Assessment of Corrective Measures and Amended Corrective Action Plan

Intermountain Generating Facility
Delta, Utah

Prepared for:
Intermountain Power Service Corporation
850 West Brush Wellman Road
Delta, Utah 84624

Prepared by:
Stantec Consulting Services, Inc.
8160 South Highland Drive
Sandy, UT 84093

Project No.: 203709098

January 9, 2019

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.

Prepared by: ________________________

John G. Russell, III
Utah PG #5216074-2250
Sr. Hydrogeologist, Environmental Risk Manager

Reviewed by: __________________

Chris LaLonde
Risk Assessor

Reviewed by: ____________________

J. Clinton Rogers, PE
Sr. Principal, Water

Table of Contents

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

Abbreviations

CB Landfill	Combustion By-Products Landfill
CoC	Chain-of-Custody
DQO	Data Quality Objective
ft	Foot or feet
IGF	Intermountain Generating Facility
IPSC	Intermountain Power Service Corporation
LCL	Lower Confidence Limit
MCL	Maximum Contaminant Level
mg/l	milligrams per liter
msl	mean sea level
ORP	Oxygen Reduction Potential
QA/QC	Quality Assurance and Quality Control
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
SOPs	Standard Operating Procedures
Stantec	Stantec Consulting Services Inc.
SSI	Statistically Significant Increase
UDEQ	Utah Department of Environmental Quality
UTL	Upper Tolerance Limit
US EPA	United States Environmental Protection Agency

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 report to finalize the assessment of corrective measures required by the coal combustion residuals rules and to supplement IPSC's September 2016 *Updated Corrective Action Plan* report, at the request of the Utah Department of Environmental Quality ("UDEQ"), Division of Water Quality ("DWQ"). The 2016 report presented IPSC's approach for addressing requirements specified by the facility's DWQ Ground Water Discharge Permit No. UGW270004. The most recent permit renewal was issued by the UDEQ to IPSC's Intermountain Generating Facility ("IGF"), effective May 24, 2016.

This 2019 report incorporates by reference IPSC's September 2016 *Updated Corrective Action Plan* report. This 2019 report also incorporates by reference IPSC's routine, semi-annual reports that IPSC has submitted historically to the DWQ as part of ongoing compliance with its Ground Water Discharge Permit.

During the generalized timeframe of December 2015 through today, IPSC has been complying with facility monitoring measures prescribed 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")). IPSC implemented a ground water quality monitoring program prescribed by the CCR Rules that included monitoring of CCR units and installation, monitoring, and sampling of several new, additional monitoring wells that were not part of IPSC's Ground Water Discharge Permit.

IPSC commenced a ground water quality monitoring program prescribed sequentially by CCR Rules Parts §257.90 (R315-319-90) Applicability; §257.91 (R315-319-91) Ground Water Monitoring Systems; §257.93 (R315-319-93) Ground Water Sampling and Analysis Requirements; §257.94 (R315-319-94) Detection Monitoring Program; §257.95 (R315-319-95) Assessment Monitoring Program; and §257.96 (R315-319-96) Assessment of Corrective Measures. 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):

- Combustion By-Products Landfill ("CB Landfill");
- Bottom Ash Basin; and
- Waste Water Basin.

The DWQ has regulatory oversight for IPSC's compliance with its Ground Water 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 will be issuing a separate permit for the CCR Units. IPSC has prepared this report to provide a summary of its CCR

Rule compliance activities while proposing a dove-tailed, ground water monitoring and recovery program intended to comply with the Federal and State CCR Rules and its Ground Water Discharge Permit.

1.2 BACKGROUND

Historically, when complying with its Ground Water Discharge Permit, and as reported to the UDEQ, whenever IPSC identified a potential release from a permitted basin, IPSC implemented investigative and remedial actions to identify the source and then repair the leak area (typically a localized tear in the 80-mil high-density, polyethylene [HDPE] liner material). Investigative and remedial measures were implemented and communicated to the UDEQ in a timely manner and in accordance with Ground Water Discharge Permit requisites.

As a result of localized, historical releases from the Bottom Ash Basin, a plume of Total Dissolved Solids (TDS) in excess of background concentrations impacted the uppermost ground water quality and migrated with ground water toward the southwest (the predominant, uppermost aquifer flow direction in relation to the Bottom Ash Basin). Since March 2010, IPSC has operated three ground water recovery wells that recover ground water from areas that exhibit elevated TDS concentrations within the uppermost aquifer beneath the site. The three recovery wells (wells WR-101, WR-102, and WR-103) collectively recover approximately 25 gallons per minute (gpm) and route recovered ground water to the Recycle Basin.

The three recovery wells were designed to remove TDS mass from the apparent center of the TDS plume, as proposed in IPSC's original June 2007 *Corrective Action Plan Report*, which was 'approved' by the UDEQ and implemented sequentially, as documented in IPSC's March 2010 *Ground Water Recovery Well Installation Report*. At the time of installation, the three recovery wells were not intended to control the downgradient migration of the TDS plume, but rather to reduce TDS mass within the uppermost aquifer at locations positioned in relatively close proximity to release source areas. In turn, it is anticipated that reduction of total TDS mass in the aquifer should also help promote natural attenuation processes (such as dilution, dispersion, diffusion, etc.), which ultimately should help remediate the TDS plume.

As of September 2016, TDS water quality data indicated that the down-gradient, leading edge of the TDS plume was moving beyond ground water recovery measures in place at the time. IPSC's September 2016 *Updated Corrective Action Plan* report included a summary of Stantec's ground water modeling and preliminary analysis of subsurface, hydraulic characteristics which were used in part to formulate a proposed enhanced, ground water recovery program. The model was developed generally in accordance with ASTM International's (American Standard for Testing and Materials) *Standard Guide for Application of Groundwater Model to a Site-Specific Problem* and the current version of United States Geological Survey (USGS) *Modular Three-Dimensional Finite Difference Groundwater Flow Model* (MODFLOW-2005).

IPSC proposed to install and test additional ground water recovery wells near the downgradient, leading edge of the TDS plume to enhance TDS plume control measures and help IPSC gain a clearer understanding of the hydraulic characteristics of the leading edge of the TDS plume. The

TDS plume associated with historical releases at the Bottom Ash Basin is located within the boundaries of IPSC-owned property and as such poses no risk to potential on- and/or off-site receptors.

2.0 CCR RULE *DETECTION MONITORING* PROGRAM, 2015-2017

As detailed in IPSC's November 2015 *CCR Unit Monitoring Well Design and Installation Summary Report*, IPSC installed a series of ground water monitoring wells to monitor uppermost ground water quality in up-gradient (e.g., "background" water quality) and down-gradient directions in relation to the CB Landfill, Bottom Ash Basin, and Waste Water Basin. Table 1 presents a summary of all CCR Rules-related, ground water monitoring well construction details and completion dates. Appendix A includes copies of the drilling logs and well schematic diagrams.

During late-October 2015, IPSC initiated its CCR unit-specific, monitoring, sampling, and analysis program for background and down-gradient, monitoring wells, in accordance with §257.94 (R315-319-94) Detection Monitoring Program and IPSC's November 2015 *Ground Water Sampling and Analysis Plan.* As prescribed by §257.94(b) (R315-319-94(b)) for existing CCR-regulated landfills and surface impoundments, IPSC analyzed all ground water samples for Appendix III and Appendix IV constituents. As of October 2017, IPSC completed eight (8) independent sampling events from each background and down-gradient monitoring well in accordance with §257.94(b) (R315-319-94(b)).

In accordance with §257.90(e) (R315-319-90(e)), IPSC's January 2018 *Annual Ground Water Monitoring Summary Report* presented the results of IPSC's eight ground water monitoring and sampling events that comprised its Detection Monitoring Program pursuant to §257.94 (R315-319-94). All monitoring and sampling procedures were implemented in accordance with IPSC's November 2015 *CCR Unit Monitoring Well Design and Installation Summary Report* and corollary *Ground Water Sampling and Analysis Plan* report. All three predecessor reports are stand-alone documents that are incorporated by reference herein.

As reported in IPSC's January 2018 summary report, statistical analyses indicated potential statistically significant increases ("SSIs") over background concentrations of certain Appendix III constituents associated with each of the three CCR units. Therefore, as of the first quarter of 2018, IPSC initiated implementation of an Assessment Monitoring Program at each of the three CCR units in accordance with measures and timeframes prescribed by CCR Rule §257.95 (R315-319-95), as detailed in following report section *3.0 CCR Rule, Assessment Monitoring Program, 2018*. Table 2 herein provides a summary of all ground water sampling results associated with the 2015-2017 Detection Monitoring Program, the March and June 2018 Assessment Monitoring Program, and the subsequent October 2018 data discussed in the following report section.

3.0 CCR RULE *ASSESSMENT MONITORING* PROGRAM, 2018-2019

3.1 ASSESSMENT MONITORING RESULTS

Activities conducted during 2018-2019 entailed implementation of an Assessment Monitoring Program prescribed by CCR Rule §257.95 (R315-319-95), including evaluation of ground water monitoring data, establishment of Ground Water Protection Standards (“GWPSs”) for Appendix IV constituents, and §257.96 (R315-319-96) Assessment of Corrective Measures, if and where needed. Simultaneously and as reported to the UDEQ under separate cover, IPSC also continued its Ground Water Discharge Permit compliance program, which included ongoing monitoring and localized recovery of uppermost ground water containing elevated TDS concentrations down-gradient of the Bottom Ash Basin.

3.1.1 Ground Water Flow Characteristics

During each ground water monitoring and sampling event, field personnel implemented consistent water level measurement procedures, field techniques, and quality assurance/quality control (QA/QC) protocol in accordance with methodologies specified within IPSC’s CCR Rules-specific and Ground Water Discharge Permit-specific, *Ground Water Sampling and Analysis Plans*. Water levels were measured prior to purging and sampling of each well with field data recorded in a dedicated, project notebook for archiving.

The depth to static water in each well was measured utilizing an electronic meter, capable of measuring to 0.01-foot (ft.). The meter was decontaminated prior to each use to minimize the potential for cross-well contamination, when using the meter between wells. During each sampling event, static ground water level measurements were made to the nearest 0.01-ft. from a consistent, reference point established on the northern top of each PVC monitoring well casing.

Figures 3 and 4 depict estimated, regional ground water flow patterns based on Assessment Monitoring Program March and June 2018 water level measurements at the CCR unit-specific monitoring wells. Regional and localized ground water flow patterns were similar to those observed during the 2015-2017 Detection Monitoring Program, as reported in IPSC’s January 2018 *Annual Ground Water Monitoring Summary Report*.

Upon preliminary review of Appendix III and IV constituent analytical results, and in accordance with Assessment Monitoring Program §257.95(g)(1)(iii) (R315-319-95(g)(1)(iii)), IPSC contracted Stantec and Cascade Drilling, Environmental Drilling Services of Salt Lake City, Utah, a Utah-certified water well driller, to install supplemental monitoring wells at the facility property boundaries located in presumed down-gradient directions in relation to the three CCR units. The wells were drilled, soil sampled, installed, developed, and surveyed in relation to all other monitoring wells in similar fashion as the original CCR unit boundary monitoring wells.

One (1) ground water monitoring well was installed at the property boundary located in a presumed down-gradient direction in relation to the CB Landfill (well CL-U-9), while two (2) ground water monitoring wells were installed in a presumed down-gradient direction in relation to the Waste Water Basin (wells WWC-6 and WWC-7). Additionally, new monitoring well CL-U-3 was installed in a presumed up-gradient direction in relation to the CB Landfill to provide additional, up-gradient/background information, supplemental to the other up-gradient monitoring wells CL-U-1 and CL-U-2.

Copies of drilling logs and schematic well diagrams are presented in Appendix A herein. As may be noted by review of the drilling logs, subsurface lithologic characteristics were generally similar to those encountered during the drilling and installation of the original monitoring wells, including similar depth ranges to uppermost ground water and varied, heterogeneity of subsurface lithologic characteristics. Well screen intervals were placed to permit monitoring of the uppermost aquifer at each location.

The first-time water level measurements were monitored at the expanded array of CCR monitoring wells was during October 2018, following surveying of the new property boundary wells. Reference Figure 5 for a potentiometric map estimating ground water flow patterns across the site, utilizing the October 2018 data (excluding well CL-U-9, whose water level was not measured at this time).

As may be noted by review of the potentiometric maps, the predominant regional ground water flow direction appears to be generally from the east toward the west, with more southwesterly, localized components of flow near the Bottom Ash Basin and Waste Water Basin. Although there were slight, localized changes in hydraulic gradient across the site during each individual monitoring event, in totem, the gradient patterns appear relatively similar to one another during each of the eight Detection Monitoring Program monitoring events and the 2018 Assessment Monitoring Program monitoring events.

Stantec's review of natural topographic elevations presented on the 1971 USGS *Rain Lake, Utah Quadrangle* topographic map indicates that the natural topography grades generally from the east toward the west across the generalized vicinity of the CB Landfill (T15S, R7W, Section 11), while the natural grade becomes more southwesterly in the vicinity of the Bottom Ash Basin (T15S, R7W, Section 14) and the Waste Water Basin (T15S, R7W, Sections 14 and 23) and on-site land located south and southwest of the surface impoundments and north of the Brush Wellman Highway (i.e., State Route 174). In summary, and on a generalized scale, the potentiometric maps tend to mimic the expression of the topography of the land surface across the site.

3.1.2 CCR Unit-Specific, Ground Water Quality Results

Background and down-gradient, CCR unit-specific ground water monitoring wells were purged and sampled as part of the Assessment Monitoring Program during March and June 2018 and subsequent monitoring during October 2018. All purging, sampling, laboratory analysis, and Quality Assurance/Quality Control ("QA/QC") protocols were administered as specified by §257.95 (R315-319-95) Assessment Monitoring Program and as proposed within IPSC's November

2015 *Ground Water Sampling and Analysis Plan*. Tabulated analytical results and water level measurement data associated with the CCR Rule Detection and Assessment Monitoring Program events are presented in Table 2 herein.

Detection and Assessment Monitoring Program ground water quality results were utilized by Stantec to establish groundwater protection standards ("GWPSs") for each Appendix IV constituent and each CCR-regulated unit in accordance with CCR Rule §257.95(d)(2) and §257.95(h) (R315-319-95(d)(2) and R315-319-95(h)) and the following general guidance sources:

- US EPA "Unified Guidance" document (*Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities, Unified Guidance,* March 2009, *EPA 530/R-09-007*);
- the Interstate Technology and Regulatory Council's (ITRC) 2013, *Groundwater Statistics for Monitoring and Compliance, Statistical Tools for the Project Lifecycle*, Online Guidance; and
- Ofungwu, J. (2014) *Statistical Applications for Environmental Analysis and Risk Assessment*. Hoboken, New Jersey: John Wiley and Sons, Inc.

The Unified Guidance recommends the use of Upper Tolerance Limits ("UTLs") for Assessment Monitoring. Tolerance limits consist of two values expected to contain a pre-specified proportion of the underlying data population with a specified level of confidence. For example, a 95% tolerance interval with a 95% confidence level, there is 95% confidence that, on average, 95% of the data population is contained within the interval. The upper, one-sided UTL is used commonly in environmental monitoring and is constructed using background data (Ofungwu 2014).

In the context of the CCR Rule, data from all background wells is used to estimate a 95% UTL with 95% coverage for each Appendix IV constituent at each CCR-regulated unit. This represents a 95% upper confidence limit on the 95th percentile. In Assessment Monitoring, the UTL may be used to represent the GWPS if: 1) the constituent does not have an established MCL; or 2) the background UTL exceeds the established MCL.

Three Appendix IV constituents do not have a US EPA-promulgated MCL: Cobalt, Lithium, and Molybdenum. However, the US EPA amended the original CCR rule in July 2018 and established the following alternate, regulatory limits for these compounds: Cobalt (0.006 milligrams per liter, mg/L), Lithium (0.04 mg/L), and Molybdenum (0.1 mg/L).

As specified by CCR Rule §257.95(d)(2) and §257.95(h) (R315-319-95(d)(2) and R315-319-95(h)), each constituent-specific GWPS shall be either the MCL for that constituent (or above-referenced, CCR Rule-established, alternate, regulatory limits for Cobalt, Lithium, and Molybdenum) or the UTL in instances where the UTL exceeds the established MCL. Appendix B presents a tabulation of UTL and GWPS data for each CCR unit and each monitoring well.

During Assessment Monitoring, the site is assumed to be free of impacts, unless proven otherwise through statistical testing. The statistical null hypothesis (Ho) represents a mean downgradient concentration less than or equal to the GWPS, while the alternate hypothesis (Ha) represents a mean downgradient concentration greater than the GWPS (ITRC, 2013). To test this hypothesis, the Lower Confidence Limits (LCL) around the mean downgradient Appendix IV concentrations are estimated using data collected during the Detection Monitoring and Assessment Monitoring programs. The LCL for each constituent/well pair are then compared to their respective GWPS. If the LCL exceeds the GWPS, then downgradient concentrations are at a statistically significant level (SSL) above the GWPS, which *may* trigger corrective action at the Site.

It should be noted that individual sample results of Appendix IV constituents above the GWPS during Assessment Monitoring are not necessarily a demonstration of statistically significant exceedances of the GWPS. The LCL must exceed the GWPS to conclude a statistically significant increase (SSI). However, if individual constituent concentrations exceed GWPSs, then Assessment Monitoring is to continue at that specific CCR unit. Appendix B presents a tabulation of UTL, GWPS, and Confidence Limit data for each CCR unit and each monitoring well.

In summary, and as presented on Figure 6, the quantitative analytical results associated with monitoring under the CCR Rules indicated the following Appendix IV constituent-specific, LCL exceedances above corollary GWPS concentrations at ground water monitoring wells located at each CCR-regulated unit (all concentrations in mg/L):

CCR Unit	Well	Appendix IV Constituent	LCL Concentration	GWPS Concentration
CB Landfill		NONE	------	-----
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

It must be noted that recently-installed, down-gradient monitoring wells WWC-6 and WWC-7 (southwest of the Waste Water Basin), as well as other down-gradient wells that will be integrated into future ground water monitoring/sampling events (as proposed in more detail in following report section *4.0 Assessment of Corrective Measures*), will require additional sampling data for comparative analysis to corollary GWPSs; i.e., one sampling event, such as October 2018, is insufficient for appropriate statistical analysis. Additional monitoring wells will be added to IPSC's ongoing, future CCR Rule monitoring network, as part of IPSC's future-proposed, ground water monitoring program.

3.1.2.1 Regional Ground Water Quality

The site is located within the Basin and Range Physiographic Province and the Sevier Desert on a more localized scale. It is well-documented throughout arid Utah that localized, historical Lake Bonneville basin-fill sediments (that underlie the site) and associated uppermost ground water located in close proximity to igneous/volcanic and metamorphic formations contain high concentrations of abundant, naturally-occurring Arsenic (typically attributable to chemical and physical weathering of arsenopyrite). Likewise, Basin and Range Physiographic Province sediments, surface water, and ground water can also exhibit elevated concentrations of natural Lithium – especially in areas that are characterized by hydrologically-closed basins and thermal ground water.

Arsenic and Lithium concentrations within uppermost ground water can vary considerably, over short, lateral distances, in many instances. Indeed, ground water quality data associated with the site exhibits considerable variation in Arsenic and Lithium concentrations across relatively-short, lateral distances, including up-gradient monitoring wells.

Stantec's familiarity with the regional geology surrounding the site, as well as review of United States Geological Survey (USGS) geologic maps associated with areas surrounding, and in a presumed up-gradient direction (northeast of) in relation to the site, indicate vast acreages encompassing square miles of volcanic and metamorphic mountainous areas with interspersed Lake Bonneville-related sediments, which could provide source material for soluble Arsenic and Lithium to impact localized, uppermost ground water quality. Baker Hot Springs and the mountainous Butte Fumarole formation are located a few miles northwest of the site, for instance. Reportedly, there are third-party companies investigating the possibility of Lithium mining/brine processing within nearby areas such as the Sevier Lake watershed and Tule Valley, areas located several miles southwest and west of the site.

3.2 GROUND WATER QUALITY, OVERVIEW SUMMARY

Figure 6 presents Appendix IV constituent concentrations within wells that exceeded corollary CCR Rule Appendix IV GWPSs. Figure 7 presents Appendix III TDS concentrations quantified within CCR Rule monitoring wells during October 2018, including those concentrations in excess of the Ground Water Discharge Permit Limit for TDS of 1,100 mg/L.

It is anticipated that the rate at which dissolved metals migrate vertically within the unsaturated, vadose zone soil column located above uppermost ground water, as well as once dissolved metals migrate laterally/horizontally upon encountering the uppermost aquifer, should be considerably less than the migration rate/advection of TDS beneath the site. Subsurface soils were identified as containing numerous clay stringers and lenses while also comprising a large percentage of interstitial soil matrix. Clay-rich, highly-porous soils promote adsorption and ionic exchange of metals to soil material, which in turn tends to retard the natural migration of dissolved metals in ground water (i.e., greater retardation than TDS). Thus, it is anticipated that TDS constituents have migrated farther down-gradient from apparent source areas in comparison to dissolved metals in ground water.

In summary, IPSC's recent CCR Rule and Ground Water Discharge Permit ground water quality data indicate the following:

- TDS concentrations at the CB Landfill reflect background concentrations. No Appendix IV metal concentration was quantified to date in excess of its corollary GWPS.

- The down-gradient, leading edge of the historical TDS plume associated with the Bottom Ash Basin has migrated farther southwest in comparison to its generalized location in September 2016, impacting wells RW-9 and RW-5 in excess of 1,100 mg/L (both wells' TDS concentrations were less than 1,100 mg/L in 2016). The October 2018 TDS concentration in well RW-6, located farther down-gradient of wells RW-9 and RW-5 and along the generalized, historical, TDS plume centerline, as well all historical TDS data to date associated with well RW-6, did not exceed the Ground Water Discharge Permit Limit of 1,100 mg/L. TDS is a Ground Water Discharge Permit compliance analyte and is also identified as an Appendix III constituent by the CCR Rules – warranting monitoring but not necessarily remediation under the CCR Rules.

  The estimated down-gradient, leading edge of the TDS plume located southwest of the Bottom Ash Basin appears to remain within IPSC-owned land and poses no risk to human health, currently. IPSC continues to recover ground water from on-site recovery wells – and as discussed in detail in following report sections, IPSC intends to install many additional ground water recovery wells to help contain this TDS plume (and any potential metal plumes, if present).

  Appendix IV metal monitoring indicates two monitoring wells at which one metal constituent exceeds its corollary GWPS: well BAC-2, Molybdenum and well BAC-3, Lithium. Down-gradient well RW-5 did not contain either metal at a concentration exceeding a GWPS. Future-proposed ground water monitoring at other down-gradient wells (for instance, monitoring well RW-3 and adjacent recovery well WR-101, as identified on Figure 7) will help investigate the degree to which ground water located in closer proximity to the basin might be impacted by metals.

  As may be noted by review of Figures 6 and 7, existing recovery well WR-101 is located immediately down-gradient of (southwest), and along the general TDS plume centerline in relation to the two monitoring wells with elevated metals concentrations at the Bottom Ash Basin (wells BAC-2 and BAC-3). Thus, in the event there has been migration of metals from these areas, recovery well WR-101 is well-positioned as a recovery well.

- TDS concentrations in localized, CCR-related, ground water monitoring wells WWC-1, WWC-4, WWC-5, and WWC-6, which were not part of the Ground Water Discharge Permit monitoring program, exceed Background TDS concentrations, indicating localized areas near the southeastern and western boundaries of the basin that appear to have been impacted by historical releases. Interestingly however, of these particular wells, only well WWC-1 contained an elevated Arsenic concentration in excess of the GWPS.

  The Appendix IV metal results indicate that there are localized areas along the south side of the Waste Water Basin that exceed GWPSs. Future-proposed, ground water monitoring at other down-gradient wells (well RW-4, RW-7, WWC-6, and WWC-7, for instance) will help investigate the degree to which ground water located down-gradient of the basin might be impacted by metals. As detailed in following report sections, IPSC intends to install additional monitoring and recovery wells to address the TDS plume (and any potential metal plumes, if present) associated with the Waste Water Basin.

4.0 ASSESSMENT OF CORRECTIVE MEASURES

The primary contaminant of potential concern at the site is TDS, as there are two localized TDS plumes beneath the site, namely: one plume located southwest of the Bottom Ash Basin and a second, smaller plume located southwest of the Waste Water Basin. TDS should be considered a leading indicator parameter of impacted ground water quality in relation to fashioning a suitable ground water remediation approach. It is also anticipated that recovery of TDS-impacted ground water at select recovery wells will also intercept any metal constituents that might be present, as TDS is expected to migrate at a faster rate than dissolved metals in ground water.

In light of the relatively great depth to the uppermost aquifer beneath most of the down-gradient leading edges of the TDS plumes (55 to 75 feet below grade), it is impractical to install horizontal, ground water interceptor trenches. Stantec and IPSC are unaware of any other effective and practicable means for *in-situ* treatment and reduction of TDS mass within the uppermost aquifer.

In summary, and as outlined in more detail in the following report sub-section, IPSC believes the most effective and practical means of reducing the mass of TDS beneath the site, as well as controlling the down-gradient leading edge migration of TDS plumes, is through ground water recovery/removal from the subsurface – as is ongoing with recovery wells WR-101, WR-102, and WR-103, the locations of which are identified on Figure 7 herein. However, as proposed in the following report sections, IPSC proposes installing additional ground water recovery wells to recover a greater volume of contaminated ground water, specifically located near the down-gradient, leading edges of the two TDS plumes.

In summary, IPSC intends to implement supplemental investigative and remedial measures to remediate the two TDS plumes (and any dissolved metal plumes, if identified through future-proposed monitoring), including installation of additional, ground water recovery wells. The following is a summary of information presented in detail within IPSC's 2016 *Updated Corrective Action Plan* report, as the findings relate directly to IPSC's remedial actions for enhanced, ground water recovery and down-gradient, leading edge plume control proposed in following report section *5.0 Proposed Corrective Actions*.

4.1 SUMMARY GROUND WATER MODELING RESULTS AND FINDINGS

IPSC's September 2016 *Updated Corrective Action Plan* report included a summary of Stantec's ground water modeling and preliminary analysis of subsurface, hydraulic characteristics which were used to formulate a proposed enhanced, ground water recovery program, designed to control the down-gradient, leading edge of the TDS plume located down-grade/southwest of the Bottom Ash Basin. Stantec constructed and calibrated a three-dimensional, numerical model to simulate ground water flow and fate and transport of TDS in ground water. The model was developed generally in accordance with ASTM's *Standard Guide for Application of*

Groundwater Model to a Site-Specific Problem and the current version of USGS *Modular Three-Dimensional Finite Difference Groundwater Flow Model* (MODFLOW-2005).

In summary, the model was based on site-specific, hydrogeologic and hydraulic characteristics identified during Stantec's past drilling and sampling of soil test borings and ground water monitoring wells located in relatively close proximity to the Bottom Ash Basin, as well as historical pump-testing of the three existing, ground water recovery wells WR-101, WR-102, and WR-103. Stantec also reviewed historical soil boring and ground water monitoring well drilling logs associated with mid- to late-1980s well installations overseen by other consulting firms prior to the construction of the facility.

Stantec's analysis of all hydrogeologic data indicates that the depth to uppermost ground water varies across the site but approximates a range between 55 to 75 feet below grade. Subsurface lithologic conditions in the immediate vicinity of each of the three CCR units were generally as follows:

CCR Unit	**Depth to Uppermost Sand Aquifer (feet below ground surface-bgs)**	**Thickness of Clay-Rich Soils Above the Aquifer (in feet-ft.)**
CB Landfill	between 52 to 78	33 to 57 ft. thick
Bottom Ash Basin	between 55 to 60	17 to 33 ft. thick
Waste Water Basin	between 48 to 65	8 to 20 ft. thick

Static water level measurements indicate that the uppermost aquifer beneath the site is under semi-confined to confined, hydraulic conditions, whereby static water levels rose within the wells following well installation and development. In other words, during the drilling of each borehole, uppermost, saturated soils were encountered at a certain subsurface depth. Subsequently, and as evidenced by recent water level measurements, the potentiometric surface of the water table was under such hydraulic pressure that the static water level within each monitoring well rose to a height 20 to 40 feet higher than the original depth at which uppermost saturated soils were first encountered. Water levels have been measured consistently to date, utilizing an electronic water level indicator that measures depth to static water in each well from the northern top of each well casing.

Stantec extrapolated that the down-gradient, leading edge of the TDS plume appears to be migrating naturally toward the southwest at an approximate rate of 150 to 180 feet per year. However, this is a generalized plume migration rate estimate, considering the relatively large, lateral distances between water quality monitoring well locations and the highly-varied, lithologic characteristics of the uppermost aquifer underlying the site.

Stantec used the model to help estimate the total number of vertical ground water recovery wells that *might* be needed to intercept the southwestern-most, down-gradient, leading edge of the TDS plume located southwest of the Bottom Ash Basin. Each proposed well would be constructed as a 6-inch diameter well, with 20- to 25-lineal feet of well screen at the bottom of each well, completed to approximately 70 feet below grade; i.e., generally the top of the lower confining aquitard layer. The model examined use of a line of equally-spaced, ground water recovery wells located perpendicular to the natural, southwesterly ground water flow direction.

The model was also used to investigate possible use of Ranney-type, collector wells (a 13-ft diameter, vertical concrete shaft driven to a depth of approximately 70-ft below grade with 300 feet long, horizontal collector screens radiating out from the bottom of the concrete shaft), instead of vertical recovery wells for containment of the TDS plume. The model indicates that use of vertical recovery wells, when compared to use of a Ranney collector well network, provides similar cumulative yield/volume of ground water recovery. However, use of vertical wells is deemed more practical, efficient, and beneficial for TDS Plume containment for numerous reasons, including:

- Greater flexibility and precision for well locating and installation;
- More extensive lateral and vertical aquifer characterization (i.e., individual well pump-testing for investigation of localized hydraulics throughout different areas within the aquifer); and
- Recovery of ground water throughout the approximate 20- to 25-foot thick aquifer (i.e., deeper ground water recovery within the aquifer, when compared to a horizontal ground water recovery network that would be placed at the bottom of the 20 to 25-foot thick aquifer).

Stantec recommends that the location of the line of proposed, vertical recovery wells be located as close as practicable near the estimated down-gradient leading edge of the TDS plume's 1,000 ppm iso-concentration line. The permit compliance concentration for TDS for Compliance Wells in the Ground Water Discharge Permit is 1,100 ppm. Figure 8 herein is original Figure 2 excerpted from IPSC's 2016 *Updated Corrective Action Plan* report. The figure presents the predominant southwesterly TDS plume centerline associated with the Bottom Ash Basin, as well as projected TDS-impacted, ground water recovery well placements.

Initially, and as modeled, the three recovery wells' (WR-101, WR-102, and WR-103) recovery rates were between 8 to 15 gallons per minute (gpm). The model indicated that the lateral capture zone for a recovery well pumping ground water at a rate of 10 gpm should extend out approximately 146 feet to either lateral side of the well (i.e., generally along the northwest-southeast oriented line of recovery wells). The lateral capture zone for a well pumping ground water at a rate of 15 gpm is projected to extend out approximately 188 feet to either side of the well.

Since the three existing recovery wells had initial sustainable yields between 8 to 15 gpm, Stantec's model estimated that the following scenarios would provide satisfactory containment of the TDS plume (using 6-inch diameter, approximately 70-feet deep recovery wells, with well screen intervals of approximately 25 feet):

- 15 wells, located at approximate 188-ft. equidistant, lateral spacings; each well producing at 15 gpm

to

- 19 wells, located at approximate 146-ft. equidistant, lateral spacings; each well producing at 10 gpm.

However, according to IPSC's most recent 2018 monitoring data, the three recovery wells' recovery rates have declined since initial pumping began in 2010 and approximate 3.5 to 9 gpm, currently. Actual recovery well pumping/recovery rates will ultimately dictate the lateral extents of each well's capture zone.

In general, it is anticipated that the model's representation of projected capture zones provides adequate estimation of the general number and locations of hypothetical recovery wells for TDS plume interception, which in turn may serve as a basis for design of TDS containment in the vicinity of the down-gradient, leading edge of the TDS plume. Considering the most recent recovery well yield data (approximately 3.5 to 9 gpm), it may be extrapolated that an approximate 100-ft. equidistant lateral spacing between each recovery well may provide adequate control at the down-gradient leading edge of the TDS plume located southwest of the Bottom Ash Basin. Thus, it is anticipated that a greater number of recovery wells may be needed for TDS plume control than those estimated by the 2016 ground water model.

The model also estimated that the down-gradient capture zone (i.e., not lateral extent but rather southwesterly direction in relation to a well) of each recovery well (regardless as to total number of wells) might extend approximately 50 feet down-gradient of each well. In the event that localized ground water containing elevated concentrations of TDS is not recovered by the recovery wells, it is probable that any such residual TDS concentrations not captured by the recovery wells would be reduced as a result of natural attenuation processes. If recovery rates are indeed only 3 to 9 gpm, it is anticipated that the down-gradient/southwesterly capture zone will be considerably smaller than the 50 feet estimated in the 2016 model.

5.0 PROPOSED CORRECTIVE ACTIONS

5.1 ONGOING GROUND WATER RECOVERY AT EXISTING RECOVERY WELLS WR-101, WR-102, AND WR-103

IPSC intends to continue operation of existing ground water recovery wells WR-101, WR-102, and WR-103 identified on Figure 8. The three wells are recovering ground water that contains elevated concentrations of TDS, located in relatively close proximity to the apparent historical TDS release areas associated with the Bottom Ash Basin. Wells WR-102 and WR-103 are located generally along the apparent TDS plume centerline, as explained in detail in IPSC's 2016 *Updated Corrective Action Plan*. Continued removal of TDS-enriched ground water from each of these three wells is helping reduce the total mass of TDS within the uppermost aquifer beneath the site in a generalized down-gradient/southwesterly direction in relation to the Bottom Ash Basin.

5.2 SUMMARY OF PROPOSED ACTIONS

IPSC and Stantec have reviewed analytical data and are proposing supplemental, ground water recovery and investigative Tasks, designed to:

1) Expand the current network of recovery wells intended to control the down-gradient, leading edge of the TDS plume associated with historical releases from the Bottom Ash Basin.

   Additional recovery wells would be installed at approximate 100-ft. lateral spacings, generally northeast of existing well RW-6, which currently contains TDS concentrations representative of background TDS concentrations. The proposed wells will be installed to intercept ground water near the down-gradient, leading edge of the TDS plume, along a generalized northwest-southeast oriented line of wells (i.e., perpendicular to the predominant, southwesterly ground water flow direction), as discussed in detail in IPSC's 2016 *Updated Corrective Action Plan*. The line of wells will be positioned approximately 600 feet due northeast of well RW-6. Each proposed recovery well should be constructed of 6-inch diameter, Schedule 40 polyvinyl chloride (PVC) piping, approximately 80-feet deep with well screen intervals of approximately 25 feet. The wells will be located in close proximity to the apparent, centerline of the TDS plume.

   Additionally, 6-inch diameter, 76-ft. deep, well RW-5 (20-ft. well screen interval) is anticipated to be a suitable recovery well in light of its total depth, well screen interval, and static water level measurements (~ 46-ft. below grade) to date. Once supplemental recovery wells are installed northeast of well RW-6, IPSC intends to conduct a series of pump-tests to investigate well yields and radial cones of influence/capture associated with the newly-installed wells and existing well RW-5. The respective well yields will be analyzed using the ground water model to extrapolate potential lateral extent of capture for each well and help extrapolate yields and possible capture zones for supplemental ground water recovery wells.

2) Delineate ground water quality more thoroughly in apparent down-gradient directions in relation to recently-discovered, apparent release areas (west and south sides) at the Waste Water Basin by installing additional monitoring wells located: south of WWC-1; east of WWC-6; and between wells WWC-6 and WWC-7.

   Well installations would be sequenced such that initial wells will be installed on-site, followed-by off-site wells located farther south/southwest, depending on water quality and ground water flow characteristics identified during the sequenced phases of investigation. Select wells will be pump-tested to help investigate local hydrogeologic characteristics, in similar fashion as proposed above and conducted at the site in the past.

   Well RW-4 (4-inch diameter, 36-ft. deep; well screen: 26-36 feet; static water level approximates 20.5-ft. below top of casing), which is located in close proximity to and down-gradient from, the northwestern-most corner of the Waste Water Basin, would also be pump-tested in similar fashion as other wells. The respective well yield will be analyzed using the ground water model to extrapolate potential lateral extent of capture for each well and help extrapolate yields and possible capture zones for supplemental ground water recovery wells.

3) Following the sequential TDS plume investigation proposed in above Task #2, IPSC intends to initiate ground water recovery to control the migration of the TDS plume down-gradient of the Waste Water Basin. Select ground water recovery wells will be installed based on Task #2 findings. The intent of the recovery well program will be to control the down-gradient leading edge of the TDS plume associated with the Waste Water Basin.

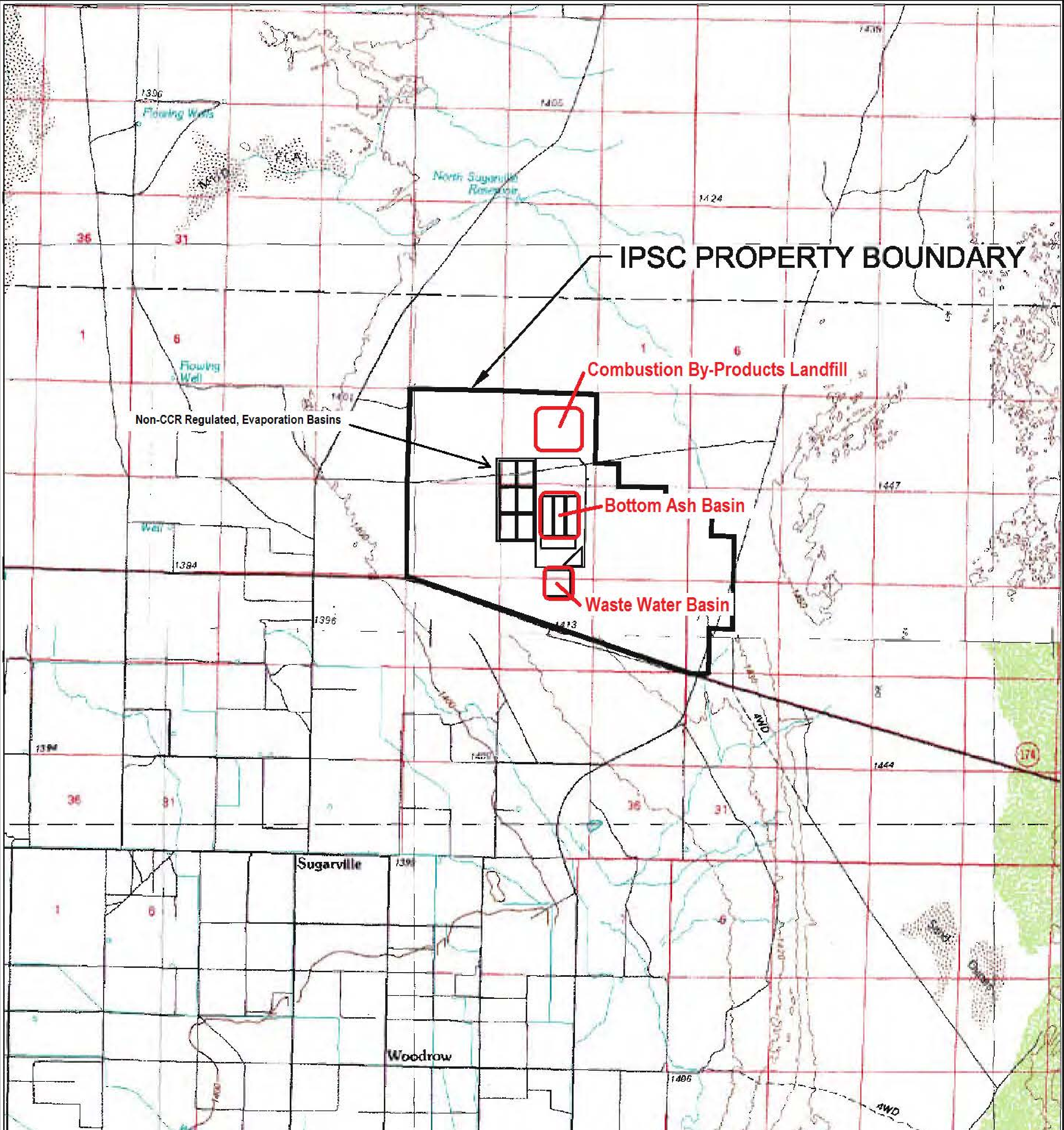
4) For the foreseeable future, the following wells will be monitored as part of CCR Rule compliance. It is recommended that the following list be amended, as site conditions and future monitoring results warrant:

   - Monitoring of CB Landfill: wells CLU-1; CLU-2; CLW-1 through CLW-9; and WDB-17.
   - Monitoring of Bottom Ash Basin: wells BAU-1; BAU-2; BAC-1 through BAC-7; RW-1; RW-3; RW-5, RW-8; WDB-5; EMW-4U; and EMW-5U (reference Figures 7 and 8).
   - Monitoring of Waste Water Basin: WWU-1; WWU-2; WWC-1 through WWC-7; RW-4; and RW-7.

Upon implementation of the enhanced ground water recovery and monitoring program proposed in this report, IPSC will evaluate the degree to which ground water recovery and natural attenuation processes control the down-gradient leading edges of TDS plumes located down-gradient of the Bottom Ash Basin and the Waste Water Basin. IPSC also intends to evaluate potential, alternative means for ongoing enhancement of remediating TDS mass from the uppermost aquifer beneath the site. IPSC will continue to conduct and report to the UDEQ its routine, semi-annual, ground water monitoring and remediation program in formal Summary Reports.

January 9, 2019

Figure 1 General Site Location Map



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

1 0 1 2 3 4 KILOMETERS

1 0 1 2 MILES

N

CCR-Regulated Units
DELTA, UTAH

FIGURE 1
SITE TOPOGRAHIC MAP

Stantec

DATE DRAWN	1-26-17
REVISION	

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

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

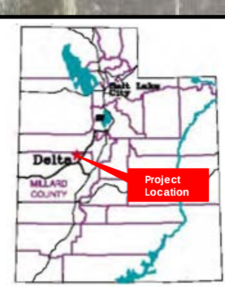
January 9, 2019

Figure 2. CCR Units Location Map

Legend

CCR Unit

N



INTERMOUNTAIN GENERATING FACILITY

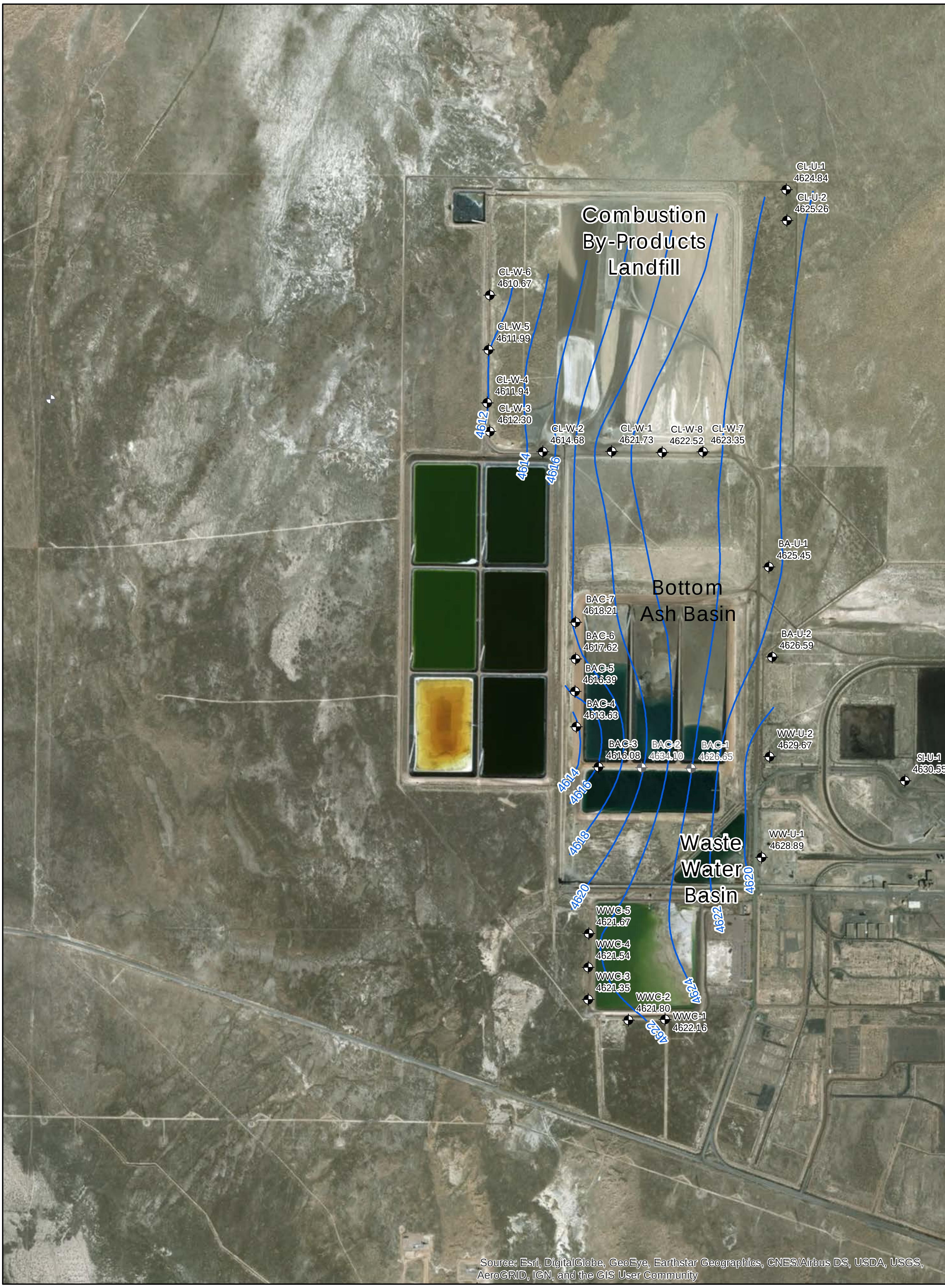
FIGURE 2
Site-Specific Location Map

Stantec

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

January 9, 2019

Figure 3. Potentiometric Map for March 2018 Water Levels



LEGEND:

- MONITORING WELL
- GROUND WATER CONTOUR

NOTE:
1) DATA COLLECTED MARCH 2018
2) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL

0 1,300 2,600
Feet
1 in = 1,350 ft

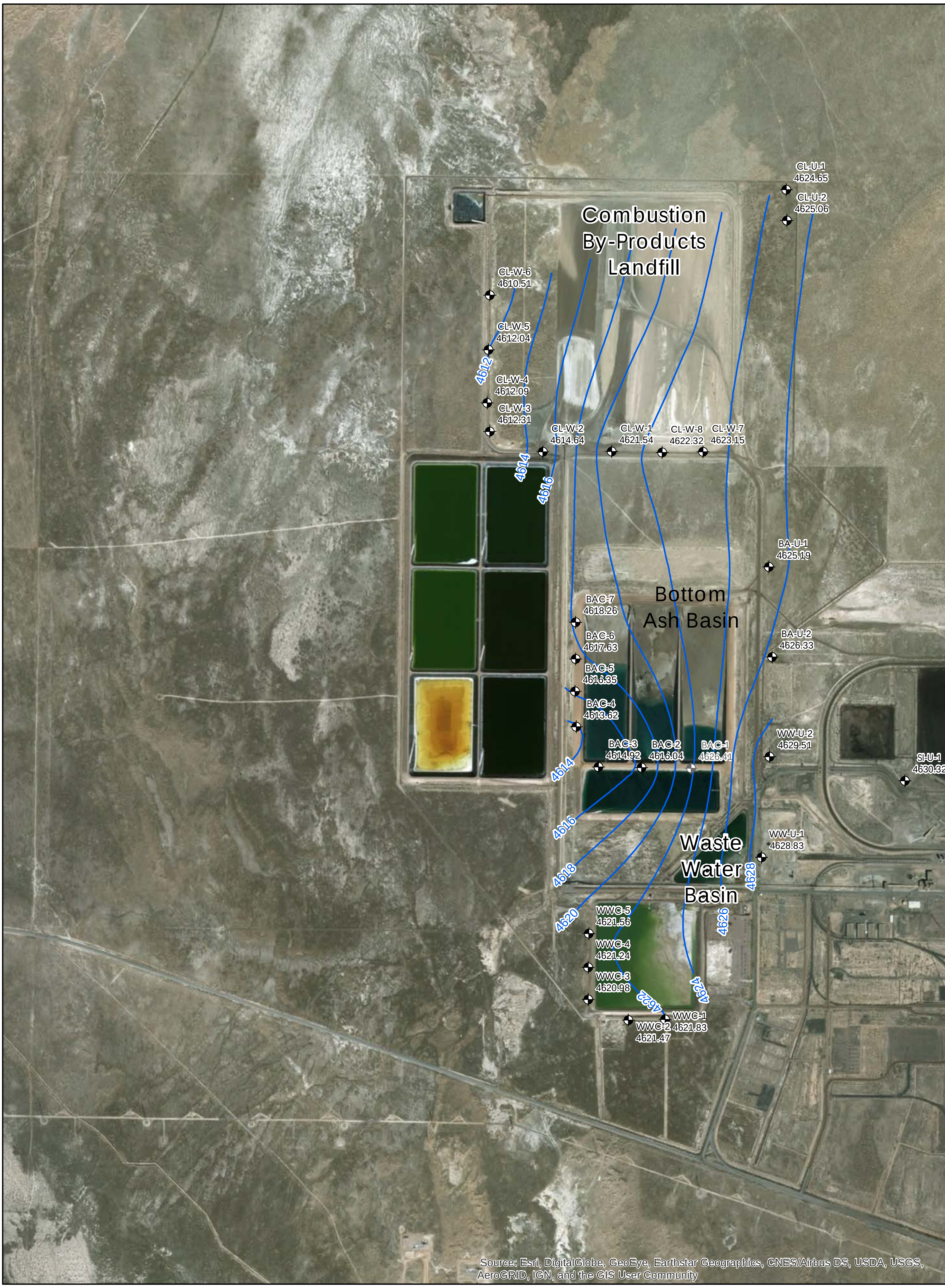
Stantec

FOR: INTERMOUNTAIN POWER SERVICE CORP. INTERMOUNTAIN GENERATION FACILITY DELTA, UTAH		FIRST QUARTER 2018 POTENTIOMETRIC SURFACE MAP		FIGURE: 3
JOB NUMBER: 203709098	DRAWN BY: CK	CHECKED BY: ALL	APPROVED BY:	DATE: 08/13/18

January 9, 2019

Figure 4. Potentiometric Map for June 2018 Water Levels

Q:\active\203709098 Intermountain Power\GIS\2018_08\fig12_2018q2gwe.mxd



LEGEND:

- MONITORING WELL
- GROUND WATER CONTOUR

NOTE:

1) DATA COLLECTED JUNE 2018
2) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL

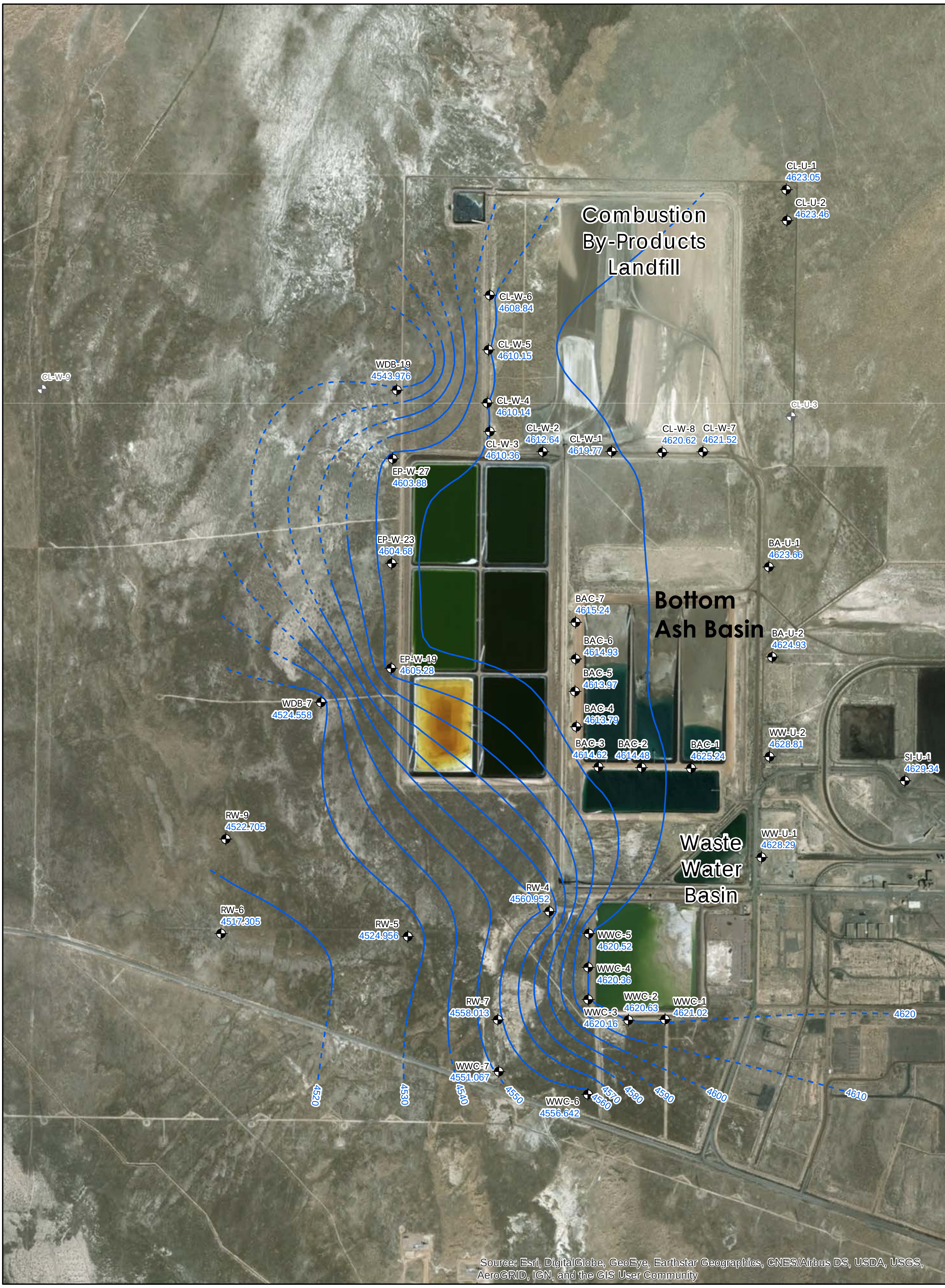
0 1,300 2,600
Feet
1 in = 1,350 ft

Stantec

FOR: INTERMOUNTAIN POWER SERVICE CORP. INTERMOUNTAIN GENERATION FACILITY DELTA, UTAH		SECOND QUARTER 2018 POTENTIOMETRIC SURFACE MAP		FIGURE: 4
JOB NUMBER: 203709098	DRAWN BY: CK	CHECKED BY: ALL	APPROVED BY:	DATE: 08/13/18

Figure 5. Potentiometric Map for October 2018 Water Levels

Q:\active\203709098 Intermountain Power\GIS\2018_11\fig12_Oct2018GWE_20181105.mxd



LEGEND:

- MONITORING WELL (GREYED WHEN NOT USED FOR CONTOURING)
- GROUND WATER CONTOUR

NOTE:

1) DATA COLLECTED OCTOBER 2018
2) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL

0 1,300 2,600
Feet
1 in = 1,350 ft

Stantec

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

OCTOBER 2018
POTENTIOMETRIC SURFACE MAP

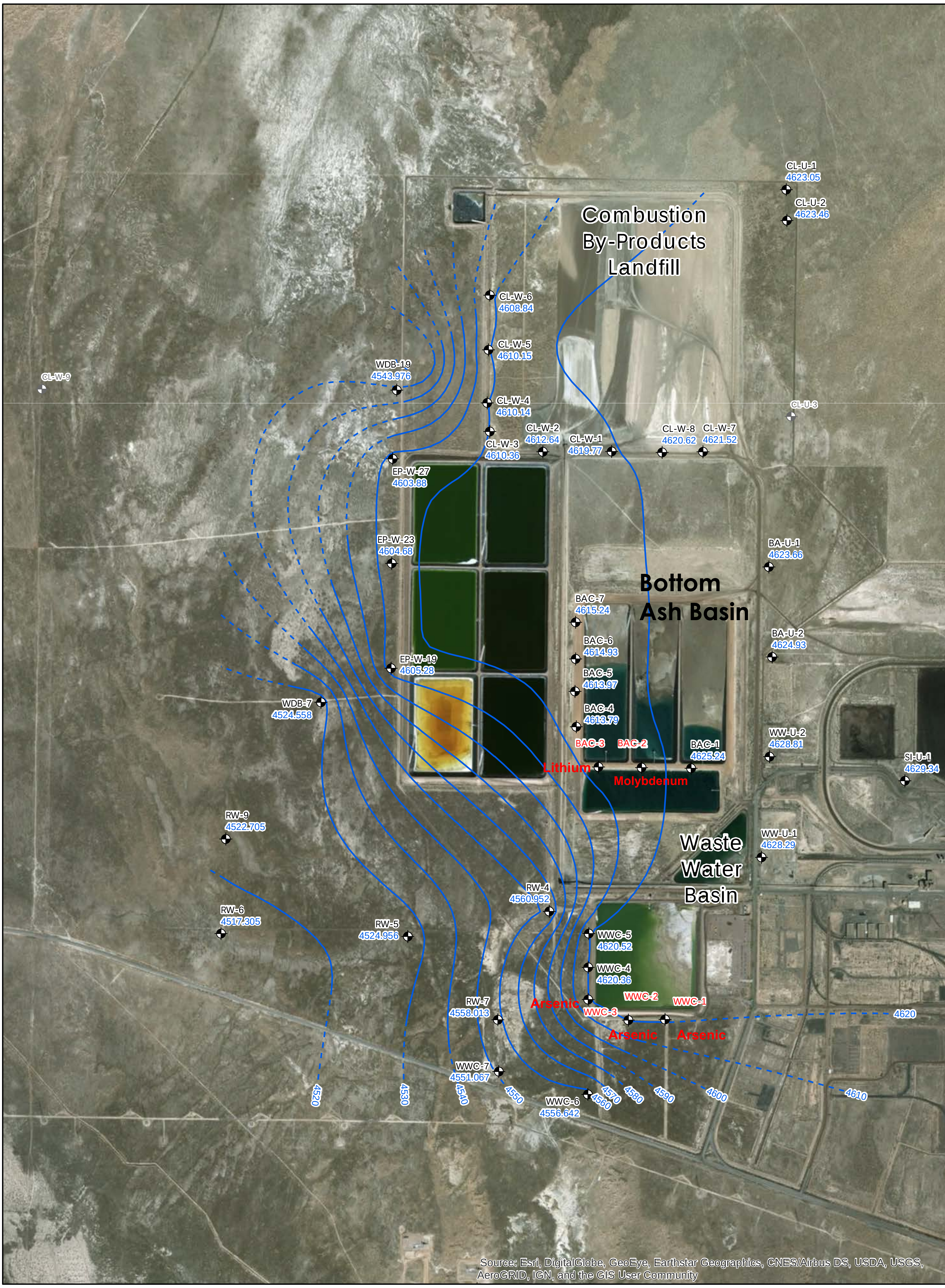
FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
203709098	CK	ALL		11/12/18

January 9, 2019

Figure 6. October 2018 Appendix IV Constituent Exceedances

Q:\active\203709098 Intermountain Power\GIS\2018_11\fig12_Oct2018GWE_20181105.mxd



LEGEND:

- MONITORING WELL (GREYED WHEN NOT USED FOR CONTOURING) Red Constituents Exceed GWPS.
- GROUND WATER CONTOUR

NOTE:

1) DATA COLLECTED OCTOBER 2018
2) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL

0 1,300 2,600
Feet
1 in = 1,350 ft

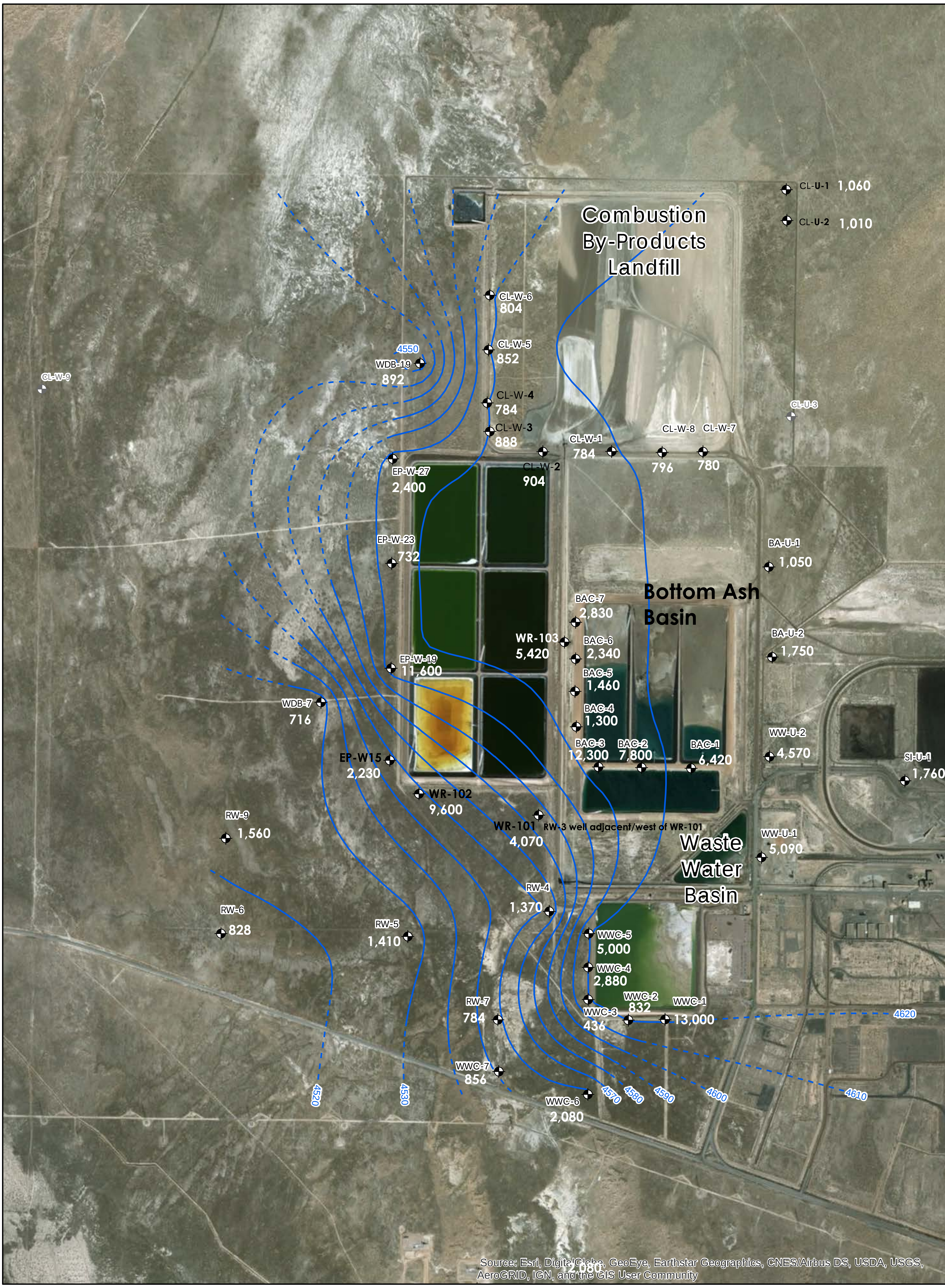
Stantec

FOR: INTERMOUNTAIN POWER SERVICE CORP. INTERMOUNTAIN GENERATION FACILITY DELTA, UTAH		Appendix IV Constituent Exceedances superimposed on OCTOBER 2018 POTENTIOMETRIC SURFACE MAP		FIGURE: 6
JOB NUMBER: 203709098	DRAWN BY: CK	CHECKED BY: ALL	APPROVED BY:	DATE: 11/12/18

January 9, 2019

Figure 7. October 2018 TDS Concentration Map

Q:\active\203709098 Intermountain Power\GIS\2018_11\fig12_Oct2018GWE_20181105.mxd



LEGEND:

- MONITORING WELL TDS Concentration (milligrams per Liter; i.e., ppm)
- GROUND WATER CONTOUR

NOTE:

1) DATA COLLECTED OCTOBER 2018
2) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL

0 1,300 2,600
Feet
1 in = 1,350 ft

Stantec

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

OCTOBER 2018
TDS Concentrations
Superimposed atop
Oct. 2018 Potentiometric Map

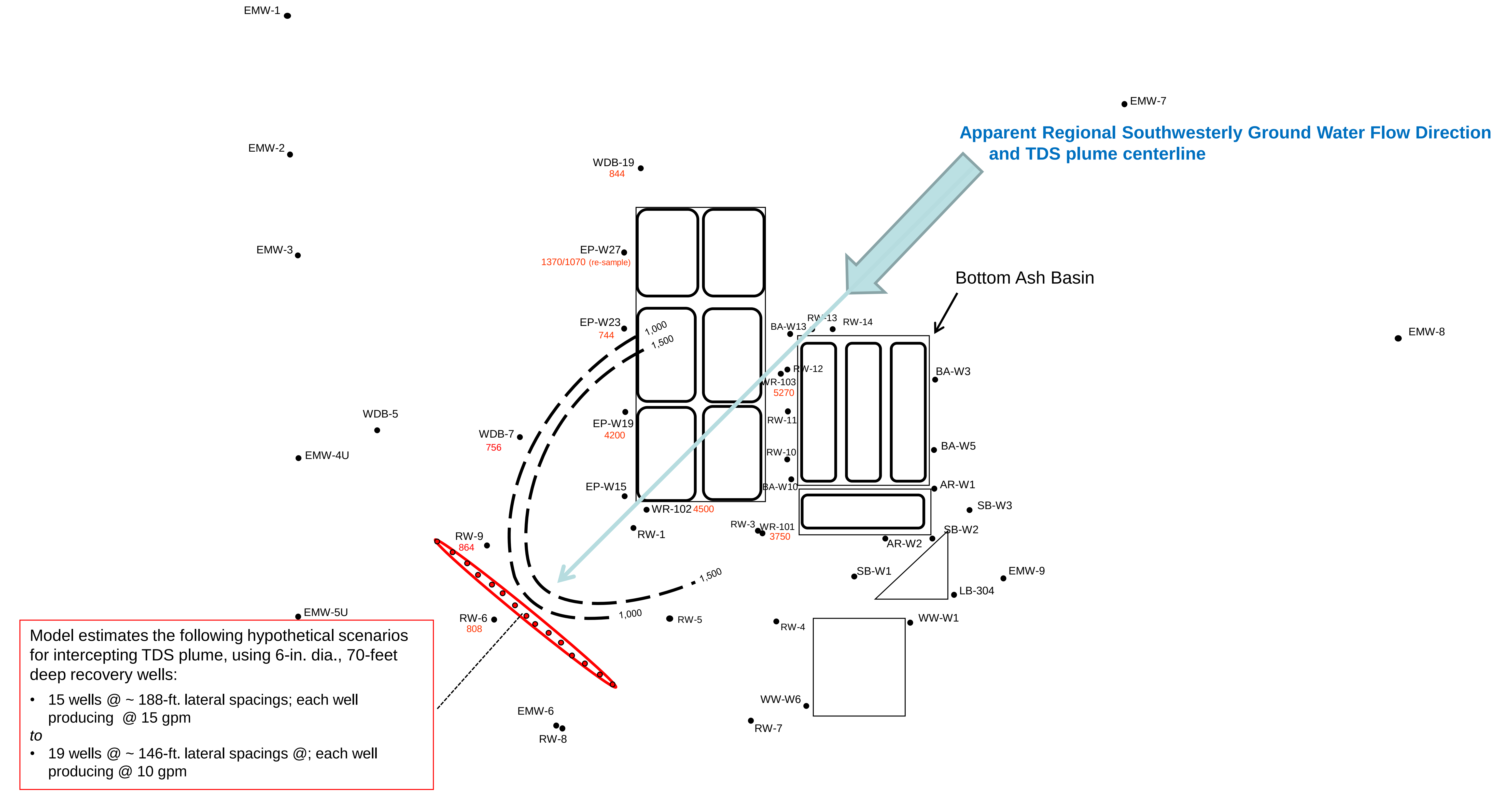
FIGURE: 7

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
203709098	JR	ALL		11/21/18

January 9, 2019

Figure 8. Excerpted Figure 2 from IPSC's 2016 Updated Corrective Action Plan Report

Excerpted Figure 2 from IPSC's 2016 Updated Corrective Action Plan Report



Stantec

INTERMOUNTAIN GENERATING FACILITY

850 WEST BRUSH WELLMAN ROAD - DELTA, MILLARD COUNTY, UTAH

Figure 8. Model-Simulated, Recovery Well Placement for TDS Plume Containment

LEGEND

● Monitoring Well Location

- 5 - Total Dissolved Solids (TDS) Iso-Concentration Contours

Concentration values in milligrams / liter (ppm) ; April 2016

0 FEET 2000

SCALE

N

TABLE 1 GROUND WATER 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*)
Combustion By-Products Landfill Wells					
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	4555.98
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	4606.01
Bottom Ash Basin Wells					
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
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*)
Waste Water Basin Wells					
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
WC-U-1	8/11/2015	4-inch PVC	70	60-70	4665.03
WC-U-2	8/11/2015	4-inch PVC	75	65-75	4665.46
WWC-6	3/24/2018	4-inch PVC	87	67-77	4576.26
WWC-7	3/22/2018	4-inch PVC	87	77-87	4570.78
SI-U-1	8/12/2015	4-inch PVC	79	69-79	4664.59

BGS = Below Ground Surface
MSL = Mean Sea Level

TABLE 2 GROUND WATER LEVEL MEASUREMENT AND WATER QUALITY ANALYTICAL RESULTS

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

Assessment Well Levels

Well	Depth	Date
RW-4	20.49	10/24/2018
RW-5	46.01	10/24/2018
RW-7	14.55	10/24/2018
WDB-19	28.97	10/24/2018
WWC-6	19.62	10/24/2018
WWC-7	19.71	10/24/2018

Round 1

Landfill Wells	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
	Results																						
CL-U-1	0	68.9	418	0.813	7.82	131	1040	0	0.0378	0.126	0	0	0.00537	0	0	0.346	0	0.00459	0	0	0.52	0.5	1.02
CL-U-2	0	73.8	404	0.611	7.73	132	1020	0	0.0317	0.129	0	0	0.00613	0	0	0.325	0	0.00406	0	0	0.55	1.2	1.75
CLW-1	0	55.7	322	0.844	7.95	76.5	832	0	0.0264	0.105	0	0	0.00814	0	0	0.3	0	0.00574	0	0	0.56	1.6	2.16
CLW-2	0	53.9	432	0.695	7.75	108	976	0	0.0283	0.0957	0	0	0.00576	0	0	0.36	0	0.00472	0	0	0.51	1.1	1.61
CLW-3	0	45	367	0.948	7.86	123	928	0	0.0375	0.111	0	0	0.00346	0	0	0.337	0	0.00492	0	0	0.4	1.3	1.7
CLW-4	0	44.5	320	1.37	7.87	73.3	828	0	0.0308	0.122	0	0	0.00336	0	0	0.319	0	0.00584	0	0	0.34	1.9	2.24
CLW-5	0	38.4	345	1.51	7.81	88.3	872	0	0.0188	0.0864	0		0	0	0	0.0325	0	0.00841	0	0	0.37	1.6	1.97
CLW-6	0	33.6	325	1.38	7.71	74.5	820	0	0.0249	0.0879	0	0	0.00335	0	0	0.316	0	0.0104	0	0	0.37	0.63	1
CLW-7	0	47.3	339	0.792	7.81	66.4	812	0	0.0234	0.0593	0	0	0.00421	0	0	0.282	0	0.00331	0	0	0.14	0.52	0.66
CLW-8	0	43.6	324	0.797	7.8	70.5	772	0	0.0155	0.107	0	0	0.00463	0	0	0.285	0	0.00626	0	0	0.4	0.74	1.14
CLW-9																							
CL-U-3																							

Round 1

Landfill Wells	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
CLW-9							
CL-U-3							

Bottom Ash	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
	Results																						
BA-U-1	0	51.4	430	1.21	8.06	121	984	0	0.0163	0.133	0	0	0.00305	0	0	0.313	0	0.0408	0	0	0.66	0.7	1.36
BA-U-2	0	53	343	0.727	8.9	48.9	82.4	0	0.0154	0.148	0	0	0.00971	0	0	0.297	0	0.0121	0	0	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	0	0.00503	0.00605	0	1.52	0	0.143	0.0204	0	0.71	1.6	2.31
BAC-2	10.7	267	2000	0.741	7.29	3620	7820	0	0.0386	0.0472	0	0	0.0116	0	0	1.38	0	0.151	0.0164	0	0.48	0.94	1.42
BAC-3	6.09	387	2900	0.648	7.6	3840	9800	0	0.0191	0.0827	0	0	0.0615	0	0	2.13	0	0.0367	0.019	0	0.99	1.1	2.09
BAC-4	0	53	473	1.35	7.96	181	1150	0	0.0407	0.0821	0	0	0.0022	0	0	0.476	0	0.0104	0	0	0.19	0.5	0.69
BAC-5	0	51.1	483	1.11	7.83	129	1010	0	0.0357	0.0928	0	0	0.0161	0	0	0.479	0	0.00926	0	0	0.29	0.96	1.25
BAC-6	4.36	142	516	0.754	7.68	1080	2410	0	0.0134	0.0622	0	0	0.0363	0	0	0.599	0	0.0968	0	0	0.39	1.4	1.79
BAC-7	4.65	148	665	1.01	7.77	1360	2910	0	0.0191	0.0577	0	0	0.0264	0	0	0.681	0	0.0699	0.00276	0	0.46	0.92	1.38

Bottom Ash	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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	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
	Results																						
SI-U-1	0.594	171	667	0	7.4	918	2300	0	0.00266	0.112	0	0	0.0099	0	0	0.49	0	0.00554	0	0	0.56	1.7	2.26
WW-U-1	1.05	374	2180	0	7.06	1470	5430	0	0.00453	0.178	0	0	0.0032	0	0	0.983	0	0.00619	0.00549	0	1	2.3	3.3
WW-U-2	1.6	358	2430	0	7.23	1370	5540	0	0.00309	0.123	0	0	0.00582	0.0072	0	0.934	0	0.0237	0.00543	0	0.84	2.1	2.94
WWC-1	9.62	561	4840	0	7.19	3150	11800	0	0.0181	0.0536	0	0	0.0139	0	0	2.69	0.00031	0.00701	0.0152	0	0.31	0.83	1.14
WWC-2	0	66.5	381	0.158	7.91	147	940	0	0.0155	0.0511	0	0	0.00348	0	0	0.241	0	0.00383	0	0	0.12	1.1	1.22
WWC-3	0	34.5	284	1.01	8.11	82.2	688	0	0.0102	0.0638	0	0	0.00577	0	0	0.243	0	0.0459	0	0	0.32	0.55	0.87
WWC-4	1.09	247	1270	0.387	7.61	800	3250	0	0.0116	0.09	0	0	0.00877	0	0	0.909	0	0.00467	0.00207	0	0.5	0.45	0.95
WWC-5	2.4	345	1810	0.331	7.47	1610	5020	0	0.00783	0.103	0	0	0.00892	0.0055	0	4.41	0	0.0265	0	0	0.51	1.1	1.61
WWC-6																							
WWC-7																							

Waste Water	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
WWC-6							
WWC-7							

Date 12/14/2015

Results below reporting limit are recorded as 0.

Date

Round 2

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	47.7	391	0.839	8.52	123	908	0	0.0415	0.0953	0	0	0	0	0	0.401	0	0.00733	0	0	0.27	1.6	1.87
CL-U-2	0	59.9	372	0.873	7.75	119	940	0	0.0243	0.0934	0	0	0	0	0	0.387	0	0.00414	0	0	0.28	1	1.28
CLW-1	0	35.1	301	0.834	7.89	71.6	808	0	0.0266	0.0648	0	0	0.00235	0	0	0.361	0	0.00506	0	0	0.36	1.5	1.86
CLW-2	0	45.9	378	1.18	7.66	90.5	936	0	0.0243	0.0882	0	0	0	0	0	0.438	0	0.00481	0	0	0.51	0.53	1.04
CLW-3	0	40.5	336	1.35	7.92	96	884	0	0.0437	0.103	0	0	0	0	0	0.435	0	0.0049	0	0	0.47	1.1	1.57
CLW-4	0	32.1	282	1.53	7.87	80.9	776	0	0.0271	0.109	0	0	0	0	0	0.375	0	0.00762	0	0	0.37	0.7	1.07
CLW-5	0	35.4	318	1.82	7.91	85.7	824	0	0.0214	0.0869	0	0	0	0	0	0.411	0	0.00922	0	0	0.27	0.32	0.59
CLW-6	0	32.1	306	1.72	7.97	75.4	816	0	0.0246	0.095	0	0	0	0	0	0.4	0	0.0117	0	0	0.02	0.96	0.98
CLW-7	0	42.8	290	0.825	7.65	67.6	832	0	0.0239	0.0794	0	0	0	0	0	0.327	0	0.146	0	0	0.14	0.29	0.43
CLW-8	0	41.5	293	0.782	7.8	70.3	808	0	0.022	0.0839	0	0	0.00224	0	0	0.35	0	0.00499	0	0	0.32	0.32	0.64
CLW-9																							
CL-U-3																							

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	28.7	258	1.67	8.55	64.2	852	0	0.023	0.0969	0	0	0	0	0	0.376	0	0.0359	0	0	0.33	1.3	1.63
BA-U-2	0	67.4	529	0.938	8.02	55.7	1230	0	0.0199	0.175	0	0	0	0	0	0.514	0	0.00298	0	0	0.2	1	1.2
BAC-1	2.85	155	1730	0	7.86	1390	5240	0	0.0174	0.39	0	0	0.00536	0	0	0.63	0	0.0607	0.0131	0	0.96	1.6	2.56
BAC-2	9.83	196	1600	0	7.35	2900	7640	0	0.0411	0.0385	0	0	0.00742	0	0.00221	1.22	0	0.167	0.0128	0	0.4	2.5	2.9
BAC-3	6.55	406	3240	0	7.62	3960	10400	0	0.0192	0.0553	0	0	0.00676	0	0	1.12	0	0.0337	0.0184	0	0.44	0.68	1.12
BAC-4	0	57.4	488	1.36	7.87	191	1290	0	0.0371	0.0806	0	0	0	0	0	0.532	0	0.0106	0	0	0.48	0.5	0.98
BAC-5	0	41.3	433	1.34	7.95	111	1010	0	0.0392	0.0736	0	0	0	0	0	0.476	0	0.00758	0	0	0.25	-0.03	0.22
BAC-6	2.67	98.4	491	0.734	7.72	636	1880	0	0.0144	0.0736	0	0	0	0	0	0.597	0	0.0569	0	0	0.61	0.6	1.21
BAC-7	4.43	132	623	1.07	7.89	1230	2980	0	0.0225	0.0372	0	0	0	0	0	0.699	0	0.0681	0.00274	0	0.16	0.51	0.67

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	168	752	0.557	7.65	665	2320	0	0.00781	0.0846	0	0	0.00346	0	0	0.634	0	0.00671	0	0	0.43	-0.16	0.27
WW-U-1	1.03	346	2430	0	7.23	1440	5330	0	0.00446	0.123	0	0	0	0	0	1.33	0	0.00669	0.00432	0	1	2.2	3.2
WW-U-2	1.59	362	2410	0	7.34	1370	5780	0	0.00846	0.0761	0	0	0.00735	0	0	1.35	0	0.0126	0.0108	0	0.51	1.2	1.71
WWC-1	6.01	458	4530	0.256	7.24	2710	10800	0	0.00331	0.072	0	0	0.00369	0.00842	0	1.08	0	0.0103	0.00919	0	0.91	1.6	2.51
WWC-2	0	61.3	352	0.208	7.97	131	932	0	0.0147	0.0421	0	0	0.00335	0	0	0.162	0	0.00391	0	0	0.18	1	1.18
WWC-3	0	29.2	203	0.845	8.2	78.5	660	0	0.021	0.0357	0	0	0	0	0	0.172	0	0.00593	0	0	0.16	0.52	0.68
WWC-4	0.826	185	1100	0.39	7.31	716	3100	0	0.00923	0.101	0	0	0	0	0	0.75	0	0.00783	0	0	0.6	0.84	1.44
WWC-5	1.59	320	1640	0.319	7.22	1210	4790	0	0.00371	0.0882	0	0	0	0	0	1.41	0	0.0205	0.00345	0	0.52	1.9	2.42
WWC-6																							
WWC-7																							

Date 2/29/2016

Results below reporting limit are recorded as 0.

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
CLW-9							
CL-U-3							

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	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
WWC-6							
WWC-7							

Date

Round 3

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	51.2	414	1.01	7.83	122	1080	0	0.0507	0.0887	0	0	0	0	0	0.378	0	0.00491	0	0	0.11	0.72	0.83
CL-U-2	0	53.7	390	1.14	7.75	121	976	0	0.0245	0.0933	0	0	0	0	0	0.346	0	0.00391	0	0	0.26	1.5	1.76
CLW-1	0	34.6	312	1.13	7.9	70.1	716	0	0.0285	0.0621	0	0	0	0	0	0.318	0	0.00438	0	0	0.28	0.89	1.17
CLW-2	0	43.9	402	1.21	7.84	87.9	976	0	0.0264	0.0819	0	0	0	0	0	0.396	0	0.00427	0	0	0.25	1.1	1.35
CLW-3	0	36.2	346	1.3	7.86	104	876	0	0.0402	0.0992	0	0	0	0	0	0.375	0	0.00463	0	0	0.35	1.2	1.55
CLW-4	0	30.6	294	1.58	7.79	77.9	748	0	0.0196	0.119	0	0	0	0	0	0.338	0	0.0092	0	0	0.45	0.72	1.17
CLW-5	0	33	336	1.81	7.86	84.9	848	0	0.0182	0.0851	0	0	0	0	0	0.352	0	0.00868	0	0	0.27	0.65	0.92
CLW-6	0	29.8	313	1.73	7.9	73.2	756	0	0.0181	0.0901	0	0	0	0	0	0.333	0	0.0105	0	0	0.34	1.4	1.74
CLW-7	0	39.3	328	1.16	7.64	67.4	732	0	0.0246	0.0581	0	0	0.00891	0	0	0.331	0	0.00638	0	0	0.19	0.55	0.74
CLW-8	0	40.3	312	1.08	7.82	69.7	808	0	0.0225	0.0797	0	0	0	0	0	0.32	0	0.00435	0	0	0.27	0.32	0.59
CLW-9																							
CL-U-3																							

Round 3

Landfill Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
CL-U-1	18.94	8.04	-204	1910	22.6	1.2	1.22
CL-U-2	18.47	7.7	-136	1900	1	2.72	1.22
CLW-1	23.71	7.77	62	1550	0	1.34	0.99
CLW-2	22.15	7.66	-169	1840	0	1.31	1.17
CLW-3	20.8	7.71	-225	1720	0.8	1.8	1.1
CLW-4	19.51	7.8	-235	1480	0	4.39	0.95
CLW-5	21.24	7.77	-209	1570	11.5	4.22	1.01
CLW-6	18.81	7.87	-235	1600	0	1.7	1.02
CLW-7	16.73	7.62	66	1580	8.9	3.82	1.01
CLW-8	20.93	7.66	55	1510	0	12.58	0.966
CLW-9							
CL-U-3							

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	195	1130	0.801	7.63	339	2520	0	0.0177	0.0935	0	0	0	0	0	0.773	0	0.00317	0.00426	0	0.3	1.6	1.9
BA-U-2	0	15.9	284	0.865	12	40.6	720	0	0	0.128	0	0	0.0032	0	0	0.315	0	0.016	0	0	0.22	1.5	1.72
BAC-1	4.73	191	2240	0.402	7.59	1840	6420	0	0.0164	0.081	0	0	0.0033	0	0	1.3	0	0.0669	0.0168	0	0.51	1.3	1.81
BAC-2	11.2	216	1650	0.986	7.17	3220	7520	0	0.0416	0.0248	0	0	0.00488	0	0	1.32	0	0.14	0.0142	0	0.17	1.6	1.77
BAC-3	6.82	445	3230	0.794	7.42	4490	10900	0	0.0158	0.048	0	0	0.00707	0	0	2.53	0	0.0269	0.0198	0	0.25	1.6	1.85
BAC-4	0	66.1	551	1.38	7.73	223	1280	0	0.0334	0.0772	0	0	0.00461	0	0	0.509	0	0.0122	0	0	0.16	0.68	0.84
BAC-5	0	50.4	541	1.26	7.79	122	1220	0	0.0337	0.0839	0	0	0	0	0	0.494	0	0.00738	0	0	0.11	1.7	1.81
BAC-6	1.7	89.5	521	1.04	7.72	448	1560	0	0.0122	0.0859	0	0	0	0	0	0.542	0	0.0359	0	0	0.27	0.76	1.03
BAC-7	4.51	132	685	1.31	7.69	1370	2870	0	0.0234	0.0315	0	0	0	0	0	0.674	0	0.0749	0.00319	0	0.17	2.4	2.57

Bottom Ash	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
BA-U-1	18.51	7.48	-114	4730	4.9	1.73	3.03
BA-U-2	20.17	11.9	-206	1980	5.1	4.04	1.26
BAC-1	20.91	7.43	-5	10.3	33.2	3.43	6.41
BAC-2	19.81	7.01	33	11.6	2	0.69	7.18
BAC-3	18.81	7.19	16	16.6	2.6	1.26	10.3
BAC-4	18.21	7.71	83	2490	2.6	3.05	1.59
BAC-5	18.58	7.75	51	2260	0	1320	1.45
BAC-6	20.42	7.7	50	2740	0.4	21.84	1.75
BAC-7	21.43	7.63	-7	4510	8	15.04	2.89

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	129	901	0.564	7.6	318	1880	0	0.00989	0.0929	0	0	0.0156	0	0	0.499	0	0.00411	0	0	0.45	0.64	1.09
WW-U-1	1.18	296	2030	0.386	7.21	1300	5820	0	0.0052	0.115	0	0	0	0	0	1	0	0.00888	0.00637	0	0.64	0.92	1.56
WW-U-2	1.49	412	2300	0.534	7.33	1180	5400	0	0.00538	0.0746	0	0	0.0114	0	0	1.08	0	0.0126	0.0107	0	0.64	1.1	1.74
WWC-1	3.59	526	3950	0	7.12	1990	8820	0	0.00401	0.077	0	0	0	0.00532	0	2.18	0	0.00653	0.00824	0	0.47	2	2.47
WWC-2	0	59.1	369	0.833	7.79	145	956	0	0.0151	0.0408	0	0	0	0	0	0.225	0	0.00402	0	0	0.22	0.39	0.61
WWC-3	0	26.4	197	1.02	8.12	85.6	664	0	0.0213	0.0328	0	0	0	0	0	0.23	0	0.00574	0	0	0.13	3.3	3.43
WWC-4	0.627	138	902	0.576	7.57	406	2010	0	0.00498	0.0768	0	0	0	0	0	0.606	0	0.0082	0	0	0.27	1.7	1.97
WWC-5	1.65	406	1730	0.3	7.24	1140	5060	0	0.00608	0.067	0	0	0	0	0	1.4	0	0.0119	0.00363	0	0.42	0.85	1.27
WWC-6																							
WWC-7																							

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	18	7.54	-69	3350	0.3	8.11	2.14
WW-U-1	22.73	7.15	34	7560	0	4.74	4.76
WW-U-2	18.42	7.25	-66	8820	25.9	1.6	5.56
WWC-1	18.38	6.9	62	14.7	1.6	1.86	9.13
WWC-2	18.22	7.74	-101	1.74	1.9	5.2	1.12
WWC-3	16.62	7.99	-168	1.2	0	0.59	0.765
WWC-4	16.85	7.43	-8	3.63	1.2	0.85	2.32
WWC-5	17.35	7.01	15	7.44	1	0.78	4.69
WWC-6							
WWC-7							

Date 6/13/2016

Results below reporting limit are recorded as 0.

Date

Round 4

Landfill Wells	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
	Results																						
CL-U-1	0	54.8	424	1.03	7.63	124	1030	0	0.0301	0.0911	0	0	0	0	0	0.375	0	0.00428	0	0	0.36	0.44	0.8
CL-U-2	0	57.7	406	1.17	7.69	113	948	0	0.0265	0.0961	0	0	0.00227	0	0	0.351	0	0.00508	0	0	0.31	1.1	1.41
CLW-1	0	35	315	1.18	7.89	65.4	832	0	0.0279	0.0594	0	0	0	0	0	0.316	0	0.00454	0	0	0.52	0.86	1.38
CLW-2	0	46.8	424	1.29	7.75	89.2	992	0	0.0284	0.0823	0	0	0	0	0	0.391	0	0.00462	0	0	0.31	0.62	0.93
CLW-3	0	38.7	349	1.33	7.75	109	896	0	0.0412	0.0995	0	0	0	0	0	0.368	0	0.00472	0	0	0.3	0.15	0.45
CLW-4	0	32.1	318	1.53	7.81	84.5	808	0	0.0316	0.104	0	0	0	0	0	0.336	0	0.00577	0	0	0.39	0.62	1.01
CLW-5	0	34.3	350	1.83	7.75	92.1	860	0	0.0189	0.0803	0	0	0	0	0	0.346	0	0.00798	0	0	0.24	0.27	0.51
CLW-6	0	31.5	331	1.73	7.84	77.1	812	0	0.0164	0.0966	0	0	0	0	0	0.342	0	0.011	0	0	0.2	1	1.2
CLW-7	0	42.1	336	1.1	7.71	70	760	0	0.024	0.0529	0	0	0	0	0	0.302	0	0.00396	0	0	0.17	0.33	0.5
CLW-8	0	40.1	327	1.08	7.73	75	720	0	0.0224	0.0761	0	0	0	0	0	0.308	0	0.00459	0	0	0.35	1	1.35
CLW-9																							
CL-U-3																							

Bottom Ash	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
	Results																						
BA-U-1	0	180	1170	0.888	7.62	327	2390	0	0.0191	0.0802	0	0	0	0	0	0.684	0	0.00386	0.00384	0	0.45	0.84	1.29
BA-U-2	0	10.4	317	0.975	11.8	39.9	748	0	0.00225	0.114	0	0	0.00216	0	0	0.337	0	0.0147	0	0	0.26	1.1	1.36
BAC-1	4.95	221	2520	0.401	7.52	2380	7210	0	0.0146	0.0643	0	0	0.0028	0	0	1.42	0	0.0603	0.0148	0	0.63	0.64	1.27
BAC-2	10.5	203	1640	1.03	7.22	3180	7620	0	0.0431	0.0237	0	0	0.0081	0	0	1.17	0	0.166	0.0136	0	0.33	0.23	0.56
BAC-3	6.77	399	3350	1.28	7.36	4630	11700	0	0.0213	0.0436	0	0	0.00386	0	0	2.37	0	0.0294	0.019	0	0.38	0.76	1.14
BAC-4	0	56.1	498	1.35	7.62	210	1460	0	0.0358	0.0757	0	0	0	0	0	0.508	0	0.0103	0	0	0.19	0.83	1.02
BAC-5	0	49.4	561	1.25	7.68	127	1200	0	0.0331	0.0879	0	0	0	0	0	0.538	0	0.0077	0	0	0.1	0.46	0.56
BAC-6	1.38	80.2	546	0.901	7.61	502	1540	0	0.0115	0.0781	0	0.000677	0.00283	0	0	0.54	0	0.034	0	0	0.31	0.24	0.55
BAC-7	3.96	126	612	1.28	7.68	1370	2770	0	0.0232	0.0274	0	0	0	0	0	0.669	0	0.0942	0.00257	0	0.37	-0.17	0.2

Waste Water	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
	Results																						
SI-U-1	0	131	922	0.564	7.57	281	1880	0	0.00926	0.0858	0	0	0.00217	0	0	0.467	0	0.00295	0	0	0.45	0.96	1.41
WW-U-1	1.25	304	2200	0.327	7.21	1280	5270	0	0.00439	0.0916	0	0	0.00337	0	0	1.01	0	0.00835	0.00689	0	0.54	2	2.54
WW-U-2	0.641	308	2140	0.614	7.42	854	4550	0	0.00258	0.117	0	0	0.00424	0	0	0.994	0	0.0342	0.00617	0	0.82	1.6	2.42
WWC-1	10.2	457	4680	0.213	7.11	3130	12100	0	0.02	0.0335	0	0	0	0	0	2.41	0.00019	0.00966	0.0145	0	0.33	0.86	1.19
WWC-2	0	57.9	389	0.508	7.86	151	960	0	0.0152	0.0406	0	0	0	0	0	0.243	0	0.0034	0	0	0.69	1.2	1.89
WWC-3	0	27.3	220	1.03	8.02	78	628	0	0.0217	0.0342	0	0	0	0	0	0.241	0	0.00559	0	0	0.2	-0.34	-0.14
WWC-4	1.17	225	1330	0.422	7.37	868	3230	0	0.0131	0.065	0	0	0	0	0	0.879	0	0.00237	0.00238	0	0.27	0.48	0.75
WWC-5	2.87	326	1920	0.366	7.18	1700	5440	0	0.00717	0.0439	0	0	0	0	0	1.33	0	0.00742	0.00312	0	0.41	0.51	0.92
WWC-6																							
WWC-7																							

Date 8/26/2016

Results below reporting limit are recorded as 0.

Round 4

Landfill Wells	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
CLW-9							
CL-U-3							

Bottom Ash	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
WWC-6							
WWC-7							

Date

Round 5

Landfill Wells	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
	Results																						
CL-U-1	0	57.4	424	0.959	7.7	115	912	0	0.037	0.089	0	0	0	0	0	0.217	0	0.00404	0	0	0.25	0.18	0.43
CL-U-2	0	59.5	395	0.99	7.73	113	864	0	0.0269	0.101	0	0	0	0	0	0.206	0	0.00401	0	0	0.36	0.84	1.2
CLW-1	0	38.9	325	1.15	7.8	67.8	824	0	0.0295	0.0668	0	0	0	0	0	0.189	0	0.0043	0	0	0.27	0.19	0.46
CLW-2	0	49.2	422	1.13	7.82	85.3	984	0	0.0258	0.0855	0	0	0	0	0	0.223	0	0.00456	0	0	0.31	0.34	0.65
CLW-3	0	40.8	366	1.19	7.83	100	944	0	0.0412	0.104	0	0	0	0	0	0.214	0	0.00508	0	0	0.35	0.13	0.48
CLW-4	0	34.6	335	1.39	7.84	85.9	828	0	0.0385	0.0932	0	0	0	0	0	0.203	0	0.00414	0	0	0.59	-0.37	0.22
CLW-5	0	35.3	339	1.69	7.89	82.1	928	0	0.0206	0.0812	0	0	0	0	0	0.204	0	0.00723	0	0	0.31	0.84	1.15
CLW-6	0	33.9	325	1.46	7.85	77.9	972	0	0.0287	0.0908	0	0	0	0	0	0.203	0	0.00638	0	0	0.35	0.18	0.53
CLW-7	0	42.8	343	1.14	7.9	68.6	796	0	0.0235	0.0551	0	0	0.00234	0	0	0.182	0	0.00413	0	0	0.27	0.32	0.59
CLW-8	0	41.7	334	1.11	7.77	68.9	744	0	0.0258	0.0797	0	0	0	0	0	0.189	0	0.00428	0	0	0.37	-0.28	0.09
CLW-9																							
CL-U-3																							

Round 5

Landfill Wells	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
CLW-9							
CL-U-3							

Bottom Ash	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
	Results																						
BA-U-1	0	16.7	327	1.65	9.08	60.2	832	0	0.0362	0.0679	0	0	0	0	0	0.215	0	0.0163	0	0	0.67	0.13	0.8
BA-U-2	0	38.1	357	1.02	8.56	51.9	824	0	0.0234	0.131	0	0	0	0	0	0.21	0	0.00449	0	0	0.57	0.42	0.99
BAC-1	3.42	131	1850	0.437	8.8	1610	7720	0	0.0103	0.049	0	0	0.00612	0	0	0.402	0	0.0498	0.00852	0	0.34	0.27	0.61
BAC-2	9.71	216	1620	1.11	7.34	2980	7040	0	0.0444	0.0228	0	0	0.00644	0	0	0.414	0	0.165	0.0131	0	0.25	-0.03	0.22
BAC-3	7.04	401	3160	0.76	7.39	4260	11400	0	0.0226	0.0404	0	0	0.00362	0	0	0.812	0	0.0275	0.0195	0	0.24	0.14	0.38
BAC-4	0	59.2	534	1.34	7.8	222	1230	0	0.0352	0.0723	0	0	0.00212	0	0	0.243	0	0.00992	0	0	0.09	0.4	0.49
BAC-5	0	40.5	479	1.33	7.85	110	1070	0	0.0359	0.0909	0	0	0	0	0	0.219	0	0.00715	0	0	0.2	-0.01	0.19
BAC-6	4.35	133	606	0.97	7.61	1080	2620	0	0.022	0.0287	0	0	0.00257	0	0	0.266	0	0.0858	0.00369	0	0.13	0.69	0.82
BAC-7	3.97	135	628	1.42	7.69	1340	2880	0	0.0241	0.026	0	0	0.00217	0	0	0.279	0	0.0944	0.00279	0	0.26	1.1	1.36

Bottom Ash	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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	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
	Results																						
SI-U-1	0	132	863	0.514	7.52	286	1850	0	0.00895	0.0871	0	0	0	0	0	0.254	0	0.00276	0	0	0.32	0.11	0.43
WW-U-1	1.23	348	2190	0.346	7.18	1230	5370	0	0.0041	0.0771	0	0	0.00538	0	0	0.479	0	0.00891	0.00579	0	0.73	0.17	0.9
WW-U-2	1.47	383	2340	0.416	7.22	1120	5540	0	0.00573	0.0704	0	0	0.00396	0	0	0.512	0	0.0111	0.0116	0	0.78	0.46	1.24
WWC-1	9.83	513	4540	0.133	7.04	2960	12500	0	0.0197	0.0317	0	0	0.00348	0	0	0.819	0.000198	0.00936	0.0153	0	0.23	0.73	0.96
WWC-2	0	58.5	369	0.42	7.88	140	960	0	0.0129	0.0543	0	0	0.0243	0	0	0.112	0	0.00809	0	0	0.1	0.45	0.55
WWC-3	0	27.7	224	1.08	8.01	86.1	612	0	0.0218	0.0332	0	0	0	0	0	0.123	0	0.00543	0	0	0.07	0.1	0.17
WWC-4	1.19	227	1200	0.509	7.32	763	3200	0	0.0136	0.0629	0	0	0	0	0	0.351	0	0.00222	0.00216	0	0.08	0.75	0.83
WWC-5	3.02	343	1850	0.401	0.71	1570	5300	0	0.00778	0.0389	0	0	0.00238	0	0	0.497	0	0.00498	0.0041	0	0.43	1.1	1.53
WWC-6																							
WWC-7																							

Waste Water	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
WWC-6							
WWC-7							

Date 10/17/2016

Results below reporting limit are recorded as 0.

Date

Round 6

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	57.1	403	0.876	7.83	113	908	0	0.0322	0.0867	0	0	0	0	0	0.214	0	0.00365	0	0	0.62	0.22	0.62
CL-U-2	0	61.2	374	0.903	7.89	110	852	0	0.0272	0.0976	0	0	0	0	0	0.208	0	0.00386	0	0	0.4	0.39	0.4
CLW-1	0	38.4	295	1.05	7.83	62.4	768	0	0.0309	0.0631	0	0	0.0187	0	0	0.185	0	0.00654	0	0	0.41	0.78	1.2
CLW-2	0	49.7	377	1.07	7.85	92.9	936	0	0.0277	0.0811	0	0	0	0	0	0.219	0	0.00437	0	0	0.31	0.72	1
CLW-3	0	42.4	333	1.23	7.87	94.4	876	0	0.0423	0.103	0	0	0	0	0	0.214	0	0.00473	0	0	0.35	0.7	1.1
CLW-4	0	35.2	306	1.27	8.02	79.1	808	0	0.0388	0.0898	0	0	0	0	0	0.202	0	0.00439	0	0	0.39	0.12	0.39
CLW-5	0	36	320	1.71	7.88	79.9	748	0	0.0216	0.0801	0	0	0.00214	0	0	0.025	0	0.00666	0	0	0.4	0.38	0.4
CLW-6	0	33.4	302	1.48	7.91	66	752	0	0.0164	0.0976	0	0	0	0	0	0.193	0	0.00805	0	0	0.25	-0.35	0.25
CLW-7	0	46.4	312	1.02	7.68	61	824	0	0.0257	0.0545	0	0	0.00772	0	0	0.182	0	0.00425	0	0	0.14	0.18	0.14
CLW-8	0	42.8	301	1.03	7.71	63.8	772	0	0.0255	0.0707	0	0	0.012	0	0	0.189	0	0.00526	0	0	0.25	0.29	0.25
CLW-9																							
CL-U-3																							

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	24.5	259	1.57	8.59	48.8	648	0	0.0359	0.0856	0	0	0	0	0	0.193	0	0.0124	0	0	0.28	0.15	0.28
BA-U-2	0	3.76	328	0.886	12.1	39.2	728	0	0.00254	0.122	0	0	0	0	0	0.221	0	0.00986	0	0	0.3	0.47	0.3
BAC-1	4.01	188	2170	0	7.47	1650	6320	0	0.0202	0.279	0	0	0.0412	0	0	0.429	0	0.0391	0.0152	0	1.1	1.5	2.6
BAC-2	10.5	193	1480	0.871	7.2	2780	7320	0	0.0469	0.022	0	0	0.0145	0	0	0.44	0	0.194	0.0144	0	0.34	0.22	0.56
BAC-3	7.57	408	3140	0	7.36	4290	13000	0	0.0239	0.0376	0	0	0.00447	0	0	0.974	0	0.026	0.0211	0	0.2	0.5	0.7
BAC-4	0	59	461	1.13	7.68	206	1260	0	0.0362	0.0705	0	0	0.011	0	0	0.237	0	0.012	0	0	0.13	0.18	0.13
BAC-5	0	59.5	576	0.994	7.73	190	1430	0	0.032	0.0893	0	0	0.00204	0	0	0.277	0	0.00666	0	0	0.21	0.24	0.45
BAC-6	4.44	128	594	0.763	7.6	1040	2500	0	0.0237	0.0269	0	0	0.00205	0	0	0.28	0	0.0873	0.0045	0	0.12	-0.21	-0.09
BAC-7	3.31	151	591	0.936	7.43	1140	3120	0	0.0237	0.0253	0	0	0	0	0	0.327	0	0.0702	0.007	0	0.21	0.7	0.91

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	131	785	0.458	7.54	247	1760	0	0.00941	0.08	0	0	0	0	0	0.25	0	0.00227	0	0	0.33	0.24	0.33
WW-U-1	1.15	336	1880	0.2	7.26	1180	4890	0	0.00593	0.0568	0	0	0	0	0	0.477	0	0.00558	0.00583	0	0.53	0.89	1.42
WW-U-2	0.6	317	1860	0.438	7.38	734	4300	0	0.00355	0.095	0	0	0	0	0	0.479	0	0.021	0.00749	0	0.51	1.6	2.11
WWC-1	11.2	479	4510	0	6.98	2940	12200	0	0.0213	0.0288	0	0	0	0	0	0.932	0.000328	0.00995	0.0149	0	0.26	1.1	1.36
WWC-2	0	52	318	0.405	7.79	125	856	0	0.0149	0.0361	0	0	0	0	0	0.122	0	0.00357	0	0	0.17	0.61	0.78
WWC-3	0	25.7	195	0.852	8.13	76	680	0	0.0227	0.0302	0	0	0.00309	0	0	0.137	0	0.00537	0	0	0.24	-0.21	0.03
WWC-4	1.3	233	1250	0.319	7.38	819	3230	0	0.0135	0.061	0	0	0	0	0	0.382	0	0	0.00239	0	0.18	-0.2	-0.02
WWC-5	1.72	318	1520	0.292	7.13	1190	4560	0	0.01	0.0501	0	0	0	0	0	0.555	0	0.00523	0.00399	0	0.23	0.95	1.18
WWC-6																							
WWC-7																							

Date 3/23/2017

Results below reporting limit are recorded as 0.

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
CLW-9							
CL-U-3							

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	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
WWC-6							
WWC-7							

Date

Round 7

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	53	480	0.996	7.74	132	1010	0	0.0344	0.0826	0	0.00065	0	0	0	0.202	0	0.00402	0	0	0.36	0.95	1.31
CL-U-2	0	55.1	444	1	7.8	134	952	0	0.0247	0.0938	0	0	0	0	0	0.19	0	0.00408	0	0	2.7	1	3.7
CLW-1	0	36.4	322	1.06	7.85	68.2	772	0	0.0289	0.0615	0	0	0	0	0	0.173	0	0.00389	0	0	0.2	0.14	0.34
CLW-2	0	44.7	436	1.19	7.83	102	964	0	0.0246	0.0754	0	0	0.00411	0	0	0.211	0	0.00461	0	0	0.24	1	1.24
CLW-3	0	37.3	380	1.23	7.85	106	856	0	0.0378	0.0951	0	0	0	0	0	0.197	0	0.00498	0	0	0.27	0.29	0.56
CLW-4	0	30.6	345	1.44	7.89	86.3	816	0	0.0352	0.0885	0	0	0	0	0	0.189	0	0.00481	0	0	0.29	0.3	0.59
CLW-5	0	32.4	358	1.82	7.86	91.6	860	0	0.0203	0.0732	0	0	0	0	0	0.188	0	0.00572	0	0	1.4	1.2	2.6
CLW-6	0	31	336	1.61	7.9	77.5	768	0	0.02	0.0893	0	0	0	0	0	0	0.183	0	0.0068	0	0.01	0.5	0.51
CLW-7	0	41.5	352	1.01	7.88	70.4	832	0	0.0241	0.0514	0	0	0	0	0	0.169	0	0.0033	0	0	0.14	0.75	0.89
CLW-8	0	38.4	339	1.02	7.81	73.1	812	0	0.0239	0.0681	0	0	0	0	0	0.176	0	0.00391	0	0	0.18	0.81	0.99
CLW-9																							
CL-U-3																							

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	26.3	317	1.75	8.32	52.9	776	0	0.0323	0.0901	0	0	0	0	0	0.191	0	0.0109	0	0	0.15	0.73	0.88
BA-U-2	0	3.58	366	0.821	11.8	39.6	748	0	0	0.0899	0	0	0	0	0	0.215	0	0.0086	0	0	0.09	0.98	1.07
BAC-1	1.91	88.7	914	0.266	8.92	702	2920	0	0.0145	0.0563	0	0	0.00666	0	0	0.305	0	0.0317	0.00643	0	0.2	0.99	1.19
BAC-2	10.6	216	1730	0	7.21	3260	7720	0	0.042	0.0211	0	0	0.00799	0	0	0.586	0	0.177	0.0138	0	0.14	0.64	0.78
BAC-3	7.76	401	3510	0	7.29	4900	13200	0	0.0251	0.0316	0	0	0.00858	0	0	1.17	0	0.0292	0.0212	0	0.3	0.76	1.06
BAC-4	0	56.1	612	1.13	7.84	212	1220	0	0.0329	0.0666	0	0	0	0	0	0.228	0	0.0113	0	0	0.37	0.47	0.84
BAC-5	0	58.3	654	1.1	7.76	217	1180	0	0.0297	0.0881	0	0	0	0	0	0.259	0	0.00728	0	0	0.31	0.28	0.59
BAC-6	4.25	135	697	0.779	7.63	1110	2810	0	0.0229	0.0256	0	0	0	0	0	0.257	0	0.0921	0.00414	0	0.24	0.76	1
BAC-7	3.4	146	632	0.864	7.78	1290	3170	0	0.0154	0.0288	0	0	0.00398	0	0	0.36	0	0.0888	0.00457	0	2.5	0.88	3.38

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	116	763	0.522	7.56	427	1800	0	0.0101	0.0599	0	0.00128	0.00274	0	0	0.235	0	0.00233	0	0	0.2	1.3	1.5
WW-U-1	1.18	312	2340	0.181	7.41	1450	4540	0	0.00568	0.0521	0	0	0.00212	0	0	0.441	0	0.00556	0.00625	0	1.2	1.5	2.7
WW-U-2	0.741	338	2590	0.287	7.36	1040	12500	0	0.00325	0.0803	0	0	0.067	0	0	0.512	0	0.0226	0.00846	0	0.52	1.6	2.12
WWC-1	9.88	413	4410	0	7.14	2770	11000	0	0.0173	0.0326	0	0	0	0	0	1.11	0.000175	0.0147	0.0147	0	0.39	1.5	1.89
WWC-2	0	49.5	326	0.447	7.85	134	832	0	0.0141	0.0339	0	0	0	0	0	0.138	0	0.00405	0	0	0.24	0.24	0.48
WWC-3	0	25.9	220	0.974	8.12	84.3	696	0	0.0214	0.0281	0	0	0	0	0	0.146	0	0.00504	0	0	0.1	0.45	0.55
WWC-4	1.33	229	1330	0.466	7.22	912	3060	0	0.013	0.0545	0	0	0	0	0	0.421	0	0	0.00241	0	0.22	0.74	0.96
WWC-5	2.25	287	1790	0	7.49	1420	4810	0	0.00753	0.0379	0	0	0.00202	0	0	0.567	0	0.00531	0.00336	0	0.2	1.5	1.7
WWC-6																							
WWC-7																							

Date

Results below reporting limit are recorded as 0.

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	213	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
CLW-9							
CL-U-3							

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	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
WWC-6							
WWC-7							

Date

Round 8

Landfill Wells	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
	Results																						
CL-U-1	0	52.1	422	1.07	7.73	116	1130	0	0.0291	0.088	0	0	0	0	0	0.228	0	0.00398	0	0	0.25	1.6	1.85
CL-U-2	0	53.8	390	1.1	7.67	120	1060	0	0.0262	0.0941	0	0	0	0	0	0.212	0	0.00415	0	0	0.17	1.4	1.57
CLW-1	0	35.7	310	1.15	7.85	71.7	808	0	0.0308	0.0614	0	0	0	0	0	0.192	0	0.00407	0	0	0.21	1.7	1.91
CLW-2	0	43.5	407	1.23	7.76	97.3	1040	0	0.0257	0.0793	0	0	0	0	0	0.229	0	0.00467	0	0	0.12	3	3.12
CLW-3	0	36.2	347	1.34	7.8	100	884	0	0.0408	0.102	0	0	0	0	0	0.223	0	0.00474	0	0	0.16	1.1	1.26
CLW-4	0	30.5	313	1.6	7.81	85.1	856	0	0.0333	0.09	0	0	0.0516	0	0	0.199	0	0.0115	0	0	0.24	1.8	2.04
CLW-5	0	33.2	344	1.82	7.8	88.5	824	0	0.023	0.0727	0	0	0	0	0	0.211	0	0.0052	0	0	0.2	2.2	2.4
CLW-6	0	30.5	317	1.73	7.82	74.5	828	0	0.0143	0.0961	0	0	0	0	0	0.199	0	0.00721	0	0	0.29	1.7	1.99
CLW-7	0	45.5	319	1.11	7.7	64.5	868	0	0.0244	0.0539	0	0	0	0	0	0.189	0	0.00389	0	0	0.45	0.95	1.4
CLW-8	0	37.9	319	1.13	7.77	70.6	788	0	0.0252	0.0689	0	0	0	0	0	0.192	0	0.00431	0	0	0.25	1.6	1.85
CLW-9																							
CL-U-3																							

Bottom Ash	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
	Results																						
BA-U-1	0	169	1040	1.02	7.53	343	2310	0	0.0215	0.0745	0	0	0	0	0	0.368	0	0.00296	0.00375	0	0.07	1.3	1.37
BA-U-2	0	46.3	479	0.993	8.04	53.7	1140	0	0.0249	0.156	0	0	0	0	0	0.241	0	0.00294	0	0	0.24	1.5	1.74
BAC-1	4.86	229	2620	0.854	7.4	2150	8400	0	0.0148	0.702	0	0	0.114	0.00461	0	0.52	0	0.0467	0.0174	0	0.39	1.6	1.99
BAC-2	10.1	221	1690	1.33	7.62	2970	7940	0	0.0469	0.0202	0	0	0.00547	0	0	0.431	0	0.154	0.0149	0	0.11	0.14	0.25
BAC-3	8.76	353	3370	2.51	7.43	5340	12700	0	0.054	0.0306	0	0	0.0114	0	0	0.897	0	0.0525	0.0287	0	0.23	1.3	1.53
BAC-4	0	62.4	482	1.26	7.76	231	1280	0	0.0359	0.0703	0	0	0	0	0	0.262	0	0.0139	0	0	0.1	2.5	2.6
BAC-5	0	67.5	593	1.17	7.74	269	1450	0	0.0325	0.0877	0	0	0	0	0	0.294	0	0.00838	0	0	0.26	2.7	2.96
BAC-6	0.978	77.2	516	1.01	7.97	301	1510	0	0.0156	0.0833	0	0	0	0	0	0.265	0	0.0213	0	0	0.27	3.8	4.07
BAC-7	3.41	144	633	1.15	7.65	1220	2990	0	0.0191	0.0223	0	0	0	0	0	0.285	0	0.074	0.00446	0	0.15	0.84	0.99

Waste Water	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
	Results																						
SI-U-1	0	110	820	0.618	7.55	263	1810	0.002	0.00969	0.0783	0	0	0	0	0	0.257	0	0.00251	0	0	0.44	0.56	1
WW-U-1	1.2	311	2130	0.539	7.23	1280	5260	0	0.0055	0.0545	0	0	0.003309	0	0	0.459	0	0.00792	0.00697	0	0.34	1.2	1.54
WW-U-2	1.66	314	2280	0.721	7.31	1220	5510	0	0.0104	0.0659	0	0	0.00415	0	0	0.485	0	0.00647	0.0122	0	0.24	1.3	1.54
WWC-1	9.55	492	4430	0.507	7.37	2990	11500	0	0.0177	0.0272	0	0	0	0	0	0.755	0.000262	0.0068	0.014	0	0.26	1.2	1.46
WWC-2	0	53.6	347	0.452	7.78	137	936	0	0.0142	0.0361	0	0	0	0	0	0.112	0	0.00341	0	0	0.04	1.2	1.24
WWC-3	0	25.3	207	1.13	8.14	84	704	0	0.0207	0.0242	0	0	0	0	0	0.127	0	0.00477	0	0	0.08	2	2.08
WWC-4	1.11	201	1100	0.57	7.38	744	3280	0	0.0135	0.0529	0	0	0	0	0	0.313	0	0	0.00214	0	0.38	0.4	0.78
WWC-5	1.48	327	1620	0.544	7.16	1240	4590	0	0.0104	0.0438	0	0	0	0	0	0.496	0	0.00395	0.00407	0	0.41	0.65	1.06
WWC-6																							
WWC-7																							

Date

Results below reporting limit are recorded as 0.

Round 8

Landfill Wells	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
CLW-9							
CL-U-3							

Bottom Ash	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
WWC-6							
WWC-7							

Date

Round 9

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	62.6	402	0.971	7.66	94.9	1090	0	0.0283	0.0758	0	0	0.000529	0	0	0.209	0	0.00359	0	0	0.18	0.81	0.99
CL-U-2	0	64.1	352	0.895	7.65	92.7	980	0	0.0236	0.0873	0	0	0	0	0	0.194	0	0.00376	0	0	0.34	0.16	0.5
CLW-1	0	37.8	318	1.02	7.67	59.5	720	0	0.0265	0.053	0	0	0.0271	0	0	0.179	0	0.0068	0	0	0.09	0.53	0.62
CLW-2	0	51.4	421	1.13	7.8	79.4	1020	0	0.0258	0.0711	0	0	0	0	0	0.212	0	0.00439	0	0	0.24	0.94	1.18
CLW-3	0	42.8	334	1.23	7.86	82.3	956	0	0.0364	0.089	0	0	0.000505	0	0	0.2	0	0.00464	0	0	0.37	0.94	1.31
CLW-4	0	35.8	301	1.35	7.77	70.4	864	0	0.0352	0.0788	0	0	0.000762	0	0	0.189	0	0.00477	0	0	0.46	0.59	1.05
CLW-5	0	37.4	354	1.71	7.66	79.9	876	0	0.021	0.0671	0	0	0.000712	0	0	0.194	0	0.0054	0	0	0.15	0.96	1.11
CLW-6	0	34.2	292	1.62	7.74	60.4	916	0	0.0104	0.0885	0	0	0.000612	0	0	0.182	0	0.00729	0	0	0.56	0.48	1.04
CLW-7	0	47	316	0.972	7.59	51.3	792	0	0.0215	0.0475	0		0	0	0	0.183	0	0.00341	0	0	0.28	0.22	0.5
CLW-8	0	44.1	303	0.981	7.63	54.2	792	0	0.0231	0.0609	0	0	0	0	0	0.188	0	0.00376	0	0	0.25	0.8	1.05
CLW-9																							
CL-U-3																							

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
CLW-9							
CL-U-3							

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	33.5	296	1.64	8.05	50.7	872	0	0.0276	0.0837	0	0	0.00126	0	0	0.199	0	0.00914	0.0022	0	0.07	0.31	0.38
BA-U-2	0	46.2	399	0.943	8.2	46.9	1080	0	0.0227	0.125	0	0	0	0	0	0.209	0	0.00311	0.000691	0	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	0	0.00451	0	0	0.581	0	0.028	0.00924	0	0.31	0.48	0.79
BAC-2	9.89	283	1940	1.32	7.72	3070	8590	0	0.0508	0.0238	0	0	0.00777	0	0	0.524	0	0.142	0.0173	0	0.29	0.89	1.18
BAC-3	7.91	417	3480	1.62	7.84	4460	13000	0	0.0441	0.0331	0	0	0.00468	0	0	1.05	0	0.0396	0.0228	0	0.28	1.25	1.53
BAC-4	0	67.4	489	1.14	7.74	221	1300	0	0.0316	0.0605	0	0	0	0	0	0.249	0	0.0143	0	0	0.1	0.81	0.91
BAC-5	0	74.8	524	1.07	7.68	234	1480	0	0.0275	0.0706	0	0	0	0	0	0.284	0	0.00915	0	0	0.24	0.5	0.74
BAC-6	4.58	145	595	1.15	7.48	1100	2600	0	0.0214	0.0227	0	0	0	0	0	0.28	0	0.0898	0.00249	0	0.08	0.72	0.8
BAC-7	4.51	137	1980	0.388	7.57	1100	2730	0	0.0235	0.0195	0	0	0	0	0	0.288	0	0.0752	0.0048	0	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	129	739	0.506	7.5	201	1840	0	0.00929	0.0741	0	0	0.00137	0	0	0.241	0	0.00227	0	0	0.04	0.73	0.77
WW-U-1	1.34	339	1900	0.406	7.05	1050	5280	0	0.005	0.0486	0	0	0.00193	0	0	0.436	0	0.00702	0.00653	0	0.45	0.91	1.36
WW-U-2	1.47	370	2010	0.532	7.16	925	5260	0	0.00642	0.0499	0	0	0.00144	0	0	0.475	0	0.00467	0.0115	0	0.34	0.94	1.28
WWC-1	11.9	638	4100	0.236	6.89	2640	12700	0	0.02	0.0209	0	0	0	0	0	0.805	0.000205	0.00596	0.015	0	0.25	1.21	1.46
WWC-2	0	57.2	308	0.41	7.62	111	784	0	0.014	0.031	0	0	0	0	0	0.104	0	0.00356	0	0	0.1	0.55	0.65
WWC-3	0	28.9	200	0.985	7.96	67.8	628	0	0.0214	0.0245	0	0	0	0	0	0.131	0	0.00464	0	0	0.07	0.27	0.34
WWC-4	1.19	200	1010	0.365	7.3	593	2790	0	0.0128	0.0463	0	0	0	0	0	0.355	0	0	0	0	0.22	0.58	0.8
WWC-5	2.86	321	1600	0.384	6.92	1450	5030	0	0.0096	0.0302	0	0	0	0	0	0.511	0	0.00301	0.00415	0	0.2	1.64	1.84
WWC-6																							
WWC-7																							

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
WWC-6							
WWC-7							

Date 3/26/2018

Results below reporting limit are recorded as 0.

Date

Round 10

Landfill Wells	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
	Results																						
CL-U-1	0	54.7	372	0.853	7.7	98	984	0	0.0272	0.0799	0	0	0	0	0	0.208	0	0.00361	0	0	0.18	0.67	0.85
CL-U-2	0	56.4	365	0.862	7.64	108	952	0	0.0242	0.09	0	0	0	0	0	0.195	0	0.0038	0	0	-0.02	0.67	0
CLW-1	0	35.2	298	1.02	7.93	57.8	748	0	0.0285	0.0568	0	0	0.00102	0	0	0.184	0	0.00388	0.000928	0	0.29	1.01	1.3
CLW-2	0	44.6	399	1.14	7.79	86.8	980	0	0.0247	0.072	0	0	0	0	0	0.222	0	0.00433	0	0	0.25	0.96	1.21
CLW-3	0	37.5	323	1.16	7.91	94.2	876	0	0.0382	0.0948	0	0	0	0	0	0.214	0	0.00483	0	0	0.18	0.55	0
CLW-4	0	31.8	289	1.35	7.91	76.4	836	0	0.0358	0.0801	0	0	0	0	0	0.204	0	0.00459	0	0	0.13	0.85	0.85
CLW-5	0	33.1	318	1.59	7.79	75.3	804	0	0.0215	0.0689	0	0	0	0	0	0.21	0	0.00519	0	0	0.11	0.76	0
CLW-6	0	29.9	292	1.45	7.88	66.3	796	0	0.0109	0.0902	0	0	0	0	0	0.199	0	0.00711	0	0	0.27	0.85	1.12
CLW-7	0	40.6	321	0.945	7.68	58.6	900	0	0.0234	0.0514	0	0	0	0	0	0.186	0	0.00329	0	0	0.16	0.97	0.97
CLW-8	0	38.8	314	0.933	7.73	63.5	768	0	0.0244	0.0632	0	0	0	0	0	0.188	0	0.00359	0	0	0.18	1.26	1.26
CLW-9																							
CL-U-3																							

Round 10

Landfill Wells	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
CLW-9							
CL-U-3							

Bottom Ash	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
	Results																						
BA-U-1	0	140	799	0.818	7.54	254	1970	0	0.0199	0.0636	0	0	0.000506	0	0	0.337	0	0.00279	0.00324	0	0.39	1.94	2.33
BA-U-2	0	70.1	578	0.73	7.68	63.5	1330	0	0.0208	0.145	0	0	0	0	0	0.279	0	0.00215	0.00201	0	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	0	0.00714	0	0	0.314	0	0.0288	0.00694	0	0.24	1.06	1.3
BAC-2	8.44	263	2210	0.684	7.1	3430	7720	0	0.0445	0.021	0	0	0.00483	0	0	0.463	0	0.143	0.0154	0	0.12	1.03	1.03
BAC-3	7.26	347	3870	1.52	7.42	5080	12700	0	0.0588	0.0327	0	0	0.00511	0	0	0.944	0	0.0467	0.0229	0	0.27	1.44	1.71
BAC-4	0	62.8	510	1.01	7.95	221	1290	0	0.0322	0.0672	0	0	0	0	0	0.247	0	0.0165	0	0	0.06	0.92	0
BAC-5	0	73.5	591	0.916	7.82	302	1180	0	0.0292	0.0763	0	0	0	0	0	0.288	0	0.0128	0	0	0.19	1.56	1.75
BAC-6	4.12	134	694	0.582	7.65	1120	2980	0	0.0217	0.0235	0	0	0	0	0	0.25	0	0.0938	0.00229	0	0.14	1.02	1.02
BAC-7	4.36	130	709	1.09	7.74	1280	2760	0	0.0275	0.0204	0	0	0	0	0	0.269	0	0.0757	0.00541	0	0.06	0.87	0

Bottom Ash	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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	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
	Results																						
SI-U-1	0	123	873	0.499	7.62	209	2040	0	0.00839	0.0653	0	0	0.000602	0	0	0.254	0	0.00182	0	0	0.32	1.34	1.66
WW-U-1	1.19	289	1940	0.265	7.17	1140	5450	0	0.00477	0.0479	0	0	0.00124	0	0	0.443	0	0.00591	0.00663	0	0.23	1.49	1.72
WW-U-2	1.23	337	2130	1.01	7.3	985	5120	0	0.0102	0.0459	0	0	0.00137	0	0	0.508	0	0.00277	0.0112	0	0.05	0.93	0.93
WWC-1	8.22	504	4710	0.114	7.2	2730	11100	0	0.0173	0.0268	0	0	0	0	0	0.831	0.000168	0.00896	0.0139	0	0.25	1.16	1.16
WWC-2	0	50	340	0.358	7.91	119	852	0	0.0143	0.0338	0	0	0	0	0	0.11	0	0.00372	0	0	0.08	0.27	0
WWC-3	0	27.3	230	0.897	8.05	88.4	644	0	0.0226	0.0278	0	0	0	0	0	0.125	0	0.00527	0	0	-0.03	0.15	0
WWC-4	0.998	184	1080	0.435	7.43	620	2640	0	0.0129	0.0495	0	0	0	0	0	0.309	0	0.00215	0.00201	0	0.28	0.35	0
WWC-5	2.64	314	1820	0.219	7.26	1660	5200	0	0.0104	0.0327	0	0	0	0	0	0.472	0	0.00324	0.00395	0	0.1	1.58	1.58
WWC-6																							
WDB-7																							

Waste Water	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
WWC-6							
WWC-7							

Date 6/7/2018

Results below laboratory *Reporting Limit* (RL) are recorded as 0. *RLs* as follows:	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
	0.001	*0.002*	*0.002*	*0.002*	*0.005*	*0.002*	*0.004*	*0.002*	*0.1*	*0.00015*	*0.002*	*0.002*	*0.002*

Date

Round 11 (all results ppm)

Landfill Wells	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
	Results																						
CL-U-1	0	61.9	415	0.981	7.79	122	1060	0	0.029	0.0796	0	0	0	0	0	0.229	0	0.00383	0	0	0.09	0.32	0
CL-U-2	0	67.5	414	0.995	7.73	128	1010	0	0.0255	0.0919	0	0	0	0	0	0.212	0	0.00408	0	0	0.12	0.94	0.94
CLW-1	0	39.6	288	1.06	7.76	61.9	784	0	0.0298	0.0582	0	0	0.0157	0	0	0.194	0	0.00589	0	0	0.11	1.2	1.2
CLW-2	0	49.7	475	1.19	7.72	88.1	904	0	0.0244	0.0716	0	0	0.014	0	0	0.227	0	0.00593	0	0	0.17	0.39	0
CLW-3	0	42	325	1.27	7.79	95	888	0	0.0384	0.0941	0	0	0	0	0	0.217	0	0.0052	0	0	0.33	0.68	0
CLW-4	0	35.2	297	1.45	7.85	80.7	792	0	0.0375	0.0786	0	0	0	0	0	0.211	0	0.00525	0	0	1.89	0.65	1.89
CLW-5	0	36.9	320	1.7	7.72	85.3	852	0	0.0229	0.0714	0	0	0.00999	0	0	0.213	0	0.00679	0	0	1.87	0.17	1.87
CLW-6	0	33.8	292	1.6	7.82	73.3	804	0	0.0152	0.0873	0	0	0.0116	0	0	0.204	0	0.00746	0	0	0.18	0.41	0
CLW-7	0	46.5	399	1.02	7.65	73.2	780	0	0.0232	0.0491	0	0	0	0	0	0.19	0	0.00416	0	0	0.05	0.07	0
CLW-8	0	43	300	1.04	7.71	66.5	796	0	0.0254	0.0643	0	0	0	0	0	0.192	0	0.00503	0	0	0.19	1.2	1.2
CLW-9																							
CL-U-3																							

Round 11

Landfill Wells	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
CLW-9							
CL-U-3							

Bottom Ash	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
	Results																						
BA-U-1	0	73.9	561	0.881	7.97	62.2	1050	0	0.0216	0.149	0	0	0	0	0	0.276	0	0.00237	0	0	0.44	0.74	1.18
BA-U-2	0	143	885	0.977	7.58	298	1750	0	0.0209	0.0728	0	0	0.0125	0	0	0.321	0	0.00574	0	0	0.22	0.62	0
BAC-1	4.87	225	1840	0.582	7.57	1760	6420	0	0.0129	0.0391	0	0	0.0184	0	0	0.629	0	0.0232	0.00818	0	0.45	0.88	0
BAC-2	9.98	255	1660	1.1	7.35	2730	7800	0	0.0565	0.0204	0	0	0.0111	0	0	0.472	0	0.156	0.0157	0	0.08	0.96	0.96
BAC-3	8.33	469	3280	1.63	7.31	4450	12300	0	0.0496	0.0317	0	0	0.00968	0	0	1.06	0	0.038	0.022	0	0.39	1.06	1.45
BAC-4	0.523	68.1	501	1.15	7.96	273	1300	0	0.00882	0.0171	0	0	0	0	0	0.267	0	0.017	0	0	-0.16	0.48	0
BAC-5	0	82.2	557	1.04	7.86	353	1460	0	0.0325	0.0714	0	0	0	0	0	0.323	0	0.0134	0	0	0.26	0.81	0
BAC-6	4.57	138	624	0.847	7.75	1080	2340	0	0.0248	0.0245	0	0	0	0	0	0.276	0	0.0842	0	0	0.17	1.02	0
BAC-7	4.24	143	649	1.51	7.75	1210	2830	0	0.0434	0.0214	0	0	0	0	0	0.303	0	0.075	0.00579	0	0.19	0.71	0

Bottom Ash	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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	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
	Results																						
SI-U-1	0	139	805	0.533	7.63	394	1760	0	0.0103	0.0575	0	0	0	0	0	0.265	0	0.00241	0	0	0.07	0.85	0.85
WW-U-1	1.36	357	2150	0.41	7.28	1360	5090	0	0	0.0449	0	0	0.0258	0	0	0.456	0	0.0101	0.00682	0	0.43	1.2	1.63
WW-U-2	1.23	380	2160	0.604	7.31	1090	4570	0	0.0109	0.0446	0	0	0	0	0	0.519	0	0.00338	0.0105	0	0.14	0.83	0.83
WWC-1	12	607	4430	0.331	7.25	3210	13000	0	0.0243	0.0223	0	0	0	0	0	0.964	0.000312	0.00835	0.0145	0	0.15	1.2	0
WWC-2	0	59.5	344	0.448	7.85	139	832	0	0.0152	0.0344	0	0	0	0	0	0.124	0	0.00304	0	0	0.17	0.03	0
WWC-3	0	29.7	209	1.06	7.92	84.2	436	0	0.0247	0.0289	0	0	0	0	0	0.139	0	0.00482	0	0	0	0.76	0
WWC-4	1.34	219	1030	0.481	7.46	692	2880	0	0.0145	0.0507	0	0	0	0	0	0.36	0	0	0	0	0.03	0.8	0
WWC-5	3.07	364	1720	0.431	7.38	1620	5000	0	0.0131	0.034	0	0	0	0	0	0.523	0	0.0031	0.00478	0	0.2	-0.56	0
WWC-6																							
WDB-7																							

Waste Water	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
	Field Results						
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
WWC-6	15.05	7.63	-148	3550	1.8	0.7	2.27
WWC-7	15.18	8.07	-195	1510	8.4	0.65	0.967

Date Oct. 2018

Results below laboratory *Reporting Limit* (RL) are recorded as 0. *RLs* as follows: *0.001* *0.002* *0.002* *0.002* *0.005* *0.002* *0.004* *0.002* *0.1* *0.00015* *0.002* *0.002* *0.002*

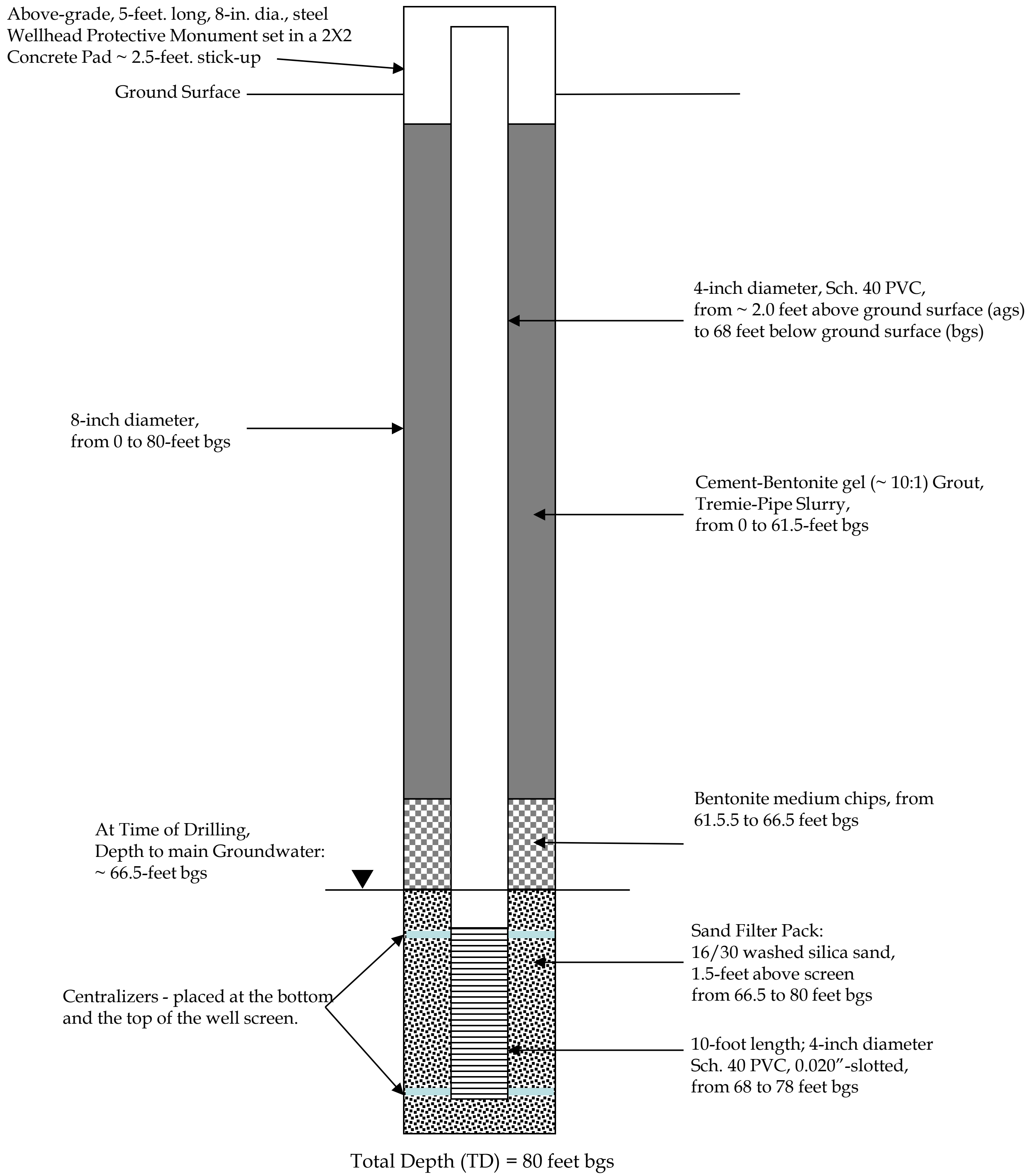
Date

Engineering Assessment

Assessment 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
RW-4	0.659	65.4	150	0.556	7.84	109	508	0	0.0298	0.0857	0	0	0	0	0	0.245	0	0.00311	0	0			
RW-5	0	32.1	569	0.86	7.73	224	1410	0	0.0308	0.0253	0	0	0.00472	0	0	0	0	0.00486	0	0			
RW-7	0	46.9	308	0.576	7.8	128	784	0	0.0217	0.033	0	0	0.00366	0	0	0.146	0	0.00436	0	0			
WDB-19	0	35	339	1.46	7.9	784	892	0	0.0287	0.0501	0	0	0.016	0	0	0.209	0	0.00623	0	0	0.16		
WWC-6	0.509	142	802	0.244	7.57	370	1920	0	0.0142	0.0795	0	0	0.00296	0	0	0.207	0	0.00542	0	0			
WWC-7	0	63.7	298	0.415	7.76	146	728	0	0.0141	0.046	0	0	0.00407	0	0	0.112	0	0.00473	0	0			

Assessment Wells	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
RW-5	15.56	7.92	72	2630	2.5	0.51	1.69
RW-4	15.98	8.2	-64	0.96	0.3	0.96	0.615
RW-7	14.72	7.83	-79	1550	7	0.72	0.99
WDB-19	15.61	7.94	-197	1580	0	0.9	1.01
EMW-9	15.05	7.63	-148	3550	1.8	0.7	2.27
EMW-4u	15.18	8.07	-195	1510	8.4	0.65	0.967

Appendix A Drilling Logs and Well Schematic Diagrams

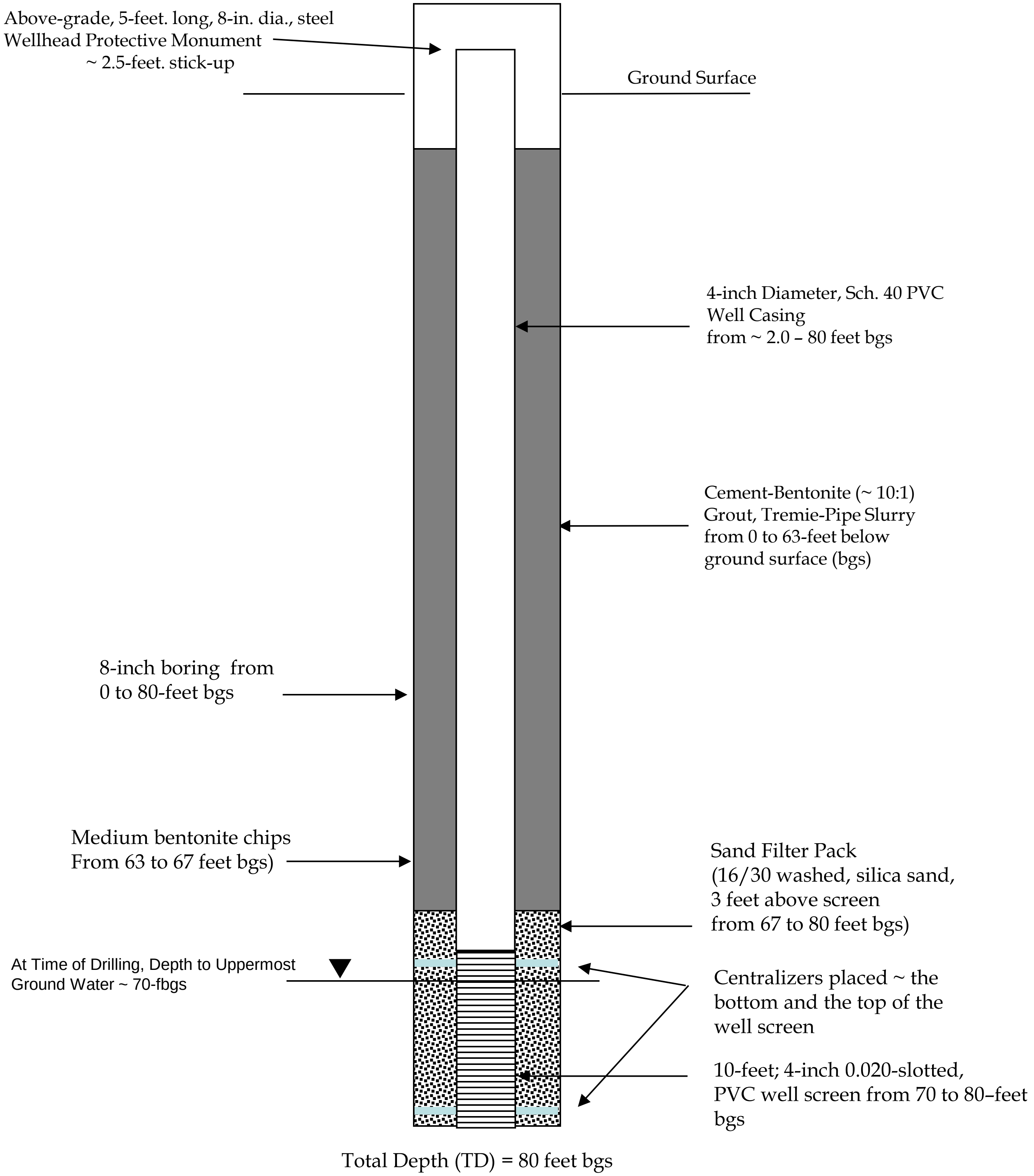


Stantec

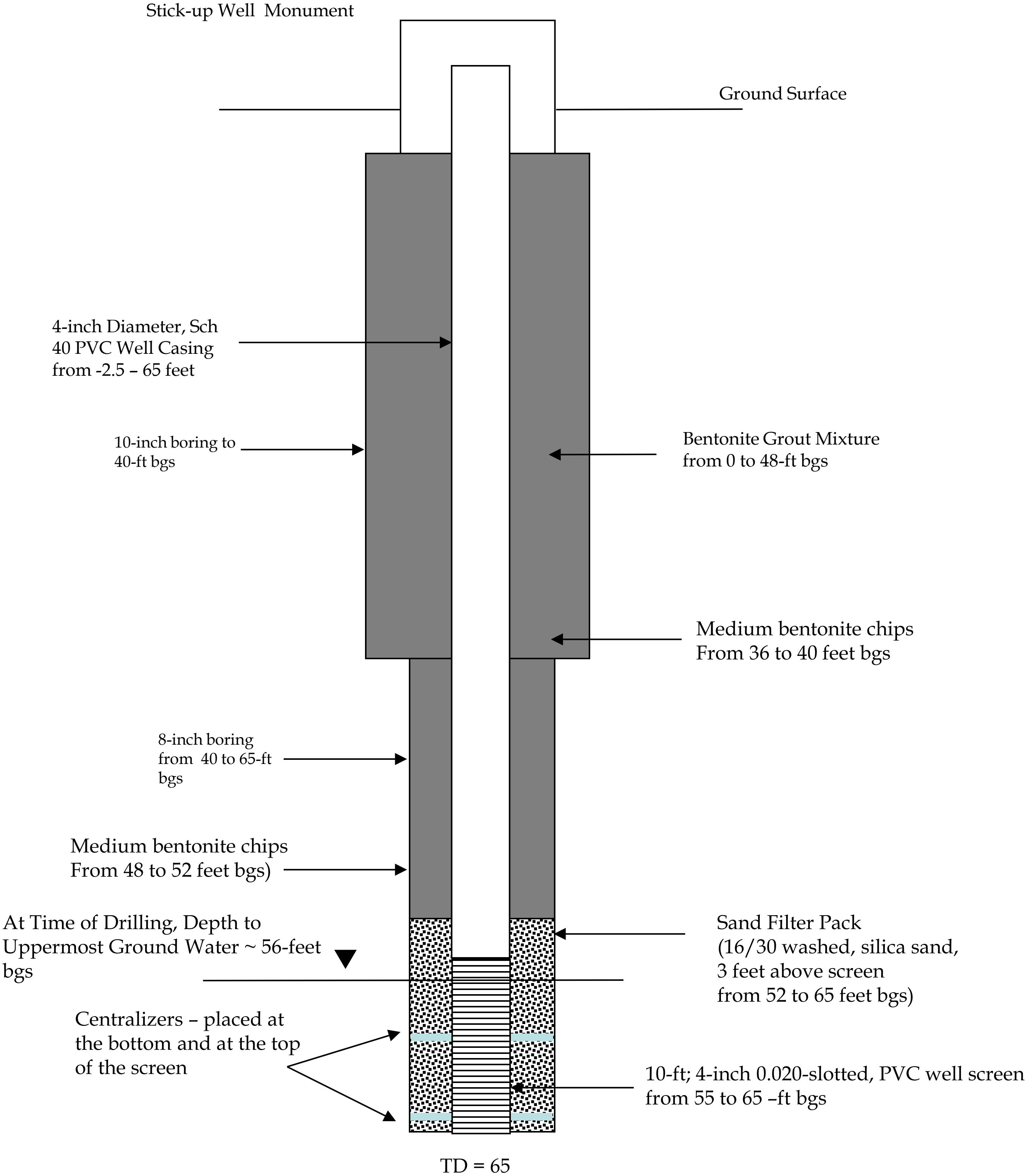
IPSC – COMBUSTION BYPRODUCT LANDFILL AREA
DELTA, UTAH

Well CL-U-1 Schematic

Design by	Drawn by MS	Scale	Date Drawn 7/23/15
			Last Revision Date



Stantec	IPSC– CB LANDFILL AREA DELTA, UTAH			
	Well CLU-2 Schematic			
				Date Drawn 9/1/15
	Design by	Drawn by TH	Scale	Last Revision Date



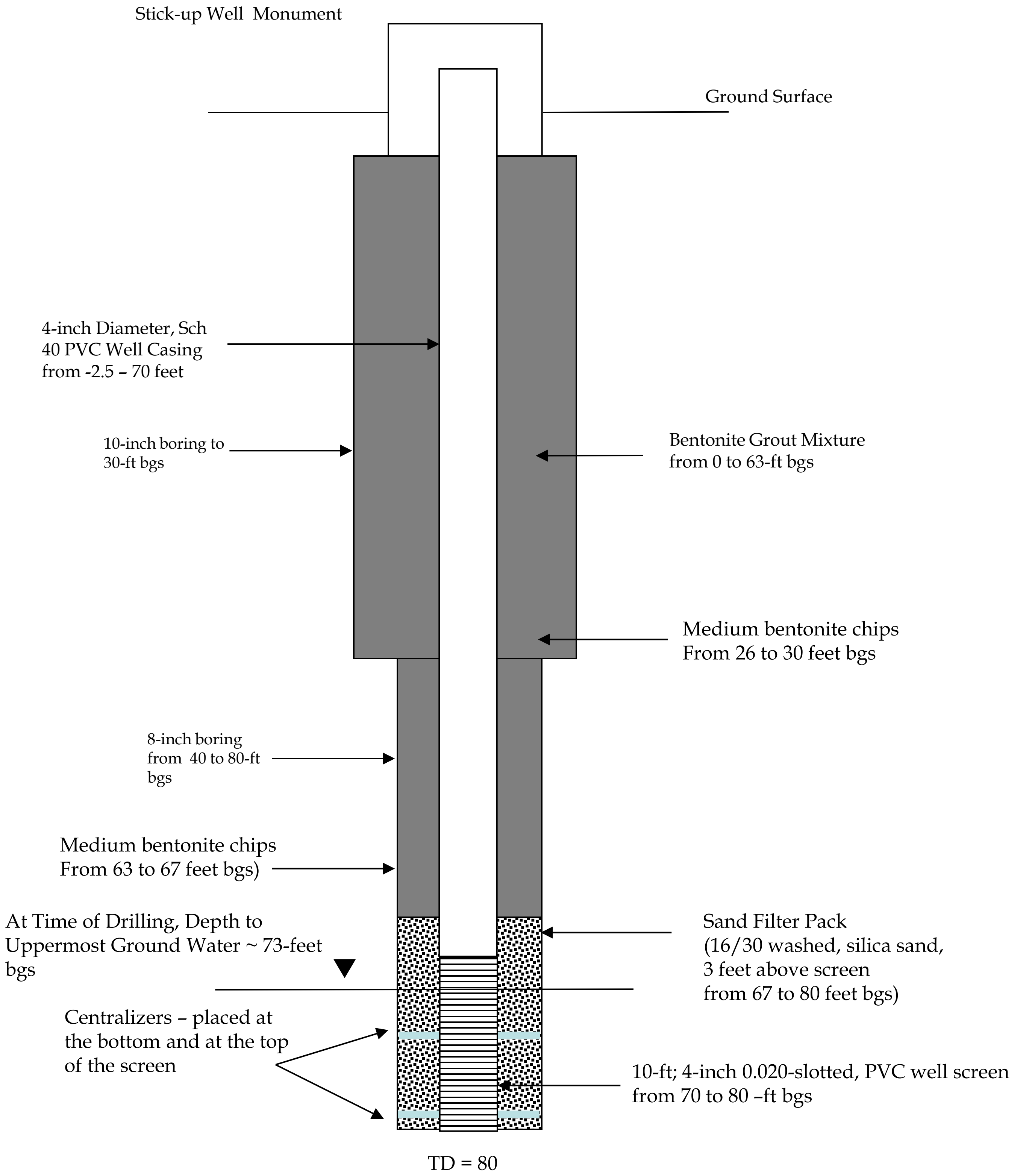
Stantec

ISPC– LANDFILL AREA

DELTA, UTAH

Figure 1 – CLW-1 Schematic

Design by	Drawn by	Scale	Date Drawn	Last Revision Date

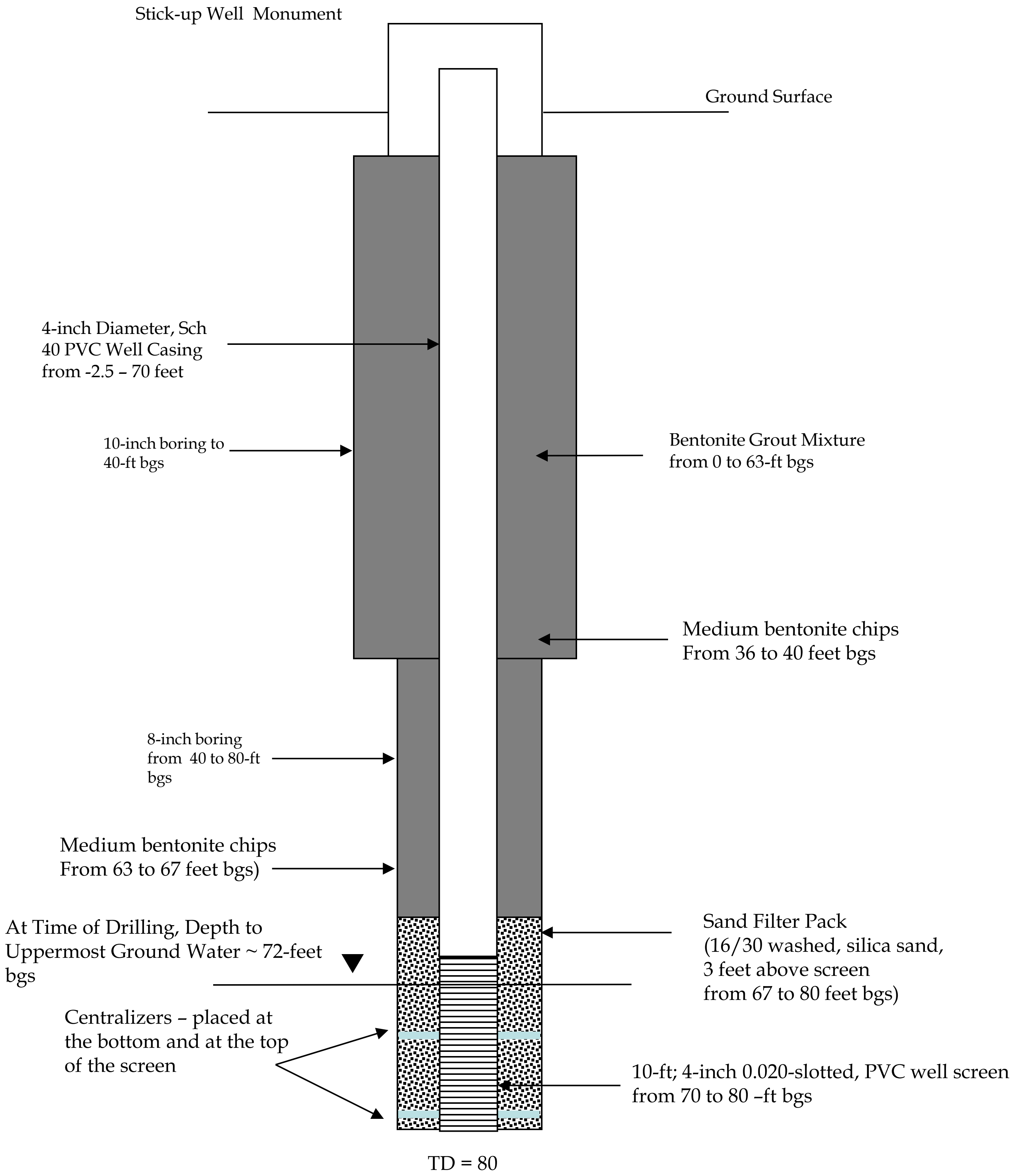


Stantec

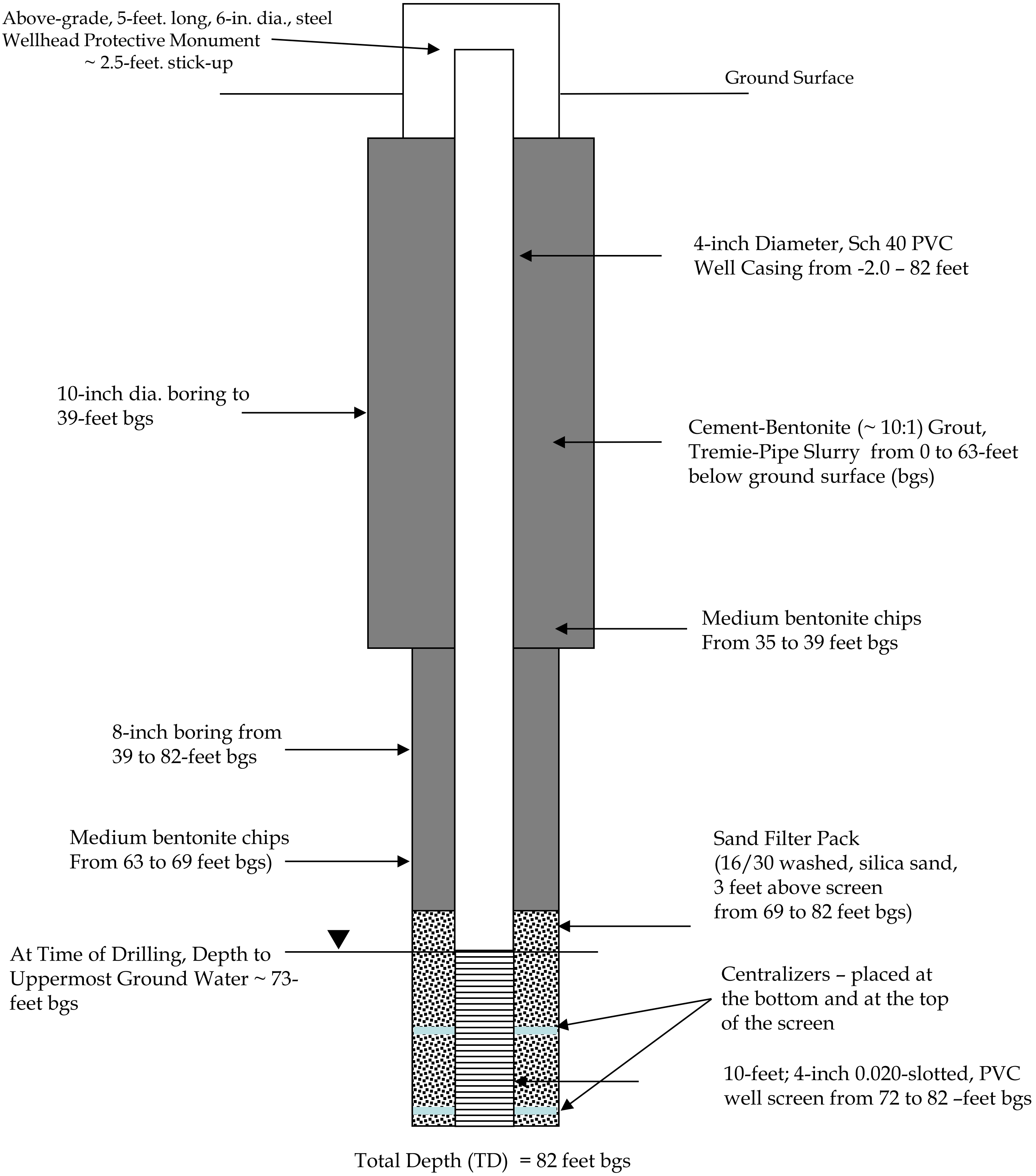
ISPC– LANDFILL AREA
DELTA, UTAH

Figure 1 – CLW-2 Schematic

Design by	Drawn by	Scale	Date Drawn
			Last Revision Date



Stantec	ISPC– LANDFILL AREA DELTA, UTAH			
	Figure 1 – CLW-3 Schematic			
				Date Drawn
	Design by	Drawn by	Scale	Last Revision Date



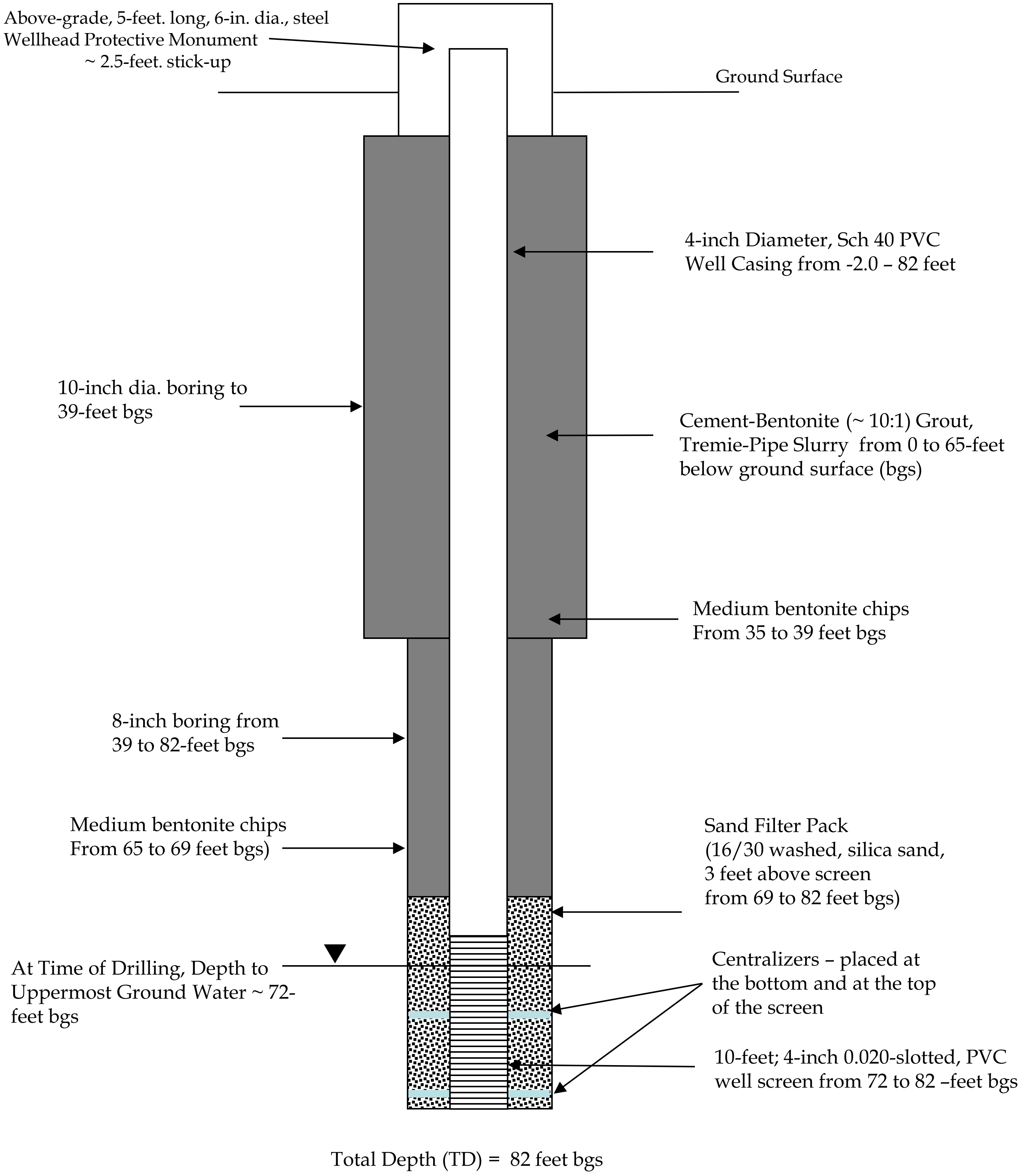
Stantec

ISPC– CB LANDFILL AREA

DELTA, UTAH

CLW-4 Schematic

Design by	Drawn by TH	Scale	Date Drawn 9/1/15 / Last Revision Date

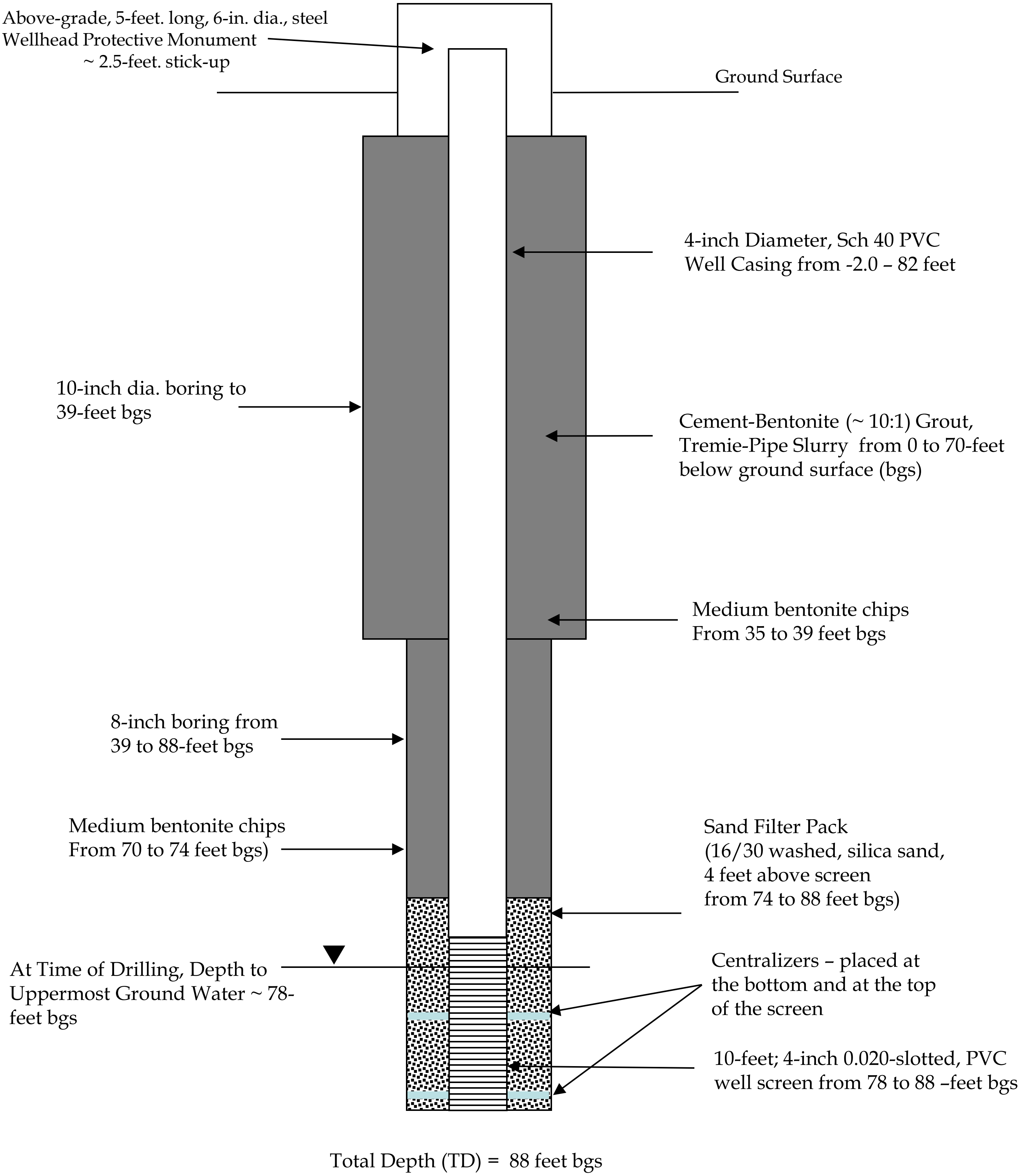


Stantec

ISPC– CB LANDFILL AREA
DELTA, UTAH

CLW-5 Schematic

Design by	Drawn by TH	Scale	Date Drawn 9/1/15
			Last Revision Date



Stantec

ISPC– CB LANDFILL AREA

DELTA, UTAH

CLW-6 Schematic

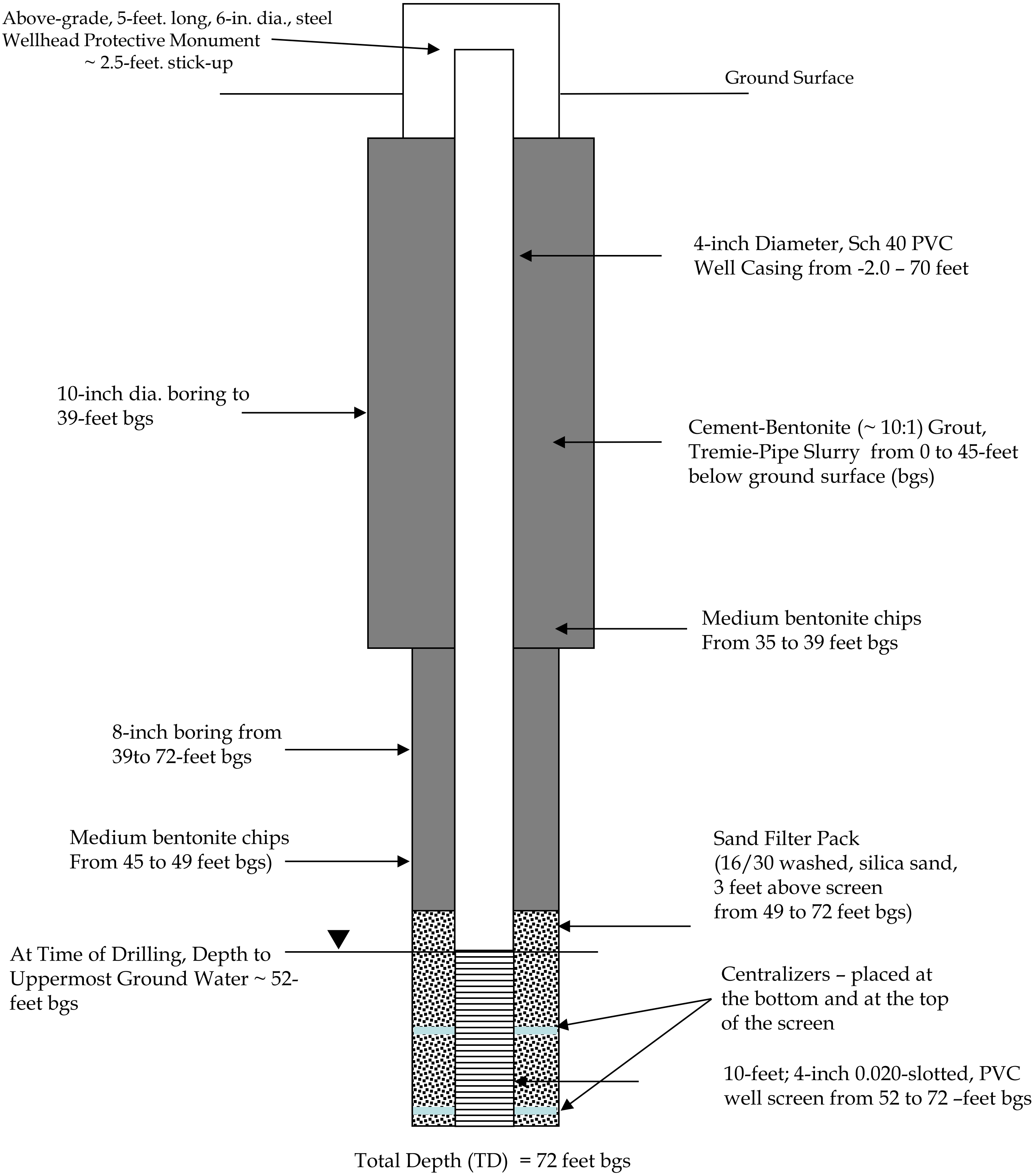
Date Drawn 9/1/15

Last Revision Date

Design by

Drawn by TH

Scale



Stantec

ISPC– CB LANDFILL AREA

DELTA, UTAH

CLW-7 Schematic

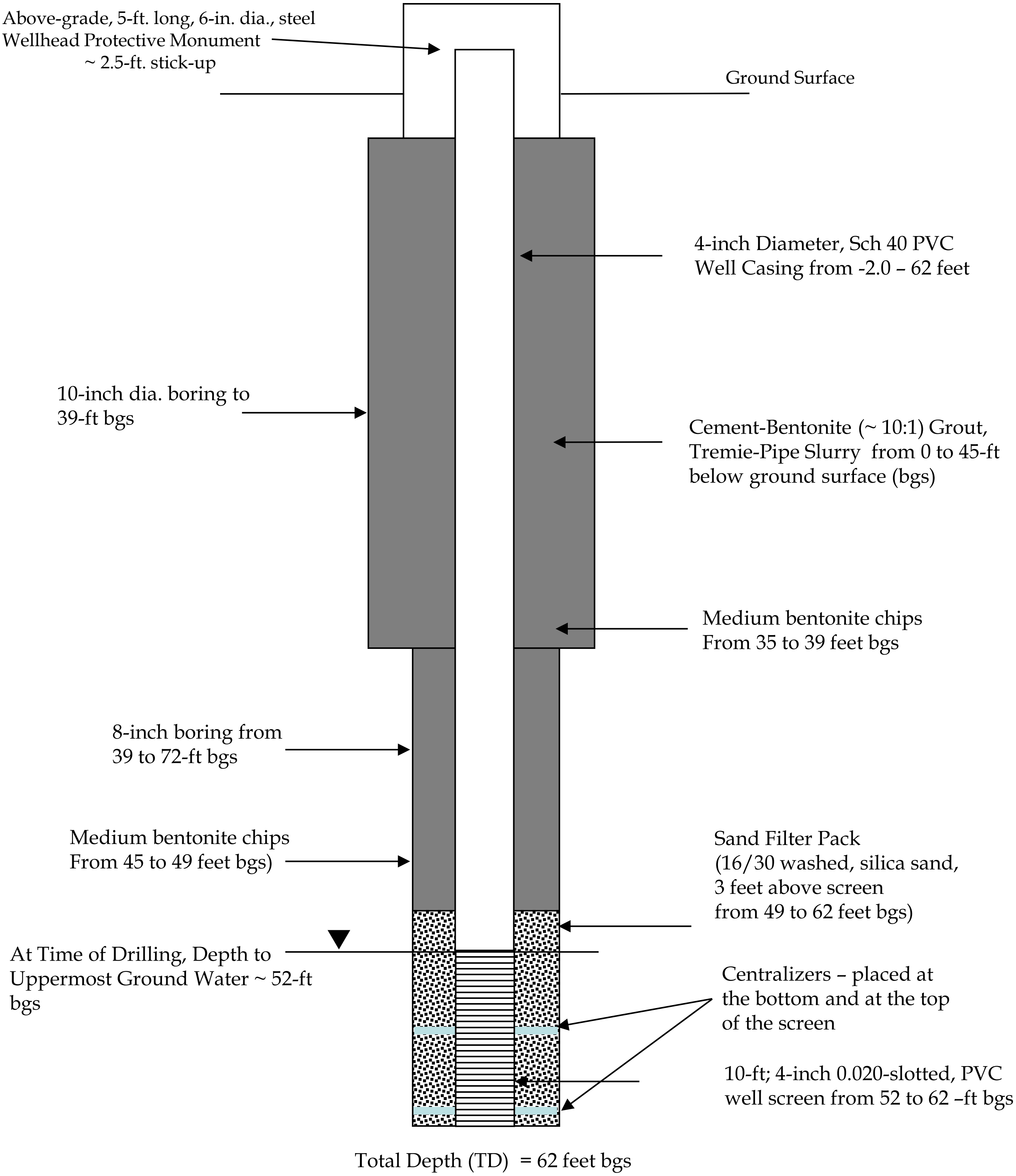
Date Drawn 9/1/15

Last Revision Date

Design by

Drawn by TH

Scale



Stantec

ISPC– CB LANDFILL AREA

DELTA, UTAH

CLW-8 Schematic

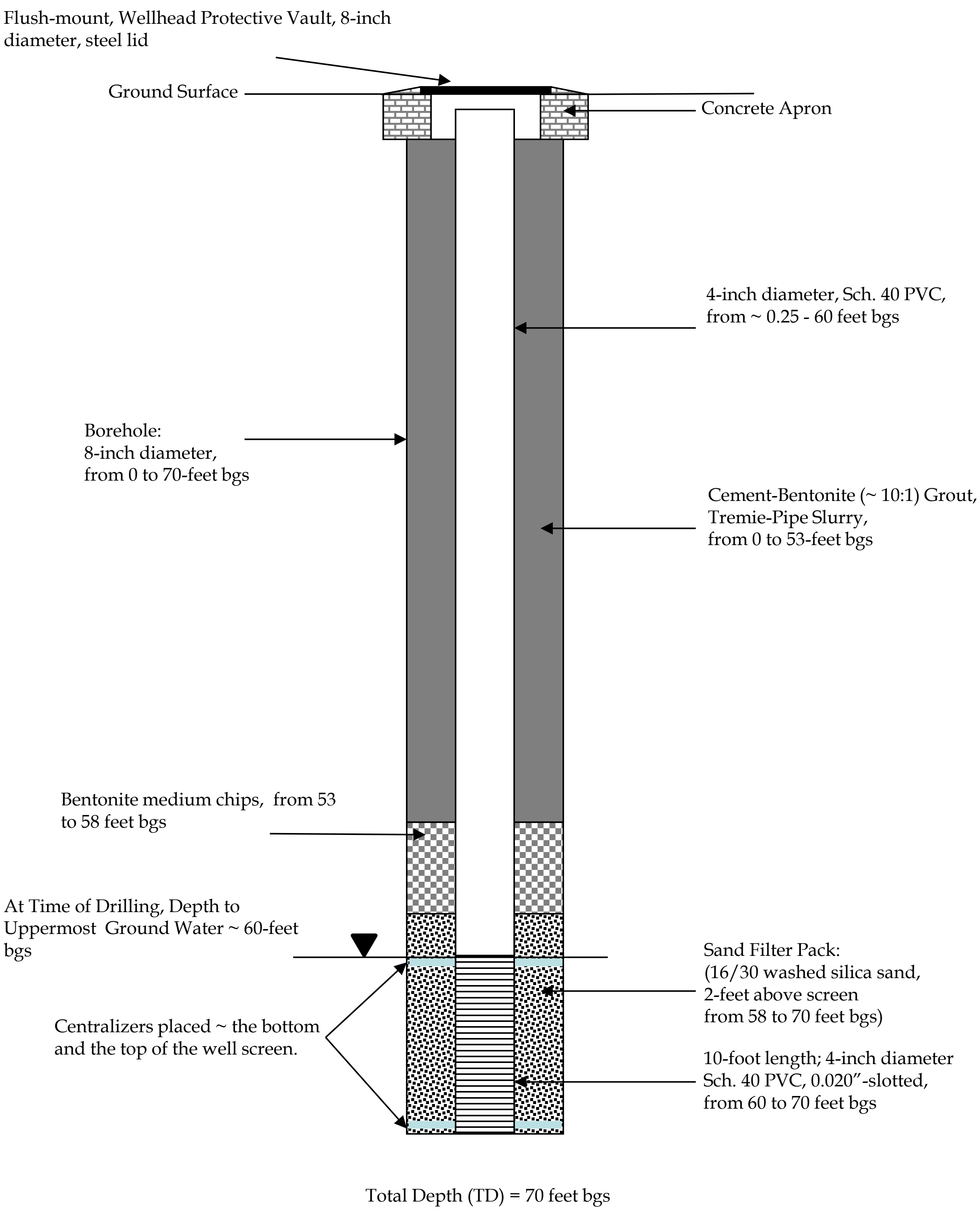
Date Drawn 9/1/15

Last Revision Date

Design by

Drawn by TH

Scale



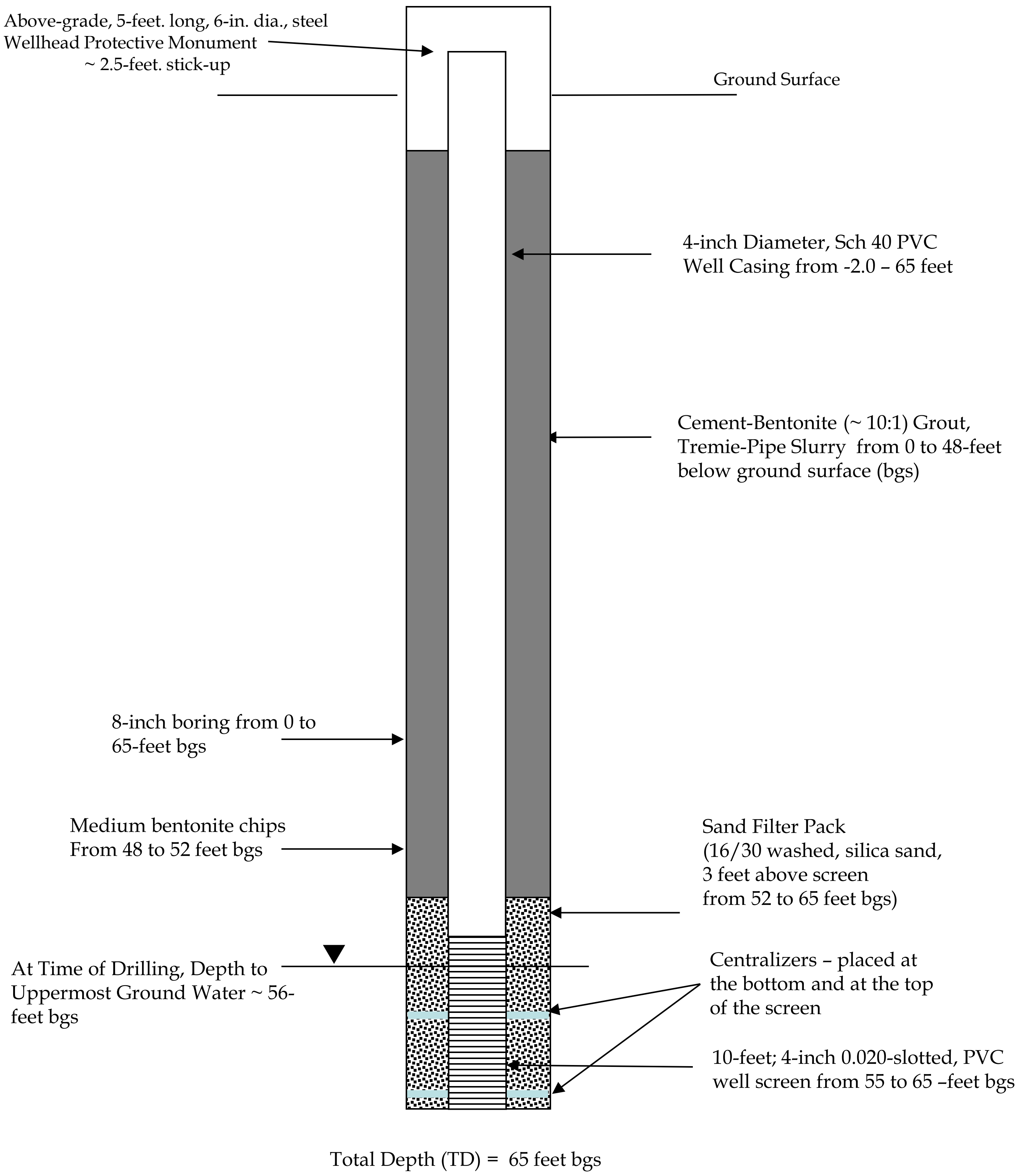
Stantec

IPSC – BOTTOM ASH SURFACE IMPOUNDMENT AREA

DELTA, UTAH

Well BAC-1 Schematic

Design by	Drawn by MS	Scale	Date Drawn 7/31/15
			Last Revision Date



Stantec

ISPC– BOTTOM ASH AREA

DELTA, UTAH

BAC-2 Schematic

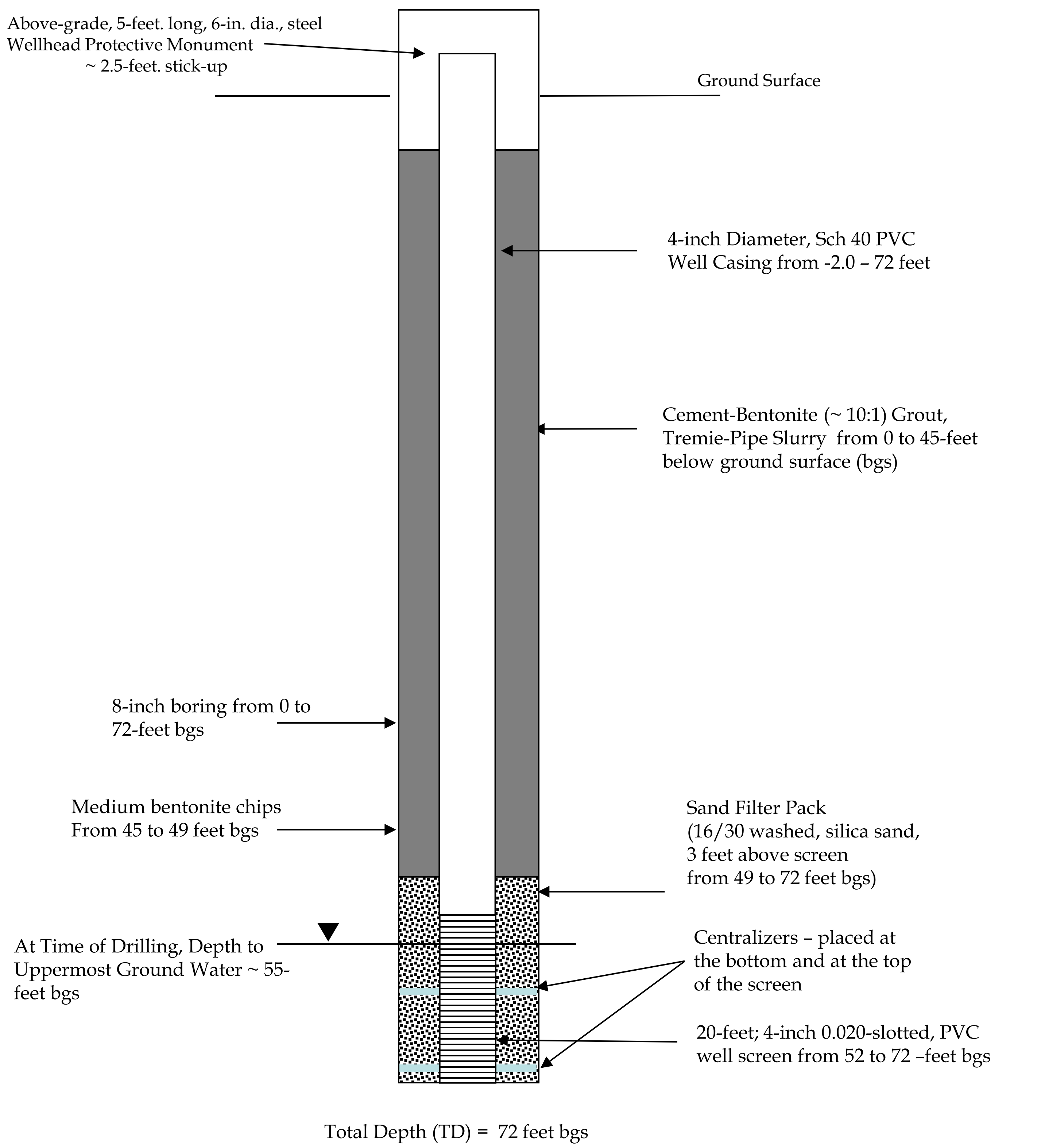
Date Drawn 9/1/15

Last Revision Date

Design by

Drawn by TH

Scale



Stantec

ISPC– BOTTOM ASH AREA

DELTA, UTAH

BAC-3 Schematic

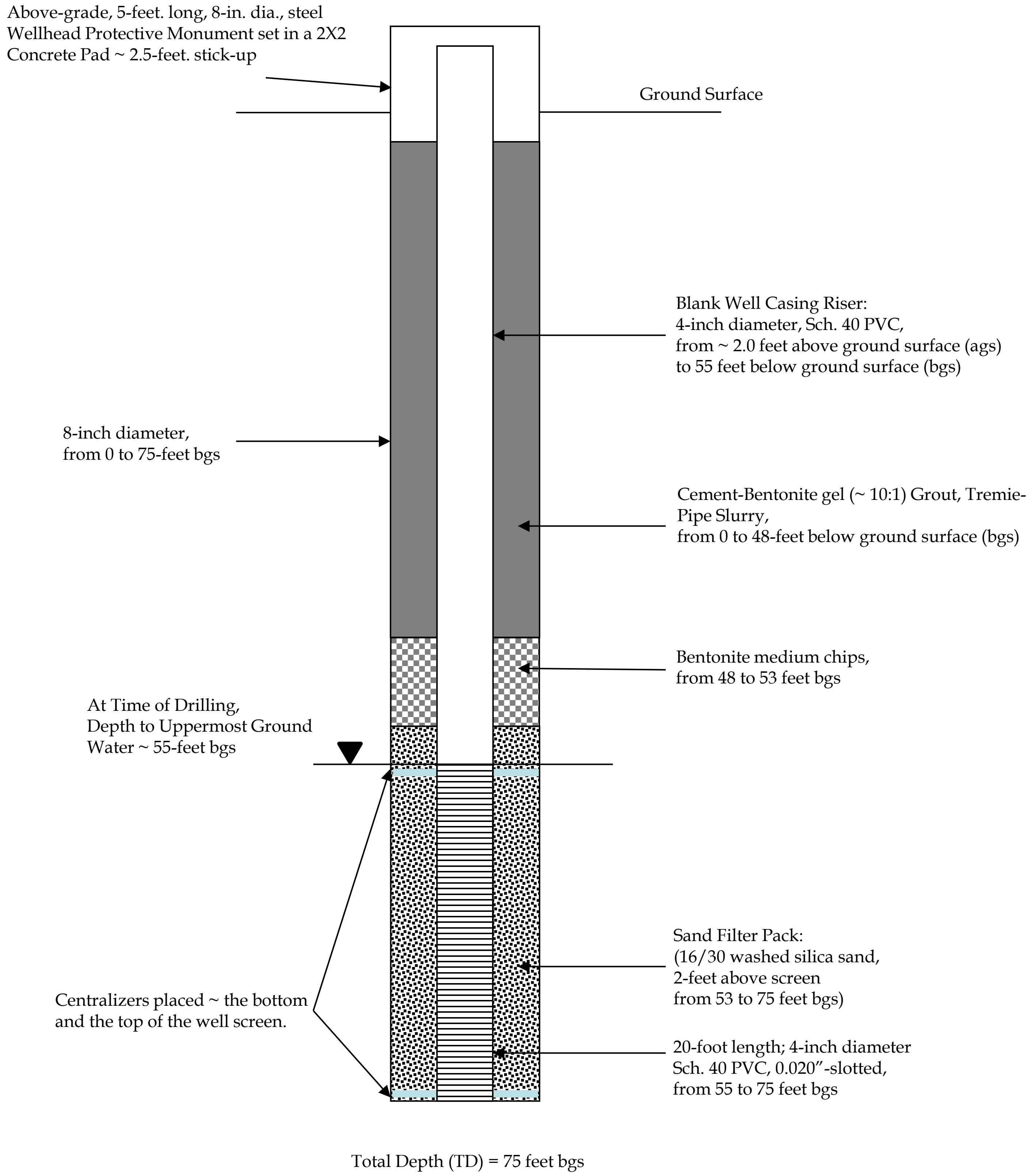
Date Drawn 9/1/15

Last Revision Date

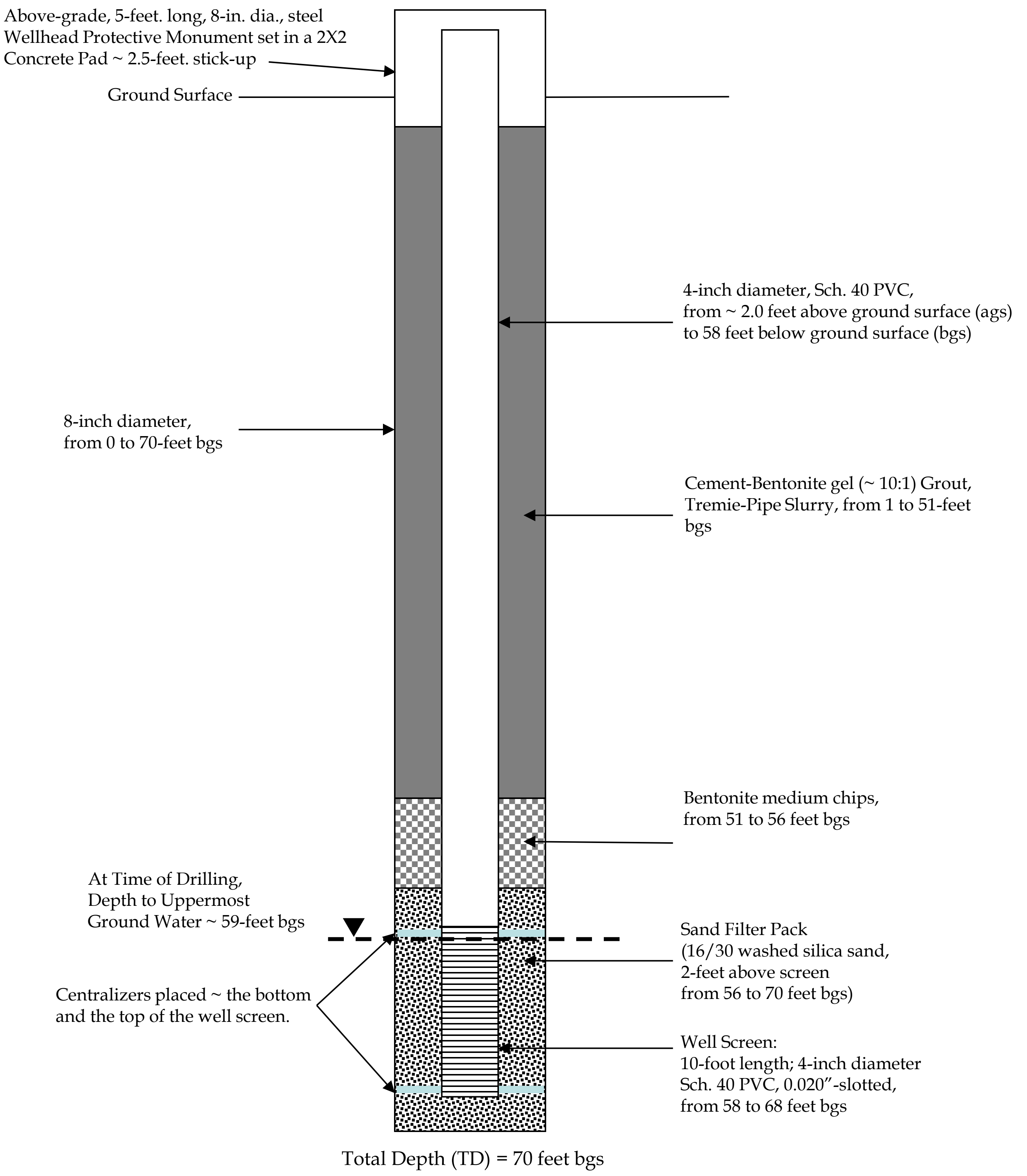
Design by

Drawn by TH

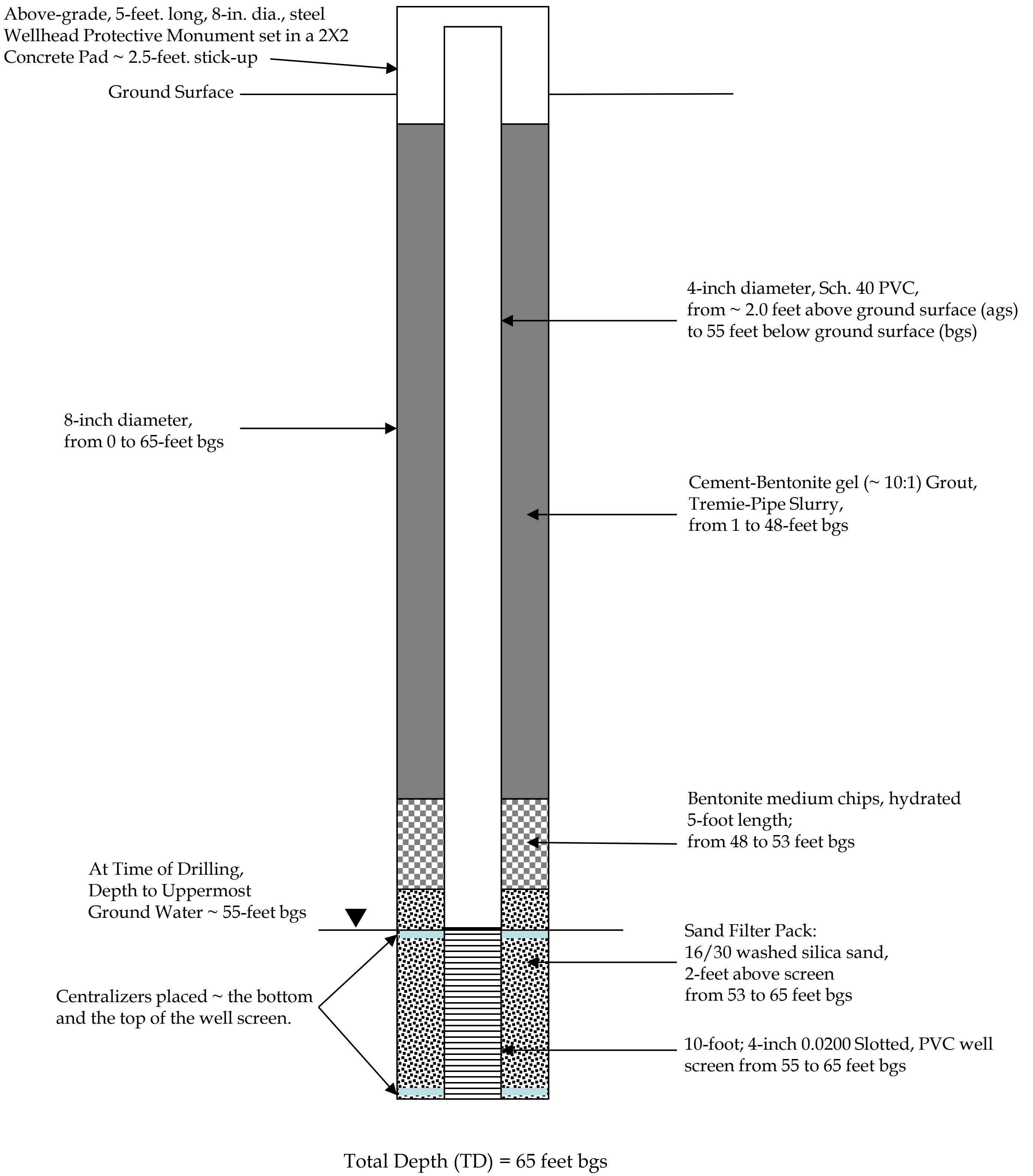
Scale



IPSC – BOTTOM ASH BASIN AREA DELTA, UTAH			
Well BAC-4 Schematic			
			Date Drawn 8/10/15
Design by	Drawn by MS	Scale	Last Revision Date



Stantec	IPSC – BOTTOM ASH BASIN AREA DELTA, UTAH		
	Well BAC-5 Schematic		
			Date Drawn 8/09/15
			Last Revision Date
Design by	Drawn by MS	Scale	



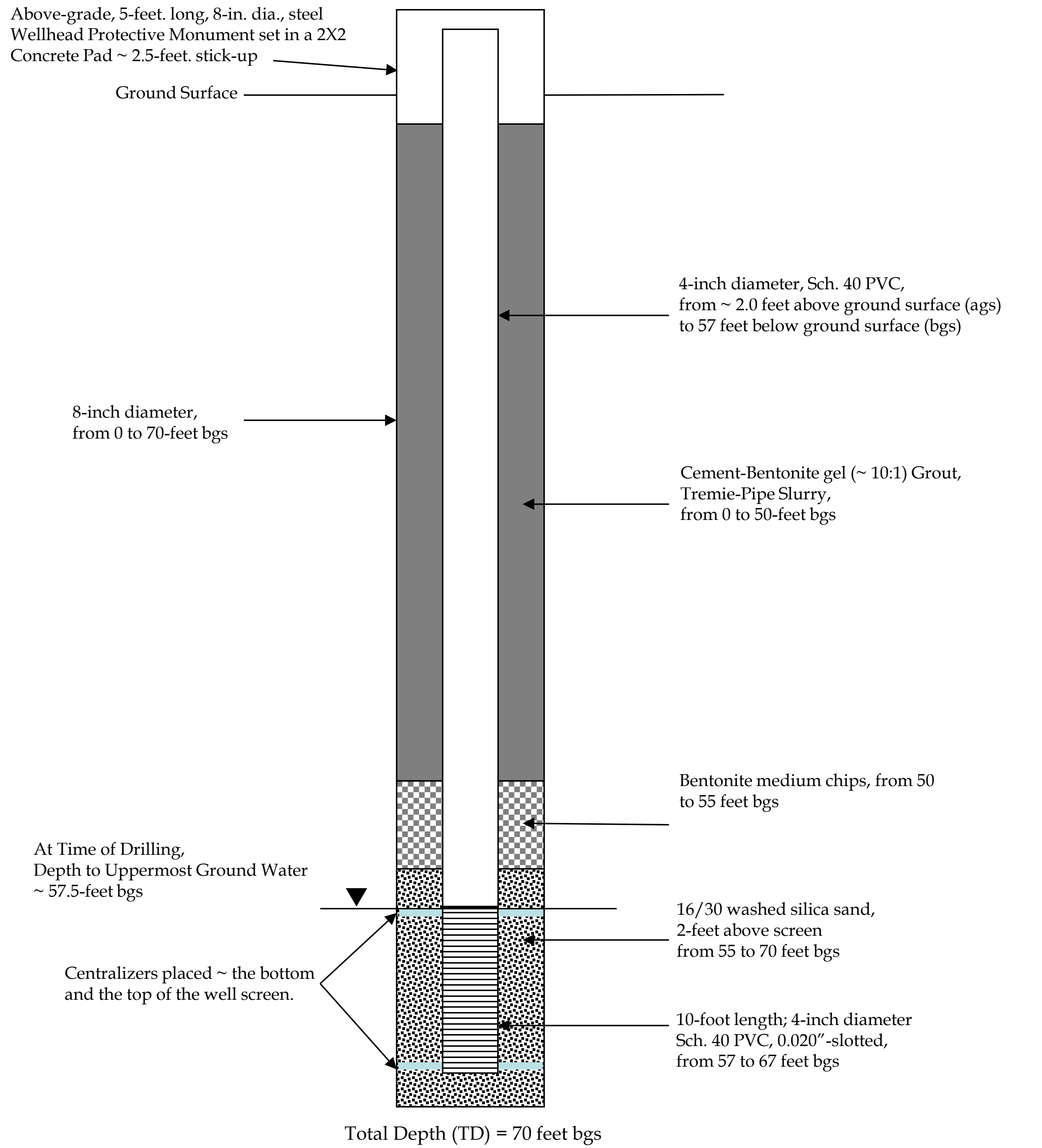
Stantec

IPSC – BOTTOM ASH BASIN AREA

DELTA, UTAH

Well BAC-6 Schematic

			Date Drawn 8/08/15
Design by	Drawn by MS	Scale	Last Revision Date



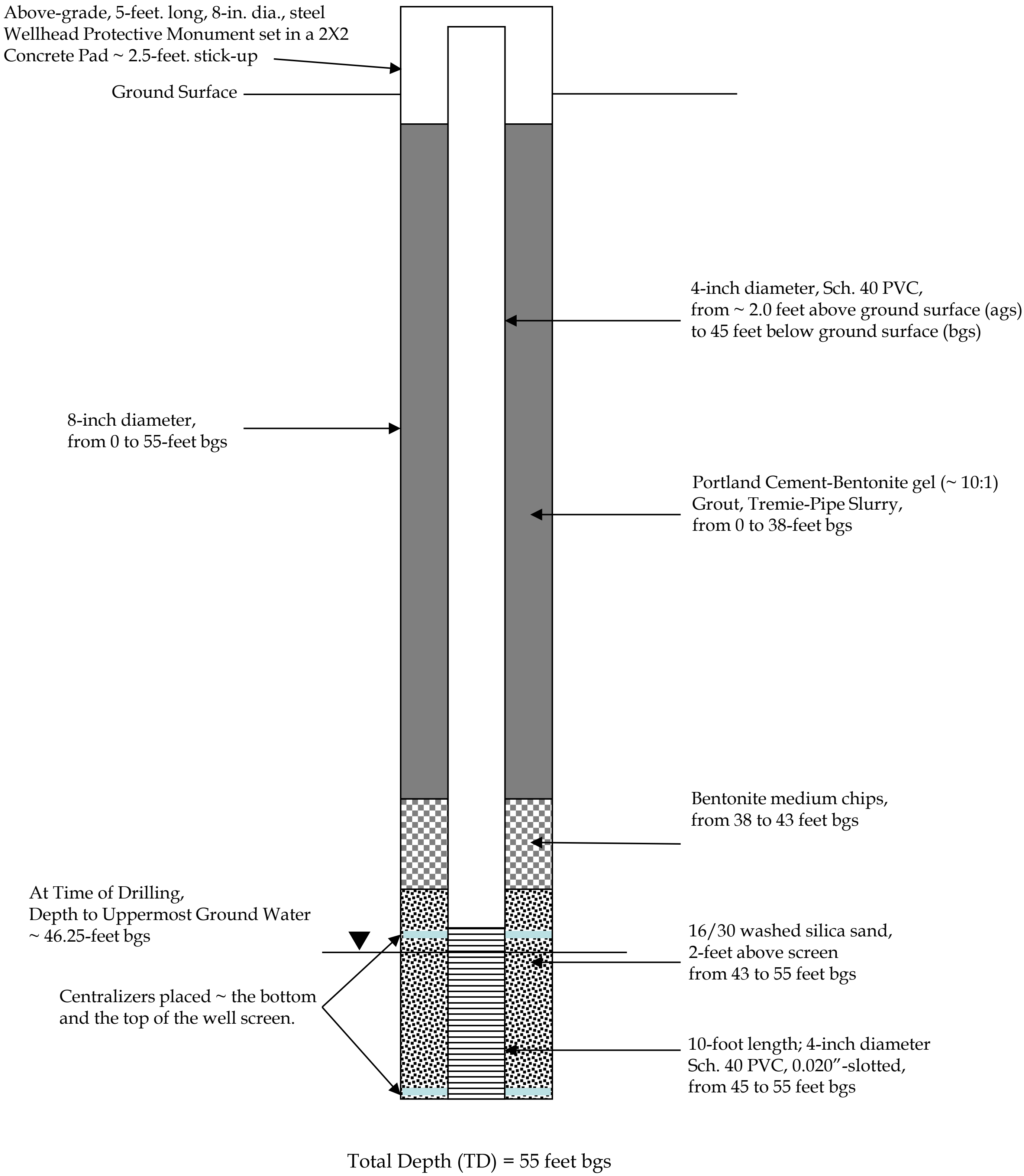
Stantec

IPSC – BOTTOM ASH BASIN AREA

DELTA, UTAH

Well BAC-7 Schematic

Design by	Drawn by MS	Scale	Date Drawn 8/07/15
			Last Revision Date



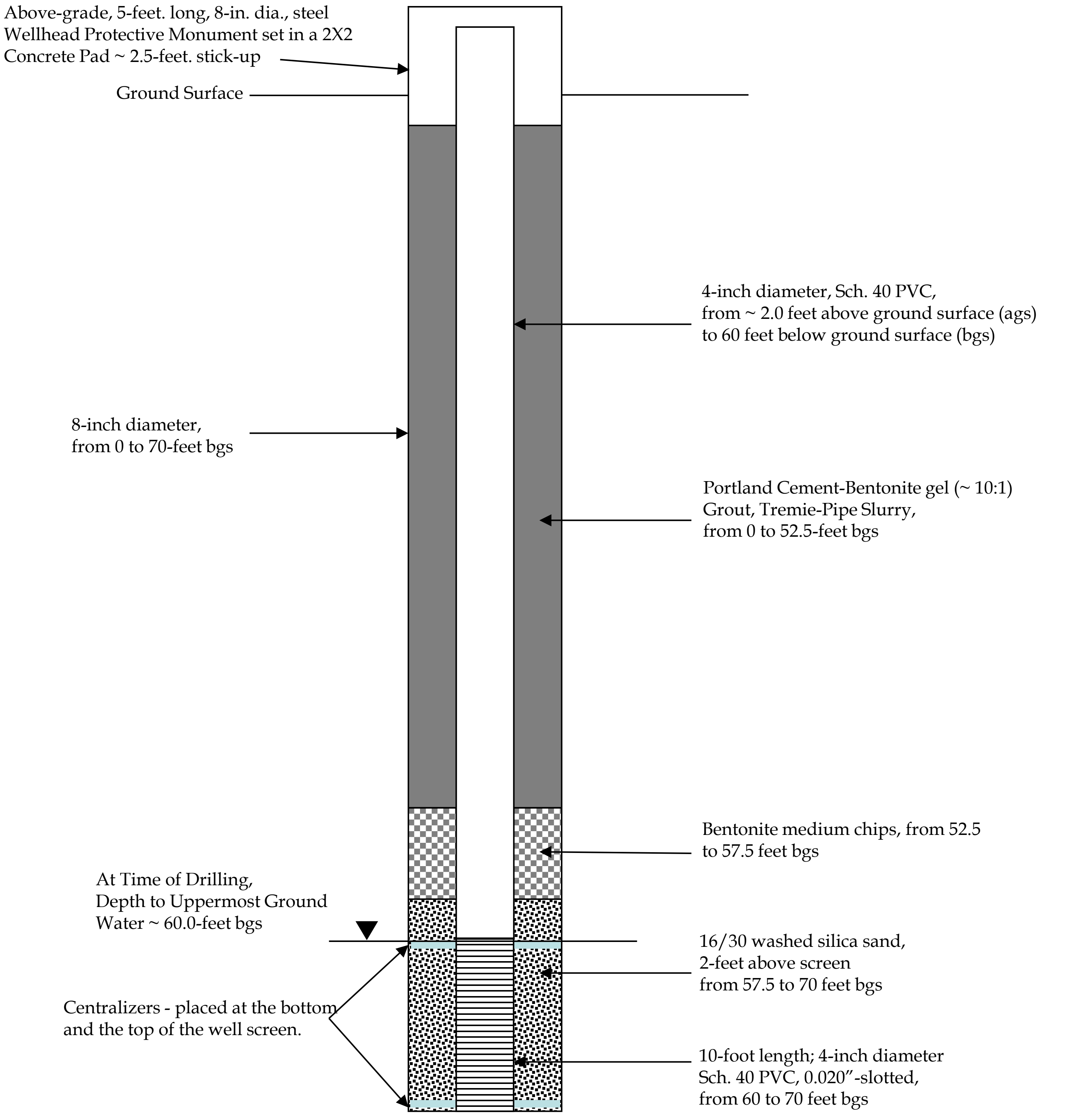
Stantec

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



Total Depth (TD) = 70 feet bgs

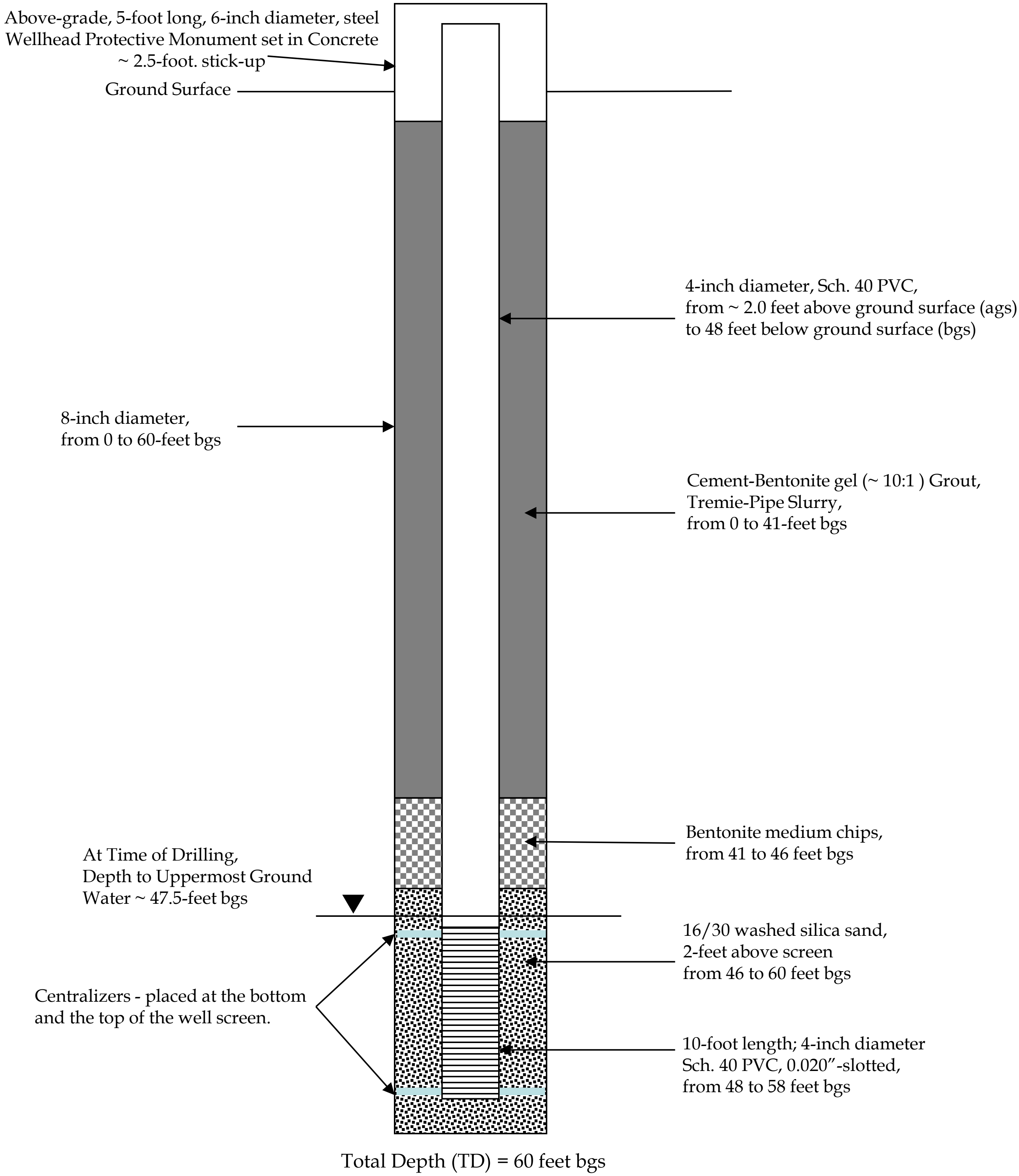
Stantec

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



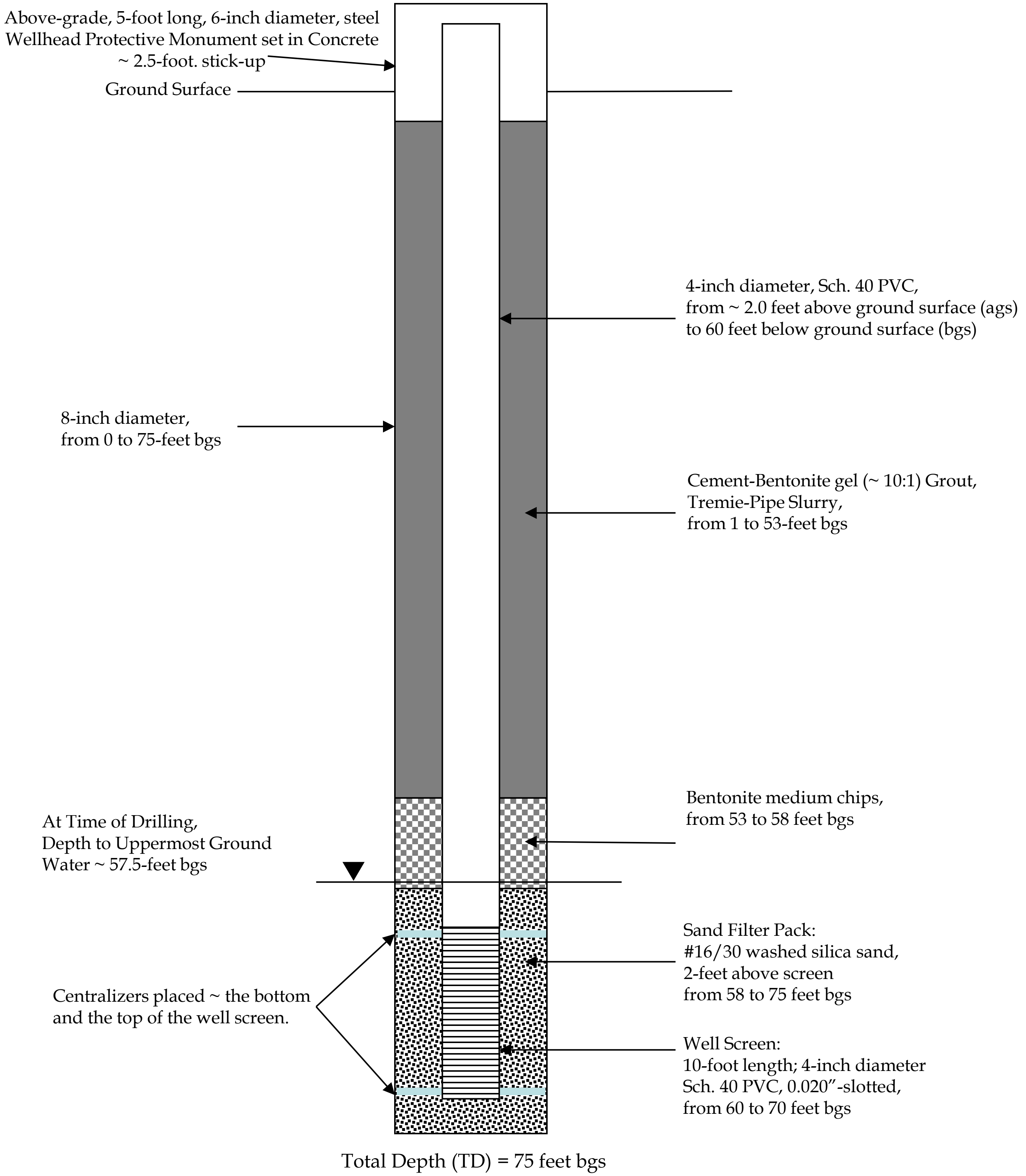
Stantec

IPSC – WASTEWATER HOLDING BASIN AREA

DELTA, UTAH

Well WWC-1 Schematic

Design by	Drawn by MS	Scale	Date Drawn 7/26/15
			Last Revision Date

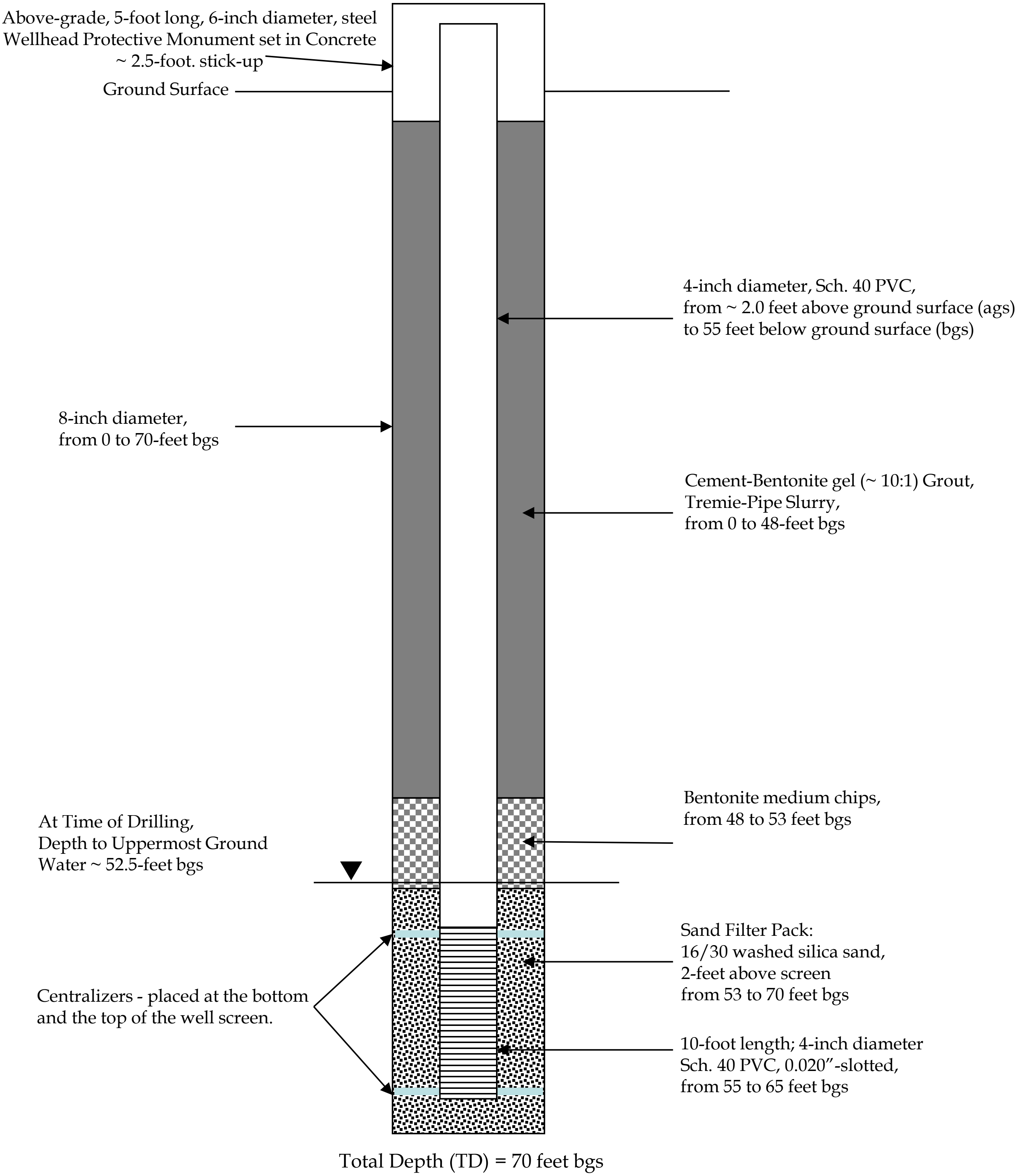


Stantec

IPSC – WASTEWATER HOLDING BASIN AREA
DELTA, UTAH

Well WWC-2 Schematic

Design by	Drawn by MS	Scale	Date Drawn 7/27/15
			Last Revision Date



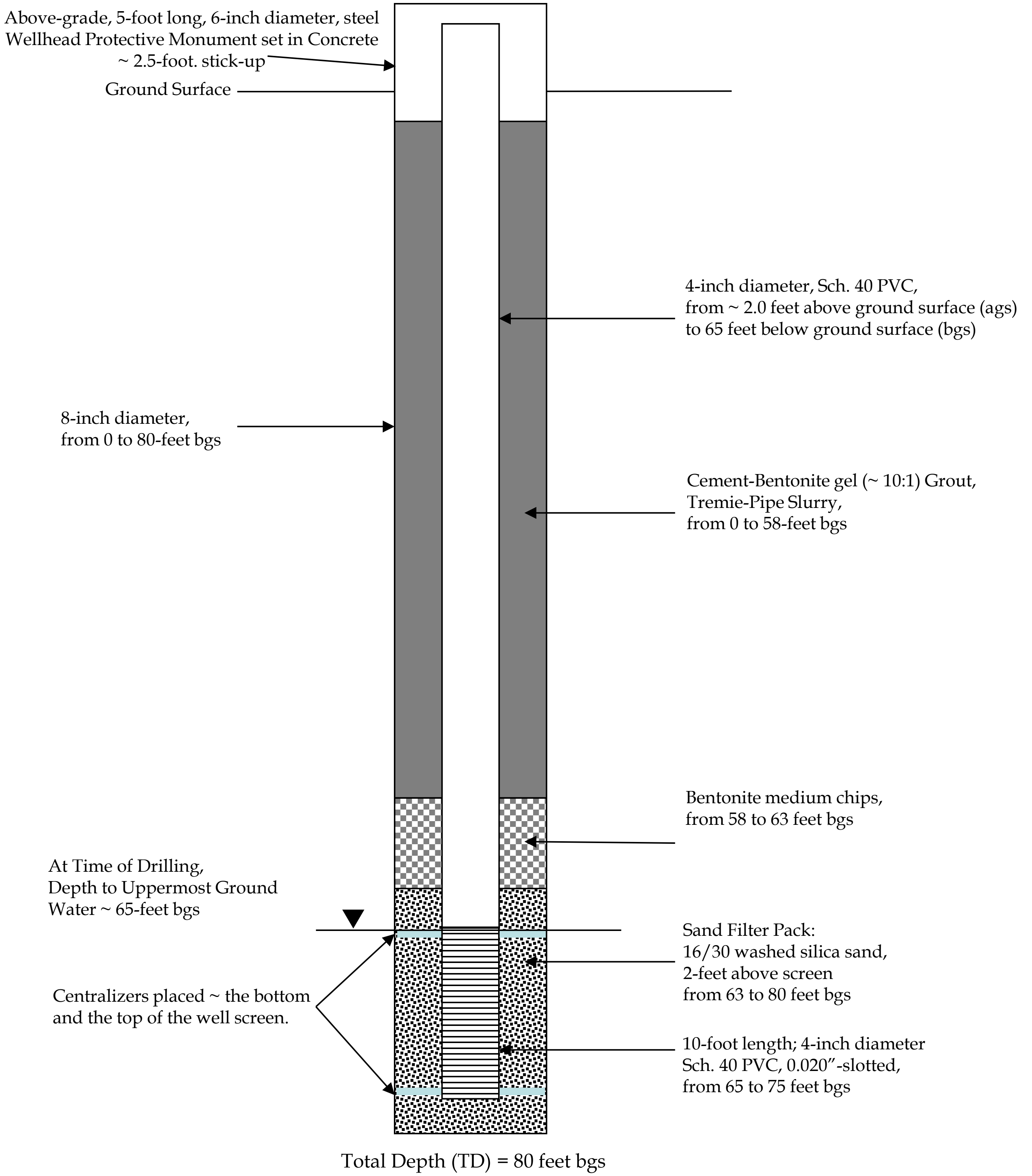
Stantec

IPSC – WASTEWATER HOLDING BASIN AREA

DELTA, UTAH

Well WWC-3 Schematic

			Date Drawn 7/30/15
Design by	Drawn by MS	Scale	Last Revision Date



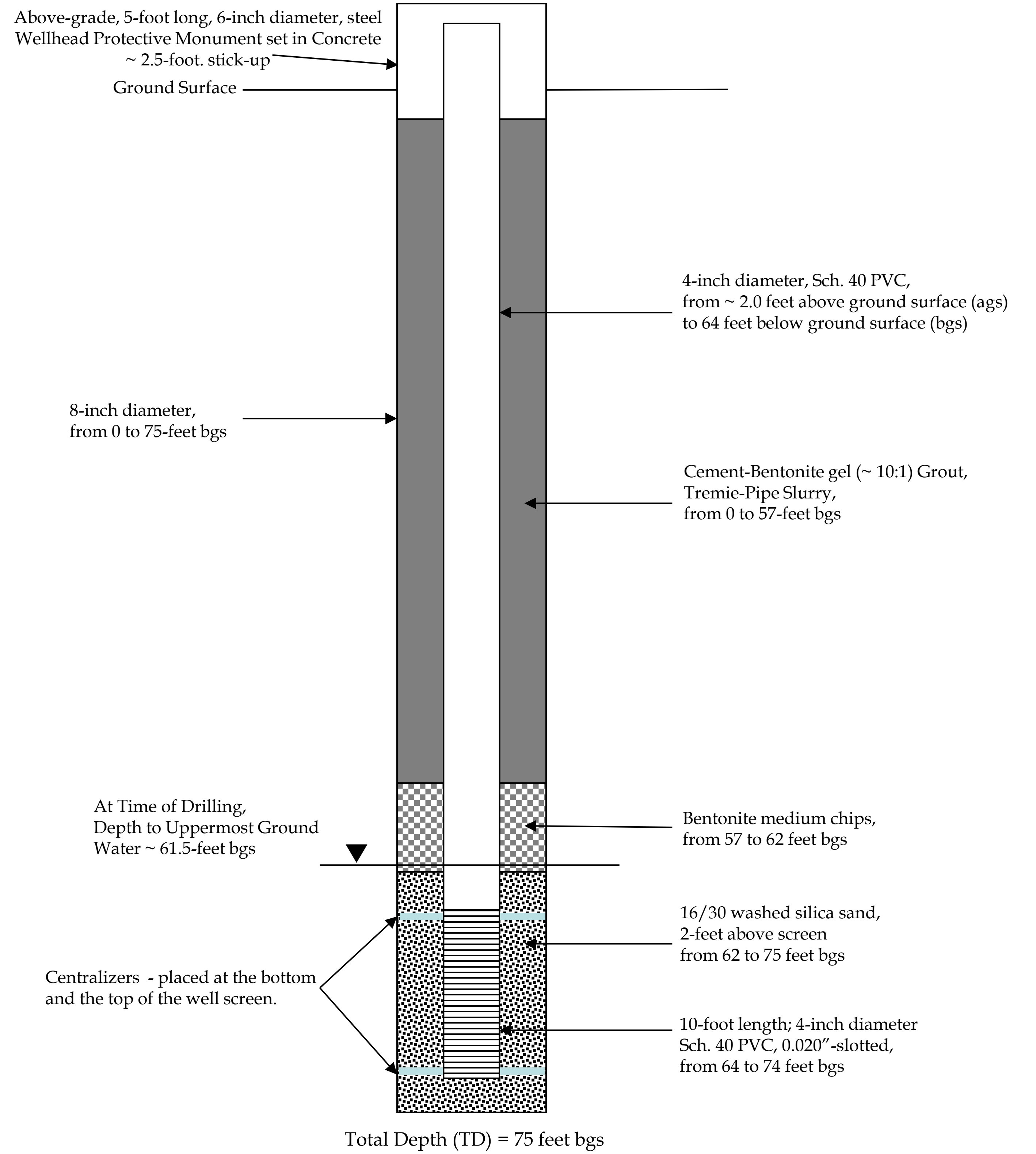
Stantec

IPSC – WASTEWATER HOLDING BASIN AREA

DELTA, UTAH

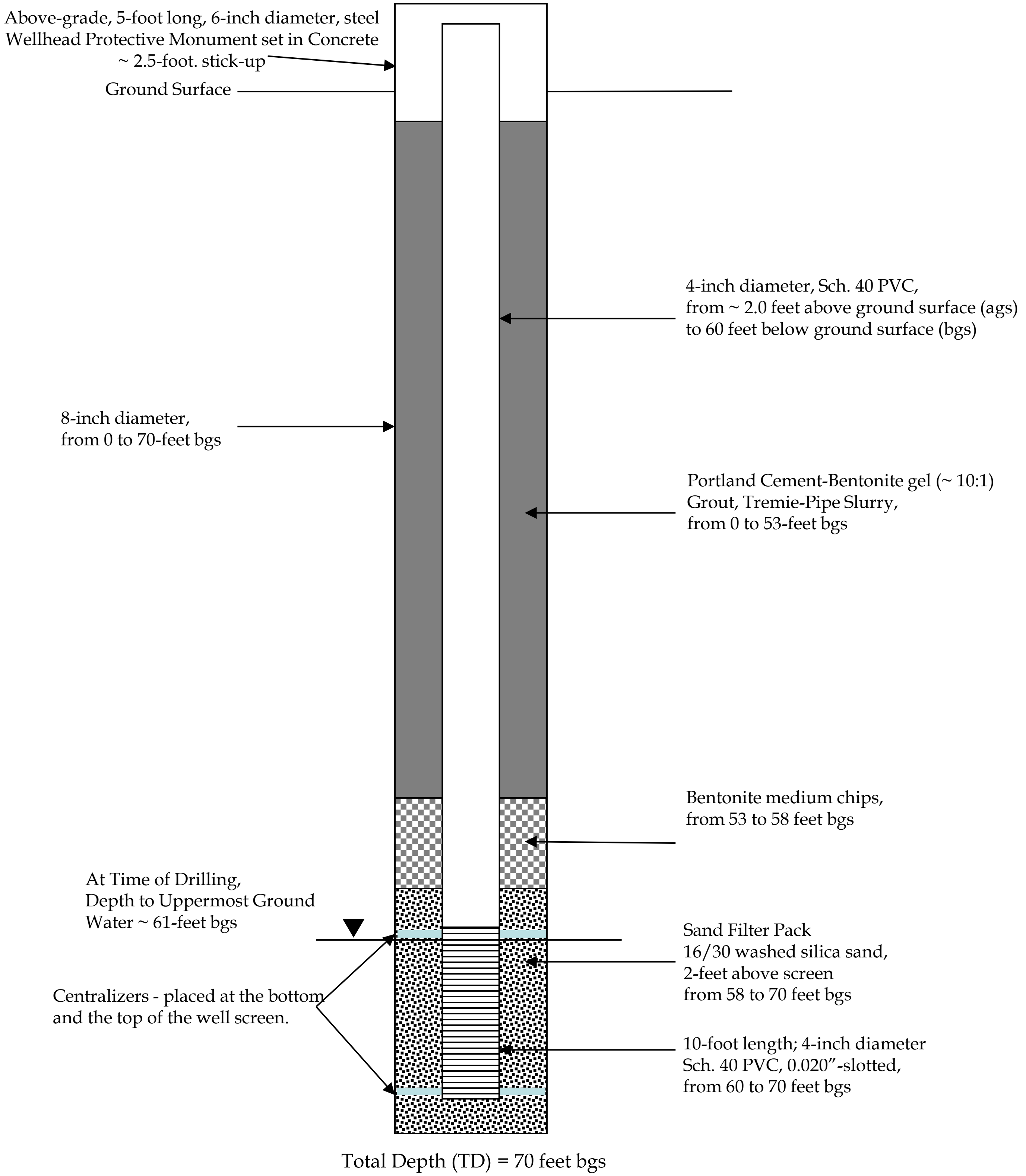
Well WWC-4 Schematic

Design by	Drawn by MS	Scale	Date Drawn 7/29/15
			Last Revision Date



Stantec

IPSC – WASTEWATER HOLDING BASIN AREA DELTA, UTAH			
Well WWC-5 Schematic			
			Date Drawn 7/28/15
Design by	Drawn by MS	Scale	Last Revision Date



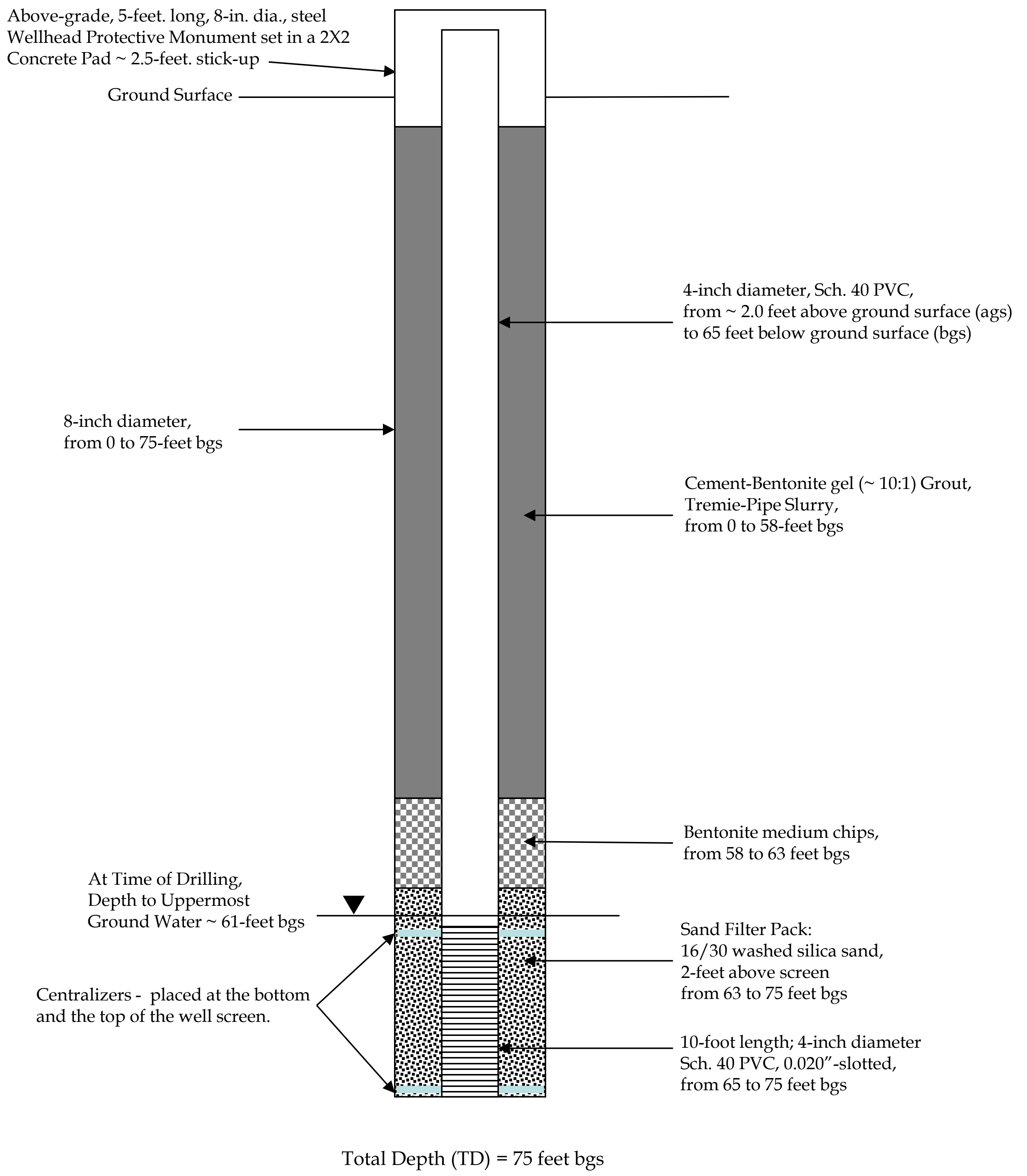
Stantec

IPSC – WASTEWATER HOLDING BASIN AREA

DELTA, UTAH

Well WW-U-1 Schematic

Design by	Drawn by MS	Scale	Date Drawn 8/11/15
			Last Revision Date



Stantec

IPSC – WASTEWATER HOLDING BASIN AREA

DELTA, UTAH

Well WW-U-2 Schematic

Design by	Drawn by MS	Scale	Date Drawn 8/11/15
			Last Revision Date

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

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

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

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 plascity
34-32	10" Sonic	Browninsh Gray CLAY, moist to very moist, high plasticity
32-53	10" Sonic to 39 feet	Brownish Gray CLAY, dencer, 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

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

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

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 alone 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

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 slihgtly 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, slihglty 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

Boring Logs

IPSC

Delta, Utah

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" Rotosonic

Drilling Company - Cascade Drilling

Driller - Daniel Dodge

Geologist - Michael Sauerwein

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

Boring Logs

ISPC

Delta, Utah

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" Rotosonic

Drilling Company - Cascade Drilling

Driller - Daniel Dodge

Geologist - Michael Sauerwein

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

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

Boring Log

ISPC

Delta, Utah

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

Boring Logs

ISPC

Delta, Utah

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" Rotosonic

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

Boring Logs
ISPC
Delta, Utah

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" Rotosonic

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

Boring Logs

ISPC

Delta, Utah

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" Rotosonic

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

Boring Logs
ISPC
Delta, Utah

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" Rotosonic

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

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" Rotosonic

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

Boring Logs

IPSC

Delta, Utah

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

Boring Logs
IPSC
Delta, Utah

WWC-2

Interval (feet)	Driling 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" Rotosonic

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

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	CH	CLAY:
50-52.5	8" Sonic		CLAY:
52.5-55	8" Sonic	SP	SAND:
55-61	8" Sonic		SAND:
61-62.5	8" Sonic	SW	SAND:
62.5-65	8" Sonic		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" Rotosonic

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

Boring Logs
ISPC
Delta, Utah

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" Rotosonic

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

Boring Logs
ISPC
Delta, Utah

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		CLAY:
51.5-52	8" Sonic	SM	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" Rotosonic

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

Boring Log

ISPC

Delta, Utah

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" Rotosonic

Drilling Company - Cascade Drilling

Driller - Rick Mallett

Geologist - Michael Sauerwein

Boring Logs
ISPC
Delta, Utah

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" Rotosonic

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

Appendix B Tabulation of UTL and GWPS Values, CCR Unit-Specific

Assessment Monitoring - Statistically Significant Levels above Groundwater Protection Standards
Intermountain Power Service Corporation - Intermountain Generation Facility
Delta, Utah

Constituent	Downgradient Well ID	N	Mean	SD	SE	Median	1st Quartile	3rd Quartile	Minimum	Maximum	% Non-Detects	UTL	MCL	GWPS	LCL	LCL Exceeds GWPS
BOTTOM ASH BASIN																
lithium (mg/L)	BAC-3	11	1.369	0.6401	0.193	1.06	0.944	2.13	0.812	2.53	0.0%	0.7415	0.04	0.7415	0.812	YES
molybdenum (mg/L)	BAC-2	11	0.1595	0.01643	0.004953	0.156	0.143	0.167	0.14	0.194	0.0%	0.04038	0.1	0.1	0.1506	YES
COMBUSTION BY-PRODUCTS LANDFILL																
NO STATISTICALLY SIGNIFICANT LEVELS ABOVE GWPS																
WASTE WATER BASIN																
arsenic (mg/L)	WWC-1	11	0.01664	0.006735	0.002031	0.0181	0.0173	0.02	0.00331	0.0243	0.0%				0.01496	YES
arsenic (mg/L)	WWC-2	11	0.01455	0.0007488	0.0002258	0.0147	0.0141	0.0152	0.0129	0.0155	0.0%	0.01275	0.01	0.01275	0.01415	YES
arsenic (mg/L)	WWC-3	11	0.02086	0.003704	0.001117	0.0214	0.021	0.0226	0.0102	0.0247	0.0%				0.02045	YES

All units micrograms per liter (mg/L)
N: Number of Samples
SD: Standard Deviation
SE: Standard Error
UTL: Upper Tolerance Limit, calculated using samples collected from upgradient wells
Bottom Ash upgrandient wells: BA-U-1, BA-U-2 (n=22)
Waste Water upgradient wells: WW-U-1, WW-U-2, SI-U-1 (n=33)
GWPS: Ground water Protection Standard = the greater value of the UTL or MCL
LCL: Lower Confidence Limit of the Mean, If the LCL exceeds the GWPS it is evidence of a statistically significant level above background

Constituent Name	Well	N	Mean	Standard Deviation	Standard Error	Median	Lower Quartile,	Upper Quartile,	Minimum	Maximum	% Non-Detects	UTL	MCL	GWPS	LCL	UCL	LCL Exceeds GWPS2	UCL Exceeds GWPS
antimony (mg/L)	Background	33	0.00103	0.0001741	0.0000303	0.001	0.001	0.001	0.001	0.002	96.97	0.001	0.006	0.006				
antimony (mg/L)	WWC-1	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	WWC-2	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	WWC-3	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	WWC-4	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	WWC-5	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
arsenic (mg/L)	Background	33	0.006554	0.002831	0.0004929	0.00573	0.004425	0.00935	0.001	0.0109	3.03	0.01275	0.01	0.01275				
arsenic (mg/L)	WWC-1	11	0.01664	0.006735	0.002031	0.0181	0.0173	0.02	0.00331	0.0243	0				0.01496	0.0203	YES	YES
arsenic (mg/L)	WWC-2	11	0.01455	0.0007488	0.0002258	0.0147	0.0141	0.0152	0.0129	0.0155	0				0.01415	0.01496	YES	YES
arsenic (mg/L)	WWC-3	11	0.02086	0.003704	0.001117	0.0214	0.021	0.0226	0.0102	0.0247	0				0.02045	0.02262	YES	YES
arsenic (mg/L)	WWC-4	11	0.01206	0.002721	0.0008204	0.013	0.0116	0.0135	0.00498	0.0145	0				0.01147	0.01344	NO	YES
arsenic (mg/L)	WWC-5	11	0.008509	0.002536	0.0007647	0.00783	0.00717	0.0104	0.00371	0.0131	0				0.007123	0.009895	NO	NO
barium (mg/L)	Background	33	0.07908	0.02935	0.005109	0.0761	0.05565	0.09225	0.0446	0.178	0	0.1481	2	2				
barium (mg/L)	WWC-1	11	0.03876	0.01967	0.00593	0.0317	0.0268	0.0536	0.0209	0.077	0				0.02755	0.04481	NO	NO
barium (mg/L)	WWC-2	11	0.03947	0.007406	0.002233	0.0361	0.0339	0.0421	0.031	0.0543	0				0.03543	0.04352	NO	NO
barium (mg/L)	WWC-3	11	0.03304	0.01088	0.003279	0.0302	0.0278	0.0342	0.0242	0.0638	0				0.0242	0.0357	NO	NO
barium (mg/L)	WWC-4	11	0.0646	0.01769	0.005334	0.061	0.0507	0.0768	0.0463	0.101	0				0.05493	0.07427	NO	NO
barium (mg/L)	WWC-5	11	0.05179	0.02411	0.00727	0.0438	0.034	0.067	0.0302	0.103	0				0.03844	0.06223	NO	NO
beryllium (mg/L)	Background	33	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.004	0.004				
beryllium (mg/L)	WWC-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	WWC-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	WWC-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	WWC-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	WWC-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
cadmium (mg/L)	Background	33	0.004887	0.0006476	0.0001127	0.005	0.005	0.005	0.00128	0.005	96.97	0.005	0.005	0.005				
cadmium (mg/L)	WWC-1	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.002	0.002	NO	NO
cadmium (mg/L)	WWC-2	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.002	0.002	NO	NO
cadmium (mg/L)	WWC-3	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.002	0.002	NO	NO
cadmium (mg/L)	WWC-4	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.002	0.002	NO	NO
cadmium (mg/L)	WWC-5	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.002	0.002	NO	NO
chromium (mg/L)	Background	33	0.00627	0.012	0.002088	0.00217	0.002	0.00481	0.000602	0.067	27.27	0.067	0.1	0.1				
chromium (mg/L)	WWC-1	11	0.00337	0.00355	0.00107	0.002	0.002	0.00348	0.002	0.0139	72.73				0.002	0.00369	NO	NO
chromium (mg/L)	WWC-2	11	0.004285	0.006663	0.002009	0.002	0.002	0.00335	0.002	0.0243	72.73				0.002	0.00348	NO	NO
chromium (mg/L)	WWC-3	11	0.002442	0.001151	0.0003471	0.002	0.002	0.002	0.002	0.00577	81.82				0.002	0.00309	NO	NO
chromium (mg/L)	WWC-4	11	0.002615	0.002041	0.0006155	0.002	0.002	0.002	0.002	0.00877	90.91				0.002	0.002	NO	NO
chromium (mg/L)	WWC-5	11	0.002665	0.002078	0.0006264	0.002	0.002	0.00202	0.002	0.00892	72.73				0.002	0.00238	NO	NO
cobalt (mg/L)	Background	33	0.004097	0.000557	0.00009697	0.004	0.004	0.004	0.004	0.0072	96.97	0.0072	0.006	0.0072				
cobalt (mg/L)	WWC-1	11	0.004522	0.001352	0.0004077	0.004	0.004	0.004	0.004	0.00842	81.82				0.004	0.00532	NO	NO
cobalt (mg/L)	WWC-2	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	WWC-3	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	WWC-4	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	WWC-5	11	0.004136	0.0004523	0.0001364	0.004	0.004	0.004	0.004	0.0055	90.91				0.004	0.004	NO	NO
fluoride (mg/L)	Background	33	0.4106	0.2331	0.04058	0.458	0.276	0.548	0	1.01	15.15	0.9086	4	4				
fluoride (mg/L)	WWC-1	11	0.1627	0.1651	0.04978	0.133	0	0.256	0	0.507	36.36				0.0767	0.2488	NO	NO
fluoride (mg/L)	WWC-2	11	0.4225	0.1728	0.0521	0.42	0.358	0.452	0.158	0.833	0				0.328	0.5169	NO	NO
fluoride (mg/L)	WWC-3	11	0.9894	0.09192	0.02772	1.01	0.897	1.06	0.845	1.13	0				0.9391	1.04	NO	NO
fluoride (mg/L)	WWC-4	11	0.4473	0.08237	0.02484	0.435	0.387	0.509	0.319	0.576	0				0.4023	0.4923	NO	NO
fluoride (mg/L)	WWC-5	11	0.3261	0.1374	0.04143	0.331	0.292	0.401	0	0.544	9.091				0.251	0.4012	NO	NO
lead (mg/L)	Background	33	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.015	0.015				
lead (mg/L)	WWC-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	WWC-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	WWC-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	WWC-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	WWC-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lithium (mg/L)	Background	33	0.5821	0.3149	0.05482	0.479	0.4385	0.784	0.235	1.35	0	1.35	0.04	1.35				
lithium (mg/L)	WWC-1	11	1.325	0.7251	0.2186	0.964	0.819	2.18	0.755	2.69	0				0.755	2.41	NO	YES
lithium (mg/L)	WWC-2	11	0.1539	0.05544	0.01672	0.124	0.112	0.225	0.104	0.243	0				0.104	0.241	NO	NO
lithium (mg/L)	WWC-3	11	0.1649	0.04891	0.01475	0.139	0.127	0.23	0.123	0.243	0				0.123	0.241	NO	NO
lithium (mg/L)	WWC-4	11	0.5123	0.2318	0.0699	0.382	0.351	0.75	0.309	0.909	0				0.309	0.879	NO	NO
lithium (mg/L)	WWC-5	11	1.106	1.165	0.3513	0.555	0.497	1.4	0.472	4.41	0				0.472	1.41	NO	YES
mercury (mg/L)	Background	33	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100	0.00015	0.002	0.002				
mercury (mg/L)	WWC-1	11	0.0002225	0.00006787	0.00002046	0.000198	0.000168	0.00031	0.00015	0.000328	18.18				0.0001872	0.0002579	NO	NO
mercury (mg/L)	WWC-2	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	WWC-3	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	WWC-4	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	WWC-5	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
molybdenum (mg/L)	Background	33	0.008239	0.00735	0.001279	0.00619	0.00286	0.009505	0.00182	0.0342	0	0.02676	0.1	0.1				
molybdenum (mg/L)	WWC-1	11	0.008871	0.00245	0.0007387	0.00896	0.0068	0.00995	0.00596	0.0147	0				0.007532	0.01021	NO	NO
molybdenum (mg/L)	WWC-2	11	0.004055	0.001372	0.0004137	0.00372	0.00341	0.00402	0.00304	0.00809	0				0.00304	0.00405	NO	NO
molybdenum (mg/L)	WWC-3	11	0.008955	0.01226	0.003697	0.00537	0.00482	0.00574	0.00464	0.0459	0				0.00464	0.00593	NO	NO
molybdenum (mg/L)	WWC-4	11	0.002949	0.002736	0.0008249	0.00215	0.001	0.00467	0.001	0.0082	45.45				0.001	0.00783	NO	NO
molybdenum (mg/L)	WWC-5	11	0.008649	0.007883	0.002377	0.00523	0.00324	0.0119	0.00301	0.0265	0				0.004262	0.009735	NO	NO
radium226and228combined (pCi/L)	Background	30	1.633	0.7959	0.1453	1.54	1.045	2.19	0.27	3.3	0	3.4	5	5				
radium226and228combined (pCi/L)	WWC-1	10	1.56	0.551	0.1743	1.41	1.15	2.18	0.96	2.51	0				1.241	1.879	NO	NO
radium226and228combined (pCi/L)	WWC-2	10	0.86	0.5302	0.1677	0.715	0.515	1.23	0	1.89	10				0.5526	1.167	NO	NO
radium226and228combined (pCi/L)	WWC-3	10	0.801	1.124	0.3553	0.445	0.015	1.475	-0.14	3.43	10				0.02739	0.9845	NO	NO
radium226and228combined (pCi/L)	WWC-4	10	0.846	0.5889	0.1862	0.815	0.375	1.2	-0.02	1.97	10				0.5046	1.187	NO	NO
radium226and228combined (pCi/L)	WWC-5	10	1.511	0.4353	0.1377	1.555	1.12	1.77	0.92	2.42	0				1.259	1.763	NO	NO
selenium (mg/L)	Background	33	0.005938	0.003461	0.0006026	0.00617	0.002	0.007975	0.002	0.0122	33.33	0.0122	0.05	0.05				
selenium (mg/L)	WWC-1	11	0.01358	0.002457	0.0007407	0.0145	0.0139	0.015	0.00824	0.0153	0				0.00824	0.0152	NO	NO
selenium (mg/L)	WWC-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	WWC-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	WWC-4	11	0.002142	0.0001713	0.00005166	0.00207	0.002	0.00238	0.002	0.00241	36.36				0.002	0.00239	NO	NO
selenium (mg/L)	WWC-5	11	0.003691	0.0007226	0.0002179	0.00395	0.00336	0.0041	0.002	0.00478	9.091				0.003296	0.004086	NO	NO

thallium (mg/L)	Background	33	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.02	0.02				
thallium (mg/L)	WWC-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	WWC-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	WWC-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	WWC-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	WWC-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO

Constituent Name	Well	N	Mean	Standard Deviation	Standard Error	Median	Lower Quartile,	Upper Quartile,	Minimum	Maximum	% Non-Detects	UTLs	MCL	GWPS	LC L	UCL	LCL Exceed GWPS	UCL Exceed GWPS
antimony (mg/L)	Background	22	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100	0.001	0.006	0.006				
antimony (mg/L)	CLW-1	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	CLW-2	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	CLW-3	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	CLW-4	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	CLW-5	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	CLW-6	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	CLW-7	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	CLW-8	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
arsenic (mg/L)	Background	22	0.03012	0.006689	0.001426	0.02775	0.0251	0.0333	0.0236	0.0507	0	0.047	0.01	0.047				
arsenic (mg/L)	CLW-1	11	0.02857	0.001619	0.0004882	0.0285	0.0266	0.0298	0.0264	0.0309	0				0.02769	0.02946	NO	NO
arsenic (mg/L)	CLW-2	11	0.02601	0.001529	0.0004609	0.0258	0.0246	0.0277	0.0243	0.0284	0				0.02517	0.02684	NO	NO
arsenic (mg/L)	CLW-3	11	0.03979	0.002278	0.000687	0.0402	0.0378	0.0412	0.0364	0.0437	0				0.03855	0.04104	NO	NO
arsenic (mg/L)	CLW-4	11	0.03304	0.005682	0.001713	0.0352	0.0308	0.0375	0.0196	0.0388	0				0.02993	0.03614	NO	NO
arsenic (mg/L)	CLW-5	11	0.02075	0.001594	0.0004806	0.021	0.0189	0.0216	0.0182	0.023	0				0.01987	0.02162	NO	NO
arsenic (mg/L)	CLW-6	11	0.01817	0.005867	0.001769	0.0164	0.0143	0.0246	0.0104	0.0287	0				0.01497	0.02138	NO	NO
arsenic (mg/L)	CLW-7	11	0.02379	0.00104	0.0003135	0.0239	0.0234	0.0244	0.0215	0.0257	0				0.02322	0.02436	NO	NO
arsenic (mg/L)	CLW-8	11	0.02325	0.00291	0.0008773	0.0239	0.0224	0.0254	0.0155	0.0258	0				0.0222	0.02476	NO	NO
barium (mg/L)	Background	22	0.09319	0.0127	0.002708	0.0915	0.087	0.0957	0.0758	0.129	0	0.129	2	2				
barium (mg/L)	CLW-1	11	0.06474	0.01389	0.004187	0.0615	0.0582	0.0648	0.053	0.105	0				0.053	0.0668	NO	NO
barium (mg/L)	CLW-2	11	0.08037	0.007668	0.002312	0.0811	0.072	0.0855	0.0711	0.0957	0				0.07618	0.08456	NO	NO
barium (mg/L)	CLW-3	11	0.09952	0.006035	0.00182	0.0995	0.0948	0.103	0.089	0.111	0				0.09622	0.1028	NO	NO
barium (mg/L)	CLW-4	11	0.09573	0.01558	0.004697	0.09	0.0801	0.109	0.0786	0.122	0				0.08721	0.1042	NO	NO
barium (mg/L)	CLW-5	11	0.07757	0.007172	0.002163	0.0801	0.0714	0.0851	0.0671	0.0869	0				0.07365	0.08149	NO	NO
barium (mg/L)	CLW-6	11	0.09176	0.003801	0.001146	0.0902	0.0885	0.0961	0.0873	0.0976	0				0.08969	0.09384	NO	NO
barium (mg/L)	CLW-7	11	0.05569	0.008609	0.002596	0.0539	0.0514	0.0581	0.0475	0.0794	0				0.0475	0.0593	NO	NO
barium (mg/L)	CLW-8	11	0.07477	0.01305	0.003936	0.0707	0.0643	0.0797	0.0609	0.107	0				0.06764	0.08191	NO	NO
beryllium (mg/L)	Background	22	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.004	0.004				
beryllium (mg/L)	CLW-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	CLW-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	CLW-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	CLW-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	CLW-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	CLW-6	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	CLW-7	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	CLW-8	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
cadmium (mg/L)	Background	22	0.004802	0.0009274	0.0001977	0.005	0.005	0.005	0.00065	0.005	95.45	0.005	0.005	0.005				
cadmium (mg/L)	CLW-1	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	CLW-2	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	CLW-3	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	CLW-4	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	CLW-5	10	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	CLW-6	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	CLW-7	10	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	CLW-8	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
chromium (mg/L)	Background	22	0.002286	0.001172	0.0002499	0.002	0.002	0.002	0.000529	0.00613	81.82	0.00613	0.1	0.1				
chromium (mg/L)	CLW-1	11	0.007546	0.008927	0.002692	0.002	0.002	0.0157	0.00102	0.0271	45.45				0.00102	0.0187	NO	NO
chromium (mg/L)	CLW-2	11	0.003625	0.003655	0.001102	0.002	0.002	0.00411	0.002	0.014	72.73				0.002	0.00576	NO	NO
chromium (mg/L)	CLW-3	11	0.001997	0.0006608	0.0001992	0.002	0.002	0.002	0.000505	0.00346	81.82				0.000505	0.002	NO	NO
chromium (mg/L)	CLW-4	11	0.00652	0.01496	0.004511	0.002	0.002	0.002	0.000762	0.0516	72.73				0.000762	0.00336	NO	NO
chromium (mg/L)	CLW-5	11	0.002622	0.002475	0.0007463	0.002	0.002	0.002	0.000712	0.00999	72.73				0.000712	0.00214	NO	NO
chromium (mg/L)	CLW-6	11	0.002869	0.00296	0.0008924	0.002	0.002	0.002	0.000612	0.0116	72.73				0.000612	0.00335	NO	NO
chromium (mg/L)	CLW-7	11	0.00338	0.00254	0.0007658	0.002	0.002	0.00421	0.002	0.00891	63.64				0.002	0.00772	NO	NO
chromium (mg/L)	CLW-8	11	0.00317	0.003032	0.0009141	0.002	0.002	0.00224	0.002	0.012	72.73				0.002	0.00463	NO	NO
cobalt (mg/L)	Background	22	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100	0.004	0.006	0.006				
cobalt (mg/L)	CLW-1	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	CLW-2	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	CLW-3	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	CLW-4	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	CLW-5	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	CLW-6	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	CLW-7	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	CLW-8	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
fluoride (mg/L)	Background	22	0.9517	0.1236	0.02635	0.976	0.8675	1.02	0.611	1.17	0	1.242	4	4				
fluoride (mg/L)	CLW-1	11	1.045	0.1158	0.03492	1.06	1.02	1.15	0.834	1.18	0				0.982	1.109	NO	NO
fluoride (mg/L)	CLW-2	11	1.132	0.1564	0.04715	1.18	1.13	1.21	0.695	1.29	0				1.094	1.209	NO	NO
fluoride (mg/L)	CLW-3	11	1.234	0.1135	0.03422	1.23	1.19	1.33	0.948	1.35	0				1.18	1.296	NO	NO
fluoride (mg/L)	CLW-4	11	1.442	0.1068	0.03219	1.44	1.35	1.53	1.27	1.6	0				1.383	1.5	NO	NO
fluoride (mg/L)	CLW-5	11	1.728	0.1058	0.0319	1.71	1.69	1.82	1.51	1.83	0				1.67	1.786	NO	NO
fluoride (mg/L)	CLW-6	11	1.592	0.1303	0.03928	1.61	1.46	1.73	1.38	1.73	0				1.521	1.663	NO	NO
fluoride (mg/L)	CLW-7	11	1.009	0.1205	0.03632	1.02	0.945	1.11	0.792	1.16	0				0.9427	1.074	NO	NO
fluoride (mg/L)	CLW-8	11	0.9985	0.1176	0.03545	1.03	0.933	1.08	0.782	1.13	0				0.9342	1.063	NO	NO
lead (mg/L)	Background	22	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.015	0.015				
lead (mg/L)	CLW-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	CLW-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	CLW-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	CLW-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	CLW-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	CLW-6	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	CLW-7	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	CLW-8	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO

lithium (mg/L)	Background	22	0.2651	0.07813	0.01666	0.2155	0.207	0.3485	0.19	0.401	0	0.401	0.04	0.401				
lithium (mg/L)	CLW-1	11	0.2355	0.07161	0.02159	0.192	0.184	0.316	0.173	0.361	0				0.173	0.318	NO	NO
lithium (mg/L)	CLW-2	11	0.2844	0.09059	0.02731	0.227	0.219	0.391	0.211	0.438	0				0.211	0.396	NO	NO
lithium (mg/L)	CLW-3	11	0.2722	0.08772	0.02645	0.217	0.214	0.368	0.197	0.435	0				0.197	0.375	NO	NO
lithium (mg/L)	CLW-4	11	0.2514	0.07328	0.02209	0.204	0.199	0.336	0.189	0.375	0				0.189	0.338	NO	NO
lithium (mg/L)	CLW-5	11	0.217	0.1204	0.03631	0.21	0.188	0.346	0.025	0.411	0				0.1511	0.2828	NO	NO
lithium (mg/L)	CLW-6	11	0.2383	0.09904	0.02986	0.203	0.193	0.333	0.05	0.4	9.091				0.1841	0.2924	NO	NO
lithium (mg/L)	CLW-7	11	0.2294	0.06576	0.01983	0.189	0.182	0.302	0.169	0.331	0				0.169	0.327	NO	NO
lithium (mg/L)	CLW-8	11	0.2343	0.06641	0.02002	0.192	0.188	0.308	0.176	0.35	0				0.176	0.32	NO	NO
mercury (mg/L)	Background	22	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100	0.00015	0.002	0.002				
mercury (mg/L)	CLW-1	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	CLW-2	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	CLW-3	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	CLW-4	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	CLW-5	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	CLW-6	11	0.01677	0.05513	0.01662	0.00015	0.00015	0.00015	0.00015	0.183	90.91				0.00015	0.00015	NO	NO
mercury (mg/L)	CLW-7	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	CLW-8	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
molybdenum (mg/L)	Background	22	0.004216	0.000791	0.0001686	0.00403	0.003815	0.004215	0.00359	0.00733	0	0.00733	0.1	0.1				
molybdenum (mg/L)	CLW-1	11	0.005008	0.001067	0.0003218	0.00454	0.00407	0.00589	0.00388	0.0068	0				0.004425	0.005591	NO	NO
molybdenum (mg/L)	CLW-2	11	0.004662	0.0004551	0.0001372	0.00461	0.00437	0.00472	0.00427	0.00593	0				0.00427	0.00481	NO	NO
molybdenum (mg/L)	CLW-3	11	0.004852	0.0001833	0.00005526	0.00483	0.00472	0.00498	0.00463	0.0052	0				0.004752	0.004952	NO	NO
molybdenum (mg/L)	CLW-4	11	0.006171	0.002332	0.0007033	0.00525	0.00459	0.00762	0.00414	0.0115	0				0.004892	0.007143	NO	NO
molybdenum (mg/L)	CLW-5	11	0.006953	0.00147	0.0004431	0.00679	0.0054	0.00841	0.00519	0.00922	0				0.00615	0.007756	NO	NO
molybdenum (mg/L)	CLW-6	11	0.008009	0.002976	0.0008972	0.00746	0.00711	0.0105	0.001	0.0117	9.091				0.006383	0.009635	NO	NO
molybdenum (mg/L)	CLW-7	11	0.01692	0.04282	0.01291	0.00396	0.00331	0.00425	0.00329	0.146	0				0.00329	0.00638	NO	NO
molybdenum (mg/L)	CLW-8	11	0.004575	0.0007728	0.000233	0.00435	0.00391	0.00503	0.00359	0.00626	0				0.004153	0.004998	NO	NO
radium226and228combined (pCi/L)	Background	20	1.207	0.7924	0.1772	1.11	0.71	1.66	0	3.7	5	3.106	5	5				
radium226and228combined (pCi/L)	CLW-1	10	1.24	0.6247	0.1975	1.25	0.54	1.885	0.34	2.16	0				0.8779	1.602	NO	NO
radium226and228combined (pCi/L)	CLW-2	10	1.333	0.6785	0.2146	1.195	0.965	1.48	0.65	3.12	0				0.9641	1.603	NO	NO
radium226and228combined (pCi/L)	CLW-3	10	0.998	0.5829	0.1843	1.18	0.465	1.56	0	1.7	10				0.6601	1.336	NO	NO
radium226and228combined (pCi/L)	CLW-4	10	1.063	0.6487	0.2051	1.03	0.49	1.605	0.22	2.24	0				0.687	1.439	NO	NO
radium226and228combined (pCi/L)	CLW-5	10	1.165	0.8818	0.2788	1.015	0.455	2.185	0	2.6	10				0.6538	1.676	NO	NO
radium226and228combined (pCi/L)	CLW-6	10	1.036	0.5369	0.1698	1.02	0.52	1.47	0.25	1.99	0				0.7248	1.347	NO	NO
radium226and228combined (pCi/L)	CLW-7	10	0.682	0.346	0.1094	0.625	0.465	0.93	0.14	1.4	0				0.4814	0.8826	NO	NO
radium226and228combined (pCi/L)	CLW-8	10	0.921	0.5334	0.1687	1.02	0.42	1.305	0.09	1.85	0				0.6118	1.23	NO	NO
selenium (mg/L)	Background	22	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.05	0.05				
selenium (mg/L)	CLW-1	11	0.001903	0.0003232	0.00009745	0.002	0.002	0.002	0.000928	0.002	90.91				0.000928	0.002	NO	NO
selenium (mg/L)	CLW-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	CLW-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	CLW-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	CLW-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	CLW-6	11	0.002436	0.001447	0.0004364	0.002	0.002	0.002	0.002	0.0068	90.91				0.002	0.002	NO	NO
selenium (mg/L)	CLW-7	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	CLW-8	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	Background	22	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.02	0.02				
thallium (mg/L)	CLW-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	CLW-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	CLW-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	CLW-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	CLW-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	CLW-6	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	CLW-7	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	CLW-8	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO

Constituent Name	Well	N	Mean	Standard Deviation	Standard Error	Median	Lower Quartile,	Upper Quartile,	Minimum	Maximum	% Non-Detects	UTL	MCL	GWPS	LCL	UCL	LCL Exceeds GWPS	UCL Exceeds GWPS
antimony (mg/L)	Background	22	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100	0.001	0.006	0.006				
antimony (mg/L)	BAC-1	11	0.001212	0.0004318	0.0001302	0.001	0.001	0.00138	0.001	0.00237	72.73				0.001	0.00158	NO	NO
antimony (mg/L)	BAC-2	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	BAC-3	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	BAC-4	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	BAC-5	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	BAC-6	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
antimony (mg/L)	BAC-7	11	0.001	0	0	0.001	0.001	0.001	0.001	0.001	100				0.001	0.001	NO	NO
arsenic (mg/L)	Background	22	0.01936	0.01013	0.00216	0.02085	0.01585	0.02415	0.001	0.0362	9.091	0.04317	0.01	0.04317				
arsenic (mg/L)	BAC-1	11	0.01477	0.002596	0.0007828	0.0146	0.0129	0.0164	0.0103	0.0202	0				0.01335	0.01619	NO	NO
arsenic (mg/L)	BAC-2	11	0.04513	0.005039	0.001519	0.0444	0.0416	0.0469	0.0386	0.0565	0				0.04237	0.04788	NO	YES
arsenic (mg/L)	BAC-3	11	0.03214	0.01602	0.004831	0.0239	0.0192	0.0496	0.0158	0.0588	0				0.02259	0.03865	NO	NO
arsenic (mg/L)	BAC-4	11	0.03271	0.00833	0.002512	0.0352	0.0322	0.0362	0.00882	0.0407	0				0.03142	0.03659	NO	NO
arsenic (mg/L)	BAC-5	11	0.03282	0.003337	0.001006	0.0325	0.0297	0.0357	0.0275	0.0392	0				0.03099	0.03464	NO	NO
arsenic (mg/L)	BAC-6	11	0.01851	0.005069	0.001528	0.0214	0.0134	0.0229	0.0115	0.0248	0				0.01574	0.02128	NO	NO
arsenic (mg/L)	BAC-7	11	0.02408	0.00717	0.002162	0.0234	0.0191	0.0241	0.0154	0.0434	0				0.02023	0.02683	NO	NO
barium (mg/L)	Background	22	0.1102	0.03251	0.006932	0.1055	0.08195	0.139	0.0636	0.175	0	0.1866	2	2				
barium (mg/L)	BAC-1	11	0.1682	0.2106	0.06349	0.0643	0.049	0.279	0.0391	0.702	0				0.0391	0.39	NO	NO
barium (mg/L)	BAC-2	11	0.02595	0.008703	0.002624	0.0228	0.021	0.0248	0.0202	0.0472	0				0.0202	0.0385	NO	NO
barium (mg/L)	BAC-3	11	0.04248	0.0155	0.004672	0.0376	0.0317	0.048	0.0306	0.0827	0				0.03428	0.04787	NO	NO
barium (mg/L)	BAC-4	11	0.06728	0.01782	0.005373	0.0705	0.0666	0.0772	0.0171	0.0821	0				0.06453	0.07578	NO	NO
barium (mg/L)	BAC-5	11	0.08295	0.008322	0.002509	0.0877	0.0736	0.0893	0.0706	0.0928	0				0.07841	0.0875	NO	NO
barium (mg/L)	BAC-6	11	0.04864	0.02748	0.008286	0.0287	0.0245	0.0781	0.0227	0.0859	0				0.0227	0.0833	NO	NO
barium (mg/L)	BAC-7	11	0.02886	0.0109	0.003288	0.026	0.0214	0.0315	0.0195	0.0577	0				0.0231	0.03327	NO	NO
beryllium (mg/L)	Background	22	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.004	0.004				
beryllium (mg/L)	BAC-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	BAC-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	BAC-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	BAC-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	BAC-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	BAC-6	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
beryllium (mg/L)	BAC-7	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
cadmium (mg/L)	Background	22	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100	0.005	0.005	0.005				
cadmium (mg/L)	BAC-1	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	BAC-2	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	BAC-3	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	BAC-4	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	BAC-5	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
cadmium (mg/L)	BAC-6	11	0.004607	0.001303	0.000393	0.005	0.005	0.005	0.000677	0.005	90.91				0.000677	0.005	NO	NO
cadmium (mg/L)	BAC-7	11	0.005	0	0	0.005	0.005	0.005	0.005	0.005	100				0.005	0.005	NO	NO
chromium (mg/L)	Background	22	0.002836	0.002757	0.0005879	0.002	0.002	0.00208	0.000506	0.0125	68.18	0.0125	0.1	0.1				
chromium (mg/L)	BAC-1	11	0.0195	0.03328	0.01003	0.00612	0.00451	0.0184	0.0028	0.114	0				0.0028	0.0412	NO	NO
chromium (mg/L)	BAC-2	11	0.008191	0.003057	0.0009216	0.00777	0.00547	0.0111	0.00483	0.0145	0				0.00652	0.009861	NO	NO
chromium (mg/L)	BAC-3	11	0.01152	0.01677	0.005055	0.00676	0.00447	0.00968	0.00362	0.0615	0				0.00362	0.0114	NO	NO
chromium (mg/L)	BAC-4	11	0.003085	0.002737	0.0008253	0.002	0.002	0.0022	0.002	0.011	63.64				0.002	0.00461	NO	NO
chromium (mg/L)	BAC-5	11	0.003285	0.00425	0.001281	0.002	0.002	0.002	0.002	0.0161	81.82				0.002	0.00204	NO	NO
chromium (mg/L)	BAC-6	11	0.00525	0.0103	0.003106	0.002	0.002	0.00257	0.002	0.0363	63.64				0.002	0.00283	NO	NO
chromium (mg/L)	BAC-7	11	0.004414	0.007316	0.002206	0.002	0.002	0.00217	0.002	0.0264	72.73				0.002	0.00398	NO	NO
cobalt (mg/L)	Background	22	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100	0.004	0.006	0.006				
cobalt (mg/L)	BAC-1	11	0.004242	0.000627	0.000189	0.004	0.004	0.004	0.004	0.00605	81.82				0.004	0.00461	NO	NO
cobalt (mg/L)	BAC-2	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	BAC-3	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	BAC-4	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	BAC-5	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	BAC-6	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
cobalt (mg/L)	BAC-7	11	0.004	0	0	0.004	0.004	0.004	0.004	0.004	100				0.004	0.004	NO	NO
fluoride (mg/L)	Background	22	1.081	0.3373	0.07191	0.959	0.843	1.39	0.727	1.75	0	1.75	4	4				
fluoride (mg/L)	BAC-1	11	0.3694	0.2444	0.07368	0.401	0.266	0.507	0	0.854	18.18				0.242	0.4967	NO	NO
fluoride (mg/L)	BAC-2	11	0.8338	0.4598	0.1386	0.986	0.684	1.11	0	1.33	18.18				0.5942	1.073	NO	NO
fluoride (mg/L)	BAC-3	11	0.9784	0.8142	0.2455	0.794	0	1.62	0	2.51	27.27				0.5541	1.403	NO	NO
fluoride (mg/L)	BAC-4	11	1.236	0.1279	0.03857	1.26	1.13	1.35	1.01	1.38	0				1.166	1.306	NO	NO
fluoride (mg/L)	BAC-5	11	1.144	0.1387	0.04181	1.11	1.04	1.26	0.916	1.34	0				1.068	1.219	NO	NO
fluoride (mg/L)	BAC-6	11	0.8664	0.1652	0.04981	0.847	0.754	1.01	0.582	1.15	0				0.7761	0.9566	NO	NO
fluoride (mg/L)	BAC-7	11	1.093	0.3078	0.09282	1.09	0.936	1.31	0.388	1.51	0				0.9252	1.262	NO	NO
lead (mg/L)	Background	22	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.015	0.015				
lead (mg/L)	BAC-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	BAC-2	11	0.002019	0.00006332	0.00001909	0.002	0.002	0.002	0.002	0.00221	90.91				0.002	0.002	NO	NO
lead (mg/L)	BAC-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	BAC-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO

lead (mg/L)	BAC-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	BAC-6	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lead (mg/L)	BAC-7	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
lithium (mg/L)	Background	22	0.322	0.1536	0.03275	0.288	0.2125	0.3525	0.191	0.773	0	0.7415	0.04	0.7415				
lithium (mg/L)	BAC-1	11	0.7318	0.4543	0.137	0.581	0.402	1.3	0.305	1.52	0				0.4639	0.8974	NO	YES
lithium (mg/L)	BAC-2	11	0.7655	0.408	0.123	0.524	0.44	1.22	0.414	1.38	0				0.414	1.32	NO	YES
lithium (mg/L)	BAC-3	11	1.369	0.6401	0.193	1.06	0.944	2.13	0.812	2.53	0				0.812	2.37	YES	YES
lithium (mg/L)	BAC-4	11	0.3416	0.1315	0.03966	0.262	0.243	0.508	0.228	0.532	0				0.228	0.509	NO	NO
lithium (mg/L)	BAC-5	11	0.3574	0.1144	0.03449	0.294	0.277	0.479	0.219	0.538	0				0.2914	0.4126	NO	NO
lithium (mg/L)	BAC-6	11	0.3775	0.1536	0.04631	0.28	0.265	0.542	0.25	0.599	0				0.25	0.597	NO	NO
lithium (mg/L)	BAC-7	11	0.4395	0.193	0.0582	0.327	0.285	0.674	0.269	0.699	0				0.269	0.681	NO	NO
mercury (mg/L)	Background	22	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100	0.00015	0.002	0.002				
mercury (mg/L)	BAC-1	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	BAC-2	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	BAC-3	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	BAC-4	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	BAC-5	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	BAC-6	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
mercury (mg/L)	BAC-7	11	0.00015	0	0	0.00015	0.00015	0.00015	0.00015	0.00015	100				0.00015	0.00015	NO	NO
molybdenum (mg/L)	Background	22	0.01015	0.01031	0.002198	0.00717	0.00297	0.01355	0.00215	0.0408	0	0.04038	0.1	0.1				
molybdenum (mg/L)	BAC-1	11	0.05256	0.03347	0.01009	0.0467	0.0288	0.0607	0.0232	0.143	0				0.03483	0.06541	NO	NO
molybdenum (mg/L)	BAC-2	11	0.1595	0.01643	0.004953	0.156	0.143	0.167	0.14	0.194	0				0.1506	0.1685	YES	YES
molybdenum (mg/L)	BAC-3	11	0.03511	0.008635	0.002604	0.0337	0.0275	0.0396	0.026	0.0525	0				0.03039	0.03983	NO	NO
molybdenum (mg/L)	BAC-4	11	0.01258	0.002503	0.0007548	0.012	0.0104	0.0143	0.00992	0.017	0				0.01122	0.01395	NO	NO
molybdenum (mg/L)	BAC-5	11	0.008795	0.00228	0.0006875	0.0077	0.00728	0.00926	0.00666	0.0134	0				0.00666	0.0128	NO	NO
molybdenum (mg/L)	BAC-6	11	0.07072	0.02813	0.008481	0.0858	0.0359	0.0921	0.0213	0.0968	0				0.07083	0.08867	NO	NO
molybdenum (mg/L)	BAC-7	11	0.07822	0.00959	0.002892	0.075	0.0702	0.0888	0.0681	0.0944	0				0.0681	0.0942	NO	NO
radium226and228combined (pCi/L)	Background	20	1.231	0.6188	0.1384	1.245	0.84	1.675	0.28	2.42	0	2.713	5	5				
radium226and228combined (pCi/L)	BAC-1	10	1.643	0.7154	0.2262	1.555	0.99	2.435	0.61	2.6	0				1.228	2.058	NO	NO
radium226and228combined (pCi/L)	BAC-2	10	1.067	0.8147	0.2576	0.905	0.405	1.595	0.22	2.9	0				0.5947	1.539	NO	NO
radium226and228combined (pCi/L)	BAC-3	10	1.311	0.5293	0.1674	1.335	0.88	1.78	0.38	2.09	0				1.004	1.618	NO	NO
radium226and228combined (pCi/L)	BAC-4	10	0.85	0.7078	0.2238	0.84	0.31	1	0	2.6	10				0.3394	1.157	NO	NO
radium226and228combined (pCi/L)	BAC-5	10	1.052	0.8877	0.2807	0.665	0.335	1.78	0.19	2.96	0				0.5374	1.567	NO	NO
radium226and228combined (pCi/L)	BAC-6	10	1.22	1.109	0.3508	1.01	0.675	1.5	-0.09	4.07	0				-0.09	1.79	NO	NO
radium226and228combined (pCi/L)	BAC-7	10	1.231	1.035	0.3274	0.95	0.435	1.975	0	3.38	10				0.6308	1.831	NO	NO
selenium (mg/L)	Background	22	0.002272	0.0007933	0.0001691	0.002	0.002	0.002105	0.000691	0.00426	68.18	0.00426	0.05	0.05				
selenium (mg/L)	BAC-1	11	0.01246	0.004803	0.001448	0.0131	0.00818	0.0168	0.00643	0.0204	0				0.009831	0.01508	NO	NO
selenium (mg/L)	BAC-2	11	0.01469	0.001404	0.0004233	0.0144	0.0136	0.0157	0.0128	0.0173	0				0.01392	0.01546	NO	NO
selenium (mg/L)	BAC-3	11	0.02131	0.002908	0.0008769	0.0211	0.019	0.0228	0.0184	0.0287	0				0.01973	0.02278	NO	NO
selenium (mg/L)	BAC-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	BAC-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
selenium (mg/L)	BAC-6	11	0.002646	0.0009703	0.0002925	0.002	0.002	0.00369	0.002	0.0045	54.55				0.002	0.00414	NO	NO
selenium (mg/L)	BAC-7	11	0.004189	0.001492	0.0004499	0.00446	0.00276	0.00541	0.00257	0.007	0				0.003374	0.005005	NO	NO
thallium (mg/L)	Background	22	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100	0.002	0.02	0.02				
thallium (mg/L)	BAC-1	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	BAC-2	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	BAC-3	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	BAC-4	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	BAC-5	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	BAC-6	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO
thallium (mg/L)	BAC-7	11	0.002	0	0	0.002	0.002	0.002	0.002	0.002	100				0.002	0.002	NO	NO