June 2020 Semi-Annual Progress Report

Intermountain Generating Facility
Delta, Utah

Prepared for:
Intermountain Power Service Corporation
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Prepared by:
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Project No.: 203709098

June 25, 2020

Sign-off Sheet and Signatures of Environmental Professionals

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1.0 EXECUTIVE SUMMARY

1.1 BACKGROUND

On behalf of Intermountain Power Service Corporation ("IPSC"), Stantec Consulting Services Inc. ("Stantec") has prepared this progress report to summarize recent investigative and remedial design activities designed to further assess and design corrective measures required by the United States Environmental Protection Agency's 2015 Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities, 40 CFR 257 Subpart D (the "Federal CCR Rule")(and the corresponding Utah CCR Rule at Utah Admin. Code R315-319 (the "State CCR Rule")(collectively, the "CCR Rules")). The activities summarized herein were outlined in in detail within IPSC's *January 2020 Annual Groundwater Monitoring and Corrective Action Summary Report*.

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

The UDEQ Division of Waste Management and Radiation Control ("DWMRC") also has regulatory oversight pursuant to the State CCR Rule, under which DWMRC will be issuing a separate permit for the CCR Units. 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.

As reported in IPSC's historical reports, groundwater in localized, down-gradient directions in relation to the Bottom Ash Basin and the Waste Water Basin (surface impoundments) contains Total Dissolved Solids (TDS). IPSC is currently implementing a groundwater monitoring and recovery program. Supplemental monitoring and recovery wells were installed in sequential phases during the past year, and an additional twenty-five (25) wells are being installed currently to help define more definitively the down-gradient, leading edges of the two TDS plumes, and will be used for recovery of groundwater at select locations for TDS plume control.

As reported in IPSC's January 2019 *Assessment of Corrective Measures and Amended Corrective Action Plan* report, three metal constituents (arsenic, lithium, and molybdenum) were also quantified at localized areas within wells located immediately adjacent to the two surface impoundment boundaries. Statistical analyses to date indicate that the metals are localized at the boundaries of the two surface impoundments.

Although it is documented throughout Utah and near the site that arsenic and lithium can be present naturally at elevated concentrations, IPSC will continue monitoring metal concentrations in groundwater as part of its routine groundwater monitoring program. As supplemental water quality data is generated, potential contaminants such as metals will be evaluated through statistical analysis, in accordance with CCR Rule requirements.

Groundwater quality data to date indicate that TDS has migrated farther down-gradient of the two surface impoundments than the metal constituents detected near the impoundment boundaries. TDS is therefore being used as the leading indicator parameter of impacted groundwater quality for evaluating a suitable groundwater remediation approach. The recovery of TDS-impacted groundwater at select recovery wells will also intercept metal constituents that might be present, as TDS is expected to continue to migrate at a faster rate than dissolved metals in the clay-rich aquifer that underlies the property.

1.2 PURPOSE OF THIS REPORT

IPSC implemented a sequential, groundwater quality investigative program during the past year to refine IPSC's current Conceptual Site Model (CSM) and understanding of the hydraulic conditions of localized portions of the uppermost aquifer beneath the site. Sixteen (16) wells were installed and sampled during 2019, the analytical results of which were then used to help locate the 25 additional wells that are being installed presently. The sequenced, investigative approach helped delineate more definitively the physical characteristics and footprints of the TDS groundwater plumes located down-gradient (generally southwest) of the surface impoundments.

Currently, IPSC is installing and developing 25 additional groundwater monitoring wells, with intentions to use many of the wells for groundwater recovery and TDS plume control. The six-inch diameter, 80 to 90-feet deep wells are being installed currently and are scheduled for development during June 2020. IPSC anticipates that all 25 wells will be installed, developed, and surveyed in relation to existing wells by mid-June 2020. Select wells will be pump-tested to estimate well yield and radial cones of groundwater capture. Thereafter, IPSC intends to install groundwater recovery pumps in select wells to supplement and enhance ongoing groundwater recovery and TDS plume control operations.

The 25 new wells are being drilled currently by Cascade Drilling, LP of Salt Lake City, Utah, a Utah-certified, water well drilling firm. Each well is being drilled, installed, and developed by the sonic drilling method in similar fashion as previous, historical wells at the site. Drilling logs, schematic well construction diagrams, and details related to the drilling, installation, and development of the 25 new wells will be discussed in detail within IPSC's next semi-annual, summary report.

Currently, Stantec is conducting conceptual design, sizing, and layout of the submersible pumps and associated down-well, water level controls; groundwater conveyance piping and discharge equipment; and all related appurtenances and electrical needs. The expanded groundwater recovery network is designed to recover groundwater near the down-gradient, leading edges of the two TDS plumes and help supplement existing groundwater recovery wells. Following IPSC review and comment on the conceptual design, the project will be advanced to a Pre-Final (90-percent) level design, followed by construction and startup of the enhanced, groundwater recovery system.

Although the TDS plumes pose little to no risk to human health or the environment at the present and foreseeable time, IPSC anticipates initiating construction of the expanded groundwater recovery network as soon as mid-2020. It is anticipated that the analytical results associated with ongoing monitoring of water quality beneath the site will influence what, if any, additional monitoring wells and/or recovery wells might be necessary in the future in pursuit of TDS plume delineation and control.

IPSC and Stantec have been reviewing historical groundwater quality data to delineate the two TDS plumes and decide how best to enhance groundwater recovery and TDS plume control through expanding the existing groundwater recovery well network. IPSC has prepared this report to "provide a semi-annual summary describing the progress in selecting and designing a (groundwater) remedy," as specified by UDEQ Rule R315-319-97(a).

This report provides summary details regarding investigative activities conducted subsequent to activities reported within IPSC's *January 2020 Annual Groundwater Monitoring and Corrective Action Summary Report*. This report details IPSC's Spring 2020 semi-annual groundwater sampling results. The report includes an updated TDS iso-concentration map and groundwater flow map, as of the Spring 2020 monitoring event.

2.0 MARCH-APRIL 2020 GROUNDWATER MONITORING PROGRAM

Figure 3 is a groundwater elevation potentiometric map based on mean sea level water level measurements collected during March 2020. Figure 4 presents March and April 2020 TDS iso-concentrations superimposed atop the Figure 3 groundwater potentiometric map. Analysis of the analytical results and groundwater flow patterns was used to help locate the 25 monitoring/recovery wells that are being installed currently.

Table 1 presents a summary of all groundwater monitoring well construction specific details. Attachment 1 presents a tabulated summary of water quality results associated with all existing CCR Rule monitoring wells, including the most recent March-April 2020 sampling results.

Groundwater potentiometric and apparent flow direction characteristics remain similar to those observed historically. The predominant groundwater flow direction in relatively close proximity to the Bottom Ash Basin and the Waste Water Basin is generally toward the southwest, with a more westerly component of flow due west of the Waste Water Basin.

The quantitative, analytical results are similar to those observed during recent monitoring events. The supplemental monitoring and recovery wells being installed currently are located in areas deemed to investigate down-gradient, leading edges of the TDS plumes southwest of the Bottom Ash Basin (west and southwest of existing well BAC-11) and the Waste Water Basin (southwest and southeast of existing well WWC-6).

3.0 ONGOING CORRECTIVE ACTIONS AND PROGRESS TOWARD SELECTING ADDITIONAL GROUNDWATER CORRECTIVE ACTION REMEDY

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

IPSC intends to continue operation of existing groundwater recovery wells WR-101, WR-102, and WR-103 identified on Figure 3. The three wells are recovering groundwater 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 groundwater 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.

3.2 SUMMARY OF ONGOING ACTIONS ASSOCIATED WITH SELECTION OF FINAL GROUNDWATER REMEDY

Currently, Stantec is providing advisory services to IPSC, related to conceptual design elements for enhanced TDS plume control and associated groundwater recovery. Conceptual design elements include, for instance:

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

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

- Finalized PFD of the system;
- Finalized P&IDs;
- Finalized hydraulic model of the pumping and conveyance system;
- Typical design details for the recovery wells and surface completions;

- Underground yard piping;
- Control philosophy for the system;
- Electrical single-line and termination drawings; and
- Equipment and construction specifications.

Following evaluation of the forthcoming remedial design, IPSC intends to initiate groundwater recovery to control the migration of the TDS plumes down-gradient of the surface impoundments. Upon implementation of the enhanced groundwater recovery and monitoring program proposed in this report, IPSC will evaluate the degree to which groundwater recovery and natural attenuation processes control the down-gradient leading edges of the two TDS plumes. 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 groundwater monitoring and remediation program in formal Summary Reports.

Figure 1 General Site Location Map

IPSC PROPERTY BOUNDARY

Combustion By-Products Landfill

Non-CCR Regulated, Evaporation Basins

Bottom Ash Basin

Waste Water Basin

Flowing Wells

North Sugarville Reservoir

Flowing Well

Sugarville

Woodrow

4WD

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

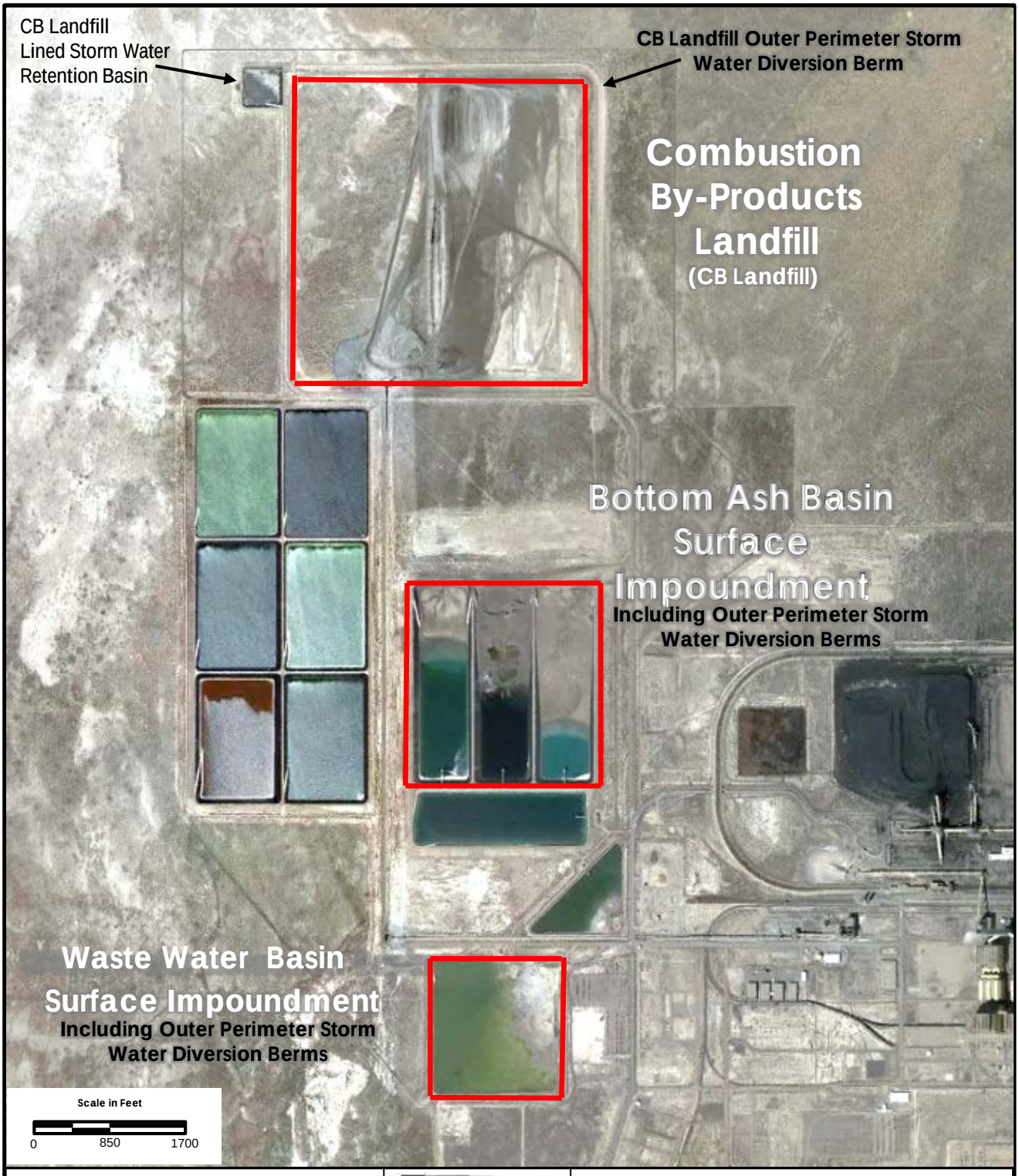
FIGURE 1
SITE TOPOGRAHIC MAP

Stantec

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JR	CP		1"=1000'	1-26-17	

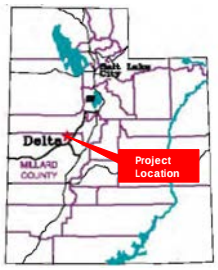
drawings\ipsc-04\Fig2 Site Topographic Map.dwg

Figure 2. CCR Units Location Map



Legend

CCR Unit



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		

Figure 3 March 2020 Groundwater Potentiometric Map

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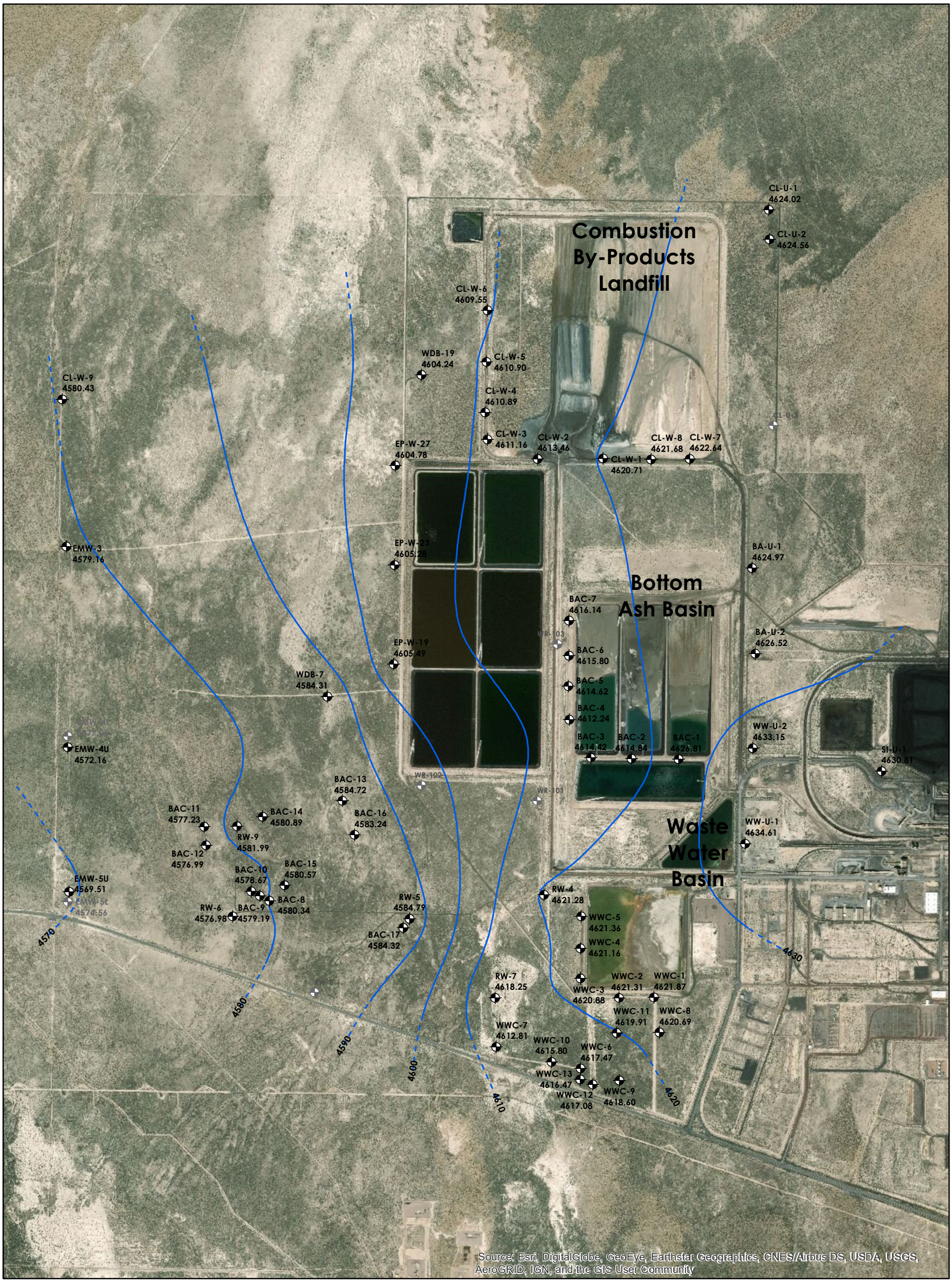

LEGEND:

- MONITORING WELL (GREYED WHEN NOT USED FOR CONTOURING)
- 4578.67 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR

NOTE:

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

0 1,375 2,750
Feet
1 in = 1,417 ft

Stantec

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

MARCH 23, 2020
POTENTIOMETRIC MAP AND GROUNDWATER FLOW MAP WITH EMW WELLS

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
203709098	CK	ALL		05/04/20

Figure 4 March-April TDS Results

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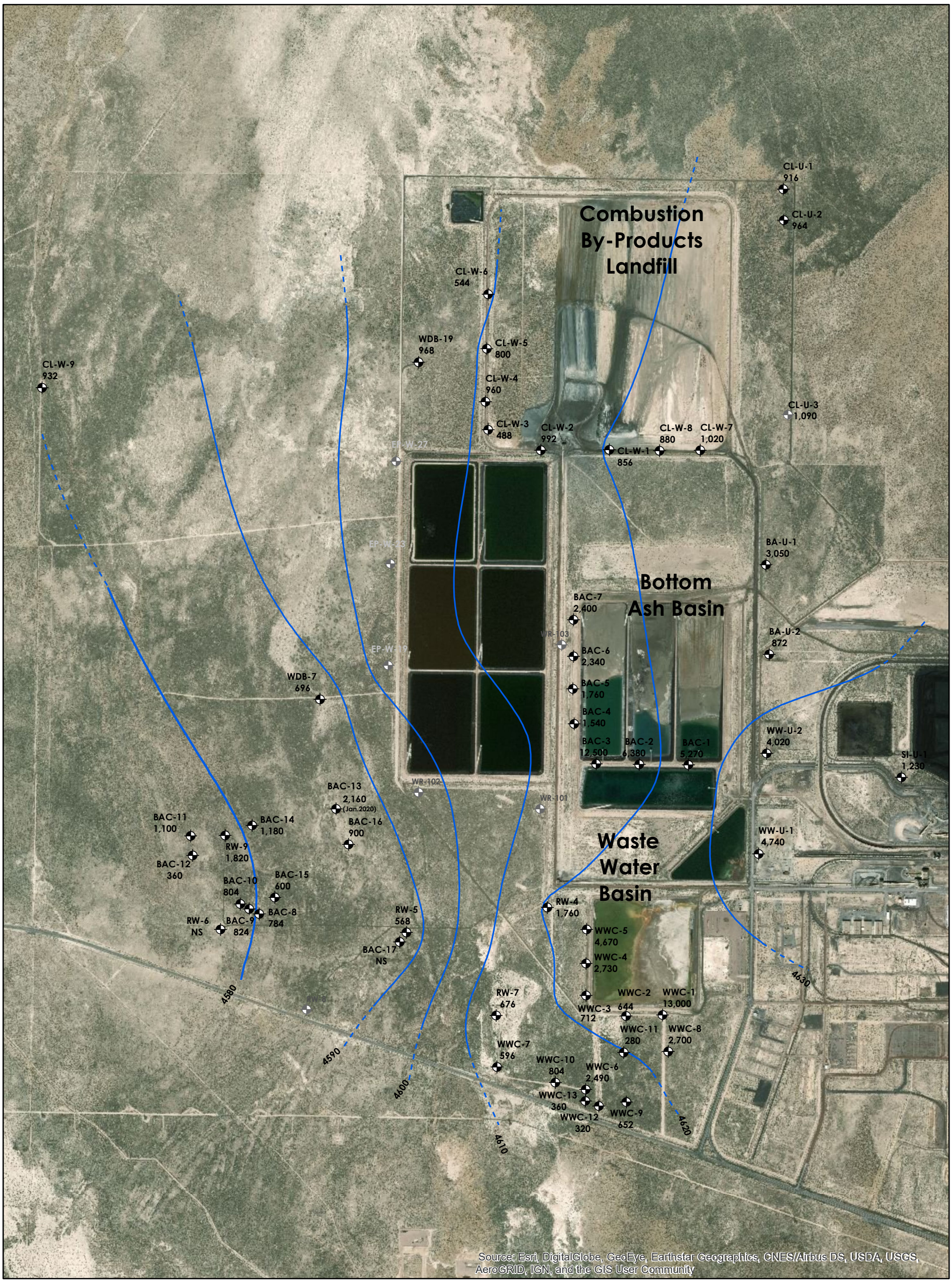


LEGEND:

- MONITORING WELL (GREYED WHEN NOT USED FOR CONTOURING)
- 4578.67 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR
- NS NOT SAMPLED

NOTE:

1) ALL ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL

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

Stantec

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

MARCH-APRIL 2020 TDS CONCENTRATIONS
SUPERIMPOSED ON MARCH 2020 POTENTIOMETRIC MAP

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
203709098	CK	ALL	JR	05/04/20

TABLE 1 GROUNDWATER MONITORING WELL CONSTRUCTION DETAILS

Table 1
WELL CONSTRUCTION SUMMARY
Intermountain Generating Facility
Delta, Utah

MONITOR WELL I.D.	DATE COMPLETED	WELL DIAMETER / MATERIAL	TOTAL DEPTH (feet BGS)	WELL SCREENING INTERVAL (feet BGS)	TOP OF PVC CASING ELEVATION (feet MSL*)
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
BAC-8	4/29/2019	6-inch PVC	77	52-77	4626.42
BAC-9	5/1/2019	6-inch PVC	77	52-77	4626.27
BAC-10	5/3/2019	6-inch PVC	87	62-87	4626.27

Table 1
WELL CONSTRUCTION SUMMARY
Intermountain Generating Facility
Delta, Utah

MONITOR WELL I.D.	DATE COMPLETED	WELL DIAMETER / MATERIAL	TOTAL DEPTH (feet BGS)	WELL SCREENING INTERVAL (feet BGS)	TOP OF PVC CASING ELEVATION (feet MSL*)
BAC-11	12/7/2019	6-inch PVC	81	50-75	4624.96
BAC-12	12/6/2019	6-inch PVC	81	53-78	4625.055
BAC-13	11/18/2019	6-inch PVC	91	65-90	4629.834
BAC-14	12/4/2019	6-inch PVC	81	53-78	4627.506
BAC-15	12/9/2019	6-inch PVC	81	50-75	4626.494
BAC-16	11/21/2019	6-inch PVC	91	64-89	4630.426
BAC-17	12/10/2019	6-inch PVC	82	56-81	4629.648
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
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
WWC-8	4/25/2019	6-inch PVC	96	71-96	4647.799
WWC-9	4/28/2019	6-inch PVC	89	62-87	4642.58
WWC-10	4/26/2019	6-inch PVC	90	62-87	4633.72
WWC-11	11/16/2019	6-inch PVC	91	65-90	4641.919
WWC-12	11/12/2019	6-inch PVC	91	65-90	4636.661
WWC-13	11/15/2019	6-inch PVC	91	65-90	4635.128
SI-U-1	8/12/2015	4-inch PVC	79	69-79	4664.59
WW-U-1	8/11/2015	4-inch PVC	70	60-70	4665.03
WW-U-2	8/11/2015	4-inch PVC	75	65-75	4665.46

BGS = Below Ground Surface

MSL = Mean Sea Level

APPENDIX A DRILLING LOGS AND WELL SCHEMATIC DIAGRAMS

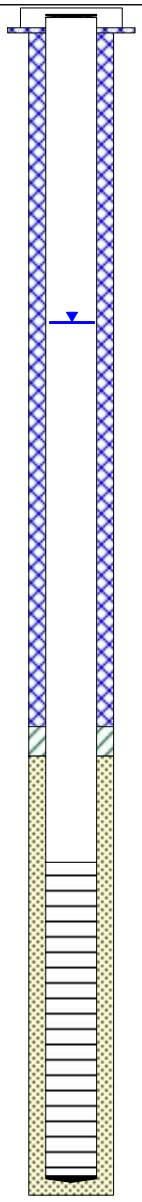
INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID:	**WWC-11**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	South of Waste Water Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 91	GROUNDWATER LEVEL (ft. btoc.): 22.82
		DATE STARTED: 11/15/2019	DATE FINISHED: 11/16/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL DESCRIPTION
0	Poorly graded Sand with Silt (SP), fine sand 95%, loose, soft, dry, very pale brown (10 YR 7/4), trace gravel 5%.
5	
10	Clay (CL), medium plasticity, cohesive, moist, soft to medium density, light gray (10 YR 7/1), mottled with some trace interfingered clay, brownish yellow (10 YR 6/8).
	Well Graded Sand with Clay (SW-SC), medium grained sand 85%, gravel 10%, clay 5%, moist, loose, pale brown (10 YR 6/3).
15	Clay with Sand (CL), low to medium plasticity, soft to medium density, non cohesive, dry to moist, brown (10 YR 5/3).
	Same as above, Clay (CL), no sand.
20	Poorly Graded Sand (SP), fine sand 98%, loose soft, dry, pale brown (10 YR 6/3), 2% gravel, subrounded.
25	
30	
35	Well Graded Sand with Gravel (SW), fine to coarse sand 90%, small gravel 10%, loose, moist, brown (10 YR 5/3), gravel are subangular to subrounded, assorted gravel matrix.
40	
45	Clay (CL), medium plasticity, medium density, moist to wet, cohesive, pale brown (10 YR 6/3).
	Well Graded Sand with gravel (SW), fine to coarse sand 90%, gravel 10%, loose, soft, brown (10 YR 5/3).
50	
	Same as above, becoming wet.
55	Clay (CL), medium plasticity, medium density, wet, cohesive, pale brown (10 YR 6/3).
	Clay with Sand (CL), low to medium plasticity, soft to medium density, non cohesive, moist, pale brown (10 YR 6/3).
60	Same as above, fine grained sand, saturated, low plasticity, non cohesive.
65	Same as above, with trace interfingering clay, reddish yellow (5 YR 6/6).
70	
	Well Graded Sand with Gravel (SW), fine to coarse sand 90%, small gravel 10%, loose, wet, brown (10 YR 5/3), gravel are subrounded, assorted matrix.
75	
80	
85	
90	Clay with Sand (CL), medium plasticity, medium density, wet, cohesive, pale brown (10 YR 6/3).
95	End of borehole to 91 ft bgs., per scope of work.



WELL CONSTUCTION DIAGRAM

- Above ground monument with well cap
- Grout 0 to 54.4 ft bgs. Borehole diameter 10 inches from 0 to 91 ft bgs.
- 0 to 65 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 54.4 to 56.7 ft bgs.
- Filter pack sand 56.7 to 91 ft bgs.
- 65 to 90 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

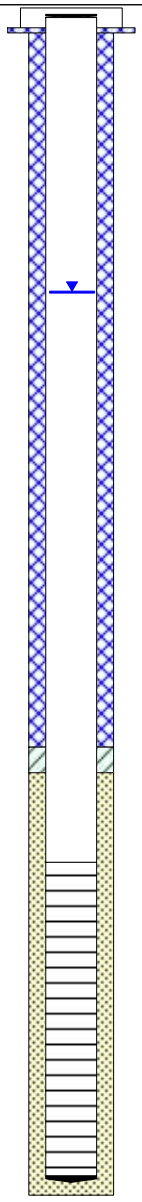
INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID:	**WWC-12**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	South of Waste Water Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 91	GROUNDWATER LEVEL (ft. btoc.): 20.46
		DATE STARTED: 11/11/2019	DATE FINISHED: 11/12/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL DESCRIPTION
0	Poorly Graded Sand with Silt (SP-SM), 90% sand, 10% silts, light gray (7.5 YR 7/1), soft, loose, fine grained, dry, sand are mostly quartz, subangular quartz grains.
5	Same as above, becoming light yellowish brown (10 YR 6/4).
10	Same as above, becoming wet at 8.5 ft bgs., perched groundwater.
	Clay (CL), medium plasticity, medium stiff, cohesive, very pale brown (10 YR 7/4).
15	Poorly Graded Sand with Silt (SP-SM), 95% fine grained sand, 5% silts, loose, soft, moist, brown (10 YR 4/3), trace gravel.
	Well Graded Sand with Gravel (SW), 80% sand, 20% gravel, fine to coarse sand, moist, loose soft, dark yellowish brown (10YR 4/4), gravel are subrounded to rounded, small.
20	
25	Clay (CL), medium plasticity, medium density, moist, cohesive, light yellowish brown (10 YR 6/4), thickly bedded, sharp contact at 25 ft bgs.
30	
	Poorly Graded Sand (SP), fine grained sand 100%, loose, soft, moist, brown (10YR 5/3).
35	
40	Well Graded Sand with Gravel (SW), fine to coarse grained sand 90%, small gravel 10%, loose, soft, moist, dark yellowish brown (10 YR 4/4).
45	Same as above, increase in gravel to 30%.
	Same as above, decrease in gravel to 10%.
50	Poorly Graded Sand (SP), fined grained sand 100%, loose, moist, brown (10YR 4/3). Sharp contact.
55	Clay (CL), high plasticity, stiff, moist, cohesive, light yellowish brown (10 YR 6/4), sharp contact.
60	Lost core sample from sonic casing.
	Clay (CH), high plasticity, stiff, moist, cohesive, yellowish brown (10 YR 5/4).
65	
70	Well Graded Sand with Silt and Clay (SW-SM), fine or medium grained sand 100%, soft, loose, brown (10 YR 4/3).
75	Clay (CH), high plasticity, stiff, moist, cohesive, yellowish brown (10 YR 5/4).
80	Poorly Graded Sand with Silts and Clay (SP-SC), fine grained sand 95%s, soft, loose, wet, light yellowish brown (10 YR 6/4), trace clay.
85	Clay with Sand (CL), medium plasticity, soft to medium density, wet, pale brown (10YR 6/3), sand are fine grained.
	Same as above with gradational transition to clay.
90	Clay (CH), high plasticity, mottled, wet, cohesive, pale brown (10 YR 6/3), mottled color is reddish yellow (7.5 YR 7/6).
95	End of borehole to 91 ft bgs., per scope of work.



WELL CONSTUCTION DIAGRAM

- Above ground monument with well cap
- Grout 0 to 55 ft bgs. Borehole diameter 10 inches from 0 to 91 ft bgs.
- 0 to 65 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 55 to 58 ft bgs. Filter Pack Sand 58 to 91 ft bgs.
- 65 to 90 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

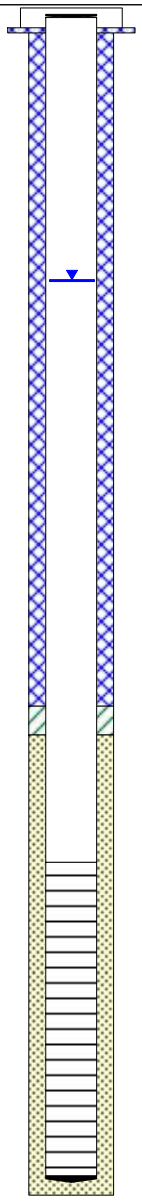
INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID:	**WWC-13**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	South of Waste Water Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 91	GROUNDWATER LEVEL (ft. btoc.): 19.55
		DATE STARTED: 11/13/2019	DATE FINISHED: 11/15/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL DESCRIPTION
0	Poorly Graded Sand with Silts (SP-SM), fine sand 95%, 5% silts, soft, loose, dry, light gray (7.5 YR 7/1).
5	Well Graded Sand (SW), fine to medium grained sand 95%, soft, loose, dry, pinkish gray (7.5 YR 7/2), trace gravel, small gravel, assorted matrix, subrounded.
	Same as above, with clay, increase gravel 10%, wet.
10	Clay with Sand (CL), low to medium plasticity, moist, cohesive, very pale brown (10 YR 7/4).
	Well Graded Sand (SW), fine to medium grained sand 95%, soft, loose, , moist, pale brown (10 YR 6/3), trace gravel 5%, subrounded.
15	
20	
	Same as above, with clay (SW-SC) at 10%, wet, soft, low plasticity clay.
25	Clay with Sand (CL), medium plasticity, moist cohesive, thick bedded, fine sand, sharp contact at 23 ft, bgs,
	Same as above, Clay (CL), trace black staining.
30	Clay with Sand (CL), medium plasticity, moist cohesive, fine sand.
	Poorly Graded Sand (SP), fine grained sand 100%, loose, soft, moist, brown (10 YR 5/3).
35	
40	
	Well Graded Sand with gravel (SW), fine to coarse sand 85%, 15% gravel, loose, soft, moist, brown (10 YR 5/3), gravel are small, subrounded, assorted matrix.
45	Poorly Graded Sand (SP), fine to medium grained sand 98%, loose, soft, moist, brown (10 YR 5/3), trace small gravel 2%, subrounded.
	Same as above, trace clay.
50	Clay with Sand (CL), low to medium plasticity, soft to medium density, moist, yellowish brown (10 YR 5/4), secondary sand are fine grained.
55	
	Clay (CL), medium to high plasticity, medium to stiff density, moist, thickly bedded, cohesive, brown (10 YR 5/3), mottled, reddish yellow (5 YR 6/6).
60	
65	
	Clay with Sand (CL) , medium plasticity, moist to wet, cohesive, brown (10 YR 5/3).
70	Clay (CL), medium plasticity, medium to stiff density, moist, cohesive, brown (10 YR 5/3), mottled, reddish yellow (5 YR 6/6).
75	
	Poorly Graded Sand with Clay (SP-SC), fine grained sand 95%, loose, soft, wet, brown (10 YR 5/3), some trace interfingering clay 5%, reddish yellow (5 YR 5/3).
80	Clay with Sand (CL), low plasticity, soft, wet, non cohesive, pale brown (10 YR 6/3).
	Clay (CL), medium to high plasticity, wet, cohesive, pale brown (10 YR 6/3), interfingering clay reddish yellow (5 YR 6/6), trace sand.
85	
90	Same as above, becoming medium plasticity.
	End of borehole to 91 ft bgs., per scope of work.
95	



Above ground monument with well cap

Grout 0 to 52.8 ft bgs.
Borehole diameter 10 inches from 0 to 91 ft bgs.

0 to 65 ft bgs., 6 in dia., Sch. 40 PVC riser

Bentonite 52.8 to 55 ft bgs.

Filter pack sand 55 to 91 ft bgs.

65 to 90 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture

End Cap

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

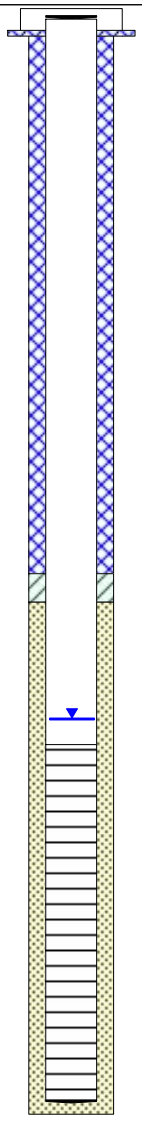
INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID:	**BAC-11**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	Southwest of Bottom Ash Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 81	GROUNDWATER LEVEL (ft. btoc.): 48.21
		DATE STARTED: 12/6/2019	DATE FINISHED: 12/7/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL DESCRIPTION
0	Fill Poorly Graded Sand with Silt (SP-SM), fine grained sand 100%, loose, soft, dry, very pale brown (10 YR 7/3).
5	
10	Clay with Sand (CL), low plasticity, soft to medium density, moist, light brownish gray (10 YR 6/2). Poorly Graded Sand with Clay (SP-SC), fine grained sand 85%, loose, medium dense, moist, light brownish gray (10 YR 6/2); clay are low plasticity, medium dense.
15	
20	Clay (CL), medium plasticity, medium dense, cohesive, moist, light brownish gray (10 YR 6/2), mottled with brownish yellow (10 YR 6/8).
25	
30	Poorly Graded Sand with Clay (SP-SC), fine grained sand 90%, loose, soft, moist, light yellowish brown (10 YR 6/4); clay low plasticity, soft, non cohesive. Same as above, becoming brown (10 YR 5/3).
35	
40	Clay (CL), medium plasticity, medium dense, cohesive, moist, light yellowish brown (10 YR 6/4).
45	
50	Poorly Graded Sand (SP), fine to medium grained sand 100%, loose, soft, wet, brown (10 YR 5/3).
55	Clay (CL), medium plasticity, medium dense, cohesive, moist, light yellowish brown (10 YR 6/4).
60	Clay with Sand (CL), low plasticity, soft, wet, pale brown (10 YR 6/3). Well Graded Sand (SW), fine to coarse Sand 95%, loose, soft, wet, brown (10 YR 5/3), trace gravel, subrounded.
65	Same as above, increase in coarse grained sand between 65.2 to 65.8 ft bgs. Same as 60 ft bgs.
70	
75	Clay (CL), medium plasticity, medium dense, moist, cohesive, light yellowish brown (10 YR 6/4).
80	
85	End of borehole at 81 ft bgs. Installed monitoring well per scope of work.



WELL CONSTUCTION DIAGRAM

- Above ground monument with well cap
- Borehole diameter 10 inches from 0 to 76 ft bgs., and 4 inches from 76 to 81 ft bgs.
- Grout 0 to 38 ft bgs.
- 0 to 50 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 38 to 40 ft bgs.
- Filter Pack Sand 40 to 76 ft bgs.
- 50 to 75 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

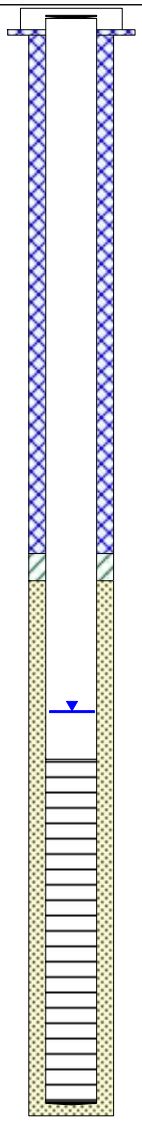
INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID:	**BAC-12**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	Southwest of Bottom Ash Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 81	GROUNDWATER LEVEL (ft. btoc.): 49.55
		DATE STARTED: 12/4/2019	DATE FINISHED: 12/6/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL GRAPHIC	LITHOLOGICAL DESCRIPTION
0		Poorly Graded Sand with Silt (SP-SM), fine grained sand 95%, loose, soft, dry, pale brown (10 YR 6/3).
10		Clay (CL), medium plasticity, medium dense, moist, cohesive, light brownish gray (10 YR 6/2).
		Poorly Graded Sand with Clay (SP-SC), fine grained sand 90%, loose, soft, dry, light brownish gray (10 YR 6/2); clay 10%, low plasticity, soft.
20		Clay (CL), medium plasticity, medium dense, moist, cohesive, very pale brown (10 YR 7/3), mottled with brownish yellow (10 YR 6/8).
25		Poorly Graded Sand with Silt (SP-SM), loose, soft, dry, pale brown (10 YR 6/3).
30		Well Graded Sand with Gravel (SW), fine to coarse sand 85%, loose, soft, dry, light brownish gray (10 YR 6/2), gravel 15%, small, subangular to subrounded, assorted matrix.
		Poorly Graded Sand (SP), fine grained sand 95%, loose, soft, moist, pale brown (10 YR 6/3), 5% clay.
40		Clay with Sand (CL), medium plasticity, medium dense, moist, light yellowish brown (10 YR 6/3).
		Clay (CL), medium plasticity, stiff, moist, cohesive, pale brown (10 YR 6/2).
45		Clay with Sand (CL), low plasticity, soft, non cohesive, wet, brown (10 YR 5/3).
		Clay (CL), Same as 39.5 ft bgs.
		Clay with Sand (CL), Same as 38.5 ft bgs.
50		Clay (CL), Same as 41.5 ft bgs.
		Clay with Sand (CL), low plasticity, soft, non cohesive, wet, brown (10 YR 5/3).
55		Clay (CL), medium plasticity, medium dense, cohesive , moist, brown (10 YR 5/3), mottled with yellowish brown (10 YR 5/6).
60		Clay with Sand (CL), low plasticity, soft, non cohesive, wet, brown (10 YR 5/3).
		Well Graded Sand (SW) fine to coarse sand 98%, loose, soft, wet, brown (10 YR 5/3), trace gravel.
65		Clay with Sand (CL), low to medium plasticity, medium dense, wet, non cohesive, brown (10 YR 5/3), mottled with light brownish gray (10 YR 6/2).
70		Well Graded Sand with Clay (SW-SC), fine grained sand 90%, loose, soft, wet, brown (10 YR 5/3): clay 10%, low plasticity, non cohesive.
75		Clay (CL), medium plasticity, medium dense, cohesive , moist, brown (10 YR 5/3).
80		End of borehole at 81 ft bgs. Installed monitoring well per scope of work.
85		



WELL CONSTUCTION DIAGRAM

- Above ground monument with well cap
- Borehole diameter 10 inches from 0 to 78 ft bgs., and 4 inches from 79 to 81 ft bgs.
- Grout 0 to 38 ft bgs.
- 0 to 53 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 38 to 40 ft bgs.
- Filter Pack Sand 40 to 79 ft bgs.
- 53 to 78ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

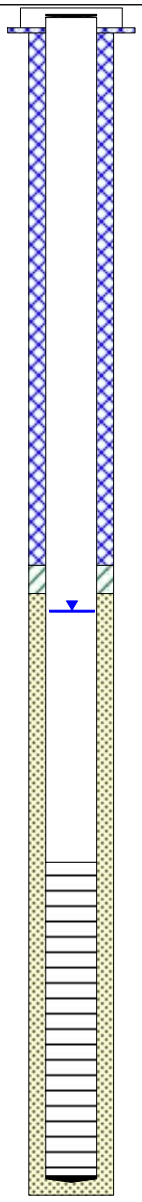
INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID:	**BAC-13**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	Southwest of Bottom Ash Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 91	GROUNDWATER LEVEL (ft. btoc.): 45.38
		DATE STARTED: 11/16/2019	DATE FINISHED: 11/18/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL DESCRIPTION
0	Poorly Graded Sand with Silt and Gravel (SP-SM), fine grained sand 85%, silts 10%, trace gravel 5%, loose, dry, light gray (10 YR 7/2).
5	Same as above, becoming dense, consolidated.
	Well Graded Sand with Gravel (SW), sand fine to coarse 85%, gravel 15%, loose, soft, dry, pale brown (10 YR 6/3), gravel are subrounded.
10	Same as above, no gravel, sand 100%.
	Clay with Sand (CL), low plasticity, dry to moist, non cohesive, brown (10 YR 5/3), with small clay interfingering, reddish yellow (5 YR 6/8).
15	Same as above, moist.
	Same as above, medium plasticity.
20	Poorly Graded Sand (SP), fine grained sand 100%, loose, dry, dark brown (10 YR 3/3), thinly bedded.
	Clay with Sand (CL), low plasticity, moist, non cohesive, brown (10 YR 5/3), with small clay interfingering, reddish yellow (5 YR 6/8).
25	
30	
35	Well Graded Sand with Gravel (SW), sand fine to coarse 85%, gravel 15%, loose, soft, dry, pale brown (10 YR 6/3), gravel are subrounded.
	Poorly Graded Sand (SP), medium grained sand 100%, loose, soft, moist, brown (10 YR 5/3).
40	Clay (CL), medium plasticity, medium dense, moist, brownish yellow (10 YR 6/6).
	Clay with Sand (CL), low plasticity, soft density, wet, non cohesive, light yellowish brown (10 YR 6/4).
45	Clay (CL), medium plasticity, medium dense, moist, cohesive, brownish yellow (10 YR 6/6), with mottled clay, brownish yellow (10 YR 6/8).
50	
55	Clay with Sand (CL), low to medium plasticity, soft to medium dense, wet, non cohesive, brown (10 YR 6/3).
60	Clay (CL), medium plasticity, medium dense, moist to wet, cohesive, light brownish gray (10 YR 6/2).
	Clay with Sand (CL), low to medium plasticity, soft to medium dense, wet, brown (10 YR 6/3).
65	Clay (CL), high plasticity, stiff, moist, cohesive, pale brown (10 YR 6/3).
	Clay (CL), medium plasticity, medium dense, moist to wet, cohesive, light brownish gray (10 YR 6/2).
70	Clay (CL), high plasticity, stiff, moist, cohesive, pale brown (10 YR 6/3).
	Poorly Graded Sand (SP), medium grained sand 95%, loose, soft, wet, brown (10 YR 5/3), trace gravel 5%, rounded to subrounded, assorted matrix.
75	
80	
85	Clay with Sand (CL), low plasticity, soft, wet, non cohesive, brown (10 YR 5/3).
	Clay (CL), medium plasticity, medium dense, moist to wet, cohesive, brown gray (10 YR 5/3).
90	End of borehole to 91 ft bgs., per scope of work.
95	



WELL CONSTUCTION DIAGRAM

- Above ground monument with well cap
- Grout 0 to 42 ft bgs. Borehole diameter 10 inches from 0 to 91 ft bgs.
- 0 to 65 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 42 to 44 ft bgs.
- Filter pack sand 44 to 91 ft bgs.
- 65 to 90 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

INTERMOUNTAIN POWER SERVICE CORP.

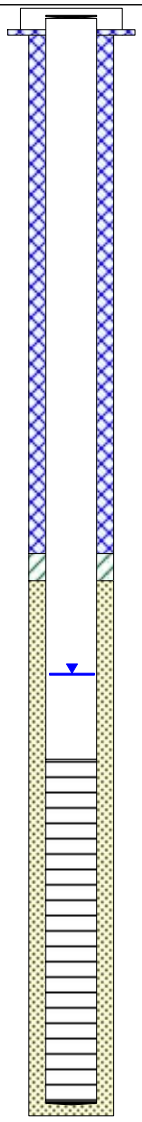
MONITORNG WELL ID:	**BAC-14**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	Southwest of Bottom Ash Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 81 ft bgs., 10 inch sonic core barrel 0 to 78 ft bgs.	TOTAL DEPTH (ft.): 81	GROUNDWATER LEVEL (ft. btoc.): 46.81
		DATE STARTED: 11/21/2019	DATE FINISHED: 12/4/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL DESCRIPTION
0	Well Graded Sand (SW), fine to coarse sand 95%, loose, soft, dry, yellowish brown (10 YR 5/4); 5% gravel, subrounded, small.
5	Well Graded Sand with Clay (SW-SC), fine to coarse sand 95%, medium dense, dry, light gray (10 YR 7/4).
10	Clay with Sand (CL), low to medium plasticity, soft to medium dense, dry to moist, very pale brown (10 YR 7/3).
15	
20	Clay (CL), medium plasticity, medium dense, moist, cohesive, pale brown (10 YR 6/3), with trace mottled clay, brownish yellow (10 YR 6/8).
25	
30	Poorly Graded Sand (SP), fine sand 100%, loose, soft, light brownish gray (10 YR 6/2). Poorly Graded Sand with Clay (SP-SC), fine sand 90%, loose, soft, moist, light brownish gray (10 YR 6/2); clay 10% low plasticity, soft, non cohesive.
35	
40	Clay (CL), medium plasticity, medium dense, moist, cohesive, yellowish brown (10 YR 5/4).
45	Poorly Graded Sand (SP), fine sand 100%, loose, soft, moist to wet, brown (10 YR 5/4).
50	Clay (CL), medium plasticity, medium to stiff dense, moist, cohesive, light brownish red (5 YR 6/3), mottled with reddish yellow (5YR 6/6).
55	Poorly Graded Sand with Clay (SP-SC), fine sand 90%, loose, soft, moist, brown (10 YR 5/3); clay 10% low plasticity. Clay (CL), medium plasticity, medium to stiff dense, moist, cohesive, light brownish red (5 YR 6/3), mottled with reddish yellow (5YR 6/6).
60	Poorly Graded Sand (SP), fine grained, loose, soft, wet, brown (10 YR 5/3). Clay (CL), medium plasticity, medium dense, wet, cohesive, light yellowish brown (10 YR 6/4).
65	Poorly Graded Sand with Clay (SP-SC), fine sand 85%, loose medium dense, wet, brown (10 YR 5/3); clay 15% low plasticity, non cohesive, light yellowish brown (10 YR 6/4).
70	Clay (CL), medium plasticity, medium dense, wet, cohesive, light yellowish brown (10 YR 6/4). Poorly Graded Sand (SP), fine grained, loose, soft, wet, brown (10 YR 5/3). Clay with Sand (CL), low plasticity, soft, wet, non cohesive, brown (10 YR 5/3).
75	Poorly Graded Sand with Clay (SP-SC), fine sand 90%, loose, soft, wet, brown (10 YR 5/3); clay 10%, low plasticity, soft, non cohesive. Poorly Graded Sand (SP), fine grained, loose, soft, wet, brown (10 YR 5/3).
80	Clay (CL), medium plasticity, medium to stiff, moist, brown (10 YR 5/3).
85	End of borehole at 81 ft bgs. Installed monitoring well per scope of work.

WELL CONSTUCTION DIAGRAM



- Above ground monument with well cap
- Borehole diameter 10 inches from 0 to 79 ft bgs. 4 inch borehole to 81 ft bgs.
- Grout 0 to 38 ft bgs.
- 0 to 53 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 38 to 40 ft bgs.
- Filter Pack Sand 40 to 79 ft bgs.
- 53 to 78 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

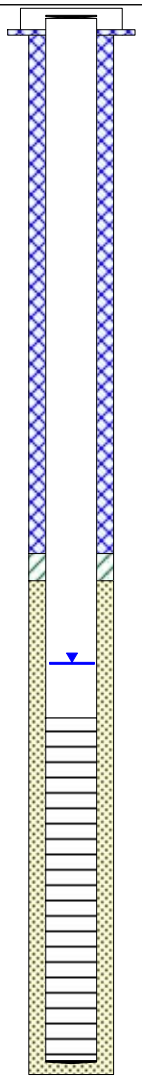
INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID:	**BAC-15**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	Southwest of Bottom Ash Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 81	GROUNDWATER LEVEL (ft. btoc.): 46.03
		DATE STARTED: 12/7/2019	DATE FINISHED: 12/9/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL DESCRIPTION
0	Fill
	Poorly Graded Sand (SP), fine grained sand 98%, loose, soft, dry, very pale brown (10 YR 7/3), trace gravel, subrounded.
5	Clay (CL), medium plasticity, medium dense, cohesive, dry, light brownish gray (10 YR 6/2), trace white (10 YR 8/1), trace calcium carbonate between clay layering, effervesces with HCL.
10	
15	Poorly Graded Sand (SP), fine grained sand 98%, loose, soft, dry, light gray (10 YR 7/1), trace clay at depth.
20	Poorly Graded Sand with Clay (SP-SC), fine grained sand 90%, soft to medium dense, dry, pale brown (10 YR 6/3), clay low plasticity, medium dense.
25	
30	Clay (CL), medium plasticity, medium dense, cohesive, moist, pale brown (10 YR 6/3).
	Same as above, becoming light yellowish brown (10 YR 6/4).
35	Clay with Sand (CL), low plasticity, soft, non cohesive, light yellowish brown (10 YR 6/4).
40	Clay (CL), medium plasticity, medium dense, cohesive, moist, light yellowish brown (10 YR 6/4).
45	Well Graded Sand with Gravel (SW), fine to coarse sand 90%, loose, soft, wet, brown (10 YR 5/3), gravel 10%, subrounded.
50	
	Same as above, with trace black staining.
55	Clay with Sand (CL), low plasticity, soft, non cohesive, wet, light yellowish brown (10 YR 6/4).
	Clay (CL), medium plasticity, medium dense, cohesive, moist, yellowish brown (10 YR 5/6).
	Clay with Sand (CL), low plasticity, soft, non cohesive, wet, light yellowish brown (10 YR 6/4).
60	Poorly Graded Sand (SP), fine grained sand 100%, loose, soft, wet, brown (10 YR 5/3)
	Same as above, with some clay.
65	Poorly Graded Sand (SP), fine grained sand 100%, loose, soft, wet, brown (10 YR 5/3).
	Same as above, color change to yellowish brown (10 YR 6/4).
70	Clay (CL), medium plasticity, medium dense, cohesive, moist, yellowish brown (10 YR 5/4).
	Same as above, with mottled yellowish red (5 YR 5/6).
75	Clay with Sand (CL), low plasticity, soft, non cohesive, wet, brown (10 YR 5/3).
	Clay (CL), medium plasticity, medium dense, cohesive, moist, yellowish brown (10 YR 5/4).
80	Clay with Sand (CL), low plasticity, soft, non cohesive, wet, brown (10 YR 5/3).
	Poorly Graded Sand (SP), fine grained sand 98%, loose, soft, wet, brown (10 YR 5/3).
	End of borehole at 81 ft bgs. Installed monitoring well per scope of work.
85	



WELL CONSTUCTION DIAGRAM

- Above ground monument with well cap
- Borehole diameter 10 inches from 0 to 76 ft bgs., and 4 inches from 76 to 81 ft bgs.
- Grout 0 to 38 ft bgs.
- 0 to 50 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 38 to 40 ft bgs.
- Filter Pack Sand 40 to 76 ft bgs.
- 50 to 75 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

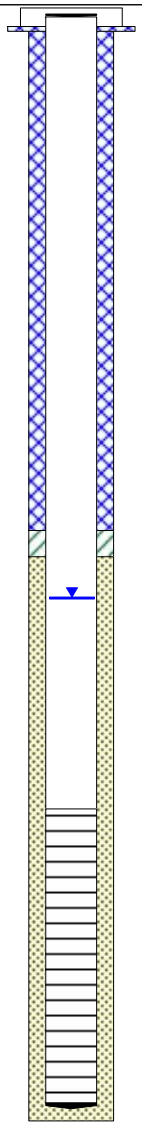
INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID:	**BAC-16**
CLIENT	Intermountain Power Service Corporation
PROJECT	Monitoring Well Installation
SITE LOCATION	Southwest of Bottom Ash Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 91	GROUNDWATER LEVEL (ft. btoc.): 47.45
		DATE STARTED: 11/18/2019	DATE FINISHED: 11/21/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL DESCRIPTION
0	Fill.
	Clay with Sand (CL), low plasticity, soft to medium dense, dry, light gray (10 YR 7/1).
5	
	No core retrieved from sonic core barrel.
10	Clay with Sand (CL), low plasticity, soft to medium dense, dry, light gray (10 YR 7/1).
	Well Graded Sand (SW), fine to coarse grained sand 95%, loose, soft, light brownish gray (10 YR 6/2), trace gravel 5%, subrounded, small.
15	Clay with Sand (CL), low plasticity, soft to medium dense, dry, light gray (10 YR 7/1).
20	
25	
	Clay (CL).
30	Clay with Sand (CL), low to medium plasticity, soft to medium dense, dry, non cohesive, pale brown (10 YR 6/3).
	Poorly Graded Sand (SP), fine grained 100%, loose to medium dense, dry, light gray (10 YR 7/1).
35	
40	Clay (CL), medium plasticity, medium density, moist, light yellowish brown (10 YR 6/4), with some interfingering clay, brownish yellow (10 YR 6/8).
	Clay with Sand (CL).
45	Poorly Graded Sand with clay (SP-SC), fine sand 90%, clay 10%, soft, loose, moist to wet, light yellowish brown (10 YR 6/4).
	Clay (CL), medium plasticity, medium dense, cohesive, moist, yellowish brown (10 YR 5/4).
50	Poorly Graded Sand with clay (SP-SC), fine sand 90%, clay 10%, soft, loose, moist to wet, light yellowish brown (10 YR 6/4).
55	Clay (CL), medium plasticity, medium dense, cohesive, moist, light yellowish brown (10 YR 6/4).
60	
	Poorly Graded Sand (SP), fine grained sand 95%, loose, soft, brown (10 YR 5/3), with trace interfingering clay 5%, yellowish red (5 YR5/6).
65	Well Graded Sand (SW), fine to coarse sand 98%, loose, soft, wet, brown (10 YR 5/3), 2% gravel, small, subrounded.
70	Clay with Sand (CL), low to medium plasticity, soft to medium density, wet, light brownish gray (10 YR 6/2).
	Clay (CL), medium plasticity, medium to stiff, cohesive, moist, light yellowish gray (10 YR 6/2).
75	Poorly Graded Sand with Clay (SP-SC), fine grained sand 85%, clay 15% loose, soft, wet, brown (10 YR 5/3).
80	Clay (CL), medium plasticity, stiff, cohesive, moist to wet, brown (10 YR 5/3).
	Poorly Graded Sand (SP), fine grained sand 100%, loose, soft, wet, brown (10 YR 5/3).
85	Clay (CL), same as 73 ft bgs.
	Poorly Graded Sand (SP), same as 82 ft bgs.
	Clay (CL), same as 73 ft bgs.
90	Poorly Graded Sand with Clay (SP-SC), fine grained sand 85%, clay 15% loose, soft, wet, brown (10 YR 5/3).
95	Clay (CL), same as 73 ft bgs., with mottled interbedded clay, yellowish red (5 YR 5/6).
	End of borehole at 91 ft bgs. Installed monitoring well per scope of work.
100	



WELL CONSTUCTION DIAGRAM

- Above ground monument with well cap
- Grout 0 to 42 ft bgs. Borehole diameter 10 inches from 0 to 91 ft bgs.
- 0 to 65 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 42 to 44 ft bgs.
- Filter Pack Sand 44 to 91 ft bgs.
- 64 to 89 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

INTERMOUNTAIN POWER SERVICE CORP.

MONITORNG WELL ID: **BAC-17**

CLIENT: Intermountain Power Service Corporation

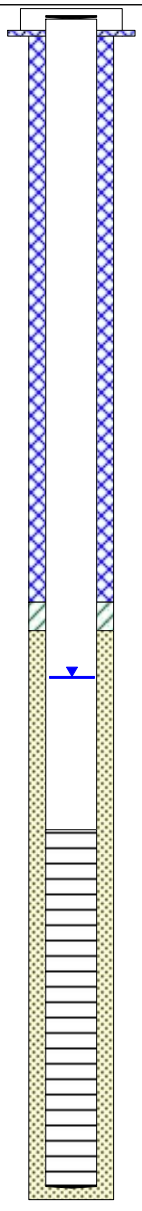
PROJECT: Monitoring Well Installation

SITE LOCATION: Southwest of Bottom Ash Basin Surface Impoundment

Stantec

DRILLING CONTRACTOR:	Cascade Drilling	COORDINATE SYSTEM:	
DRILLING METHOD:	Sonic	EASTING:	NORTHING:
DRILLING EQUIPMENT:	Pro Sonic 600 11-77287	ELEVATION:	BOREHOLE ANGLE: 90 degrees
SAMPLING METHOD:	4 inch sonic core barrel 0 to 91 ft bgs., 10 inch sonic core barrel 0 to 91 ft bgs.	TOTAL DEPTH (ft.): 82	GROUNDWATER LEVEL (ft. btoc.): 45.3
		DATE STARTED: 12/12/9/2019	DATE FINISHED: 12/10/2019
		LOGGED BY: Michael Ward	

DEPTH (feet)	LITHOLOGICAL GRAPHIC	LITHOLOGICAL DESCRIPTION
0		Well Graded Sand with Silt (SW-SM), fine to coarse sand 90%, loose, soft, pale brown (10 YR 6/3), fine silts, trace calcium carbonate.
5		Well Graded Sand (SW), fine to coarse sand 100%, loose, soft, pale brown (10 YR 6/3).
10		
15		
20		Well Graded Sand with Gravel and Clay (SW-SC), loose, soft, fine to coarse sand 90%, loose, soft, pale brown (10 YR 6/3), clay low plasticity, soft, gravel, small, subrounded. Well Graded Sand (SW), fine to coarse 98%, loose, soft, light yellowish brown (10 YR 6/4), gravel 2%, small, subrounded.
25		
30		Clay (CL), low plasticity, soft, wet, very pale brown (10 YR 7/3), perched groundwater. Clay with Sand (CL), low plasticity, soft, moist, light yellowish brown (10 YR 6/4).
35		
40		Clay (CL), medium plasticity, medium dense, cohesive, brown (10 YR 5/3), mottled with some reddish yellow (5 YR 6/6).
45		
50		
55		Clay with Sand (CL), low plasticity, soft, wet non cohesive, brown (10 YR 5/3).
60		Poorly Graded Sand with Clay (SP), fine grained sand 98%, loose, soft, wet, brown (10 YR 5/3), with trace gravel 2%, subrounded, small.
65		
70		Poorly Graded Sand with Clay (SP-SC), fine grained sand 98%, loose, soft, wet, brown (10 YR 5/3), clay, medium plasticity, soft to low density, non cohesive, light yellowish brown (10 YR 5/4). Clay (CL), medium plasticity, medium dense, moist, cohesive, yellowish brown (10 YR 5/4).
75		Poorly Graded Sand with Clay (SP-SC), fine grained sand, loose, soft, wet, brown (10 YR 5/3), clay are low plasticity, soft. Clay with Sand (CL), low to medium plasticity, soft, wet, cohesive, brown (10 YR 5/3).
80		Poorly Graded Sand (SP), fine grained sand 100%, loose, soft, wet, brown (10 YR 5/3). End of borehole at 81 ft bgs. Installed monitoring well per scope of work.
85		



WELL CONSTUCTION DIAGRAM

- Above ground monument with well cap
- Borehole diameter 10 inches from 0 to 81 ft bgs.
- Grout 0 to 40 ft bgs.
- 0 to 56 ft bgs., 6 in dia., Sch. 40 PVC riser
- Bentonite 40 to 42 ft bgs.
- Filter Pack Sand 42 to 81 ft bgs.
- 56 to 81 ft bgs., 6 in dia., Sch. 40 PVC screen with 0.02 inch slot aperture
- End Cap

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

ATTACHMENT 1 TABULATED GROUND WATER MONITORING DATA

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

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

Round 14

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

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

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

Waste Water	Results																					
	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	113	699	0.511	7.70	279	1230	0	0.00865	0.0609	0	0	0.00305	0	0	0.239	0	0.00280	0	0	0.20	1.04	1.04
WW-U-1	1.42	286	1940	0.324	7.24	1270	4740	0	0.00653	0.0391	0	0	0.00544	0	0	0.412	0	0.00811	0.00724	0	0.21	1.38	1.38
WW-U-2	1.23	337	2020	0.473	7.42	981	4020	0	0.0108	0.0502	0	0	0.00696	0	0	0.498	0	0.00309	0.0112	0	0	1.08	1.08
WWC-1	13.4	464	4800	0	7.29	3440	13000	0	0.0256	0.0207	0	0	0	0	0	0.936	0.000238	0.0136	0.0133	0	0.32	0.36	0
WWC-2	0	51.7	322	0.452	7.88	124	644	0	0.0159	0.0357	0	0	0.00332	0	0	0.119	0	0.00455	0	0	0.24	-0.15	0
WWC-3	0	31.8	254	1.06	7.96	85.8	712	0	0.0219	0.0304	0	0	0.00240	0	0	0.142	0	0.00536	0	0	-0.08	0.19	0
WWC-4	1.20	182	935	0.426	7.44	638	2730	0	0.0140	0.0437	0	0	0	0	0	0.314	0	0.00207	0.00228	0	0.47	0.27	0

Waste Water	Field Results						
	Temp	pH	REDOX	Conductance	Turbidity (NTUs)	DO	TDS
SI-U-1	16.33	7.30	3	789	0.0	3.90	0.505
WW-U-1	15.39	7.01	-38	3910	1.2	0.17	2.5
WW-U-2	13.24	7.19	-19	3800	0.7	1.02	2.43
WWC-1	14.71	6.90	-20	19400	2.8	0.31	12.0
WWC-2	13.47	7.59	-97	1690	12.8	0.54	1.08
WWC-3	14.65	7.67	-154	1430	1.1	0.17	0.916
WWC-4	14.61	7.13	-12	4750	1.4	0.40	3.04

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

Landfill Wells	Results																					
	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium 226 and 228 combined
CL-U-1	0	58.9	432	0.753	7.94	109	976	0	0.0289	0.0799	0	0	0	0	0	0.239	0	0.0035	0	0	0.03	0.75	0.75
CL-U-2	0	60.6	424	0.792	7.87	112	968	0	0.0251	0.0935	0	0	0	0	0	0.229	0	0.00412	0	0	0.03	0.57	0
CLW-1	0	36	328	1.11	8.03	69.1	852	0	0.0295	0.0612	0	0	0	0	0	0.187	0	0.00357	0	0	0.29	0.38	0
CLW-2	0	50.8	438	1.13	8.15	88.1	924	0	0.0283	0.1510	0	0	0	0	0	0.253	0	0.0102	0	0	0.08	0.56	0
CLW-3	0	47	363	1.24	7.99	90.8	828	0	0.039	0.0976	0	0	0	0	0	0.242	0	0.00504	0	0	0.6	0.43	0
CLW-4	0	34.6	332	1.55	7.97	75.6	768	0	0.0387	0.0797	0	0	0	0	0	0.235	0	0.00441	0	0	0.22	1.06	1.06
CLW-5	0	37.5	351	1.89	8	76.9	1060	0	0.0231	0.0685	0	0	0	0	0	0.237	0	0.00479	0	0	0.25	0.44	0
CLW-6	0	34.5	330	1.7	7.98	74.4	1110	0	0.0145	0.0936	0	0	0	0	0	0.239	0	0.00607	0	0	0.42	1.05	1.47
CLW-7	0	43.7	362	1	7.89	71.4	796	0	0.0238	0.0523	0	0	0	0	0	0.192	0	0.00402	0	0	0.12	-0.03	0
CLW-8	0	39.9	337	1.04	7.98	70.7	836	0	0.0266	0.0521	0	0	0.00000	0	0	0.196	0	0.00449	0	0	-0.05	0.32	0
CLW-9	0	26.9	288	1.94	8.12	88.7	792	0	0.0398	0.0469	0	0	0.00287	0	0	0.181	0	0.00573	0	0	0.36	0.02	0
CL-U-3	0	64.6	304	0.429	8.85	168	596	0	0	0.0342	0	0	0.0738	0	0	0.152	0	0.00964	0	0	2.13	0.21	2.13

Round 13

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

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

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

Waste Water	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	136	824	0.38	7.71	281	1850	0	0.00981	0.0599	0	0	0	0	0	0.277	0	0	0	0	0.19	1.61	1.61
WW-U-1	1.41	311	1010	0	7.37	588	5720	0	0.00594	0.0419	0	0	0.00166	0	0	0.485	0	0.00689	0.0077	0	-0.08	1.42	1.42
WW-U-2	1.02	346	2020	0	7.3	855	4400	0	0.00735	0.0499	0	0	0	0	0	0.54	0	0.00317	0.011	0	-0.2	1.36	1.36
WWC-1	13.2	473	4940	0.292	7.42	3570	14900	0	0.0264	0.0205	0	0	0	0	0	0.974	0.000278	0.0113	0.016	0	0.23	0.9	0.9
WWC-2	0	57.6	349	0.427	7.99	141	876	0	0.0166	0.0336	0	0	0	0	0	0.126	0	0.00327	0	0	-0.15	0.81	0.81
WWC-3	0	33.3	262	0.986	8.13	95.3	776	0	0.0236	0.0331	0	0	0	0	0	0.151	0	0.00477	0	0	3.1	0.58	3.1
WWC-4	1.06	176	968	0.453	7.61	594	3080	0	0.0154	0.0456	0	0	0	0	0	0.329	0	0	0.00177	0	0.72	0.57	0

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