ft = feet



MONITORING WELL ID: **BAC-28**

CLIENT: Intermountain Power Service Corporation

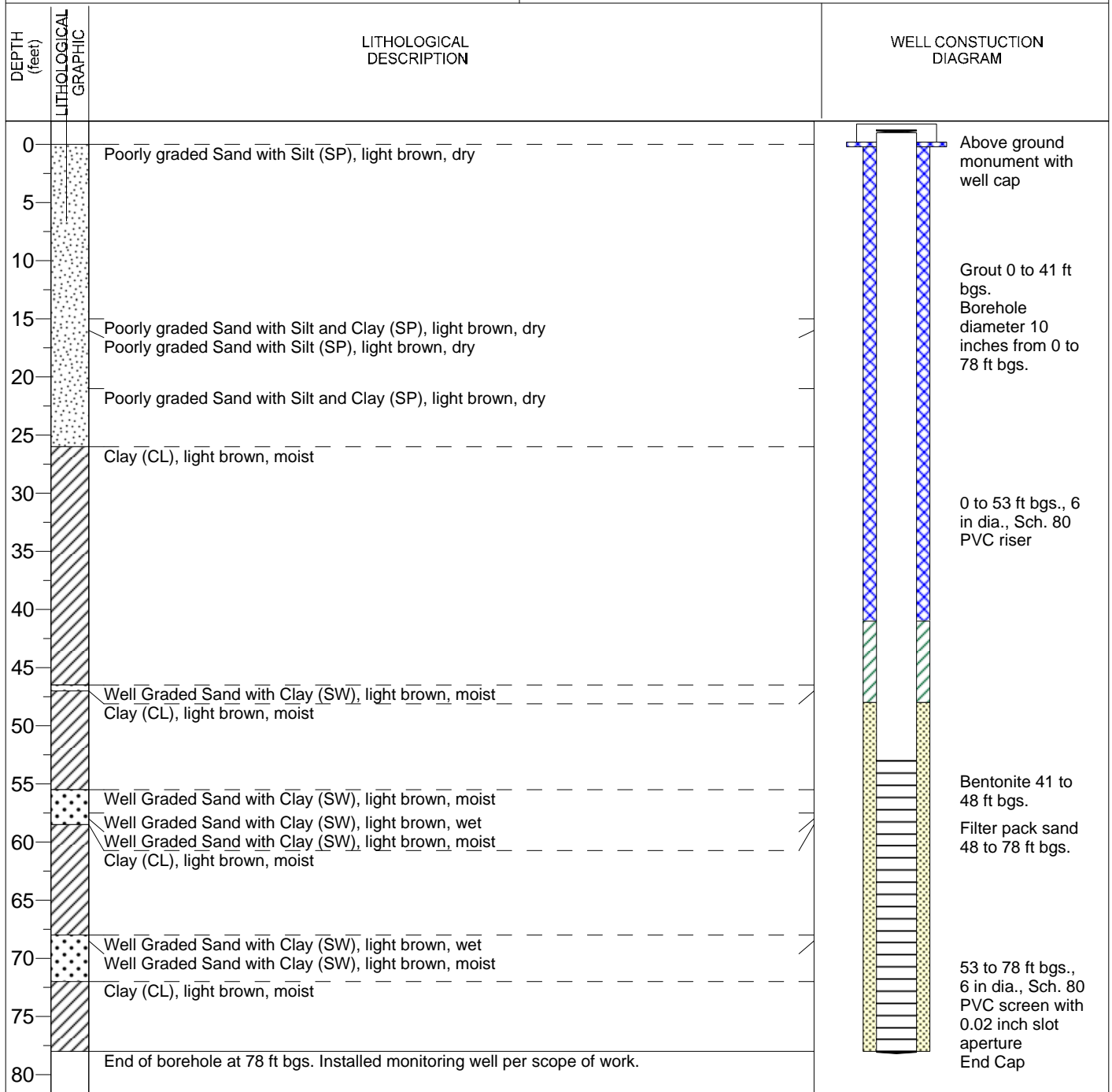


PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells

DRILLING CONTRACTOR: Cascade Drilling  
DRILLING METHOD: Sonic  
DRILLING EQUIPMENT: Pro Sonic 600  
SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
EASTING: NORTHING:  
ELEVATION: BOREHOLE ANGLE: 90 degrees  
TOTAL DEPTH (ft.): 78 GROUNDWATER LEVEL (ft. btoc.):  
DATE STARTED: 5/14/2020 DATE FINISHED: 5/14/2020  
LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface Sch. = Schedule  
dia. = diameter YR = Yellow-Red  
ft = feet



MONITORING WELL ID: **BAC-29**

CLIENT: Intermountain Power Service Corporation

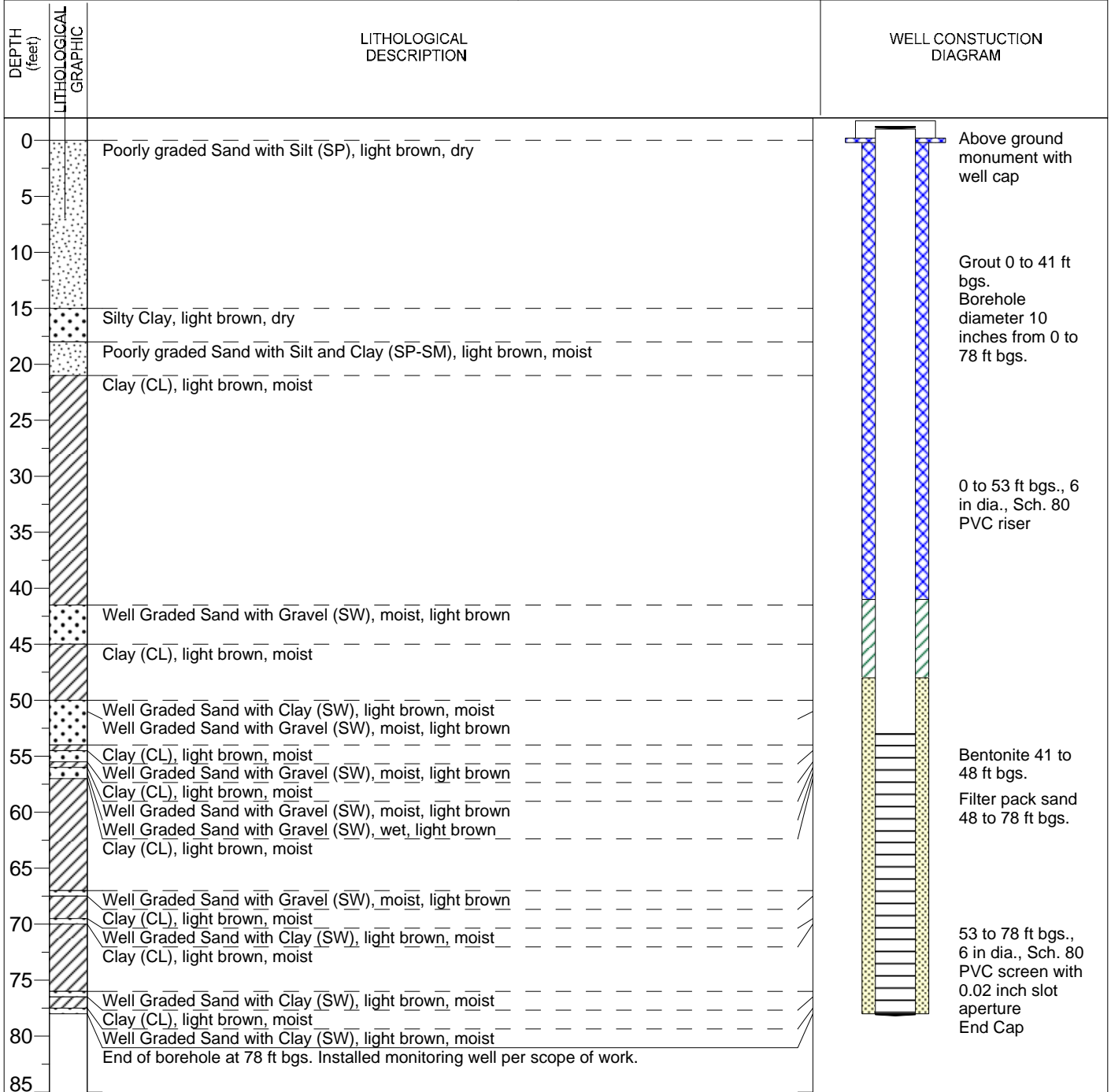
PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                                   NORTHING:  
 ELEVATION:                               BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78               GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/15/2020   DATE FINISHED: 5/15/2020  
 LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface   Sch. = Schedule  
 dia. = diameter                       YR = Yellow-Red  
 ft = feet





MONITORING WELL ID: **BAC-30**

CLIENT: Intermountain Power Service Corporation

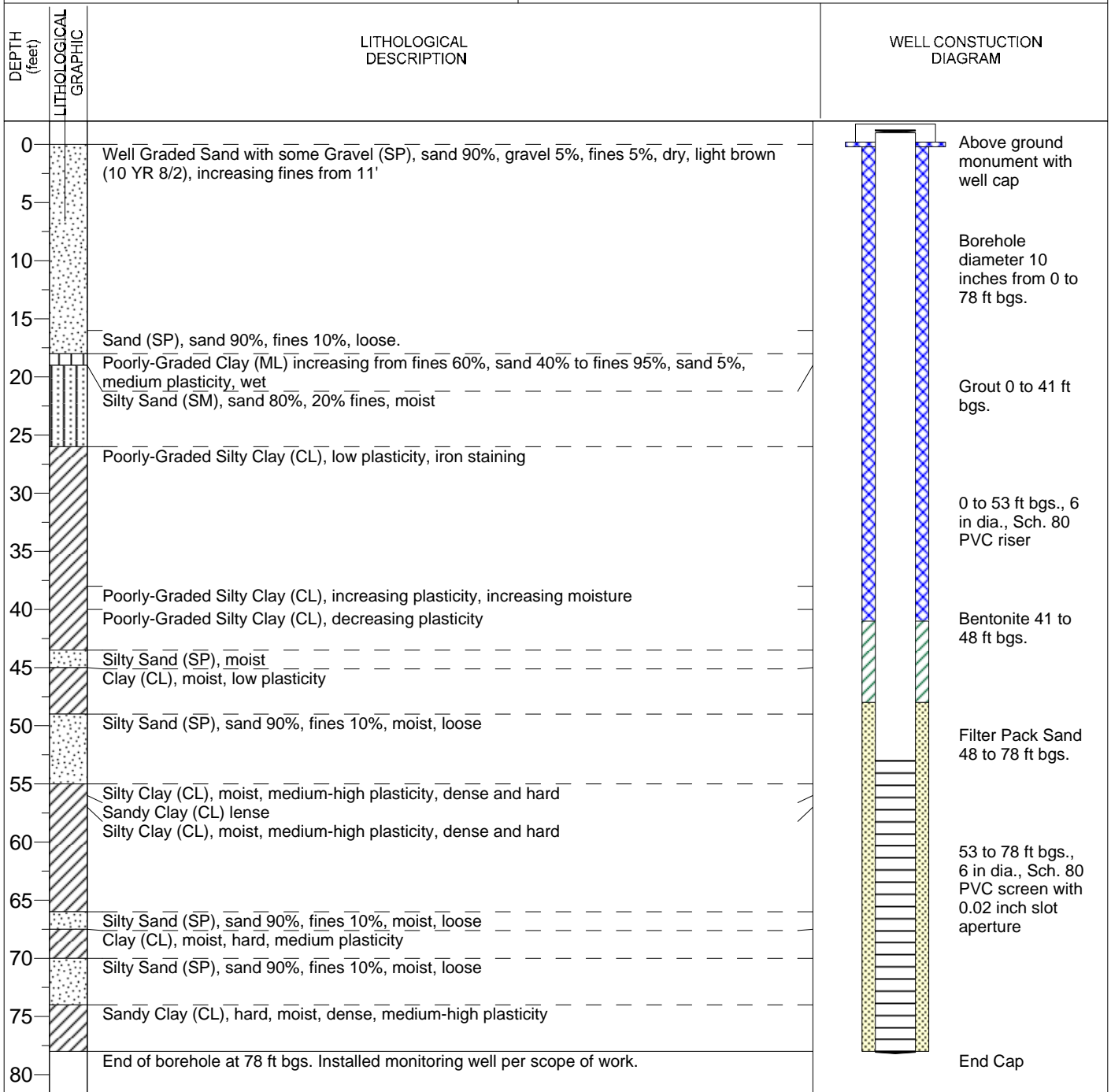
PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                      NORTHING:  
 ELEVATION:                      BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78              GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/14/2020      DATE FINISHED: 5/15/2020  
 LOGGED BY: Joel Pierson



Notes: bgs. = below ground surface    Sch. = Schedule  
 dia. = diameter                      YR = Yellow-Red  
 ft = feet





MONITORING WELL ID: **BAC-31**

CLIENT: Intermountain Power Service Corporation

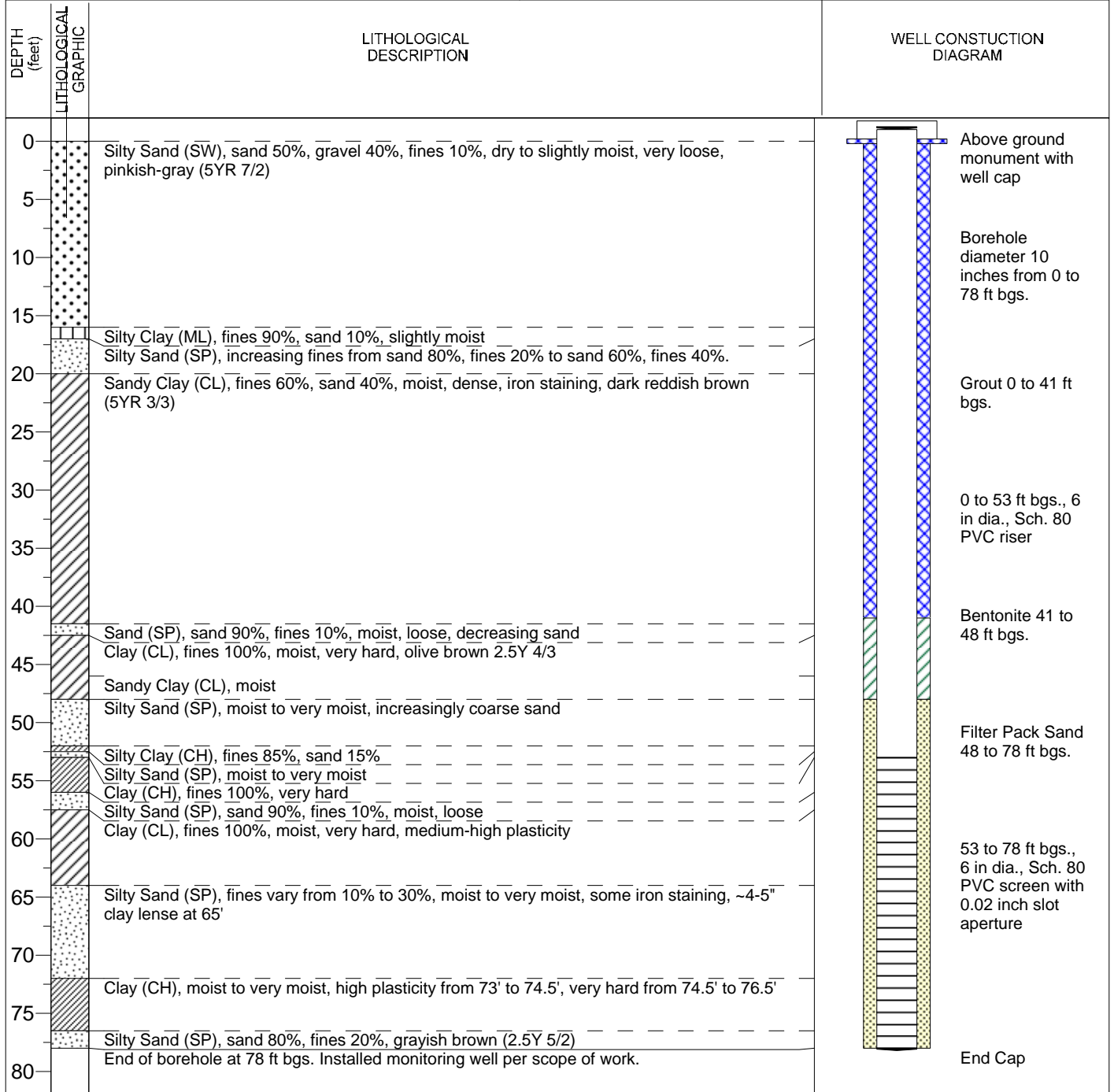
PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING: NORthing:  
 ELEVATION: BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78 GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/15/2020 DATE FINISHED: 5/18/2020  
 LOGGED BY: Joel Pierson



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-32**

CLIENT: Intermountain Power Service Corporation

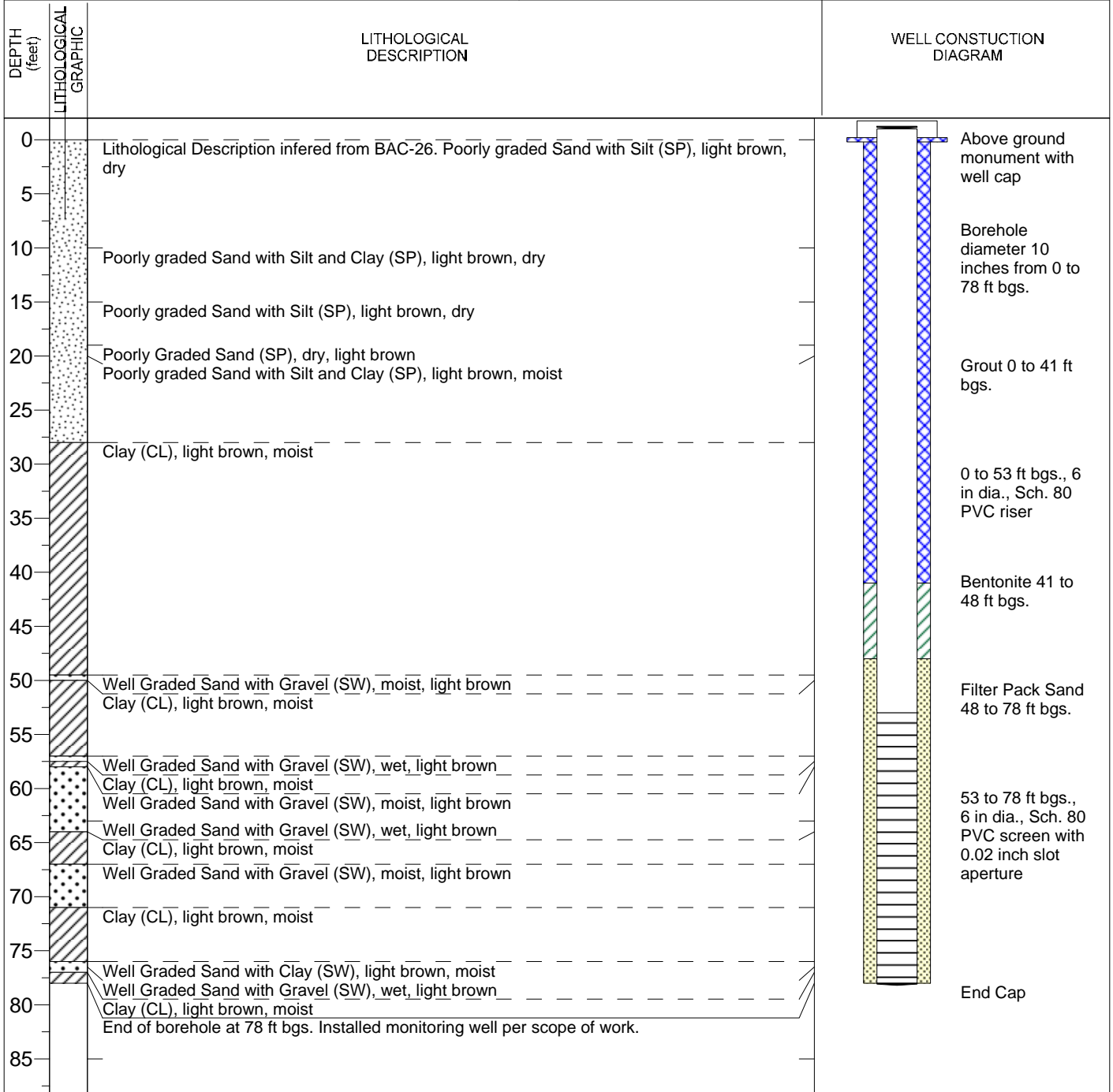
PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells



DRILLING CONTRACTOR: Cascade Drilling  
DRILLING METHOD: Sonic  
DRILLING EQUIPMENT: Pro Sonic 600  
SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
EASTING:                      NORTHING:  
ELEVATION:                      BOREHOLE ANGLE: 90 degrees  
TOTAL DEPTH (ft.): 78              GROUNDWATER LEVEL (ft. btoc.):  
DATE STARTED: 5/19/2020      DATE FINISHED: 5/19/2020  
LOGGED BY: Not Available



Notes: bgs. = below ground surface      Sch. = Schedule  
dia. = diameter                              YR = Yellow-Red  
ft = feet



MONITORNG WELL ID: **BAC-33**

CLIENT: Intermountain Power Service Corporation

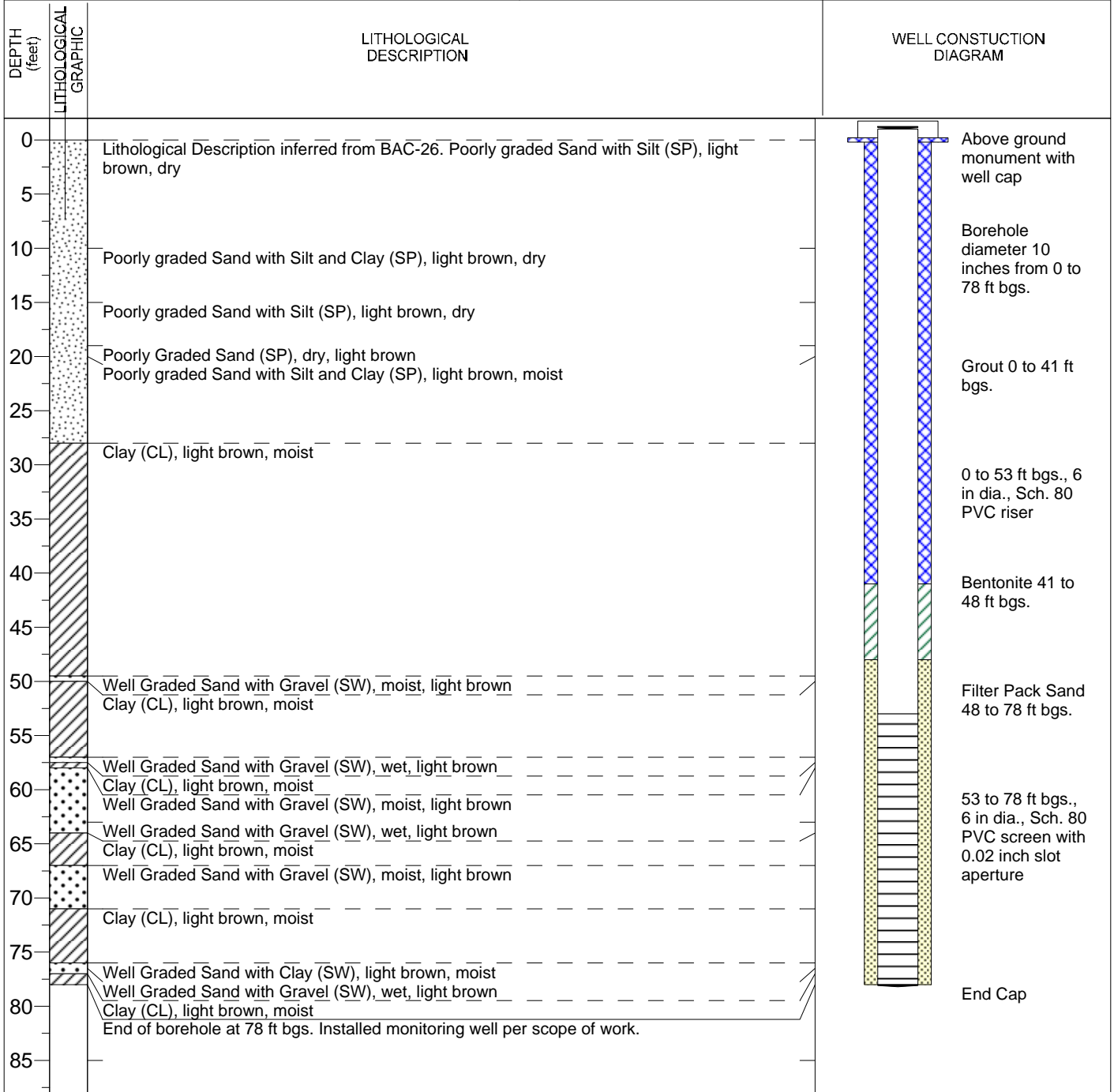
PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                      NORTHING:  
 ELEVATION:                  BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78      GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/18/2020   DATE FINISHED: 5/18/2020  
 LOGGED BY: Not Available



Notes: bgs. = below ground surface    Sch. = Schedule  
 dia. = diameter                        YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-34**

CLIENT: Intermountain Power Service Corporation

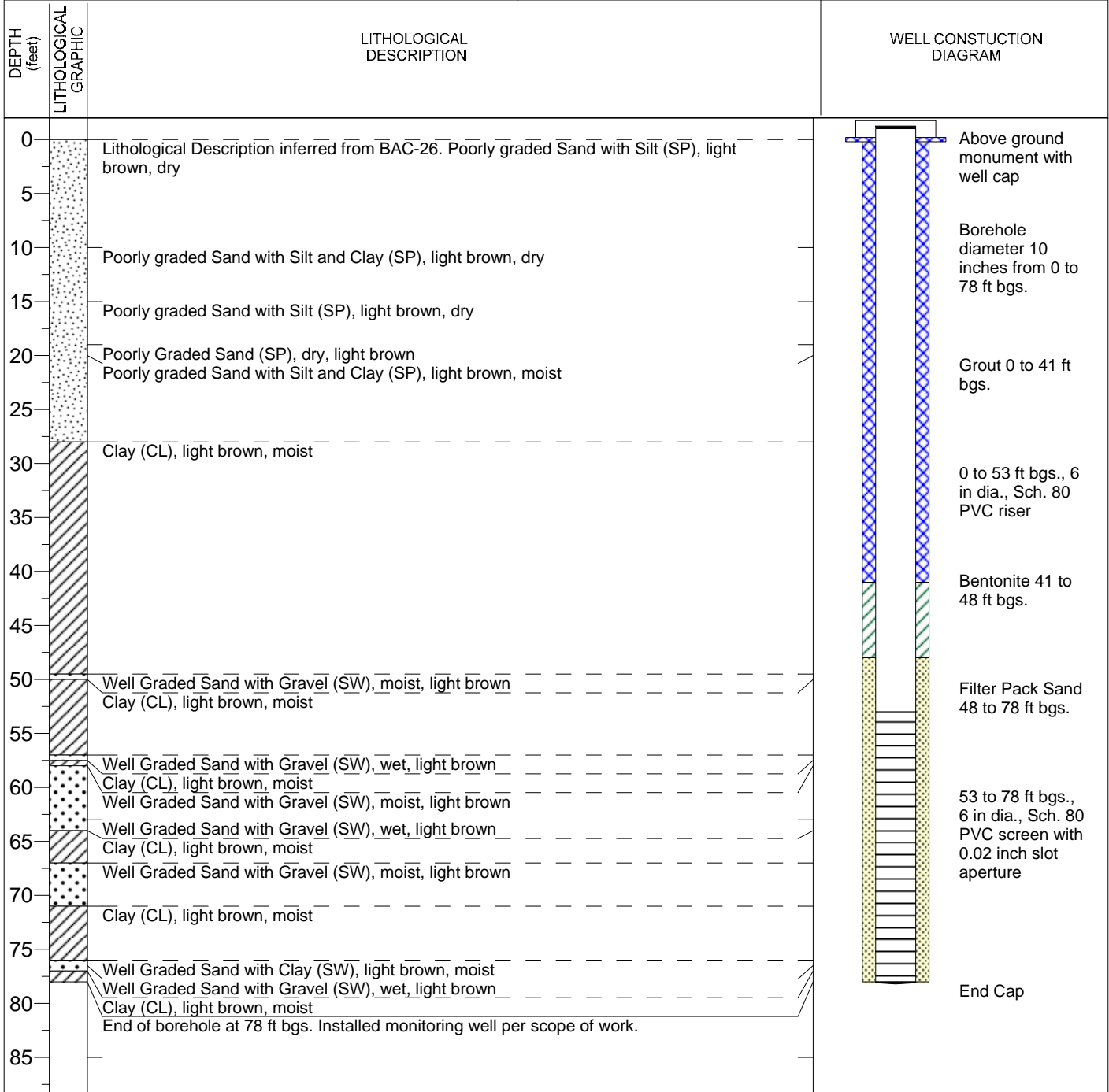
PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                                      NORTHING:  
 ELEVATION:                                  BOREHOLE ANGLE:      90 degrees  
 TOTAL DEPTH (ft.): 78                  GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/21/2020      DATE FINISHED: 5/21/2020  
 LOGGED BY:                              Not Available



Notes: bgs. = below ground surface      Sch. = Schedule  
 dia. = diameter                              YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-35**

CLIENT: Intermountain Power Service Corporation

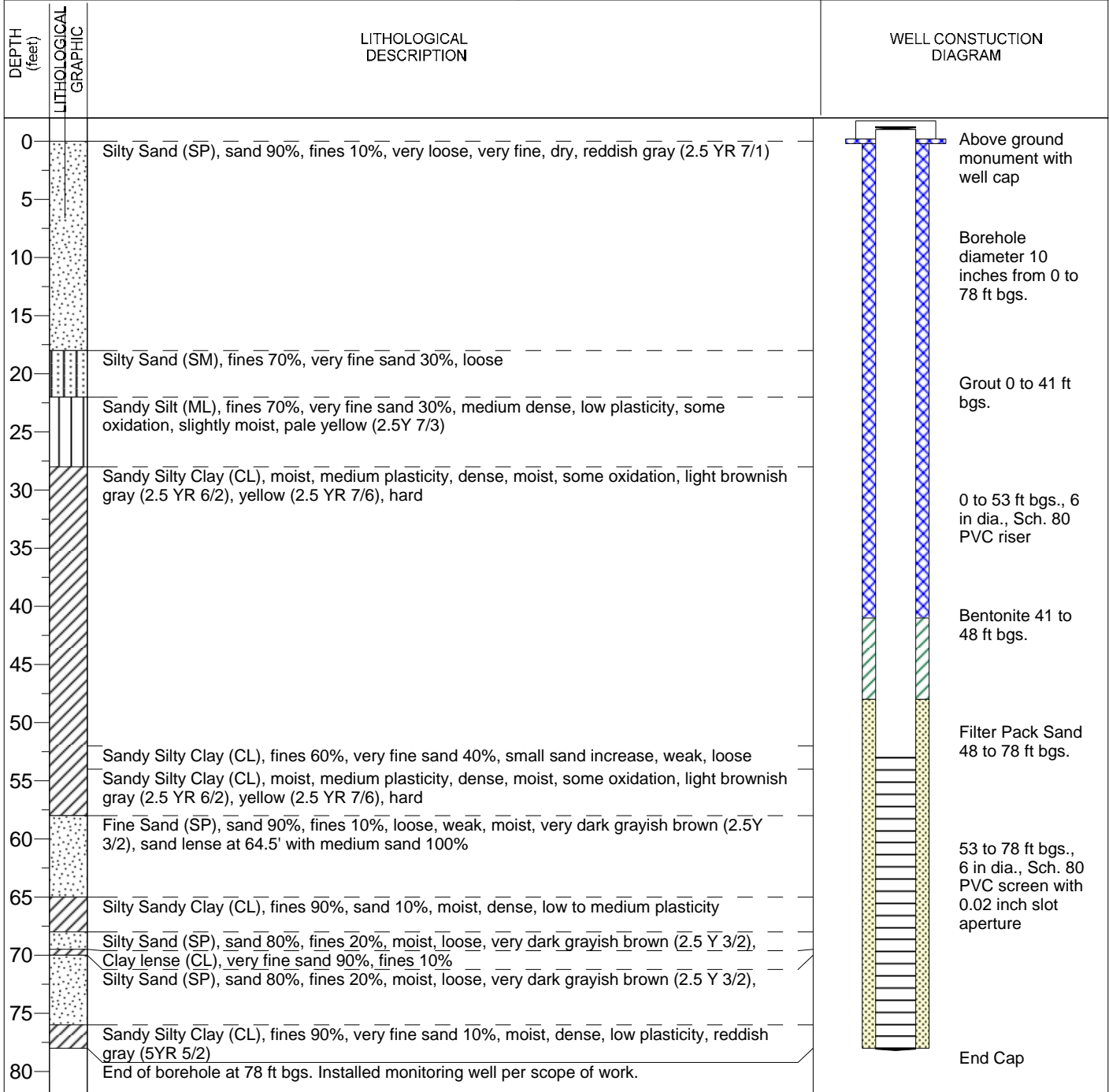
PROJECT: Monitoring Well Installation

SITE LOCATION: North Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                                 NORTHING:  
 ELEVATION:                             BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78                 GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/28/2020   DATE FINISHED: 5/29/2020  
 LOGGED BY: Joel Pierson



Notes: bgs. = below ground surface   Sch. = Schedule  
 dia. = diameter                         YR = Yellow-Red  
 ft = feet



MONITORNG WELL ID: **BAC-36**

CLIENT: Intermountain Power Service Corporation

PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling

DRILLING METHOD: Sonic

DRILLING EQUIPMENT: Pro Sonic 600

SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:

EASTING:

NORTHING:

ELEVATION:

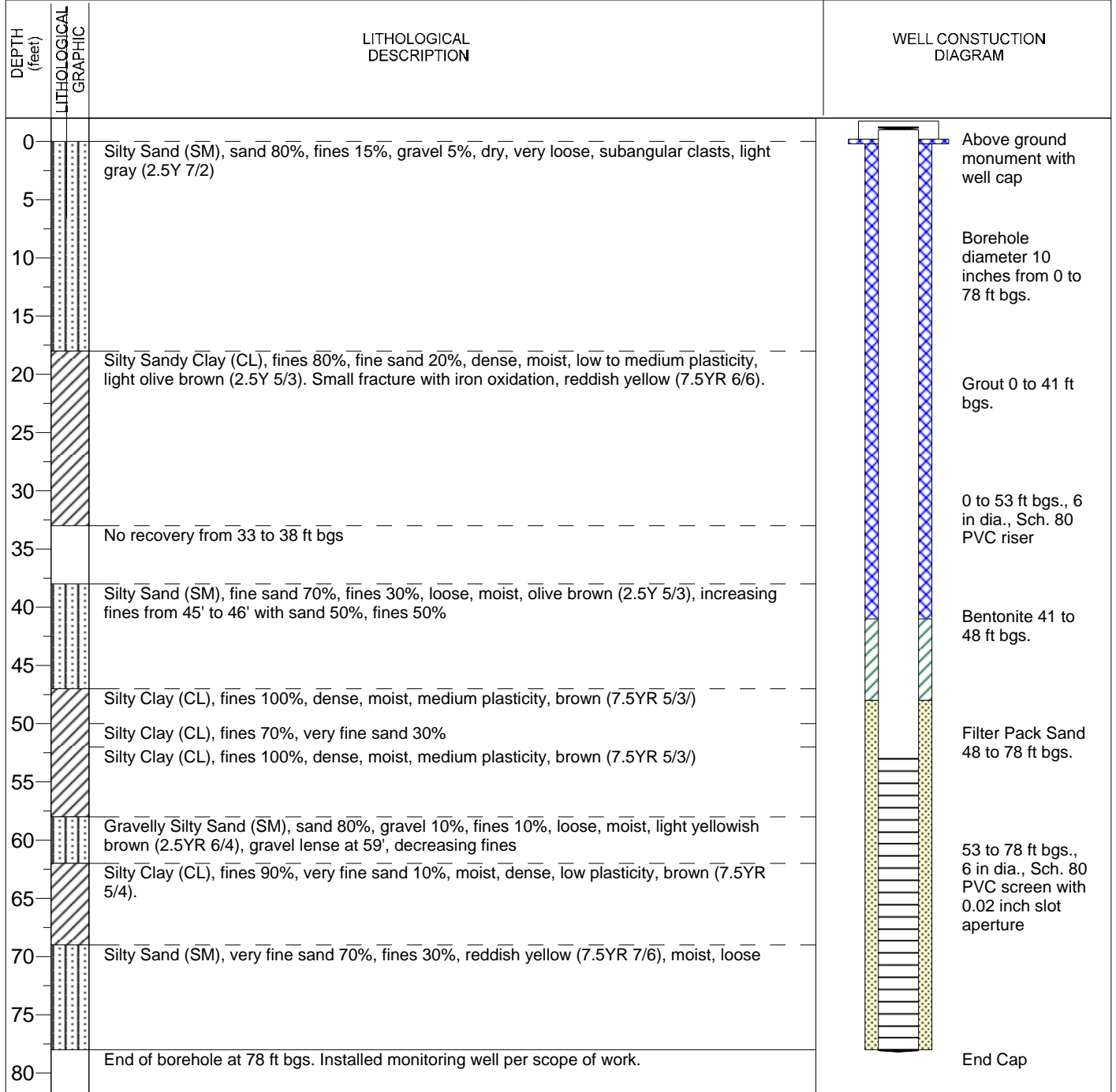
BOREHOLE ANGLE: 90 degrees

TOTAL DEPTH (ft.): 78

GROUNDWATER LEVEL (ft. btoc.):

DATE STARTED: 5/30/2020 DATE FINISHED: 5/31/2020

LOGGED BY: Joel Pierson



Notes: bgs. = below ground surface    Sch. = Schedule  
dia. = diameter                          YR = Yellow-Red  
ft = feet





MONITORNG WELL ID: **BAC-37**

CLIENT: Intermountain Power Service Corporation

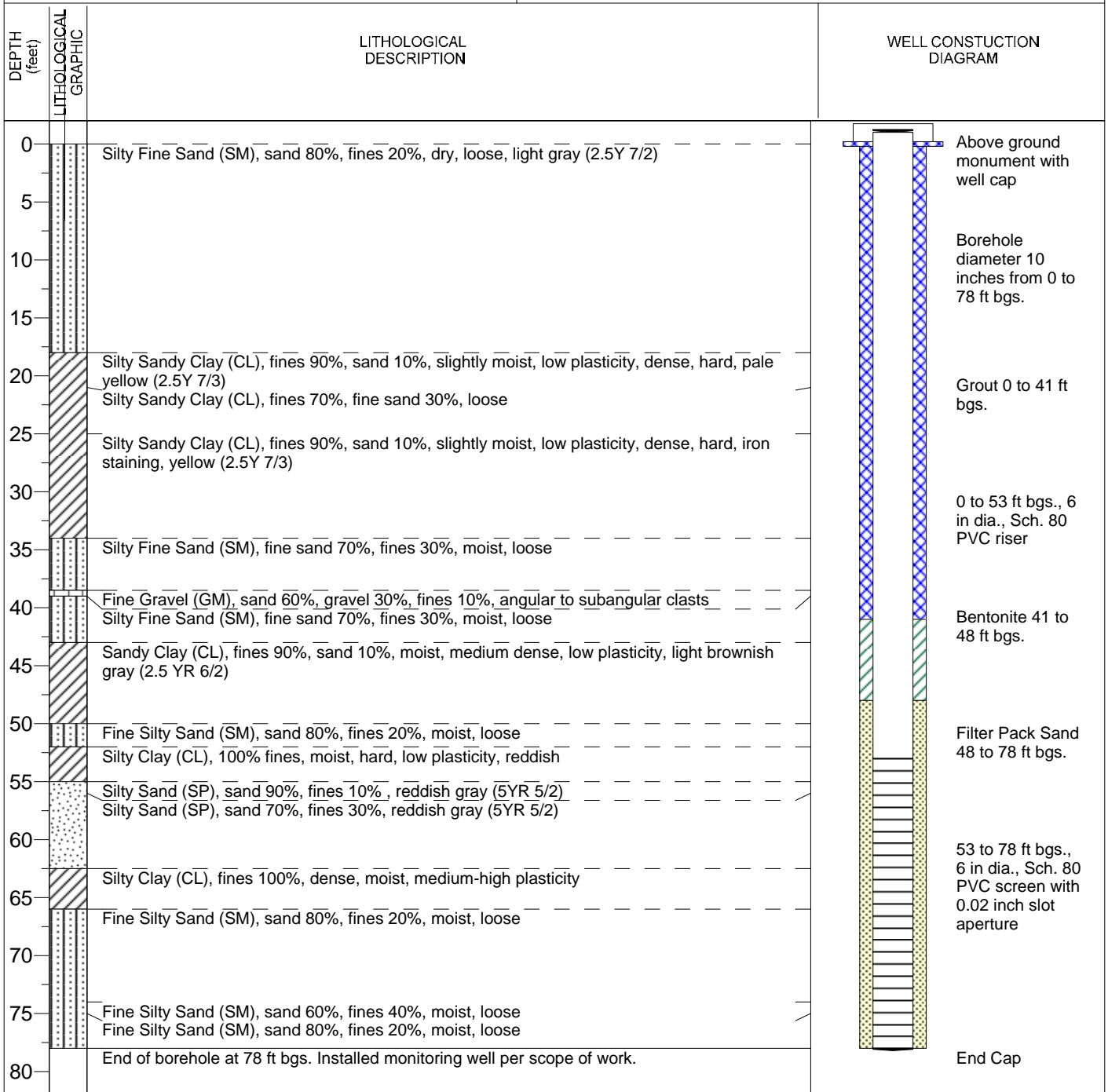
PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                      NORTHING:  
 ELEVATION:                    BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78      GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/29/2020    DATE FINISHED: 5/30/2020  
 LOGGED BY: Joel Pierson



Notes: bgs. = below ground surface    Sch. = Schedule  
 dia. = diameter                          YR = Yellow-Red  
 ft = feet





MONITORING WELL ID: **BAC-38**

CLIENT: Intermountain Power Service Corporation

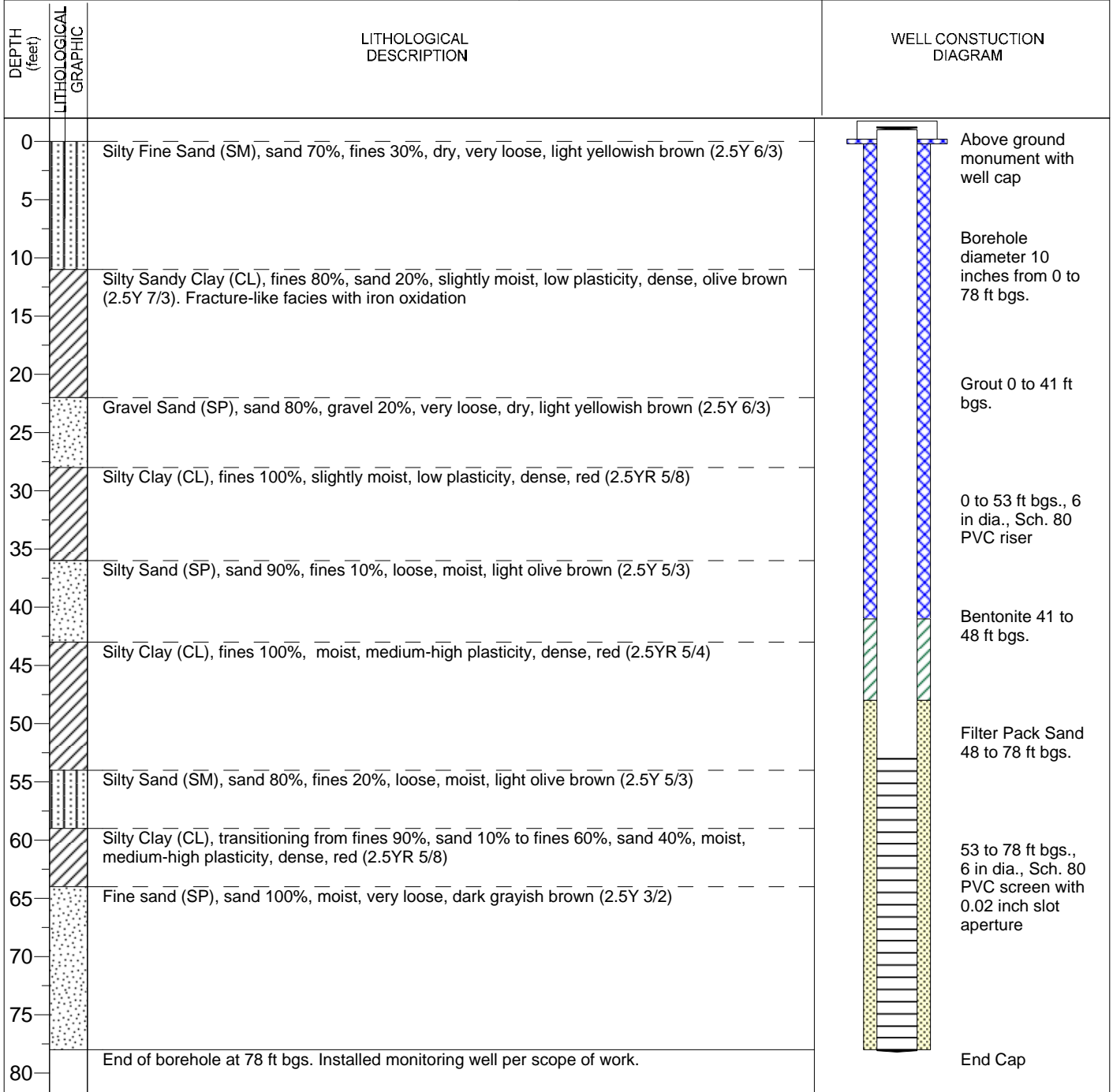
PROJECT: Monitoring Well Installation

SITE LOCATION: South Wells



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 78 ft bgs.,  
 10 inch sonic core barrel 0 to 78 ft bgs.,

COORDINATE SYSTEM:  
 EASTING: NORTHING:  
 ELEVATION: BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 78 GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/31/2020 DATE FINISHED: 5/31/2020  
 LOGGED BY: Joel Pierson



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet

BA-U-1

Interval (feet)	Drilling Method	USCS	Sample Description
7/24/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-1.5	8" Sonic	SM	Silty SAND:
1.5-2.5	8" Sonic	SC	Clayey SAND:
2.5-3.5	8" Sonic	ML	Sandy SILT:
3.5-5	8" Sonic	SM/ML	Silty SAND/Sandy Silt:
5-6	8" Sonic	SP	SAND:
6-9.5	8" Sonic		SAND:
9.5-11	8" Sonic		SAND:
11-11.5	8" Sonic	SM	Silty SAND:
11.5-12	8" Sonic		Silty SAND:
12-13	8" Sonic	SP/SM	SAND with silt:
13-17	8" Sonic	SP	SAND:
17-17.5	8" Sonic	SP/SM	SAND with silt:
17.5-20	8" Sonic	SP	SAND:
20-22.5	8" Sonic		SAND:
22.5-25	8" Sonic	SM	Silty SAND:
25-26	8" Sonic	SP	SAND:
26-27.5	8" Sonic	SP/SM	SAND with silt:
27.5-28.25	8" Sonic	SM	Silty SAND with clay:
28.25-29.25	8" Sonic	SP/SM	SAND with silt:
29.25-30	8" Sonic	CL	CLAY:
30-31.5	8" Sonic		Sandy CLAY:
31.5-33	8" Sonic	ML	Sandy SILT:
33-35	8" Sonic	SM	Silty SAND with clay:
35-36.25	8" Sonic	SP/SM	SAND with silt:
36.25-40	8" Sonic	CH	CLAY:
40-46.5	8" Sonic		CLAY:
46.5-47.5	8" Sonic	SP/SM	SAND with silt:
47.5-50	8" Sonic	SM	Silty SAND with clay:
50-51	8" Sonic	SC	Clayey SAND:
51-51.75	8" Sonic	SW	SAND:
51.75-52.5	8" Sonic	SP	SAND:
52.5-53	8" Sonic	CH	Sandy CLAY:
53-54	8" Sonic		Sandy CLAY:
54-55	8" Sonic		CLAY:

TD = 55; PVC 4-inch screen from 45 to 55; PVC 4-inch riser from -2.5 to 45  
Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Daniel Dodge  
Geologist - Michael Sauerwein

Above-grade, 5-feet. long, 8-in. dia., steel Wellhead Protective Monument set in a 2X2 Concrete Pad ~ 2.5-feet. stick-up

Ground Surface

8-inch diameter, from 0 to 55-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 45 feet below ground surface (bgs)

Portland Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 0 to 38-feet bgs

Bentonite medium chips, from 38 to 43 feet bgs

At Time of Drilling, Depth to Uppermost Ground Water ~ 46.25-feet bgs

16/30 washed silica sand, 2-feet above screen from 43 to 55 feet bgs

Centralizers placed ~ the bottom and the top of the well screen.

10-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 45 to 55 feet bgs

Total Depth (TD) = 55 feet bgs



IPSC – BOTTOM ASH BASIN AREA  
DELTA, UTAH

Well BA-U-1 Schematic

Date Drawn  
7/24/15

Design by

Drawn by

MS

Scale

Last Revision  
Date

Boring Logs  
ISPC  
Delta, Utah

BA-U-2

Interval (feet)	Drilling Method	USCS	Sample Description
7/25/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-1.5	8" Sonic	ML	Sandy SILT:
1.5-2.5	8" Sonic	SP/SM	SAND with silt:
2.5-4	8" Sonic		SAND with silt:
4-5	8" Sonic	ML	SILT with sand and clay:
5-6	8" Sonic	SP/SM	SAND with silt:
6-7	8" Sonic	SP	SAND:
7-9	8" Sonic	SW	Gravelly SAND:
9-9.75	8" Sonic		Gravelly SAND:
9.75-10.25	8" Sonic	SP	Gravelly SAND:
10.25-11	8" Sonic	SP/SM	SAND with silt:
11-12.5	8" Sonic	CL	CLAY:
12.5-13	8" Sonic	SP	SAND:
13-15.5	8" Sonic		SAND:
15.5-18	8" Sonic		SAND:
18-22.5	8" Sonic		SAND:
22.5-23	8" Sonic		SAND:
23-23.5	8" Sonic	SM	Silty SAND:
23.5-25	8" Sonic	SP/SM	SAND with silt:
25-30	8" Sonic	SM	Silty SAND:
30-32.5	8" Sonic	SC	Clayey SAND:
32.5-35	8" Sonic	SM	Silty SAND with clay:
35-37.5	8" Sonic		Silty SAND:
37.5-40	8" Sonic	CL	Sandy CLAY:
40-42	8" Sonic	SC	Clayey SAND:
42-45	8" Sonic	CH	CLAY:
45-47.5	8" Sonic		Sandy CLAY:
47.5-51.75	8" Sonic		CLAY:
51.75-53	8" Sonic	SM	Silty SAND:
53-54	8" Sonic		Silty SAND:
54-55	8" Sonic	SC/SM	Clayey SAND with silt:
55-56.5	8" Sonic	CH	CLAY:
56.5-57.5	8" Sonic		CLAY:
57.5-60	8" Sonic	SC	Clayey SAND:
60-60.75	8" Sonic	SM	Silty SAND with clay:
60.75-61.5	8" Sonic	SC	Clayey SAND:
61.5-62.5	8" Sonic	SP	SAND:
62.5-63.5	8" Sonic		SAND:
63.5-65	8" Sonic	SW	SAND:
65-67.5	8" Sonic	SP	SAND:
67.5-70	8" Sonic		SAND:

TD = 70'; PVC 4-inch screen from 60 to 70; PVC 4-inch riser from -2.5 to 60  
Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Daniel Dodge  
Geologist - Michael Sauerwein

Above-grade, 5-feet. long, 8-in. dia., steel Wellhead Protective Monument set in a 2X2 Concrete Pad ~ 2.5-feet. stick-up

Ground Surface

8-inch diameter, from 0 to 70-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 60 feet below ground surface (bgs)

Portland Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 0 to 52.5-feet bgs

At Time of Drilling, Depth to Uppermost Ground Water ~ 60.0-feet bgs

Bentonite medium chips, from 52.5 to 57.5 feet bgs

16/30 washed silica sand, 2-feet above screen from 57.5 to 70 feet bgs

Centralizers - placed at the bottom and the top of the well screen.

10-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 60 to 70 feet bgs

Total Depth (TD) = 70 feet bgs



IPSC – BOTTOM ASH BASIN AREA  
DELTA, UTAH

Well BA-U-2 Schematic

Date Drawn  
7/25/15

Design by

Drawn by

MS

Scale

Last Revision  
Date

WWC-1

Interval (feet)	Drilling Method	USCS	Sample Description
7/26/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2	8" Sonic	ML	Sandy SILT:
2-2.5	8" Sonic	SP	SAND:
2.5-5	8" Sonic		SAND:
5-6.75	8" Sonic	SM	Silty SAND:
6.75-7.5	8" Sonic	ML	Sandy SILT:
7.5-10	8" Sonic		Sandy SILT:
10-12	8" Sonic		Sandy SILT:
12-12.5	8" Sonic	SP/SM	SAND with silt:
12.5-13	8" Sonic	SM	Silty SAND:
13-15	8" Sonic	CL	Silty CLAY:
15-17.5	8" Sonic		Silty CLAY:
17.5-18.5	8" Sonic		Silty CLAY:
18.5-19	8" Sonic		Sandy CLAY:
19-20	8" Sonic		Silty CLAY:
20-22	8" Sonic	CH	CLAY:
22-24.5	8" Sonic		Sandy CLAY:
24.5-25.5	8" Sonic		Sandy CLAY:
25.5-27	8" Sonic		Sandy CLAY:
27-31	8" Sonic		CLAY:
31-31.5	8" Sonic		CLAY:
31.5-33	8" Sonic		CLAY:
33-34.5	8" Sonic		Sandy CLAY:
34.5-35	8" Sonic	Sandy CLAY:	
35-37.5	8" Sonic	SM	Silty SAND:
37.5-40	8" Sonic		Silty SAND:
40-41.5	8" Sonic	SP	SAND:
41.5-42.5	8" Sonic		SAND:
42.5-44	8" Sonic		SAND:
44-45	8" Sonic		SAND:
45-46.5	8" Sonic	CH	CLAY:
46.5-47.5	8" Sonic		Sandy CLAY:
47.5-50.5	8" Sonic	SC/SM	SAND with silt and clay:
50.5-52.5	8" Sonic	SW	SAND:
52.5-53.5	8" Sonic		SAND:
53.5-55	8" Sonic	SM	Silty SAND:
55-57	8" Sonic		Silty SAND:
57-57.5	8" Sonic	CH	CLAY:
57.5-60			CLAY:

TD = 60'; PVC 4-inch screen from 48 to 58; PVC 4-inch riser from -2.5 to 48  
 Drilling Method: Guspech GS24-300RS, 8" Rotosonic

Drilling Company - Cascade Drilling  
 Driller - Daniel Dodge  
 Geologist - Michael Sauerwein

Above-grade, 5-foot long, 6-inch diameter, steel Wellhead Protective Monument set in Concrete

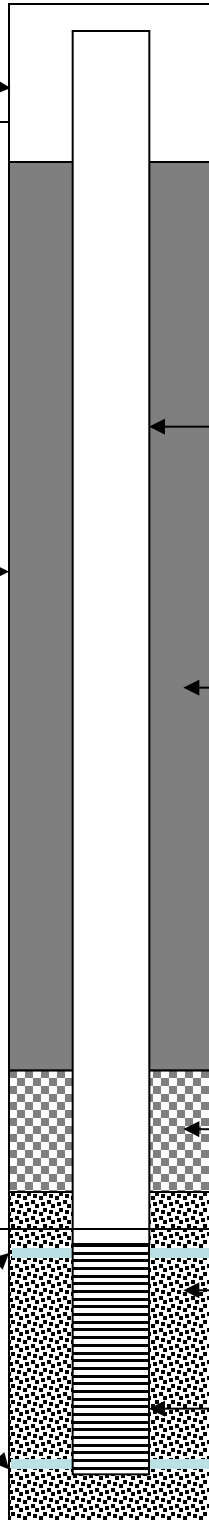
~ 2.5-foot. stick-up

Ground Surface

8-inch diameter,  
from 0 to 60-feet bgs

At Time of Drilling,  
Depth to Uppermost Ground  
Water ~ 47.5-feet bgs

Centralizers - placed at the bottom  
and the top of the well screen.



4-inch diameter, Sch. 40 PVC,  
from ~ 2.0 feet above ground surface (ags)  
to 48 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1 ) Grout,  
Tremie-Pipe Slurry,  
from 0 to 41-feet bgs

Bentonite medium chips,  
from 41 to 46 feet bgs

16/30 washed silica sand,  
2-feet above screen  
from 46 to 60 feet bgs

10-foot length; 4-inch diameter  
Sch. 40 PVC, 0.020" -slotted,  
from 48 to 58 feet bgs

Total Depth (TD) = 60 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
DELTA, UTAH

Well WWC-1 Schematic

Date Drawn  
7/26/15

Design by

Drawn by

MS

Scale

Last Revision  
Date



Boring Logs  
 IPSC  
 Delta, Utah

WWC-2

Interval (feet)	Drilling Method	USCS	Sample Description
7/27/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2.5	8" Sonic	SM	Silty SAND:
2.5-5	8" Sonic	SP	SAND:
5-7	8" Sonic		SAND:
7-9.5	8" Sonic	SW	Gravelly SAND:
9.5-10	8" Sonic	SW/SP	SAND:
10-12	8" Sonic	SP	SAND:
12-12.5	8" Sonic	SP/SW	Gravelly SAND:
12.5-14.5	8" Sonic	SW	Gravelly SAND:
14.5-15	8" Sonic	SP	SAND with gravel:
15-16	8" Sonic		SAND:
16-17.5	8" Sonic	CL	Sandy CLAY:
17.5-19	8" Sonic	SC	Clayey SAND:
19-20	8" Sonic		Clayey SAND:
20-21	8" Sonic		Clayey SAND:
21-22	8" Sonic	CH	CLAY:
22-24	8" Sonic		CLAY:
24-25	8" Sonic	SM	Silty SAND with clay:
25-26.5	8" Sonic	SM/SC	Silty SAND and clay:
26.5-27.5	8" Sonic	SC	Clayey SAND with silt:
27.5-31.5	8" Sonic	CH	CLAY:
31.5-34	8" Sonic		Silty CLAY:
34-35.5	8" Sonic	SP	SAND:
35.5-37	8" Sonic	ML	Sandy SILT with clay:
37-38.5	8" Sonic	CL	Silty CLAY:
38.5-40	8" Sonic	SM	Silty SAND:
40-42	8" Sonic	CH	CLAY:
42-42.5	8" Sonic		Silty CLAY:
42.5-45	8" Sonic	SC	Clayey SAND:
45-46.25	8" Sonic	CH	CLAY:
46.25-46.75	8" Sonic	SW/SM	SAND with silt:
46.75-47	8" Sonic	ML	Sandy SILT:
47-47.5	8" Sonic	SM	Silty SAND:
47.5-50	8" Sonic	CH	CLAY:
50-51.5	8" Sonic	SM	Silty SAND:
51.5-52	8" Sonic	CH	Sandy CLAY:
52-52.5	8" Sonic	SM	CLAY:
52.5-53.5	8" Sonic	CH	Sandy CLAY:
53.5-55	8" Sonic	SM	Silty SAND:
55-56.25	8" Sonic	ML	Sandy SILT:
56.25-57.5	8" Sonic		SILT:
57.5-60	8" Sonic	SP/SM	SAND with silt:
60-61.5	8" Sonic	SM	Silty SAND:
61.5-62.5	8" Sonic	CH	CLAY:
62.5-63.75	8" Sonic	SP/SM	SAND with silt:
63.75-65	8" Sonic	SW	SAND:
65-67.5	8" Sonic		SAND:
67.5-70	8" Sonic		Gravelly SAND:
70-70.5	8" Sonic	SC/SM	Silty SAND and clay:
70.5-72.5	8" Sonic	CH	CLAY:
72.5-75	8" Sonic		CLAY:

TD = 75'; PVC 4-inch screen from 60 to 70; PVC 4-inch riser from -2.5 to 60  
 Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling  
 Driller - Daniel Dodge  
 Geologist - Michael Sauerwein

Above-grade, 5-foot long, 6-inch diameter, steel Wellhead Protective Monument set in Concrete  
 ~ 2.5-foot stick-up

Ground Surface

8-inch diameter,  
 from 0 to 75-feet bgs

4-inch diameter, Sch. 40 PVC,  
 from ~ 2.0 feet above ground surface (ags)  
 to 60 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout,  
 Tremie-Pipe Slurry,  
 from 1 to 53-feet bgs

At Time of Drilling,  
 Depth to Uppermost Ground  
 Water ~ 57.5-feet bgs

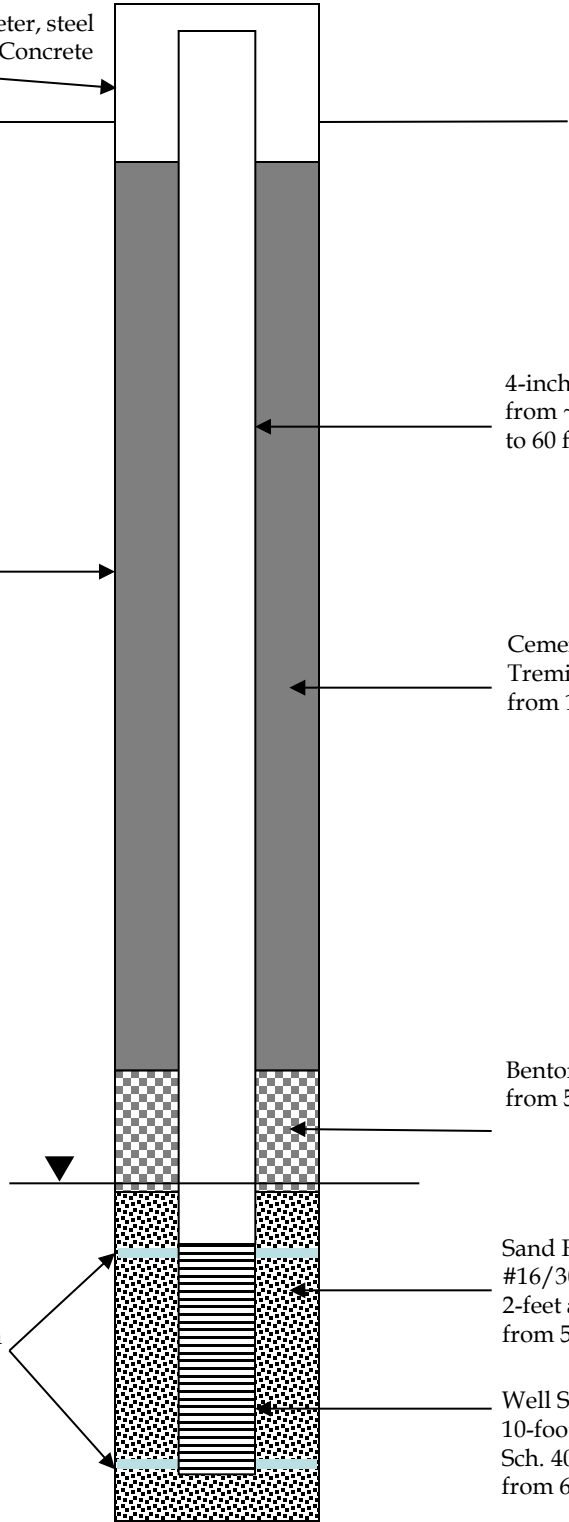
Bentonite medium chips,  
 from 53 to 58 feet bgs

Centralizers placed ~ the bottom  
 and the top of the well screen.

Sand Filter Pack:  
 #16/30 washed silica sand,  
 2-feet above screen  
 from 58 to 75 feet bgs

Well Screen:  
 10-foot length; 4-inch diameter  
 Sch. 40 PVC, 0.020"-slotted,  
 from 60 to 70 feet bgs

Total Depth (TD) = 75 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
 DELTA, UTAH

Well WWC-2 Schematic

Date Drawn  
 7/27/15

Design by

Drawn by

MS

Scale

Last Revision  
 Date

Boring Logs  
ISPC  
Delta, Utah

WWC-3

Interval (feet)	Drilling Method	USCS	Sample Description
7/30/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-1	8" Sonic	SP	Gravelly SAND:
1-2.5	8" Sonic	SM	Silty SAND:
2.5-3.5	8" Sonic		Silty SAND:
3.5-5	8" Sonic	SP/SM	SAND with silt:
5-6.5	8" Sonic	ML	Sandy SILT:
6.5-7.5	8" Sonic	CL	Sandy CLAY:
7.5-8	8" Sonic	SM	Silty SAND:
8-10	8" Sonic	SC	Clayey SAND:
10-11	8" Sonic	SM	Silty SAND:
11-12.5	8" Sonic		Silty SAND with clay:
12.5-13.5	8" Sonic		Silty SAND:
13.5-14	8" Sonic	SC	Clayey SAND:
14-15	8" Sonic	SM	Silty SAND:
15-15.5	8" Sonic	CH	CLAY:
15.5-16	8" Sonic		CLAY:
16-16.5	8" Sonic		Sandy CLAY:
16.5-17.5	8" Sonic		Sandy CLAY:
17.5-20	8" Sonic		CLAY:
20-21	8" Sonic		CLAY:
21-22	8" Sonic		CLAY:
22-24	8" Sonic		CLAY:
24-25	8" Sonic	SM	Silty SAND:
25-26.25	8" Sonic	SP/SM	SAND with silt:
26.25-27	8" Sonic	SP	SAND:
27-29	8" Sonic	SM	Silty SAND:
29-30	8" Sonic	CH	CLAY:
30-31	8" Sonic		CLAY:
31-32.5	8" Sonic	SP	SAND:
32.5-34	8" Sonic		SAND:
34-36	8" Sonic	CH	CLAY:
36-37	8" Sonic		CLAY:
37-39.5	8" Sonic	SP/SM	SAND with silt:
39.5-40.5	8" Sonic	SP	SAND:
40.5-41.5	8" Sonic		SAND:
41.5-43	8" Sonic	CH	CLAY:
43-44	8" Sonic	SP/SM	SAND with silt:
44-45	8" Sonic	SM	Silty SAND:
45-47.5	8" Sonic	SP	SAND:
47.5-50	8" Sonic		CLAY:
50-52.5	8" Sonic	CH	CLAY:
52.5-55	8" Sonic	SP	SAND:
55-61	8" Sonic		SAND:
61-62.5	8" Sonic		SAND:
62.5-65	8" Sonic	SW	SAND:
65-67.5	8" Sonic	SP	SAND:
67.5-69.5	8" Sonic	SW	SAND:
69.5-70	8" Sonic	CH	CLAY:

TD = 70'; PVC 4-inch screen from 55 to 65; PVC 4-inch riser from -2.5 to 55

Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling

Driller - Daniel Dodge

Geologist - Michael Sauerwein

Above-grade, 5-foot long, 6-inch diameter, steel Wellhead Protective Monument set in Concrete

~ 2.5-foot stick-up

Ground Surface

8-inch diameter, from 0 to 70-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 55 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 0 to 48-feet bgs

At Time of Drilling, Depth to Uppermost Ground Water ~ 52.5-feet bgs

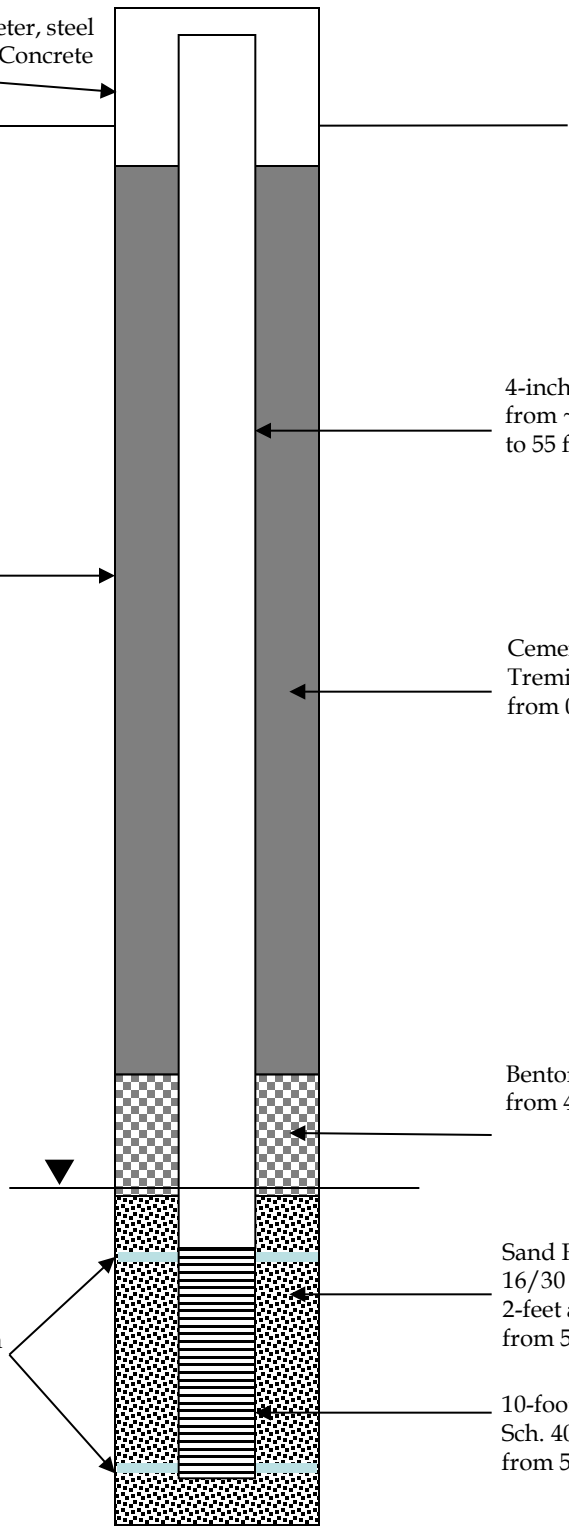
Bentonite medium chips, from 48 to 53 feet bgs

Centralizers - placed at the bottom and the top of the well screen.

Sand Filter Pack: 16/30 washed silica sand, 2-feet above screen from 53 to 70 feet bgs

10-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 55 to 65 feet bgs

Total Depth (TD) = 70 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
DELTA, UTAH UTAH

Well WWC-3 Schematic

Date Drawn  
7/30/15

Design by

Drawn by

MS

Scale

Last Revision  
Date

WWC-4

Interval (feet)	Drilling Method	USCS	Sample Description
7/29/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2.5	8" Sonic	SP/SM	SAND with silt:
2.5-5	8" Sonic		SAND with silt:
5-6.25	8" Sonic	ML	Sandy SILT:
6.25-7.25	8" Sonic	CL	CLAY:
7.25-8	8" Sonic	SC	Clayey SAND:
8-9	8" Sonic	SP/SC	SAND with clay:
9-10	8" Sonic	SP	SAND:
10-11	8" Sonic	ML	SILT:
11-12.5	8" Sonic	ML/CL	Clayey SILT:
12.5-14	8" Sonic	CL	CLAY:
14-15	8" Sonic		Sandy CLAY:
15-16	8" Sonic	SC	Clayey SAND:
16-18	8" Sonic		Clayey SAND:
18-19.5	8" Sonic	SM	Silty SAND:
19.5-20	8" Sonic	CH	CLAY:
20-21.25	8" Sonic		Sandy CLAY:
21.25-22.5	8" Sonic	SM	Silty SAND:
22.5-23.75	8" Sonic	CH	CLAY:
23.75-25	8" Sonic	SM	Silty SAND:
25-25.75	8" Sonic	SC	Clayey SAND:
25.75-27.5	8" Sonic	CL	Sandy CLAY:
27.5-29	8" Sonic	CH	CLAY:
29-30.5	8" Sonic		CLAY:
30.5-31.5	8" Sonic	SM	Silty SAND:
31.5-32.25	8" Sonic	CL	Sandy CLAY:
32.25-32.5	8" Sonic		Sandy CLAY:
32.5-33	8" Sonic	CH	CLAY:
33-36	8" Sonic	SP/SM	SAND with silt:
36-37	8" Sonic	SM	Silty SAND:
37-40	8" Sonic	SP	SAND:
40-42.5	8" Sonic		SAND:
42.5-45	8" Sonic		SAND:
45-46	8" Sonic	SP/SW	SAND:
46-46.5	8" Sonic	CH	CLAY:
45.5-47.5	8" Sonic		Sandy CLAY:
47.5-48.5	8" Sonic		CLAY:
48.5-50	8" Sonic		CLAY:
50-50.5	8" Sonic		CLAY:
50.5-52.5	8" Sonic	SM	Silty SAND:
52.5-54	8" Sonic	CH	CLAY:
54-55	8" Sonic	SP	SAND:
55-57	8" Sonic	CH	Sandy CLAY:
57-57.5	8" Sonic	SP	SAND:
57.5-60	8" Sonic	SM	Silty SAND:
60-62	8" Sonic		Silty SAND:
62-62.5	8" Sonic	SC	Clayey SAND:
62.5-63	8" Sonic	CH	Sandy CLAY:
63-65	8" Sonic	SM	Silty SAND:
65-67.5	8" Sonic	SW	SAND:
67.5-69.5	8" Sonic	SP	SAND:
69.5-70	8" Sonic	SW	SAND:
70-72	8" Sonic		SAND:
72-72.5	8" Sonic	SP/SM	SAND with silt:
72.5-75	8" Sonic	SM	Silty SAND:
75-80	8" Sonic	CH	CLAY:

TD = 80'; PVC 4-inch screen from 65 to 75; PVC 4-inch riser from -2.5 to 65  
Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Daniel Dodge  
Geologist - Michael Sauerwein

Above-grade, 5-foot long, 6-inch diameter, steel Wellhead Protective Monument set in Concrete

~ 2.5-foot stick-up

Ground Surface

8-inch diameter,  
from 0 to 80-feet bgs

4-inch diameter, Sch. 40 PVC,  
from ~ 2.0 feet above ground surface (ags)  
to 65 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout,  
Tremie-Pipe Slurry,  
from 0 to 58-feet bgs

Bentonite medium chips,  
from 58 to 63 feet bgs

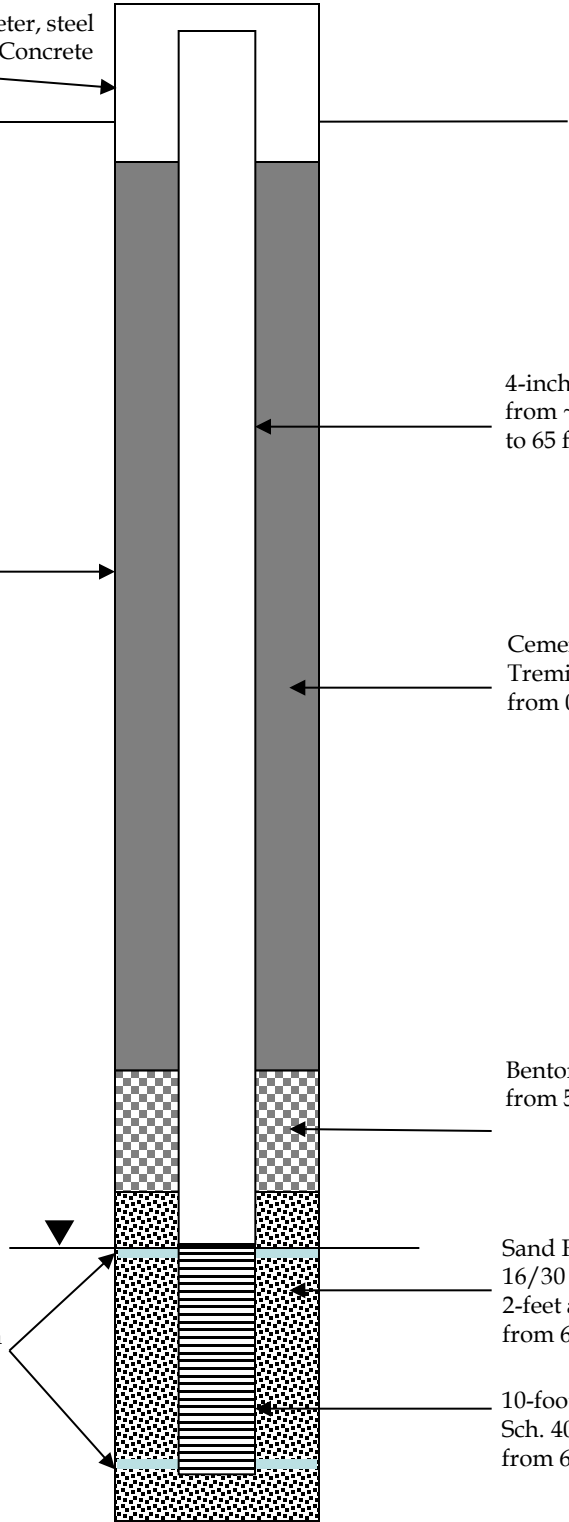
At Time of Drilling,  
Depth to Uppermost Ground  
Water ~ 65-feet bgs

Centralizers placed ~ the bottom  
and the top of the well screen.

Sand Filter Pack:  
16/30 washed silica sand,  
2-feet above screen  
from 63 to 80 feet bgs

10-foot length; 4-inch diameter  
Sch. 40 PVC, 0.020"-slotted,  
from 65 to 75 feet bgs

Total Depth (TD) = 80 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
DELTA, UTAH

Well WWC-4 Schematic

Date Drawn  
7/29/15

Design by

Drawn by

MS

Scale

Last Revision  
Date

WWC-5

Interval (feet)	Drilling Method	USCS	Sample Description
7/28/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand, Gravel, roots, coal ash.
0.5-2	8" Sonic	ML	Sandy SILT:
2-2.5	8" Sonic	SP/SM	SAND with silt:
2.5-4.25	8" Sonic	SM	Silty SAND:
4.25-5	8" Sonic	SP	SAND:
5-7.5	8" Sonic	ML	Clayey SILT:
7.5-9	8" Sonic	CL	Silty CLAY:
9-10	8" Sonic		Sandy CLAY:
10-10.5	8" Sonic	SC	Clayey SAND:
10.5-11.25	8" Sonic	CL	CLAY:
11.25-12.5	8" Sonic	ML	Clayey SILT:
12.5-13.25	8" Sonic	SM	Silty SAND:
13.25-13.75	8" Sonic	SC	Clayey SAND:
13.75-15	8" Sonic	CL	CLAY:
15-16	8" Sonic		CLAY:
16-17.5	8" Sonic	CH	CLAY:
17.5-19	8" Sonic	SC	Clayey SAND:
19-20.5	8" Sonic	CH	CLAY:
20.5-21.25	8" Sonic		Sandy CLAY:
21.25-22	8" Sonic		CLAY:
22-22.5	8" Sonic	SC	Clayey SAND:
22.5-24	8" Sonic	SM	Silty SAND:
24-25	8" Sonic	CH	CLAY:
25-26	8" Sonic	SM/CH	Silty SAND / CLAY:
26-27.5	8" Sonic	CH	CLAY:
27.5-28	8" Sonic		Sandy CLAY:
28-28.25	8" Sonic	SM	Silty SAND:
28.25-30	8" Sonic	CH	CLAY:
30-32.5	8" Sonic	SP	SAND:
32.5-34	8" Sonic		SAND:
34-37.5	8" Sonic		SAND:
37.5-40	8" Sonic	SP/SM	SAND with silt:
40-42.5	8" Sonic	CH	CLAY:
42.5-42.75	8" Sonic	SM	Silty SAND:
42.75-44	8" Sonic	CH	Sandy CLAY:
44-44.5	8" Sonic	SM	Silty SAND:
44.5-45	8" Sonic		Silty SAND:
45-45.5	8" Sonic		Silty SAND:
45.5-46.75	8" Sonic		Silty SAND:
46.75-47.5	8" Sonic	CH	CLAY:
47.5-50	8" Sonic		CLAY:
50-50.5	8" Sonic		Sandy CLAY:
50.5-51.5	8" Sonic	SM	CLAY:
51.5-52	8" Sonic		Silty SAND:
52-53.25	8" Sonic	CH	CLAY:
53.25-53.5	8" Sonic		CLAY:
53.5-54	8" Sonic	SC	Clayey SAND:
54-55	8" Sonic	SM/SC	Silty SAND and clay:
55-57.5	8" Sonic	SP	SAND:
57.5-60	8" Sonic		SAND:
60-60.75	8" Sonic		SAND:
60.75-61.5	8" Sonic	CH	CLAY:
61.5-62.5	8" Sonic	SP/SM	SAND with silt:
62.5-64	8" Sonic		SAND with silt:
64-65	8" Sonic	SW	SAND:
65-67.5	8" Sonic		SAND with gravel:
67.5-70	8" Sonic		Gravelly SAND:
70-72.5	8" Sonic		SAND:
72.5-75	8" Sonic		SAND:

TD = 75'; PVC 4-inch screen from 64 to 74; PVC 4-inch riser from -2.5 to 64  
Drilling Method: Guspech GS24-300RS, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Daniel Dodge  
Geologist - Michael Sauerwein



Above-grade, 5-foot long, 6-inch diameter, steel Wellhead Protective Monument set in Concrete

~ 2.5-foot stick-up

Ground Surface

8-inch diameter, from 0 to 75-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 64 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 0 to 57-feet bgs

At Time of Drilling, Depth to Uppermost Ground Water ~ 61.5-feet bgs

Bentonite medium chips, from 57 to 62 feet bgs

16/30 washed silica sand, 2-feet above screen from 62 to 75 feet bgs

Centralizers - placed at the bottom and the top of the well screen.

10-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 64 to 74 feet bgs

Total Depth (TD) = 75 feet bgs

IPSC - WASTEWATER SURFACE IMPOUNDMENT  
DELTA, UTAH

Well WWC-5 Schematic



Date Drawn  
7/28/15

Design by

Drawn by

MS

Scale

Last Revision  
Date

Boring Logs  
 ISPC  
 Delta, Utah

WWC-6

Interval (feet)	Drilling Method	USCS	Sample Description
03/23/2018 - 03/24/2018			
0-0.5	8" Sonic	SM	Silty sand
0.7-7	8" Sonic	SP	Sand, poorly graded, dry
7-12.5	8" Sonic	CH	Silty clay
12.5-15.5	8" Sonic	SM	Sand, some silt
15.5-19.5	8" Sonic	SP	Sand, poorly graded
19.5-21.5	8" Sonic	SW/GW	Sand and gravel
21.5-27	8" Sonic	SP	Sand, poorly graded, running sands @ ~26
27-29.5	8" Sonic	SP	Sand, poorly graded, running sands
29.5-30	8" Sonic	SW	Sand with gravel
30-37	8" Sonic	CH	Clay, stiff
37-41	8" Sonic	CH	Clay, trace silt, moist, stiff
41-47	8" Sonic	CH	Clay, stiff, moist
47-48	8" Sonic	SP	Sand
48-57	8" Sonic	SW	Sand, silt and gravel
57-59	8" Sonic	SP	Sand
59-60.5	8" Sonic	CH	Clay wet
60.5-64.5	8" Sonic	MH	Silt, trace clay
64.5-67	8" Sonic	CH	Clay wet
67-72	8" Sonic	CH	Clay wet
72-77	8" Sonic	SP	Sand, saturated
77-87	8" Sonic	CH	Clay

TD = 87'; PVC sump 87-77; 4" screen 77-67; sand 87-62 centralizers 67.5 and 76.5  
 Drilling Method: Sonic

Drilling Company - Cascade Drilling  
 Driller - David Donnely  
 Geologist - Tom Fendler

Flush-mount, Wellhead Protective Vault, 8-inch diameter, steel lid

Ground Surface

Concrete Apron

Borehole:  
8-inch diameter,  
from 0 to 87-feet bgs

4-inch diameter, Sch. 40 PVC,  
from ~ 0.25 - 67 feet bgs

Cement-Bentonite (~ 10:1) Grout,  
Tremie-Pipe Slurry,  
from 0 to 57-feet bgs

Bentonite medium chips, from 57  
to 62 feet bgs

At Time of Drilling, Depth to  
Uppermost Ground Water ~ 72 to 77-  
feet bgs

Sand Filter Pack:  
(16/30 washed silica sand,  
2-feet above screen  
from 62 to 87 feet bgs)

Centralizers placed ~ the bottom  
and the top of the well screen.

10-foot length; 4-inch diameter  
Sch. 40 PVC, 0.020" -slotted,  
from 67 to 77 feet bgs...with 10-ft. solid  
PVC sump at 77 to 87 feet bgs.

Total Depth (TD) = 87 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
Delta, Utah

Well WWC-6 Schematic

Date Drawn	10/24/1
Last Revision	8
Date	

Design by

Drawn by JR

Scale

Boring Logs  
 ISPC  
 Delta, Utah

WWC-7

Interval (feet)	Drilling Method	USCS	Sample Description
03/20/2018 - 03/23/2018			
0-1.5	8" Sonic	SM	Silty sand, dry
1.5-8.5	8" Sonic	SP	Sand, poorly graded, saturated at 7.5
8.5-9	8" Sonic	CH	Sandy clay
9-14	8" Sonic	SC	Clay with trace sand
14-24	8" Sonic	SP	Sand, poorly graded, saturated with heaving sands at 17'
24-25	8" Sonic	SW/GW	Gravel/sand and gravel
25-27	8" Sonic	CH	Clay, moist
27-34.5	8" Sonic	SP	Sandy, wet
34.5-35.5	8" Sonic	SW/GW	Sand, some gravel
35.5-37	8" Sonic	CH	Clay, moist, stiff
37-47	8" Sonic	CH	Clay, moist, stiff
47-49.5	8" Sonic	CH	Clay, moist, stiff
49.5-50.5	8" Sonic	SP	Sand, poorly sorted, moist
50.5-57	8" Sonic	CH	Clay, moist, stiff
57-67	8" Sonic	CH	Clay, moist, stiff
67-72	8" Sonic	CH	Clay, moist, stiff
72-77	8" Sonic	SP	Sand, poorly graded, saturated @76.5
77-87	8" Sonic	SP	Sand, poorly graded, saturated

TD = 87'; PVC 4-inch screen from 77 to 87; sand pack 72-87; bentonite pellets 67-72; grout 67-grade

Drilling Method: Sonic

Drilling Company - Cascade Drilling

Driller - David Donnely

Geologist - Tom Fendler

Flush-mount, Wellhead Protective Vault, 8-inch diameter, steel lid

Ground Surface

Concrete Apron

Borehole:  
8-inch diameter,  
from 0 to 87-feet bgs

4-inch diameter, Sch. 40 PVC,  
from ~ 0.25 - 77 feet bgs

Cement-Bentonite (~ 10:1) Grout,  
Tremie-Pipe Slurry,  
from 0 to 67-feet bgs

Bentonite medium chips, from 67  
to 72 feet bgs

At Time of Drilling, Depth to  
Uppermost Ground Water ~ 72 to 77-  
feet bgs

Sand Filter Pack:  
(16/30 washed silica sand,  
2-feet above screen  
from 72 to 87 feet bgs)

Centralizers placed ~ the bottom  
and the top of the well screen.

10-foot length; 4-inch diameter  
Sch. 40 PVC, 0.020" -slotted,  
from 77 to 87 feet bgs

Total Depth (TD) = 87 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
DELTA, UTAH

Well WWC-7 Schematic

Date Drawn	10/24/1
Last Revision	8
Date	

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Scale



**Project Name:** Intermountain Power Service Corporation  
**Boring Monitor Well:** WWC-8

**Project No.:** 203709098  
**Completion Date:** 2019-04-25

**Drilling Firm:** Cascade  
**Boring Method:** Sonic  
**Boring Diameter:** 10 inches

**Driller:** Ryan Miller  
**Logged by:** Rich Pratt  
**Depth to Water at Drilling:** 77 feet  
**Depth to Water at Drilling (static at 24 hours):** 27 feet

WWC-8

Interval (feet)	Description
0 - 3	Light brown sand, moist
3 - 7	Light brown sand with silt, dry
7 - 9	Medium brown clay with sand, moist
9 - 13	Medium brown clay, moist
13 - 15	Light brown clay, moist
15 - 17	Light brown clay, dry
17 - 26	Light brown clay, moist
26 - 35	Light brown clay with sand, moist
35 - 37	Light brown clay, moist
37 - 41	Medium brown medium grained sand, moist
41 - 43	Medium brown medium grained sand, moist
43 - 55	Medium brown medium grained sand, moist
55 - 59	Light brown clay, moist
59 - 63	Light brown clay with sand, moist
63 - 66	Light brown clay, moist
66 - 67	Light brown clay with sand, moist
67 - 68	Light brown sand, moist
68 - 77	Light brown clay with sand, moist
77 - 88	Medium brown sand, saturated
88 - 93	Light brown clay
93 - 94	Light brown clay with sand
94 - 96	Light brown clay
96 - 97	Medium brown sand

Well Completion materials and Depth Intervals (feet) Below Ground Surface

**Surface Completion:** Stick-up  
**Casing, solid (6-inch PVC):** 0-69.38 feet  
**Screen (6 inch, 0.02 slotted, PVC):** 69.38-94.38 feet  
**Sand Pack:** 16/30 sand, 64.38-94.38 feet  
**Bentonite Seal:** Hydrolyzed bentonite pellet seal  
 57.38-64.38 feet

**Top of 6 in. PVC Casing Elevation (Relative Datum Survey):** NA  
**Top of Manhole Cover (Relative Datum Survey):** NA

Top of PVC casing above ground surface ~ 2.02 feet. stick-up

Above-grade, 5-feet. long, 8-in. square, steel Wellhead Protective Monument ~ 2.57 feet. stick-up

Ground Surface

6-inch Diameter, Sch 40 PVC Well Casing from below top of casing - 96.4 feet

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 57.38 feet below ground surface (bgs)

10-inch boring from 0 to 94.38-feet bgs

Medium bentonite chips From 57.38 to 64.38 feet bgs

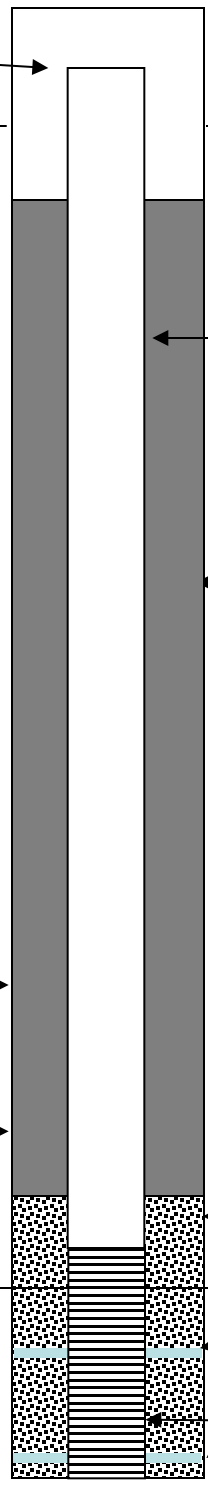
Sand Filter Pack (16/30 washed, silica sand, 5 feet above screen from 64.38 to 94.38 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 77 feet bgs

Centralizers - placed at the bottom and at 25-30 foot intervals

25-feet; 6-inch 0.020-slotted, PVC well screen from 69.38 to 94.38 feet bgs

Total Depth (TD) = 94.38 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
DELTA, UTAH

WWC-8 Schematic

Date Drawn  
6-4-19

Design by

Drawn by

RP

Scale

Last Revision  
Date





**Project Name:** Intermountain Power Service Corporation

**Project No.:** 203709098

**Completion Date:** 2019-04-28

**Boring Monitor Well:** WWC-9

**Drilling Firm:** Cascade

**Driller:** Ryan Miller

**Boring Method:** Sonic

**Logged by:** Rich Pratt

**Boring Diameter:** 10 inches

**Depth to Water at Drilling:** 67 feet

**Depth to Water at Drilling (static at 24 hours):**  
23.75 feet

WWC-9

Interval (feet)	Description
0 - 0.5	Medium brown silt, dry
0.5 - 1	Medium brown clay, dry
1 - 4	Light brown fine-grained sand, dry
4 - 8	Light brown clay, dry
8 - 13	Light brown fine-grained sand, dry
13 - 15	Light brown clay, dry
15 - 16	Light brown clay with sand, dry
16 - 17	Light brown clay, dry
17 - 18	Light brown clay with sand, moist
18 - 21.5	Light brown clay, moist
21.5 - 22	Light brown clay with sand, moist
22 - 23	Light brown clay, moist
23 - 26	Light brown clay with sand, moist
26 - 27	Light brown clay, moist
27 - 30	Light brown clay, moist
30 - 31	Light brown clay, saturated
31 - 32	Light brown clay with sand, moist
32 - 36	Light brown clay, moist
36 - 37	Light brown clay with sand, moist
37 - 38	Light brown clay with sand, moist
38 - 51	Medium brown medium grained sand, moist
51 - 54	Light brown clay, moist
54 - 58	Medium brown medium grained sand, moist
58 - 59	Medium brown medium grained sand, moist
59 - 62	Medium brown medium grained sand, moist
62 - 63	Light brown clay, moist to moist
63 - 66	Light brown clay with sand, moist
66 - 67	Light brown clay, moist
67 - 69	Light brown clay with sand, saturated



Interval (feet)	Description
69 – 69.5	Medium brown sand
69.5 - 70	Light brown clay with sand
70 - 71	Light brown clay
71 - 74	Light brown clay with sand
74 - 75	Medium brown sand
75 - 77	Light brown clay
77 - 83	Medium brown sand
83 - 85	Light brown clay
85 - 87	Light brown clay with sand

Well Completion materials and Depth Intervals (feet) Below Ground Surface

**Surface Completion:** Stick-up

**Casing, solid (6-inch PVC):** 0-61.7 feet

**Screen (6 inch, 0.02 slotted, PVC):** 61.7-86.7 feet

**Sand Pack:** 16/30 sand, 56.7-86.7 feet

**Bentonite Seal:** Hydrolyzed bentonite pellet seal  
49.7-56.7 feet

**Top of 6 in. PVC Casing Elevation (Relative Datum Survey):** NA

**Top of Manhole Cover (Relative Datum Survey):**  
NA

Top of PVC casing above ground surface ~ 2.45 feet. stick-up

Above-grade, 5-feet. long, 8-in. square, steel Wellhead Protective Monument ~ 3.24 feet. stick-up

Ground Surface

6-inch Diameter, Sch 40 PVC Well Casing from below top of casing - 89.15 feet

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 49.7 feet below ground surface (bgs)

10-inch boring from 0 to 86.7-feet bgs

Medium bentonite chips From 49.7 to 56.7 feet bgs

Sand Filter Pack (16/30 washed, silica sand, 5 feet above screen from 56.7 to 86.7 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 67 feet bgs

Centralizers - placed at the bottom and at 25-30 foot intervals

25-feet; 6-inch 0.020-slotted, PVC well screen from 61.7 to 86.7 feet bgs

Total Depth (TD) = 86.7 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
Delta, Utah

WWC-9 Schematic

Date Drawn  
6-4-19

Design by

Drawn by RP

Scale

Last Revision  
Date



**Project Name:** Intermountain Power Service Corporation

**Boring Monitor Well:** WWC-10

**Project No.:** 203709098

**Completion Date:** 2019-04-26

**Drilling Firm:** Cascade

**Boring Method:** Sonic

**Boring Diameter:** 10 inches

**Driller:** Ryan Miller

**Logged by:** Rich Pratt

**Depth to Water at Drilling:** 67 feet

**Depth to Water at Drilling (static at 24 hours):**  
17.65 feet

WWC-10

Interval (feet)	Description
0 - 5	Light brown sand, moist
5 - 9.5	Light brown clay with sand, moist
9.5 - 13	Dark gray clay, moist
13 - 14	Dark brown silt with organic plant matter, moist
14 - 15	Dark gray clay, moist
15 - 17	Gray medium grained sand, moist
17 - 34	Gray medium grained sand, moist
34 - 45	Brown medium grained sand, moist
45 - 47	Medium brown clay, moist
47 - 49	Medium brown clay with sand, moist
49 - 50	Medium brown medium grained sand, moist
50 - 51	Medium brown clay with sand, moist
51 - 52	Medium brown medium grained sand, moist
52 - 53	Medium brown clay with sand, moist
53 - 54	Medium brown medium grained sand, moist
54 - 60	Medium brown clay, moist
60 - 61	Medium brown clay with sand, moist
61 - 67	Medium brown clay, moist
67 - 68	Medium brown clay, saturated
68 - 69	Medium brown clay with sand
69 - 70	Medium brown clay
70 - 76	Medium brown clay with sand
76 - 87	Medium brown clay

Well Completion materials and Depth Intervals (feet) Below Ground Surface

**Surface Completion:** Stick-up

**Casing, solid (6-inch PVC):** 0-62.75 feet

**Screen (6 inch, 0.02 slotted, PVC):** 62.75-87.75 feet

**Sand Pack:** 16/30 sand, 57.75-87.75 feet

**Bentonite Seal:** Hydrolyzed bentonite pellet seal  
50.75-57.75 feet

**Top of 6 in. PVC Casing Elevation (Relative Datum Survey):** NA

**Top of Manhole Cover (Relative Datum Survey):**  
NA

Top of PVC casing above ground surface ~ 2.35 feet. stick-up

Above-grade, 5-feet. long, 8-in. square, steel Wellhead Protective Monument ~ 3.17 feet. stick-up

Ground Surface

6-inch Diameter, Sch 40 PVC Well Casing from below top of casing - 90.1 feet

Cement-Bentonite (~ 10:1) Grout, Tremie-Pipe Slurry from 0 to 50.75 feet below ground surface (bgs)

10-inch boring from 0 to 87.75-feet bgs

Medium bentonite chips From 50.75 to 57.75 feet bgs

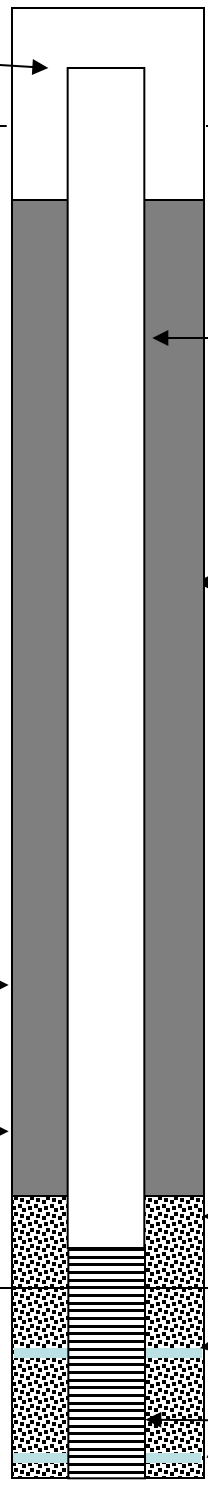
Sand Filter Pack (16/30 washed, silica sand, 5 feet above screen from 57.75 to 87.75 feet bgs)

At Time of Drilling, Depth to Uppermost Ground Water ~ 67 feet bgs

Centralizers - placed at the bottom and at 25-30 foot intervals

25-feet; 6-inch 0.020-slotted, PVC well screen from 62.75 to 87.75 feet bgs

Total Depth (TD) = 87.75 feet bgs



IPSC – WASTEWATER SURFACE IMPOUNDMENT  
DELTA, UTAH

WWC-10 Schematic

Date Drawn  
6-4-19

Design by

Drawn by

RP

Scale

Last Revision  
Date









MONITORING WELL ID: **WWC-13**

CLIENT: Intermountain Power Service Corporation

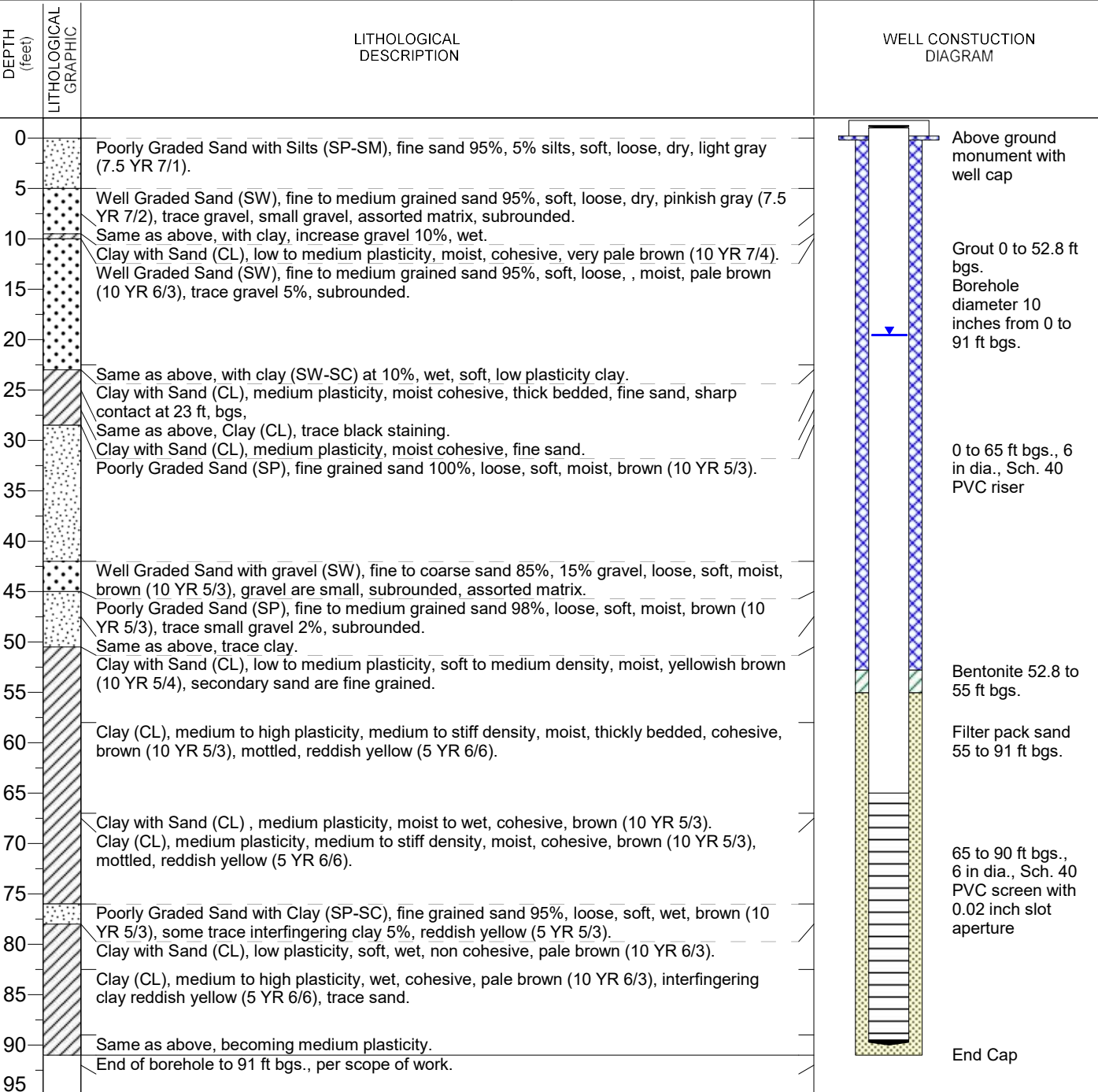
PROJECT: Monitoring Well Installation

SITE LOCATION: South of Waste Water Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600 11-77287  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
 10 inch sonic core barrel 0 to 91 ft bgs.

COORDINATE SYSTEM:  
 EASTING:  
 NORTHING:  
 ELEVATION:  
 BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 91  
 GROUNDWATER LEVEL (ft. btoc.): 19.55  
 DATE STARTED: 11/13/2019 DATE FINISHED: 11/15/2019  
 LOGGED BY: Michael Ward



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



**MONITORING WELL ID: WWC-14**

CLIENT: Intermountain Power Service Corporation

PROJECT: Monitoring Well Installation

SITE LOCATION: South of Waste Water Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling

DRILLING METHOD: Sonic

DRILLING EQUIPMENT: Pro Sonic 600

SAMPLING METHOD: 4 inch sonic core barrel 0 to 88 ft bgs.,  
10 inch sonic core barrel 0 to 88 ft bgs.,

COORDINATE SYSTEM:

EASTING:

NORTHING:

ELEVATION:

BOREHOLE ANGLE: 90 degrees

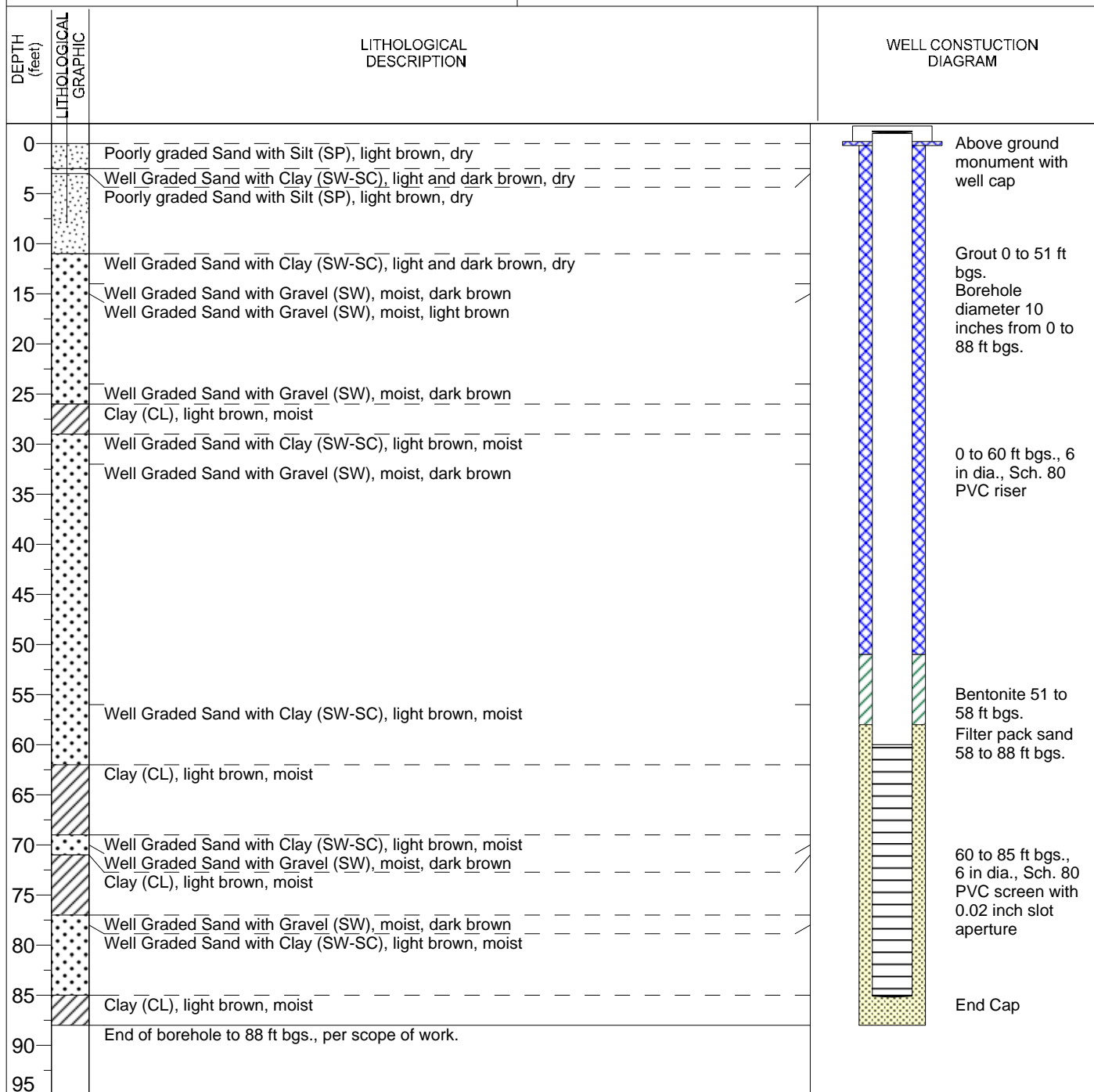
TOTAL DEPTH (ft.): 88

GROUNDWATER LEVEL (ft. btoc.):

DATE STARTED: 5/6/2020

DATE FINISHED: 5/7/2020

LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface Sch. = Schedule  
dia. = diameter YR = Yellow-Red  
ft = feet



MONITORNG WELL ID: **WWC-15**

CLIENT: Intermountain Power Service Corporation

PROJECT: Monitoring Well Installation

SITE LOCATION: South of Waste Water Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 88 ft bgs.,  
 10 inch sonic core barrel 0 to 88 ft bgs.,

COORDINATE SYSTEM:  
 EASTING: NORTHING:  
 ELEVATION: BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 88 GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/6/2020 DATE FINISHED: 5/7/2020  
 LOGGED BY: Michael Ward

DEPTH (feet)	LITHOLOGICAL GRAPHIC	LITHOLOGICAL DESCRIPTION	WELL CONSTRUCTION DIAGRAM	
0		Well graded sand with silt (SW-SM), fine to medium grained sands, loose, soft, dry, unconsolidated, light yellowish brown (10 YR 6/4).	Above ground monument with well cap	
5		Poorly graded sand (SP), fine to medium grained, dry, soft, loose, light brownish gray (10 YR 6/2).		
10		Poorly Graded Sand with Clay (SP-SC), fine grained, moist, clays are soft, dark yellowish brown (10 YR 5/4).	Grout 0 to 51 ft bgs. Borehole diameter 10 inches from 0 to 88.5 ft bgs.	
15				
20		Well Graded Sand (SW), fine to coarse sand, loose, soft, unconsolidated, dark yellowish brown (10 YR 4/4), trace gravels.	0 to 63 ft bgs., 6 in dia., Sch. 80 PVC riser	
25		Poorly graded sand (SP), fine to medium grained, dry, soft, loose, brown (10 YR 4/3).		
30		Clay (CL), stiff, medium to high plasticity, moist, cohesive, light yellowish brown (10 YR 6/4).		
35		Poorly Graded Sand with Clay (SP-SC), fine to medium grained, moist to wet, soft, noncohesive, pale brown (10 YR 6/3).		
40				Clay (CL), stiff, medium to high plasticity, moist, cohesive, light yellowish brown (10 YR 6/4).
45		Poorly Graded Sand (SP), fine or medium grained, loose, soft, moist, brown (10 YR 5/3), trace gravels.		
50				
55		Well Graded Sand (SW), fine to coarse sand, loose, soft, unconsolidated, moist, brown (10 YR 5/3).		Bentonite 51 to 58 ft bgs. Filter pack sand 58 to 88 ft bgs.
60		Clays (CL), stiff, medium to high plasticity, moist.		
65		Well Graded Sand (SW), fine to coarse sand, loose, soft, unconsolidated, moist, brown (10 YR 5/3), trace gravels, rounded.		63 to 88 ft bgs., 6 in dia., Sch. 80 PVC screen with 0.02 inch slot aperture
70		Clay (CL), medium plasticity, stiff, cohesive, brown (7.5 YR 5/4).		
75		Same as above, becoming high plasticity.		
80		Poorly Graded Sand (SW), fine or medium grained, wet, saturated, loose, soft, brown (10 YR 5/3).		
85		Clay (CL), medium plasticity, stiff, cohesive, brown (7.5 YR 5/4).		
90		Poorly Graded Sand (SW), fine or medium grained, wet, saturated, loose, soft, brown (10 YR 5/3).	End Cap	
95		Clay (CL), medium plasticity, stiff, cohesive, brown (7.5 YR 5/4). Clay with Sand (CL), wet, non cohesive, low plasticity, brown (10 YR 5/3).		
88		End of borehole at 88 ft bgs. Installed monitoring well per scope of work.		

Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



MONITORING WELL ID: **WWC-16**

CLIENT: Intermountain Power Service Corporation

PROJECT: Monitoring Well Installation

SITE LOCATION: South of Waste Water Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling

DRILLING METHOD: Sonic

DRILLING EQUIPMENT: Pro Sonic 600

SAMPLING METHOD: 4 inch sonic core barrel 0 to 88 ft bgs.,  
10 inch sonic core barrel 0 to 88 ft bgs.,

COORDINATE SYSTEM:

EASTING:

NORTHING:

ELEVATION:

BOREHOLE ANGLE: 90 degrees

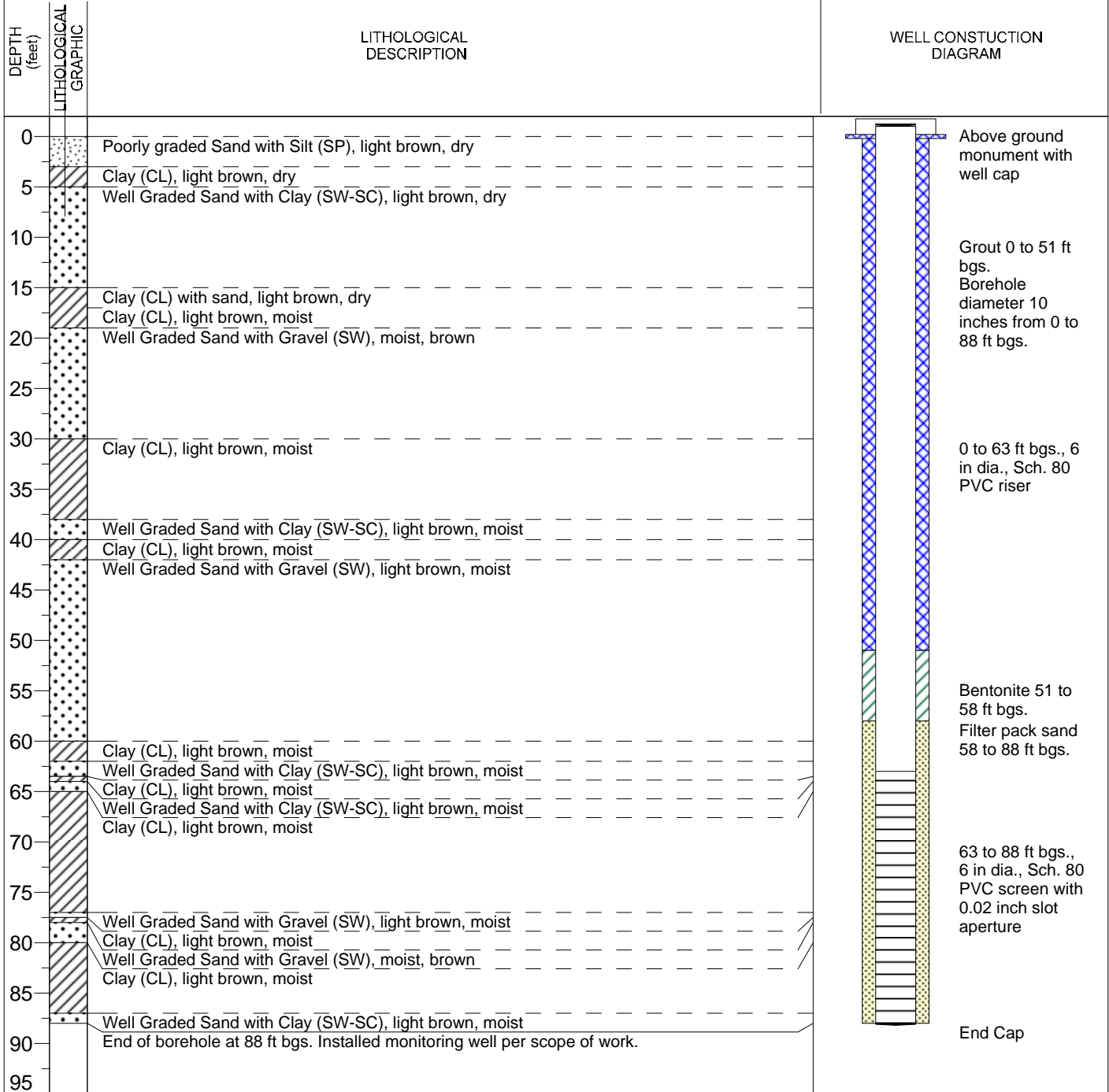
TOTAL DEPTH (ft.): 88

GROUNDWATER LEVEL (ft. btoc.):

DATE STARTED: 5/7/2020

DATE FINISHED: 5/8/2020

LOGGED BY: Rich Pratt



Notes: bgs. = below ground surface Sch. = Schedule  
 dia. = diameter YR = Yellow-Red  
 ft = feet



MONITORING WELL ID: **WWC-17**

CLIENT: Intermountain Power Service Corporation

PROJECT: Monitoring Well Installation

SITE LOCATION: South of Waste Water Basin Surface Impoundment



DRILLING CONTRACTOR: Cascade Drilling  
 DRILLING METHOD: Sonic  
 DRILLING EQUIPMENT: Pro Sonic 600  
 SAMPLING METHOD: 4 inch sonic core barrel 0 to 91 ft bgs.,  
 10 inch sonic core barrel 0 to 91 ft bgs.,

COORDINATE SYSTEM:  
 EASTING:                                    NORTHING:  
 ELEVATION:                                BOREHOLE ANGLE: 90 degrees  
 TOTAL DEPTH (ft.): 88                 GROUNDWATER LEVEL (ft. btoc.):  
 DATE STARTED: 5/8/2020   DATE FINISHED: 5/8/2020  
 LOGGED BY: Michael Ward

DEPTH (feet)	LITHOLOGICAL GRAPHIC	LITHOLOGICAL DESCRIPTION	WELL CONSTRUCTION DIAGRAM
0		Well Graded Sand with Silt (SW-SM), fine or medium grained sand, loose, soft, dry, very pale brown (10 YR 7/4).	Above ground monument with well cap
5		Poorly Graded Sand (SP), fine to coarse, loose, soft, dry, unconsolidated, light gray (10 YR 7/2).	
10		Clays (CL), low to medium plasticity, medium dense, moist, light yellowish brown (10 YR 7/4).	Grout 0 to 50 ft bgs. Borehole diameter 10 inches from 0 to 88 ft bgs.
15		Poorly Graded Sand (SP), fine to coarse, loose, soft, dry, unconsolidated, light gray (10 YR 7/2).	
20		Clay (CL), medium plasticity, medium dense, cohesive, dark red (2.5 YR 4/6).	0 to 63 ft bgs., 6 in dia., Sch. 80 PVC riser
25		Well Graded Sand (SW), fine grained, loose, soft, moist, yellowish brown (10 YR 5/4).	
30		Clay (CL), medium plasticity, medium dense, cohesive, dark red (2.5 YR 4/6), mottled with gray (10 YR 6/1).	Bentonite 50 to 55 ft bgs. Filter pack sand 55 to 88 ft bgs.
35		Well Graded Sand (SW), fine grained, loose, soft, wet, brown (10 YR 4/3), with thin black lenses.	
40			63 to 88 ft bgs., 6 in dia., Sch. 80 PVC screen with 0.02 inch slot aperture
45			
50		Sandy Lean Clay (CL), low plasticity, soft to medium dense, wet, yellowish brown (10 YR 6/1).	End Cap
55		Well Graded Sand with Clay (SW-SC), fine grained sand, wet, loose, soft, yellowish brown (10 YR 5/4).	
60		Sandy Lean Clay (CL), low plasticity, soft to medium dense, wet, brown (10 YR 5/3).	
65		Well Graded Sand (SW), fine or medium grained sand, loose, soft, wet, brown (10 YR 5/3)	
70		Clay (CL), moderate plasticity, medium dense, consolidated, brown (10 YR 5/3).	
75		Well Graded Sand (SW), fine or medium grained sand, loose, soft, wet, brown (10 YR 5/3)	
80		Clay (CL), medium to high plasticity, stiff, dense, consolidated, brown (10 YR 5/3).	
85		Well Graded Sand (SW), fine or medium grained sand, loose, soft, wet, brown (10 YR 5/3)	
90		End of borehole at 88 ft bgs. Installed monitoring well per scope of work.	
95			

Notes: bgs. = below ground surface   Sch. = Schedule  
 dia. = diameter                        YR = Yellow-Red  
 ft = feet

WWU-1

Interval (feet)	Drilling Method	USCS	Sample Description
8/11/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand and Gravel.
0.5-1.5	8" Sonic	SM	Silty SAND:
1.5-2.5	8" Sonic	SP/SM	SAND with silt:
2.5-3.5	8" Sonic	ML	Sandy SILT:
3.5-4.75	8" Sonic	SP	SAND:
4.75-5	8" Sonic	SC	Clayey SAND:
5-7	8" Sonic	SP/SM	SAND with silt:
7-10.75	8" Sonic	SC	Clayey SAND:
10.75-12.5	8" Sonic	SP/SM	SAND with silt:
12.5-13	8" Sonic	SC	Clayey SAND:
13-14	8" Sonic	SM	Silty SAND:
14-15	8" Sonic	SP	SAND:
15-17.5	8" Sonic	SP/SM	SAND with silt:
17.5-20	8" Sonic	SP	SAND:
20-22	8" Sonic	SP/SM	SAND with silt:
22-22.5	8" Sonic	SC	Clayey SAND:
22.5-25	8" Sonic	CL	Sandy CLAY:
25-27.5	8" Sonic		Sandy CLAY:
27.5-28	8" Sonic	SC	Clayey SAND:
28-30	8" Sonic	SW	Gravelly SAND:
30-32.5	8" Sonic	SP/SM	SAND with silt:
32.5-35	8" Sonic	SM	Silty SAND:
35-37.5	8" Sonic	SP	SAND:
37.5-40	8" Sonic		SAND:
40-42.5	8" Sonic	SW/SM	SAND with silt:
42.5-43.25	8" Sonic	SM	Silty SAND:
43.25-44.25	8" Sonic		Silty SAND:
44.25-45	8" Sonic	SP/SW	SAND:
45-47.5	8" Sonic	SW	SAND:
47.5-50	8" Sonic	SP	SAND:
50-50.5	8" Sonic		SAND:
50.5-51.75	8" Sonic	ML	Sandy SILT:
51.75-52.5	8" Sonic	SP	SAND:
52.5-53.25	8" Sonic	SC	Clayey SAND:
53.25-55	8" Sonic		Clayey SAND:
55-56.5	8" Sonic		Clayey SAND:
56.5-57.5	8" Sonic		Clayey SAND:
57.5-60	8" Sonic		Clayey SAND:
60-61	8" Sonic	ML	Clayey SILT with sand:
61-62.5	8" Sonic	SM	Silty SAND:
62.5-63.75	8" Sonic	CL	Sandy CLAY:
63.75-64.75	8" Sonic	SM	Silty SAND:
64.75-65.5	8" Sonic	SP	SAND:
65.5-66.5	8" Sonic	ML	Clayey SILT with sand:
66.5-67.5	8" Sonic	SC	Clayey SAND:
67.5-70	8" Sonic	SM	Silty SAND with clay:

TD = 70'; PVC 4-inch screen from 60 to 70; PVC 4-inch riser from -2.5 to 60

Drilling Method: Prosonic T600, 8" Rotasonic

Drilling Company - Cascade Drilling

Driller - Rick Mallett

Geologist - Michael Sauerwein

Above-grade, 5-foot long, 6-inch diameter, steel Wellhead Protective Monument set in Concrete

~ 2.5-foot. stick-up

Ground Surface

8-inch diameter,  
from 0 to 70-feet bgs

4-inch diameter, Sch. 40 PVC,  
from ~ 2.0 feet above ground surface (ags)  
to 60 feet below ground surface (bgs)

Portland Cement-Bentonite gel (~ 10:1)  
Grout, Tremie-Pipe Slurry,  
from 0 to 53-feet bgs

Bentonite medium chips,  
from 53 to 58 feet bgs

At Time of Drilling,  
Depth to Uppermost Ground  
Water ~ 61-feet bgs

Sand Filter Pack  
16/30 washed silica sand,  
2-feet above screen  
from 58 to 70 feet bgs

Centralizers - placed at the bottom  
and the top of the well screen.

10-foot length; 4-inch diameter  
Sch. 40 PVC, 0.020"-slotted,  
from 60 to 70 feet bgs

Total Depth (TD) = 70 feet bgs



IPSC – WASTEWATER HOLDING BASIN AREA  
DELTA, UTAH

Well WW-U-1 Schematic

Date Drawn  
8/11/15

Design by

Drawn by

MS

Scale

Last Revision  
Date



WWU-2

Interval (feet)	Drilling Method	USCS	Sample Description
8/11/2015			
0-0.5	8" Sonic	TOPSOIL	Surface - Sand and Gravel.
0.5-2.5	8" Sonic	ML	Gravelly SILT with sand:
2.5-4	8" Sonic	SP	SAND:
4-5	8" Sonic		SAND:
5-5.5	8" Sonic		SAND:
5.5-7.5	8" Sonic		SAND:
7.5-9.5	8" Sonic	SP/SW	SAND:
9.5-10	8" Sonic	SP	SAND:
10-11	8" Sonic	SW	SAND:
11-12.5	8" Sonic	SP/SM	SAND with silt:
12.5-13	8" Sonic	SM	Silty SAND:
13-15	8" Sonic	ML	Sandy SILT:
15-15.5	8" Sonic	SP	SAND:
15.5-17	8" Sonic	SC	Clayey SAND with gravel:
17-17.5	8" Sonic	SW	Gravelly SAND with sand:
17.5-19	8" Sonic		SAND:
19-20	8" Sonic		SAND:
20-22.5	8" Sonic	GW	Sandy GRAVEL:
22.5-23.5	8" Sonic	SW	SAND:
23.5-25	8" Sonic	SP/SM	SAND with silt:
25-32.5	8" Sonic		SAND with silt:
32.5-33.5	8" Sonic	SW/SC	Gravelly SAND with clay:
33.5-35	8" Sonic	SP/SM	SAND with silt:
35-37.5	8" Sonic		SAND with silt:
37.5-39	8" Sonic	SC/CL	Clayey SAND/Sandy CLAY:
39-40	8" Sonic	SC	Clayey SAND:
40-45	8" Sonic	SC/CL	Clayey SAND/Sandy CLAY:
45-45.5	8" Sonic	SM	Silty SAND with clay:
45.5-47.5	8" Sonic	SC/CL	Clayey SAND/Sandy CLAY:
47.5-49.5	8" Sonic	CH/SC	Sandy CLAY/Clayey SAND:
49.5-50	8" Sonic	SP/SM	SAND with silt:
50-51.5	8" Sonic	SC	Clayey SAND:
51.5-52.5	8" Sonic	SP/SC	SAND with clay:
52.5-55	8" Sonic	SP	SAND:
55-56.5	8" Sonic	CH	Sandy CLAY:
56.5-57.5	8" Sonic	SC	Clayey SAND:
57.5-59	8" Sonic	ML	Clayey SILT with sand:
59-60	8" Sonic	CH	Sandy CLAY:
60-62.5	8" Sonic	SC	Clayey SAND:
62.5-64	8" Sonic	CH	Sandy CLAY:
64-65	8" Sonic	SM	Silty SAND:
65-66.5	8" Sonic	SP	SAND:
66.5-67.5	8" Sonic	SM	Silty SAND:
67.5-75	8" Sonic	SW	SAND:

TD = 75'; PVC 4-inch screen from 65 to 75; PVC 4-inch riser from -2.5 to 65

Drilling Method: Prosonic T600, 8" Rotasonic

Drilling Company - Cascade Drilling

Driller - Rick Mallett

Geologist - Michael Sauerwein



Above-grade, 5-feet. long, 8-in. dia., steel Wellhead Protective Monument set in a 2X2 Concrete Pad ~ 2.5-feet. stick-up

Ground Surface

8-inch diameter, from 0 to 75-feet bgs

4-inch diameter, Sch. 40 PVC, from ~ 2.0 feet above ground surface (ags) to 65 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout, Tremie-Pipe Slurry, from 0 to 58-feet bgs

At Time of Drilling, Depth to Uppermost Ground Water ~ 61-feet bgs

Bentonite medium chips, from 58 to 63 feet bgs

Sand Filter Pack: 16/30 washed silica sand, 2-feet above screen from 63 to 75 feet bgs

Centralizers - placed at the bottom and the top of the well screen.

10-foot length; 4-inch diameter Sch. 40 PVC, 0.020"-slotted, from 65 to 75 feet bgs

Total Depth (TD) = 75 feet bgs



IPSC – WASTEWATER HOLDING BASIN AREA  
DELTA, UTAH

Well WW-U-2 Schematic

Date Drawn  
8/11/15

Design by

Drawn by

MS

Scale

Last Revision  
Date

SI-U-1

Interval (feet)	USCS	Sample Description
8/12/2015		
0-0.5	TOPSOIL	Surface - Sand and Gravel, roots and grass.
0.5-2.5	SP/SM	SAND with silt:
2.5-5	SP	SAND:
5-6.5	SP/SM	SAND with silt:
6.5-7.5	SW/SM	SAND with silt:
7.5-8	SW	SAND:
8-12.5	SP	SAND:
12.5-17.5		SAND:
17.5-18	SP/SM	SAND with silt:
18-19	SM	Silty SAND:
19-20	CL	CLAY:
20-21.5	SP	SAND:
21.5-22.5	SP/SM	Gravelly SAND with silt:
22.5-26.5	SW	SAND:
26.5-27.5	SW/SC	SAND with clay:
27.5-29.5	ML	Sandy SILT with clay:
29.5-30	SP	SAND:
30-32	ML	Sandy SILT with clay:
32-32.5	SW	SAND with gravel:
32.5-38	SC	Clayey SAND:
38-40	SM	Silty SAND:
40-42.5	SP/SM	SAND with silt:
42.5-44.25	GW	Sandy GRAVEL with clay:
44.25-45	SM	Silty SAND:
45-46.5	SC	Clayey SAND:
46.5-47.75	SP/SC	SAND with clay:
47.75-52.5	SP	SAND:
52.5-54	CH	CLAY:
54-55	SC/CH	Clayey SAND/Sandy CLAY:
55-60	CH	CLAY:
60-62.5		CLAY:
62.5-66		CLAY:
66-70	SC	Clayey SAND:
70-70.75	ML	Clayey SILT with sand:
70.75-71.5	CH	CLAY:
71.5-72.5	SP/SC	SAND with clay:
72.5-75	SP/SM	SAND with silt:
75-75.75	SM	Silty SAND:
75.75-77	SC	Clayey SAND:
77-80	SP/SM	SAND with silt:

TD = 80'; PVC 4-inch screen from 69 to 79; PVC 4-inch riser from -2.5 to 69  
Drilling Method: Prosonic T600, 8" Rotasonic

Drilling Company - Cascade Drilling  
Driller - Rick Mallett  
Geologist - Michael Sauerwein

Above-grade, 5-foot long, 6-inch diameter, steel Wellhead Protective Monument set in Concrete  
 ~ 2.5-foot. stick-up

Ground Surface

8-inch diameter,  
 from 0 to 80-feet bgs

4-inch diameter, Sch. 40 PVC,  
 from ~ 2.0 feet above ground surface (ags)  
 to 69 feet below ground surface (bgs)

Cement-Bentonite gel (~ 10:1) Grout,  
 Tremie-Pipe Slurry,  
 from 0 to 62-feet bgs

Bentonite medium chips,  
 from 62 to 67 feet bgs

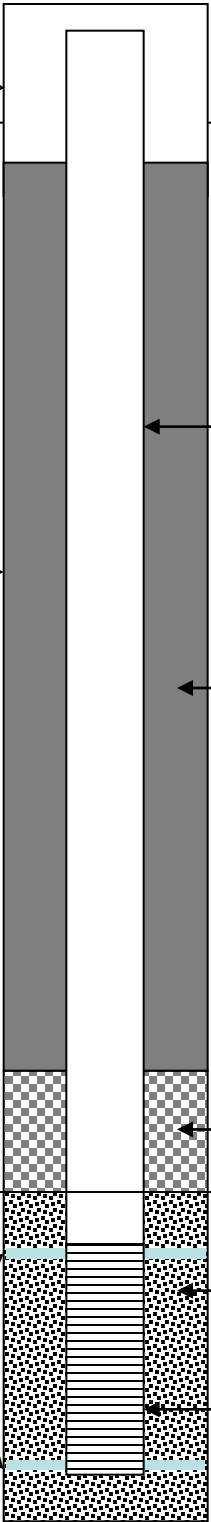
At Time of Drilling,  
 Depth to Uppermost  
 Groundwater ~ 67-feet bgs

#16/30 washed silica sand,  
 2-feet above screen  
 from 67 to 80 feet bgs

Centralizers - placed at the bottom  
 and the top of the well screen.

10-foot length; 4-inch diameter  
 Sch. 40 PVC, 0.020"-slotted,  
 from 69 to 79 feet bgs

Total Depth (TD) = 80 feet bgs



IPSC – COAL STORAGE AND UNLOADING AREA  
 DELTA, UTAH

Well SI-U-1 Schematic

Date Drawn  
 8/12/15

Design by

Drawn by MS

Scale

Last Revision  
 Date



## DRILLING LOG

PROJECT NAME: Intermountain Power Plant  
 BORING/MONITORING WELL: WR-101 / RW-2  
 DRILLING FIRM: Boart Longyear  
 BORING METHOD: Sonic  
 BORING DIAMETER: 10.0-inch

PROJECT No.: 07.00408.01  
 COMPLETION DATE: 12/11/2007  
 DRILLER: Robert  
 LOGGED BY: Thomas Hedrick  
 DEPTH TO WATER (at drilling): ~ 40 ft.  
 DEPTH TO WATER (static > 24-hrs.): 36.09 ft.

### WR-101 / RW-2

Interval (feet)	Drilling Method	Sample Description
0 - 9	SDM	Light Brown fine grained SAND with clay matrix
9 - 17	SDM	Light Brown clayey SILT
17 - 20	SDM	Light Brown silty CLAY
20 - 25	SDM	Brown medium grained SAND with pebbles, Dry and loose
25 - 28	SDM	Light Brown silty CLAY, very tight, MOIST
28 - 38	SDM	Light Brown CLAY, Moist
38 - 42	SDM	Brown fine grained SAND, Moist
42 - 50	SDM	Brownish/Red CLAY, Dry
50 - 56	SDM	Brown medium grained SAND with clay matrix, very moist/saturated
56 - 58	SDM	Brown silty CLAY, moist
60 - 66	SDM	Brown medium grained SAND, Saturated
Total Depth = 66 feet BGS, Screened from 66 – 46', Sand 40-66', Bentonite 36-40', Grout 0-36'		

### Well Completion Materials and Depth Intervals (ft.)

**Surface Completion:** Stick-up

**Casing, solid:** 6 inch diameter sch. 80 PVC casing, 0-7 ft.

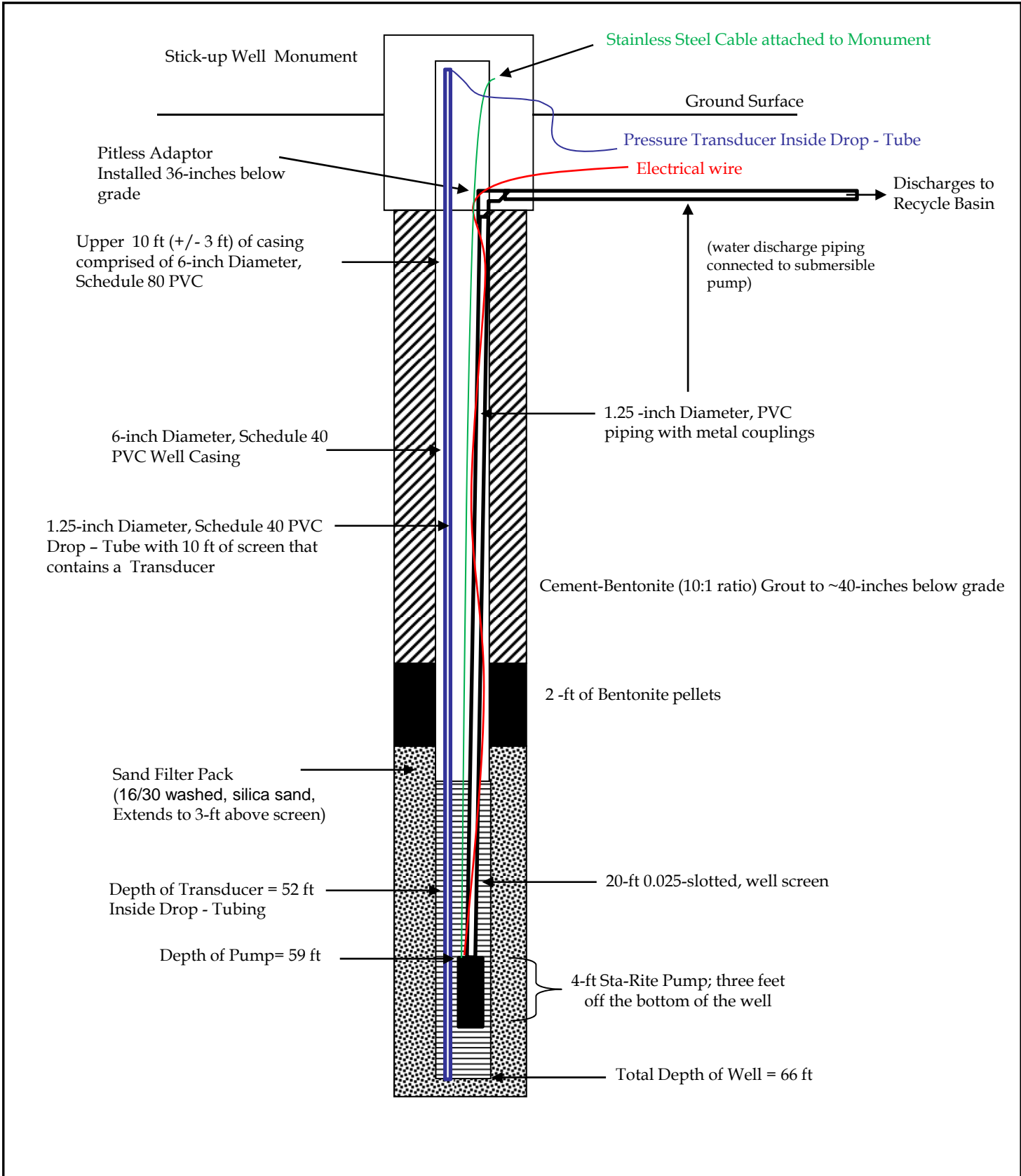
**Casing, solid:** 6 inch diameter sch. 40 PVC casing, 7 -46 ft.

**Screen:** 6 inch diameter sch. 40 PVC well screen 0.025-slotted, 46-66 ft.

**Sand Pack:** 16/30 washed, silica sand, 40-66 ft.

**Bentonite Seal:** "Pure Gold" Bentonite Pellets, 36-40 ft.

**Cement-Bentonite (10:1 ratio) Grout:** 0-36 ft.



<b>INTERMOUNTAIN POWER PLANT</b> 850 WEST BRUSH WELLMAN ROAD – DELTA, MILLARD COUNTY, UTAH			
<b>Ground Water Recovery Well WR-101 Schematic</b>			
			Date Drawn
			Last Revision Date
Design by	Drawn by	Scale	



## DRILLING LOG

PROJECT NAME: Intermountain Power Plant  
BORING/MONITORING WELL: WR-102

PROJECT No.: 08.00463.01  
COMPLETION DATE: 3/30/2009

DRILLING FIRM: Boart Longyear  
BORING METHOD: Sonic Drilling Method  
BORING DIAMETER: 10.0-inch

DRILLER: Chato  
LOGGED BY: Thomas Hedrick  
DEPTH TO WATER (at drilling): ~ 40 ft.  
DEPTH TO WATER (static > 24-hrs.): ~ 27 ft.

### WR-102

Interval (feet)	Drilling Method	Sample Description
0 - 11	SDM	Light Brown fine grained SAND with pebbles present from 3 - 7 feet, Dry
11 - 16	SDM	Light Brown fine grained SAND with interbeds of brown CLAY, Dry
16 - 35	SDM	Light Gray CLAY, moist at ~ 35 feet,
35 - 37	SDM	Light Gray Clay with a fine to medium grained sandy matrix, very moist
37 - 48	SDM	Brown fine to medium grained SAND, saturated
48 - 50	SDM	Brown CLAY, dry
50 - 53	SDM	Brown to Black medium grained SAND, saturated
53 - 57	SDM	Brown CLAY with two fine grained sand layer present
		Total Depth = 57 feet BGS, Screened from 37 – 57', Sand 34-57', Bentonite 31-34, Grout 0-31'

### Well Completion Materials and Depth Intervals (ft.)

**Surface Completion:** Stick-up

**Casing, solid:** 6 inch diameter sch. 80 PVC casing, 0-9 ft.

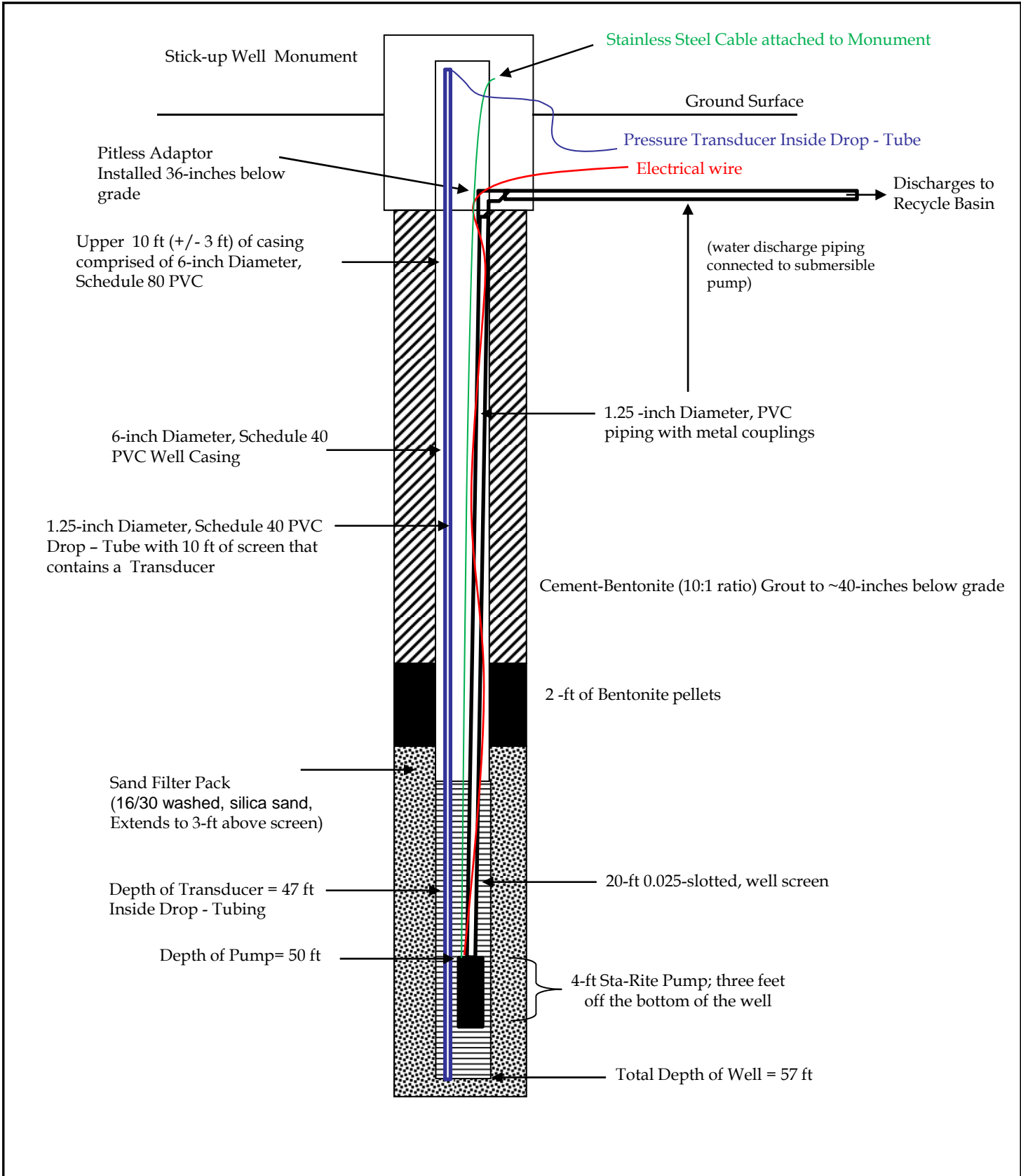
**Casing, solid:** 6 inch diameter sch. 40 PVC casing, 9 -37 ft.

**Screen:** 6 inch diameter sch. 40 PVC well screen 0.025-slotted, 37-57 ft.

**Sand Pack:** 16/30 washed, silica sand, 34-57 ft.

**Bentonite Seal:** "Pure Gold" Bentonite Pellets, 31-34 ft.

**Cement-Bentonite (10:1 ratio) Grout:** 0-31 ft.



INTERMOUNTAIN POWER PLANT 850 WEST BRUSH WELLMAN ROAD – DELTA, MILLARD COUNTY, UTAH			
Ground Water Recovery Well WR-102 Schematic			
			Date Drawn
			Last Revision Date
Design by	Drawn by	Scale	



## DRILLING LOG

PROJECT NAME: Intermountain Power  
Plant BORING/MONITORING WELL: WR-103

PROJECT No.: 08.00463.01  
COMPLETION DATE: 3/31/2009

DRILLING FIRM: Boart Longyear  
BORING METHOD: Sonic  
BORING DIAMETER: 10.0-inch

DRILLER: Chato  
LOGGED BY: Thomas Hedrick  
DEPTH TO WATER (at drilling): ~ 40 ft.  
DEPTH TO WATER (static > 24-hrs.): ~ 30 ft.

### WR-103

Interval (feet)	Drilling Method	Sample Description
0 - 3	SDM	Brown to Light brown fine grained SAND to silt, Dry
3 - 15	SDM	Light brown fine to medium grained SAND, pebbles present from 3 - 5 feet, Dry
15 - 17	SDM	Light brown fine to medium grained SAND, with interbeds of light brown CLAY with a sandy matrix, Dry
17 - 24	SDM	Light brown CLAY, Dry
24 - 37	SDM	Reddish Gray CLAY, Dry
37 - 45	SDM	Brown to Black medium fine to medium grained SAND, very moist
45 - 47	SDM	Brown fine grained SAND with a CLAY matrix, very moist
47 - 52	SDM	Brown Fine to medium grained SAND, saturated
52 - 55	SDM	Red CLAY, dry
Total Depth = 55 feet BGS, Screened from 35 – 55', Sand 32-55', Bentonite 29-32, Grout 0-29'		

### Well Completion Materials and Depth Intervals (ft.)

**Surface Completion:** Stick-up

**Casing, solid:** 6 inch diameter sch. 80 PVC casing, 0-6.5 ft.

**Casing, solid:** 6 inch diameter sch. 40 PVC casing, 6.5 -35 ft.

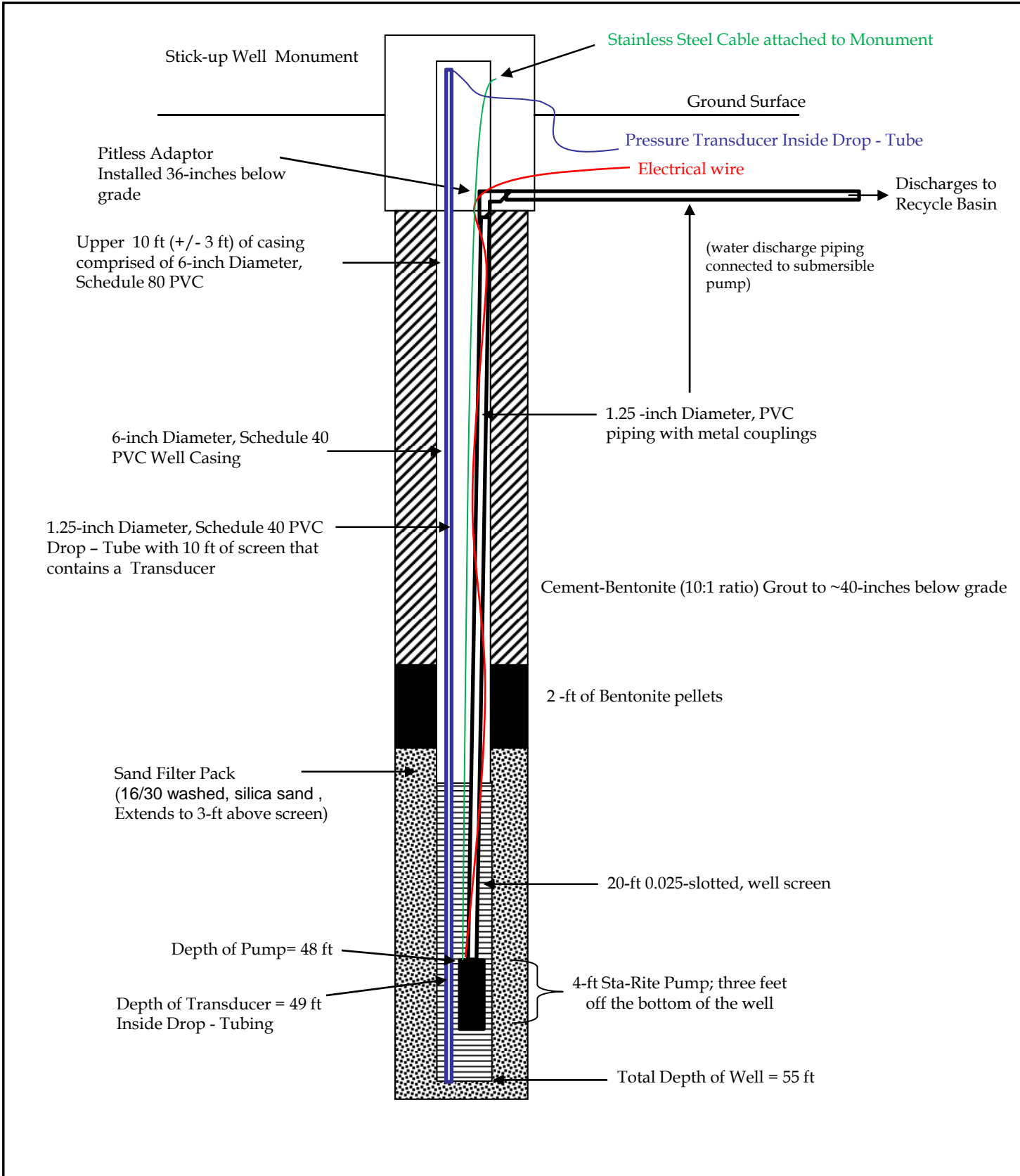
**Screen:** 6 inch diameter sch. 40 PVC well screen 0.025-slotted, 35-55 ft.

**Sand Pack:** 16/30 washed, silica sand, 32-55 ft.

**Bentonite Seal:** "Pure Gold" Bentonite Pellets, 29-32 ft.

**Cement-Bentonite (10:1 ratio) Grout:** 0-29 ft.





INTERMOUNTAIN POWER PLANT 850 WEST BRUSH WELLMAN ROAD – DELTA, MILLARD COUNTY, UTAH			
Ground Water Recovery Well WR-103 Schematic			
			Date Drawn
			Last Revision Date
Design by	Drawn by	Scale	

# DECEMBER 2020 SEMI-ANNUAL PROGRESS REPORT

December 22, 2020

## ATTACHMENT 2 TABULATED GROUND WATER MONITORING DATA

## CCR Well Levels

Well	Depth	Date
WW-U-1	33.23	12/7/2015
WW-U-2	23.42	12/7/2015
SI-U-1	32.47	12/7/2015
CL-U-1	32.02	12/7/2015
CL-U-2	37.55	12/7/2015
CL-W-1	31.05	12/7/2015
CL-W-2	33.14	12/7/2015
CL-W-3	31.54	12/7/2015
CL-W-4	30.56	12/7/2015
CL-W-5	29.76	12/7/2015
CL-W-6	28.71	12/7/2015
CL-W-7	35.23	12/7/2015
CL-W-8	32.37	12/7/2015
BA-U-1	39.21	12/7/2015
BA-U-2	33.26	12/7/2015
BAC-1	39.32	12/7/2015
BAC-2	51.38	12/7/2015
BAC-3	51.02	12/7/2015
BAC-4	35.35	12/7/2015
BAC-5	32.62	12/7/2015
BAC-6	29.76	12/7/2015
BAC-7	31.26	12/7/2015
WWC-1	21.16	12/7/2015
WWC-2	22.16	12/7/2015
WWC-3	16.42	12/7/2015
WWC-4	17.85	12/7/2015
WWC-5	18.78	12/7/2015

## CCR Well Levels

Well	Depth	Date
WW-U-1	33.08	3/3/2016
WW-U-2	23.52	3/3/2016
SI-U-1	32.45	3/3/2016
CL-U-1	31.53	3/3/2016
CL-U-2	37.09	3/3/2016
CL-W-1	31.56	3/3/2016
CL-W-2	32.59	3/3/2016
CL-W-3	30.91	3/3/2016
CL-W-4	30.02	3/3/2016
CL-W-5	28.17	3/3/2016
CL-W-6	28.13	3/3/2016
CL-W-7	34.75	3/3/2016
CL-W-8	31.89	3/3/2016
BA-U-1	38.82	3/3/2016
BA-U-2	33.05	3/3/2016
BAC-1	39.85	3/3/2016
BAC-2	51.31	3/3/2016
BAC-3	51.29	3/3/2016
BAC-4	34.97	3/3/2016
BAC-5	32.07	3/3/2016
BAC-6	29.27	3/3/2016
BAC-7	29.78	3/3/2016
WWC-1	20.92	3/3/2016
WWC-2	21.79	3/3/2016
WWC-3	16.12	3/3/2016
WWC-4	17.56	3/3/2016
WWC-5	18.5	3/3/2016

## CCR Well Levels

Well	Depth	Date
WW-U-1	34.2	6/24/2016
WW-U-2	24.21	6/24/2016
SI-U-1	32.93	6/24/2016
CL-U-1	31.88	6/24/2016
CL-U-2	37.41	6/24/2016
CL-W-1	30.67	6/24/2016
CL-W-2	32.49	6/24/2016
CL-W-3	30.78	6/24/2016
CL-W-4	29.86	6/24/2016
CL-W-5	27.97	6/24/2016
CL-W-6	27.9	6/24/2016
CL-W-7	34.98	6/24/2016
CL-W-8	32.07	6/24/2016
BA-U-1	39.13	6/24/2016
BA-U-2	33.49	6/24/2016
BAC-1	40.42	6/24/2016
BAC-2	51.38	6/24/2016
BAC-3	51.35	6/24/2016
BAC-4	34.85	6/24/2016
BAC-5	31.79	6/24/2016
BAC-6	28.86	6/24/2016
BAC-7	30.26	6/24/2016
WWC-1	21.47	6/24/2016
WWC-2	22.33	6/24/2016
WWC-3	16.63	6/24/2016
WWC-4	18.07	6/24/2016
WWC-5	19.03	6/24/2016

## CCR Well Levels

Well	Depth	Date
WW-U-1	34.42	8/30/2016
WW-U-2	24.57	8/30/2016
SI-U-1	33.49	8/30/2016
CL-U-1	32.74	8/30/2016
CL-U-2	38.31	8/30/2016
CL-W-1	31.52	8/30/2016
CL-W-2	33.5	8/30/2016
CL-W-3	31.81	8/30/2016
CL-W-4	30.89	8/30/2016
CL-W-5	28.99	8/30/2016
CL-W-6	28.95	8/30/2016
CL-W-7	35.84	8/30/2016
CL-W-8	32.93	8/30/2016
BA-U-1	39.95	8/30/2016
BA-U-2	34.24	8/30/2016
BAC-1	40.97	8/30/2016
BAC-2	52.1	8/30/2016
BAC-3	51.94	8/30/2016
BAC-4	35.68	8/30/2016
BAC-5	32.67	8/30/2016
BAC-6	29.64	8/30/2016
BAC-7	31.09	8/30/2016
WWC-1	22.4	8/30/2016
WWC-2	22.87	8/30/2016
WWC-3	17.17	8/30/2016
WWC-4	18.61	8/30/2016
WWC-5	19.6	8/30/2016

## CCR Well Levels

Well	Depth	Date
WW-U-1	34.74	11/9/2016
WW-U-2	24.81	11/9/2016
SI-U-1	33.74	11/9/2016
CL-U-1	33.04	11/9/2016
CL-U-2	38.59	11/9/2016
CL-W-1	31.89	11/9/2016
CL-W-2	34.00	11/9/2016
CL-W-3	32.34	11/9/2016
CL-W-4	31.43	11/9/2016
CL-W-5	29.58	11/9/2016
CL-W-6	29.55	11/9/2016
CL-W-7	36.20	11/9/2016
CL-W-8	33.28	11/9/2016
BA-U-1	40.27	11/9/2016
BA-U-2	34.59	11/9/2016
BAC-1	41.51	11/9/2016
BAC-2	52.61	11/9/2016
BAC-3	52.10	11/9/2016
BAC-4	35.98	11/9/2016
BAC-5	32.90	11/9/2016
BAC-6	29.81	11/9/2016
BAC-7	30.92	11/9/2016
WWC-1	22.27	11/9/2016
WWC-2	23.22	11/9/2016
WWC-3	17.43	11/9/2016
WWC-4	18.88	11/9/2016
WWC-5	19.85	11/9/2016

## CCR Well Levels

Well	Depth	Date
WW-U-1	33.88	3/30/2017
WW-U-2	22.19	3/30/2017
SI-U-1	32.89	3/30/2017
CL-U-1	31.99	3/30/2017
CL-U-2	37.56	3/30/2017
CL-W-1	32.84	3/30/2017
CL-W-2	32.72	3/30/2017
CL-W-3	31.08	3/30/2017
CL-W-4	30.25	3/30/2017
CL-W-5	28.41	3/30/2017
CL-W-6	28.40	3/30/2017
CL-W-7	35.15	3/30/2017
CL-W-8	32.04	3/30/2017
BA-U-1	39.29	3/30/2017
BA-U-2	33.67	3/30/2017
BAC-1	40.89	3/30/2017
BAC-2	51.32	3/30/2017
BAC-3	51.94	3/30/2017
BAC-4	34.73	3/30/2017
BAC-5	31.71	3/30/2017
BAC-6	28.74	3/30/2017
BAC-7	30.03	3/30/2017
WWC-1	18.91	3/30/2017
WWC-2	22.21	3/30/2017
WWC-3	16.53	3/30/2017
WWC-4	17.97	3/30/2017
WWC-5	17.94	3/30/2017



## CCR Well Levels

Well	Depth	Date
WW-U-1	34.70	6/21/2017
WW-U-2	24.75	6/21/2017
SI-U-1	33.46	6/21/2017
CL-U-1	32.13	6/21/2017
CL-U-2	37.72	6/21/2017
CL-W-1	30.74	6/21/2017
CL-W-2	32.35	6/21/2017
CL-W-3	30.72	6/21/2017
CL-W-4	29.90	6/21/2017
CL-W-5	28.06	6/21/2017
CL-W-6	28.01	6/21/2017
CL-W-7	35.16	6/21/2017
CL-W-8	32.21	6/21/2017
BA-U-1	39.41	6/21/2017
BA-U-2	33.90	6/21/2017
BAC-1	41.29	6/21/2017
BAC-2	50.94	6/21/2017
BAC-3	51.14	6/21/2017
BAC-4	34.08	6/21/2017
BAC-5	30.98	6/21/2017
BAC-6	28.03	6/21/2017
BAC-7	29.30	6/21/2017
WWC-1	21.95	6/21/2017
WWC-2	22.74	6/21/2017
WWC-3	17.04	6/21/2017
WWC-4	18.48	6/21/2017
WWC-5	19.44	6/21/2017

## CCR Well Levels

Well	Depth	Date
WW-U-1	35.43	10/4/2017
WW-U-2	25.49	10/5/2017
SI-U-1	34.28	10/6/2017
CL-U-1	33.25	10/7/2017
CL-U-2	38.81	10/8/2017
CL-W-1	31.80	10/9/2017
CL-W-2	33.60	10/10/2017
CL-W-3	31.93	10/11/2017
CL-W-4	31.09	10/12/2017
CL-W-5	29.26	10/13/2017
CL-W-6	29.26	10/14/2017
CL-W-7	36.23	10/15/2017
CL-W-8	33.28	10/16/2017
BA-U-1	40.42	10/17/2017
BA-U-2	34.85	10/18/2017
BAC-1	41.78	10/19/2017
BAC-2	52.03	10/20/2017
BAC-3	52.31	10/21/2017
BAC-4	35.29	10/22/2017
BAC-5	32.19	10/23/2017
BAC-6	29.24	10/24/2017
BAC-7	30.48	10/25/2017
WWC-1	22.69	10/26/2017
WWC-2	23.51	10/27/2017
WWC-3	17.80	10/28/2017
WWC-4	19.27	10/29/2017
WWC-5	20.26	10/30/2017

## CCR Well Levels

Well	Depth	Date
WW-U-1	36.14	3/26/2018
WW-U-2	25.79	3/26/2018
SI-U-1	34.04	3/26/2018
CL-U-1	32.64	3/26/2018
CL-U-2	38.22	3/26/2018
CL-W-1	31.73	3/26/2018
CL-W-2	33.49	3/26/2018
CL-W-3	31.73	3/26/2018
CL-W-4	30.94	3/26/2018
CL-W-5	29.00	3/26/2018
CL-W-6	28.96	3/26/2018
CL-W-7	35.99	3/26/2018
CL-W-8	33.11	3/26/2018
BA-U-1	40.28	3/26/2018
BA-U-2	34.74	3/26/2018
BAC-1	42.05	3/26/2018
BAC-2	34.62	3/26/2018
BAC-3	52.76	3/26/2018
BAC-4	35.82	3/26/2018
BAC-5	33.28	3/26/2018
BAC-6	30.53	3/26/2018
BAC-7	31.88	3/26/2018
WWC-1	22.56	3/26/2018
WWC-2	23.31	3/26/2018
WWC-3	17.55	3/26/2018
WWC-4	19.04	3/26/2018
WWC-5	20.08	3/26/2018

## CCR Well Levels

Well	Depth	Date
WW-U-1	36.20	6/13/2018
WW-U-2	25.95	6/13/2018
SI-U-1	34.27	6/13/2018
CL-U-1	32.83	6/13/2018
CL-U-2	38.42	6/13/2018
CL-W-1	31.92	6/13/2018
CL-W-2	33.53	6/13/2018
CL-W-3	31.72	6/13/2018
CL-W-4	30.79	6/13/2018
CL-W-5	28.95	6/13/2018
CL-W-6	29.12	6/13/2018
CL-W-7	36.19	6/13/2018
CL-W-8	33.31	6/13/2018
BA-U-1	40.54	6/13/2018
BA-U-2	35.00	6/13/2018
BAC-1	42.29	6/13/2018
BAC-2	52.68	6/13/2018
BAC-3	53.92	6/13/2018
BAC-4	35.83	6/13/2018
BAC-5	33.32	6/13/2018
BAC-6	30.52	6/13/2018
BAC-7	31.83	6/13/2018
WWC-1	22.89	6/13/2018
WWC-2	23.64	6/13/2018
WWC-3	17.92	6/13/2018
WWC-4	19.34	6/13/2018
WWC-5	20.19	6/13/2018

## CCR Well Levels

Well	Depth	Date
WW-U-1	36.74	10/24/2018
WW-U-2	26.65	10/24/2018
SI-U-1	35.25	10/24/2018
CL-U-1	34.43	10/24/2018
CL-U-2	40.02	10/24/2018
CL-W-1	33.69	10/24/2018
CL-W-2	35.53	10/24/2018
CL-W-3	33.67	10/24/2018
CL-W-4	32.74	10/24/2018
CL-W-5	30.84	10/24/2018
CL-W-6	30.79	10/24/2018
CL-W-7	37.82	10/24/2018
CL-W-8	35.01	10/24/2018
BA-U-1	42.07	10/24/2018
BA-U-2	36.40	10/24/2018
BAC-1	43.46	10/24/2018
BAC-2	54.24	10/24/2018
BAC-3	54.22	10/24/2018
BAC-4	35.66	10/24/2018
BAC-5	35.70	10/24/2018
BAC-6	33.22	10/24/2018
BAC-7	34.85	10/24/2018
WWC-1	23.70	10/24/2018
WWC-2	24.48	10/24/2018
WWC-3	18.74	10/24/2018
WWC-4	20.22	10/24/2018
WWC-5	21.23	10/24/2018

<b>Well Levels</b>		
<b>Wells</b>	<b>Level</b>	<b>Date</b>
WW-U-1	35.34	5/20/19
WW-U-2	25.90	5/20/19
SI-U-1	34.60	5/20/19
CL-U-1	33.35	5/20/19
CL-U-2	38.93	5/20/19
CL-W-1	32.93	5/20/19
CL-W-2	34.76	5/20/19
CL-W-3	32.86	5/20/19
CL-W-4	31.89	5/20/19
CL-W-5	29.99	5/20/19
CL-W-6	29.91	5/20/19
CL-W-7	36.94	5/20/19
CL-W-8	34.18	5/20/19
BA-U-1	41.22	5/20/19
BA-U-2	35.55	5/20/19
BAC-1	43.02	5/20/19
BAC-2	54.19	5/20/19
BAC-3	54.69	5/20/19
BAC-4	37.62	5/20/19
BAC-5	35.66	5/20/19
BAC-6	33.08	5/20/19
BAC-7	34.69	5/20/19
WWC-1	22.95	5/20/19
WWC-2	24.70	5/20/19
WWC-3	18.01	5/20/19
WWC-4	19.47	5/20/19
WWC-5	20.47	5/20/19
RW-4	19.85	5/20/19
RW-5	45.41	5/20/19
RW-7	13.80	5/20/19
WDB-19	28.00	5/20/19
CLW-9	18.37	5/20/19
WWC-6	35.74	5/20/19
WWC-7	17.47	5/20/19
WWC-8	27.06	5/20/19
WWC-9	23.80	5/20/19
WWC-10	17.80	5/20/19
BAC-8	45.65	5/20/19
BAC-9	46.70	5/20/19
BAC-10	47.21	5/20/19
CLU-3	41.49	5/20/19
WR-101	54.61	5/20/19
WR-102	44.76	5/20/19
WR-103	47.30	5/20/19
EP-W-19	32.61	5/20/19
RW-6	44.17	5/20/19
RW-9	42.91	5/20/19
WDB-7	41.72	5/20/19
EP-W-23	30.71	5/20/19
EP-W-27	28.92	5/20/19
WDB-19	28.00	5/20/19
RW-5	45.41	5/20/19

<b>Well Levels</b>		
<b>Wells</b>	<b>Level</b>	<b>Date</b>
WW-U-1	35.91	10/17/19
WW-U-2	26.64	10/17/19
SI-U-1	35.35	10/17/19
CL-U-1	34.52	10/17/19
CL-U-2	40.08	10/17/19
CL-W-1	33.81	10/17/19
CL-W-2	35.70	10/17/19
CL-W-3	33.85	10/17/19
CL-W-4	32.90	10/17/19
CL-W-5	31.02	10/17/19
CL-W-6	30.99	10/17/19
CL-W-7	37.98	10/17/19
CL-W-8	35.11	10/17/19
BA-U-1	42.09	10/17/19
BA-U-2	36.42	10/17/19
BAC-1	43.71	10/17/19
BAC-2	54.62	10/17/19
BAC-3	55.01	10/17/19
BAC-4	38.14	10/17/19
BAC-5	36.01	10/17/19
BAC-6	33.01	10/17/19
BAC-7	35.06	10/17/19
WWC-1	23.81	10/17/19
WWC-2	24.61	10/17/19
WWC-3	18.90	10/17/19
WWC-4	20.37	10/17/19
WWC-5	21.37	10/17/19
RW-4	20.69	10/17/19
RW-5	46.31	10/17/19
RW-7	14.74	10/17/19
WDB-19	29.11	10/17/19
CLW-9	36.97	10/17/19
WWC-6	19.57	10/17/19
WWC-7	19.20	10/17/19
WWC-8	28.15	10/17/19
WWC-9	24.86	10/17/19
WWC-10	19.40	10/17/19
BAC-8	46.07	10/17/19
BAC-9	47.18	10/17/19
BAC-10	47.80	10/17/19
CLU-3	42.49	10/17/19
WR-101	54.60	10/17/19
WR-102	43.14	10/17/19
WR-103	45.40	10/17/19
EP-W-19	33.52	10/17/19
RW-6	44.69	10/17/19
RW-9	43.16	10/17/19
WDB-7	42.55	10/17/19
EP-W-23	31.66	10/17/19
EP-W-27	29.89	10/17/19
WDB-19	29.11	10/17/19
RW-5	46.31	10/17/19

**Well Levels**

Well	Level	Date
WW-U-1	30.42	3/23/2020
WW-U-2	22.31	3/23/2020
SI-U-1	33.78	3/23/2020
CL-U-1	33.46	3/23/2020
CL-U-2	38.92	3/23/2020
CL-W-1	32.75	3/23/2020
CL-W-2	34.71	3/23/2020
CL-W-3	32.87	3/23/2020
CL-W-4	31.99	3/23/2020
CL-W-5	30.09	3/23/2020
CL-W-6	30.08	3/23/2020
CL-W-7	36.70	3/23/2020
CL-W-8	33.95	3/23/2020
BA-U-1	40.76	3/23/2020
BA-U-2	34.81	3/23/2020
BAC-1	41.89	3/23/2020
BAC-2	53.88	3/23/2020
BAC-3	54.42	3/23/2020
BAC-4	37.21	3/23/2020
BAC-5	35.05	3/23/2020
BAC-6	32.35	3/23/2020
BAC-7	33.95	3/23/2020
WWC-1	22.85	3/23/2020
WWC-2	23.80	3/23/2020
WWC-3	18.02	3/23/2020
WWC-4	19.42	3/23/2020
WWC-5	20.39	3/23/2020
CLW-9	36.13	3/23/2020
WWC-6	18.48	3/23/2020
WWC-7	17.68	3/23/2020
WWC-8	27.11	3/23/2020
WWC-9	23.98	3/23/2020
WWC-10	17.92	3/23/2020
WWC-11	22.01	3/23/2020
WWC-12	19.59	3/23/2020
WWC-13	18.66	3/23/2020
BAC-8	46.08	3/23/2020
BAC-9	47.08	3/23/2020
BAC-10	47.60	3/23/2020
BAC-11	47.73	3/23/2020
BAC-12	48.07	3/23/2020
BAC-13	45.11	3/23/2020
BAC-14	46.62	3/23/2020
BAC-15	45.92	3/23/2020
BAC-16	47.19	3/23/2020
BAC-17	45.33	3/23/2020
CLU-3	41.32	3/23/2020
RW-4	19.80	3/23/2020
RW-5	45.88	3/23/2020
RW-7	14.01	3/23/2020
WDB-19	28.19	3/23/2020
EPW-15	43.84	3/23/2020
WR-101	35.91	3/23/2020
WR-102	32.16	3/23/2020
WR-103	45.40	3/23/2020
EP-W-19	32.81	3/23/2020
RW-6	44.55	3/23/2020
RW-9	43.32	3/23/2020
WDB-7	42.13	3/23/2020
EP-W-23	30.75	3/23/2020
EP-W-27	28.79	3/23/2020
WDB-19	28.19	3/23/2020
RW-5	45.88	3/23/2020



Well Levels		
Well	Level	Date
WW-U-1	35.28	10/20/2020
WW-U-2	25.96	10/20/2020
SI-U-1	35.19	10/20/2020
CL-U-1	35.06	10/20/2020
CL-U-2	40.63	10/20/2020
CL-U-3	42.93	10/20/2020
CL-W-1	34.22	10/20/2020
CL-W-2	36.27	10/20/2020
CL-W-3	34.42	10/20/2020
CL-W-4	33.48	10/20/2020
CL-W-5	31.62	10/20/2020
CL-W-6	31.61	10/20/2020
CL-W-7	38.26	10/20/2020
CL-W-8	35.51	10/20/2020
CL-W-9	37.75	10/20/2020
BA-U-1	42.35	10/20/2020
BA-U-2	36.54	10/20/2020
BAC-1	43.54	10/20/2020
BAC-2	55.01	10/20/2020
BAC-3	55.36	10/20/2020
BAC-4	38.61	10/20/2020
BAC-5	36.36	10/20/2020
BAC-6	33.72	10/20/2020
BAC-7	35.26	10/20/2020
WWC-1	23.98	10/20/2020
WWC-2	24.79	10/20/2020
WWC-3	19.12	10/20/2020
WWC-4	20.57	10/20/2020
WWC-5	21.58	10/20/2020
BAC-8	46.50	10/20/2020
BAC-9	47.62	10/20/2020
BAC-10	48.29	10/20/2020
BAC-11	48.82	10/20/2020
BAC-12	49.18	10/20/2020
BAC-13	45.95	10/20/2020
BAC-14	47.21	10/20/2020
BAC-15	46.34	10/20/2020
BAC-16	47.66	10/20/2020
BAC-17	46.43	10/20/2020
BAC-18	45.05	10/20/2020
BAC-19	41.31	10/20/2020
BAC-20	42.90	10/20/2020
BAC-21	44.74	10/20/2020
BAC-22	45.10	10/20/2020
BAC-23	44.60	10/20/2020
BAC-24	44.35	10/20/2020
BAC-25	44.49	10/20/2020
BAC-26	48.43	10/20/2020
BAC-27	47.85	10/20/2020
BAC-28	45.42	10/20/2020
BAC-29	44.86	10/20/2020
BAC-30	44.71	10/20/2020
BAC-31	44.34	10/20/2020
BAC-32	48.31	10/20/2020
BAC-33	48.14	10/20/2020
BAC-34	48.22	10/20/2020
BAC-35	48.08	10/20/2020
BAC-36	44.73	10/20/2020
BAC-37	43.67	10/20/2020
BAC-38	42.82	10/20/2020
WWC-6	19.84	10/20/2020
WWC-7	20.22	10/20/2020
WWC-8	28.57	10/20/2020
WWC-9	25.34	10/20/2020
WWC-10	19.57	10/20/2020
WWC-11	23.28	10/20/2020
WWC-12	20.97	10/20/2020
WWC-13	20.13	10/20/2020
WWC-14	18.90	10/20/2020
WWC-15	21.19	10/20/2020
WWC-16	19.52	10/20/2020
WWC-17	24.62	10/20/2020
RW-3	38.71	10/20/2020
RW-4	20.84	10/20/2020
RW-5	46.95	10/20/2020
RW-7	15.10	10/20/2020
RW-8	43.97	10/20/2020
EPW-15	44.53	10/20/2020
WDB-5	45.33	10/20/2020
WDB-17	40.46	10/20/2020
WR-101	54.61	10/20/2020
WR-102	44.76	10/20/2020
WR-103	45.40	10/20/2020
EP-W-19	34.23	10/20/2020
RW-6	45.11	10/20/2020
RW-9	43.61	10/20/2020
WDB-7	43.24	10/20/2020
EP-W-23	32.30	10/20/2020
EP-W-27	30.28	10/20/2020
WDB-19	29.84	10/20/2020
EMW-1	31.15	10/20/2020
EMW-3	39.99	10/20/2020
EMW-U4	38.04	10/20/2020
EMW-L4	34.08	10/20/2020
EMW-U5	35.74	10/20/2020
EMW-5L	31.81	10/20/2020
EMW-6	43.10	10/20/2020
EMW-7	44.33	10/20/2020
EMW-8	55.94	10/20/2020
EP-2	32.71	10/20/2020
EP-3	37.25	10/20/2020
EP-4	38.91	10/20/2020
EP-5	27.73	10/20/2020

Round 1 Detection Monitoring - December 2-10, 2015

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	68.9	418	0.813	7.82	131	1040	<0.00200	0.0378	0.126	<0.00200	<0.000500	0.00537	<0.00400	<0.00200	0.346	<0.000150	0.00459	<0.00200	<0.00200	0.52	0.5	1.02
CL-U-2	< 0.500	73.8	404	0.611	7.73	132	1020	<0.00200	0.0317	0.129	<0.00200	<0.000500	0.00613	<0.00400	<0.00200	0.325	<0.000150	0.00406	<0.00200	<0.00200	0.55	1.2	1.75
CLW-1	< 0.500	55.7	322	0.844	7.95	76.5	832	<0.00200	0.0264	0.105	<0.00200	<0.000500	0.00814	<0.00400	<0.00200	0.3	<0.000150	0.00574	<0.00200	<0.00200	0.56	1.6	2.16
CLW-2	< 0.500	53.9	432	0.695	7.75	108	976	<0.00200	0.0283	0.0957	<0.00200	<0.000500	0.00576	<0.00400	<0.00200	0.36	<0.000150	0.00472	<0.00200	<0.00200	0.51	1.1	1.61
CLW-3	< 0.500	45	367	0.948	7.86	123	928	<0.00200	0.0375	0.111	<0.00200	<0.000500	0.00346	<0.00400	<0.00200	0.337	<0.000150	0.00492	<0.00200	<0.00200	0.4	1.3	1.7
CLW-4	< 0.500	44.5	320	1.37	7.87	73.3	828	<0.00200	0.0308	0.122	<0.00200	<0.000500	0.00336	<0.00400	<0.00200	0.319	<0.000150	0.00584	<0.00200	<0.00200	0.34	1.9	2.24
CLW-5	< 0.500	38.4	345	1.51	7.81	88.3	872	<0.00200	0.0188	0.0864	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.0325	<0.000150	0.00841	<0.00200	<0.00200	0.37	1.6	1.97
CLW-6	< 0.500	33.6	325	1.38	7.71	74.5	820	<0.00200	0.0249	0.0879	<0.00200	<0.000500	0.00335	<0.00400	<0.00200	0.316	<0.000150	0.0104	<0.00200	<0.00200	0.37	0.63	1
CLW-7	< 0.500	47.3	339	0.792	7.81	66.4	812	<0.00200	0.0234	0.0593	<0.00200	<0.000500	0.00421	<0.00400	<0.00200	0.282	<0.000150	0.00331	<0.00200	<0.00200	0.14	0.52	0.66
CLW-8	< 0.500	43.6	324	0.797	7.8	70.5	772	<0.00200	0.0155	0.107	<0.00200	<0.000500	0.00463	<0.00400	<0.00200	0.285	<0.000150	0.00626	<0.00200	<0.00200	0.4	0.74	1.14

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	13.46	7.74	-42	1720	443	2.12	-
CL-U-2	14.72	6.92	-38	1750	604	2.6	-
CLW-1	14.84	7.69	-45	1490	383	2.28	0.952
CLW-2	9.95	7.86	-144	1810	99.6	1.76	1.16
CLW-3	11.24	7.95	-158	1740	128	1.9	1.11
CLW-4	14.9	7.95	-165	1540	25.1	1.67	0.98
CLW-5	15.12	7.96	-134	1620	46.4	1.6	1.04
CLW-6	15.3	8	-193	1550	30.8	0.98	0.998
CLW-7	16.38	7.54	8	1430	90.9	7.01	0.917
CLW-8	15.01	7.58	0	1530	11.3	2.09	0.976

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	51.4	430	1.21	8.06	121	984	<0.00200	0.0163	0.133	<0.00200	<0.000500	0.00305	<0.00400	<0.00200	0.313	<0.000150	0.0408	<0.00200	<0.00200	0.66	0.7	1.36
BA-U-2	< 0.500	53	343	0.727	8.9	48.9	82.4	<0.00200	0.0154	0.148	<0.00200	<0.000500	0.00971	<0.00400	<0.00200	0.297	<0.000150	0.0121	<0.00200	<0.00200	0.32	2.1	2.42
BAC-1	7.49	274	3280	0.299	7.37	3060	8860	0.00237	0.0146	0.1	<0.00200	<0.000500	0.00503	0.00605	<0.00200	1.52	<0.000150	0.143	0.0204	<0.00200	0.71	1.6	2.31
BAC-2	10.7	267	2000	0.741	7.29	3620	7820	<0.00200	0.0386	0.0472	<0.00200	<0.000500	0.0116	<0.00400	<0.00200	1.38	<0.000150	0.151	0.0164	<0.00200	0.48	0.94	1.42
BAC-3	6.09	387	2900	0.648	7.6	3840	9800	<0.00200	0.0191	0.0827	<0.00200	<0.000500	0.0615	<0.00400	<0.00200	2.13	<0.000150	0.0367	0.019	<0.00200	0.99	1.1	2.09
BAC-4	< 0.500	53	473	1.35	7.96	181	1150	<0.00200	0.0407	0.0821	<0.00200	<0.000500	0.0022	<0.00400	<0.00200	0.476	<0.000150	0.0104	<0.00200	<0.00200	0.19	0.5	0.69
BAC-5	< 0.500	51.1	483	1.11	7.83	129	1010	<0.00200	0.0357	0.0928	<0.00200	<0.000500	0.0161	<0.00400	<0.00200	0.479	<0.000150	0.00926	<0.00200	<0.00200	0.29	0.96	1.25
BAC-6	4.36	142	516	0.754	7.68	1080	2410	<0.00200	0.0134	0.0622	<0.00200	<0.000500	0.0363	<0.00400	<0.00200	0.599	<0.000150	0.0968	<0.00200	<0.00200	0.39	1.4	1.79
BAC-7	4.65	148	665	1.01	7.77	1360	2910	<0.00200	0.0191	0.0577	<0.00200	<0.000500	0.0264	<0.00400	<0.00200	0.681	<0.000150	0.0699	0.00276	<0.00200	0.46	0.92	1.38

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	14.56	7.93	-67	1590	106	2.51	-
BA-U-2	13.58	8.33	-85	1510	96.4	2.9	-
BAC-1	11.8	7.32	111	15100	54.8	1.84	9.35
BAC-2	15.7	7.12	79	11800	100	1.82	7.33
BAC-3	16.24	7.51	75	15000	34.2	1.36	9.28
BAC-4	14.36	7.93	12	2230	12.5	2.07	1.43
BAC-5	13.96	7.88	-18	2020	113	0.97	1.29
BAC-6	12.49	7.69	-157	3610	96.1	1.2	2.31
BAC-7	14.17	7.76	-96	4430	789	1.12	2.84

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	0.594	171	667	<0.100	7.4	918	2300	<0.00200	0.00266	0.112	<0.00200	<0.000500	0.0099	<0.00400	<0.00200	0.49	<0.000150	0.00554	<0.00200	<0.00200	0.56	1.7	2.26
WW-U-1	1.05	374	2180	<0.100	7.06	1470	5430	<0.00200	0.00453	0.178	<0.00200	<0.000500	0.0032	<0.00400	<0.00200	0.983	<0.000150	0.00619	0.00549	<0.00200	1	2.3	3.3
WW-U-2	1.6	358	2430	<0.100	7.23	1370	5540	<0.00200	0.00309	0.123	<0.00200	<0.000500	0.00582	0.0072	<0.00200	0.934	<0.000150	0.0237	0.00543	<0.00200	0.84	2.1	2.94
WWC-1	9.62	561	4840	<0.100	7.19	3150	11800	<0.00200	0.0181	0.0536	<0.00200	<0.000500	0.0139	<0.00400	<0.00200	2.69	0.00031	0.00701	0.0152	<0.00200	0.31	0.83	1.14
WWC-2	< 0.500	66.5	381	0.158	7.91	147	940	<0.00200	0.0155	0.0511	<0.00200	<0.000500	0.00348	<0.00400	<0.00200	0.241	<0.000150	0.00383	<0.00200	<0.00200	0.12	1.1	1.22
WWC-3	< 0.500	34.5	284	1.01	8.11	82.2	688	<0.00200	0.0102	0.0638	<0.00200	<0.000500	0.00577	<0.00400	<0.00200	0.243	<0.000150	0.0459	<0.00200	<0.00200	0.32	0.55	0.87
WWC-4	1.09	247	1270	0.387	7.61	800	3250	<0.00200	0.0116	0.09	<0.00200	<0.000500	0.00877	<0.00400	<0.00200	0.909	<0.000150	0.00467	0.00207	<0.00200	0.5	0.45	0.95
WWC-5	2.4	345	1810	0.331	7.47	1610	5020	<0.00200	0.00783	0.103	<0.00200	<0.000500	0.00892	0.0055	<0.00200	4.41	<0.000150	0.0265	<0.00200	<0.00200	0.51	1.1	1.61

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	10.79	7.27	-14	3720	74	6.93	-
WW-U-1	13.11	7.01	2	7920	32.9	3.2	-
WW-U-2	12.59	7.23	-11	7920	93.4	5.09	-
WWC-1	14.94	7.06	15	1850	110	1.28	11.5
WWC-2	17.36	7.88	-44	1680	79.9	1.08	1.07
WWC-3	13.92	8.1	-249	1430	121	1.29	0.918
WWC-4	14.73	7.4	-20	5230	61.1	1.52	3.3
WWC-5	15.35	7.3	-122	7740	348	0.97	4.88

Round 2 Detection Monitoring - February 23-March 8, 2016

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	47.7	391	0.839	8.52	123	908	<0.00200	0.0415	0.0953	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.401	<0.000150	0.00733	<0.00200	<0.00200	0.27	1.6	1.87
CL-U-2	< 0.500	59.9	372	0.873	7.75	119	940	<0.00200	0.0243	0.0934	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.387	<0.000150	0.00414	<0.00200	<0.00200	0.28	1	1.28
CLW-1	< 0.500	35.1	301	0.834	7.89	71.6	808	<0.00200	0.0266	0.0648	<0.00200	<0.000500	0.00235	<0.00400	<0.00200	0.361	<0.000150	0.00506	<0.00200	<0.00200	0.36	1.5	1.86
CLW-2	< 0.500	45.9	378	1.18	7.66	90.5	936	<0.00200	0.0243	0.0882	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.438	<0.000150	0.00481	<0.00200	<0.00200	0.51	0.53	1.04
CLW-3	< 0.500	40.5	336	1.35	7.92	96	884	<0.00200	0.0437	0.103	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.435	<0.000150	0.0049	<0.00200	<0.00200	0.47	1.1	1.57
CLW-4	< 0.500	32.1	282	1.53	7.87	80.9	776	<0.00200	0.0271	0.109	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.375	<0.000150	0.00762	<0.00200	<0.00200	0.37	0.7	1.07
CLW-5	< 0.500	35.4	318	1.82	7.91	85.7	824	<0.00200	0.0214	0.0869	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.411	<0.000150	0.00922	<0.00200	<0.00200	0.27	0.32	0.59
CLW-6	< 0.500	32.1	306	1.72	7.97	75.4	816	<0.00200	0.0246	0.095	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.4	<0.000150	0.0117	<0.00200	<0.00200	0.02	0.96	0.98
CLW-7	< 0.500	42.8	290	0.825	7.65	67.6	832	<0.00200	0.0239	0.0794	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.327	<0.000150	0.146	<0.00200	<0.00200	0.14	0.29	0.43
CLW-8	< 0.500	41.5	293	0.782	7.8	70.3	808	<0.00200	0.022	0.0839	<0.00200	<0.000500	0.00224	<0.00400	<0.00200	0.35	<0.000150	0.00499	<0.00200	<0.00200	0.32	0.32	0.64

Round 2

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	14.18	8.74	-209	1750	4.3	2.15	1.12
CL-U-2	14.41	7.75	-89	1820	4.6	1.85	1.17
CLW-1	15.84	7.95	-60	1560	3.8	1.4	0.996
CLW-2	17.53	7.81	-137	1840	2	9.35	1.17
CLW-3	14.99	7.87	-203	1710	0	3.96	1.09
CLW-4	17.08	7.81	-211	1490	11.5	1.82	0.955
CLW-5	17.06	7.82	-168	1650	10.9	8.45	1.06
CLW-6	15.83	7.91	-194	1600	6.2	0.95	1.02
CLW-7	16.53	7.75	9	1560	3.5	2.67	0.996
CLW-8	15.86	7.81	-25	1560	8	1.92	0.996

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	28.7	258	1.67	8.55	64.2	852	<0.00200	0.023	0.0969	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.376	<0.000150	0.0359	<0.00200	<0.00200	0.33	1.3	1.63
BA-U-2	< 0.500	67.4	529	0.938	8.02	55.7	1230	<0.00200	0.0199	0.175	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.514	<0.000150	0.00298	<0.00200	<0.00200	0.2	1	1.2
BAC-1	2.85	155	1730	<0.100	7.86	1390	5240	<0.00200	0.0174	0.39	<0.00200	<0.000500	0.00536	<0.00400	<0.00200	0.63	<0.000150	0.0607	0.0131	<0.00200	0.96	1.6	2.56
BAC-2	9.83	196	1600	<0.100	7.35	2900	7640	<0.00200	0.0411	0.0385	<0.00200	<0.000500	0.00742	<0.00400	0.00221	1.22	<0.000150	0.167	0.0128	<0.00200	0.4	2.5	2.9
BAC-3	6.55	406	3240	<0.100	7.62	3960	10400	<0.00200	0.0192	0.0553	<0.00200	<0.000500	0.00676	<0.00400	<0.00200	1.12	<0.000150	0.0337	0.0184	<0.00200	0.44	0.68	1.12
BAC-4	< 0.500	57.4	488	1.36	7.87	191	1290	<0.00200	0.0371	0.0806	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.532	<0.000150	0.0106	<0.00200	<0.00200	0.48	0.5	0.98
BAC-5	< 0.500	41.3	433	1.34	7.95	111	1010	<0.00200	0.0392	0.0736	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.476	<0.000150	0.00758	<0.00200	<0.00200	0.25	-0.03	0.22
BAC-6	2.67	98.4	491	0.734	7.72	636	1880	<0.00200	0.0144	0.0736	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.597	<0.000150	0.0569	<0.00200	<0.00200	0.61	0.6	1.21
BAC-7	4.43	132	623	1.07	7.89	1230	2980	<0.00200	0.0225	0.0372	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.699	<0.000150	0.0681	0.00274	<0.00200	0.16	0.51	0.67

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	13.53	8.63	5	1550	11.3	2.59	0.995
BA-U-2	15.78	7.94	-167	2240	19.7	1.06	1.44
BAC-1	17.51	8.16	39	6.5	10.7	3	4.11
BAC-2	16.74	7.2	322	9.96	3.2	2.59	6.26
BAC-3	14.4	7.36	29	1590	3.8	3.35	9.84
BAC-4	15.9	7.81	-55	2370	3.9	2.08	1.51
BAC-5	16.34	7.92	-23	1980	4	2.89	1.27
BAC-6	18.19	7.67	-8	2.94	0	1.73	1.88
BAC-7	14.22	7.9	-9	4560	3.9	2.46	2.92

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	< 0.500	168	752	0.557	7.65	665	2320	<0.00200	0.00781	0.0846	<0.00200	<0.000500	0.00346	<0.00400	<0.00200	0.634	<0.000150	0.00671	<0.00200	<0.00200	0.43	-0.16	0.27
WW-U-1	1.03	346	2430	<0.100	7.23	1440	5330	<0.00200	0.00446	0.123	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	1.33	<0.000150	0.00669	0.00432	<0.00200	1	2.2	3.2
WW-U-2	1.59	362	2410	<0.100	7.34	1370	5780	<0.00200	0.00846	0.0761	<0.00200	<0.000500	0.00735	<0.00400	<0.00200	1.35	<0.000150	0.0126	0.0108	<0.00200	0.51	1.2	1.71
WWC-1	6.01	458	4530	0.256	7.24	2710	10800	<0.00200	0.00331	0.072	<0.00200	<0.000500	0.00369	0.00842	<0.00200	1.08	<0.000150	0.0103	0.00919	<0.00200	0.91	1.6	2.51
WWC-2	< 0.500	61.3	352	0.208	7.97	131	932	<0.00200	0.0147	0.0421	<0.00200	<0.000500	0.00335	<0.00400	<0.00200	0.162	<0.000150	0.00391	<0.00200	<0.00200	0.18	1	1.18
WWC-3	< 0.500	29.2	203	0.845	8.2	78.5	660	<0.00200	0.021	0.0357	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.172	<0.000150	0.00593	<0.00200	<0.00200	0.16	0.52	0.68
WWC-4	0.826	185	1100	0.39	7.31	716	3100	<0.00200	0.00923	0.101	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.75	<0.000150	0.00783	<0.00200	<0.00200	0.6	0.84	1.44
WWC-5	1.59	320	1640	0.319	7.22	1210	4790	<0.00200	0.00371	0.0882	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	1.41	<0.000150	0.0205	0.00345	<0.00200	0.52	1.9	2.42

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	12.99	7.49	11	3790	7.4	1.37	2.42
WW-U-1	15.75	7.21	-117	8030	19.6	4.07	5.06
WW-U-2	14.5	7.34	-22	9240	12.9	2.4	5.82
WWC-1	15.29	7.11	-108	1400	11.8	7.82	8.62
WWC-2	14.19	7.75	-86	1720	9.1	2.37	1.1
WWC-3	15.63	8.1	-183	1190	2	1.36	0.759
WWC-4	15.58	7.37	-8	5004	4.7	1.61	3.18
WWC-5	15	7.22	19	7510	6.4	2	4.75

Date: 2/29/2016

Round 3 Detection Monitoring - June 6-15, 2016

Landfill Wells	Results																							Field Results						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	CL-U-1	< 0.500	51.2	414	1.01	7.83	122	1080	<0.00200	0.0507	0.0887	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.378	<0.000150	0.00491	<0.00200	<0.00200	0.11	0.72	0.83	18.94	8.04	-204	1910	22.6	1.2
CL-U-2	< 0.500	53.7	390	1.14	7.75	121	976	<0.00200	0.0245	0.0933	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.346	<0.000150	0.00391	<0.00200	<0.00200	0.26	1.5	1.76	18.47	7.7	-136	1900	1	2.72	1.22
CLW-1	< 0.500	34.6	312	1.13	7.9	70.1	716	<0.00200	0.0285	0.0621	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.318	<0.000150	0.00438	<0.00200	<0.00200	0.28	0.89	1.17	23.71	7.77	62	1550	0	1.34	0.99
CLW-2	< 0.500	43.9	402	1.21	7.84	87.9	976	<0.00200	0.0264	0.0819	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.396	<0.000150	0.00427	<0.00200	<0.00200	0.25	1.1	1.35	22.15	7.66	-169	1840	0	1.31	1.17
CLW-3	< 0.500	36.2	346	1.3	7.86	104	876	<0.00200	0.0402	0.0992	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.375	<0.000150	0.00463	<0.00200	<0.00200	0.35	1.2	1.55	20.8	7.71	-225	1720	0.8	1.8	1.1
CLW-4	< 0.500	30.6	294	1.58	7.79	77.9	748	<0.00200	0.0196	0.119	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.338	<0.000150	0.0092	<0.00200	<0.00200	0.45	0.72	1.17	19.51	7.8	-235	1480	0	4.39	0.95
CLW-5	< 0.500	33	336	1.81	7.86	84.9	848	<0.00200	0.0182	0.0851	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.352	<0.000150	0.00868	<0.00200	<0.00200	0.27	0.65	0.92	21.24	7.77	-209	1570	11.5	4.22	1.01
CLW-6	< 0.500	29.8	313	1.73	7.9	73.2	756	<0.00200	0.0181	0.0901	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.333	<0.000150	0.0105	<0.00200	<0.00200	0.34	1.4	1.74	18.81	7.87	-235	1600	0	1.7	1.02
CLW-7	< 0.500	39.3	328	1.16	7.64	67.4	732	<0.00200	0.0246	0.0581	<0.00200	<0.000500	0.00891	<0.00400	<0.00200	0.331	<0.000150	0.00638	<0.00200	<0.00200	0.19	0.55	0.74	16.73	7.62	66	1580	8.9	3.82	1.01
CLW-8	< 0.500	40.3	312	1.08	7.82	69.7	808	<0.00200	0.0225	0.0797	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.32	<0.000150	0.00435	<0.00200	<0.00200	0.27	0.32	0.59	20.93	7.66	55	1510	0	12.58	0.966

Bottom Ash	Results																							Field Results						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	BA-U-1	< 0.500	195	1130	0.801	7.63	339	2520	<0.00200	0.0177	0.0935	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.773	<0.000150	0.00317	0.00426	<0.00200	0.3	1.6	1.9	18.51	7.48	-114	4730	4.9	1.73
BA-U-2	< 0.500	15.9	284	0.865	12	40.6	720	<0.00200	<0.00200	0.128	<0.00200	<0.000500	0.0032	<0.00400	<0.00200	0.315	<0.000150	0.016	<0.00200	<0.00200	0.22	1.5	1.72	20.17	11.9	-206	1980	5.1	4.04	1.26
BAC-1	4.73	191	2240	0.402	7.59	1840	6420	<0.00200	0.0164	0.081	<0.00200	<0.000500	0.0033	<0.00400	<0.00200	1.3	<0.000150	0.0669	0.0168	<0.00200	0.51	1.3	1.81	20.91	7.43	-5	10.3	33.2	3.43	6.41
BAC-2	11.2	216	1650	0.986	7.17	3220	7520	<0.00200	0.0416	0.0248	<0.00200	<0.000500	0.00488	<0.00400	<0.00200	1.32	<0.000150	0.14	0.0142	<0.00200	0.17	1.6	1.77	19.81	7.01	33	11.6	2	0.69	7.18
BAC-3	6.82	445	3230	0.794	7.42	4490	10900	<0.00200	0.0158	0.048	<0.00200	<0.000500	0.00707	<0.00400	<0.00200	2.53	<0.000150	0.0269	0.0198	<0.00200	0.25	1.6	1.85	18.81	7.19	16	16.6	2.6	1.26	10.3
BAC-4	< 0.500	66.1	551	1.38	7.73	223	1280	<0.00200	0.0334	0.0772	<0.00200	<0.000500	0.00461	<0.00400	<0.00200	0.509	<0.000150	0.0122	<0.00200	<0.00200	0.16	0.68	0.84	18.21	7.71	83	2490	2.6	3.05	1.59
BAC-5	< 0.500	50.4	541	1.26	7.79	122	1220	<0.00200	0.0337	0.0839	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.494	<0.000150	0.00738	<0.00200	<0.00200	0.11	1.7	1.81	18.58	7.75	51	2260	0	1320	1.45
BAC-6	1.7	89.5	521	1.04	7.72	448	1560	<0.00200	0.0122	0.0859	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.542	<0.000150	0.0359	<0.00200	<0.00200	0.27	0.76	1.03	20.42	7.7	50	2740	0.4	21.84	1.75
BAC-7	4.51	132	685	1.31	7.69	1370	2870	<0.00200	0.0234	0.0315	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.674	<0.000150	0.0749	0.00319	<0.00200	0.17	2.4	2.57	21.43	7.63	-7	4510	8	15.04	2.89

Waste Water	Results																							Field Results						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	SI-U-1	< 0.500	129	901	0.564	7.6	318	1880	<0.00200	0.00989	0.0929	<0.00200	<0.000500	0.0156	<0.00400	<0.00200	0.499	<0.000150	0.00411	<0.00200	<0.00200	0.45	0.64	1.09	18	7.54	-69	3350	0.3	8.11
WW-U-1	1.18	296	2030	0.386	7.21	1300	5820	<0.00200	0.0052	0.115	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	1	<0.000150	0.00888	0.00637	<0.00200	0.64	0.92	1.56	22.73	7.15	34	7560	0	4.74	4.76
WW-U-2	1.49	412	2300	0.534	7.33	1180	5400	<0.00200	0.00538	0.0746	<0.00200	<0.000500	0.0114	<0.00400	<0.00200	1.08	<0.000150	0.0126	0.0107	<0.00200	0.64	1.1	1.74	18.42	7.25	-66	8820	25.9	1.6	5.56
WWC-1	3.59	526	3950	<0.100	7.12	1990	8820	<0.00200	0.00401	0.077	<0.00200	<0.000500	<0.00200	0.00532	<0.00200	2.18	<0.000150	0.00653	0.00824	<0.00200	0.47	2	2.47	18.38	6.9	62	14.7	1.6	1.86	9.13
WWC-2	< 0.500	59.1	369	0.833	7.79	145	956	<0.00200	0.0151	0.0408	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.225	<0.000150	0.00402	<0.00200	<0.00200	0.22	0.39	0.61	18.22	7.74	-101	1.74	1.9	5.2	1.12
WWC-3	< 0.500	26.4	197	1.02	8.12	85.6	664	<0.00200	0.0213	0.0328	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.23	<0.000150	0.00574	<0.00200	<0.00200	0.13	3.3	3.43	16.62	7.99	-168	1.2	0	0.59	0.765
WWC-4	0.627	138	902	0.576	7.57	406	2010	<0.00200	0.00498	0.0768	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.606	<0.000150	0.0082	<0.00200	<0.00200	0.27	1.7	1.97	16.85	7.43	-8	3.63	1.2	0.85	2.32
WWC-5	1.65	406	1730	0.3	7.24	1140	5060	<0.00200	0.00608	0.067	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	1.4	<0.000150	0.0119	0.00363	<0.00200	0.42	0.85	1.27	17.35	7.01	15	7.44	1	0.78	4.69

Date: 6/13/2016

Round 4 Detection Monitoring - August 22-September 1, 2016

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	54.8	424	1.03	7.63	124	1030	<0.00200	0.0301	0.0911	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.375	<0.000150	0.00428	<0.00200	<0.00200	0.36	0.44	0.8
CL-U-2	< 0.500	57.7	406	1.17	7.69	113	948	<0.00200	0.0265	0.0961	<0.00200	<0.000500	0.00227	<0.00400	<0.00200	0.351	<0.000150	0.00508	<0.00200	<0.00200	0.31	1.1	1.41
CLW-1	< 0.500	35	315	1.18	7.89	65.4	832	<0.00200	0.0279	0.0594	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.316	<0.000150	0.00454	<0.00200	<0.00200	0.52	0.86	1.38
CLW-2	< 0.500	46.8	424	1.29	7.75	89.2	992	<0.00200	0.0284	0.0823	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.391	<0.000150	0.00462	<0.00200	<0.00200	0.31	0.62	0.93
CLW-3	< 0.500	38.7	349	1.33	7.75	109	896	<0.00200	0.0412	0.0995	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.368	<0.000150	0.00472	<0.00200	<0.00200	0.3	0.15	0.45
CLW-4	< 0.500	32.1	318	1.53	7.81	84.5	808	<0.00200	0.0316	0.104	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.336	<0.000150	0.00577	<0.00200	<0.00200	0.39	0.62	1.01
CLW-5	< 0.500	34.3	350	1.83	7.75	92.1	860	<0.00200	0.0189	0.0803	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.346	<0.000150	0.00798	<0.00200	<0.00200	0.24	0.27	0.51
CLW-6	< 0.500	31.5	331	1.73	7.84	77.1	812	<0.00200	0.0164	0.0966	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.342	<0.000150	0.011	<0.00200	<0.00200	0.2	1	1.2
CLW-7	< 0.500	42.1	336	1.1	7.71	70	760	<0.00200	0.024	0.0529	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.302	<0.000150	0.00396	<0.00200	<0.00200	0.17	0.33	0.5
CLW-8	< 0.500	40.1	327	1.08	7.73	75	720	<0.00200	0.0224	0.0761	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.308	<0.000150	0.00459	<0.00200	<0.00200	0.35	1	1.35

Round 4

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	17.53	7.66	-180	1.84	4.1	1.72	1.18
CL-U-2	19.27	7.65	-151	1.81	0	9.25	1.16
CLW-1	18.96	7.85	34	1.55	0	5.66	0.992
CLW-2	19.41	7.7	-177	1.81	0	10.68	1.16
CLW-3	19.1	7.74	-225	1.66	0	10.74	1.07
CLW-4	21.52	7.8	-244	1.54	0	5.07	0.985
CLW-5	20.36	7.74	-195	1.67	45.2	9.17	1.07
CLW-6	18.53	7.79	-235	1.61	0	4.22	1.03
CLW-7	19.86	7.62	-71	1.57	0.01	12.06	1.01
CLW-8	20.81	7.7	-78	1.53	0	5.02	0.976

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	180	1170	0.888	7.62	327	2390	<0.00200	0.0191	0.0802	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.684	<0.000150	0.00386	0.00384	<0.00200	0.45	0.84	1.29
BA-U-2	< 0.500	10.4	317	0.975	11.8	39.9	748	<0.00200	0.00225	0.114	<0.00200	<0.000500	0.00216	<0.00400	<0.00200	0.337	<0.000150	0.0147	<0.00200	<0.00200	0.26	1.1	1.36
BAC-1	4.95	221	2520	0.401	7.52	2380	7210	<0.00200	0.0146	0.0643	<0.00200	<0.000500	0.0028	<0.00400	<0.00200	1.42	<0.000150	0.0603	0.0148	<0.00200	0.63	0.64	1.27
BAC-2	10.5	203	1640	1.03	7.22	3180	7620	<0.00200	0.0431	0.0237	<0.00200	<0.000500	0.0081	<0.00400	<0.00200	1.17	<0.000150	0.166	0.0136	<0.00200	0.33	0.23	0.56
BAC-3	6.77	399	3350	1.28	7.36	4630	11700	<0.00200	0.0213	0.0436	<0.00200	<0.000500	0.00386	<0.00400	<0.00200	2.37	<0.000150	0.0294	0.019	<0.00200	0.38	0.76	1.14
BAC-4	< 0.500	56.1	498	1.35	7.62	210	1460	<0.00200	0.0358	0.0757	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.508	<0.000150	0.0103	<0.00200	<0.00200	0.19	0.83	1.02
BAC-5	< 0.500	49.4	561	1.25	7.68	127	1200	<0.00200	0.0331	0.0879	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.538	<0.000150	0.0077	<0.00200	<0.00200	0.1	0.46	0.56
BAC-6	1.38	80.2	546	0.901	7.61	502	1540	<0.00200	0.0115	0.0781	<0.00200	0.000677	0.00283	<0.00400	<0.00200	0.54	<0.000150	0.034	<0.00200	<0.00200	0.31	0.24	0.55
BAC-7	3.96	126	612	1.28	7.68	1370	2770	<0.00200	0.0232	0.0274	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.669	<0.000150	0.0942	0.00257	<0.00200	0.37	-0.17	0.2

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	20.11	7.46	-160	4.24	0	3.38	2.72
BA-U-2	17.77	11.83	-224	2.11	9.1	8.94	1.35
BAC-1	22.39	7.33	10	11.8	8.7	2.54	7.3
BAC-2	21.36	7.04	0	10200	0	2.17	6.33
BAC-3	22.52	7.22	34	15.4	0	2.18	9.58
BAC-4	19.45	7.62	-94	2350	0	11.45	1.51
BAC-5	19.21	7.62	-96	2340	0	10.71	1.5
BAC-6	19.95	7.59	9	2650	0	24.99	1.7
BAC-7	19.38	7.56	-77	4270	0	2.75	2.73

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	< 0.500	131	922	0.564	7.57	281	1880	<0.00200	0.00926	0.0858	<0.00200	<0.000500	0.00217	<0.00400	<0.00200	0.467	<0.000150	0.00295	<0.00200	<0.00200	0.45	0.96	1.41
WW-U-1	1.25	304	2200	0.327	7.21	1280	5270	<0.00200	0.00439	0.0916	<0.00200	<0.000500	0.00337	<0.00400	<0.00200	1.01	<0.000150	0.00835	0.00689	<0.00200	0.54	2	2.54
WW-U-2	0.641	308	2140	0.614	7.42	854	4550	<0.00200	0.00258	0.117	<0.00200	<0.000500	0.00424	<0.00400	<0.00200	0.994	<0.000150	0.0342	0.00617	<0.00200	0.82	1.6	2.42
WWC-1	10.2	457	4680	0.213	7.11	3130	12100	<0.00200	0.02	0.0335	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	2.41	0.00019	0.00966	0.0145	<0.00200	0.33	0.86	1.19
WWC-2	< 0.500	57.9	389	0.508	7.86	151	960	<0.00200	0.0152	0.0406	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.243	<0.000150	0.0034	<0.00200	<0.00200	0.69	1.2	1.89
WWC-3	< 0.500	27.3	220	1.03	8.02	78	628	<0.00200	0.0217	0.0342	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.241	<0.000150	0.00559	<0.00200	<0.00200	0.2	-0.34	-0.14
WWC-4	1.17	225	1330	0.422	7.37	868	3230	<0.00200	0.0131	0.065	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.879	<0.000150	0.00237	0.00238	<0.00200	0.27	0.48	0.75
WWC-5	2.87	326	1920	0.366	7.18	1700	5440	<0.00200	0.00717	0.0439	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	1.33	<0.000150	0.00742	0.00312	<0.00200	0.41	0.51	0.92

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	21.31	7.57	-21	3.25	1.6	14.7	2.08
WW-U-1	20.96	7.12	34	8.06	10.9	3.52	5.08
WW-U-2	19.51	7.41	-63	7.34	4.7	8.24	4.62
WWC-1	20.69	6.94	-34	18400	0	0.54	11.4
WWC-2	17.91	7.64	-153	1720	2.6	3.57	1.1
WWC-3	17.39	7.97	-176	1200	0	0.54	0.766
WWC-4	17.14	7.22	-68	5320	0	2.25	3.35
WWC-5	17.85	7.01	-89	7790	0.9	0.59	4.91

Date: 8/26/2016



Round 5 Detection Monitoring - October 17-26, 2016

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	57.4	424	0.959	7.7	115	912	<0.00200	0.037	0.089	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.217	<0.000150	0.00404	<0.00200	<0.00200	0.25	0.18	0.43
CL-U-2	< 0.500	59.5	395	0.99	7.73	113	864	<0.00200	0.0269	0.101	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.206	<0.000150	0.00401	<0.00200	<0.00200	0.36	0.84	1.2
CLW-1	< 0.500	38.9	325	1.15	7.8	67.8	824	<0.00200	0.0295	0.0668	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.189	<0.000150	0.0043	<0.00200	<0.00200	0.27	0.19	0.46
CLW-2	< 0.500	49.2	422	1.13	7.82	85.3	984	<0.00200	0.0258	0.0855	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.223	<0.000150	0.00456	<0.00200	<0.00200	0.31	0.34	0.65
CLW-3	< 0.500	40.8	366	1.19	7.83	100	944	<0.00200	0.0412	0.104	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.214	<0.000150	0.00508	<0.00200	<0.00200	0.35	0.13	0.48
CLW-4	< 0.500	34.6	335	1.39	7.84	85.9	828	<0.00200	0.0385	0.0932	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.203	<0.000150	0.00414	<0.00200	<0.00200	0.59	-0.37	0.22
CLW-5	< 0.500	35.3	339	1.69	7.89	82.1	928	<0.00200	0.0206	0.0812	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.204	<0.000150	0.00723	<0.00200	<0.00200	0.31	0.84	1.15
CLW-6	< 0.500	33.9	325	1.46	7.85	77.9	972	<0.00200	0.0287	0.0908	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.203	<0.000150	0.00638	<0.00200	<0.00200	0.35	0.18	0.53
CLW-7	< 0.500	42.8	343	1.14	7.9	68.6	796	<0.00200	0.0235	0.0551	<0.00200	<0.000500	0.00234	<0.00400	<0.00200	0.182	<0.000150	0.00413	<0.00200	<0.00200	0.27	0.32	0.59
CLW-8	< 0.500	41.7	334	1.11	7.77	68.9	744	<0.00200	0.0258	0.0797	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.189	<0.000150	0.00428	<0.00200	<0.00200	0.37	-0.28	0.09

Round 5

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	16.15	7.72	-195	1900	0.7	2.79	1.22
CL-U-2	16.89	7.67	-102	1820	0.4	0.82	1.17
CLW-1	16.85	7.77	-50	1520	2	1.57	0.974
CLW-2	17.05	7.76	-202	1900	0.4	3.82	1.21
CLW-3	15.28	7.75	-231	1720	1.8	1.29	1.1
CLW-4	14.67	7.78	-235	1620	7	1.4	1.04
CLW-5	17.4	7.71	-209	1690	8.1	1.41	1.08
CLW-6	15.85	7.83	-249	1620	1.1	1.72	1.04
CLW-7	17.42	7.7	-73	564	0	13.65	0.361
CLW-8	17.18	7.7	-100	1530	2.2	1.03	0.978

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	16.7	327	1.65	9.08	60.2	832	<0.00200	0.0362	0.0679	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.215	<0.000150	0.0163	<0.00200	<0.00200	0.67	0.13	0.8
BA-U-2	< 0.500	38.1	357	1.02	8.56	51.9	824	<0.00200	0.0234	0.131	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.21	<0.000150	0.00449	<0.00200	<0.00200	0.57	0.42	0.99
BAC-1	3.42	131	1850	0.437	8.8	1610	7720	<0.00200	0.0103	0.049	<0.00200	<0.000500	0.00612	<0.00400	<0.00200	0.402	<0.000150	0.0498	0.00852	<0.00200	0.34	0.27	0.61
BAC-2	9.71	216	1620	1.11	7.34	2980	7040	<0.00200	0.0444	0.0228	<0.00200	<0.000500	0.00644	<0.00400	<0.00200	0.414	<0.000150	0.165	0.0131	<0.00200	0.25	-0.03	0.22
BAC-3	7.04	401	3160	0.76	7.39	4260	11400	<0.00200	0.0226	0.0404	<0.00200	<0.000500	0.00362	<0.00400	<0.00200	0.812	<0.000150	0.0275	0.0195	<0.00200	0.24	0.14	0.38
BAC-4	< 0.500	59.2	534	1.34	7.8	222	1230	<0.00200	0.0352	0.0723	<0.00200	<0.000500	0.00212	<0.00400	<0.00200	0.243	<0.000150	0.00992	<0.00200	<0.00200	0.09	0.4	0.49
BAC-5	< 0.500	40.5	479	1.33	7.85	110	1070	<0.00200	0.0359	0.0909	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.219	<0.000150	0.00715	<0.00200	<0.00200	0.2	-0.01	0.19
BAC-6	4.35	133	606	0.97	7.61	1080	2620	<0.00200	0.022	0.0287	<0.00200	<0.000500	0.00257	<0.00400	<0.00200	0.266	<0.000150	0.0858	0.00369	<0.00200	0.13	0.69	0.82
BAC-7	3.97	135	628	1.42	7.69	1340	2880	<0.00200	0.0241	0.026	<0.00200	<0.000500	0.00217	<0.00400	<0.00200	0.279	<0.000150	0.0944	0.00279	<0.00200	0.26	1.1	1.36

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	16.41	9.07	6	1660	3.2	1.88	1.06
BA-U-2	16.67	8.77	-318	1600	1.7	1.76	1.03
BAC-1	18.66	7.57	-144	8800	7.7	0.55	6.19
BAC-2	19.51	7.01	-2	10200	0.6	0.46	6.34
BAC-3	18.63	7.15	2	16700	20	4.99	10.4
BAC-4	16.35	7.72	-120	0.859	3	4.2	0.55
BAC-5	16.43	7.85	-64	726	1.4	12.41	0.464
BAC-6	16.07	7.62	-86	1370	11.4	1.77	0.879
BAC-7	16.64	7.59	-67	1560	4.6	12.42	0.998

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	< 0.500	132	863	0.514	7.52	286	1850	<0.00200	0.00895	0.0871	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.254	<0.000150	0.00276	<0.00200	<0.00200	0.32	0.11	0.43
WW-U-1	1.23	348	2190	0.346	7.18	1230	5370	<0.00200	0.0041	0.0771	<0.00200	<0.000500	0.00538	<0.00400	<0.00200	0.479	<0.000150	0.00891	0.00579	<0.00200	0.73	0.17	0.9
WW-U-2	1.47	383	2340	0.416	7.22	1120	5540	<0.00200	0.00573	0.0704	<0.00200	<0.000500	0.00396	<0.00400	<0.00200	0.512	<0.000150	0.0111	0.0116	<0.00200	0.78	0.46	1.24
WWC-1	9.83	513	4540	0.133	7.04	2960	12500	<0.00200	0.0197	0.0317	<0.00200	<0.000500	0.00348	<0.00400	<0.00200	0.819	0.000198	0.00936	0.0153	<0.00200	0.23	0.73	0.96
WWC-2	< 0.500	58.5	369	0.42	7.88	140	960	<0.00200	0.0129	0.0543	<0.00200	<0.000500	0.0243	<0.00400	<0.00200	0.112	<0.000150	0.00809	<0.00200	<0.00200	0.1	0.45	0.55
WWC-3	< 0.500	27.7	224	1.08	8.01	86.1	612	<0.00200	0.0218	0.0332	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.123	<0.000150	0.00543	<0.00200	<0.00200	0.07	0.1	0.17
WWC-4	1.19	227	1200	0.509	7.32	763	3200	<0.00200	0.0136	0.0629	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.351	<0.000150	0.00222	0.00216	<0.00200	0.08	0.75	0.83
WWC-5	3.02	343	1850	0.401	0.71	1570	5300	<0.00200	0.00778	0.0389	<0.00200	<0.000500	0.00238	<0.00400	<0.00200	0.497	<0.000150	0.00498	0.0041	<0.00200	0.43	1.1	1.53

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	16.62	7.47	-22	3370	1	9	2.16
WW-U-1	17.72	6.99	7	8330	3	1.89	5.25
WW-U-2	17.84	7.19	-10	8400	2.6	1.89	5.29
WWC-1	15.78	6.93	-22	18600	0	0.51	11.6
WWC-2	15.91	7.75	-210	1680	6	1.08	1.07
WWC-3	16.26	7.94	-166	1210	0	0.24	0.772
WWC-4	16.51	7.22	-41	5140	0.2	1.09	3.24
WWC-5	15.83	7.02	-87	7930	0.2	0.37	4.99

Date: 10/17/2016

Round 6 Detection Monitoring - March 20-30, 2017

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	<0.500	57.1	403	0.876	7.83	113	908	<0.00200	0.0322	0.0867	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.214	<0.000150	0.00365	<0.00200	<0.00200	0.62	0.22	0.62
CL-U-2	<0.500	61.2	374	0.903	7.89	110	852	<0.00200	0.0272	0.0976	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.208	<0.000150	0.00386	<0.00200	<0.00200	0.4	0.39	0.4
CLW-1	<0.500	38.4	295	1.05	7.83	62.4	768	<0.00200	0.0309	0.0631	<0.00200	<0.000500	0.0187	<0.00400	<0.00200	0.185	<0.000150	0.00654	<0.00200	<0.00200	0.41	0.78	1.2
CLW-2	<0.500	49.7	377	1.07	7.85	92.9	936	<0.00200	0.0277	0.0811	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.219	<0.000150	0.00437	<0.00200	<0.00200	0.31	0.72	1
CLW-3	<0.500	42.4	333	1.23	7.87	94.4	876	<0.00200	0.0423	0.103	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.214	<0.000150	0.00473	<0.00200	<0.00200	0.35	0.7	1.1
CLW-4	<0.500	35.2	306	1.27	8.02	79.1	808	<0.00200	0.0388	0.0898	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.202	<0.000150	0.00439	<0.00200	<0.00200	0.39	0.12	0.39
CLW-5	<0.500	36	320	1.71	7.88	79.9	748	<0.00200	0.0216	0.0801	<0.00200	<0.000500	0.00214	<0.00400	<0.00200	0.025	<0.000150	0.00666	<0.00200	<0.00200	0.4	0.38	0.4
CLW-6	<0.500	33.4	302	1.48	7.91	66	752	<0.00200	0.0164	0.0976	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.193	<0.000150	0.00805	<0.00200	<0.00200	0.25	-0.35	0.25
CLW-7	<0.500	46.4	312	1.02	7.68	61	824	<0.00200	0.0257	0.0545	<0.00200	<0.000500	0.00772	<0.00400	<0.00200	0.182	<0.000150	0.00425	<0.00200	<0.00200	0.14	0.18	0.14
CLW-8	<0.500	42.8	301	1.03	7.71	63.8	772	<0.00200	0.0255	0.0707	<0.00200	<0.000500	0.012	<0.00400	<0.00200	0.189	<0.000150	0.00526	<0.00200	<0.00200	0.25	0.29	0.25

Round 6

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	17.27	7.52	-194	957	4.2	2.53	0.613
CL-U-2	15.81	7.48	-139	929	0	10.45	0.598
CLW-1	14.45	7.6	-173	1540	0	5.98	0.984
CLW-2	16.63	7.58	-221	950	0	9.29	0.609
CLW-3	16.58	7.66	-235	840	0	10.64	0.539
CLW-4	16.67	7.68	-253	785	0	2.14	0.502
CLW-5	16.63	7.6	-222	834	0	2.29	0.534
CLW-6	15.51	7.65	-245	790	0	8.85	0.505
CLW-7	15.48	7.52	-150	1600	0	1.94	1.02
CLW-8	15.08	7.57	-159	1550	0	1.55	0.991

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	<0.500	24.5	259	1.57	8.59	48.8	648	<0.00200	0.0359	0.0856	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.193	<0.000150	0.0124	<0.00200	<0.00200	0.28	0.15	0.28
BA-U-2	<0.500	3.76	328	0.886	12.1	39.2	728	<0.00200	0.00254	0.122	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.221	<0.000150	0.00986	<0.00200	<0.00200	0.3	0.47	0.3
BAC-1	4.01	188	2170	<0.100	7.47	1650	6320	<0.00200	0.0202	0.279	<0.00200	<0.000500	0.0412	<0.00400	<0.00200	0.429	<0.000150	0.0391	0.0152	<0.00200	1.1	1.5	2.6
BAC-2	10.5	193	1480	0.871	7.2	2780	7320	<0.00200	0.0469	0.022	<0.00200	<0.000500	0.0145	<0.00400	<0.00200	0.44	<0.000150	0.194	0.0144	<0.00200	0.34	0.22	0.56
BAC-3	7.57	408	3140	<0.100	7.36	4290	13000	<0.00200	0.0239	0.0376	<0.00200	<0.000500	0.00447	<0.00400	<0.00200	0.974	<0.000150	0.026	0.0211	<0.00200	0.2	0.5	0.7
BAC-4	<0.500	59	461	1.13	7.68	206	1260	<0.00200	0.0362	0.0705	<0.00200	<0.000500	0.011	<0.00400	<0.00200	0.237	<0.000150	0.012	<0.00200	<0.00200	0.13	0.18	0.13
BAC-5	<0.500	59.5	576	0.994	7.73	190	1430	<0.00200	0.032	0.0893	<0.00200	<0.000500	0.00204	<0.00400	<0.00200	0.277	<0.000150	0.00666	<0.00200	<0.00200	0.21	0.24	0.45
BAC-6	4.44	128	594	0.763	7.6	1040	2500	<0.00200	0.0237	0.0269	<0.00200	<0.000500	0.00205	<0.00400	<0.00200	0.28	<0.000150	0.0873	0.0045	<0.00200	0.12	-0.21	-0.09
BAC-7	3.31	151	591	0.936	7.43	1140	3120	<0.00200	0.0237	0.0253	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.327	<0.000150	0.0702	0.007	<0.00200	0.21	0.7	0.91

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	16.08	8.22	55	783	1.8	6.02	0.501
BA-U-2	17.77	11.71	-250	2120	1.9	7.87	1.36
BAC-1	16.44	7.24	-131	9640	11.2	2.14	6.07
BAC-2	15.89	6.86	-53	10400	0.1	0.6	6.44
BAC-3	15.61	7.1	-44	18000	3.4	0.5	11.2
BAC-4	14.42	7.58	-165	2400	0	2.76	1.53
BAC-5	15.18	7.53	-155	2550	0.1	0.57	1.63
BAC-6	16.07	7.42	-115	4030	0	0.32	2.58
BAC-7	16.54	7.34	-124	4780	1.5	0.38	3.06

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	<0.500	131	785	0.458	7.54	247	1760	<0.00200	0.00941	0.08	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.25	<0.000150	0.00227	<0.00200	<0.00200	0.33	0.24	0.33
WW-U-1	1.15	336	1880	0.2	7.26	1180	4890	<0.00200	0.00593	0.0568	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.477	<0.000150	0.00558	0.00583	<0.00200	0.53	0.89	1.42
WW-U-2	0.6	317	1860	0.438	7.38	734	4300	<0.00200	0.00355	0.095	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.479	<0.000150	0.021	0.00749	<0.00200	0.51	1.6	2.11
WWC-1	11.2	479	4510	<0.100	6.98	2940	12200	<0.00200	0.0213	0.0288	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.932	0.000328	0.00995	0.0149	<0.00200	0.26	1.1	1.36
WWC-2	<0.500	52	318	0.405	7.79	125	856	<0.00200	0.0149	0.0361	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.122	<0.000150	0.00357	<0.00200	<0.00200	0.17	0.61	0.78
WWC-3	<0.500	25.7	195	0.852	8.13	76	680	<0.00200	0.0227	0.0302	<0.00200	<0.000500	0.00309	<0.00400	<0.00200	0.137	<0.000150	0.00537	<0.00200	<0.00200	0.24	-0.21	0.03
WWC-4	1.3	233	1250	0.319	7.38	819	3230	<0.00200	0.0135	0.061	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.382	<0.000150	<0.00200	0.00239	<0.00200	0.18	-0.2	-0.02
WWC-5	1.72	318	1520	0.292	7.13	1190	4560	<0.00200	0.01	0.0501	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.555	<0.000150	0.00523	0.00399	<0.00200	0.23	0.95	1.18

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	17.03	7.37	-45	3340	1.1	8.42	2.14
WW-U-1	18.15	6.96	-57	7980	11.5	1.02	5.02
WW-U-2	17.03	7.29	-15	7470	2.3	1.36	4.71
WWC-1	15.08	6.74	-32	19700	0.3	1.8	12.2
WWC-2	15.4	7.75	-134	1650	1	0.44	1.06
WWC-3	15.31	8.09	207	1230	1.2	0.22	0.784
WWC-4	15.85	7.18	-70	5390	0.5	3.15	3.39
WWC-5	16.2	6.84	-61	7180	0	0.62	4.52

Date: 3/23/2017

Round 7 Detection Monitoring - June 5-21, 2017

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	53	480	0.996	7.74	132	1010	<0.00200	0.0344	0.0826	<0.00200	0.00065	<0.00200	<0.00400	<0.00200	0.202	<0.000150	0.00402	<0.00200	<0.00200	0.36	0.95	1.31
CL-U-2	< 0.500	55.1	444	1	7.8	134	952	<0.00200	0.0247	0.0938	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.19	<0.000150	0.00408	<0.00200	<0.00200	2.7	1	3.7
CLW-1	< 0.500	36.4	322	1.06	7.85	68.2	772	<0.00200	0.0289	0.0615	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.173	<0.000150	0.00389	<0.00200	<0.00200	0.2	0.14	0.34
CLW-2	< 0.500	44.7	436	1.19	7.83	102	964	<0.00200	0.0246	0.0754	<0.00200	<0.000500	0.00411	<0.00400	<0.00200	0.211	<0.000150	0.00461	<0.00200	<0.00200	0.24	1	1.24
CLW-3	< 0.500	37.3	380	1.23	7.85	106	856	<0.00200	0.0378	0.0951	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.197	<0.000150	0.00498	<0.00200	<0.00200	0.27	0.29	0.56
CLW-4	< 0.500	30.6	345	1.44	7.89	86.3	816	<0.00200	0.0352	0.0885	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.189	<0.000150	0.00481	<0.00200	<0.00200	0.29	0.3	0.59
CLW-5	< 0.500	32.4	358	1.82	7.86	91.6	860	<0.00200	0.0203	0.0732	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.188	<0.000150	0.00572	<0.00200	<0.00200	1.4	1.2	2.6
CLW-6	< 0.500	31	336	1.61	7.9	77.5	768	<0.00200	0.02	0.0893	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	<0.100	0.183	<0.00200	0.0068	<0.00200	0.01	0.5	0.51
CLW-7	< 0.500	41.5	352	1.01	7.88	70.4	832	<0.00200	0.0241	0.0514	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.169	<0.000150	0.0033	<0.00200	<0.00200	0.14	0.75	0.89
CLW-8	< 0.500	38.4	339	1.02	7.81	73.1	812	<0.00200	0.0239	0.0681	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.176	<0.000150	0.00391	<0.00200	<0.00200	0.18	0.81	0.99

Round 7

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	16.35	7.59	-206	1920	0	1.51	1.23
CL-U-2	15.98	7.5	-177	1860	0	1.62	1.19
CLW-1	18.47	7.79	-160	768	0	0.9	0.491
CLW-2	16.77	7.73	-210	945	0	1.52	0.605
CLW-3	17.35	7.78	-246	879	0	2.13	0.562
CLW-4	17.86	7.75	-252	1580	0	4.35	1.01
CLW-5	18.97	7.66	-232	1680	0	2.65	1.08
CLW-6	16.95	7.75	-258	1590	0	5.1	1.02
CLW-7	18.07	7.7	-131	805	0	2.21	0.516
CLW-8	17.59	7.74	-130	776	0	1.58	0.497

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	26.3	317	1.75	8.32	52.9	776	<0.00200	0.0323	0.0901	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.191	<0.000150	0.0109	<0.00200	<0.00200	0.15	0.73	0.88
BA-U-2	< 0.500	3.58	366	0.821	11.8	39.6	748	<0.00200	<0.00200	0.0899	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.215	<0.000150	0.0086	<0.00200	<0.00200	0.09	0.98	1.07
BAC-1	1.91	88.7	914	0.266	8.92	702	2920	<0.00200	0.0145	0.0563	<0.00200	<0.000500	0.00666	<0.00400	<0.00200	0.305	<0.000150	0.0317	0.00643	<0.00200	0.2	0.99	1.19
BAC-2	10.6	216	1730	<0.100	7.21	3260	7720	<0.00200	0.042	0.0211	<0.00200	<0.000500	0.00799	<0.00400	<0.00200	0.586	<0.000150	0.177	0.0138	<0.00200	0.14	0.64	0.78
BAC-3	7.76	401	3510	<0.100	7.29	4900	13200	<0.00200	0.0251	0.0316	<0.00200	<0.000500	0.00858	<0.00400	<0.00200	1.17	<0.000150	0.0292	0.0212	<0.00200	0.3	0.76	1.06
BAC-4	< 0.500	56.1	612	1.13	7.84	212	1220	<0.00200	0.0329	0.0666	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.228	<0.000150	0.0113	<0.00200	<0.00200	0.37	0.47	0.84
BAC-5	< 0.500	58.3	654	1.1	7.76	217	1180	<0.00200	0.0297	0.0881	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.259	<0.000150	0.00728	<0.00200	<0.00200	0.31	0.28	0.59
BAC-6	4.25	135	697	0.779	7.63	1110	2810	<0.00200	0.0229	0.0256	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.257	<0.000150	0.0921	0.00414	<0.00200	0.24	0.76	1
BAC-7	3.4	146	632	0.864	7.78	1290	3170	<0.00200	0.0154	0.0288	<0.00200	<0.000500	0.00398	<0.00400	<0.00200	0.36	<0.000150	0.0888	0.00457	<0.00200	2.5	0.88	3.38

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	18.46	8.13	-138	1500	0	2.32	0.963
BA-U-2	19.9	11.43	-301	1870	0	0.58	1.2
BAC-1	22.57	9.92	-118	5180	15.6	2.32	3.27
BAC-2	19.02	7.09	-80	10900	2.2	0.84	6.76
BAC-3	18.87	7.1	-69	17800	3.2	1.02	11
BAC-4	17.01	7.62	-158	2380	0	1.61	1.52
BAC-5	17.31	7.69	-131	2560	0	2.62	1.64
BAC-6	19.46	7.59	-128	3900	35.2	0.85	2.5
BAC-7	17.97	7.5	-147	4610	2.9	1.16	2.95

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	< 0.500	116	763	0.522	7.56	427	1800	<0.00200	0.0101	0.0599	<0.00200	0.00128	0.00274	<0.00400	<0.00200	0.235	<0.000150	0.00233	<0.00200	<0.00200	0.2	1.3	1.5
WW-U-1	1.18	312	2340	0.181	7.41	1450	4540	<0.00200	0.00568	0.0521	<0.00200	<0.000500	0.00212	<0.00400	<0.00200	0.441	<0.000150	0.00556	0.00625	<0.00200	1.2	1.5	2.7
WW-U-2	0.741	338	2590	0.287	7.36	1040	12500	<0.00200	0.00325	0.0803	<0.00200	<0.000500	0.067	<0.00400	<0.00200	0.512	<0.000150	0.0226	0.00846	<0.00200	0.52	1.6	2.12
WWC-1	9.88	413	4410	<0.100	7.14	2770	11000	<0.00200	0.0173	0.0326	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	1.11	0.000175	0.0147	0.0147	<0.00200	0.39	1.5	1.89
WWC-2	< 0.500	49.5	326	0.447	7.85	134	832	<0.00200	0.0141	0.0339	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.138	<0.000150	0.00405	<0.00200	<0.00200	0.24	0.24	0.48
WWC-3	< 0.500	25.9	220	0.974	8.12	84.3	696	<0.00200	0.0214	0.0281	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.146	<0.000150	0.00504	<0.00200	<0.00200	0.1	0.45	0.55
WWC-4	1.33	229	1330	0.466	7.22	912	3060	<0.00200	0.013	0.0545	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.421	<0.000150	<0.00200	0.00241	<0.00200	0.22	0.74	0.96
WWC-5	2.25	287	1790	<0.100	7.49	1420	4810	<0.00200	0.00753	0.0379	<0.00200	<0.000500	0.00202	<0.00400	<0.00200	0.567	<0.000150	0.00531	0.00336	<0.00200	0.2	1.5	1.7

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	17.96	7.27	-138	3170	0	0.57	2.03
WW-U-1	18.63	6.87	-32	8050	0	1	5.07
WW-U-2	18.21	7.22	-161	7610	0	0.91	4.79
WWC-1	16.96	6.95	-34	15200	0.1	0.67	9.48
WWC-2	16.11	7.72	-169	1500	1.3	0.94	0.96
WWC-3	16.94	7.99	-194	1210	0.7	0.63	0.773
WWC-4	16.15	7.16	-73	5.48	0.5	0.6	3.46
WWC-5	16.54	7.01	-42	7225	0.9	0.76	4.57



Round 8 Detection Monitoring - September 25-October 4, 2017

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	<0.500	52.1	422	1.07	7.73	116	1130	<0.00200	0.0291	0.088	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.228	<0.000150	0.00398	<0.00200	<0.00200	0.25	1.6	1.85
CL-U-2	<0.500	53.8	390	1.1	7.67	120	1060	<0.00200	0.0262	0.0941	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.212	<0.000150	0.00415	<0.00200	<0.00200	0.17	1.4	1.57
CLW-1	<0.500	35.7	310	1.15	7.85	71.7	808	<0.00200	0.0308	0.0614	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.192	<0.000150	0.00407	<0.00200	<0.00200	0.21	1.7	1.91
CLW-2	<0.500	43.5	407	1.23	7.76	97.3	1040	<0.00200	0.0257	0.0793	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.229	<0.000150	0.00467	<0.00200	<0.00200	0.12	3	3.12
CLW-3	<0.500	36.2	347	1.34	7.8	100	884	<0.00200	0.0408	0.102	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.223	<0.000150	0.00474	<0.00200	<0.00200	0.16	1.1	1.26
CLW-4	<0.500	30.5	313	1.6	7.81	85.1	856	<0.00200	0.0333	0.09	<0.00200	<0.000500	0.0516	<0.00400	<0.00200	0.199	<0.000150	0.0115	<0.00200	<0.00200	0.24	1.8	2.04
CLW-5	<0.500	33.2	344	1.82	7.8	88.5	824	<0.00200	0.023	0.0727	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.211	<0.000150	0.0052	<0.00200	<0.00200	0.2	2.2	2.4
CLW-6	<0.500	30.5	317	1.73	7.82	74.5	828	<0.00200	0.0143	0.0961	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.199	<0.000150	0.00721	<0.00200	<0.00200	0.29	1.7	1.99
CLW-7	<0.500	45.5	319	1.11	7.7	64.5	868	<0.00200	0.0244	0.0539	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.189	<0.000150	0.00389	<0.00200	<0.00200	0.45	0.95	1.4
CLW-8	<0.500	37.9	319	1.13	7.77	70.6	788	<0.00200	0.0252	0.0689	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.192	<0.000150	0.00431	<0.00200	<0.00200	0.25	1.6	1.85

Round 8

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	16.07	7.45	-199	1930	0.4	0.56	1.24
CL-U-2	15.67	7.43	-176	1880	0.8	0.58	1.2
CLW-1	20.49	7.68	-172	1.48	0	0.41	0.949
CLW-2	16.63	7.63	-199	1880	0.7	0.64	1.2
CLW-3	16.82	7.59	-251	1750	1.5	2.9	1.12
CLW-4	17.63	7.56	-269	1620	1.6	1.56	1.03
CLW-5	17.21	7.71	-244	1690	3.7	1.12	1.09
CLW-6	15.97	7.75	-259	1.6	2.3	3.3	1.02
CLW-7	16.72	7.59	-147	1640	0	0.86	1.05
CLW-8	18.26	7.65	-145	1.53	1.1	1.89	0.975

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	<0.500	169	1040	1.02	7.53	343	2310	<0.00200	0.0215	0.0745	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.368	<0.000150	0.00296	0.00375	<0.00200	0.07	1.3	1.37
BA-U-2	<0.500	46.3	479	0.993	8.04	53.7	1140	<0.00200	0.0249	0.156	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.241	<0.000150	0.00294	<0.00200	<0.00200	0.24	1.5	1.74
BAC-1	4.86	229	2620	0.854	7.4	2150	8400	<0.00200	0.0148	0.702	<0.00200	<0.000500	0.114	0.00461	<0.00200	0.52	<0.000150	0.0467	0.0174	<0.00200	0.39	1.6	1.99
BAC-2	10.1	221	1690	1.33	7.62	2970	7940	<0.00200	0.0469	0.0202	<0.00200	<0.000500	0.00547	<0.00400	<0.00200	0.431	<0.000150	0.154	0.0149	<0.00200	0.11	0.14	0.25
BAC-3	8.76	353	3370	2.51	7.43	5340	12700	<0.00200	0.054	0.0306	<0.00200	<0.000500	0.0114	<0.00400	<0.00200	0.897	<0.000150	0.0525	0.0287	<0.00200	0.23	1.3	1.53
BAC-4	<0.500	62.4	482	1.26	7.76	231	1280	<0.00200	0.0359	0.0703	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.262	<0.000150	0.0139	<0.00200	<0.00200	0.1	2.5	2.6
BAC-5	<0.500	67.5	593	1.17	7.74	269	1450	<0.00200	0.0325	0.0877	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.294	<0.000150	0.00838	<0.00200	<0.00200	0.26	2.7	2.96
BAC-6	0.978	77.2	516	1.01	7.97	301	1510	<0.00200	0.0156	0.0833	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.265	<0.000150	0.0213	<0.00200	<0.00200	0.27	3.8	4.07
BAC-7	3.41	144	633	1.15	7.65	1220	2990	<0.00200	0.0191	0.0223	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.285	<0.000150	0.074	0.00446	<0.00200	0.15	0.84	0.99

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	16.04	7.21	-166	4300	1.7	0.78	2.75
BA-U-2	16.58	8.07	-272	2030	0	1.63	1.3
BAC-1	15.36	6.93	-28	7170	1	0.54	4.52
BAC-2	16.95	6.92	-20	11500	2	0.9	7.11
BAC-3	16.87	7.07	-102	18.7	43.3	0.94	11.6
BAC-4	16.67	7.68	-148	2470	1.1	0.62	1.58
BAC-5	16.66	7.71	-140	2740	0.8	1.12	1.75
BAC-6	17.02	7.83	-47	2610	0.9	2.54	1.67
BAC-7	15.97	7.45	-121	4500	3.3	2.56	2.88

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	<0.500	110	820	0.618	7.55	263	1810	0.002	0.00969	0.0783	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.257	<0.000150	0.00251	<0.00200	<0.00200	0.44	0.56	1
WW-U-1	1.2	311	2130	0.539	7.23	1280	5260	<0.00200	0.0055	0.0545	<0.00200	<0.000500	0.003309	<0.00400	<0.00200	0.459	<0.000150	0.00792	0.00697	<0.00200	0.34	1.2	1.54
WW-U-2	1.66	314	2280	0.721	7.31	1220	5510	<0.00200	0.0104	0.0659	<0.00200	<0.000500	0.00415	<0.00400	<0.00200	0.485	<0.000150	0.00647	0.0122	<0.00200	0.24	1.3	1.54
WWC-1	9.55	492	4430	0.507	7.37	2990	11500	<0.00200	0.0177	0.0272	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.755	0.000262	0.0068	0.014	<0.00200	0.26	1.2	1.46
WWC-2	<0.500	53.6	347	0.452	7.78	137	936	<0.00200	0.0142	0.0361	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.112	<0.000150	0.00341	<0.00200	<0.00200	0.04	1.2	1.24
WWC-3	<0.500	25.3	207	1.13	8.14	84	704	<0.00200	0.0207	0.0242	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.127	<0.000150	0.00477	<0.00200	<0.00200	0.08	2	2.08
WWC-4	1.11	201	1100	0.57	7.38	744	3280	<0.00200	0.0135	0.0529	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.313	<0.000150	<0.00200	0.00214	<0.00200	0.38	0.4	0.78
WWC-5	1.48	327	1620	0.544	7.16	1240	4590	<0.00200	0.0104	0.0438	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.496	<0.000150	0.00395	0.00407	<0.00200	0.41	0.65	1.06

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	17.02	7.36	-123	3490	0	1.25	2.24
WW-U-1	16.41	6.96	-135	8820	0.7	1.56	5.56
WW-U-2	16.68	7.09	-34	9.23	0.6	3.75	5.82
WWC-1	16.21	6.78	48	18900	0.8	1.92	11.7
WWC-2	16.38	7.64	-110	1740	1	2.87	1.12
WWC-3	15.49	8.16	-207	1220	1.3	0.45	0.781
WWC-4	16.11	7.17	-77	4980	1.2	0.46	3.19
WWC-5	15.42	6.94	-31	7180	1.3	0.53	4.52

Round 9 Assessment Monitoring - March 26-30, 2018

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	62.6	402	0.971	7.66	94.9	1090	<0.00200	0.0283	0.0758	<0.00200	<0.000500	0.000529	<0.00400	<0.00200	0.209	<0.000150	0.00359	<0.00200	<0.00200	0.18	0.81	0.99
CL-U-2	< 0.500	64.1	352	0.895	7.65	92.7	980	<0.00200	0.0236	0.0873	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.194	<0.000150	0.00376	<0.00200	<0.00200	0.34	0.16	0.5
CLW-1	< 0.500	37.8	318	1.02	7.67	59.5	720	<0.00200	0.0265	0.053	<0.00200	<0.000500	0.0271	<0.00400	<0.00200	0.179	<0.000150	0.0068	<0.00200	<0.00200	0.09	0.53	0.62
CLW-2	< 0.500	51.4	421	1.13	7.8	79.4	1020	<0.00200	0.0258	0.0711	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.212	<0.000150	0.00439	<0.00200	<0.00200	0.24	0.94	1.18
CLW-3	< 0.500	42.8	334	1.23	7.86	82.3	956	<0.00200	0.0364	0.089	<0.00200	<0.000500	0.000505	<0.00400	<0.00200	0.2	<0.000150	0.00464	<0.00200	<0.00200	0.37	0.94	1.31
CLW-4	< 0.500	35.8	301	1.35	7.77	70.4	864	<0.00200	0.0352	0.0788	<0.00200	<0.000500	0.000762	<0.00400	<0.00200	0.189	<0.000150	0.00477	<0.00200	<0.00200	0.46	0.59	1.05
CLW-5	< 0.500	37.4	354	1.71	7.66	79.9	876	<0.00200	0.021	0.0671	<0.00200	<0.000500	0.000712	<0.00400	<0.00200	0.194	<0.000150	0.0054	<0.00200	<0.00200	0.15	0.96	1.11
CLW-6	< 0.500	34.2	292	1.62	7.74	60.4	916	<0.00200	0.0104	0.0885	<0.00200	<0.000500	0.000612	<0.00400	<0.00200	0.182	<0.000150	0.00729	<0.00200	<0.00200	0.56	0.48	1.04
CLW-7	< 0.500	47	316	0.972	7.59	51.3	792	<0.00200	0.0215	0.0475	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.183	<0.000150	0.00341	<0.00200	<0.00200	0.28	0.22	0.5
CLW-8	< 0.500	44.1	303	0.981	7.63	54.2	792	<0.00200	0.0231	0.0609	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.188	<0.000150	0.00376	<0.00200	<0.00200	0.25	0.8	1.05

Round 9

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	14.91	7.28	-193	1940	0.6	0.54	1.24
CL-U-2	14.84	7.24	-174	1890	0.2	0.67	1.21
CLW-1	16.76	7.7	-186	1530	0.2	0.7	0.98
CLW-2	15.47	7.6	-204	1880	0.4	0.96	1.22
CLW-3	16.64	7.49	-236	1720	0	1.61	1.1
CLW-4	16.15	7.51	-259	1610	0	2.2	1.03
CLW-5	16.46	7.43	-239	1720	3	1	1.1
CLW-6	15.56	7.47	-250	1600	0.1	3.61	1.03
CLW-7	18.88	7.52	-123	1570	0	1.89	1
CLW-8	18.47	7.58	-129	1520	0	0.45	0.973

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	33.5	296	1.64	8.05	50.7	872	<0.00200	0.0276	0.0837	<0.00200	<0.000500	0.00126	<0.00400	<0.00200	0.199	<0.000150	0.00914	0.0022	<0.00200	0.07	0.31	0.38
BA-U-2	< 0.500	46.2	399	0.943	8.2	46.9	1080	<0.00200	0.0227	0.125	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.209	<0.000150	0.00311	0.000691	<0.00200	0.12	0.34	0.46
BAC-1	3.88	192	1890	0.507	7.63	1470	6120	0.00138	0.0127	0.0501	<0.00200	<0.000500	0.00451	<0.00400	<0.00200	0.581	<0.000150	0.028	0.00924	<0.00200	0.31	0.48	0.79
BAC-2	9.89	283	1940	1.32	7.72	3070	8590	<0.00200	0.0508	0.0238	<0.00200	<0.000500	0.00777	<0.00400	<0.00200	0.524	<0.000150	0.142	0.0173	<0.00200	0.29	0.89	1.18
BAC-3	7.91	417	3480	1.62	7.84	4460	13000	<0.00200	0.0441	0.0331	<0.00200	<0.000500	0.00468	<0.00400	<0.00200	1.05	<0.000150	0.0396	0.0228	<0.00200	0.28	1.25	1.53
BAC-4	< 0.500	67.4	489	1.14	7.74	221	1300	<0.00200	0.0316	0.0605	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.249	<0.000150	0.0143	<0.00200	<0.00200	0.1	0.81	0.91
BAC-5	< 0.500	74.8	524	1.07	7.68	234	1480	<0.00200	0.0275	0.0706	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.284	<0.000150	0.00915	<0.00200	<0.00200	0.24	0.5	0.74
BAC-6	4.58	145	595	1.15	7.48	1100	2600	<0.00200	0.0214	0.0227	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.28	<0.000150	0.0898	0.00249	<0.00200	0.08	0.72	0.8
BAC-7	4.51	137	1980	0.388	7.57	1100	2730	<0.00200	0.0235	0.0195	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.288	<0.000150	0.0752	0.0048	<0.00200	0.14	0.71	0.85

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	15.13	7.78	-33	1600	0.6	3.82	1.02
BA-U-2	16.14	8.65	-281	1750	0.2	0.25	1.12
BAC-1	16.99	7.23	-189	9190	8.1	0.52	5.79
BAC-2	15.94	6.82	-77	12000	1.2	0.51	7.44
BAC-3	15.37	7.03	-82	18900	5	3.65	11.7
BAC-4	15.79	7.47	-150	2500	0.5	0.7	1.6
BAC-5	18.41	7.47	-149	2570	0.5	3.97	1.63
BAC-6	19.15	7.32	-92	3810	0.5	0.55	2440
BAC-7	19.26	7.4	-101	4190	3	3.14	2.68

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	< 0.500	129	739	0.506	7.5	201	1840	<0.00200	0.00929	0.0741	<0.00200	<0.000500	0.00137	<0.00400	<0.00200	0.241	<0.000150	0.00227	<0.00200	<0.00200	0.04	0.73	0.77
WW-U-1	1.34	339	1900	0.406	7.05	1050	5280	<0.00200	0.005	0.0486	<0.00200	<0.000500	0.00193	<0.00400	<0.00200	0.436	<0.000150	0.00702	0.00653	<0.00200	0.45	0.91	1.36
WW-U-2	1.47	370	2010	0.532	7.16	925	5260	<0.00200	0.00642	0.0499	<0.00200	<0.000500	0.00144	<0.00400	<0.00200	0.475	<0.000150	0.00467	0.0115	<0.00200	0.34	0.94	1.28
WWC-1	11.9	638	4100	0.236	6.89	2640	12700	<0.00200	0.02	0.0209	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.805	0.000205	0.00596	0.015	<0.00200	0.25	1.21	1.46
WWC-2	< 0.500	57.2	308	0.41	7.62	111	784	<0.00200	0.014	0.031	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.104	<0.000150	0.00356	<0.00200	<0.00200	0.1	0.55	0.65
WWC-3	< 0.500	28.9	200	0.985	7.96	67.8	628	<0.00200	0.0214	0.0245	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.131	<0.000150	0.00464	<0.00200	<0.00200	0.07	0.27	0.34
WWC-4	1.19	200	1010	0.365	7.3	593	2790	<0.00200	0.0128	0.0463	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.355	<0.000150	<0.00200	<0.00200	<0.00200	0.22	0.58	0.8
WWC-5	2.86	321	1600	0.384	6.92	1450	5030	<0.00200	0.0096	0.0302	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.511	<0.000150	0.00301	0.00415	<0.00200	0.2	1.64	1.84

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	16.11	7.56	-31	3240	0	0.71	2.07
WW-U-1	16.35	7.11	-75	8010	0.7	0.4	5.03
WW-U-2	16.11	7.27	-10	8450	0.2	0.47	5.32
WWC-1	16.03	6.65	-17	19900	0	2.51	12.4
WWC-2	15.75	7.52	-124	1650	0.4	0.55	1.05
WWC-3	14.89	7.81	-190	1250	1.1	0.79	0.8
WWC-4	16.17	7.26	-64	4600	2.3	0.37	2.92
WWC-5	17.27	7.02	-36	7300	0	0.34	4.6

Round 10 Assessment Monitoring - June 4-13, 2018

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	54.7	372	0.853	7.7	98	984	<0.00200	0.0272	0.0799	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.208	<0.000150	0.00361	<0.00200	<0.00200	0.18	0.67	0.85
CL-U-2	< 0.500	56.4	365	0.862	7.64	108	952	<0.00200	0.0242	0.09	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.195	<0.000150	0.0038	<0.00200	<0.00200	-0.02	0.67	0.65
CLW-1	< 0.500	35.2	298	1.02	7.93	57.8	748	<0.00200	0.0285	0.0568	<0.00200	<0.000500	0.00102	<0.00400	<0.00200	0.184	<0.000150	0.00388	0.000928	<0.00200	0.29	1.01	1.3
CLW-2	< 0.500	44.6	399	1.14	7.79	86.8	980	<0.00200	0.0247	0.072	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.222	<0.000150	0.00433	<0.00200	<0.00200	0.25	0.96	1.21
CLW-3	< 0.500	37.5	323	1.16	7.91	94.2	876	<0.00200	0.0382	0.0948	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.214	<0.000150	0.00483	<0.00200	<0.00200	0.18	0.55	0.73
CLW-4	< 0.500	31.8	289	1.35	7.91	76.4	836	<0.00200	0.0358	0.0801	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.204	<0.000150	0.00459	<0.00200	<0.00200	0.13	0.85	0.85
CLW-5	< 0.500	33.1	318	1.59	7.79	75.3	804	<0.00200	0.0215	0.0689	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.21	<0.000150	0.00519	<0.00200	<0.00200	0.11	0.76	0.87
CLW-6	< 0.500	29.9	292	1.45	7.88	66.3	796	<0.00200	0.0109	0.0902	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.199	<0.000150	0.00711	<0.00200	<0.00200	0.27	0.85	1.12
CLW-7	< 0.500	40.6	321	0.945	7.68	58.6	900	<0.00200	0.0234	0.0514	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.186	<0.000150	0.00329	<0.00200	<0.00200	0.16	0.97	0.97
CLW-8	< 0.500	38.8	314	0.933	7.73	63.5	768	<0.00200	0.0244	0.0632	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.188	<0.000150	0.00359	<0.00200	<0.00200	0.18	1.26	1.26

Round 10

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	17.54	7.56	-196	1888	1.7	0.39	1.2
CL-U-2	17.81	7.55	-171	1830	0.7	2.53	1.17
CLW-1	19.97	7.67	-159	1480	2.1	4.08	9.45
CLW-2	17.54	7.63	-220	1830	4.5	0.63	1.18
CLW-3	17.95	7.73	-260	1680	5.5	1.57	1.07
CLW-4	17.85	7.73	-278	1570	2.8	1.64	1
CLW-5	17.16	7.72	-276	1660	8.2	1.29	1.07
CLW-6	17.86	7.83	-280	1570	8	2.56	1.01
CLW-7	17.32	7.6	-150	1610	15.7	3.84	1.03
CLW-8	17.1	7.61	-194	1550	2	0.73	0.985

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	140	799	0.818	7.54	254	1970	<0.00200	0.0199	0.0636	<0.00200	<0.000500	0.000506	<0.00400	<0.00200	0.337	<0.000150	0.00279	0.00324	<0.00200	0.39	1.94	2.33
BA-U-2	< 0.500	70.1	578	0.73	7.68	63.5	1330	<0.00200	0.0208	0.145	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.279	<0.000150	0.00215	0.00201	<0.00200	0.16	1.13	1.13
BAC-1	2.16	113	1190	0.315	7.92	971	3120	0.00158	0.0141	0.0393	<0.00200	<0.000500	0.00714	<0.00400	<0.00200	0.314	<0.000150	0.0288	0.00694	<0.00200	0.24	1.06	1.3
BAC-2	8.44	263	2210	0.684	7.1	3430	7720	<0.00200	0.0445	0.021	<0.00200	<0.000500	0.00483	<0.00400	<0.00200	0.463	<0.000150	0.143	0.0154	<0.00200	0.12	1.03	1.03
BAC-3	7.26	347	3870	1.52	7.42	5080	12700	<0.00200	0.0588	0.0327	<0.00200	<0.000500	0.00511	<0.00400	<0.00200	0.944	<0.000150	0.0467	0.0229	<0.00200	0.27	1.44	1.71
BAC-4	< 0.500	62.8	510	1.01	7.95	221	1290	<0.00200	0.0322	0.0672	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.247	<0.000150	0.0165	<0.00200	<0.00200	0.06	0.92	0.98
BAC-5	< 0.500	73.5	591	0.916	7.82	302	1180	<0.00200	0.0292	0.0763	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.288	<0.000150	0.0128	<0.00200	<0.00200	0.19	1.56	1.75
BAC-6	4.12	134	694	0.582	7.65	1120	2980	<0.00200	0.0217	0.0235	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.25	<0.000150	0.0938	0.00229	<0.00200	0.14	1.02	1.02
BAC-7	4.36	130	709	1.09	7.74	1280	2760	<0.00200	0.0275	0.0204	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.269	<0.000150	0.0757	0.00541	<0.00200	0.06	0.87	0.93

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	19.26	7.41	-163	3640	1	0.46	2.33
BA-U-2	18.16	7.63	-187	2370	2.1	1.31	1.51
BAC-1	17.87	8.86	-418	6480	53.2	2.95	4.04
BAC-2	16.94	6.98	-63	12400	2.3	4.29	7.68
BAC-3	17.19	7.16	-356	18300	15.2	0.87	11.4
BAC-4	17.11	7.64	-149	2500	1.5	0.75	1.6
BAC-5	17.63	7.61	-126	2850	1.2	0.65	1.83
BAC-6	17.58	7.51	-112	4210	0	0.51	2.63
BAC-7	17.32	7.6	-127	4440	0	0.56	2.84

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	< 0.500	123	873	0.499	7.62	209	2040	<0.00200	0.00839	0.0653	<0.00200	<0.000500	0.000602	<0.00400	<0.00200	0.254	<0.000150	0.00182	<0.00200	<0.00200	0.32	1.34	1.66
WW-U-1	1.19	289	1940	0.265	7.17	1140	5450	<0.00200	0.00477	0.0479	<0.00200	<0.000500	0.00124	<0.00400	<0.00200	0.443	<0.000150	0.00591	0.00663	<0.00200	0.23	1.49	1.72
WW-U-2	1.23	337	2130	1.01	7.3	985	5120	<0.00200	0.0102	0.0459	<0.00200	<0.000500	0.00137	<0.00400	<0.00200	0.508	<0.000150	0.00277	0.0112	<0.00200	0.05	0.93	0.93
WWC-1	8.22	504	4710	0.114	7.2	2730	11100	<0.00200	0.0173	0.0268	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.831	0.000168	0.00896	0.0139	<0.00200	0.25	1.16	1.16
WWC-2	< 0.500	50	340	0.358	7.91	119	852	<0.00200	0.0143	0.0338	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.11	<0.000150	0.00372	<0.00200	<0.00200	0.08	0.27	0.35
WWC-3	< 0.500	27.3	230	0.897	8.05	88.4	644	<0.00200	0.0226	0.0278	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.125	<0.000150	0.00527	<0.00200	<0.00200	-0.03	0.15	0.12
WWC-4	0.998	184	1080	0.435	7.43	620	2640	<0.00200	0.0129	0.0495	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.309	<0.000150	0.00215	0.00201	<0.00200	0.28	0.35	0.63
WWC-5	2.64	314	1820	0.219	7.26	1660	5200	<0.00200	0.0104	0.0327	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.472	<0.000150	0.00324	0.00395	<0.00200	0.1	1.58	1.58

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	18.38	7.39	-108	3510	1.7	0.79	2.25
WW-U-1	21.81	6.92	-77	8180	0.1	0.51	5.14
WW-U-2	18.76	7.09	-16	8130	7.6	1.06	5.12
WWC-1	16.92	6.94	-84	15600	1.5	4.48	9.65
WWC-2	17.4	7.75	-163	1570	1.2	0.4	1
WWC-3	17.01	7.89	-191	1220	2.6	0.42	0.782
WWC-4	18.39	7.27	-106	4320	2.4	1.17	2.77
WWC-5	15.81	6.98	-84	7740	0.8	0.58	4.88

Round 11 (all results ppm) Assessment Monitoring - October 8-18, 2018

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	61.9	415	0.981	7.79	122	1060	<0.00200	0.029	0.0796	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.229	<0.000150	0.00383	<0.00200	<0.00200	0.09	0.32	0.41
CL-U-2	< 0.500	67.5	414	0.995	7.73	128	1010	<0.00200	0.0255	0.0919	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.212	<0.000150	0.00408	<0.00200	<0.00200	0.12	0.94	0.94
CLW-1	< 0.500	39.6	288	1.06	7.76	61.9	784	<0.00200	0.0298	0.0582	<0.00200	<0.000500	0.0157	<0.00400	<0.00200	0.194	<0.000150	0.00589	<0.00200	<0.00200	0.11	1.2	1.2
CLW-2	< 0.500	49.7	475	1.19	7.72	88.1	904	<0.00200	0.0244	0.0716	<0.00200	<0.000500	0.014	<0.00400	<0.00200	0.227	<0.000150	0.00593	<0.00200	<0.00200	0.17	0.39	0.56
CLW-3	< 0.500	42	325	1.27	7.79	95	888	<0.00200	0.0384	0.0941	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.217	<0.000150	0.0052	<0.00200	<0.00200	0.33	0.68	1.01
CLW-4	< 0.500	35.2	297	1.45	7.85	80.7	792	<0.00200	0.0375	0.0786	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.211	<0.000150	0.00525	<0.00200	<0.00200	1.89	0.65	1.89
CLW-5	< 0.500	36.9	320	1.7	7.72	85.3	852	<0.00200	0.0229	0.0714	<0.00200	<0.000500	0.00999	<0.00400	<0.00200	0.213	<0.000150	0.00679	<0.00200	<0.00200	1.87	0.17	1.87
CLW-6	< 0.500	33.8	292	1.6	7.82	73.3	804	<0.00200	0.0152	0.0873	<0.00200	<0.000500	0.0116	<0.00400	<0.00200	0.204	<0.000150	0.00746	<0.00200	<0.00200	0.18	0.41	0.59
CLW-7	< 0.500	46.5	399	1.02	7.65	73.2	780	<0.00200	0.0232	0.0491	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.19	<0.000150	0.00416	<0.00200	<0.00200	0.05	0.07	0.12
CLW-8	< 0.500	43	300	1.04	7.71	66.5	796	<0.00200	0.0254	0.0643	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.192	<0.000150	0.00503	<0.00200	<0.00200	0.19	1.2	1.2

Round 11

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	17.4	7.85	-132	1800	40.9	0.61	1.15
CL-U-2	18.15	7.83	-97	1770	0	3.95	1.13
CLW-1	17.83	7.93	-114	1490	0	1.48	0.951
CLW-2	16.04	7.84	-184	1850	0.6	2.72	1.18
CLW-3	17.52	7.98	-178	1660	3.6	3.1	1.06
CLW-4	18.53	8.02	-192	1530	7.2	1.63	0.983
CLW-5	21	7.94	-175	1640	0	1.29	1.05
CLW-6	16.49	8.02	-210	1560	0	2.23	1
CLW-7	17.12	7.83	-81	1560	2.4	2.97	1
CLW-8	17.05	7.91	-130	1510	0	1.37	0.963

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	73.9	561	0.881	7.97	62.2	1050	<0.00200	0.0216	0.149	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.276	<0.000150	0.00237	<0.00200	<0.00200	0.44	0.74	1.18
BA-U-2	< 0.500	143	885	0.977	7.58	298	1750	<0.00200	0.0209	0.0728	<0.00200	<0.000500	0.0125	<0.00400	<0.00200	0.321	<0.000150	0.00574	<0.00200	<0.00200	0.22	0.62	0.84
BAC-1	4.87	225	1840	0.582	7.57	1760	6420	<0.00200	0.0129	0.0391	<0.00200	<0.000500	0.0184	<0.00400	<0.00200	0.629	<0.000150	0.0232	0.00818	<0.00200	0.45	0.88	1.33
BAC-2	9.98	255	1660	1.1	7.35	2730	7800	<0.00200	0.0565	0.0204	<0.00200	<0.000500	0.0111	<0.00400	<0.00200	0.472	<0.000150	0.156	0.0157	<0.00200	0.08	0.96	0.96
BAC-3	8.33	469	3280	1.63	7.31	4450	12300	<0.00200	0.0496	0.0317	<0.00200	<0.000500	0.00968	<0.00400	<0.00200	1.06	<0.000150	0.038	0.022	<0.00200	0.39	1.06	1.45
BAC-4	0.523	68.1	501	1.15	7.96	273	1300	<0.00200	0.00882	0.0171	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.267	<0.000150	0.017	<0.00200	<0.00200	-0.16	0.48	0.32
BAC-5	< 0.500	82.2	557	1.04	7.86	353	1460	<0.00200	0.0325	0.0714	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.323	<0.000150	0.0134	<0.00200	<0.00200	0.26	0.81	1.07
BAC-6	4.57	138	624	0.847	7.75	1080	2340	<0.00200	0.0248	0.0245	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.276	<0.000150	0.0842	<0.00200	<0.00200	0.17	1.02	1.19
BAC-7	4.24	143	649	1.51	7.75	1210	2830	<0.00200	0.0434	0.0214	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.303	<0.000150	0.075	0.00579	<0.00200	0.19	0.71	0.9

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	16.4	7.71	-41	3010	0	0.7	1.94
BA-U-2	18.72	8.31	-138	2010	0	0.56	1.28
BAC-1	16.12	7.43	-228	9840	77.8	0.85	6.2
BAC-2	16.79	7.15	-22	11200	2.5	1.3	6.93
BAC-3	16.79	7.31	42	18300	7	5.15	11.3
BAC-4	15.08	7.77	-69	2500	0.2	0.61	1.6
BAC-5	16.95	7.88	-43	2860	0	0.52	1.83
BAC-6	17.13	7.74	-35	3970	0	0.49	2.54
BAC-7	17	7.76	-71	4420	1.9	0.48	2.84

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	< 0.500	139	805	0.533	7.63	394	1760	<0.00200	0.0103	0.0575	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.265	<0.000150	0.00241	<0.00200	<0.00200	0.07	0.85	0.85
WW-U-1	1.36	357	2150	0.41	7.28	1360	5090	<0.00200	<0.00200	0.0449	<0.00200	<0.000500	0.0258	<0.00400	<0.00200	0.456	<0.000150	0.0101	0.00682	<0.00200	0.43	1.2	1.63
WW-U-2	1.23	380	2160	0.604	7.31	1090	4570	<0.00200	0.0109	0.0446	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.519	<0.000150	0.00338	0.0105	<0.00200	0.14	0.83	0.83
WWC-1	12	607	4430	0.331	7.25	3210	13000	<0.00200	0.0243	0.0223	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.964	0.000312	0.00835	0.0145	<0.00200	0.15	1.2	1.35
WWC-2	< 0.500	59.5	344	0.448	7.85	139	832	<0.00200	0.0152	0.0344	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.124	<0.000150	0.00304	<0.00200	<0.00200	0.17	0.03	0.2
WWC-3	< 0.500	29.7	209	1.06	7.92	84.2	436	<0.00200	0.0247	0.0289	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.139	<0.000150	0.00482	<0.00200	<0.00200	0	0.76	0.76
WWC-4	1.34	219	1030	0.481	7.46	692	2880	<0.00200	0.0145	0.0507	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.36	<0.000150	<0.00200	<0.00200	<0.00200	0.03	0.8	0.83
WWC-5	3.07	364	1720	0.431	7.38	1620	5000	<0.00200	0.0131	0.034	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.523	<0.000150	0.0031	0.00478	<0.00200	0.2	-0.56	-0.36

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	17.1	7.65	-6	3290	0	0.58	2.11
WW-U-1	16.29	7.25	-7	8350	0.6	0.87	5.27
WW-U-2	16.41	7.44	55	7730	0	1.5	4.87
WWC-1	16.6	7.11	40	19600	0	4.49	12.1
WWC-2	17.73	7.91	-84	1600	2.1	0.62	1.03
WWC-3	16.97	8.12	-179	1190	0.2	0.56	0.759
WWC-4	16.27	7.4	-32	4780	0.7	0.54	3.06
WWC-5	15.76	7.16	-11	7580	1	3.51	4.77



Round 12 (all results ppm) Assessment Monitoring - April 4 - May 15, 2019

Landfill Wells	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	< 0.500	61.1	388	0.989	7.74	112	932	<0.00200	0.0279	0.0841	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.231	<0.000150	0.0036	<0.00200	<0.00200	0.13	0.4	0.53
CL-U-2	< 0.500	68.4	378	1.02	7.74	97.6	920	<0.00200	0.0254	0.0943	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.214	<0.000150	0.00405	<0.00200	<0.00200	0.31	0.94	1.25
CLW-1	< 0.500	39.4	303	1.12	7.88	64.5	692	<0.00200	0.002	0.0589	<0.00200	<0.000500	0.00742	<0.00400	<0.00200	0.203	<0.000150	0.00481	<0.00200	<0.00200	0	0.41	0.41
CLW-2	< 0.500	55.1	416	1.25	7.8	96.4	976	<0.00200	0.0259	0.0743	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.253	<0.000150	0.00423	<0.00200	<0.00200	0.21	0.75	0.96
CLW-3	< 0.500	44.5	351	1.34	7.83	98.4	884	<0.00200	0.0382	0.0970	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.243	<0.000150	0.00488	<0.00200	<0.00200	0.16	0.49	0.65
CLW-4	< 0.500	38.8	321	1.45	7.90	85.5	968	<0.00200	0.0376	0.0819	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.232	<0.000150	0.00425	<0.00200	<0.00200	0.47	0.54	1.01
CLW-5	< 0.500	38.5	340	1.85	7.93	85.6	936	<0.00200	0.0236	0.0707	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.226	<0.000150	0.00515	<0.00200	<0.00200	0.14	0.28	0.42
CLW-6	< 0.500	38.4	270	1.55	7.89	72.8	828	<0.00200	0.0271	0.0896	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.214	<0.000150	0.00478	<0.00200	<0.00200	0.2	0.78	0.98
CLW-7	< 0.500	51.3	336	1.07	7.76	68.9	792	<0.00200	0.0228	0.0511	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.205	<0.000150	0.00323	<0.00200	<0.00200	-0.09	0.54	0.45
CLW-8	< 0.500	44.3	317	1.11	7.81	67.2	776	<0.00200	0.0257	0.0621	<0.00200	<0.000500	0.00200	<0.00400	<0.00200	0.212	<0.000150	0.00358	<0.00200	<0.00200	0.27	0.22	0.49
CLW-9	< 0.500	26.2	298	2.02	7.91	86.4	760	<0.00200	0.0368	0.0462	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.168	<0.000150	0.00518	<0.00200	<0.00200	0.21	0.21	0.42
CL-U-3	< 0.500	59.6	390	0.872	7.83	114	984	<0.00200	0.0183	0.0495	<0.00200	<0.000500	0.00565	<0.00400	<0.00200	0.212	<0.000150	0.00372	<0.00200	<0.00200	0	0.48	0.48

Bottom Ash	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
BA-U-1	< 0.500	174	934	0.919	7.61	271	2050	<0.00200	0.002	0.0776	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.354	<0.000150	0.00312	0.00458	<0.00200	0	0.4	0.4
BA-U-2	< 0.500	91.8	718	0.844	7.68	102	1350	<0.00200	0.0211	0.1670	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.300	<0.000150	0.0022	0.00234	<0.00200	0.18	0.62	0.8
BAC-1	1.31	72.4	431	0.197	8.42	404	1830	<0.00200	0.0121	0.0567	<0.00200	<0.000500	0.00359	<0.00400	<0.00200	0.172	<0.000150	0.142	0.00278	<0.00200	0.28	0.09	0.37
BAC-2	10.3	233	1700	1.11	7.2	2590	8310	<0.00200	0.0519	0.0180	<0.00200	<0.000500	0.00556	<0.00400	<0.00200	0.491	<0.000150	0.163	0.0145	<0.00200	0.17	0.48	0.65
BAC-3	8.64	417	3400	1.3	7.24	4090	12900	<0.00200	0.0472	0.0272	<0.00200	<0.000500	0.00593	<0.00400	<0.00200	1.030	0.000105	0.0388	0.0206	<0.00200	0.17	0.77	0.94
BAC-4	0.553	72.4	488	1.22	7.76	269	1270	<0.00200	0.0319	0.0641	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.281	<0.000150	0.0196	<0.00200	<0.00200	0.16	0.58	0.74
BAC-5	< 0.500	91.8	585	1.07	7.73	393	1540	<0.00200	0.0294	0.0594	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.334	<0.000150	0.0168	<0.00200	<0.00200	-0.1	0.27	0.17
BAC-6	4.4	137	536	0.866	7.84	963	2260	<0.00200	0.0248	0.0206	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.283	<0.000150	0.0923	<0.00200	<0.00200	-0.09	-0.38	-0.47
BAC-7	5.17	142	529	1.34	7.72	985	2760	<0.00200	0.0298	0.0184	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.284	<0.000150	0.0908	0.00388	<0.00200	0.09	0.34	0.43
BAC-8	< 0.500	27.8	266	1.61	7.92	81.1	708	<0.00200	0.0519	0.0732	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.165	<0.000150	0.0055	<0.00200	<0.00200	0.31	0.41	0.72
BAC-9	< 0.500	28.4	283	1.7	7.91	82.6	736	<0.00200	0.583	0.051	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.167	<0.000150	0.00451	<0.00200	<0.00200	0.06	0.53	0.59
BAC-10	< 0.500	31.1	273	1.66	7.91	85	788	<0.00200	0.0527	0.0612	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.171	<0.000150	0.00567	<0.00200	<0.00200	0.15	0.5	0.65

Waste Water	Results																						
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
SI-U-1	< 0.500	147	744	0.519	7.59	263	1840	<0.00200	0.00927	0.0634	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.271	<0.000150	0.00206	<0.00200	<0.00200	0.27	0.59	0.86
WW-U-1	1.39	323	1820	0.416	7.27	1140	5120	<0.00200	0.00592	0.0442	<0.00200	<0.000500	0.00432	<0.00400	<0.00200	0.431	<0.000150	0.00702	0.00748	<0.00200	0.38	0.89	1.27
WW-U-2	1.16	347	1170	0.633	7.45	872	4270	<0.00200	0.0114	0.0473	<0.00200	<0.000500	0.00237	<0.00400	<0.00200	0.484	<0.000150	0.00411	0.0113	<0.00200	0.19	0.54	0.73
WWC-1	12.9	584	4600	0.245	7.1	3190	13800	<0.00200	0.0215	0.0183	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	1.000	0.00018	0.00794	0.0146	<0.00200	0.13	0.82	0.95
WWC-2	< 0.500	54.2	316	0.534	7.75	128	824	<0.00200	0.0161	0.0296	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.128	<0.000150	0.00348	<0.00200	<0.00200	-0.06	0.5	0.44
WWC-3	< 0.500	35.3	244	1.14	7.79	86	764	<0.00200	0.0226	0.0306	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.151	<0.000150	0.00471	<0.00200	<0.00200	0.06	0.38	0.44
WWC-4	1.34	240	1030	0.449	7.97	673	2780	<0.00200	0.0133	0.0412	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.388	<0.000150	<0.00200	<0.00200	<0.00200	-0.03	0.56	0.53

Round 12

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	15.92	7.84	-138	1880	1.6	0.42	1.2
CL-U-2	15.68	7.81	-119	1820	4.7	0.6	1.17
CLW-1	15.59	7.68	-68	1540	0.9	2.06	0.984
CLW-2	15.77	7.86	-187	1870	1.7	1.5	1.2
CLW-3	15.45	7.93	-201	1720	2.1	1.37	1.1
CLW-4	15.51	7.97	-203	1610	12.7	1.55	1.03
CLW-5	15.07	7.94	-214	1.69	3.8	3.03	1.08
CLW-6	16.62	8.04	-225	1570	1.1	1.54	1
CLW-7	16.75	7.76	-79	1630	0.5	0.91	1.05
CLW-8	16.41	7.82	-99	1570	0.07	1.7	1.01
CLW-9	15.39	7.98	-184	1550	3.6	0.83	0.993
CL-U-3	15.07	7.55	-197	1830	0.3	2.51	1.17

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	18.39	7.67	-60	3720	1.1	0.31	2.38
BA-U-2	16.57	7.81	-97	2710	2	0.38	1.74
BAC-1	19.56	8.75	-282	1340	22.8	1.17	0.852
BAC-2	18.83	7.25	-39	5370	2.2	1.1	3.38
BAC-3	17.57	7.34	-11	8.95	1.1	1.61	5.64
BAC-4	15.14	7.6	-57	2600	0	1.94	1.66
BAC-5	15.26	7.68	-62	2960	0	2.03	1.9
BAC-6	15.21	7.63	-44	3880	0	1.48	2.48
BAC-7	15.95	7.74	-71	4210	0	1.37	2.7
BAC-8	17.34	7.98	-91	1490	3.9	1.21	0.954
BAC-9	16.49	8.02	-69	1460	1.6	0.96	0.937
BAC-10	17.35	8	-80	1500	2.9	0.94	0.963

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	16.23	7.68	-37	3470	1.9	0.36	2.22
WW-U-1	16.64	7.24	-17	8020	0	0.41	5.05
WW-U-2	17.11	7.41	-8	7650	1.1	0.51	4.82
WWC-1	16.68	7.13	2	9830	0	1.37	6.19
WWC-2	15.94	8.03	-95	1550	2.9	1.56	0.989
WWC-3	16.07	8.01	-144	1310	0	2.09	0.841
WWC-4	15.29	7.38	-19	4910	0	1.4	3.14

Round 13 (all results ppm) Assessment Monitoring - September 23 - October 15, 2019

Landfill Wells	Results																						Radium 226 and 228 combined
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	
CL-U-1	< 0.500	58.9	432	0.753	7.94	109	976	<0.00200	0.0289	0.0799	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.239	<0.000150	0.0035	<0.00200	<0.00200	0.03	0.75	0.75
CL-U-2	< 0.500	60.6	424	0.792	7.87	112	968	<0.00200	0.0251	0.0935	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.229	<0.000150	0.00412	<0.00200	<0.00200	0.03	0.57	0.6
CLW-1	< 0.500	36	328	1.11	8.03	69.1	852	<0.00200	0.0295	0.0612	<0.00200	<0.000500	0.00742	<0.00400	<0.00200	0.187	<0.000150	0.00357	<0.00200	<0.00200	0.29	0.38	0.67
CLW-2	< 0.500	50.8	438	1.13	8.15	88.1	924	<0.00200	0.0283	0.1510	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.253	<0.000150	0.0102	<0.00200	<0.00200	0.08	0.56	0.64
CLW-3	< 0.500	47	363	1.24	7.99	90.8	828	<0.00200	0.039	0.0976	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.242	<0.000150	0.00504	<0.00200	<0.00200	0.6	0.43	1.03
CLW-4	< 0.500	34.6	332	1.55	7.97	75.6	768	<0.00200	0.0387	0.0797	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.235	<0.000150	0.00441	<0.00200	<0.00200	0.22	1.06	1.06
CLW-5	< 0.500	37.5	351	1.89	8	76.9	1060	<0.00200	0.0231	0.0685	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.237	<0.000150	0.00479	<0.00200	<0.00200	0.25	0.44	0.69
CLW-6	< 0.500	34.5	330	1.7	7.98	74.4	1110	<0.00200	0.0145	0.0936	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.239	<0.000150	0.00607	<0.00200	<0.00200	0.42	1.05	1.47
CLW-7	< 0.500	43.7	362	1	7.89	71.4	796	<0.00200	0.0238	0.0523	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.192	<0.000150	0.00402	<0.00200	<0.00200	0.12	-0.03	0.09
CLW-8	< 0.500	39.9	337	1.04	7.98	70.7	836	<0.00200	0.0266	0.0521	<0.00200	<0.000500	0.00000	<0.00400	<0.00200	0.196	<0.000150	0.00449	<0.00200	<0.00200	-0.05	0.32	0.27
CLW-9	< 0.500	26.9	288	1.94	8.12	88.7	792	<0.00200	0.0398	0.0469	<0.00200	<0.000500	0.00287	<0.00400	<0.00200	0.181	<0.000150	0.00573	<0.00200	<0.00200	0.36	0.02	0.38
CL-U-3	< 0.500	64.6	304	0.429	8.85	168	596	<0.00200	<0.00200	0.0342	<0.00200	<0.000500	0.0738	<0.00400	<0.00200	0.152	<0.000150	0.00964	<0.00200	<0.00200	2.13	0.21	2.13

Bottom Ash	Results																						Radium 226 and 228 combined
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	
BA-U-1	< 0.500	173	1140	0.587	7.71	314	2290	<0.00200	0.0223	0.0770	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.385	<0.000150	0.00302	0.00502	<0.00200	0.16	0.73	0.73
BA-U-2	< 0.500	47.1	400	0.893	8.18	56.6	972	<0.00200	0.0283	0.1270	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.247	<0.000150	0.00332	<0.00200	<0.00200	0.26	0.7	0.96
BAC-1	1.43	93.7	801	0.307	8.16	701	2730	<0.00200	0.0126	0.0460	<0.00200	<0.000500	0.00163	<0.00400	<0.00200	0.259	<0.000150	0.128	0.00436	<0.00200	0	0.14	0.14
BAC-2	9.49	208	1730	1.07	7.45	2760	7240	<0.00200	0.0647	0.0192	<0.00200	<0.000500	0.0058	<0.00400	<0.00200	0.466	0.00028	0.19	0.0145	<0.00200	0.12	0.39	0.51
BAC-3	7.32	441	3500	0.675	7.49	4310	13900	0.0027	0.0356	0.0321	<0.00200	<0.000500	0.00449	<0.00400	<0.00200	0.957	<0.000150	0.0255	0.0236	<0.00200	0	0.45	0.45
BAC-4	0.606	66.7	573	1.13	7.95	330	1820	<0.00200	0.0322	0.0637	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.279	<0.000150	0.0218	<0.00200	<0.00200	0.15	0.16	0.31
BAC-5	< 0.500	66.2	568	1.11	8.07	250	1410	<0.00200	0.0321	0.0814	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.289	<0.000150	0.00941	<0.00200	<0.00200	0.25	0.36	0.61
BAC-6	2.66	119	625	0.796	7.86	646	1870	<0.00200	0.0223	0.0338	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.288	<0.000150	0.0651	0.00273	<0.00200	0.31	0.83	1.14
BAC-7	5.06	107	566	1.31	7.96	1170	2320	<0.00200	0.0314	0.0174	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.248	<0.000150	0.0887	0.00276	<0.00200	0.04	0.22	0.26
BAC-8	< 0.500	23.2	280	1.53	8.05	95.5	784	<0.00200	0.0639	0.0389	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.156	<0.000150	0.00545	<0.00200	<0.00200	0.03	1.21	1.21
BAC-9	< 0.500	27.1	299	1.45	8.06	87.6	788	<0.00200	0.0593	0.0388	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.16	<0.000150	0.00483	<0.00200	<0.00200	0.09	0	0.53
BAC-10	< 0.500	25.7	280	1.51	8.09	87.4	808	<0.00200	0.0595	0.045	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.16	<0.000150	0.00584	<0.00200	<0.00200	0.8	0.16	1.8

Waste Water	Results																						Radium 226 and 228 combined
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	
SI-U-1	< 0.500	136	824	0.38	7.71	281	1850	<0.00200	0.00981	0.0599	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.277	<0.000150	<0.00200	<0.00200	<0.00200	0.19	1.61	1.61
WW-U-1	1.41	311	1010	<0.100	7.37	588	5720	<0.00200	0.00594	0.0419	<0.00200	<0.000500	0.00166	<0.00400	<0.00200	0.485	<0.000150	0.00689	0.0077	<0.00200	-0.08	1.42	1.42
WW-U-2	1.02	346	2020	<0.100	7.3	855	4400	<0.00200	0.00735	0.0499	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.54	<0.000150	0.00317	0.011	<0.00200	-0.2	1.36	1.36
WWC-1	13.2	473	4940	0.292	7.42	3570	14900	<0.00200	0.0264	0.0205	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.974	0.000278	0.0113	0.016	<0.00200	0.23	0.9	0.9
WWC-2	< 0.500	57.6	349	0.427	7.99	141	876	<0.00200	0.0166	0.0336	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.126	<0.000150	0.00327	<0.00200	<0.00200	-0.15	0.81	0.81
WWC-3	< 0.500	33.3	262	0.986	8.13	95.3	776	<0.00200	0.0236	0.0331	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.151	<0.000150	0.00477	<0.00200	<0.00200	3.1	0.58	3.1
WWC-4	1.06	176	968	0.453	7.61	594	3080	<0.00200	0.0154	0.0456	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.329	<0.000150	<0.00200	0.00177	<0.00200	0.72	0.57	1.29

Round 13

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	15.85	7.75	-159	777	0	1.62	0.497
CL-U-2	15.96	7.7	-158	743	0	1.01	0.476
CLW-1	15.83	7.73	-48	1480	1.3	2.01	0.948
CLW-2	16.6	7.79	-191	760	0	2	0.488
CLW-3	17.14	7.84	-215	1730	0.5	1.43	1.11
CLW-4	16.47	7.88	-233	1600	2.7	1.61	1.03
CLW-5	17.05	7.83	-220	1700	1.9	1.84	1.09
CLW-6	16.65	7.7	-229	1590	1.6	2.69	1.02
CLW-7	17.74	7.76	-57	1580	0.6	1.24	1.01
CLW-8	16.37	7.81	-36	1520	1	1.51	0.969
CLW-9	16.03	7.72	-299	1610	0.2	7.56	1.03
CL-U-3	16.1	9.08	-76	503	0	1.84	0.322

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	16.68	7.47	-58	1610	0	1.29	1.03
BA-U-2	16.37	8.94	-255	1550	1.4	0.8	0.99
BAC-1	17.09	7.98	-50	3950	1.32	3.4	2.53
BAC-2	16.92	7.19	28	10600	3.3	2.45	6.59
BAC-3	17.34	7.1	20	16700	2	0.61	10.4
BAC-4	16.73	7.81	-57	2570	0.6	1.18	1.64
BAC-5	17.52	7.84	-50	2540	0.4	1.33	1.63
BAC-6	16.78	7.74	-52	2670	0.7	0.87	1.71
BAC-7	17.16	7.83	-156	4000	3.1	0.86	2.56
BAC-8	15.03	7.65	-41	1540	0.2	5.45	0.989
BAC-9	15.03	7.68	-23	1560	0.3	1.2	0.993
BAC-10	14.98	7.65	-31	1560	0.1	1.15	0.999

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	16.51	7.63	-12	3290	0.1	0.78	2.11
WW-U-1	16.11	7.19	14	8000	2.8	1.93	5.04
WW-U-2	16.06	7.38	22	7390	0.6	1.32	4.66
WWC-1	15.13	6.79	36	1910	0	3.67	11.8
WWC-2	14.82	7.31	-29	1720	0.3	0.47	1.1
WWC-3	15.96	7.72	-244	1420	0	0.2	0.909
WWC-4	14.38	7.21	-34	4460	0	2.35	2.86

Round 14 (all results ppm) Assessment Monitoring - March 25 - April 9, 2020

Landfill Wells	Results																					Radium 226 and 228 combined	
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226		Radium 228
CL-U-1	< 0.500	57.6	429	0.979	7.70	122	916	<0.00200	0.0310	0.0800	<0.00200	<0.000500	0.00551	<0.00400	<0.00200	0.241	<0.000150	0.00505	<0.00200	<0.00200	0.36	0.93	1.29
CL-U-2	< 0.500	60.0	408	1.01	7.68	118	964	<0.00200	0.0266	0.0901	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.221	<0.000150	0.00404	<0.00200	<0.00200	0.09	1.23	1.23
CLW-1	< 0.500	36.6	304	0.979	7.91	61.0	856	<0.00200	0.0300	0.0612	<0.00200	<0.000500	0.00551	<0.00400	<0.00200	0.172	<0.000150	0.00527	<0.00200	<0.00200	0.25	0.12	0
CLW-2	< 0.500	47.0	418	1.23	7.84	86.0	992	<0.00200	0.0258	0.0770	<0.00200	<0.000500	0.00337	<0.00400	<0.00200	0.212	0.000278	0.00556	<0.00200	<0.00200	0.03	0.54	0
CLW-3	< 0.500	39.4	361	1.27	7.88	101	488	<0.00200	0.0387	0.0991	<0.00200	<0.000500	0.00251	<0.00400	<0.00200	0.206	<0.000150	0.00560	<0.00200	<0.00200	0.20	-0.04	0
CLW-4	< 0.500	33.6	323	1.34	7.88	85.5	960	<0.00200	0.0381	0.0822	<0.00200	<0.000500	0.00245	<0.00400	<0.00200	0.204	<0.000150	0.00508	<0.00200	<0.00200	-0.03	0.47	0
CLW-5	< 0.500	34.5	340	1.58	7.86	83.9	800	<0.00200	0.0227	0.0737	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.198	<0.000150	0.00585	<0.00200	<0.00200	0.15	0.62	0
CLW-6	< 0.500	33.0	312	1.48	7.94	81.2	544	<0.00200	0.0225	0.0878	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.203	<0.000150	0.00540	<0.00200	<0.00200	0.43	-0.06	0
CLW-7	< 0.500	44.3	329	1.03	7.79	60.5	1020	<0.00200	0.0242	0.0526	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.180	<0.000150	0.00392	<0.00200	<0.00200	0.20	-0.08	0
CLW-8	< 0.500	40.8	316	1.03	7.86	63.7	880	<0.00200	0.0267	0.0634	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.182	<0.000150	0.00400	<0.00200	<0.00200	0.12	0.12	0
CLW-9	< 0.500	25.2	296	1.90	7.96	83.5	932	<0.00200	0.0402	0.0499	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.170	<0.000150	0.00597	<0.00200	<0.00200	0.15	0.32	0
CL-U-3	< 0.500	57.7	386	0.889	7.75	116	1090	<0.00200	0.0206	0.0478	<0.00200	<0.000500	0.00553	<0.00400	<0.00200	0.205	<0.000150	0.00467	<0.00200	<0.00200	-0.06	0.95	0.95

Round 14

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
Round 13	14.31	7.53	-172	1970	1.0	0.46	1.26
CL-U-2	14.47	7.47	-132	1890	1.1	4.72	1.21
CLW-1	15.51	7.45	-110	1500	0.3	0.40	0.96
CLW-2	15.46	7.59	-189	1950	1.0	0.14	1.25
CLW-3	15.26	7.66	-230	1760	1.0	0.16	1.13
CLW-4	15.25	7.67	-237	1650	3.3	0.17	1.06
CLW-5	15.20	7.57	-234	1730	7.5	0.40	1.11
CLW-6	14.63	7.57	-236	1650	0.9	0.26	1.06
CLW-7	16.02	7.45	-97	1610	0.2	0.24	1.03
CLW-8	16.24	7.47	-106	1540	6.0	0.37	0.98
CLW-9	13.95	7.72	-276	1590	1.9	6.57	1.02
CL-U-3	14.31	7.51	-210	1870	1.7	5.53	1.20

Bottom Ash	Results																					Radium 226 and 228 combined	
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226		Radium 228
BA-U-1	< 0.500	188	1090	0.817	7.50	367	3050	<0.00200	0.0226	0.0774	<0.00200	<0.000500	0.0711	<0.00400	<0.00200	0.375	<0.000150	0.0152	0.00519	<0.00200	0.28	1.20	1.2
BA-U-2	< 0.500	2.47	395	0.912	10.70	42.7	872	<0.00200	0.00683	0.0804	<0.00200	<0.000500	0.00611	<0.00400	<0.00200	0.327	<0.000150	0.00629	<0.00200	<0.00200	-0.03	0.70	0
BAC-1	3.00	239	1890	0.645	7.39	1300	5270	<0.00200	0.0154	0.0340	<0.00200	<0.000500	0.00219	<0.00400	<0.00200	0.547	<0.000150	0.0170	0.00791	<0.00200	0.09	0.83	0.83
BAC-2	8.38	210	1710	1.16	7.27	2440	6380	<0.00200	0.0609	0.0206	<0.00200	<0.000500	0.00986	<0.00400	<0.00200	0.431	0.000192	0.172	0.0128	<0.00200	0.33	1.21	1.21
BAC-3	7.47	447	3620	1.26	7.21	4380	12500	<0.00200	0.0321	0.0284	<0.00200	<0.000500	0.0150	<0.00400	<0.00200	0.913	<0.000150	0.0251	0.0204	<0.00200	0.16	0.51	0
BAC-4	0.613	70.5	541	1.09	7.89	295	1540	<0.00200	0.0330	0.0649	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.272	<0.000150	0.0211	<0.00200	<0.00200	-0.06	0.17	0
BAC-5	0.547	83.5	552	0.991	7.79	416	1760	<0.00200	0.0297	0.0560	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.306	<0.000150	0.0242	<0.00200	<0.00200	0.03	0.22	0
BAC-6	4.02	115	560	0.847	7.74	1020	2340	<0.00200	0.0255	0.0215	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.242	0.000278	0.0805	<0.00200	<0.00200	0.14	0.52	0
BAC-7	5.48	92.6	532	1.48	7.91	1090	2400	<0.00200	0.0350	0.0168	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.218	<0.000150	0.0805	0.00202	<0.00200	0.21	0.25	0
BAC-8	< 0.500	25.4	264	1.61	7.97	84.4	784	<0.00200	0.0596	0.0370	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.183	<0.000150	0.00581	<0.00200	<0.00200	0	0.16	0
BAC-9	< 0.500	31.4	305	1.47	7.94	77.5	824	<0.00200	0.0488	0.0400	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.185	<0.000150	0.00487	<0.00200	<0.00200	0.09	0.29	0
BAC-10	0.571	26.1	278	1.62	7.95	84.0	804	<0.00200	0.0531	0.0381	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.171	<0.000150	0.00617	<0.00200	<0.00200	0.22	0.19	0
BAC-11	< 0.500	84.4	676	0.984	7.71	147	1100	<0.00200	0.0312	0.1160	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.244	<0.000150	0.00345	<0.00200	<0.00200	0.36	0.09	0
BAC-12	< 0.500	25.9	210	1.24	7.99	71.7	360	<0.00200	0.0423	0.0938	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.132	<0.000150	0.00479	<0.00200	<0.00200	0.23	0.18	0
BAC-13	0.604	115	929	0.957	7.50	276	46400	<0.00200	0.0329	0.0773	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.285	<0.000150	0.00250	<0.00200	<0.00200	0.35	0.55	0
BAC-14	0.565	158	940	0.972	7.53	432	1180	<0.00200	0.0359	0.0542	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.321	<0.000150	0.00222	<0.00200	<0.00200	0.03	0.08	0
BAC-15	< 0.500	26.2	263	1.75	8.01	78.9	600	<0.00200	0.0539	0.0395	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.172	<0.000150	0.00827	<0.00200	<0.00200	0.08	0.18	0
BAC-16	< 0.500	24.2	304	1.89	8.15	77.8	900	<0.00200	0.0783	0.0346	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.183	<0.000150	0.00732	<0.00200	<0.00200	0.20	0.22	0

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	15.43	7.22	-203	4340	5.7	0.20	2.78
BA-U-2	15.98	10.31	-330	469	0.0	0.35	0.305
BAC-1	17.25	7.20	-60	8060	2.4	0.32	5.09
BAC-2	16.70	7.16	-30	10100	8.1	5.44	6.26
BAC-3	16.05	7.18	-5	16500	3.7	0.50	10.2
BAC-4	15.70	7.53	-107	2600	0.0	0.18	1.67
BAC-5	15.76	7.51	-74	2900	0.2	0.16	1.86
BAC-6	16.17	7.49	-63	3540	0.9	0.33	2.26
BAC-7	15.35	7.66	-115	3840	1.9	2.47	2.46
BAC-8	14.78	7.54	68	1510	0.8	0.89	0.969
BAC-9	15.30	7.55	-28	1590	2.4	1.12	1.02
BAC-10	15.23	7.60	-50	1540	3.2	0.92	0.991
BAC-11	15.03	7.41	12	2980	7.1	7.33	1.91
BAC-12	14.93	7.75	-152	1280	1.4	6.36	0.821
BAC-13	14.46	7.28	-47	3850	1.1	6.99	2.47
BAC-14	14.81	7.20	4230	22	2.0	4.84	2.7
BAC-15	14.67	7.72	-45	1550	1.5	7.69	0.99
BAC-16	14.41	7.71	-64	1710	0.5	7.76	1.1

Waste Water	Results																					Radium 226 and 228 combined	
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226		Radium 228
SI-U-1	< 0.500	113	699	0.511	7.70	279	1230	<0.00200	0.00865	0.0609	<0.00200	<0.000500	0.00305	<0.00400	<0.00200	0.239	<0.000150	0.00280	<0.00200	<0.00200	0.20	1.04	1.04
WW-U-1	1.42	286	1940	0.324	7.24	1270	4740	<0.00200	0.00653	0.0391	<0.00200	<0.000500	0.00544	<0.00400	<0.00200	0.412	<0.000150	0.00811	0.00724	<0.00200	0.21	1.38	1.38
WW-U-2	1.23	337	2020	0.473	7.42	981	4020	<0.00200	0.0108	0.0502	&lt												



Round 15 (all results ppm) Assessment Monitoring

Landfill Wells	Results																					Radium 226 and 228 combined		
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228		
CL-U-1	< 0.500	56.7	423	1.23	8.02	118	1050	<0.00400	0.0367	0.0866	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.227	<0.0000900	0.00422	<0.00200	<0.00200				
CL-U-2	< 0.500	59.3	408	1.09	7.98	123	1600	<0.00400	0.0278	0.0991	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.21	<0.0000900	0.00461	<0.00200	<0.00200				
CLW-1	< 0.500	34.8	305	1.15	8.06	64.4	972	<0.00400	0.0340	0.0640	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.183	<0.0000900	0.00407	<0.00200	<0.00200				
CLW-2	< 0.500	44.4	432	1.26	8.10	95.5	1040	<0.00400	0.0299	0.0825	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.218	<0.0000900	0.00482	<0.00200	<0.00200				
CLW-3	< 0.500	37.1	356	1.57	8.04	103	904	<0.00400	0.0426	0.1040	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.208	<0.0000900	0.00554	<0.00200	<0.00200				
CLW-4	< 0.500	30.8	316	1.69	8.14	85.8	844	<0.00400	0.0444	0.0837	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.203	<0.0000900	0.00519	<0.00200	<0.00200				
CLW-5	< 0.500	32.6	345	2.03	8.11	88.5	952	<0.00400	0.0253	0.0740	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.202	<0.0000900	0.00503	<0.00200	<0.00200				
CLW-6	< 0.500	30.7	320	1.84	8.13	83.5	884	<0.00400	0.0173	0.0985	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.197	<0.0000900	0.00645	<0.00200	<0.00200				
CLW-7	< 0.500	41.7	338	1.24	8.04	70.4	880	<0.00400	0.0270	0.0558	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.185	<0.0000900	0.00348	<0.00200	<0.00200				
CLW-8	< 0.500	38.4	315	1.13	7.99	68.3	872	<0.00400	0.0297	0.0666	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.185	<0.0000900	0.00377	<0.00200	<0.00200				
CLW-9	2	36.1	287	1.37	8.09	80.7	832	<0.00400	0.0411	0.0489	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	1.230	<0.0000900	0.0059	<0.00200	<0.00200				
CL-U-3	< 0.500	56.3	374	1.08	7.89	115	1080	<0.00400	0.0202	0.0509	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.223	<0.0000900	0.00351	<0.00200	<0.00200				

Round 13

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-2	16.77	7.3	-109	1920	0.8	3.13	1.23
CLW-1	17.12	7.41	-17	1560	1.1	2.97	1.00
CLW-2	17.25	7.56	-194	1980	0.9	0.18	1.26
CLW-3	17.34	7.6	-243	1770	1.8	4.44	1.14
CLW-4	16.23	7.53	-238	1660	1.6	0.23	1.06
CLW-5	16.56	7.49	-219	1760	4.9	0.30	1.13
CLW-6	16.65	7.62	-254	1640	2.0	0.34	1.05
CLW-7	16.77	7.43	-68	1660	1.5	2.14	1.06
CLW-8	16.98	-72	7.47	1580	1.7	2.39	1.01
CLW-9	14.93	7.62	-265	1570	1.4	0.26	1.01
CL-U-3	15.72	7.36	-496	1900	1.7	2.81	1.21

Bottom Ash	Results																					Radium 226 and 228 combined		
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228		
BA-U-1	< 0.500	209	1220	1.1	7.59	510	2660	<0.00400	0.0223	0.0668	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.44	<0.0000900	0.00274	0.00518	<0.00200				
BA-U-2	< 0.500	86.8	691	0.844	7.62	86.3	1780	<0.00400	0.0222	0.1470	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.321	<0.0000900	<0.00200	0.00227	<0.00200				
BAC-1	2.28	177	1240	0.687	7.16	1010	3510	<0.00400	0.2	0.0528	<0.00200	<0.000500	0.00365	<0.00400	<0.00200	0.34	<0.0000900	0.0979	0.00798	<0.00200				
BAC-2	7.08	205	1840	1.2	7.27	2670	6940	<0.00400	0.0632	0.0230	<0.00200	<0.000500	0.00573	<0.00400	<0.00200	0.436	<0.0000900	0.182	0.0137	<0.00200				
BAC-3	7.17	410	3790	1.56	7.25	4940	13800	<0.00400	0.0398	0.0300	<0.00200	<0.000500	0.0055	<0.00400	<0.00200	0.996	<0.0000900	0.0311	0.0222	<0.00200				
BAC-4	0.913	70.2	506	1.33	8.01	327	3500	<0.00400	0.0342	0.0656	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.29	<0.0000900	0.0262	<0.00200	<0.00200				
BAC-5	0.677	83.7	552	1.2	7.99	451	1030	<0.00400	0.0322	0.0556	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.329	<0.0000900	0.0276	<0.00200	<0.00200				
BAC-6	4.26	115	507	1.09	7.88	958	1480	<0.00400	0.0270	0.0187	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.26	<0.0000900	0.0772	<0.00200	<0.00200				
BAC-7	6.05	90.1	560	2.28	8.05	1110	2220	<0.00400	0.0418	0.0192	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.236	<0.0000900	0.0691	0.00239	<0.00200				
BAC-8	< 0.500	24.1	254	1.63	7.99	91.9	724	<0.00400	0.0619	0.0368	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.154	<0.0000900	0.00644	<0.00200	<0.00200				
BAC-9	< 0.500	30.6	298	1.44	7.95	100	744	<0.00400	0.0504	0.0427	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.16	<0.0000900	0.0045	<0.00200	<0.00200				
BAC-10	< 0.500	25.6	256	1.63	7.99	82.6	836	<0.00400	0.0559	0.0373	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.154	<0.0000900	0.00581	<0.00200	<0.00200				
BAC-11	< 0.500	78.6	742	1.17	7.76	168	1490	<0.00400	0.0338	0.1270	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.237	<0.0000900	0.00314	<0.00200	<0.00200				
BAC-12	< 0.500	30.9	291	1.45	7.92	77.8	832	<0.00400	0.0474	0.0983	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.15	<0.0000900	0.00454	<0.00200	<0.00200				
BAC-13	0.613	111	973	1.1	7.62	326	1980	<0.00400	0.0351	0.0613	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.278	<0.0000900	<0.00200	<0.00200	<0.00200				
BAC-14	0.55	147	1040	1.05	7.50	465	2540	<0.00400	0.0313	0.0519	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.331	<0.0000900	<0.00200	<0.00200	<0.00200				
BAC-15	< 0.500	25.5	248	1.76	7.89	79.5	720	<0.00400	0.0573	0.0399	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.0147	<0.0000900	0.00707	<0.00200	<0.00200				
BAC-16	< 0.500	23.1	477	1.88	8.00	206	730	<0.00400	0.0847	0.0354	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.167	<0.0000900	0.00651	<0.00200	<0.00200				
BAC-17	< 0.500	24.1	123	0.799	8.16	99.6	400	<0.00400	0.0321	0.0316	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	<0.100	<0.0000900	0.00421	<0.00200	<0.00200				

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	17.46	7.25	-37	4770	1.4	2.35	3.05
BA-U-2	16.52	7.45	-118	2730	0.0	0.39	1.75
BAC-1	17.54	6.80	-175	5330	1.5	0.29	3.36
BAC-2	19.40	7.14	-2	9990	7.6	6.61	6.29
BAC-3	17.87	7.13	-26	17200	1.9	4.81	10.7
BAC-4	18.04	7.59	-80	2680	1.4	0.16	1.71
BAC-5	17.47	7.58	-89	2950	0.7	0.14	1.89
BAC-6	15.98	7.44	-92	3720	3.3	0.18	2.38
BAC-7	17.02	7.71	-125	4120	2.7	0.87	2.64
BAC-8	14.65	7.66	7	1580	1.5	0.82	1.01
BAC-9	14.76	7.66	16	1690	2.0	1.31	1.08
BAC-10	14.79	7.70	17	1600	2.0	0.98	1.03
BAC-11	15.23	7.38	98	3050	2.7	7.47	1.95
BAC-12	15.06	7.36	125	1590	2.8	3.03	1.02
BAC-13	14.35	7.24	5	4190	4.0	1.29	2.69
BAC-14	15.80	7.38	46	4360	1.1	0.83	2.79
BAC-15	14.66	7.69	9	1570	6.6	1.37	1.01
BAC-16	14.40	7.60	15	1750	1.3	1.98	1.12
BAC-17	15.16	7.73	-102	0.907	2.6	0.20	0.58

Waste Water	Results																					Radium 226 and 228 combined		
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228		
SI-U-1	< 0.500	90.5	512	0.779	7.69	366	1650	<0.00400	0.0123	0.0465	<0.00200	<0.000500	<0.00200	<0.00400	<0.00200	0.236	<0.0000900	<0.00200	<0.00200	<0.00200				
WW-U-1	1.35	268	1860	0.444	7.48	1310	5280	<0.00400	0.00635	0.0381	<0.00200	<0.000500	0.00275	<0.00400	<0.00200	0.488	<0.0000900	0.00732	0.00717	<0.00200				
WW-U-2	1.35	314	1860	0.67	7.47	1080	4780	&lt																