Savannah River
NUCLEAR SOLUTIONS℠

488-4D Ash Landfill
Annual Groundwater Monitoring Report

2024 Data

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DISCLAIMER

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and
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LIST OF ABBREVIATIONS AND ACRONYMS

bgs	below ground surface
DAG	D-Area Groundwater
DCSA	484-17D D-Area Coal Storage Area
CPRB	489-D D-Area Coal Pile Runoff Basin
ft	foot, feet
ft amsl	feet above mean sea level
GCU	Gordon Confining Unit
m	meters
MCL	Maximum Contaminant Level
µg/L	microgram per Liter
NSDWS	National Secondary Drinking Water Standard
OU	Operable Unit
PCE	tetrachloroethylene
PFAS	per- and polyfluoroalkyl substances
RSL	Regional Screening Level
SCDES	South Carolina Department of Environmental Services[1]
SRS	Savannah River Site
TCE	trichloroethylene
USEPA	United States Environmental Protection Agency
UTRA	Upper Three Runs Aquifer
VOC	volatile organic compounds

[1] South Carolina Department of Environmental Services (SCDES) was known as South Carolina Department of Health and Environmental Control (SCDHEC) prior to July 1, 2024.

1.0 SITE DESCRIPTION AND BACKGROUND

The 488-4D Ash Landfill is a 15-acre landfill that received coal ash and is located in D Area on the Savannah River Site (SRS). Although the ash landfill is located within the boundary of the D-Area Groundwater (DAG) Operable Unit (OU) where multiple groundwater plumes are monitored, the 488-4D Ash Landfill is specifically monitored with five (5) groundwater wells (DCB077, DCB078, DCB079, and DCB080 and DCB 8) (**Figure 1, Table 1**). The 488-4D Ash Landfill was closed in 2016 under a non-time critical removal action and was included in the DAOU Second Early Action Record of Decision (SRNS 2020). The groundwater associated with the landfill was previously monitored and reported to South Carolina Department of Environmental Services (SCDES) under the Solid Waste Division (previous Solid Waste Permit #025800-1602). In 2018, groundwater monitoring and reporting for the 488-4D Ash Landfill was combined with the DAG OU. The DAG OU has now transitioned to the RCRA Facility Investigation/Remedial Investigation/Baseline Risk Assessment project phase. As agreed to by the U.S. Environmental Protection Agency (USEPA) and SCDES in the November 2023 DAG OU Post-Characterization Scoping Meeting (SRNS 2023a), the last full monitoring report for the DAG OU was submitted in 2023 with sampling of the DAG OU continuing until submittal of a Corrective Measures Study/Feasibility Study. To fulfill the SCDES post-closure care requirements for the 488-4D Ash Landfill, a focused groundwater monitoring report specifically for the landfill is submitted annually.

This annual groundwater monitoring data report for the 488-4D Ash Landfill describes sampling activities specifically conducted at the five landfill monitoring wells during calendar year 2024. An agreement was made during the November 2023 DAG OU Post-Characterization Scoping Meeting (SRNS 2023a) to include all other 2024 DAG OU groundwater and surface water monitoring data that is outside of the 488-4D Ash Landfill groundwater monitoring in a separate DAG OU data report to be submitted in 2025.

2.0 GROUNDWATER MONITORING

The 488-4D Ash Landfill groundwater monitoring and current sampling schedule is reported in the most recent DAG OU report (SRNS 2023b). **Table 2** includes the sampling schedule and requirements for the 488-4D Ash Landfill groundwater monitoring. Monitoring wells DCB078, DCB079, and DCB080 are located downgradient of the 488-4D Ash Landfill: (**Figure 1**). DCB 078 is the replacement well for DCB 47C that was abandoned during closure of the D-Area ash basins. A fourth well, DCB077, is located upgradient and northwest of the landfill. These four wells are also downgradient of the 484-17D D-Area Coal Storage Area (DCSA) and the 489-D Coal Pile Runoff Basin (CPRB), which are primary sources of metals contamination in D Area. Additionally, a fifth well, DCB 8, is upgradient 500 meters (m) (1,640 feet [ft]) of the landfill and is also upgradient of the 484-17D DCSA and the 489-D CPRB. All five (5) 488-4D Ash Landfill wells are water table wells and screened no deeper than 13.4 m (44 ft) below ground surface (bgs).

Groundwater monitoring wells in the DAG OU monitoring program downgradient of the 484-17D DCSA and 489-D CBRB indicate metal contamination in the low-pH conditions. Groundwater at the 488-4D Ash Landfill has been impacted by the acidic leachate from the 484-17D DCSA and the 489-D CPRB source units. **Figure 2** displays the beryllium plume across D Area. Tritium, volatile organic compounds (VOCs), and per- and polyfluoroalkyl substances (PFAS) contamination present in D Area is not associated with the 488-4D Ash Landfill and originate from upgradient sources as shown in **Figure 3** (SRNS 2023b). The tritium, VOC, and PFAS groundwater contaminants are monitored and reported as part of the DAG OU (SRNS 2023b).

2.1 Site Geology and Hydrogeology

The SRS is underlain by Atlantic Coastal Plan sediments that thicken to the southeast. Sediments range in age from Late Cretaceous to recent and are approximately 270 m (900 ft) thick at SRS (Aadland et al., 1995; Fallaw and Price, 1995). The pertinent stratigraphy beneath D-Area, in ascending order, is the Snapp, Fourmile Branch, Congaree, Warley Hill, Tinker/Santee, and Clinchfield Formations (Aadland et. al, 1995). Quaternary Savannah River deposits exists at D Area, with more extensive reworking of the shallow material west of the 488-D D-Area Ash Basin, and 488-4D Ash Landfill near the current Savannah River as shown in **Figure 1** and in cross-sectional view in **Figure 4**.

The shallow aquifer system at D Area includes a semi-confined and an unconfined aquifer system. The semi-confined Gordon Aquifer is a 15 m (50 ft) thick sequence of fine to medium-grained sand that is overlain by the Gordon Confining Unit (GCU); the GCU can be up to a 3 m (10 ft) thick clay layer or consist of silty/sandy clays to silty sands. The GCU is overlain by the Upper Three Runs Aquifer (UTRA), which is an unconfined series of interbedded and laterally discontinuous sand, silt, and clay beds ranging in thickness from 12 m (40 ft) to 18 m (60 ft) beneath D Area. In D Area, the UTRA has been partially eroded and the tan clay confining layer is not present; therefore, the UTRA in D Area is not defined by upper and lower zones separated by a confining layer as often seen at other units at SRS. A schematic of the lithostratigraphy and hydrostratigraphy generally observed at SRS is provided in **Figure 5**. The 488-4D Ash Landfill monitoring wells are screened within the UTRA.

2.2 Groundwater Constituents and Parameters

The five 488-4D Ash Landfill wells (DCB077, DCB078, DCB079, and DCB080 and DCB 8) are monitored according to the DAG OU *Groundwater Samples Analyte List and Sample Frequency* table that is included in the DAG OU groundwater monitoring reports and letters (SRNS 2023b; *Appendix B, Table B-1*). **Table 2** lists the required analytical and field parameters being monitored for the 488-4D Ash Landfill. Results are compared to Maximum Contaminant Levels (MCLs), National Secondary Drinking Water Standards (NSDWS), or USEPA Regional Screening Levels (RSLs), in that order.

3.0 RESULTS

Groundwater water elevations and analytical samples were collected in May 2024 for all five (5) wells associated with the 488-4D Ash Landfill. Water elevations were also collected during November 2024. All five monitoring wells (DCB077, DCB078, DCB079, and DCB080 and DCB 8) are also used for monitoring groundwater elevations and/or metals/sulfate in the D-Area Treatability Study (SRNS 2025). Wells DCB 8, DCB077, and DCB078 include additional metal/sulfate sample analyses for the D-Area Treatability Study in the first, third, and fourth quarters of the calendar year. The 488-4D Ash Landfill required field measurements and sampling results and the additional analysis supporting the D-Area Treatability Study are presented in **Table 3**.

3.1 Groundwater Flow

Water elevation data for the second quarter 2024 are presented in **Figure 1**. The water table near the 488-4D Ash Landfill is approximately 4.3 to 7.0 m (14 to 23 ft) bgs and the shallow groundwater in the UTRA flows toward the southwest. Water elevations at the five 488-4D Ash Landfill monitoring wells ranged from 1.3 to 7.4 m (4.3 to 23.4 ft) bgs. Water elevations have been stable or slightly higher than 2023 levels at downgradient wells DCB078, DCB079, and DCB080. Water elevations vary more at well DCB077 due to localized effects from the screen zone being directly above a thick competent clay layer causing some perched effects. Well DCB 8, which is in the injection field line of the D-Area Treatability Study, has displayed elevated groundwater elevations since March 2022 due to the ongoing groundwater injections. The D-Area Treatability Study has not impacted groundwater monitoring or results for the 488-4D Ash Landfill. More information about the D-Area Treatability Study can be found in the recent 2025 treatability study data report (SRNS 2025). Water elevations measured during 2024 are provided in **Table 3** and include any additional measurements collected as part of the D-Area Treatability Study as all five wells are used for water elevations as part of the study. Hydrographs for the five monitoring wells are provided in **Figures 6 through 8**.

3.2 Results Above Regulatory Threshold Limits

Analytical results from the 2024 sampling show the following six metals/sulfate constituents were detected in the five 488-4D Ash Landfill monitoring wells at concentrations above their applicable regulatory threshold level in at least one monitoring well:

- Aluminum (NSDWS & RSL)
- Beryllium (MCL)
- Cobalt (RSL)
- Iron (NSDWS & RSL)
- Manganese (NSDWS & RSL)
- Sulfate (NSDWS)

These are the same constituents observed within the DAG OU (SRNS 2023b). Metals contamination is sourced from the 484-17D CBRB DCSA and 489-D CPRB from low-pH groundwater conditions caused by long-term coal storage and subsequent dissolution of coal and natural aquifer minerals due to acidic water leachate. Although the groundwater has elevated metal concentrations, the concentrations have been steady or decreasing for the last seven years. As an example, **Figures 9 through 11** show the time-series plots for beryllium at the five 488-4D Ash

Landfill monitoring wells. Additionally, upgradient DAG OU wells, such as DCB 23C, display higher groundwater concentrations of metals including beryllium indicating metals contamination originates from upgradient sources (i.e., the 484-17D DCSA and 489-D CPRB) (**Figure 2**).

Groundwater will continue to be monitored at the five 488-4D Ash Landfill monitoring wells annually. Subsequent 488-4D Ash Landfill groundwater data will be reported in July the year after the data was collected.

4.0 REFERENCES

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SRNS, 2024. E-Mail, C. Jones (SRNS) to J. Richards (USEPA) and S. Fulmer (SCDES), *Submittal of D-Area Groundwater Operable Unit (OU) Annual Data Summary Report – 2023 Data (U) (SRNS-RP-2024-01267, Revision 0, November 2024) and Associated Scoping Summary (ERD-EN-2019-0022, Final, November 2023)*, SRNS-J2000-2024-00855, dated November 20, 2024, Savannah River Nuclear Solutions, LLC, Savannah River, Site, Aiken, SC

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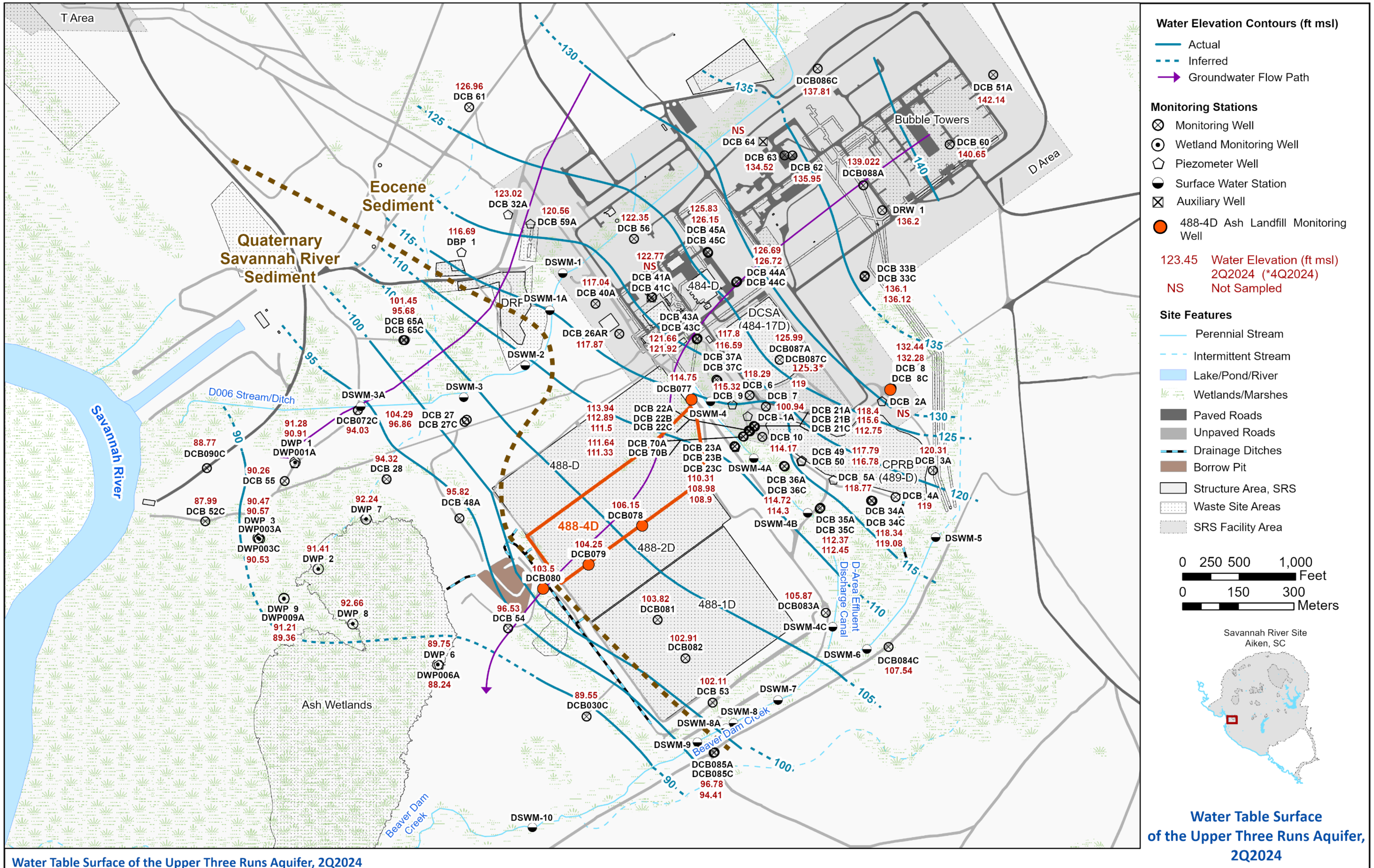

Figure 1. Monitoring Well Locations at the 488-4D Ash Landfill and 2Q2024 Water Level Elevations

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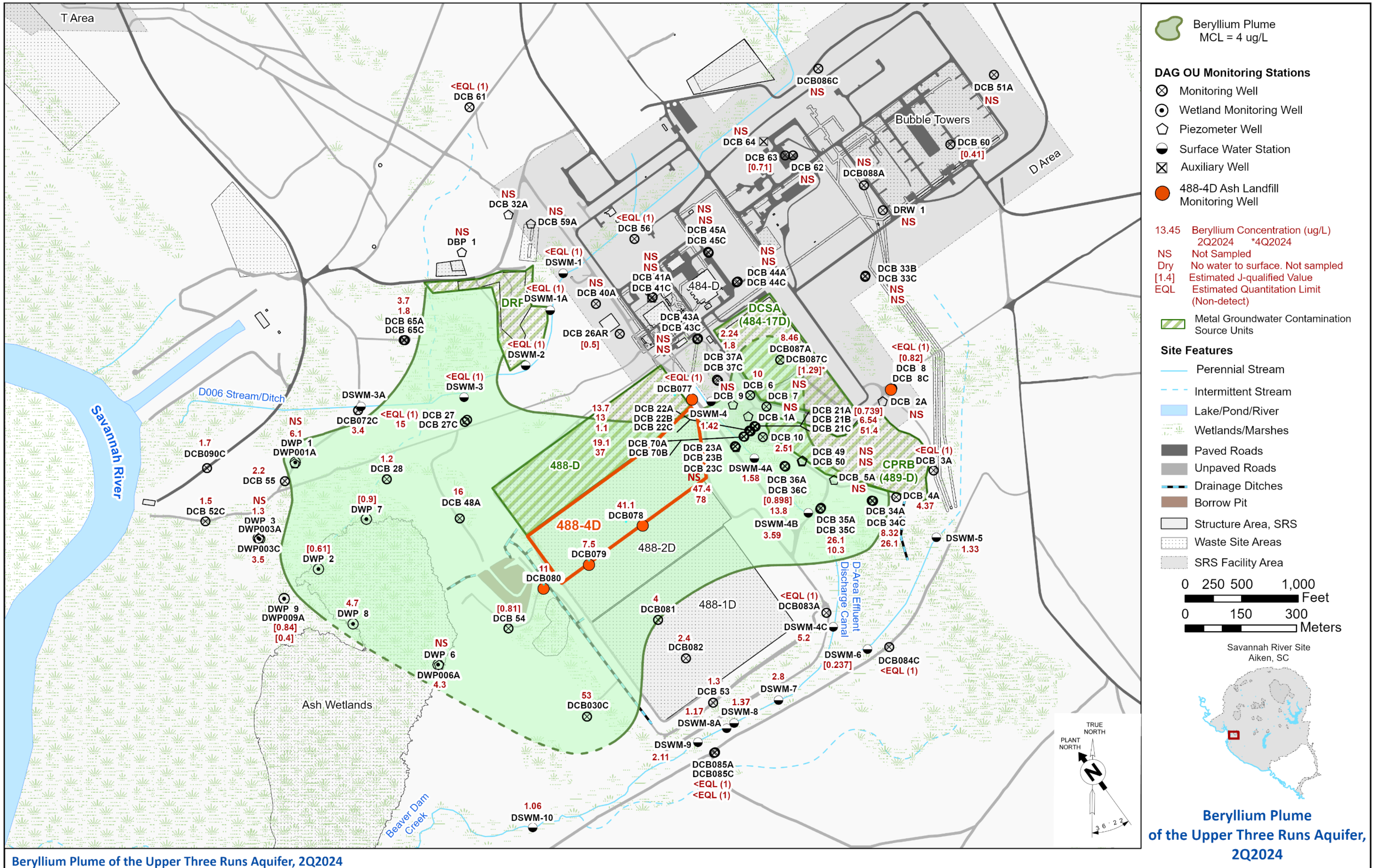

Figure 2. Beryllium Concentrations at the 488-4D Ash Landfill, Second Quarter 2024

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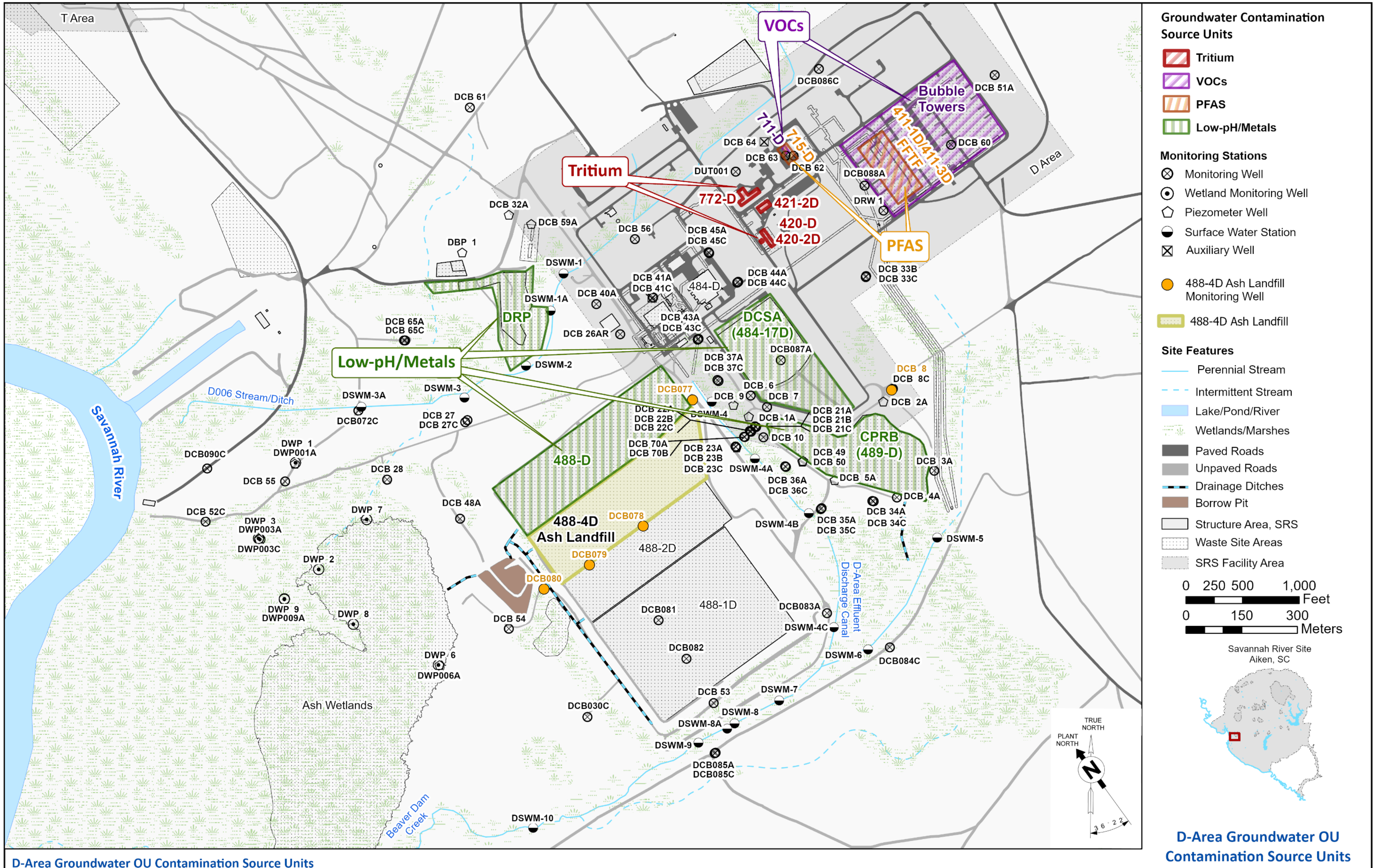

Figure 3. Upgradient Sources of Tritium, VOCs, and PFAS Constituents in D Area

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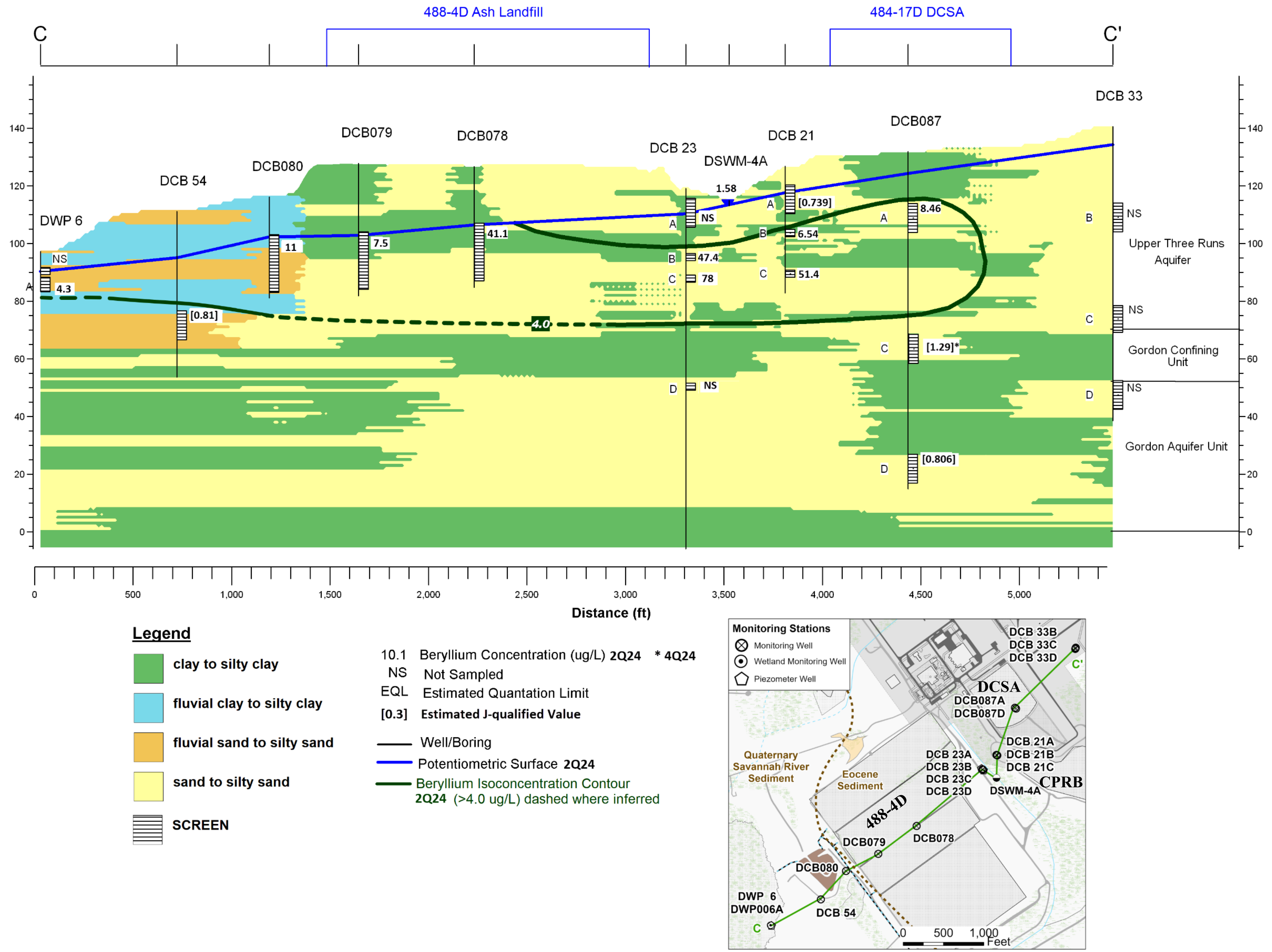

Figure 4. Cross-Sectional View at the 488-4D Ash Landfill and Surrounding Area with Beryllium Plume and Water Elevations from 2Q2024

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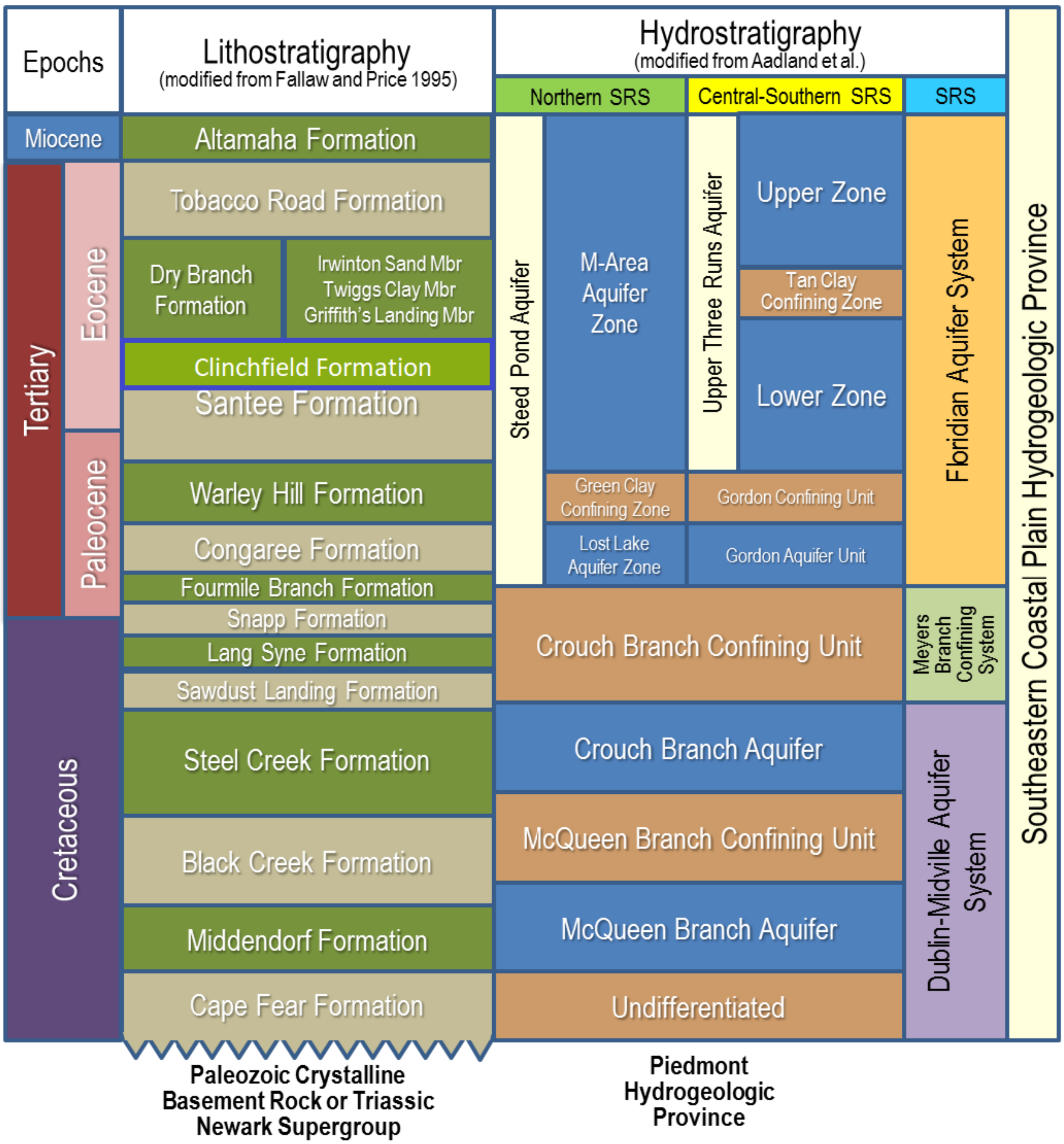

Figure 5. Lithostratigraphic and Hydrostratigraphic Units at SRS

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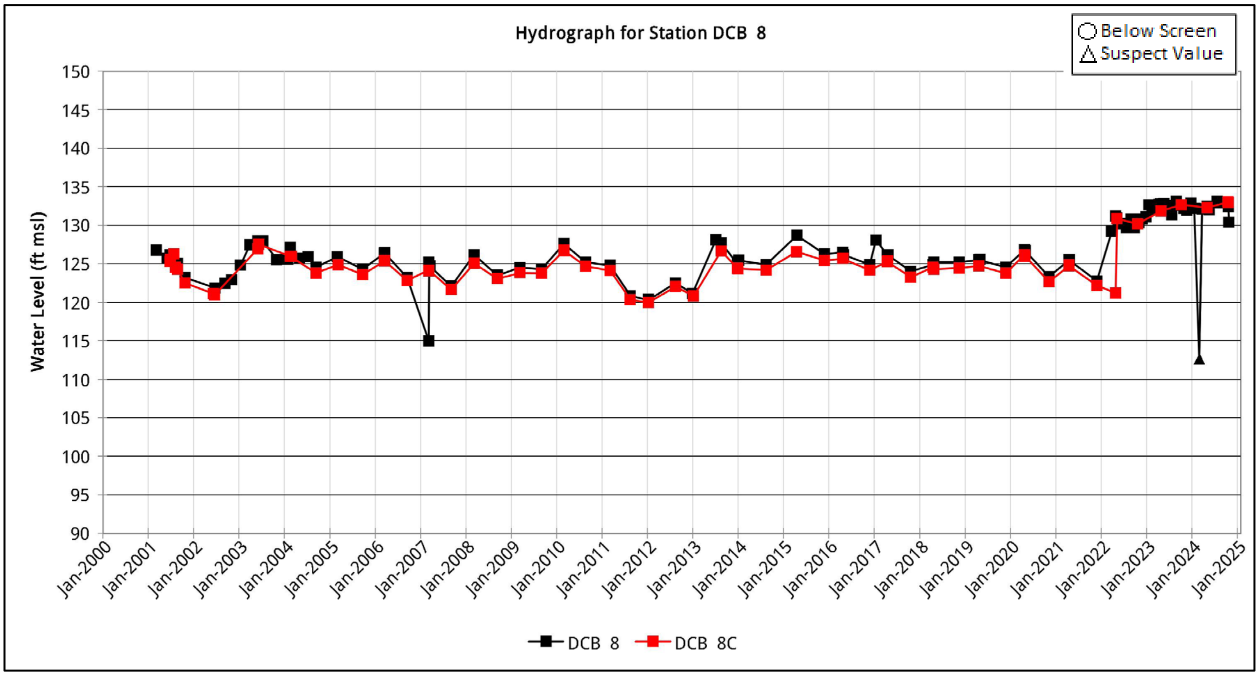


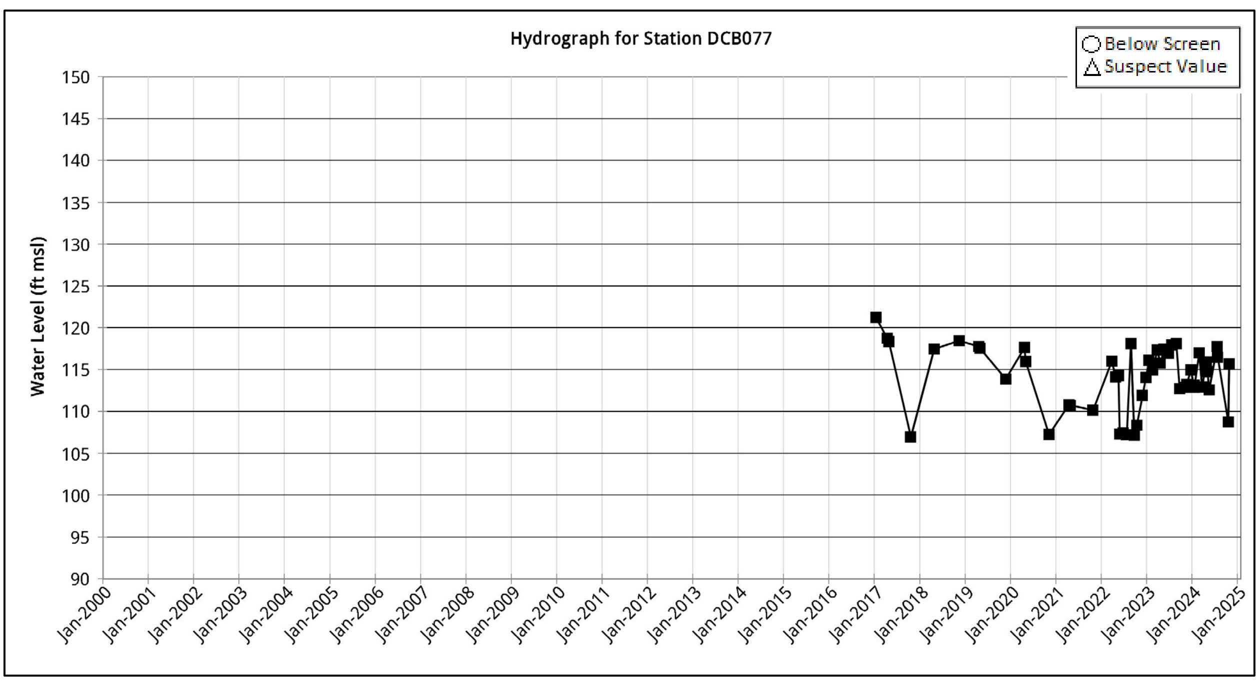
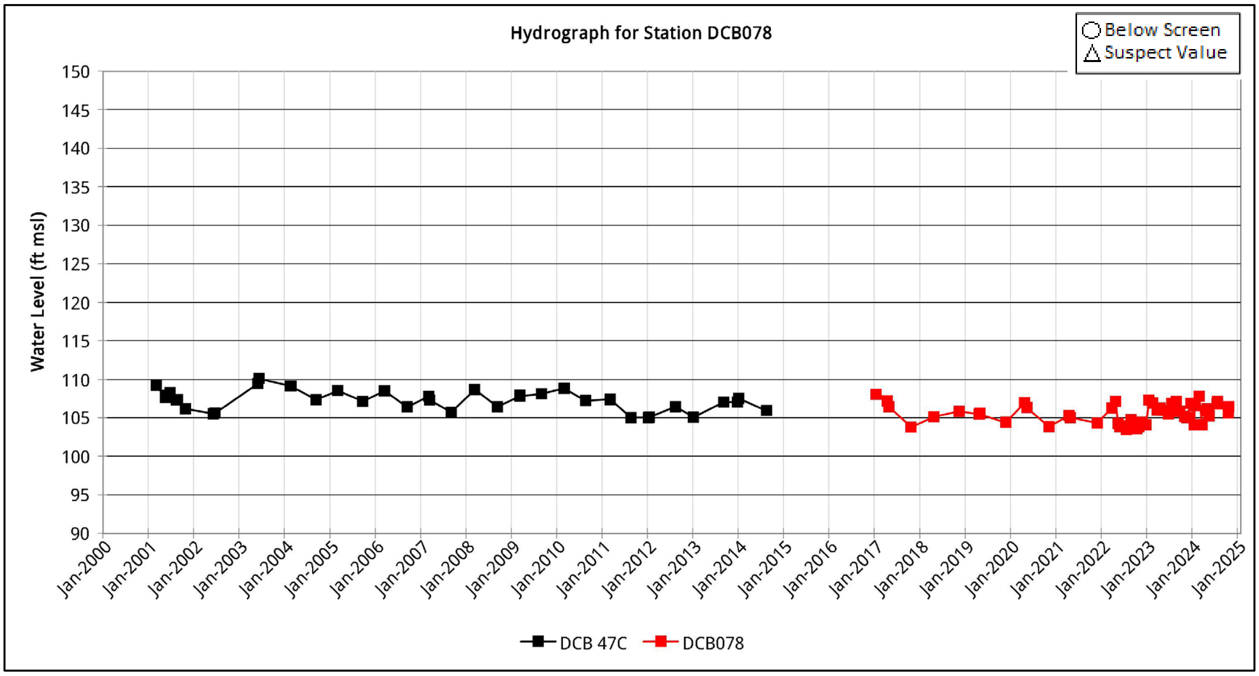


Figure 6. Hydrographs at DCB 8 and DCB077



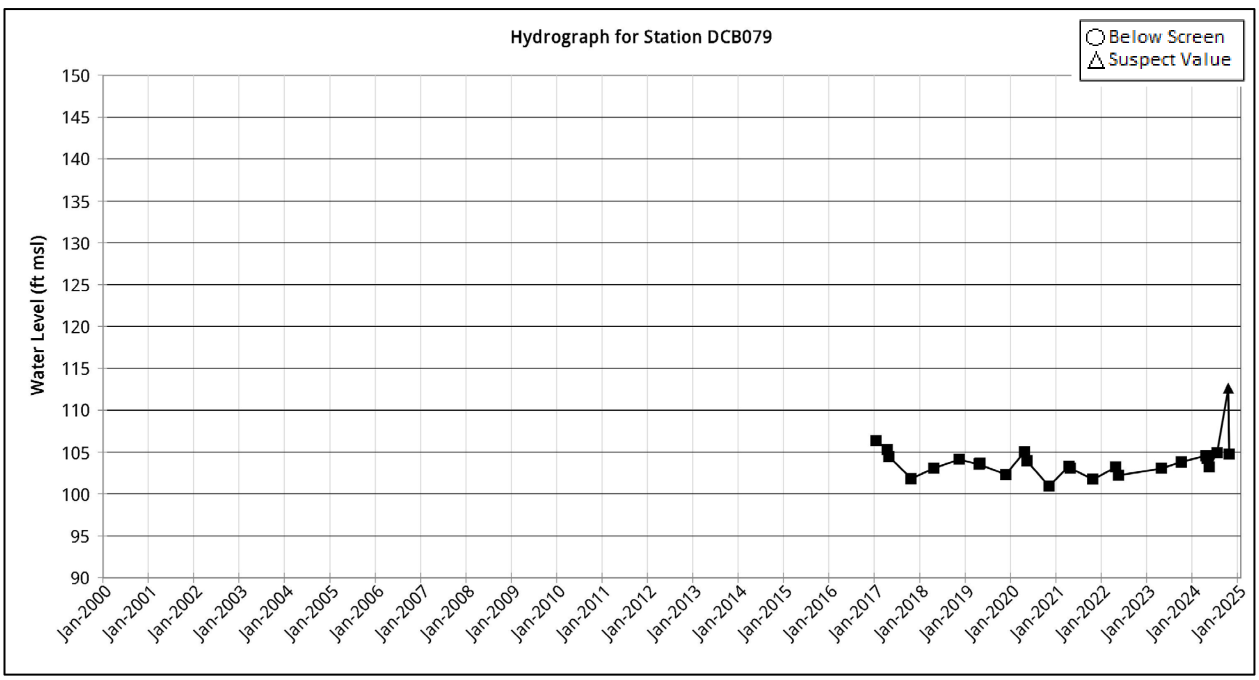


Figure 7. Hydrographs at DCB078 (and abandoned well DCB 47C) and DCB079

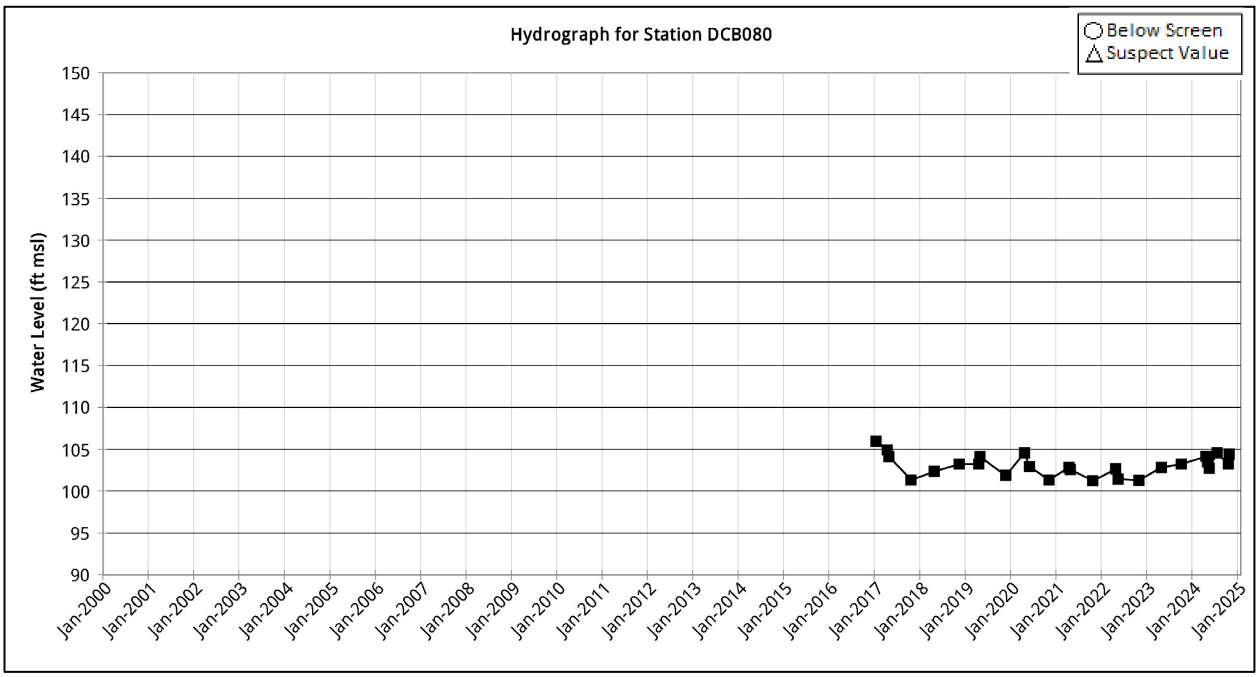
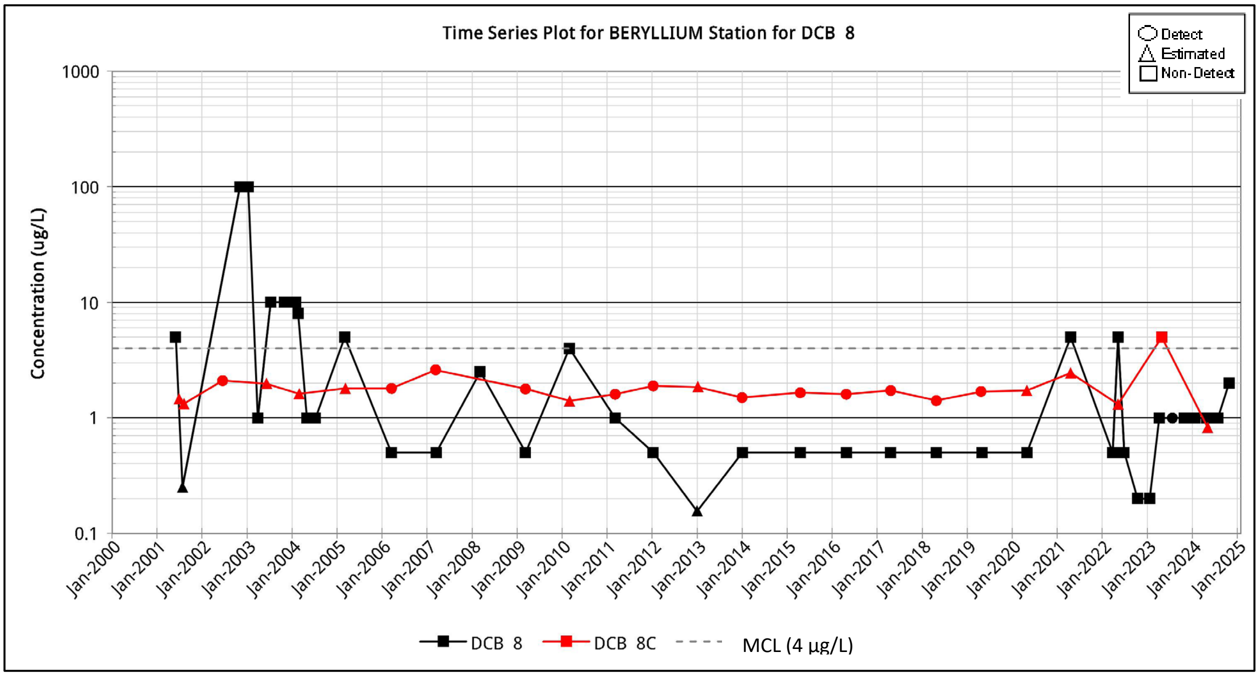


Figure 8. Hydrographs at DCB080



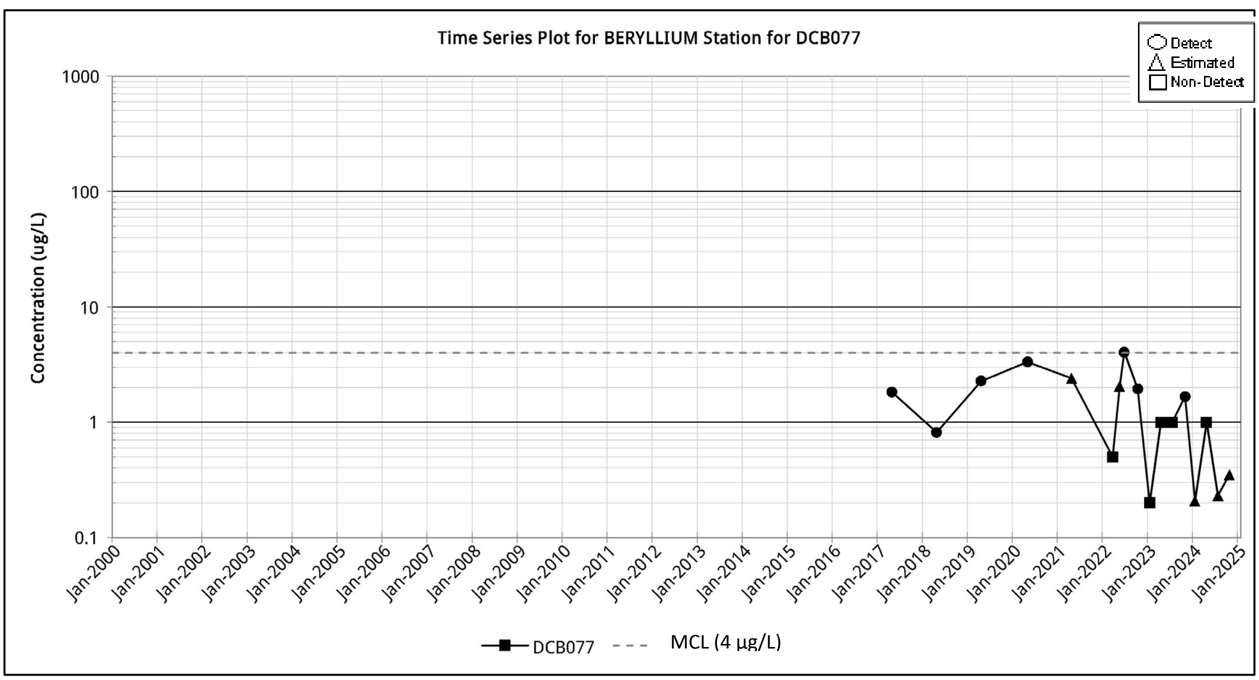
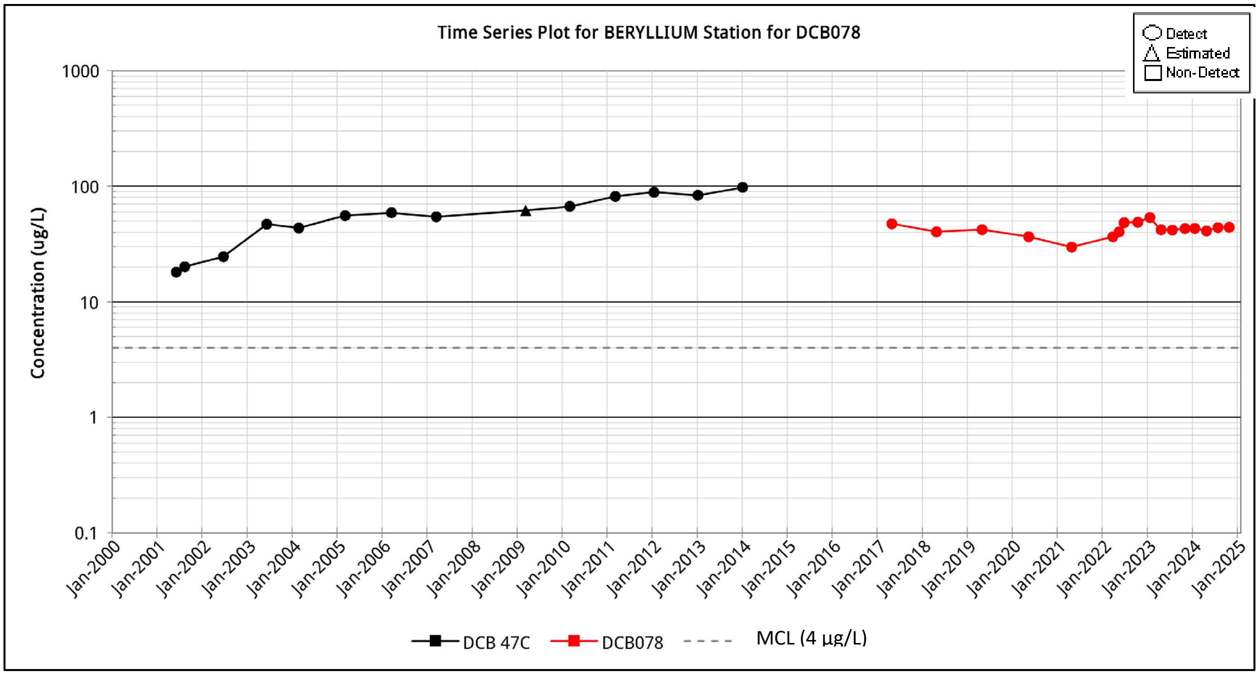


Figure 9. Beryllium Time Series Plots at DCB 8 and DCB077



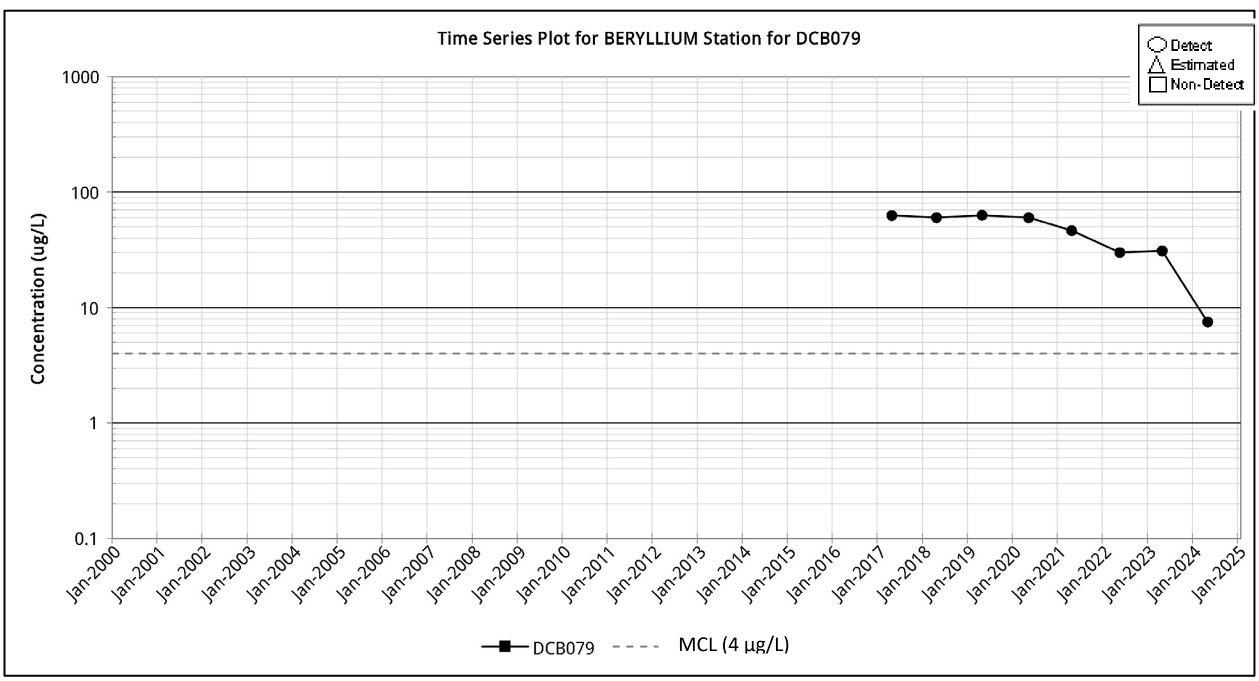


Figure 10. Beryllium Time Series Plots at DCB078 (and abandoned well DCB 47C) and DCB079

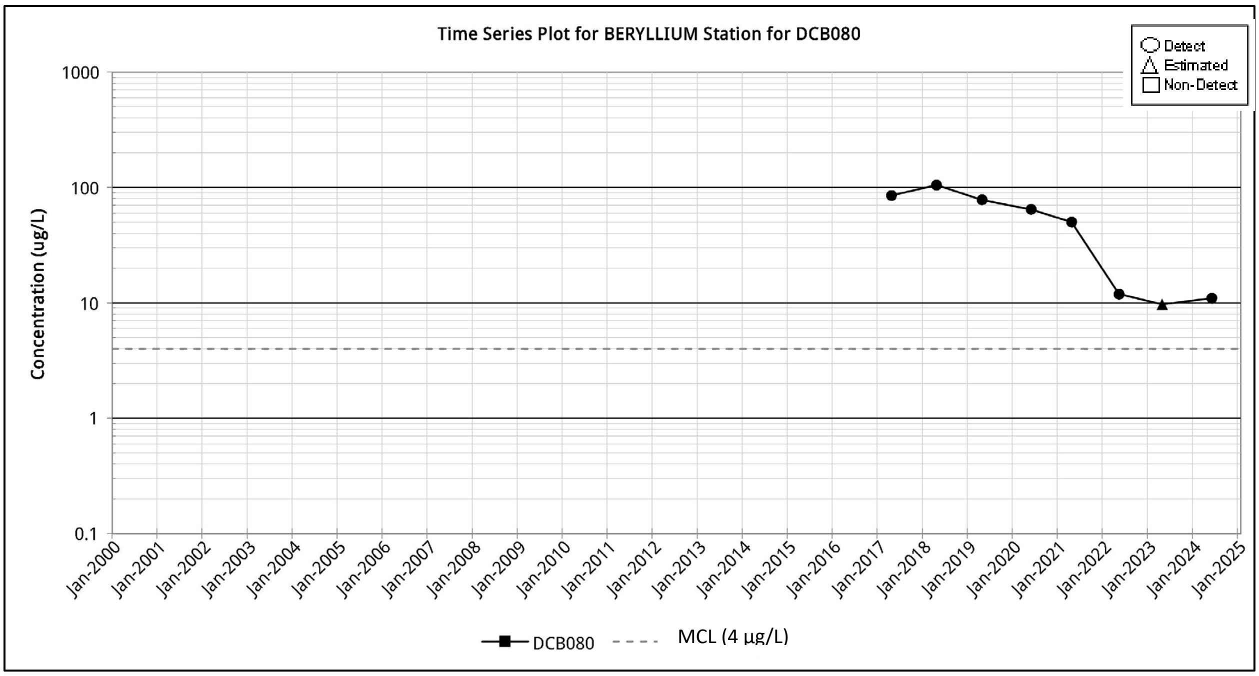


Figure 11. Beryllium Time Series Plot at DCB080

Table 1. Groundwater Monitoring Network at the 488-4D Ash Landfill

Station	Well Use	Aquifer	UTM East (NAD 27)	UTM North (NAD 27)	Reference Elevation *(ft amsl)*	Ground Elevation *(ft amsl)*	Depth to Top of Screen Zone *(ft bgs)*	Depth to Bottom of Screen Zone *(ft bgs)*
DCB 8	upgradient	UTRA	431521.3	3673555.1	137.20	134.80	4.5	24.5
DCB077	upgradient	UTRA	430985.68	3673528.71	130.64	127.7	9.7	29.7
DCB078	downgradient	UTRA	430852.27	3673189.19	126.56	126.7	19.7	39.7
DCB079	downgradient	UTRA	430707.50	3673083.91	127.65	127.8	23.7	43.7
DCB080	downgradient	UTRA	430585.51	3673019.20	119.03	116.1	13.1	33.1

UTM – Universal Transverse Mercator; NAD – North American Datum; UTRA – Upper Three Runs Aquifer (water table)

Table 2. Required Monitored Constituents for the 488-4D Ash Landfill

Monitoring Well	Second Quarter	Fourth Quarter
DCB 8	Fp, M, S, U	W
DCB077	Fp, M, S	W
DCB078	Fp, M, S	W
DCB079	Fp, M, S	W
DCB080	Fp, M, S	W

Fp-Field Parameters; M-Metals; S-Sulfate; U-Uranium; W-Water Elevation Only

Metals	
Aluminum	Magnesium
Antimony	Manganese
Arsenic	Mercury
Barium	Nickel
Beryllium	Potassium
Cadmium	Selenium
Calcium	Silver
Chromium	Sodium
Cobalt	Thallium
Copper	Vanadium
Iron	Zinc
Lead	

Field Parameters
Depth to Water
Purge Volume
Turbidity
Water Temperature
pH
Specific Conductance
Alkalinity
Dissolved Oxygen

Table 3. 2024 Sampling Results for the 488-4D Ash Landfill

See insert on next page

Table 3. 488-4D Ash Landfill 2024 Groundwater Monitoring Data

			Field Data														488-4D Ash Landfill Analyte Suite																								
			SAMPLE COLLECTION DATE	SAMPLING EVENT WATER ELEVATION	SAMPLE EVENT DEPTH TO WATER	SYNCHRONOUS MEASUREMENT DATE	SYNCHRONOUS WATER ELEVATION	TURBIDITY	PH	WATER TEMPERATURE	SPECIFIC CONDUCTANCE	TOTAL ALKALINITY (AS CACO3)	OXYGEN	OXIDATION/REDUCTION POTENTIAL	Constituent	FIELD CONDITIONS / COMMENTS	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	MERCURY	NICKEL	POTASSIUM	SELENIUM	SILVER	SODIUM	SULFATE	THALLIUM	URANIUM	VANADIUM	ZINC
			day-month-year	ft	ft	day-month-year	ft	NTU	pH	degC	uS/cm	mg/L	mg/L	mV	Unit		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	mg/L	ug/L
															NPDWS (MCL)			6	10	2,000	4	5		100		1,300		15			2			50				2	30		
															NSDWS		200										300			50					100		250				5,000
Station	Well Use	Aquifer Zone													RSL		20,000								6		14,000			430		390			94						6,000
DCB 8	Monitoring Well	UTRA	NS	NS	NS	11-Jan-2024	132.86	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB 8	Monitoring Well	UTRA	12-Feb-2024	132.17	5.03	07-Feb-2024	132.18	12.4	5	18.6	27.4	0	0.48	177		TS	[138]	<EQL (8)	<EQL (1)	[12.3]	<EQL (1)	<EQL (1)	1,210	<EQL (30)	[0.331]	24.7	<EQL (200)	<EQL (3)	[595]	5.28	<EQL (0.4)	[0.544]	[546]	<EQL (2)	<EQL (1)	[1,360]	[0.848]	<EQL (2)	<EQL (20)	[0.633]	<EQL (40)
DCB 8	Monitoring Well	UTRA	NS	NS	NS	18-Mar-2024	112.67	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB 8	Monitoring Well	UTRA	NS	NS	NS	11-Apr-2024	132.12	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB 8	Monitoring Well	UTRA	14-May-2024	132.44	4.76	21-May-2024	132.44	6.7	5	18.8	33	0	2.4	278			[79.9]	<EQL (8)	<EQL (1)	15.6	<EQL (1)	<EQL (1)	1,390	<EQL (30)	[0.317]	21.6	<EQL (200)	<EQL (3)	[702]	[4.95]	<EQL (0.4)	<EQL (4)	[566]	<EQL (2)	<EQL (1)	[1,500]	[0.609]	<EQL (2)	<EQL (20)	<EQL (5)	<EQL (40)
DCB 8	Monitoring Well	UTRA	NS	NS	NS	06-Jun-2024	132	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB 8	Monitoring Well	UTRA	14-Aug-2024	132.9	4.3	08-Aug-2024	133.09	12.7	5.3	20.9	43	0	0.8	103		TS	221	<EQL (8)	[0.613]	14.2	<EQL (1)	<EQL (1)	1,640	<EQL (30)	[0.373]	16.2	2,270	[0.646]	[751]	7.04	<EQL (0.4)	[0.616]	[730]	<EQL (2)	<EQL (1)	[2,230]	[0.845]	<EQL (2)	<EQL (20)	[0.844]	<EQL (40)
DCB 8	Monitoring Well	UTRA	12-Nov-2024	130.38	6.82	07-Nov-2024	132.42	3.3	5.1	20.4	44	1	1.6	287		TS	[57.7]	<EQL (4)	[0.143]	20.6	<EQL (2)	<EQL (1)	2,000	<EQL (2)	[0.48]	28.4	[75.9]	<EQL (2)	1,030	8.08	[0.0898]	[0.661]	[743]	<EQL (2)	<EQL (2)	2060	<EQL (5)	<EQL (2)	<EQL (1)	<EQL (5)	[7.67]
DCB077	Monitoring Well	UTRA	NS	NS	NS	11-Jan-2024	114.95	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB077	Monitoring Well	UTRA	08-Feb-2024	113.12	17.52	07-Feb-2024	112.88	4.6	5.1	19.7	387	3	3.87	145		TS	[86.8]	<EQL (8)	<EQL (1)	71.1	[0.207]	<EQL (1)	60,900	<EQL (30)	[1.63]	[1.03]	4,710	<EQL (3)	5,290	536	<EQL (0.4)	4.6	[9210]	15.4	<EQL (1)	4900	168	[0.534]	<EQL (20)	<EQL (5)	<EQL (40)
DCB077	Monitoring Well	UTRA	NS	NS	NS	18-Mar-2024	116.98	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB077	Monitoring Well	UTRA	NS	NS	NS	11-Apr-2024	112.93	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB077	Monitoring Well	UTRA	13-May-2024	115.88	14.76	22-May-2024	114.75	2.4	5.9	19.1	156	23	3.27	123			<EQL (200)	<EQL (8)	<EQL (1)	72.1	<EQL (1)	<EQL (1)	20,800	<EQL (30)	[0.391]	[1.37]	507	<EQL (3)	1,600	11.9	<EQL (0.4)	[1.68]	5,750	6.59	<EQL (1)	[2,330]	35.3	[0.285]	<EQL (20)	[0.84]	<EQL (40)
DCB077	Monitoring Well	UTRA	NS	NS	NS	06-Jun-2024	112.59	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB077	Monitoring Well	UTRA	14-Aug-2024	116.43	14.21	08-Aug-2024	117.72	2.1	5.6	20.1	315	22	5.2	93		TS	[80.9]	<EQL (8)	<EQL (1)	111	[0.231]	<EQL (1)	41,000	<EQL (30)	2.13	<EQL (3)	402	<EQL (3)	3,030	88.9	<EQL (0.4)	[3.79]	9,230	5.47	<EQL (1)	7380	94	[0.615]	<EQL (20)	<EQL (5)	<EQL (40)
DCB077	Monitoring Well	UTRA	14-Nov-2024	115.7	14.94	07-Nov-2024	108.72	3.8	3.4	20.9	340	0	3.33	440		TS	114	<EQL (4)	<EQL (2)	66.7	[0.349]	<EQL (1)	41,000	<EQL (2)	[1.9]	[1.25]	346	<EQL (2)	3,470	157	<EQL (0.2)	6.34	10,600	7.7	<EQL (2)	3920	120	[0.707]	<EQL (1)	<EQL (5)	[8.35]
DCB078	Monitoring Well	UTRA	NS	NS	NS	11-Jan-2024	106.88	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB078	Monitoring Well	UTRA	08-Feb-2024	106.61	19.95	07-Feb-2024	104.12	3.1	4	20.1	854	0	1.2	247		TS	26,900	<EQL (8)	[0.66]	21	43.2	2.49	63,300	<EQL (30)	249	11.5	32,100	<EQL (3)	28,500	4190	<EQL (0.4)	232	[3,070]	6.07	<EQL (1)	10,600	483	[0.271]	<EQL (20)	<EQL (5)	680
DCB078	Monitoring Well	UTRA	NS	NS	NS	18-Mar-2024	107.81	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB078	Monitoring Well	UTRA	NS	NS	NS	11-Apr-2024	104.09	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB078	Monitoring Well	UTRA	13-May-2024	105.87	20.69	22-May-2024	106.15	2.6	4.1	20.2	852	0	1.65	255			22,900	<EQL (8)	[0.78]	20.5	41.1	2.28	54,600	<EQL (30)	234	13.5	33,100	<EQL (3)	28,800	3,640	<EQL (0.4)	237	2,890	[1.86]	<EQL (1)	10,800	510	[0.3]	<EQL (20)	[0.809]	630
DCB078	Monitoring Well	UTRA	NS	NS	NS	06-Jun-2024	105.25	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB078	Monitoring Well	UTRA	14-Aug-2024	107.15	19.41	08-Aug-2024	106.81	12.1	4.1	20.5	859	0	1.6	168		TS	26,100	<EQL (8)	1.11	22.4	44	2.37	60,500	<EQL (30)	242	18.8	31,200	<EQL (3)	26,900	4,500	<EQL (0.4)	225	2,630	3.79	<EQL (1)	9,770	501	[0.291]	<EQL (20)	[0.744]	672
DCB078	Monitoring Well	UTRA	11-Nov-2024	106.41	20.15	07-Nov-2024	105.63	5	3.8	20.5	856.6	0	3.88	147		TS	25,900	<EQL (4)	[0.983]	20.8	44.2	2.15	61,100	[1.8]	232	13.1	31,200	<EQL (2)	26,100	4,100	<EQL (0.2)	218	2,780	3.54	<EQL (2)	9,390	537	[0.296]	[0.231]	[0.523]	656
DCB079	Monitoring Well	UTRA	22-May-2024	104.25	23.4	09-May-2024	104.55	11.5	4.5	20.7	290	0	NS	NS			910	<EQL (2)	<EQL (5)	36	7.5	<EQL (1)	20,000	[0.96]	110	4.2	4,300	<EQL (1)	4,100	1,500	0.23	16	2,800	<EQL (5)	<EQL (1)	21,000	100	<EQL (1)	NS	[1.8]	78
DCB079	Monitoring Well	UTRA	NS	NS	NS	06-Jun-2024	103.24	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB079	Monitoring Well	UTRA	NS	NS	NS	08-Aug-2024	104.93	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB079	Monitoring Well	UTRA	13-Nov-2024	104.78	22.87	07-Nov-2024	103.6	5	3.8	20.5	856.6	0	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB080	Monitoring Well	UTRA	23-May-2024	103.5	15.53	09-May-2024	104.15	8.9	4	19	544	0	NS	NS		MS	5,300	<EQL (2)	[1.8]	21	11	[0.27]	40,000	[0.68]	92	26	17,000	[0.26]	12,000	1,200	[0.07]	40	6,000	<EQL (5)	<EQL (1)	16,000	230	<EQL (1)	NS	12	100
DCB080	Monitoring Well	UTRA	NS	NS	NS	06-Jun-2024	102.73	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB080	Monitoring Well	UTRA	NS	NS	NS	08-Aug-2024	104.58	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCB080	Monitoring Well	UTRA	NS	NS	NS	07-Nov-2024	103.2	NS	NS	NS	NS	NS	NS	NS		TS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Explanation

[##]	EPA Functional Guideline Code of 'J' was applied to the result, indicating an estimated quanity.
<EQL(##)	Constituent was below detection. The sample-specific Estimated Quantitation Limit is in parentheses.
	Result exceeds applicable limit.
REJ	Result Rejected.
	Result is less than the applicable limit and without EPA Functional Guidline qualifiers.
NS	Requested to be sampled but was not. See comments as to why not.
Blue Text	Not a required sample analysis.
MS	Mistakenly not measured or sampled
TS	Additional sample/field measurement data collected for the DAG OU Treatability Study.