Colbert Landfill Remediation Project Annual Report 2025

Progress Report for

April 2024 through June 2025

Prepared by:

Spokane County Landfill Closure
22515 N Elk-Chattaroy Rd
Colbert, WA 99005

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***Historical monitoring well analytical results and remedial progress reports can be found on the Spokane County Solid Waste Department website at:**

https://www.spokanecounty.org/4726/Colbert-Landfill

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List of Acronyms

AC	Action Criteria: Action Level Criteria is equal to 65% of the Evaluation Criteria for each COC, and will be used for purposes of the Shutdown Test.
COC	Constintuent(s) of Concern - the COCs for the Colbert Landfill site include TCA, DCA, PCE, TCE, and MC
CD	Consent Decree: Project Consent Decree between EPA, Ecology, Spokane County, and Key Tronic Corp.
DCA	1,1-Dichloroethane
DCE	1,1-Dichloroethylene
EC	Evaluation Criteria: alternative standards developed due to the inability of analytical methods to accurately quantify PCE and MC to the Performance Standards at the time the consent decree was written, but are otherwise the same as the Performance Standards.
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
MC	Methylene chloride
MSL	Mean Sea Level
P&T	Pump-and-treat system
PC	Performance Criteria: Health-based Remedial Action criteria for Constituents of Concern specified in the Record of Decision.
PCE	Tetrachloroethylene
ppb	Parts per billion
ppm	Parts per million

QA/QC	Quality Assurance/Quality Control
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision (EPA)
SD	Shutdown Test
TCA	1,1,1-Trichloroethane
TCE	Trichloroethylene
TDS	Total dissolved solids
TOC	Total Organic Carbons
VOC	Volatile Organic Compound

1.0 Colbert Landfill Remediation Project Summary

The Colbert Landfill Superfund site is a closed, 40-acre, municipal solid waste landfill located approximately 15 miles north of Spokane, Washington, and about 2.5 miles north of Colbert, Washington. The landfill received waste from 1968 to 1986 when it became filled to capacity. Groundwater in the vicinity of the landfill was found to be contaminated with volatile organic compounds and in 1983, and the landfill was placed on the National Priorities List (NPL) by EPA. In 1989, a consent decree (CD) was executed to implement a site remedy. The site remedy includes:

- An available alternate water supply for residential wells impacted by groundwater contamination originating from the landfill.
- Institutional Controls
- Construction and operation of a pump and treat system to capture and prevent further spread of groundwater contaminants.
- Landfill closure according to the State of Washington regulations Minimal Functional Standards (WAC 173-304).
- Monitoring of contaminants to protect human health and the environment at the site.

Construction of a pump and treat (P&T) system was completed in 1994. The P&T system operated successfully for 20 years. In 2014, an EPA-recommended Shutdown test was initiated to determine if the facility was continuing to add any significant benefit to the clean-up. The programs currently in place include a Shutdown Test (lower aquifer) for the pump and treat system; upper aquifer compliance groundwater monitoring (includes 1,4-dioxane monitoring and Minimal Functional Standards (MFS) monitoring of the upper aquifer); residential well monitoring (includes both upper and lower aquifers); supplemental sampling (includes both upper and lower aquifers); and landfill cover maintenance and monitoring. The groundwater monitoring programs and criteria are summarized below.

Current Monitoring Programs

Program	Aquifer	Parameters	Schedule
Shutdown Test	Lower	VOC's	Annual (Extraction wells Quarterly)
Upper Aquifer Compliance	Upper	VOC's	Annual (Extraction wells Quarterly)
1,4-Dioxane Sampling	Lower/ Upper	1,4-Dioxane	Annual/Monthly
MFS Monitoring	Upper	Cl/NH3/NO2/NH3/ SO4/Fe/Mn/Zn/TOC/COD	Annual
Residential Monitoring	Lower/ Upper	VOC's	Monthly/Quarterly/SemiAnnual/ Annual/BiAnnual
Supplemental Sampling	Lower/ Upper	VOC's	Every five years

Program Criteria

PROGRAM	CRITERIA	TCA	DCE	DCA	TCE	PCE	MC	1,4-Dioxane		Units
CONSENT DECREE	Performance	200	7	4050	5	0.7	2.5			ug/L
	Evaluation	200	7	4050	5	0.7	2.5	7		
SHUTDOWN TEST	Action Level	130	4.55	2632	3.25	0.5	1.63			
	Evaluation	200	7	4050	5	0.7	2.5			
RESIDENTIAL										
Monthly sampling initiated, evaluated in 12 months	Action Level	130	4.55	2632	3.25	0.5	1.63			ug/L
Exceedance requires alternative drinking water source to be supplied	MCL	200	7	4050	5	0.7	2.5			
		Cl	**Fe**	**Mn**	**Zn**	**TOC**	**COD**	**SO4**	**NO3**	
MFS	(mg/L)	250	0.3	0.05	5	NA	NA	250	10	mg/L

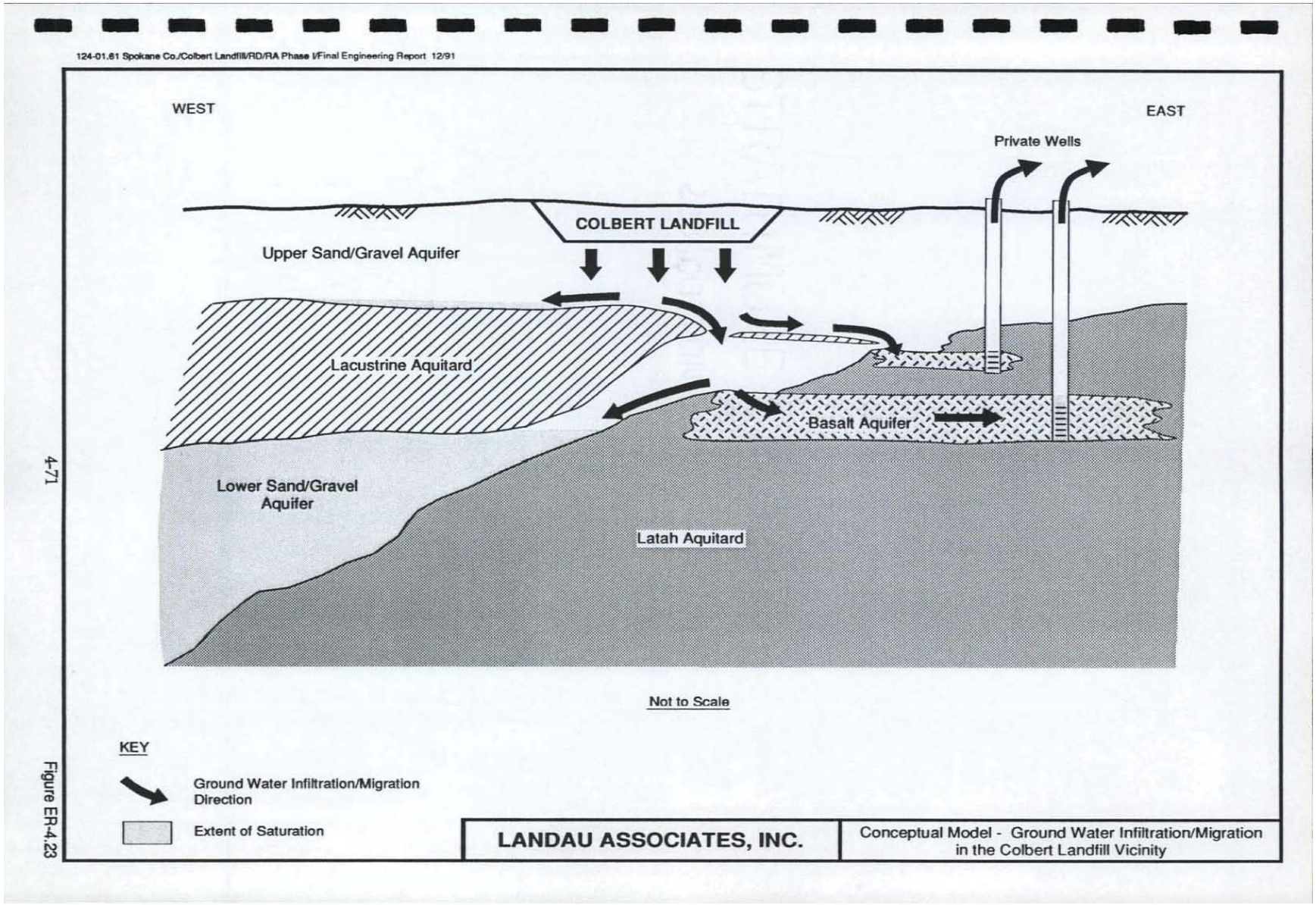
1.1 Geology/Hydrogeology

Hydrogeologic cross-sections for the Colbert Landfill are presented in Appendix D. The geology beneath the Site consists of six vertically stratified and laterally discontinuous geologic units derived from glacial and fluvial material, modified by erosional (and possibly landslide) processes, overlaid on granitic bedrock. There are two primary aquifers that include the saturated portion of the Upper Sand and Gravel Unit and the saturated portion of the Lower Sand and Gravel Unit, which are separated by a Lacustrine Unit that serves as an aquitard. The Latah Formation serves as an aquitard that underlies the Lower Sand and Gravel Aquifer at most locations. A basalt unit forms a secondary aquifer interbedded in the Latah Aquitard and is referred to as the Basalt Aquifer. The Granite Unit is an aquitard that underlies the Latah Formation and serves as the lower boundary to the regional flow system. For more information, please refer to the Phase I Engineering Report (Landau Associates 1991).

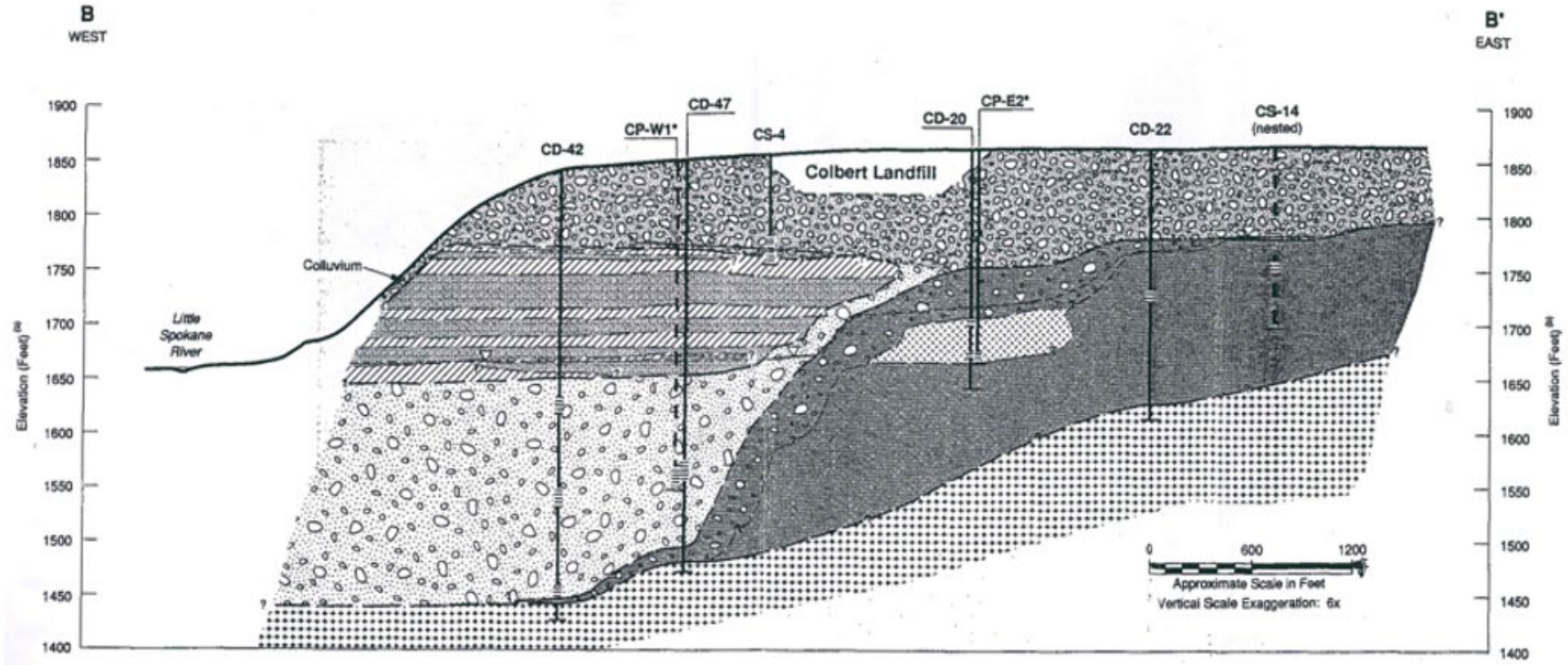
The Upper Sand and Gravel Unit aquifer (Upper Aquifer) is unconfined with a water table that lies approximately 90 ft below the ground surface. Groundwater flow in this aquifer is generally north to south, changing to the southeast approximately 1 mile south of the Site. The direction of flow appears to be influenced by the topography of the upper surface of the Lacustrine Aquitard (Landau Associates 1991).

The Lower Sand and Gravel Unit aquifer (Lower Aquifer) is confined to the west of the landfill and unconfined to the east of the landfill. To the west of the landfill, the Upper and Lower aquifers are separated by the Lacustrine unit, which causes the confined conditions in that area. Groundwater flow in the Lower Aquifer is predominantly toward the west with discharge to the Little Spokane River.

Colbert Landfill Hydrogeology/Groundwater Migration



Colbert Landfill Hydrogeology Overview



1.2 Colbert Landfill Monitoring – Overview of Results/Discussion

Shutdown Test - Lower Aquifer

The highest constituent of concern (COC) concentrations in the vicinity of the Colbert Landfill are found in the lower aquifer. After the shutdown of the Colbert Landfill extraction system, COC concentrations in the lower aquifer appeared to follow the same general pattern to the present. During the first few years after the shutdown of the P&T system, lower aquifer COC concentrations exhibited increases until early 2017, when COC concentrations began to decrease. Concentrations decreased until the last quarter of 2018, and then concentrations stabilized for a few years. Starting in late 2021, COC concentrations began a secondary increase that continued until late 2024/early 2025, and now concentrations appear to be decreasing to the present, with a few exceptions. There also appears to be an inverse relationship between the COC concentrations and their respective groundwater elevations. During the first few years after the shutdown, when COC concentrations were increasing, groundwater elevations were relatively low/slowly decreasing. The decreases in COC concentrations that began in 2017 coincided with significant increases in groundwater elevations for the lower aquifer Shutdown Test wells; the increases in concentrations during 2024 coincided with groundwater elevation decreases, and the current observed concentration decreases are coinciding with significant increases in groundwater elevations.

The vast majority of detectable COC concentrations in the lower aquifer Shutdown Test wells exhibited decreases from May 2024 to April 2025, with the exception of TCA/DCA/DCE for CP-E1, TCA for CP-E2, TCE for CP-E3, DCE for CP-W1, and Methylene chloride for CP-W3. While most Consent Decree criteria exceedances occurred in the extraction wells, which are not criteria-dependent locations/actions during the Shutdown Test are not governed by COC concentrations in these wells, there was a cleanup criteria exceedance in a criteria-dependent monitoring well during this reporting period. Monitoring well CD-49 exhibited DCE concentrations at 5.67 ppb on 1/14/2025, which was above the Shutdown Test Action Level criteria of 4.55 ppb. To confirm the criteria exceedance/contaminant concentrations, County personnel collected additional VOC samples from CD-49 on 2/3/2025, and the laboratory results indicated that DCE concentrations found in CD-49 were 3.65 ppb, below the 4.55 ppb DCE Action Level criteria. No additional criteria exceedances in any of the criteria-dependent wells occurred during this reporting period.

County personnel collected groundwater samples from CD-21C3 during the Supplemental Sampling event in May 2022. The results indicated that the highest concentrations of TCA and DCE in the lower aquifer were found at CD-21C3. County personnel installed a dedicated pump in CD-21C3 in October 2023 to monitor these “source area” concentrations on a quarterly basis to assess COC changes and trends. Monitoring Well CD-21C3 COC concentrations vs. time are presented in Figure 2-20. Individual COC concentration increases/decreases for all Shutdown compliance and extraction wells between May 2024 and April 2025 are presented in Table 2-8. For more information regarding the Shutdown program, see Section 1.3.

Upper Aquifer Compliance Monitoring

COC concentrations in the upper aquifer compliance wells have continued to exhibit stable/decreasing trends following the shutdown of the extraction wells. There were several COC concentration increases and decreases in the upper aquifer compliance monitoring wells during this reporting period. DCA in 1573A-1, DCA/DCE in CD-40C1, PCE in CD-60A1, TCA/DCA/DCE/TCE for CP-S1, and DCA/TCE for CP-S4 all exhibited concentration increases during this reporting period. DCA/DCE in CD-36A1, DCA/TCE in CS-04A1, and DCA/TCE in CP-S6 all exhibited concentration decreases during this reporting period. DCA concentrations in both CD-36A1 and CP-S1 continued to exceed the Regional Screening Level of 2.8 ppb, but no exceedances of the Consent Decree criteria occurred during this reporting period. DCE and DCA concentrations in CD-36A1 exhibited concentration increases that began in April 2022, but the most recent data indicate that concentrations are stabilizing/potentially decreasing. PCE concentrations found in CP-S4 continue to remain below the cleanup criteria.

These COC concentration decreases appear to coincide with groundwater elevation increases. Similar to several monitoring wells found in the lower aquifer, COC concentrations exhibited an initial increase after the shutdown of the extraction system, followed by a decrease/plateau starting in 2016/2017 that has continued to the present. Individual COC concentration increases/decreases for all upper aquifer compliance and extraction wells between May 2024 and April 2025 are presented in Table 3-8. For more information regarding the Upper Aquifer Compliance Monitoring program, see Section 1.4.

Residential Well Monitoring

There are currently 29 residential wells that Spokane County monitors through the Residential Well Monitoring program (excluding the residential wells currently in the Supplemental Sampling program). COC concentrations for residential wells in both the lower and upper aquifers have exhibited decreases prior to the shutdown of the extraction system. After the shutdown of the extraction system, COC concentrations have remained below detection or at very low concentrations for all of the residential wells sampled through the Residential Monitoring Program. The only COC concentrations above the detection limit during this reporting period were low concentrations (0.67 ug/L) of DCA found in residential well 1073L-1. For more information regarding the Residential Well Monitoring program, see Section 1.5.

1,4-Dioxane Monitoring

From 2005 to 2008, Spokane County conducted an evaluation for 1,4-Dioxane prevalence and distribution in both the upper and lower aquifers. After the conclusion of the evaluation, only 5 wells in the upper aquifer were added to the Spokane County 1,4-Dioxane monitoring program for annual sampling. In 2021, Spokane County received grant funding to conduct another evaluation for the prevalence/distribution of 1,4-Dioxane in post-shutdown conditions. The evaluation concluded in 2023, and County personnel added 2 lower aquifer wells to the 1,4-Dioxane monitoring program – extraction wells CP-E2 and CP-W3. While 1,4-Dioxane concentrations for CP-E2 remained low (1.49 ppb), 1,4-Dioxane concentrations for CP-W3 continue to significantly increase. Dioxane concentrations in CP-W3 increased from 44.4 ppb in 4/2/2024 to over 120 ppb on 5/12/2025. In

response to these continuous 1,4-Dioxane concentration increases in CP-W3, County personnel have expanded the 1,4-Dioxane sampling in the lower aquifer to track any potential migration towards downgradient wells. Monitoring wells CD-21C3, CD-42C1, CD-43C1, CD-45C1, CP-W1, CP-W2, CP-E2, and CP-E3 have been added to the quarterly 1,4-Dioxane sampling list to track any changes/migration until 1,4-Dioxane concentrations begin to stabilize/decrease. Furthermore, County personnel have installed a pump system on the Colbert Landfill cover to remove any standing water that accumulates to prevent additional interaction with/distribution of 1,4-Dioxane. 1,4-Dioxane concentrations for the lower aquifer wells are presented in Table 2-9, and 1,4-Dioxane concentrations vs. time graphs are presented in Figure 2-32.

Most detections found in the upper aquifer were low concentrations of 1,4-Dioxane. Dioxane concentrations in CD-36A1 have exceeded the Washington State Model Toxics Control Act (MTCA) criterion of 7 µg/L each year since April 2022, but 1,4-Dioxane concentrations were non-detectable in CD-36A1 during this reporting period. 1,4-Dioxane concentrations ranged from non-detection (1473M-1, 1573A-1, and CD-36A1) to 2.58 ug/l found in CP-S1. No 1,4-Dioxane concentrations in the upper aquifer monitoring wells exceeded the Washington State Model Toxics Control Act (MTCA) criterion of 7 µg/L. For more information regarding the current 1,4-Dioxane monitoring, see Section 1.6.

Colbert Landfill Upper/Lower Aquifer Data Evaluation

As discussed in the Shutdown Test (lower aquifer) and the Upper Aquifer Compliance Monitoring sections, while monitoring wells in both the upper and lower aquifers exhibited increasing trends over the last few years, the most recent groundwater sampling data indicate that the majority of COC concentrations exhibited decreases during this reporting period. The stabilizing/decreasing trends shown in the extraction and compliance monitoring wells appear to coincide with significant groundwater elevation increases. This recent decrease in COC concentrations is also reflected concurrently in the CD-21C3 source-area monitoring well. Monitoring well CD-49 exhibited DCE concentrations at 5.67 ppb on 1/14/2025, which was above the Shutdown Test Action Level criteria of 4.55 ppb. Confirmation sampling at CD-49 showed DCE concentrations at 3.65 ppb, below the 4.55 ppb DCE Action Level criteria. No additional criteria exceedances in any of the criteria-dependent wells occurred during this reporting period.

While 1,4-Dioxane concentrations for CP-E2 remained low (1.49 ppb), 1,4-Dioxane concentrations for CP-W3 continue to significantly increase. Dioxane concentrations in CP-W3 increased from 44.4 ppb in 4/2/2024 to over 120 ppb on 5/12/2025. In response to these continuous 1,4-Dioxane concentration increases in CP-W3, County personnel have expanded the 1,4-Dioxane sampling in the lower aquifer to track any potential migration towards downgradient wells. Monitoring wells CD-21C3, CD-42C1, CD-43C1, CD-45C1, CP-W1, CP-W2, CP-E2, and CP-E3 have been added to the quarterly 1,4-Dioxane sampling list to track any changes/migration until 1,4-Dioxane concentrations begin to stabilize/decrease. Furthermore, County personnel have installed a pump system on the Colbert Landfill cover to remove any standing water that accumulates to prevent additional interaction with/distribution of 1,4-Dioxane.

COC concentrations in the upper aquifer compliance wells have continued to exhibit stable/decreasing trends following the shutdown of the extraction wells. There were several COC concentration increases and decreases during this reporting period. DCA in 1573A-1, DCA/DCE in CD-40C1, PCE in CD-60A1, TCA/DCA/DCE/TCE for CP-S1, and DCA/TCE for CP-S4 all exhibited concentration increases during this reporting period. DCA/DCE in CD-36A1, DCA/TCE in CS-04A1, and DCA/TCE in CP-S6 all exhibited concentration increases during this reporting period. DCA concentrations in both CD-36A1 and CP-S1 continued to exceed the Regional Screening Level of 2.8 ppb, but no exceedances of the Consent Decree criteria occurred during this reporting period. DCE and DCA concentrations in CD-36A1 exhibited concentration increases that began in April 2022, but the most recent data indicate that concentrations are stabilizing/potentially decreasing. PCE concentrations found in CP-S4 continue to remain below the cleanup criteria.

Groundwater velocities in the Lower Aquifer under non-pumping conditions were reported to be on the order of 100 to 200 ft/yr in the 1991 Final Phase I Engineering Report (Landau Associates 1991), and the existing downgradient compliance monitoring wells are about 900 ft west of the western extraction wells. Therefore, it was anticipated that monitoring for the Shutdown Test would need to continue for up to 9 years to determine the impact (if any) the system shutdown has on groundwater quality downgradient from the West System extraction wells. After evaluating the available data for the Colbert Landfill site, the EPA and the Department of Ecology concluded that the estimated 9-year travel time that was used to determine the length of the Shutdown Test may not have accounted for the time it would take for the hydrogeologic system to return to baseline after an extensive, years-long groundwater extraction program, and/or the heterogeneity of the subsurface may have retarded the equilibration of groundwater flow between the landfill and the downgradient wells. To assess whether the system can fully attenuate under natural conditions at concentrations that are protective of human health and the environment, the Shutdown Test should continue as outlined in the approved Work Plan beyond the proposed 9-year extent. The end point of the Shutdown Test and implementation of the associated Work Plan will be determined by Ecology and EPA, in concert with Spokane County, once either the rebound of downgradient concentrations of any COC has triggered action levels for four consecutive quarters, or the remedy has been deemed successful at achieving long-term protectiveness.

1.3 Shutdown Test - Lower Aquifer

A pump and treat system was successfully operated from 1994 through March 31, 2014, to prevent further spread of groundwater contamination emanating from the landfill. A Shutdown Test for the lower aquifer pump and treat system was deemed appropriate for the site after a Remedial System Evaluation (RSE) was performed as recommended in the 2009 Five Year Review (EPA). The RSE recommendation stated that with the extensive groundwater monitoring programs in place and with concentrations having decreased substantially after 20 years of operation, the current pump and treat system may not be adding significant benefit to the overall protectiveness of the remedy and that a Shutdown Test would help determine its efficacy. The Shutdown Test procedures are outlined in the Final Work Plan, Groundwater Pump and Treat System Shutdown Test, Colbert Landfill CERCLA Site, Spokane County Utilities/ Landau Assoc. 2013. See Section 2 of this report for more details. The upper aquifer monitoring wells are governed by the Consent Decree (CD) compliance, Post Closure (Minimal Functional Standards), and 1,4-dioxane sampling programs and are not included in the Shutdown test work plan. Shutdown Testing results and information are presented in Section 2.0.

1.4 Upper Aquifer Monitoring

1.4.1 Compliance Monitoring (VOC's)

The compliance monitoring sampling program is outlined in the Consent Decree and performed according to the Colbert Landfill Operations and Maintenance manual *(Colbert Landfill Operations and Maintenance Manual, 1998*.). During the implementation of the lower aquifer system Shutdown Test, the compliance monitoring will only apply to the upper aquifer. Per conditions outlined in the consent decree (Appendix B, page V-7), the south system extraction wells are not required to be in operation and have been on stand-by status since 2004, and therefore are included in the compliance monitoring program. Compliance monitoring results and information are presented in Section 3.2.

1.4.2 1,4-Dioxane Sampling

In previous years, the 1,4-Dioxane monitoring program only applied to select wells in the upper aquifer. The selected upper aquifer well locations were sampled for 1,4-dioxane according to the *1,4-Dioxane Work Plan for the Colbert Landfill (December 2007)*. Spokane County conducted a 1,4-Dioxane evaluation in the upper and lower aquifers that began in 2021 and ended in 2023. See section 1.6 for additional 1,4-Dioxane monitoring requirements/information.

1.4.3 Minimal Functional Standards (MFS) Post Closure

The landfill was closed pursuant to requirements of the Minimal Functional Standards for Solid Waste Handling (MFS, WAC173-304). Lower aquifer locations, as outlined in the MFS Groundwater Monitoring Plan (Landau Assoc., 1996), require no additional monitoring after the 2 year monitoring period, which ended in January 1999. Monitoring for the upper aquifer will continue according to the *Colbert Landfill Operations and Maintenance Manual, 1998*., and the *MFS Groundwater Monitoring Plan, 1996*. MFS analytical results and information are presented in Section 3.4.

1.5 Residential Well Monitoring

The Consent Decree specified that domestic wells within the vicinity of the landfill be monitored to protect human health. Domestic well locations and schedules for this program were selected by proximity to landfill contamination and are evaluated on a regular basis to accommodate any changes in groundwater contamination. This program includes well locations in both the upper and lower aquifers. Sampling for this program is done in accordance with the Quality Assurance and *Field Sampling Plan-Colbert Residential Well Sampling, 1991*, and is governed by the Consent Decree. Residential program analytical results and information are presented in Section 4.0.

1.6 1,4-Dioxane Sampling

In 2005, the EPA specified an additional constituent, 1,4-Dioxane, for evaluation at the Colbert Landfill site. After extensive monitoring in both the upper and lower aquifers, it was determined that an ongoing monitoring program would apply to selected wells in the upper aquifer only. During the 2019 EPA Five-Year Site Review, the EPA recommended that, "*Sampling for 1,4-Dioxane should be performed across a broader network of monitoring wells, including residential wells for at least two sampling events*" to evaluate the presence and extent of 1,4-Dioxane in post-shutdown conditions. The monitoring wells that are sampled annually for 1,4-Dioxane were selected prior to the P&T system shutdown based on sampling events conducted from 2005 - 2008, and groundwater flow conditions/contaminant transport may have changed. Spokane County conducted a 1,4-Dioxane evaluation in the upper and lower aquifers that began in 2021 and ended in 2023. 1,4-Dioxane analytical results for the lower aquifer are presented in Table 2-9, and the 1,4-Dioxane analytical results for the upper aquifer are presented in Table 3-7.

1.7 Supplemental Sampling

Supplemental sampling occurs every five years and is intended to collect additional data from monitoring and residential wells not regularly sampled. Although there are no criteria for monitoring or reporting associated with supplemental sampling, data collected helps provide a more accurate representation of groundwater flow and contamination throughout the area. The next Supplemental sampling will occur in April and May 2027.

1.8 Landfill Operations and Maintenance

In 1997, the landfill closure construction (cover system and components) was completed as part of the MFS requirements. The landfill gas collection and treatment system are monitored and maintained on a regular basis as outlined in the *Operations and Maintenance Manual for Colbert Landfill Closure, CH2MHill, May 1997*. Landfill operations and maintenance information is presented in Section 6.0.

2.0 Shutdown Test

A Shutdown test of the Colbert Landfill Groundwater Pump and Treat facility was initiated on April 1, 2014, when all lower aquifer extraction wells were turned off and placed in standby mode. The Shutdown Test was deemed appropriate for the site after a Remedial System Evaluation (RSE) was performed as recommended in the 2009 Five-Year Review (EPA). The Shutdown Test is performed according to the *Final Work Plan, Groundwater Pump and Treat System Shutdown Test, Colbert Landfill CERCLA Site, Spokane County Utilities/ Landau Assoc. 2013*.

2.1 Shutdown Testing Locations and Schedule

The lower aquifer wells selected as monitoring locations for the Colbert Landfill pump and treat system Shutdown Test include: the compliance monitoring well clusters (CD-41, CD-42, CD-43, CD-44, CD-45, and CD-48), monitoring well CD-49, and the lower aquifer extraction wells (CP-E1, CP-E2, CP-E3, CP-W1, CP-W2, and CP-W3). Locations are presented in Figure 2-1. Collection of groundwater samples (contaminant sampling) from the Shutdown locations, along with the collection of water level measurements, was performed as outlined in Table 2-1.

2.2 Shutdown Test Monitoring

The lower aquifer extraction wells, the compliance monitoring well clusters (CD-41, CD-42, CD-43, CD-44, CD-45, and CD-48), and monitoring well CD-49 were sampled according to the *Colbert Landfill Operations and Maintenance Manual, 1998.* Field parameters were taken, and VOC samples were collected.

2.2.1 Groundwater Elevations

Groundwater elevations for the reporting period are shown in Table 2 2 and Figure 2 2. Estimated groundwater contours and flow are shown in Figure 2 4 and Figure 2-5. Measurements were consistent and followed typical seasonal variation with levels slightly higher in the spring and slightly lower during the fall. Extraction well hydrographs show the increase in groundwater levels in the immediate vicinity of those wells in April 2014 when the system was shut down. Groundwater elevations in the lower aquifer appear to be on a current increasing trend since late 2024, which followed a decreasing trend after the observed increase after the extraction wells were shut down.

2.2.2 Field Parameters

Field parameters taken at the Shutdown test locations are shown in Table 2-2. The highest conductivities were mostly seen in the east system extraction wells. Conductivity values in monitoring wells ranged from 344 to 1162 umhos/cm. Measurements of pH ranged from 6.86 to 8.01. The highest conductivity/lowest pH values are generally found in the east system extraction wells.

2.2.3 Constituents of Concern (COC's)

Constituent of concern concentrations for Shutdown Test locations are presented in Table 2-4 and Table 2-5. COC Concentrations versus time graphs for Shutdown locations are presented in Figure 2-6 through Figure 2-16. Estimated COC plume boundaries and COC detections in the lower aquifer are presented in Figure 2-21 through Figure 2-31. All detected concentrations found in the

Shutdown Test compliance wells remained below any applicable criteria. Colbert Landfill COC Criteria are shown in Table 2-3.

Constituent of concern concentrations for Shutdown Test locations are presented in Table 2-4 and Table 2-5. COC Concentrations versus time graphs for Shutdown locations are presented in Figure 2-6 through Figure 2-20. Estimated COC plume boundaries and COC detections in the lower aquifer are presented in Figure 2-21 through Figure 2-31. All detected concentrations found in the Shutdown Test compliance wells remained below any applicable criteria. Colbert Landfill COC Criteria are shown in Table 2-3. The COCs found in the Shutdown program criteria-dependent (SD compliance) wells were concentrations of TCA and DCE. No concentrations of DCA, PCE, TCE, or MC were detected in the criteria-dependent wells during this reporting period.

Analytical results from the Shutdown program criteria-dependent wells are shown in Table 2-4. Time versus concentration plots are presented in Figure 2-6 through Figure 2-12. Lower aquifer extraction wells are not criteria-dependent locations, and therefore actions during the Shutdown Test are not governed by COC concentrations in these wells. Analytical results from the extraction wells are shown in Table 2-5. Time versus concentration plots are found in Figure 2-13 through

All COC constituent concentrations found in the lower aquifer extraction wells exhibited decreases in concentrations between May 2024 and April 2025, with the exception of TCA/DCA/DCE for CP-E1, TCA for CP-E2, TCE for CP-E3, DCE for CP-W1, and Methylene chloride for CP-W3. Lower aquifer extraction well criteria exceedances are summarized below (consent decree criteria only):

- CP-E1 exceeded the criteria for DCE, PCE, and TCE.
- CP-E2 exceeded the criteria for DCE, PCE, and TCE.
- CP-E3 exceeded the criteria for DCE.
- CP-W2 exceeded the criteria for DCE.
- CP-W3 exceeded the criteria for DCE, TCE, and 1,4-Dioxane.

A comparison summarizing the differences in COC concentrations observed in the Shutdown/Extraction wells between 2020, 2024, and 2025 is presented in Table 3-8.

2.3 Data Evaluation

Conclusions from the Colbert Landfill Phase I Engineering Report found that the wells screened within the basalt aquifer (CP-E2 and CD-04E1) are directly (although incompletely) hydrologically connected to the lower sand/gravel aquifer, along with the monitoring and residential wells screened within it. This hydraulic connection potentially provides a hydrogeologic pathway connecting some of the wells with the highest COC concentrations (CD-21C3, CP-E2, and CD-04E1) to the downgradient wells screened in the lower aquifer (CP-W3 and CD-49).

Data indicate that, although there were increasing trends of COC concentrations following the decrease of concentrations (after the rebound/back diffusion “peak”) post-shutdown, most COC

concentrations are currently exhibiting stabilizing/decreasing trends that are occurring concurrently with groundwater elevation increases.

2.4 Program Changes or Modifications

Criteria Exceedances in the lower aquifer are presented in Table 2-6 (Consent Decree criteria) and Table 2-7 (updated criteria values from the Colbert Landfill 6th Five-year Review, which includes an increase for Trichloroethene [PCE] from the performance standard in the ROD [0.7 µg/L] to the current MCL [5µg/L], and a decrease for 1,1-Dichloroethane [1,1-DCA] to the regional screening level [RSL] of 2.8 µg/L). DCE concentrations found in CD-49 exceeded the Action Level criteria on 1/14/2025 at 5.67 ppb, but after collecting additional VOC samples to confirm concentrations, DCE concentrations in CD-49 remained below the Action Level criteria. Additional criteria exceedances during this reporting period occurred in the extraction wells, but these wells are not criteria-dependent.

Sampling at the lower aquifer compliance monitoring wells will continue on an annual basis until a different sampling interval/remedial program is implemented. The exceptions to this are monitoring wells CD-49, CD-43C1, and CD-21C3. Quarterly sampling will continue at these wells to monitor the COC concentration trends for TCA and DCE. Quarterly sampling will continue at the extraction wells, as running the wells periodically will assist with preventive maintenance and provide indicators for any possible changes in COC concentrations near the landfill boundaries.

2.5 Cost Savings

Typical electrical costs associated with operating the pump-and-treat system for the lower aquifer continually for one year were approximately $59,000. From May 2024 through April 2025, the cost of electricity at the treatment facility was $20,061. Costs incurred during this reporting period continued to remain higher than typical annual sampling years due to the increased number of wells sampled, additional groundwater samples analyzed at the laboratories, increased labor costs associated with additional sampling/sampling events, and price increases at both laboratories. This includes the increased labor and laboratory expenses associated with the additional 1,4-Dioxane monitoring to assess current trends/track potential migration. Spokane County saved an estimated $942.

Typical Annual Electrical Costs		**$60,000**
Electrical Costs for the Shut-down Test		($20,061)
Additional Lab Cost Associated with Shut-down Test		($36,946)
Estimated labor costs for additional sample rounds		($2,051)
Estimated Total Cost Savings		$942

Figure 2-1 Shutdown Test Locations

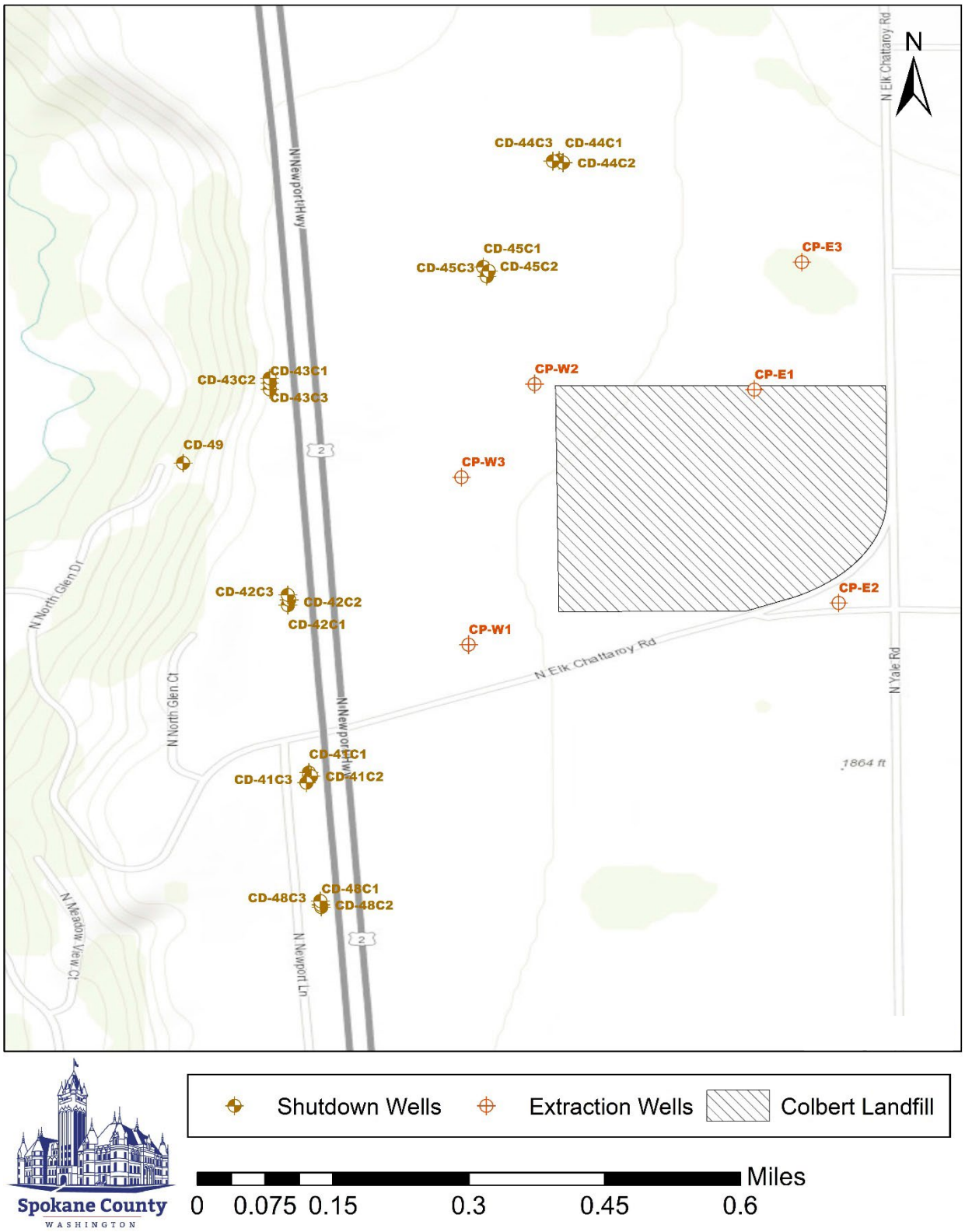
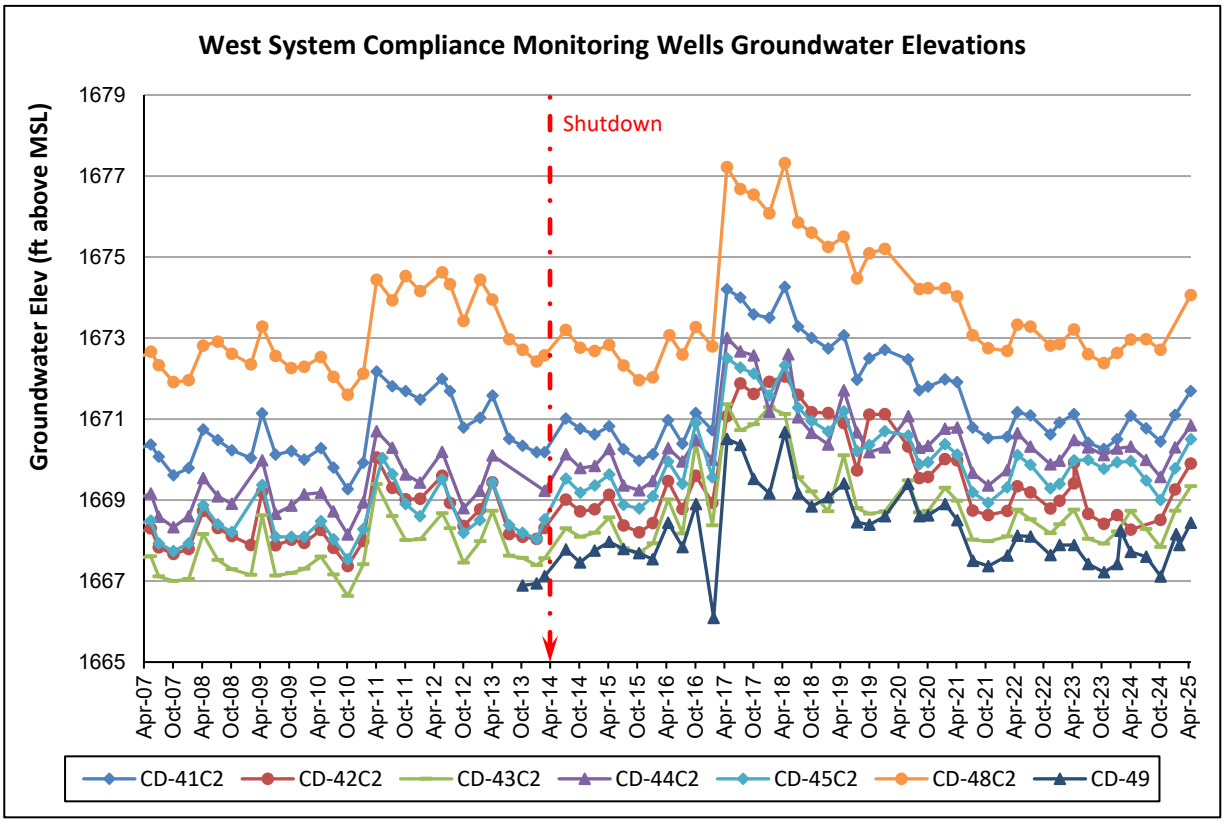


Table 2-1 Colbert Landfill Shutdown Test Sampling Schedule (May 2024 - June 2025)

System	Well ID	Monitoring Frequency		Shutdown Criteria Applies?
		Water Levels	Sampling	
West	CD-41C1	Quarterly	Annual	Yes
	CD-41C2	Quarterly	Annual	
	CD-41C3	Quarterly	Annual	
	CD-42C1	Quarterly	Annual	Yes
	CD-42C2	Quarterly	Annual	
	CD-42C3	Quarterly	Annual	
	CD-43C1	Quarterly	Quarterly	Yes
	CD-43C2	Quarterly	Annual	
	CD-43C3	Quarterly	Annual	
	CD-44C1	Quarterly	Annual	Yes
	CD-44C2	Quarterly	Annual	
	CD-44C3	Quarterly	Annual	
	CD-45C1	Quarterly	Annual	Yes
	CD-45C2	Quarterly	Annual	
	CD-45C3	Quarterly	Annual	
	CD-48C1	Quarterly	Annual	Yes
	CD-48C2	Quarterly	Annual	
	CD-48C3	Quarterly	Annual	
	CD-49	Quarterly	Quarterly	Yes
	CP-W1	Quarterly	Quarterly	No
	CP-W2	Quarterly	Quarterly	
	CP-W3	Quarterly	Quarterly	
East	CP-E1	Quarterly	Quarterly	No
	CP-E2	Quarterly	Quarterly	
	CP-E3	Quarterly	Quarterly	

Changes to the program are highlighted in **RED**

Figure 2-2 Lower Aquifer Groundwater Elevations



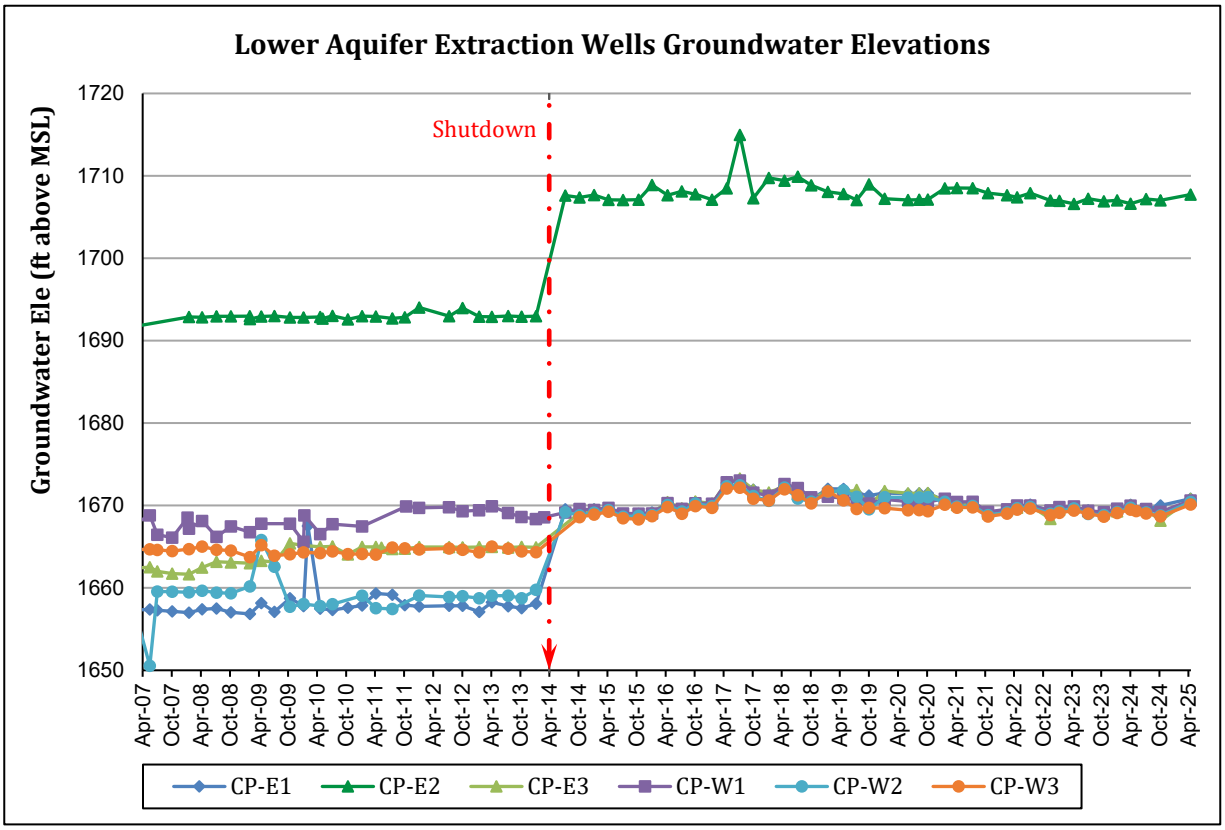
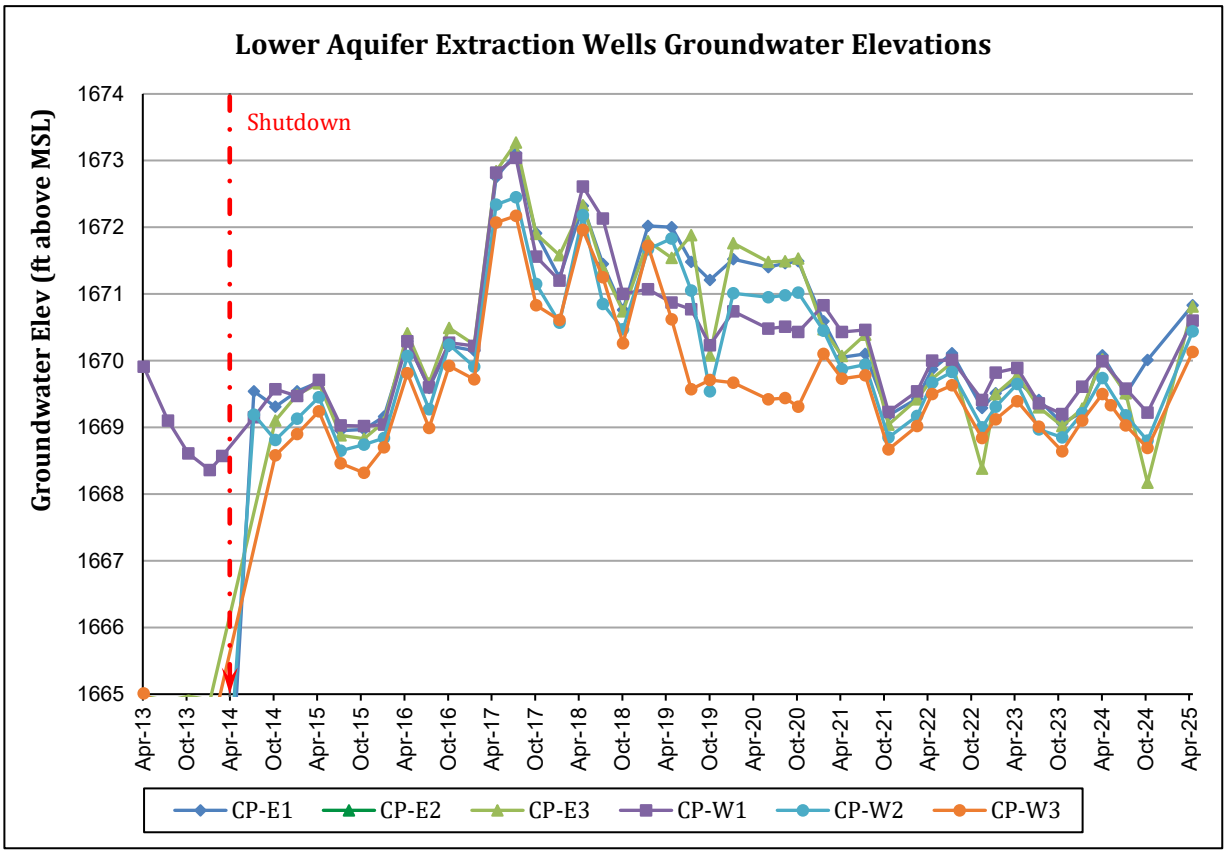


Figure 2-3 Lower Aquifer Groundwater Elevations (cont.)



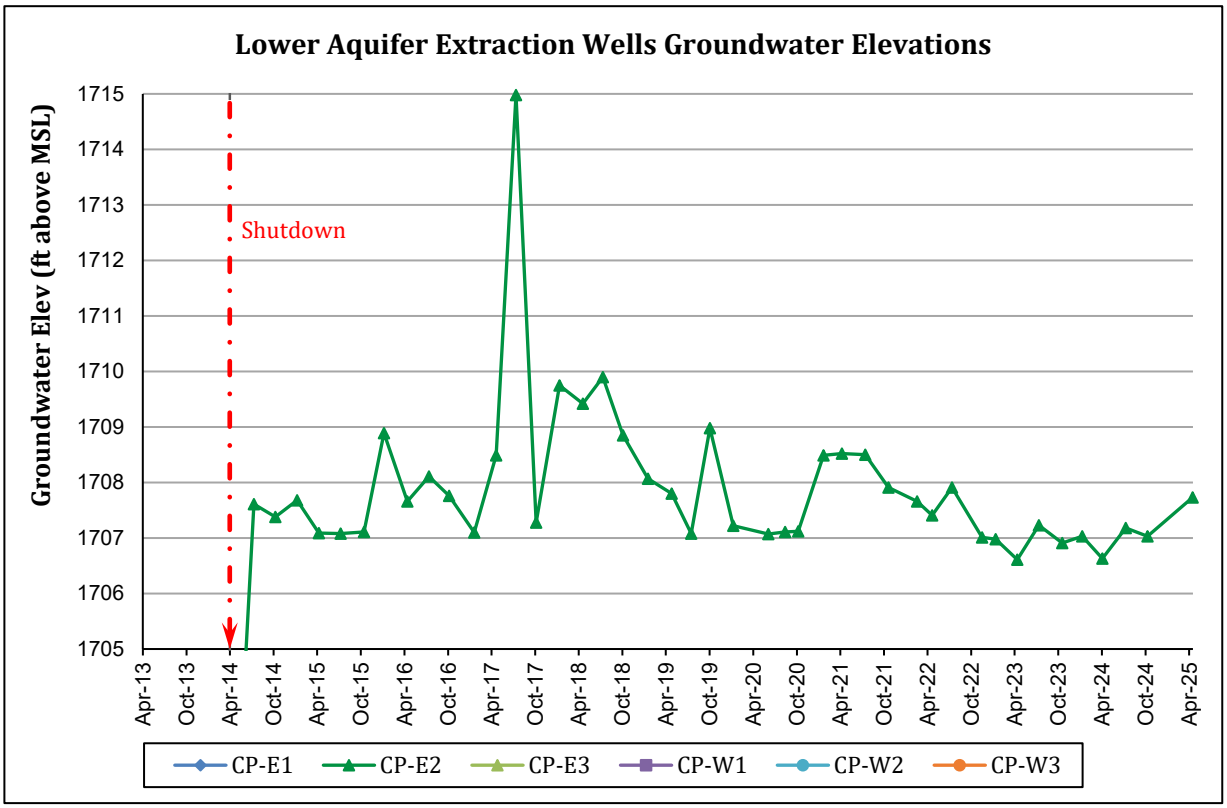


Figure 2-4 Lower Aquifer Groundwater Contours

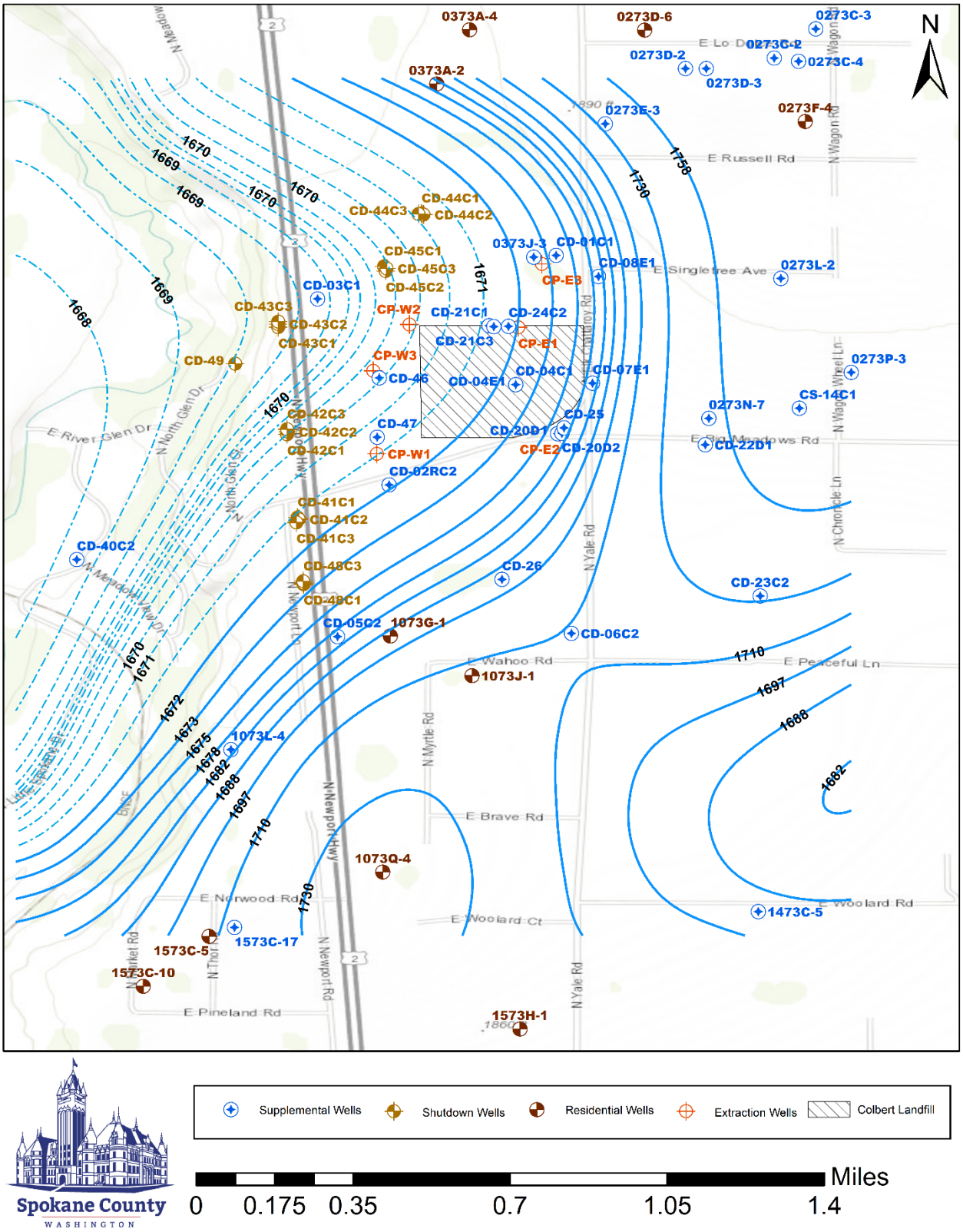


Figure 2-5 Lower Aquifer Groundwater Elevation Map

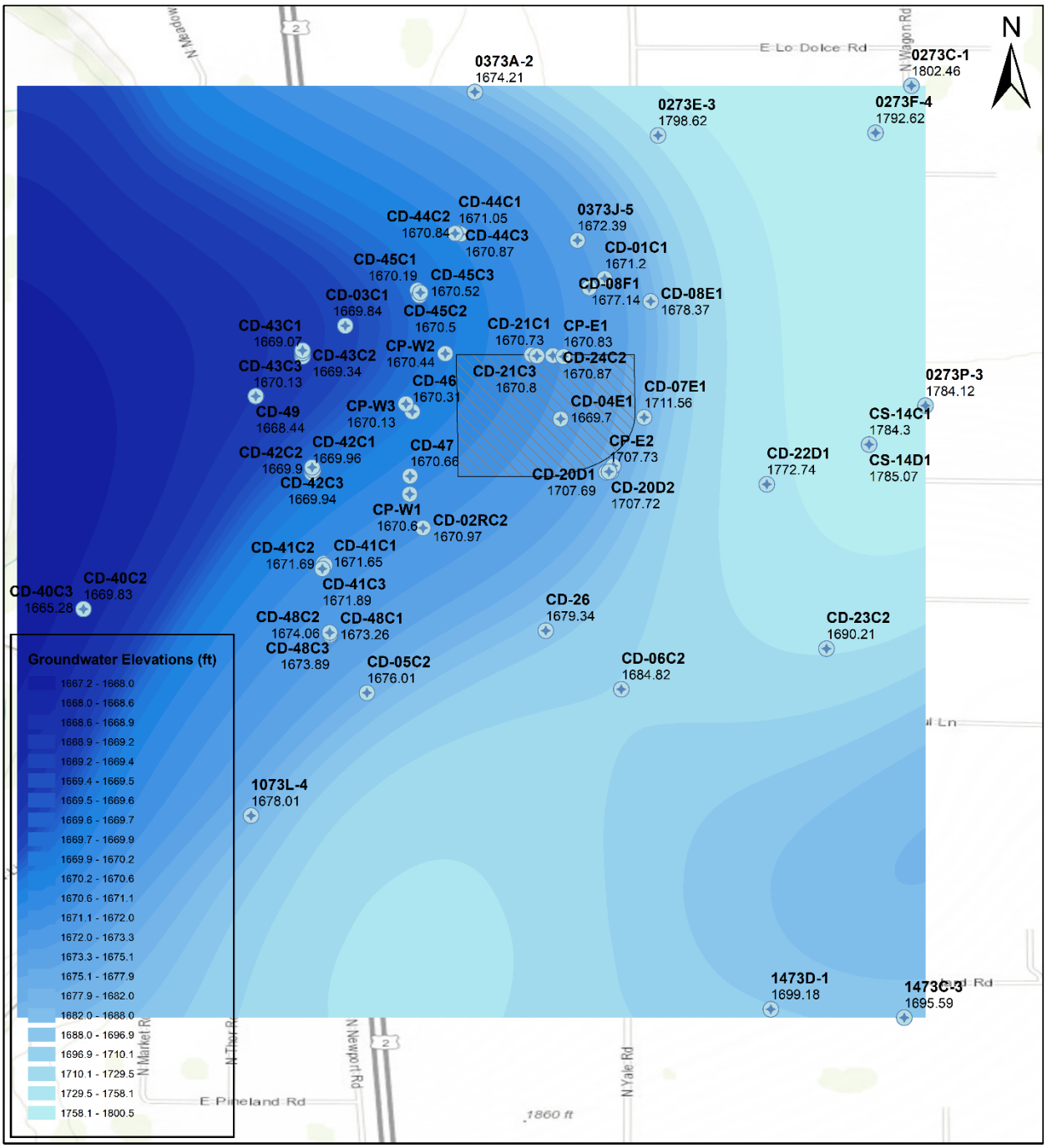


Table 2-2 Shutdown Test Location Field Parameters

StationID	SampleDate	WtrElev	Temp	PH	Conductivity	Turbidity	Aquifer	Program
CD-41C1	4/15/2025	1671.65	11.3	7.91	453	0.08	lower	SD
CD-41C2	4/15/2025	1671.69	11.7	7.97	462	0.08	lower	SD
CD-41C3	4/15/2025	1671.89	12	7.85	511	0.09	lower	SD
CD-42C1	10/8/2024	1668.58	12.1	7.8	499	1.04	lower	SD
CD-42C1	1/7/2025	1669.44	12	7.85	498	1.02	lower	SD
CD-42C1	4/15/2025	1669.96	12.5	7.83	528	0.03	lower	SD
CD-42C2	4/15/2025	1669.9	12.2	7.85	523	0.03	lower	SD
CD-42C3	4/15/2025	1669.94	12.5	7.92	440	0.68	lower	SD
CD-43C1	7/9/2024	1667.95	11.2	7.92	445	0.05	lower	SD
CD-43C1	10/9/2024	1667.52	10.7	7.79	468	1.35	lower	SD
CD-43C1	1/7/2025	1668.42	10.6	7.78	466	1.02	lower	SD
CD-43C1	4/15/2025	1669.07	11.2	7.92	500	0.05	lower	SD
CD-43C2	4/15/2025	1669.34	11.3	8.01	423	0.02	lower	SD
CD-43C3	4/15/2025	1670.13	12.1	7.9	344	2.85	lower	SD
CD-44C1	4/16/2025	1671.05	14.9	7.69	446	0.6	lower	SD
CD-44C2	4/16/2025	1670.84	12.3	7.57	441	0.01	lower	SD
CD-44C3	4/16/2025	1670.87	12.9	7.57	431	0.26	lower	SD
CD-45C1	10/8/2024	1669	10.8	7.65	513	0.97	lower	SD
CD-45C1	1/7/2025	1669.74	10.2	7.76	507	1.12	lower	SD
CD-45C1	4/16/2025	1670.19	10.9	7.55	491	0.02	lower	SD
CD-45C2	4/16/2025	1670.5	11	7.46	448	0.03	lower	SD
CD-45C3	4/16/2025	1670.52	11.1	7.91	351	0.03	lower	SD
CD-48C1	4/15/2025	1673.26	11.5	7.71	539	0.02	lower	SD
CD-48C2	4/15/2025	1674.06	11.4	7.79	474	1.09	lower	SD
CD-48C3	4/15/2025	1673.89	11.8	7.75	504	0.03	lower	SD
CD-49	7/9/2024	1667.6	14.1	7.88	489	0.05	lower	SD
CD-49	10/8/2024	1667.11	13.8	7.77	514	0.27	lower	SD
CD-49	1/14/2025	1668.16	12.6	7.8	512	1	lower	SD
CD-49	2/3/2025	1667.89	12.5	7.88	505	0.38	lower	SD
CD-49	4/16/2025	1668.44	12.7	7.79	496	0.01	lower	SD
CP-E1	7/9/2024	1669.5	14	6.86	970	0.73	lower	SD
CP-E1	10/8/2024	1670.01	12.9	6.87	1081	1.17	lower	SD
CP-E1	1/7/2025		12.5	6.87	1057	0.76	lower	SD
CP-E1	4/15/2025	1670.83	12.8	6.98	1014	1.13	lower	SD
CP-E2	7/9/2024	1707.18	14	7.02	1034	0.39	lower	SD
CP-E2	10/8/2024	1707.03	13.4	7.02	1148	0.79	lower	SD
CP-E2	1/7/2025		12.7	7.02	1162	0.4	lower	SD
CP-E2	4/15/2025	1707.73	13.3	7.03	1160	0.7	lower	SD
CP-E3	7/9/2024	1669.51	12.3	7.11	850	0.53	lower	SD
CP-E3	10/8/2024	1668.17	11.8	7.03	917	2.12	lower	SD
CP-E3	1/7/2025		11.7	7.01	926	2.4	lower	SD
CP-E3	4/15/2025	1670.81	11.8	7.08	902	1.47	lower	SD
CP-W1	7/9/2024	1669.58	11.7	7.87	461	0.046	lower	SD
CP-W1	10/8/2024	1669.22	11.5	7.8	493	0.59	lower	SD
CP-W1	1/7/2025		11.1	7.79	485	0.54	lower	SD
CP-W1	4/15/2025	1670.6	11.6	7.91	477	0.44	lower	SD
CP-W2	7/9/2024	1669.18	12	7.52	514	0.47	lower	SD
CP-W2	10/8/2024	1668.8	10.8	7.54	540	1.31	lower	SD
CP-W2	1/7/2025		10.3	7.65	526	1.13	lower	SD
CP-W2	4/15/2025	1670.44	10.8	7.69	518	0.81	lower	SD
CP-W3	7/9/2024	1669.03	12.9	7.22	776	0.43	lower	SD
CP-W3	10/8/2024	1668.69	11.7	7.19	866	0.89	lower	SD
CP-W3	1/7/2025		11.4	7.25	880	0.55	lower	SD
CP-W3	4/15/2025	1670.13	11.8	7.33	892	0.89	lower	SD

Temp=degrees C; Conductivity=umhos/cm; Turbidity= NTU

Table 2-3 Colbert Landfill Shutdown Test Criteria

Groundwater monitoring associated with the P&T system currently includes water level measurements and groundwater quality monitoring at extraction and compliance monitoring wells in accordance with the Quality Assurance Project Plan (QAPP; Landau Associates 1992b) to meet the criteria established in the Consent Decree. The purpose of this monitoring is to evaluate the performance of the P&T system in preventing the spread of contaminated groundwater downgradient from the capture zone for the West System. Compliance monitoring wells are currently sampled on an annual basis and the extraction wells are sampled on a quarterly basis. The consent decree evaluation criteria and action-level criteria for the Shutdown test are presented below:

SHUTDOWN TEST CRITERIA		
COC	**ACTION LEVEL CRITERIA (ug/L)**	**CONSENT DECREE EVALUATION CRITERIA (ug/L)**
TCA	**130**	**200**
DCA	**2632**	**4050**
DCE	**4.55**	**7**
MC	**1.6**	**2.5**
PCE	**0.5**	**0.7**
TCE	**3.25**	**5**

Table 2-4 Shutdown Test Compliance Well Analytical Results (reported in ug/L)

StationID	SampleDate	DCA	DCE	MC	PCE	TCA	TCE
CD-41C1	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-41C2	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-41C3	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-42C1	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-42C2	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-42C3	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-43C1	7/9/2024	<0.5	<0.5	<0.5	<0.5	**1.1**	<0.5
CD-43C1	10/9/2024	<0.5	<0.5	<0.5	<0.5	**1.58**	<0.5
CD-43C1	1/7/2025	<0.5	<0.5	<0.5	<0.5	**1.36**	<0.5
CD-43C1	4/15/2025	<0.5	<0.5	<0.5	<0.5	**0.67**	<0.5
CD-43C2	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-43C3	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-44C1	4/16/2025	<0.5	<0.5	<0.5	<0.5	**0.68**	<0.5
CD-44C2	4/16/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-44C3	4/16/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-45C1	4/16/2025	<0.5	<0.5	<0.5	<0.5	**1.18**	<0.5
CD-45C2	4/16/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-45C3	4/16/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-48C1	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-48C2	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-48C3	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CD-49	7/9/2024	<0.5	**4.22**	<0.5	<0.5	**4.46**	<0.5
CD-49	10/8/2024	<0.5	**3.79**	<0.5	<0.5	**5.85**	<0.5
CD-49	1/14/2025	**0.53**	**5.67**	<0.5	<0.5	**7.34**	<0.5
CD-49	4/16/2025	<0.5	**3.57**	<0.5	<0.5	**4.17**	<0.5

***Bold** indicates a value greater than non-detection.

Table 2-5 Lower Aquifer Extraction Well Analytical Results (reported in ug/L)

StationID	SampleDate	DCA	DCE	MC	PCE	TCA	TCE
CP-E1	7/9/2024	**8.55**	**19.7**	<0.5	**2.59**	**4.19**	**8.82**
CP-E1	10/8/2024	**9.95**	**24.2**	<0.5	**2.65**	**5.76**	**9.76**
CP-E1	1/7/2025	**13.2**	**31.2**	<0.5	**2.98**	**6.69**	**11.7**
CP-E1	4/15/2025	**8.05**	**20.5**	<0.5	**2.19**	**3.83**	**7.8**
CP-E2	7/9/2024	**26**	**107**	<0.5	**0.72**	**31.6**	**95.4**
CP-E2	10/8/2024	**33.8**	**130**	<0.5	**0.82**	**31.6**	**124**
CP-E2	1/7/2025	**45.1**	**169**	<0.5	**0.86**	**39.9**	**148**
CP-E2	4/15/2025	**30.2**	**115**	<0.5	**0.68**	**26.4**	**93.5**
CP-E3	7/9/2024	**1.93**	**13.6**	<0.5	<0.5	**5.3**	**1.9**
CP-E3	10/8/2024	**2.14**	**13.6**	<0.5	<0.5	**6.89**	**1.86**
CP-E3	1/7/2025	**2.4**	**15.6**	<0.5	<0.5	**6.91**	**1.93**
CP-E3	4/15/2025	**1.69**	**10.9**	<0.5	<0.5	**3.79**	**2.06**
CP-S1	7/9/2024	**0.91**	<0.5	<0.5	<0.5	<0.5	**1.02**
CP-S1	10/8/2024	**1.24**	<0.5	<0.5	<0.5	**0.65**	**1.33**
CP-S1	1/7/2025	**3.35**	**1.79**	<0.5	<0.5	**1.54**	**2.67**
CP-S1	4/15/2025	**1**	**0.82**	<0.5	<0.5	**0.52**	**1.12**
CP-S4	7/9/2024	**0.58**	<0.5	<0.5	**0.52**	<0.5	**1.79**
CP-S4	10/8/2024	**0.9**	<0.5	<0.5	**0.57**	<0.5	**1.93**
CP-S4	1/7/2025	**1.19**	<0.5	<0.5	**0.61**	**0.52**	**2.36**
CP-S4	4/15/2025	**0.73**	<0.5	<0.5	<0.5	<0.5	**1.62**
CP-S5	7/9/2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CP-S5	10/8/2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CP-S5	1/7/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CP-S5	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CP-S6	7/9/2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CP-S6	10/8/2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CP-S6	1/7/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CP-S6	4/15/2025	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CP-W1	7/9/2024	<0.5	**3.52**	<0.5	<0.5	**1.55**	<0.5
CP-W1	10/8/2024	<0.5	**3.32**	<0.5	<0.5	**1.95**	<0.5
CP-W1	1/7/2025	<0.5	**3.59**	<0.5	<0.5	**1.9**	<0.5
CP-W1	4/15/2025	<0.5	**3.02**	<0.5	<0.5	**1.13**	<0.5
CP-W2	7/9/2024	**0.89**	**7.46**	<0.5	<0.5	**9.76**	<0.5
CP-W2	10/8/2024	**0.87**	**7.65**	<0.5	<0.5	**10.5**	<0.5
CP-W2	1/7/2025	**0.93**	**8.15**	<0.5	<0.5	**9.65**	<0.5
CP-W2	4/15/2025	**0.5**	**5.95**	<0.5	<0.5	**5.13**	<0.5
CP-W3	7/9/2024	**46.4**	**60.9**	**0.74**	<0.5	**29.5**	**44.4**
CP-W3	10/8/2024	**53.9**	**64.5**	<0.5	<0.5	**30**	**45.4**
CP-W3	1/7/2025	**71.1**	**81.1**	**1.17**	<0.5	**33.9**	**49.2**
CP-W3	4/15/2025	**43.9**	**58.4**	**0.99**	<0.5	**22.6**	**30.5**

***Bold** indicates a value greater than non-detection.

Table 2-6 Shutdown Program Criteria Exceedances (Consent Decree criteria)

StationID	SampleDate	Aquifer	Program	Analyte	Result	Units	Flag
CP-E1	7/9/2024	lower	SD	1,1-Dichloroethene	19.7	ug/L	Exceedance
CP-E1	10/8/2024	lower	SD	1,1-Dichloroethene	23	ug/L	Exceedance
CP-E1	1/7/2025	lower	SD	1,1-Dichloroethene	31.2	ug/L	Exceedance
CP-E1	4/15/2025	lower	SD	1,1-Dichloroethene	20.5	ug/L	Exceedance
CP-E1	7/9/2024	lower	SD	Tetrachloroethene	2.59	ug/L	Exceedance
CP-E1	10/8/2024	lower	SD	Tetrachloroethene	2.65	ug/L	Exceedance
CP-E1	1/7/2025	lower	SD	Tetrachloroethene	2.98	ug/L	Exceedance
CP-E1	4/15/2025	lower	SD	Tetrachloroethene	2.19	ug/L	Exceedance
CP-E1	7/9/2024	lower	SD	Trichloroethene	8.82	ug/L	Exceedance
CP-E1	10/8/2024	lower	SD	Trichloroethene	9.76	ug/L	Exceedance
CP-E1	1/7/2025	lower	SD	Trichloroethene	11.7	ug/L	Exceedance
CP-E1	4/15/2025	lower	SD	Trichloroethene	7.8	ug/L	Exceedance
CP-E2	7/9/2024	lower	SD	1,1-Dichloroethene	107	ug/L	Exceedance
CP-E2	10/8/2024	lower	SD	1,1-Dichloroethene	130	ug/L	Exceedance
CP-E2	1/7/2025	lower	SD	1,1-Dichloroethene	169	ug/L	Exceedance
CP-E2	4/15/2025	lower	SD	1,1-Dichloroethene	115	ug/L	Exceedance
CP-E2	7/9/2024	lower	SD	Tetrachloroethene	0.72	ug/L	Exceedance
CP-E2	10/8/2024	lower	SD	Tetrachloroethene	0.82	ug/L	Exceedance
CP-E2	1/7/2025	lower	SD	Tetrachloroethene	0.86	ug/L	Exceedance
CP-E2	7/9/2024	lower	SD	Trichloroethene	95.4	ug/L	Exceedance
CP-E2	10/8/2024	lower	SD	Trichloroethene	124	ug/L	Exceedance
CP-E2	1/7/2025	lower	SD	Trichloroethene	148	ug/L	Exceedance
CP-E2	4/15/2025	lower	SD	Trichloroethene	93.5	ug/L	Exceedance
CP-E3	7/9/2024	lower	SD	1,1-Dichloroethene	13.6	ug/L	Exceedance
CP-E3	10/8/2024	lower	SD	1,1-Dichloroethene	13.6	ug/L	Exceedance
CP-E3	1/7/2025	lower	SD	1,1-Dichloroethene	15.6	ug/L	Exceedance
CP-E3	4/15/2025	lower	SD	1,1-Dichloroethene	10.9	ug/L	Exceedance
CP-W2	7/9/2024	lower	SD	1,1-Dichloroethene	7.46	ug/L	Exceedance
CP-W2	10/8/2024	lower	SD	1,1-Dichloroethene	7.65	ug/L	Exceedance
CP-W2	1/7/2025	lower	SD	1,1-Dichloroethene	7.71	ug/L	Exceedance
CP-W3	7/9/2024	lower	SD	1,1-Dichloroethene	60.9	ug/L	Exceedance
CP-W3	10/8/2024	lower	SD	1,1-Dichloroethene	64.5	ug/L	Exceedance
CP-W3	1/7/2025	lower	SD	1,1-Dichloroethene	81.1	ug/L	Exceedance
CP-W3	4/15/2025	lower	SD	1,1-Dichloroethene	58.4	ug/L	Exceedance
CP-W3	10/8/2024	lower	SD	1,4-Dioxane	99.3	ug/L	Exceedance
CP-W3	1/7/2025	lower	SD	1,4-Dioxane	106	ug/L	Exceedance
CP-W3	5/12/2025	lower	SD	1,4-Dioxane	120	ug/L	Exceedance
CP-W3	7/9/2024	lower	SD	Trichloroethene	44.4	ug/L	Exceedance
CP-W3	10/8/2024	lower	SD	Trichloroethene	45.4	ug/L	Exceedance
CP-W3	1/7/2025	lower	SD	Trichloroethene	49.2	ug/L	Exceedance
CP-W3	4/15/2025	lower	SD	Trichloroethene	30.5	ug/L	Exceedance

Table 2-7 Shutdown Program Criteria Exceedances (*Updated criteria values)

*Increase for Trichloroethene (PCE) from the performance standard in the ROD (0.7 µg/L) to the current MCL (5 µg/L), and a decrease for 1,1-Dichloroethane (1,1-DCA) to the regional screening level (RSL) of 2.8 µg/L.

StationID	SampleDate	Aquifer	Program	Analyte	Result	Units	Flag
CP-E1	7/9/2024	lower	SD	1,1-Dichloroethane	8.55	ug/L	Exceedance
CP-E1	10/8/2024	lower	SD	1,1-Dichloroethane	9.95	ug/L	Exceedance
CP-E1	1/7/2025	lower	SD	1,1-Dichloroethane	13.2	ug/L	Exceedance
CP-E1	4/15/2025	lower	SD	1,1-Dichloroethane	8.05	ug/L	Exceedance
CP-E1	7/9/2024	lower	SD	1,1-Dichloroethene	19.7	ug/L	Exceedance
CP-E1	10/8/2024	lower	SD	1,1-Dichloroethene	23	ug/L	Exceedance
CP-E1	1/7/2025	lower	SD	1,1-Dichloroethene	31.2	ug/L	Exceedance
CP-E1	4/15/2025	lower	SD	1,1-Dichloroethene	20.5	ug/L	Exceedance
CP-E1	7/9/2024	lower	SD	Trichloroethene	8.82	ug/L	Exceedance
CP-E1	10/8/2024	lower	SD	Trichloroethene	9.76	ug/L	Exceedance
CP-E1	1/7/2025	lower	SD	Trichloroethene	11.7	ug/L	Exceedance
CP-E1	4/15/2025	lower	SD	Trichloroethene	7.8	ug/L	Exceedance
CP-E2	7/9/2024	lower	SD	1,1-Dichloroethane	26	ug/L	Exceedance
CP-E2	10/8/2024	lower	SD	1,1-Dichloroethane	33.8	ug/L	Exceedance
CP-E2	1/7/2025	lower	SD	1,1-Dichloroethane	45.1	ug/L	Exceedance
CP-E2	4/15/2025	lower	SD	1,1-Dichloroethane	30.2	ug/L	Exceedance
CP-E2	7/9/2024	lower	SD	1,1-Dichloroethene	107	ug/L	Exceedance
CP-E2	10/8/2024	lower	SD	1,1-Dichloroethene	130	ug/L	Exceedance
CP-E2	1/7/2025	lower	SD	1,1-Dichloroethene	169	ug/L	Exceedance
CP-E2	4/15/2025	lower	SD	1,1-Dichloroethene	115	ug/L	Exceedance
CP-E2	7/9/2024	lower	SD	Trichloroethene	95.4	ug/L	Exceedance
CP-E2	10/8/2024	lower	SD	Trichloroethene	124	ug/L	Exceedance
CP-E2	1/7/2025	lower	SD	Trichloroethene	148	ug/L	Exceedance
CP-E2	4/15/2025	lower	SD	Trichloroethene	93.5	ug/L	Exceedance
CP-E3	7/9/2024	lower	SD	1,1-Dichloroethene	13.6	ug/L	Exceedance
CP-E3	10/8/2024	lower	SD	1,1-Dichloroethene	13.6	ug/L	Exceedance
CP-E3	1/7/2025	lower	SD	1,1-Dichloroethene	15.6	ug/L	Exceedance
CP-E3	4/15/2025	lower	SD	1,1-Dichloroethene	10.9	ug/L	Exceedance
CP-W2	7/9/2024	lower	SD	1,1-Dichloroethene	7.46	ug/L	Exceedance
CP-W2	10/8/2024	lower	SD	1,1-Dichloroethene	7.65	ug/L	Exceedance
CP-W2	1/7/2025	lower	SD	1,1-Dichloroethene	7.71	ug/L	Exceedance
CP-W3	7/9/2024	lower	SD	1,1-Dichloroethane	46.4	ug/L	Exceedance
CP-W3	10/8/2024	lower	SD	1,1-Dichloroethane	53.9	ug/L	Exceedance
CP-W3	1/7/2025	lower	SD	1,1-Dichloroethane	71.1	ug/L	Exceedance
CP-W3	4/15/2025	lower	SD	1,1-Dichloroethane	43.9	ug/L	Exceedance
CP-W3	7/9/2024	lower	SD	1,1-Dichloroethene	60.9	ug/L	Exceedance
CP-W3	10/8/2024	lower	SD	1,1-Dichloroethene	64.5	ug/L	Exceedance
CP-W3	1/7/2025	lower	SD	1,1-Dichloroethene	81.1	ug/L	Exceedance
CP-W3	4/15/2025	lower	SD	1,1-Dichloroethene	58.4	ug/L	Exceedance
CP-W3	10/8/2024	lower	SD	1,4-Dioxane	99.3	ug/L	Exceedance
CP-W3	1/7/2025	lower	SD	1,4-Dioxane	106	ug/L	Exceedance
CP-W3	5/12/2025	lower	SD	1,4-Dioxane	120	ug/L	Exceedance
CP-W3	7/9/2024	lower	SD	Trichloroethene	44.4	ug/L	Exceedance
CP-W3	10/8/2024	lower	SD	Trichloroethene	45.4	ug/L	Exceedance
CP-W3	1/7/2025	lower	SD	Trichloroethene	49.2	ug/L	Exceedance
CP-W3	4/15/2025	lower	SD	Trichloroethene	30.5	ug/L	Exceedance

Table 2-8 Shutdown Program Concentrations: Summary of 5-year/1-year Differences

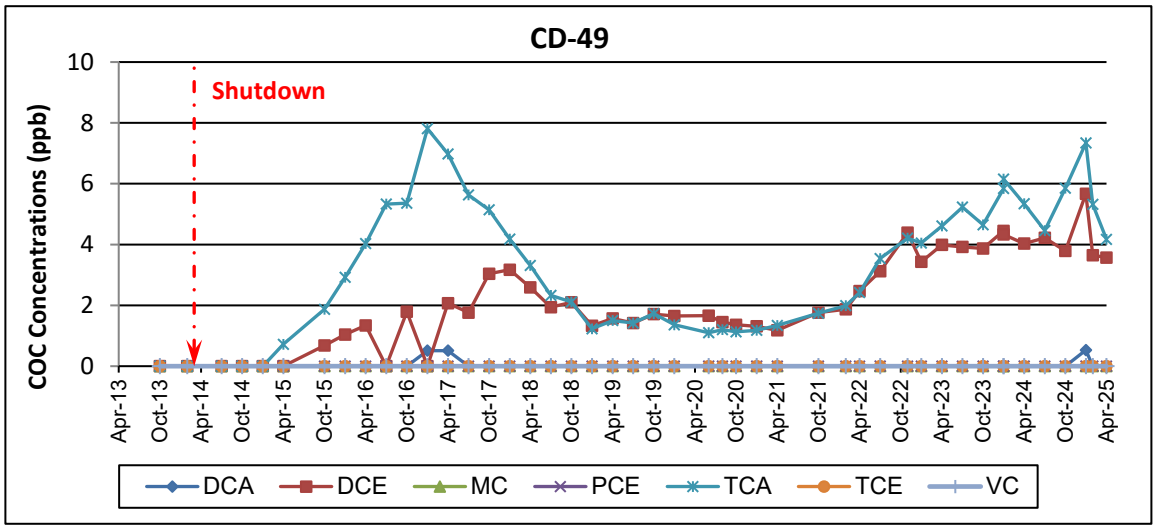
StationID	Aquifer	Program	Analyte	2020 Results	2024 Results	2025 Results	5-Year Difference	1-Year Difference	Units
CD-41C1	lower	SD	TCA	0	0	0	0	0	ug/L
CD-41C1	lower	SD	DCA	0	0	0	0	0	ug/L
CD-41C1	lower	SD	DCE	0	0	0	0	0	ug/L
CD-41C1	lower	SD	MC	0	0	0	0	0	ug/L
CD-41C1	lower	SD	PCE	0	0	0	0	0	ug/L
CD-41C1	lower	SD	TCE	0	0	0	0	0	ug/L
CD-41C1	lower	SD	VC	0	0	0	0	0	ug/L
CD-41C2	lower	SD	TCA	0	0	0	0	0	ug/L
CD-41C2	lower	SD	DCA	0	0	0	0	0	ug/L
CD-41C2	lower	SD	DCE	0	0	0	0	0	ug/L
CD-41C2	lower	SD	MC	0	0	0	0	0	ug/L
CD-41C2	lower	SD	PCE	0	0	0	0	0	ug/L
CD-41C2	lower	SD	TCE	0	0	0	0	0	ug/L
CD-41C2	lower	SD	VC	0	0	0	0	0	ug/L
CD-41C3	lower	SD	TCA	0	0	0	0	0	ug/L
CD-41C3	lower	SD	DCA	0	0	0	0	0	ug/L
CD-41C3	lower	SD	DCE	0	0	0	0	0	ug/L
CD-41C3	lower	SD	MC	0	0	0	0	0	ug/L
CD-41C3	lower	SD	PCE	0	0	0	0	0	ug/L
CD-41C3	lower	SD	TCE	0	0	0	0	0	ug/L
CD-41C3	lower	SD	VC	0	0	0	0	0	ug/L
CD-42C1	lower	SD	TCA	0	0	0	0	0	ug/L
CD-42C1	lower	SD	DCA	0	0	0	0	0	ug/L
CD-42C1	lower	SD	DCE	0	0	0	0	0	ug/L
CD-42C1	lower	SD	MC	0	0	0	0	0	ug/L
CD-42C1	lower	SD	PCE	0	0	0	0	0	ug/L
CD-42C1	lower	SD	TCE	0	0	0	0	0	ug/L
CD-42C1	lower	SD	VC	0	0	0	0	0	ug/L
CD-42C2	lower	SD	TCA	0	0	0	0	0	ug/L
CD-42C2	lower	SD	DCA	0	0	0	0	0	ug/L
CD-42C2	lower	SD	DCE	0	0	0	0	0	ug/L
CD-42C2	lower	SD	MC	0	0	0	0	0	ug/L
CD-42C2	lower	SD	PCE	0	0	0	0	0	ug/L
CD-42C2	lower	SD	TCE	0	0	0	0	0	ug/L
CD-42C2	lower	SD	VC	0	0	0	0	0	ug/L
CD-42C3	lower	SD	TCA	0	0	0	0	0	ug/L
CD-42C3	lower	SD	DCA	0	0	0	0	0	ug/L
CD-42C3	lower	SD	DCE	0	0	0	0	0	ug/L
CD-42C3	lower	SD	MC	0	0	0	0	0	ug/L
CD-42C3	lower	SD	PCE	0	0	0	0	0	ug/L
CD-42C3	lower	SD	TCE	0	0	0	0	0	ug/L
CD-42C3	lower	SD	VC	0	0	0	0	0	ug/L
CD-43C1	lower	SD	TCA	3.93	1.3	0.67	**-3.26**	**-0.63**	ug/L
CD-43C1	lower	SD	DCA	0	0	0	0	0	ug/L
CD-43C1	lower	SD	DCE	0	0	0	0	0	ug/L
CD-43C1	lower	SD	MC	0	0	0	0	0	ug/L
CD-43C1	lower	SD	PCE	0	0	0	0	0	ug/L
CD-43C1	lower	SD	TCE	0	0	0	0	0	ug/L
CD-43C1	lower	SD	VC	0	0	0	0	0	ug/L
CD-43C2	lower	SD	TCA	0	0	0	0	0	ug/L
CD-43C2	lower	SD	DCA	0	0	0	0	0	ug/L
CD-43C2	lower	SD	DCE	0	0	0	0	0	ug/L
CD-43C2	lower	SD	MC	0	0	0	0	0	ug/L
CD-43C2	lower	SD	PCE	0	0	0	0	0	ug/L
CD-43C2	lower	SD	TCE	0	0	0	0	0	ug/L
CD-43C2	lower	SD	VC	0	0	0	0	0	ug/L
CD-43C3	lower	SD	TCA	0	0	0	0	0	ug/L
CD-43C3	lower	SD	DCA	0	0	0	0	0	ug/L
CD-43C3	lower	SD	DCE	0	0	0	0	0	ug/L

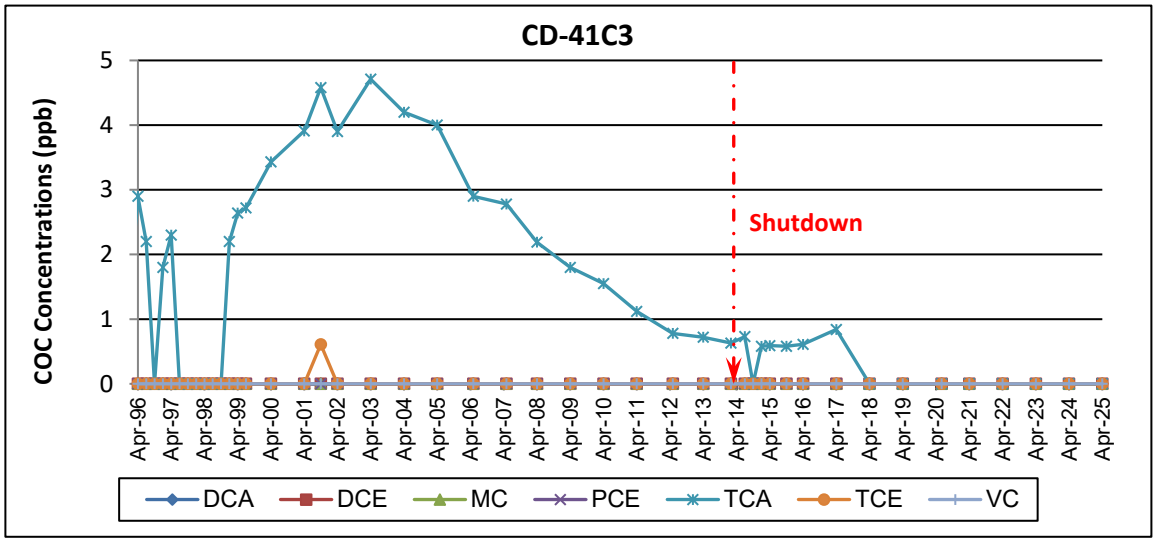
StationID	Aquifer	Program	Analyte	2020 Results	2024 Results	2025 Results	5-Year Difference	1-Year Difference	Units
CD-43C3	lower	SD	MC	0	0	0	0	0	ug/L
CD-43C3	lower	SD	PCE	0	0	0	0	0	ug/L
CD-43C3	lower	SD	TCE	0	0	0	0	0	ug/L
CD-43C3	lower	SD	VC	0	0	0	0	0	ug/L
CD-44C1	lower	SD	TCA	2.27	0.87	0.68	-1.59	-0.19	ug/L
CD-44C1	lower	SD	DCA	0	0	0	0	0	ug/L
CD-44C1	lower	SD	DCE	0	0	0	0	0	ug/L
CD-44C1	lower	SD	MC	0	0	0	0	0	ug/L
CD-44C1	lower	SD	PCE	0	0	0	0	0	ug/L
CD-44C1	lower	SD	TCE	0	0	0	0	0	ug/L
CD-44C1	lower	SD	VC	0	0	0	0	0	ug/L
CD-44C2	lower	SD	TCA	0	0	0	0	0	ug/L
CD-44C2	lower	SD	DCA	0	0	0	0	0	ug/L
CD-44C2	lower	SD	DCE	0	0	0	0	0	ug/L
CD-44C2	lower	SD	MC	0	0	0	0	0	ug/L
CD-44C2	lower	SD	PCE	0	0	0	0	0	ug/L
CD-44C2	lower	SD	TCE	0	0	0	0	0	ug/L
CD-44C2	lower	SD	VC	0	0	0	0	0	ug/L
CD-44C3	lower	SD	TCA	0	0	0	0	0	ug/L
CD-44C3	lower	SD	DCA	0	0	0	0	0	ug/L
CD-44C3	lower	SD	DCE	0	0	0	0	0	ug/L
CD-44C3	lower	SD	MC	0	0	0	0	0	ug/L
CD-44C3	lower	SD	PCE	0	0	0	0	0	ug/L
CD-44C3	lower	SD	TCE	0	0	0	0	0	ug/L
CD-44C3	lower	SD	VC	0	0	0	0	0	ug/L
CD-45C1	lower	SD	TCA	1.56	1.52	1.18	-0.38	-0.34	ug/L
CD-45C1	lower	SD	DCA	0	0	0	0	0	ug/L
CD-45C1	lower	SD	DCE	0	0	0	0	0	ug/L
CD-45C1	lower	SD	MC	0	0	0	0	0	ug/L
CD-45C1	lower	SD	PCE	0	0	0	0	0	ug/L
CD-45C1	lower	SD	TCE	0	0	0	0	0	ug/L
CD-45C1	lower	SD	VC	0	0	0	0	0	ug/L
CD-45C2	lower	SD	TCA	0	0	0	0	0	ug/L
CD-45C2	lower	SD	DCA	0	0	0	0	0	ug/L
CD-45C2	lower	SD	DCE	0	0	0	0	0	ug/L
CD-45C2	lower	SD	MC	0	0	0	0	0	ug/L
CD-45C2	lower	SD	PCE	0	0	0	0	0	ug/L
CD-45C2	lower	SD	TCE	0	0	0	0	0	ug/L
CD-45C2	lower	SD	VC	0	0	0	0	0	ug/L
CD-45C3	lower	SD	TCA	0	0	0	0	0	ug/L
CD-45C3	lower	SD	DCA	0	0	0	0	0	ug/L
CD-45C3	lower	SD	DCE	0	0	0	0	0	ug/L
CD-45C3	lower	SD	MC	0	0	0	0	0	ug/L
CD-45C3	lower	SD	PCE	0	0	0	0	0	ug/L
CD-45C3	lower	SD	TCE	0	0	0	0	0	ug/L
CD-45C3	lower	SD	VC	0	0	0	0	0	ug/L
CD-48C1	lower	SD	TCA	0	0	0	0	0	ug/L
CD-48C1	lower	SD	DCA	0	0	0	0	0	ug/L
CD-48C1	lower	SD	DCE	0	0	0	0	0	ug/L
CD-48C1	lower	SD	MC	0	0	0	0	0	ug/L
CD-48C1	lower	SD	PCE	0	0	0	0	0	ug/L
CD-48C1	lower	SD	TCE	0	0	0	0	0	ug/L
CD-48C1	lower	SD	VC	0	0	0	0	0	ug/L
CD-48C2	lower	SD	TCA	0	0	0	0	0	ug/L
CD-48C2	lower	SD	DCA	0	0	0	0	0	ug/L
CD-48C2	lower	SD	DCE	0	0	0	0	0	ug/L
CD-48C2	lower	SD	MC	0	0	0	0	0	ug/L
CD-48C2	lower	SD	PCE	0	0	0	0	0	ug/L
CD-48C2	lower	SD	TCE	0	0	0	0	0	ug/L
CD-48C2	lower	SD	VC	0	0	0	0	0	ug/L
CD-48C3	lower	SD	TCA	0	0	0	0	0	ug/L

StationID	Aquifer	Program	Analyte	2020 Results	2024 Results	2025 Results	5-Year Difference	1-Year Difference	Units
CD-48C3	lower	SD	DCA	0	0	0	0	0	ug/L
CD-48C3	lower	SD	DCE	0	0	0	0	0	ug/L
CD-48C3	lower	SD	MC	0	0	0	0	0	ug/L
CD-48C3	lower	SD	PCE	0	0	0	0	0	ug/L
CD-48C3	lower	SD	TCE	0	0	0	0	0	ug/L
CD-48C3	lower	SD	VC	0	0	0	0	0	ug/L
CD-49	lower	SD	TCA	1.1	5.34	4.17	3.07	-1.17	ug/L
CD-49	lower	SD	DCA	0	0	0	0	0	ug/L
CD-49	lower	SD	DCE	1.66	4.03	3.57	1.91	-0.46	ug/L
CD-49	lower	SD	MC	0	0	0	0	0	ug/L
CD-49	lower	SD	PCE	0	0	0	0	0	ug/L
CD-49	lower	SD	TCE	0	0	0	0	0	ug/L
CD-49	lower	SD	VC	0	0	0	0	0	ug/L
CP-E1	lower	SD	TCA	8.48	3.78	3.83	-4.65	0.05	ug/L
CP-E1	lower	SD	DCA	9.49	7.7	8.05	-1.44	0.35	ug/L
CP-E1	lower	SD	DCE	20.4	16.2	20.5	0.1	4.3	ug/L
CP-E1	lower	SD	MC	0	0	0	0	0	ug/L
CP-E1	lower	SD	PCE	1.32	2.65	2.19	0.87	-0.46	ug/L
CP-E1	lower	SD	TCE	8.12	8.71	7.8	-0.32	-0.91	ug/L
CP-E1	lower	SD	VC	0	0	0	0	0	ug/L
CP-E2	lower	SD	TCA	46.3	25.3	26.4	-19.9	1.1	ug/L
CP-E2	lower	SD	DCA	41.4	40.1	30.2	-11.2	-9.9	ug/L
CP-E2	lower	SD	DCE	138	157	115	-23	-42	ug/L
CP-E2	lower	SD	MC	0	0	0	0	0	ug/L
CP-E2	lower	SD	PCE	1	0.9	0.68	-0.32	-0.22	ug/L
CP-E2	lower	SD	TCE	181	200	93.5	-87.5	-106.5	ug/L
CP-E2	lower	SD	VC	0	0	0	0	0	ug/L
CP-E3	lower	SD	TCA	4.91	5.99	3.79	-1.12	-2.2	ug/L
CP-E3	lower	SD	DCA	2.61	1.92	1.69	-0.92	-0.23	ug/L
CP-E3	lower	SD	DCE	7.95	12.9	10.9	2.95	-2	ug/L
CP-E3	lower	SD	MC	0	0	0	0	0	ug/L
CP-E3	lower	SD	PCE	0	0	0	0	0	ug/L
CP-E3	lower	SD	TCE	2.55	1.82	2.06	-0.49	0.24	ug/L
CP-E3	lower	SD	VC	0	0	0	0	0	ug/L
CP-W1	lower	SD	TCA	2.58	1.56	1.13	-1.45	-0.43	ug/L
CP-W1	lower	SD	DCA	0	0	0	0	0	ug/L
CP-W1	lower	SD	DCE	3.13	2.8	3.02	-0.11	0.22	ug/L
CP-W1	lower	SD	MC	0	0	0	0	0	ug/L
CP-W1	lower	SD	PCE	0	0	0	0	0	ug/L
CP-W1	lower	SD	TCE	0	0	0	0	0	ug/L
CP-W1	lower	SD	VC	0	0	0	0	0	ug/L
CP-W2	lower	SD	TCA	14.6	10.5	5.13	-9.47	-5.37	ug/L
CP-W2	lower	SD	DCA	1.86	0.86	0.5	-1.36	-0.36	ug/L
CP-W2	lower	SD	DCE	1.93	6.84	5.95	4.02	-0.89	ug/L
CP-W2	lower	SD	MC	0	0	0	0	0	ug/L
CP-W2	lower	SD	PCE	0	0	0	0	0	ug/L
CP-W2	lower	SD	TCE	0	0	0	0	0	ug/L
CP-W2	lower	SD	VC	0	0	0	0	0	ug/L
CP-W3	lower	SD	TCA	31.3	32	22.6	-8.7	-9.4	ug/L
CP-W3	lower	SD	DCA	6.96	53.6	43.9	36.94	-9.7	ug/L
CP-W3	lower	SD	DCE	19.8	62.1	58.4	38.6	-3.7	ug/L
CP-W3	lower	SD	MC	0	0.88	0.99	0.99	0.11	ug/L
CP-W3	lower	SD	PCE	0	0	0	0	0	ug/L
CP-W3	lower	SD	TCE	28.6	51.7	30.5	1.9	-21.2	ug/L
CP-W3	lower	SD	VC	0	0	0	0	0	ug/L

Analytes that exceeded Consent Decree clean-up criteria this reporting period are displayed in **ORANGE**.
Increases in analyte concentrations are highlighted in **RED**.
Decreases in analyte concentrations are highlighted in **BLUE**.

Figure 2-6 Lower Aquifer Individual Monitoring Well COC Concentrations





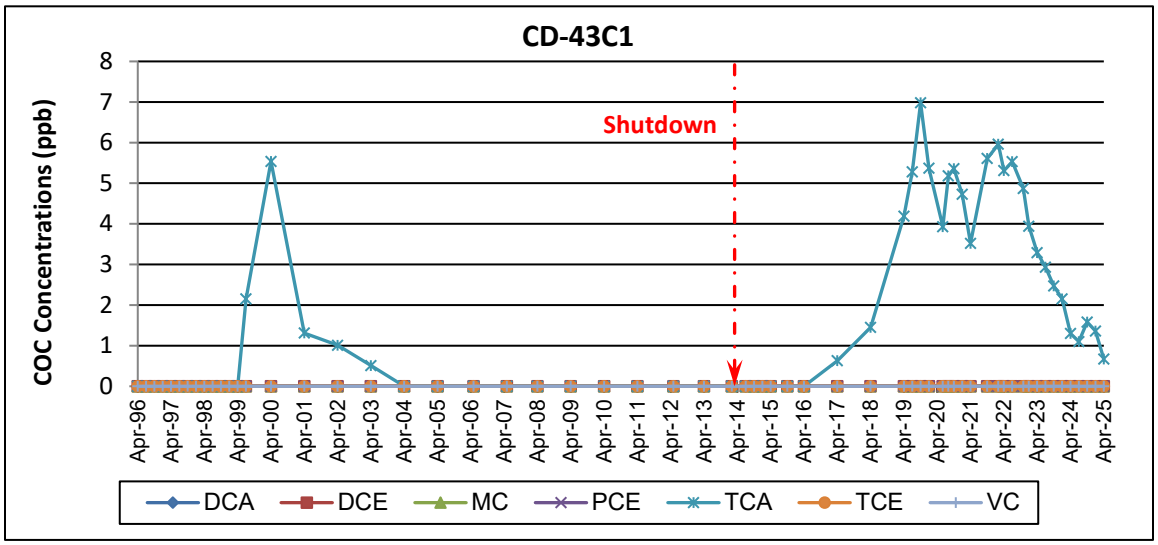
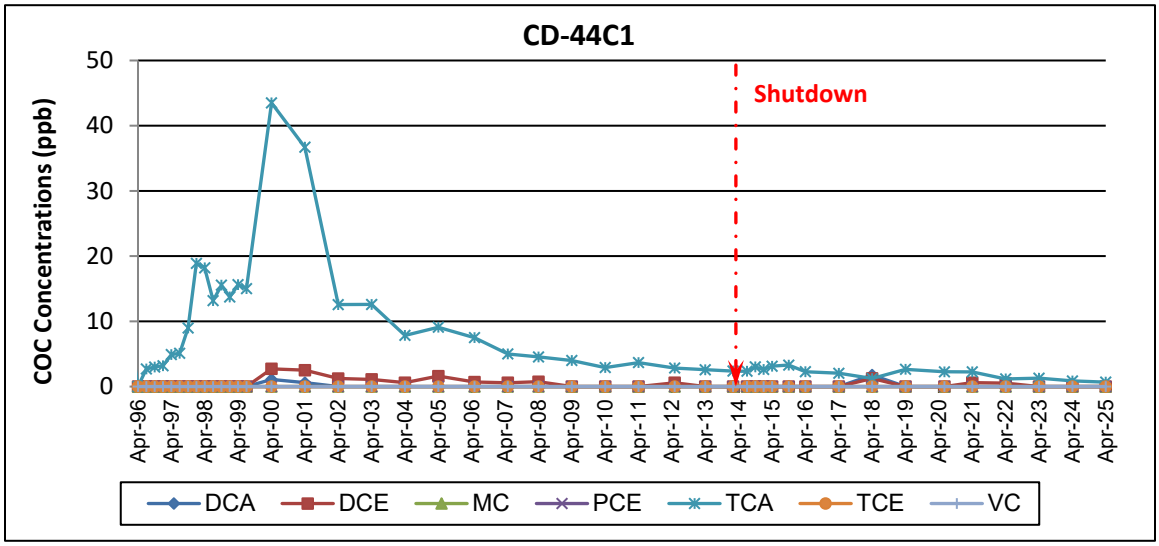
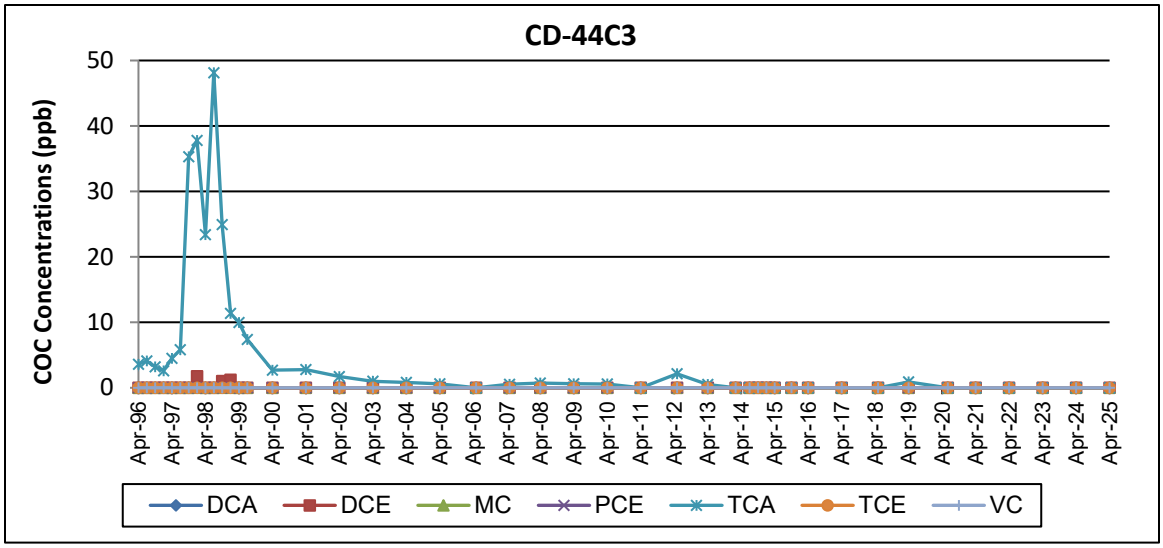


Figure 2-7 Lower Aquifer Individual Monitoring Well COC Concentrations





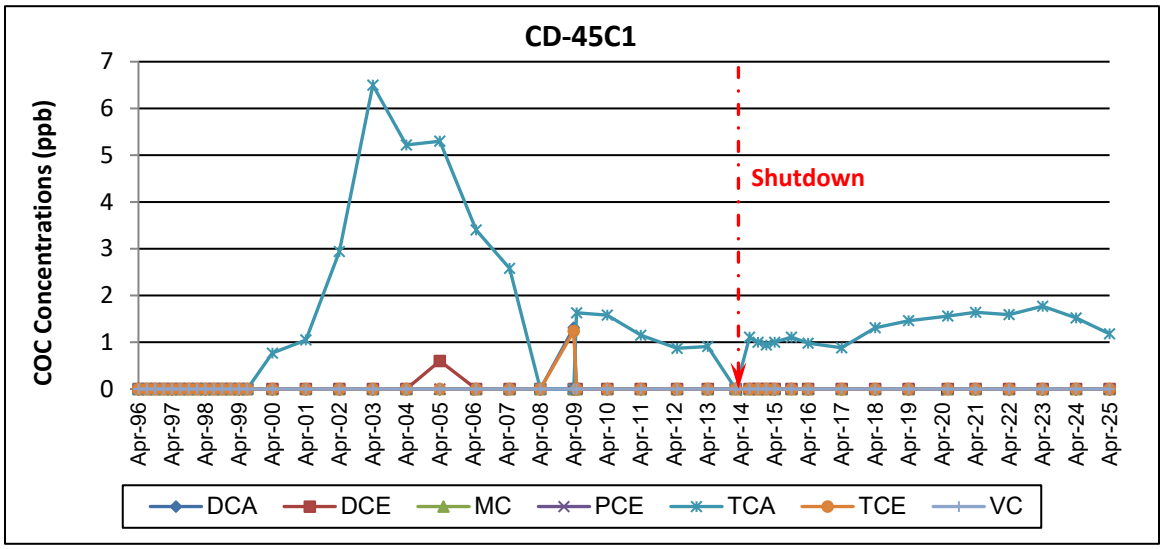
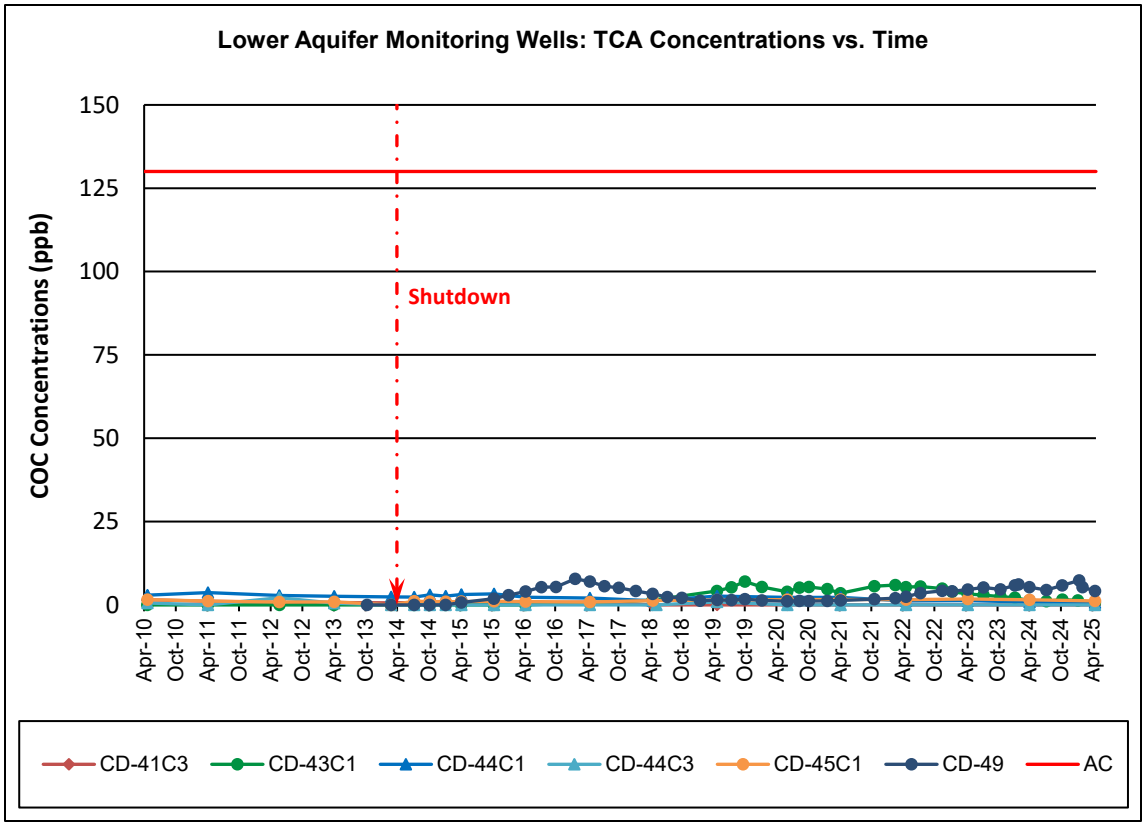


Figure 2-8 Lower Aquifer Compliance Wells TCA Concentrations



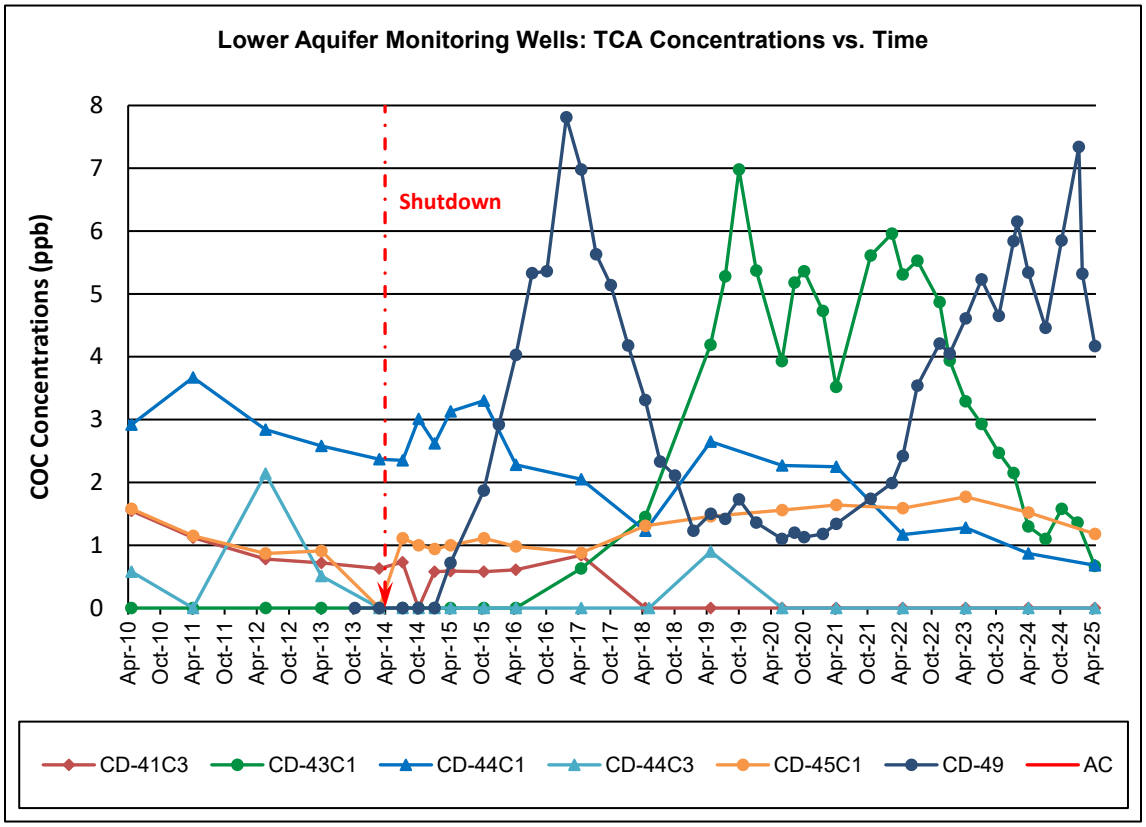
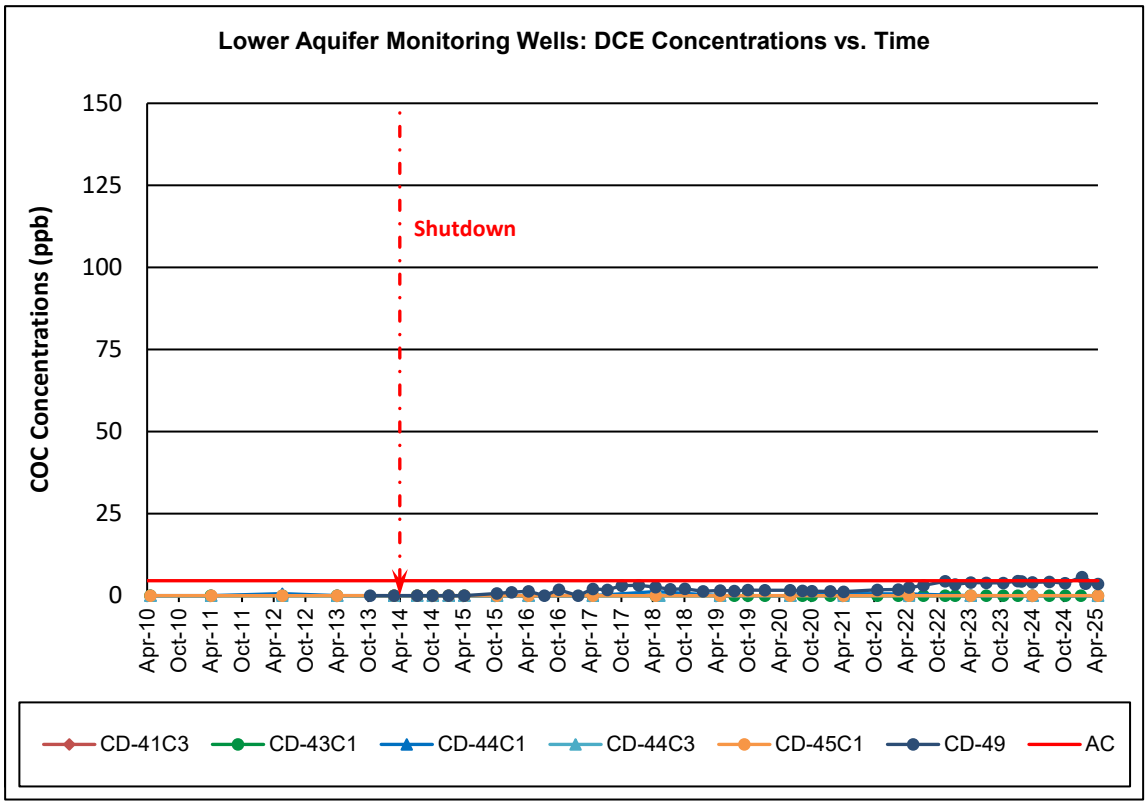


Figure 2-9 Lower Aquifer Compliance Wells DCE Concentrations



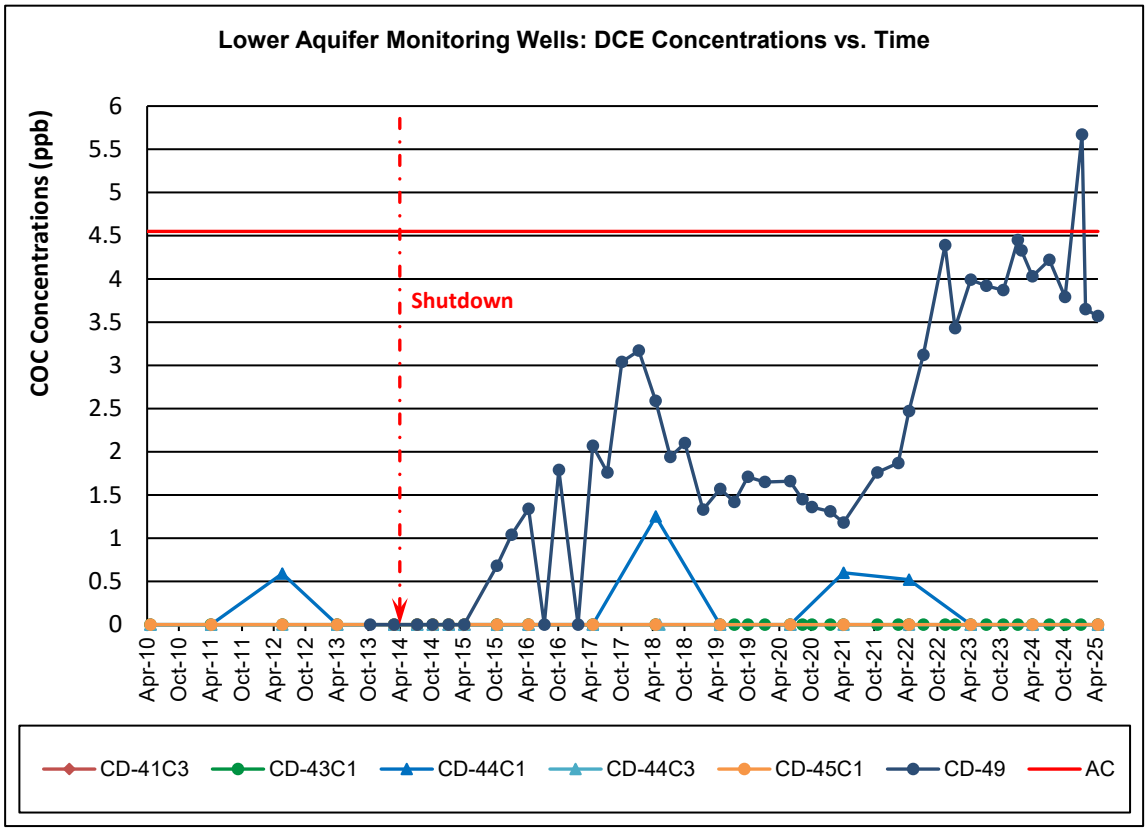
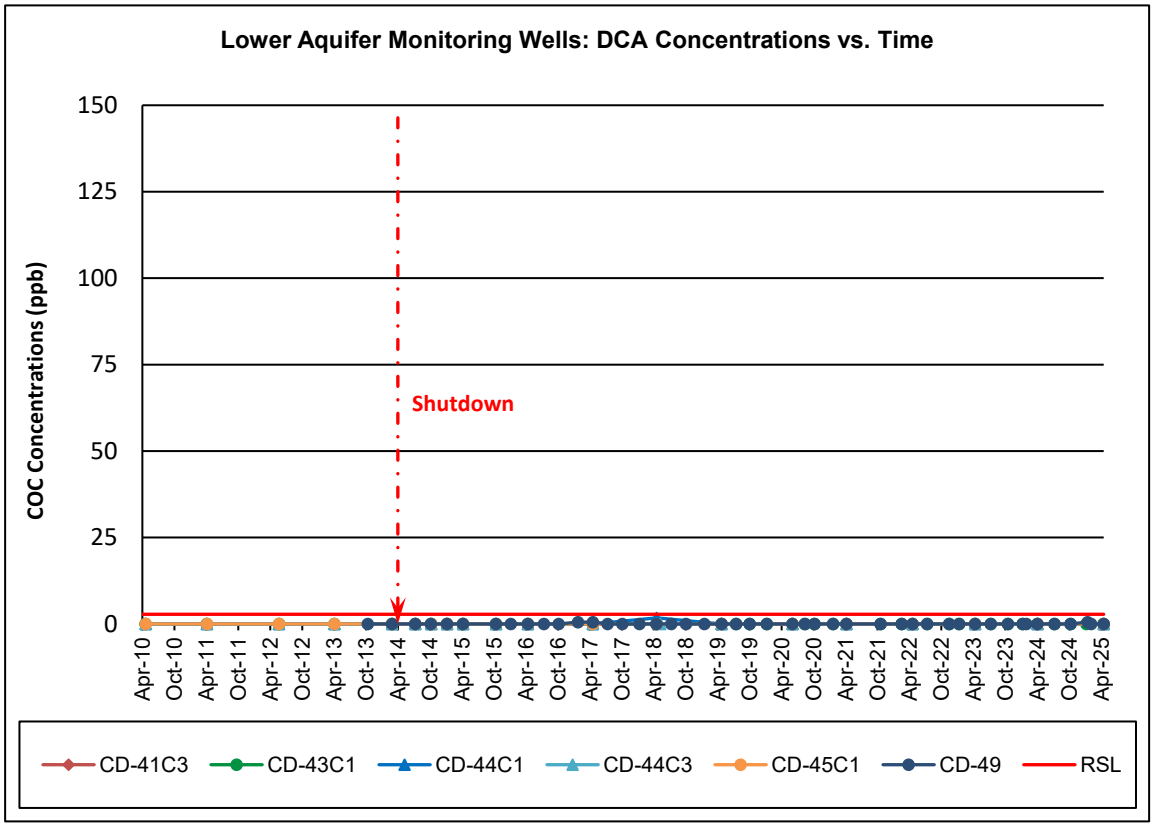


Figure 2-10 Lower Aquifer Compliance Wells DCA Concentrations



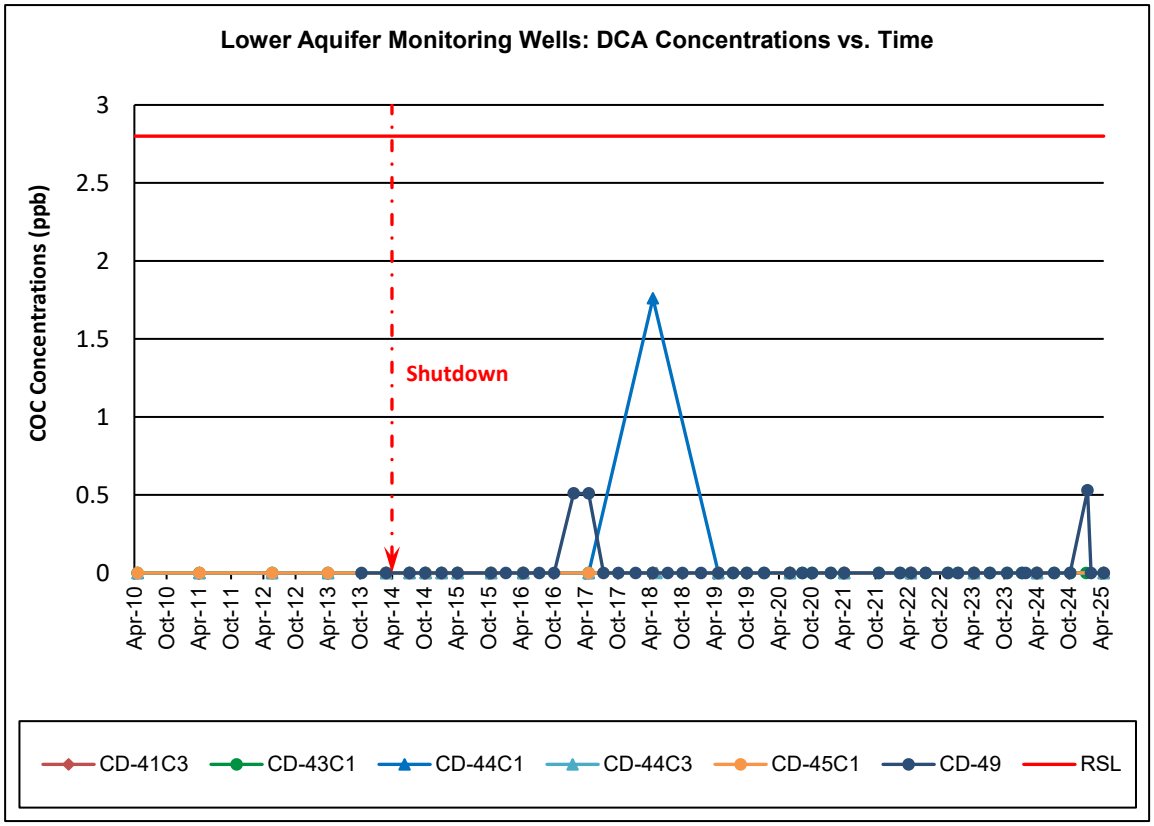
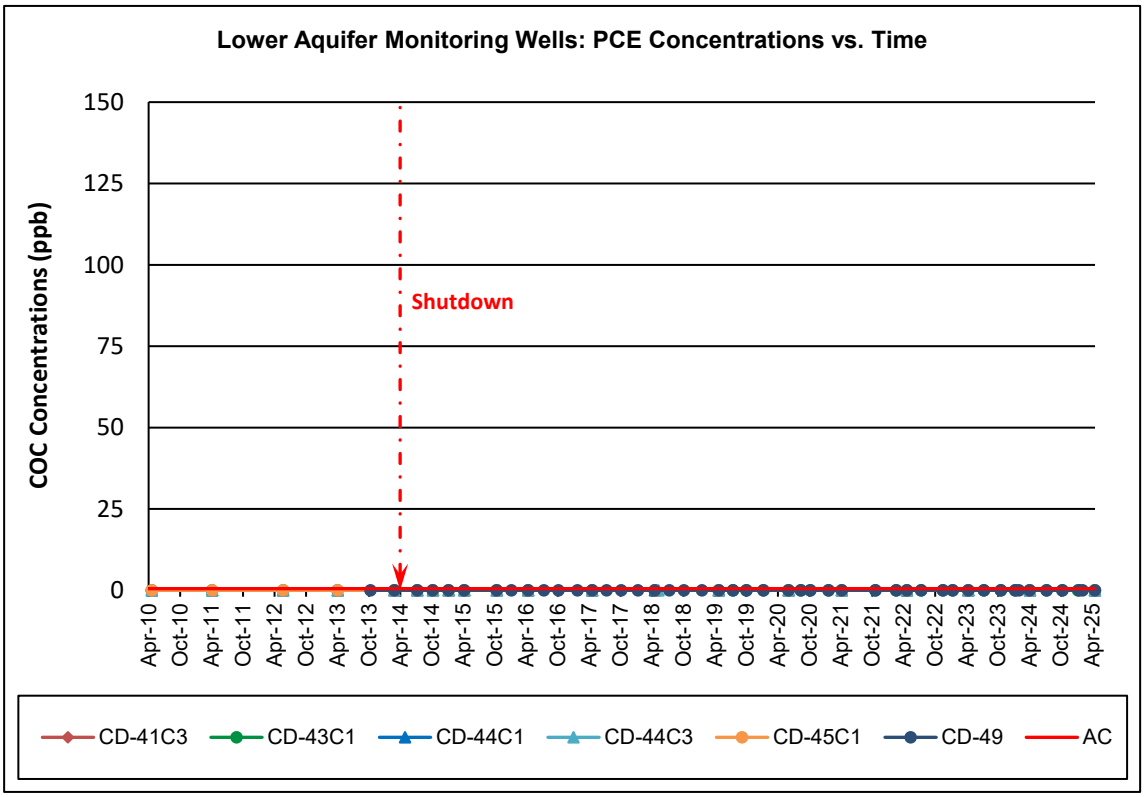


Figure 2-11 Lower Aquifer Compliance Wells PCE Concentrations



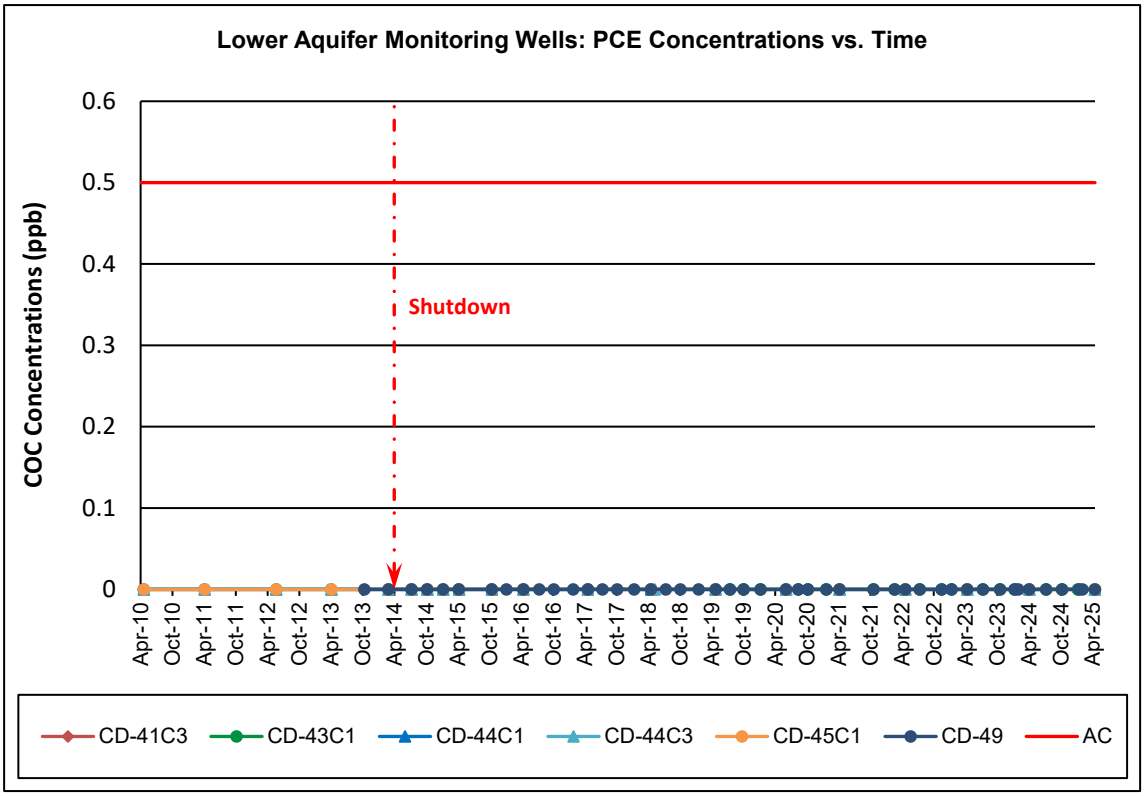
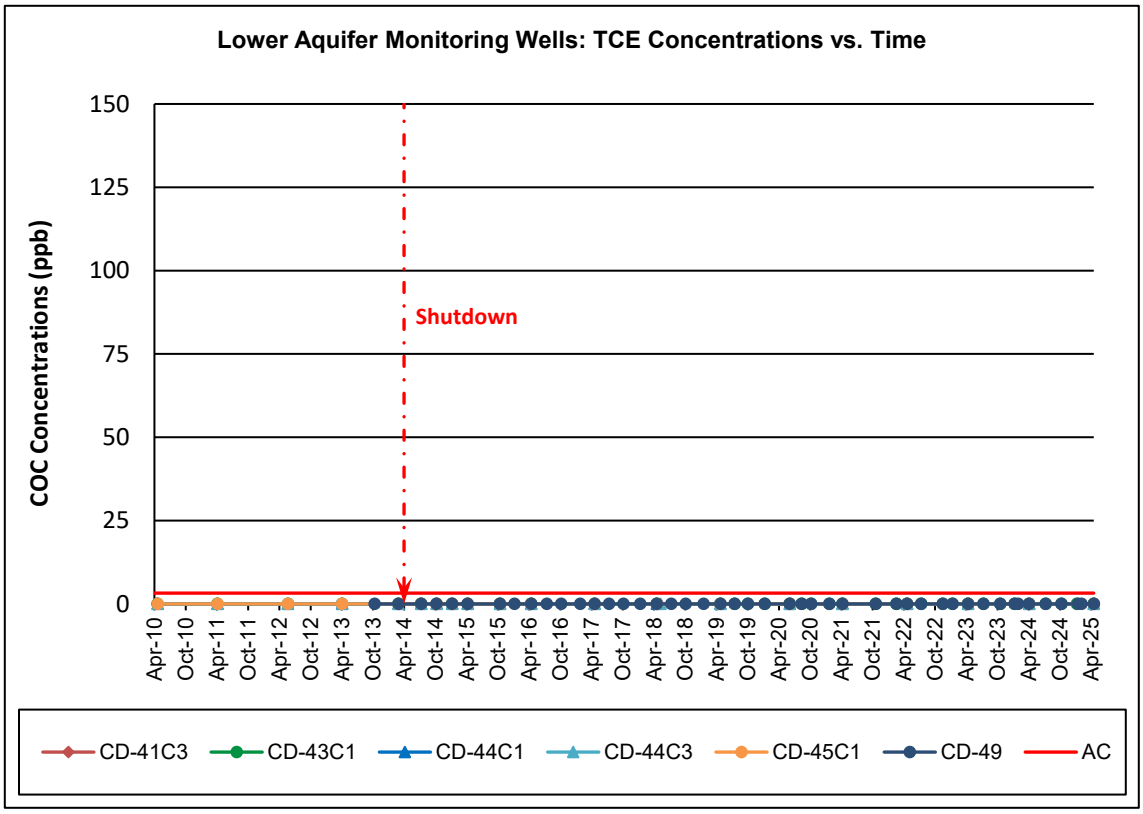


Figure 2-12 Lower Aquifer Compliance Wells TCE Concentrations



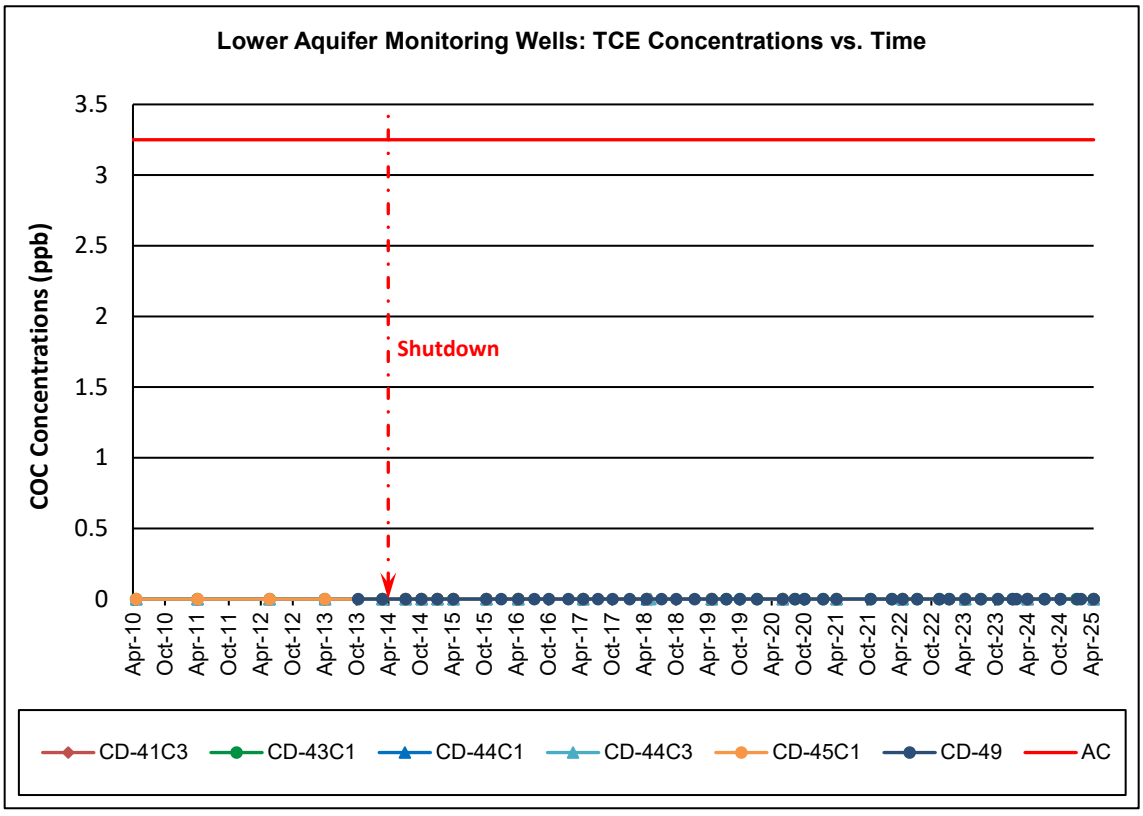


Figure 2-13 Lower Aquifer Individual Extraction Well COC Concentrations

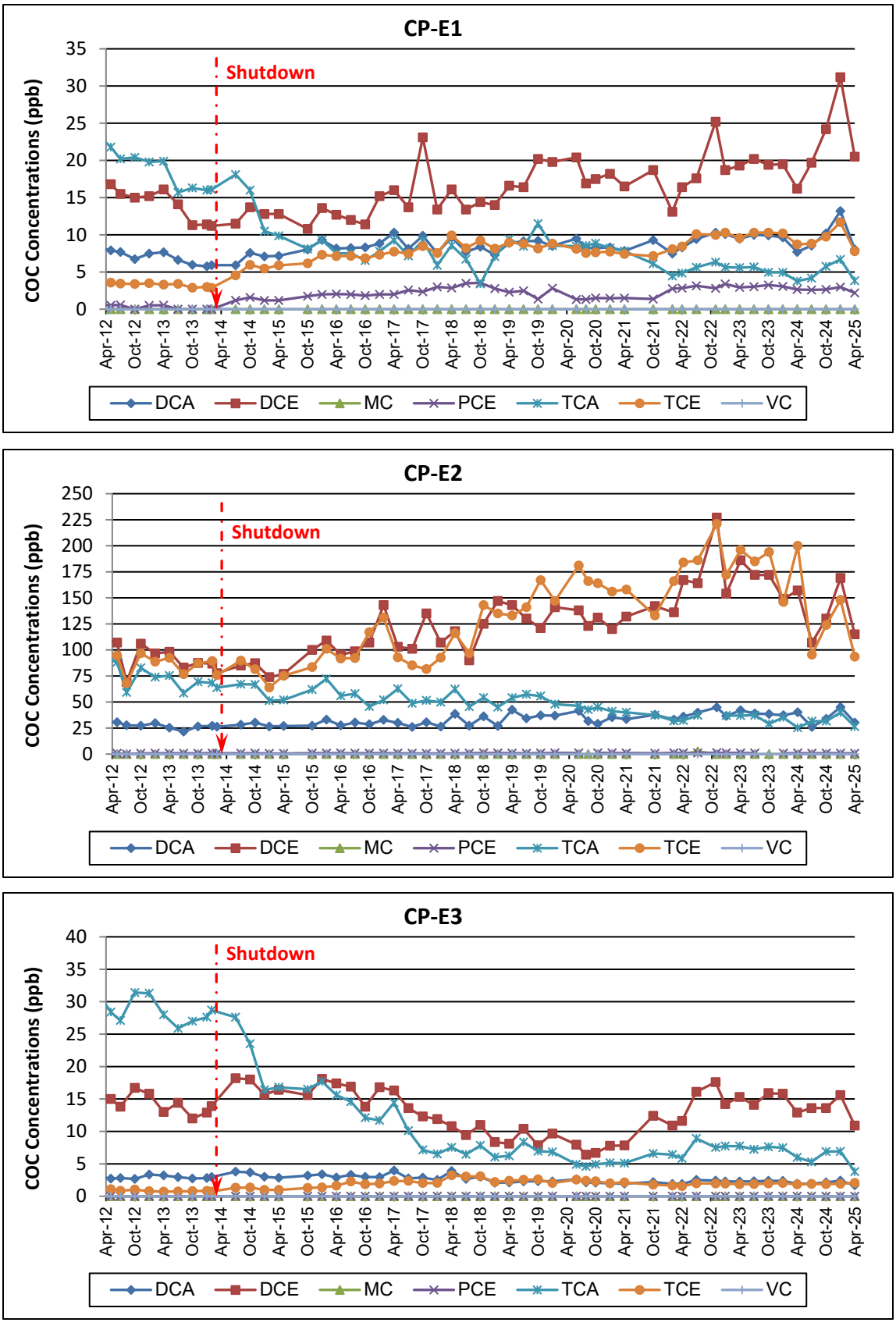


Figure 2-14 Lower Aquifer Individual Extraction Well COC Concentrations

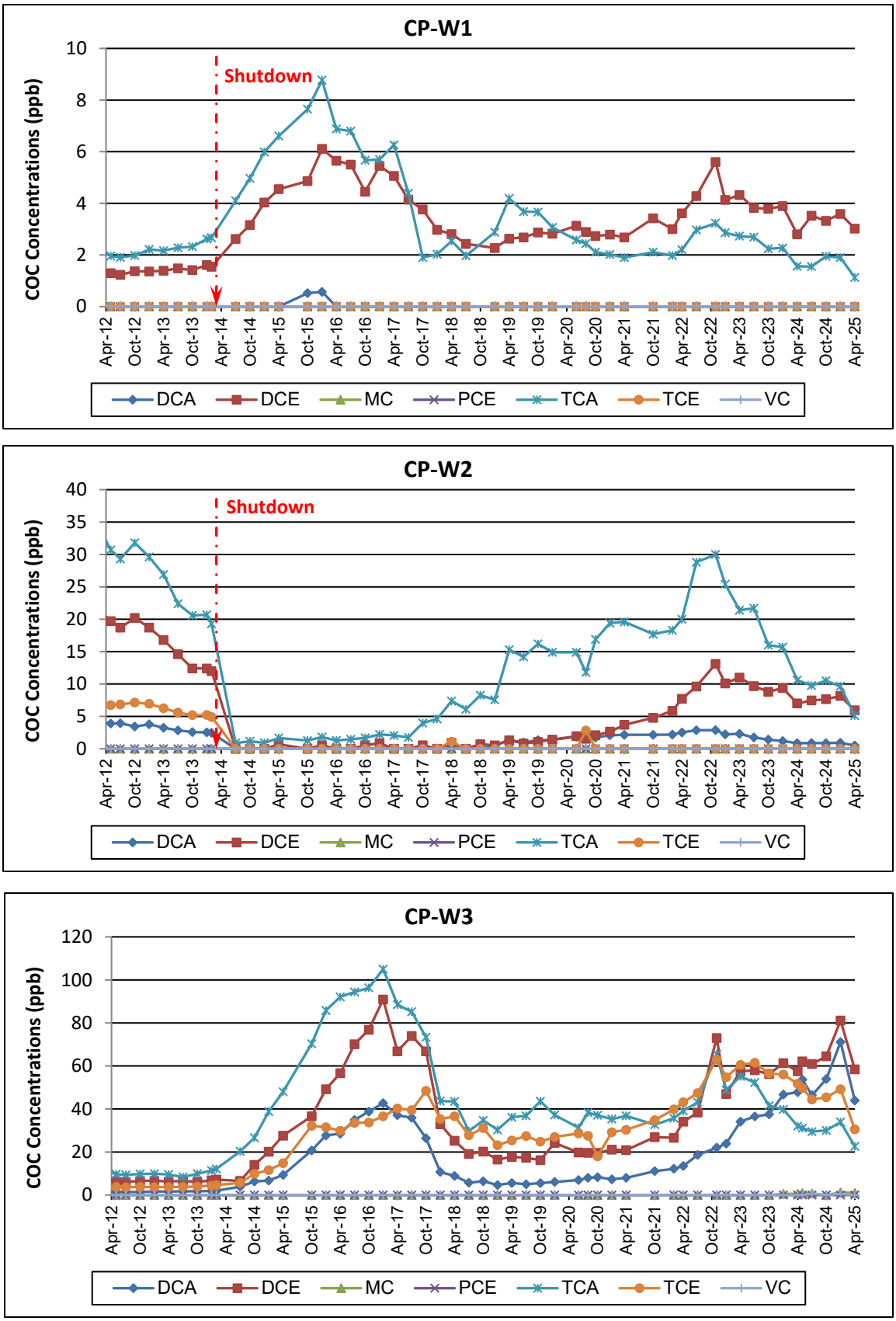
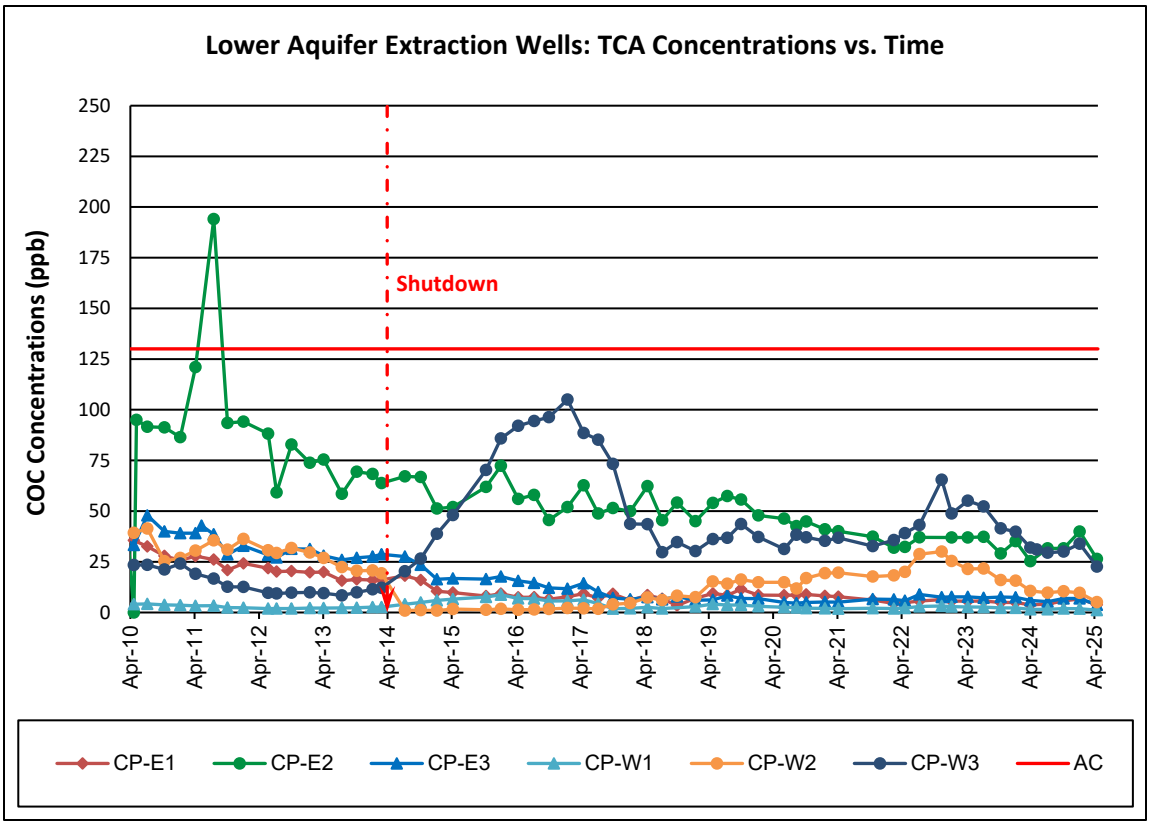


Figure 2-15 Lower Aquifer Extraction Wells TCA Concentrations vs. Time



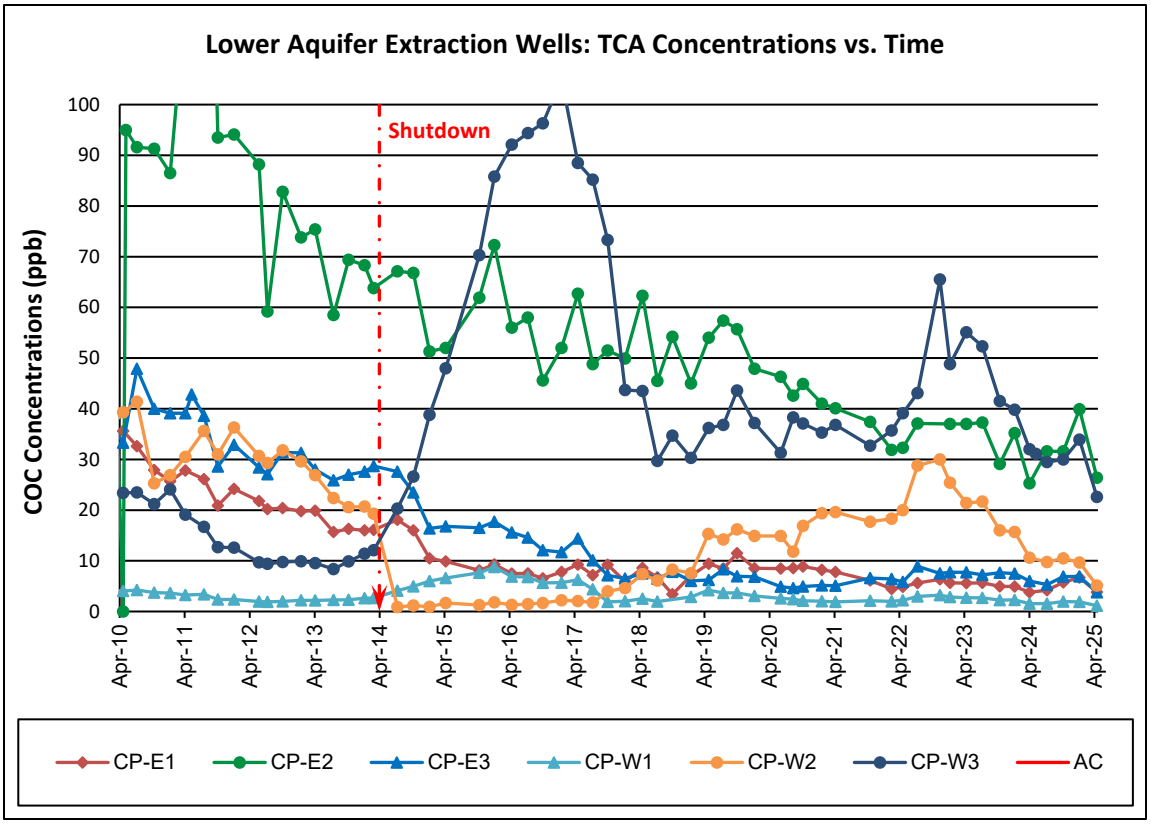
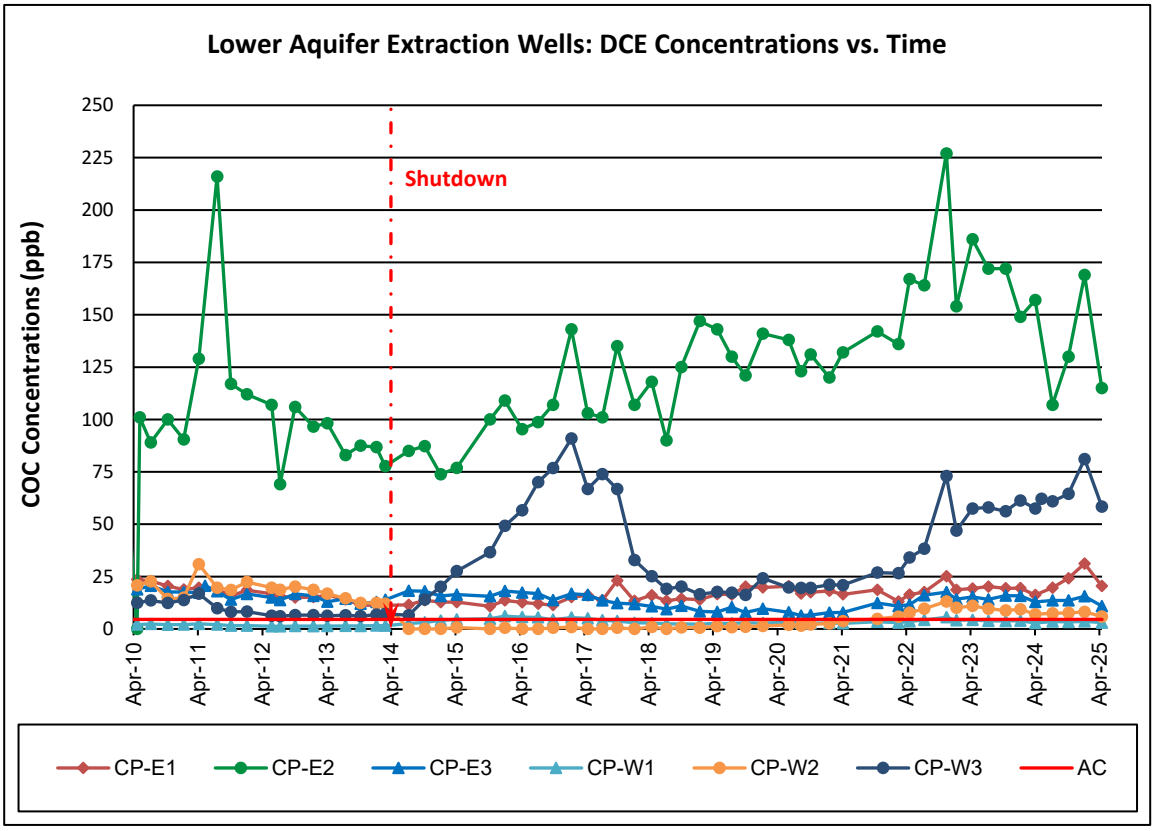


Figure 2-16 Lower Aquifer Extraction Wells DCE Concentrations vs. Time



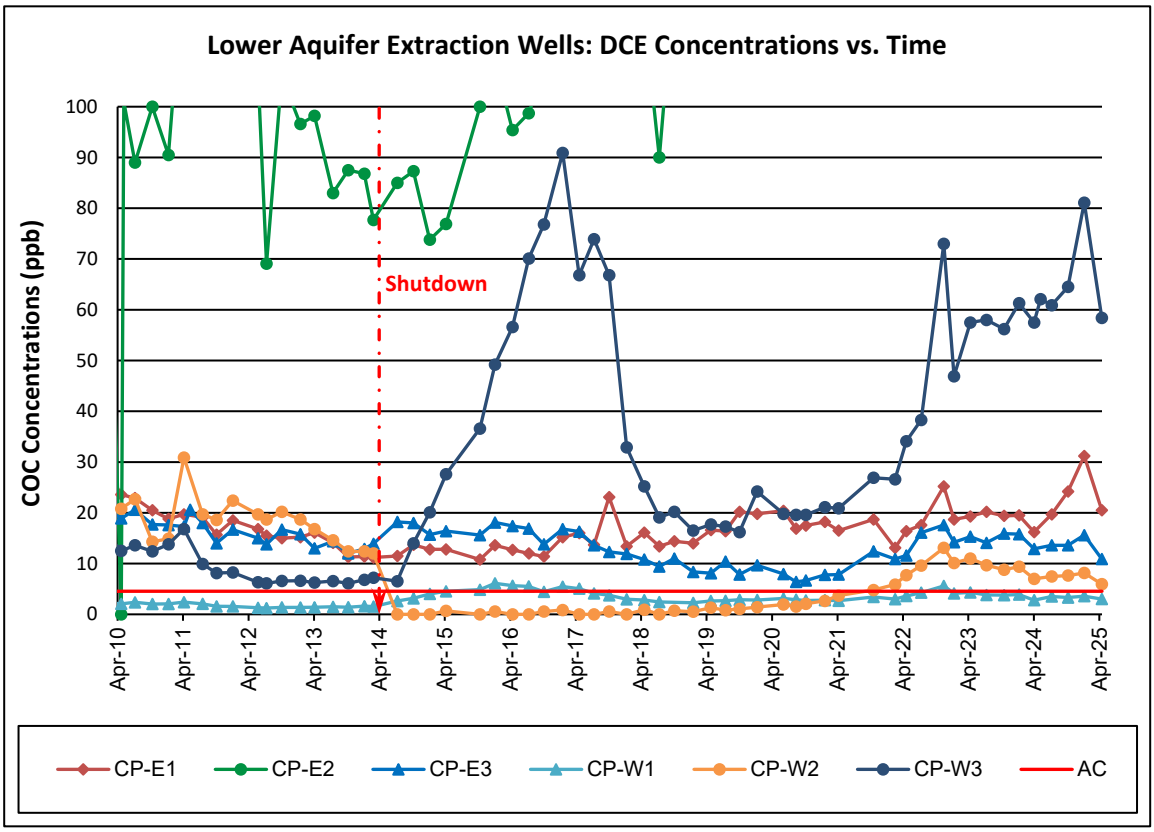
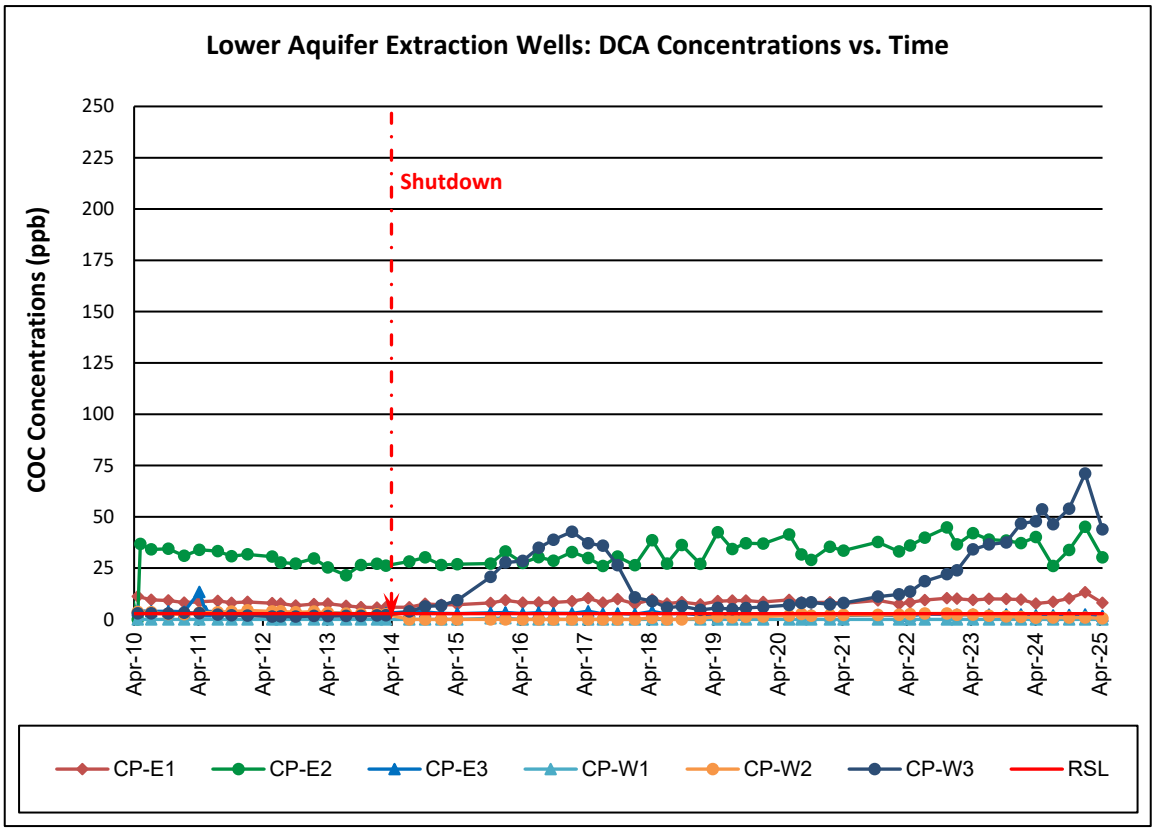


Figure 2-17 Lower Aquifer Extraction Wells DCA Concentrations vs. Time



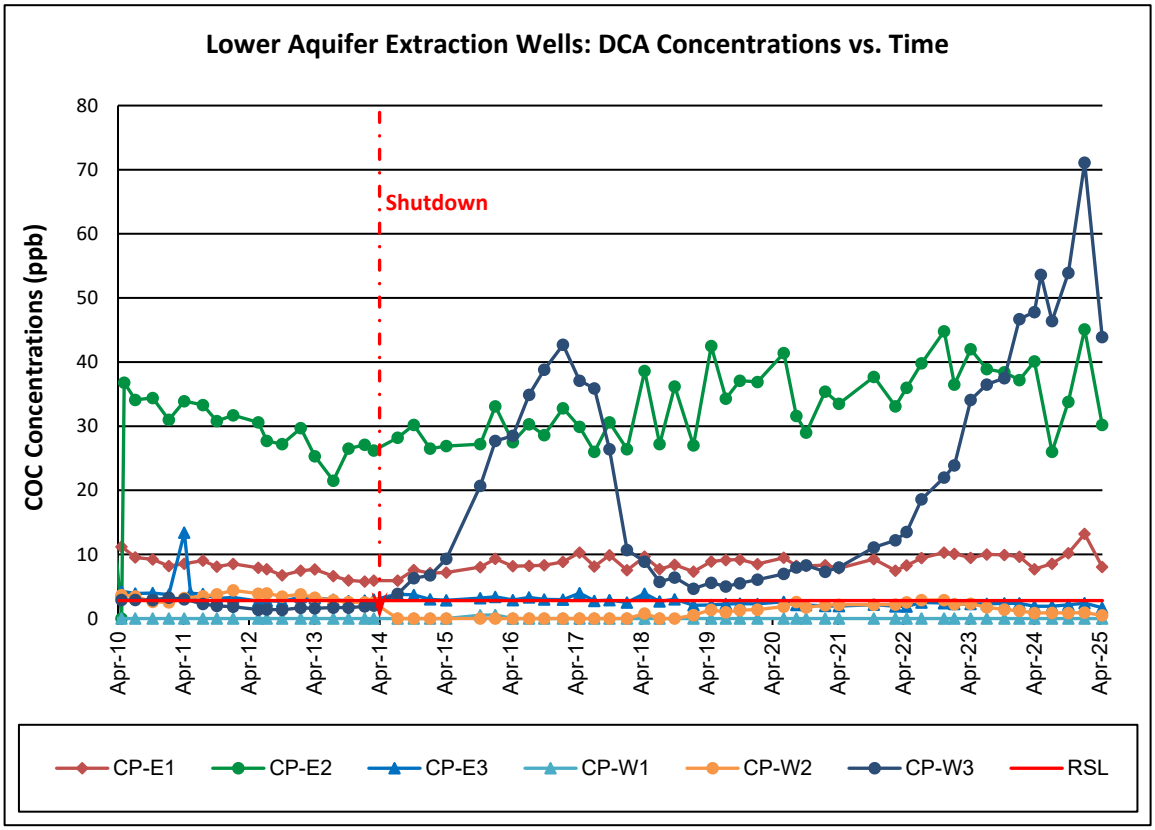
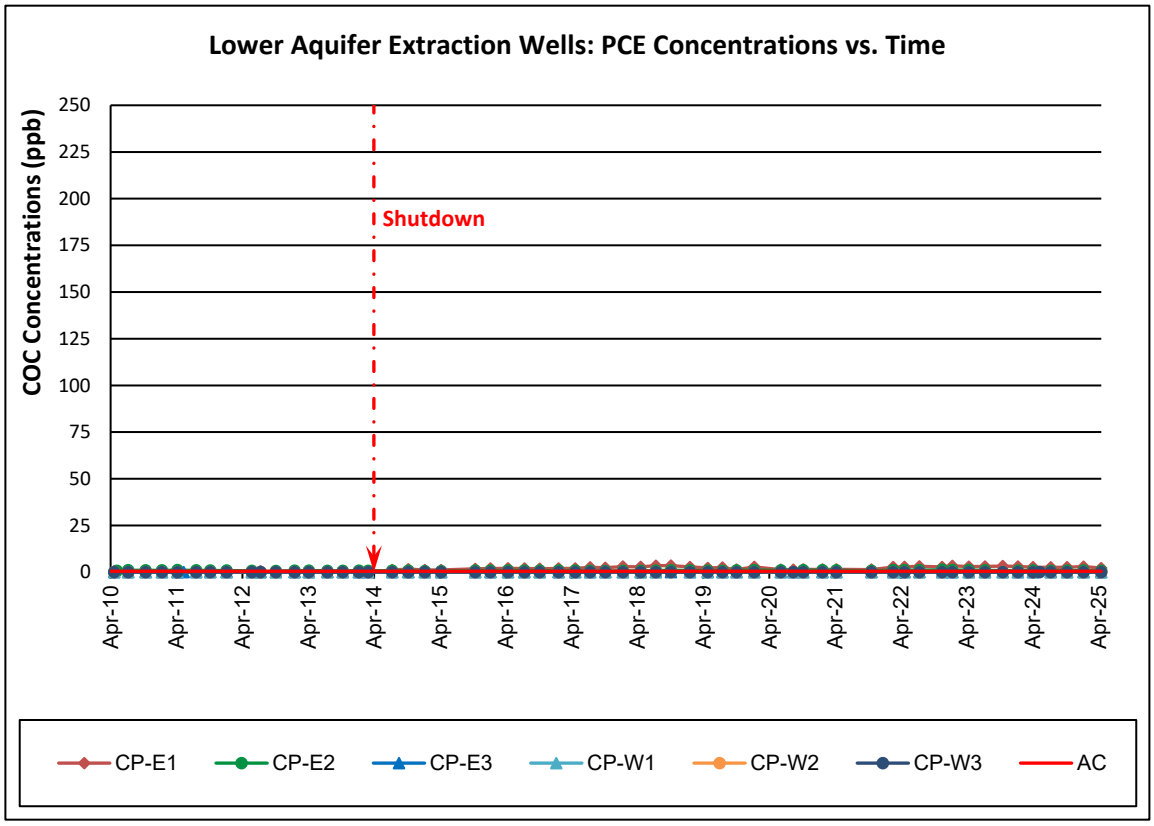


Figure 2-18 Lower Aquifer Extraction Wells PCE Concentrations vs. Time



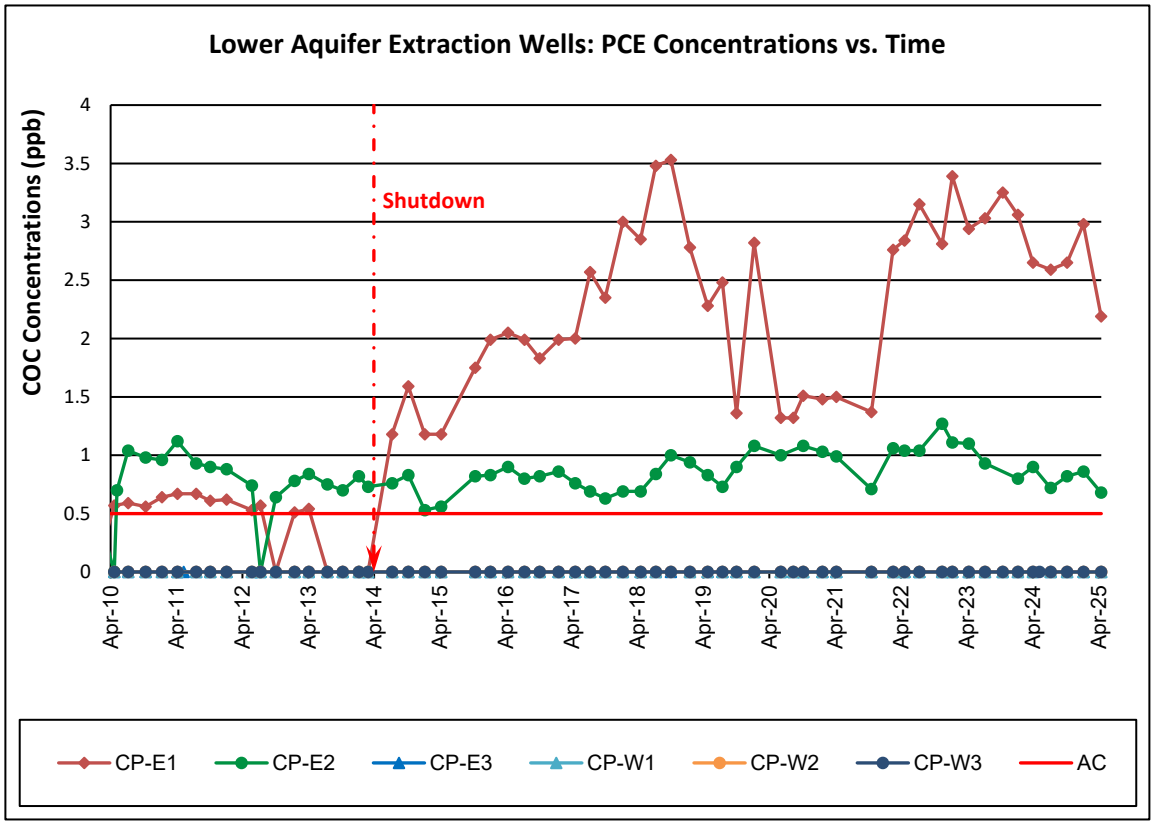
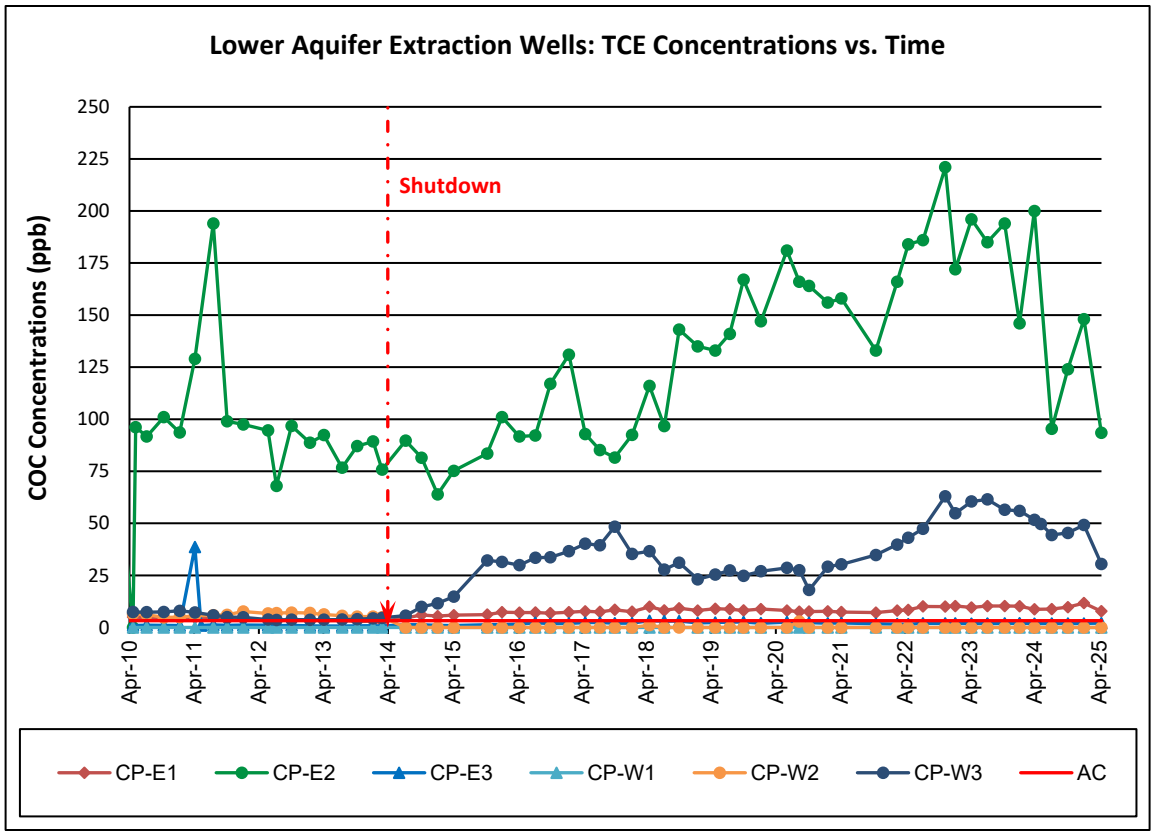


Figure 2-19 Lower Aquifer Extraction Wells TCE Concentrations vs. Time



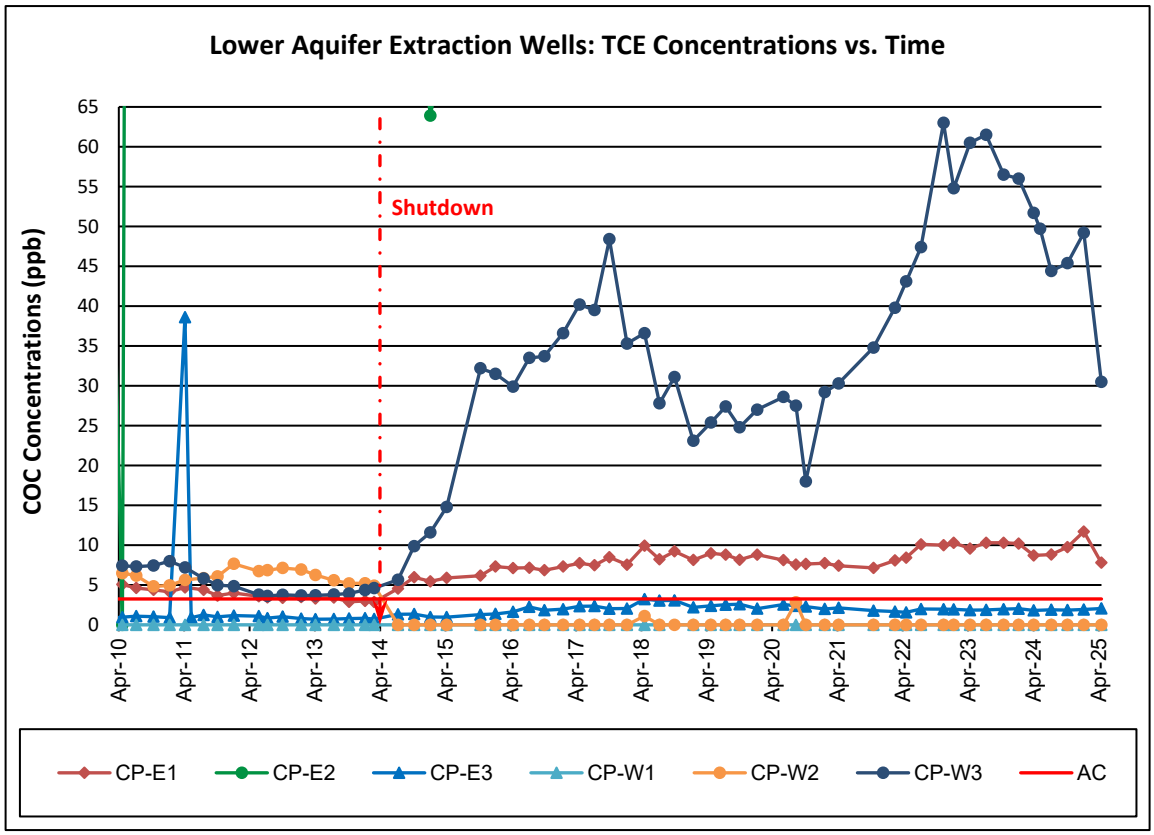
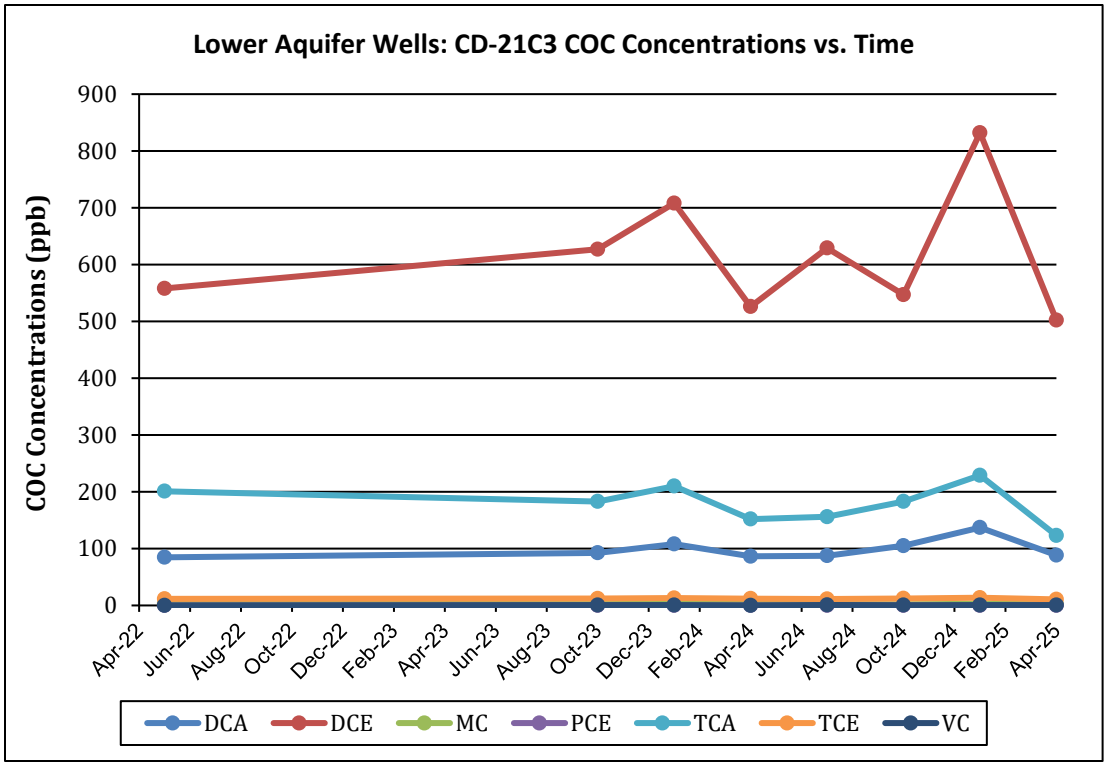


Figure 2-20 CD-21C3 COC Concentrations vs. Time



During the Supplemental Sampling event in May 2022, Spokane County collected groundwater samples from CD-21C3 to determine COC concentrations. The results indicated that the highest concentrations of TCA and DCE in the vicinity of the Colbert Landfill were found in CD-21C3. County personnel installed a dedicated pump in CD-21C3 in October 2023 to monitor these "source area" concentrations on a quarterly basis to assess COC changes and trends.

For all of the COC concentrations vs. time graphs above, non-detection values from the laboratory are displayed as 0 ppb.

Figure 2-21 Lower Aquifer Estimated TCA Plume

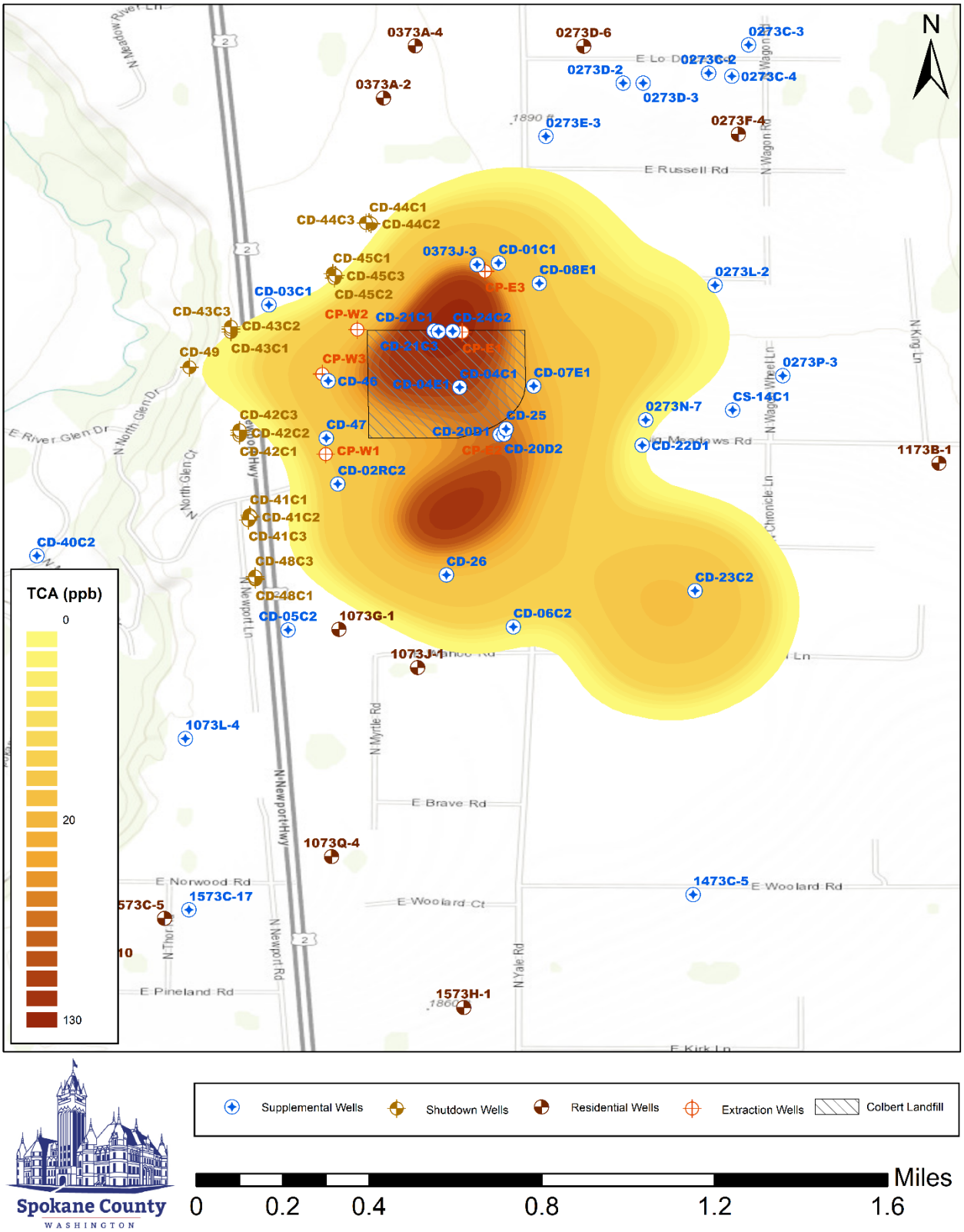


Figure 2-22 Lower Aquifer TCA Detections Map

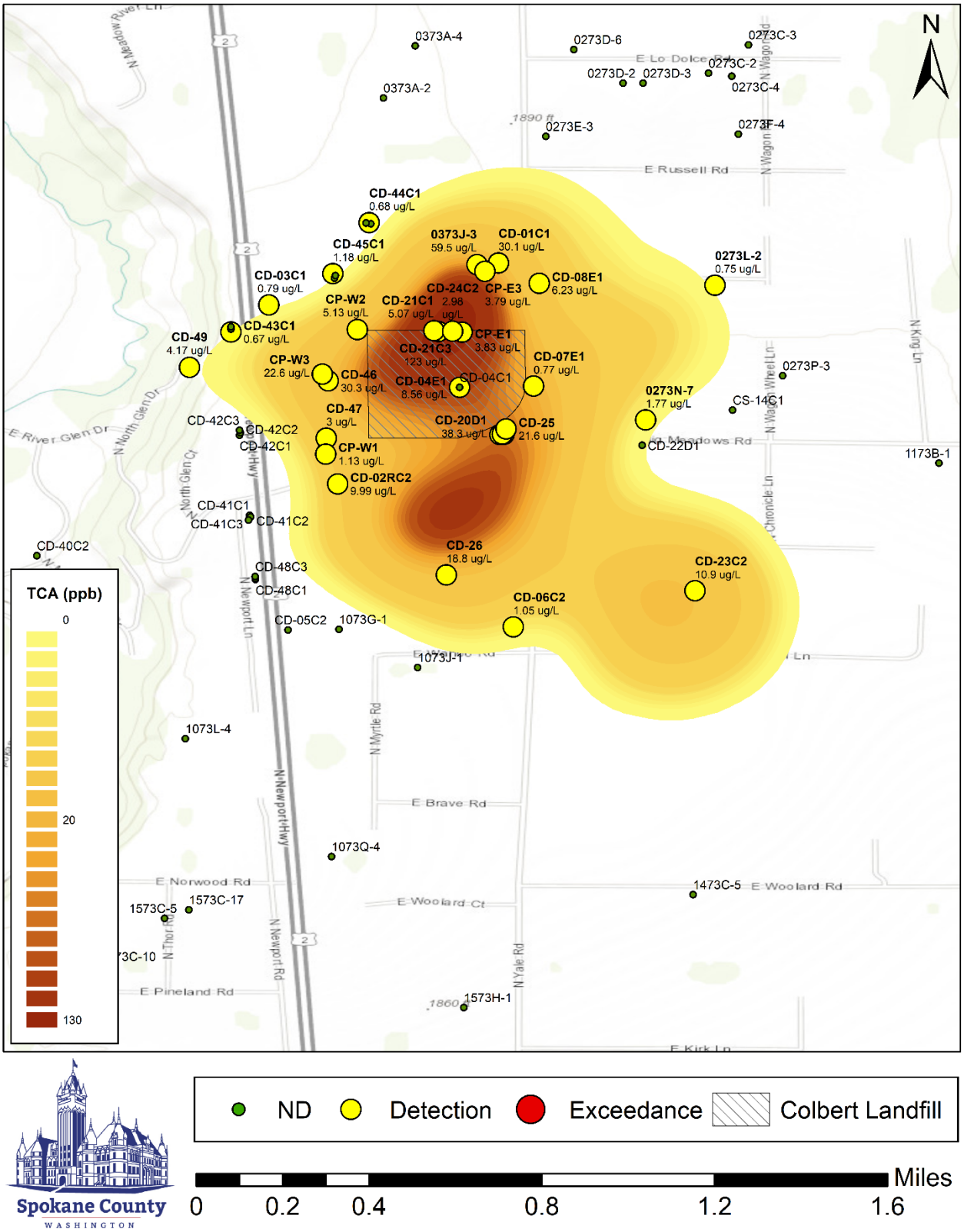


Figure 2-23 Lower Aquifer Estimated DCA Plume

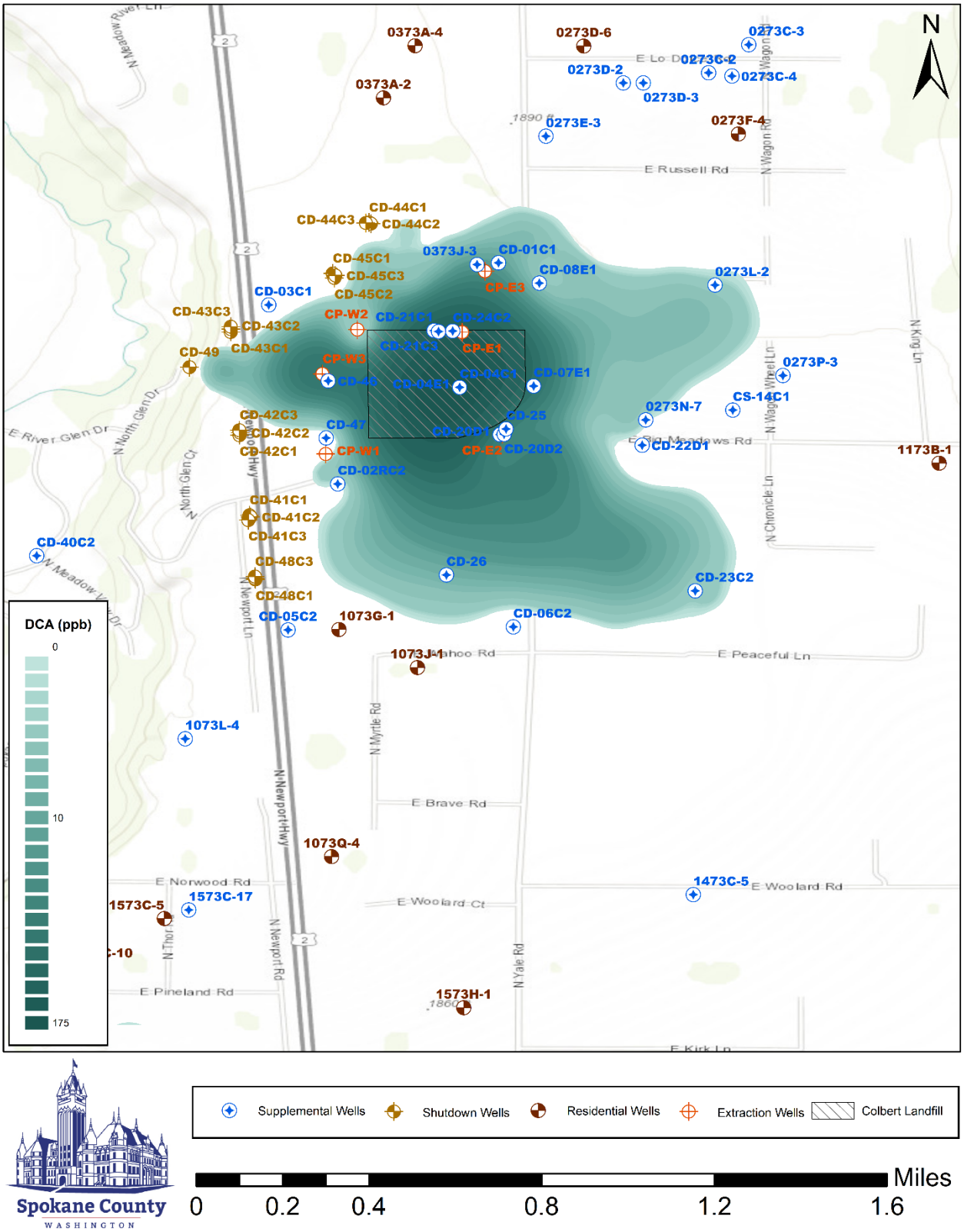


Figure 2-24 Lower Aquifer DCA Detections Map

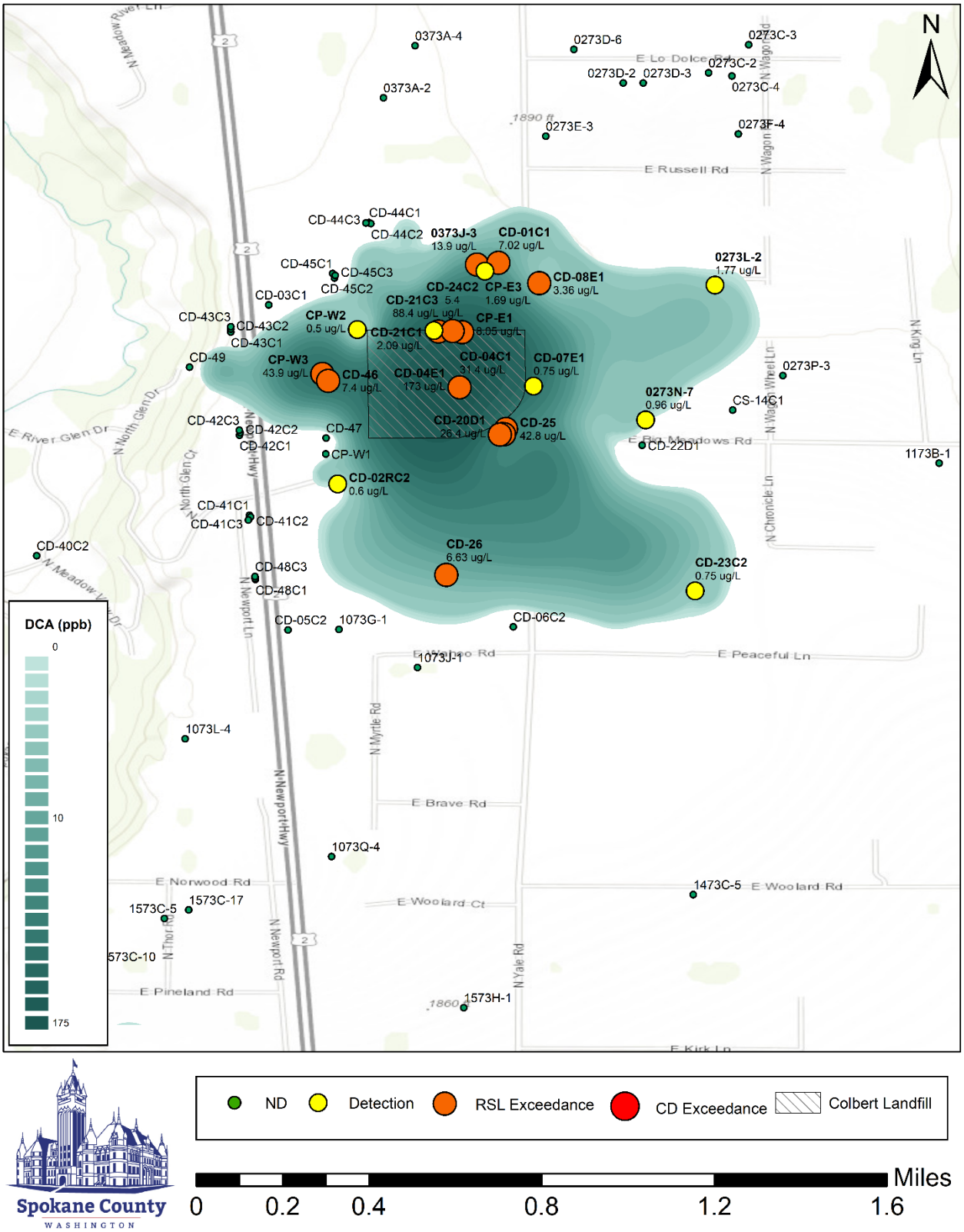


Figure 2-25 Lower Aquifer Estimated DCE Plume

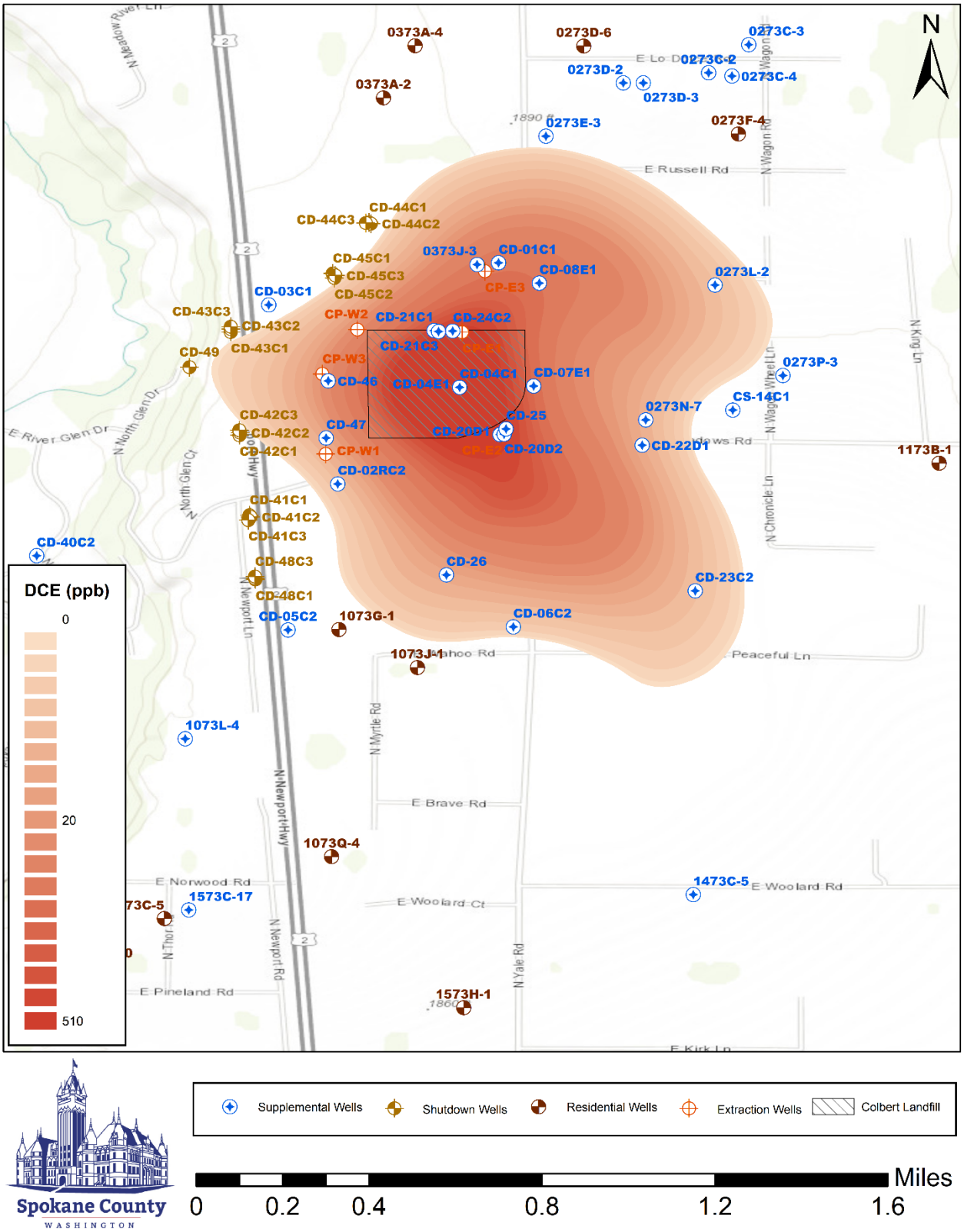


Figure 2-26 Lower Aquifer DCE Detections Map

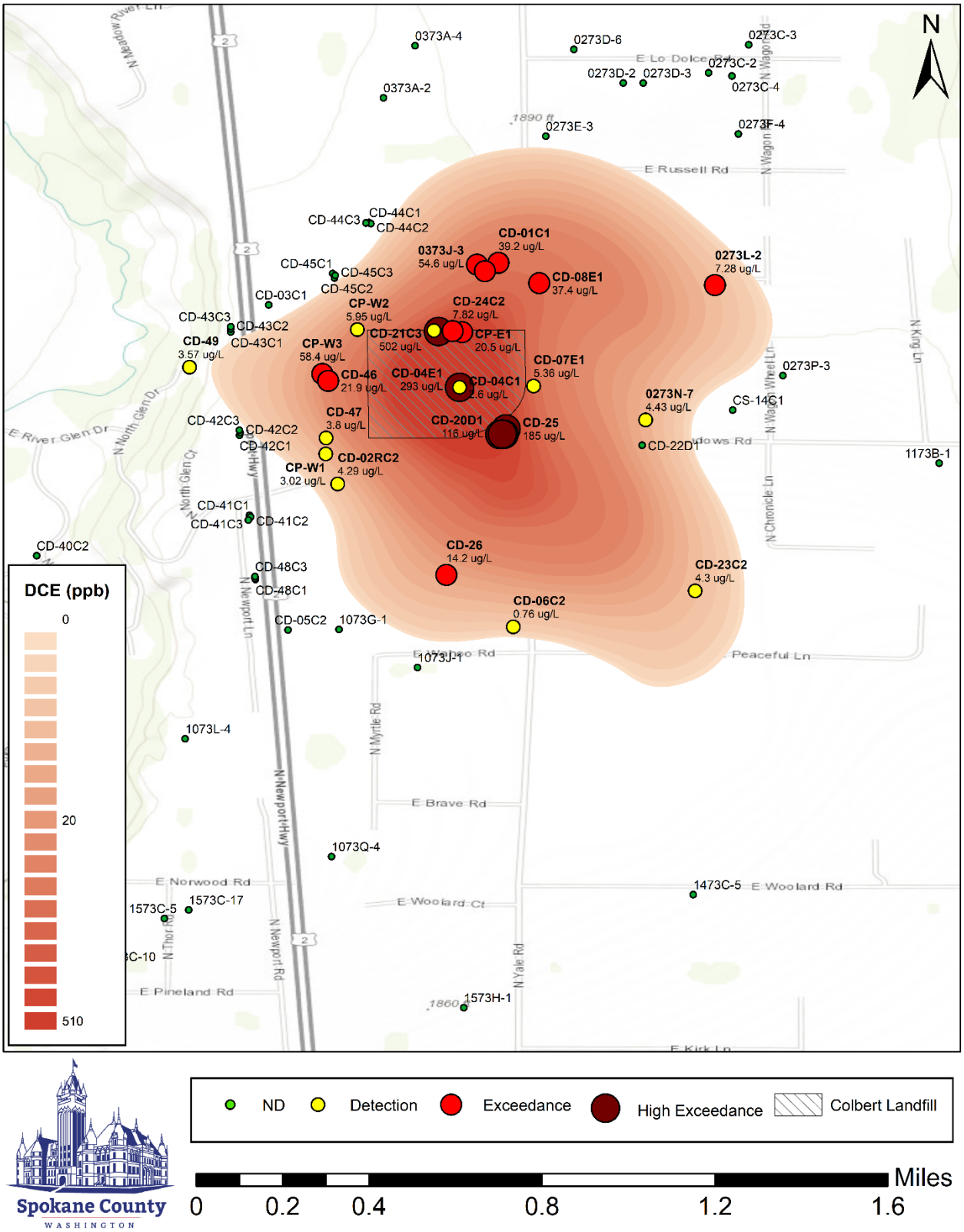


Figure 2-27 Lower Aquifer Estimated PCE Plume

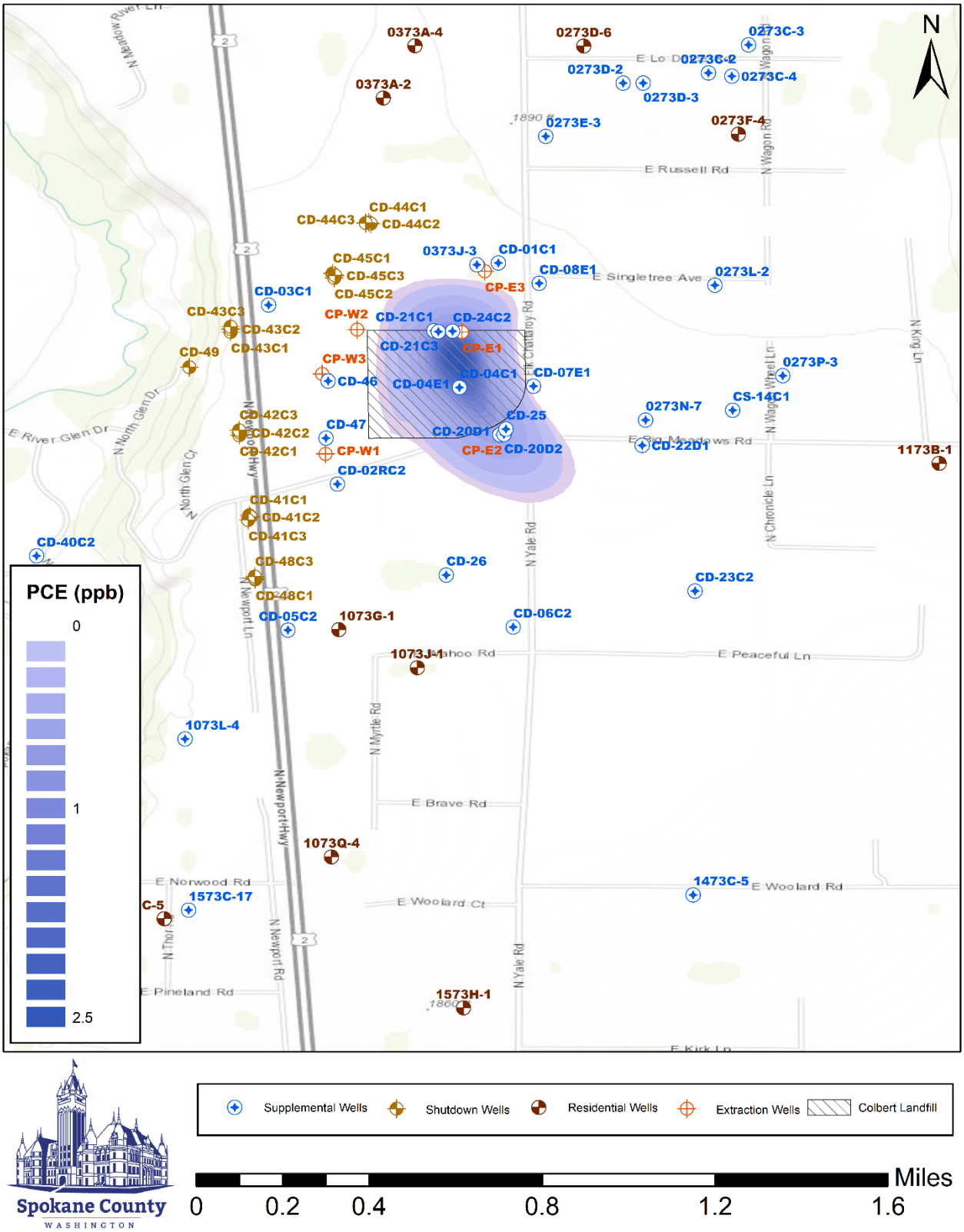


Figure 2-28 Lower Aquifer PCE Detections Map

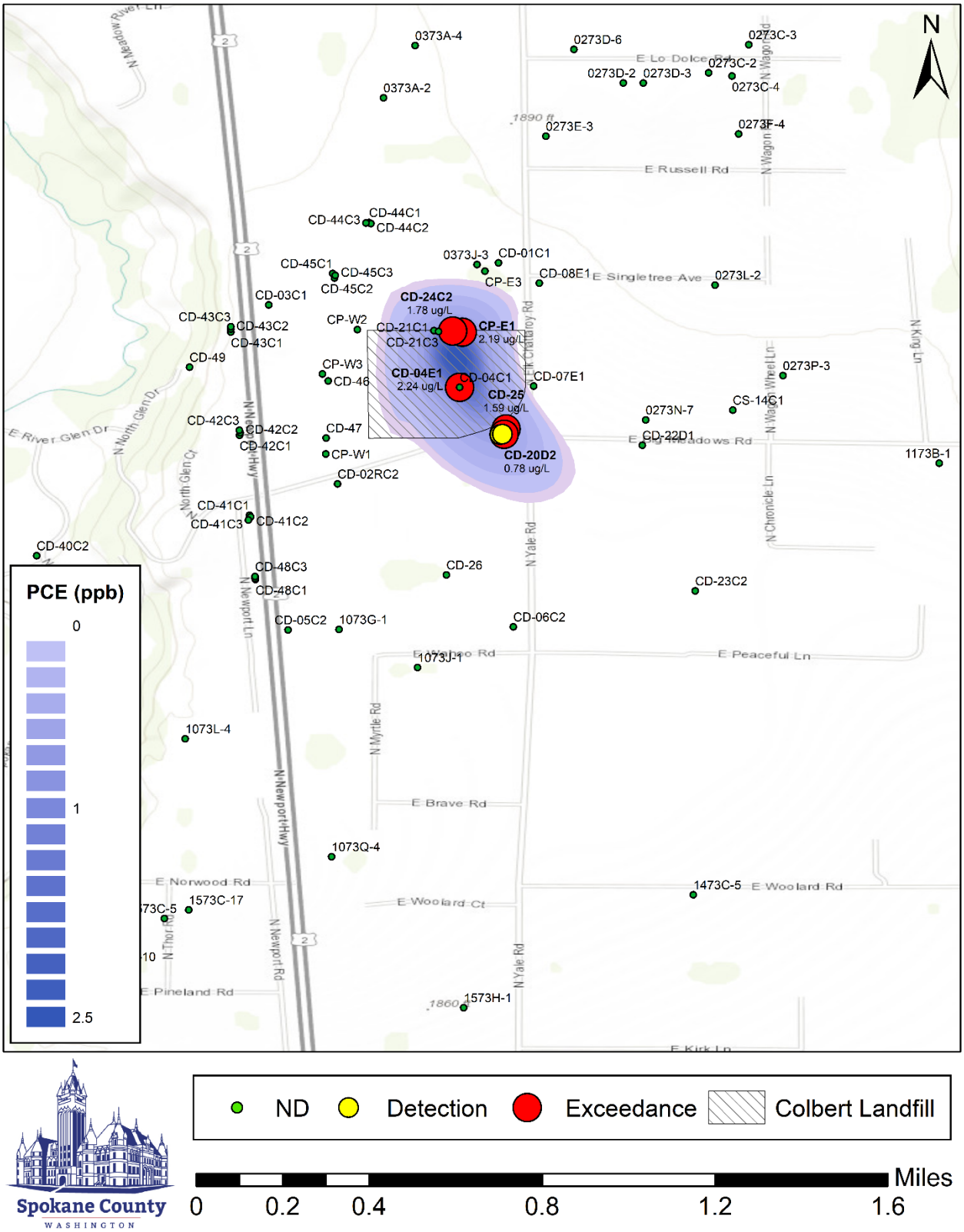


Figure 2-29 Lower Aquifer Estimated TCE Plume

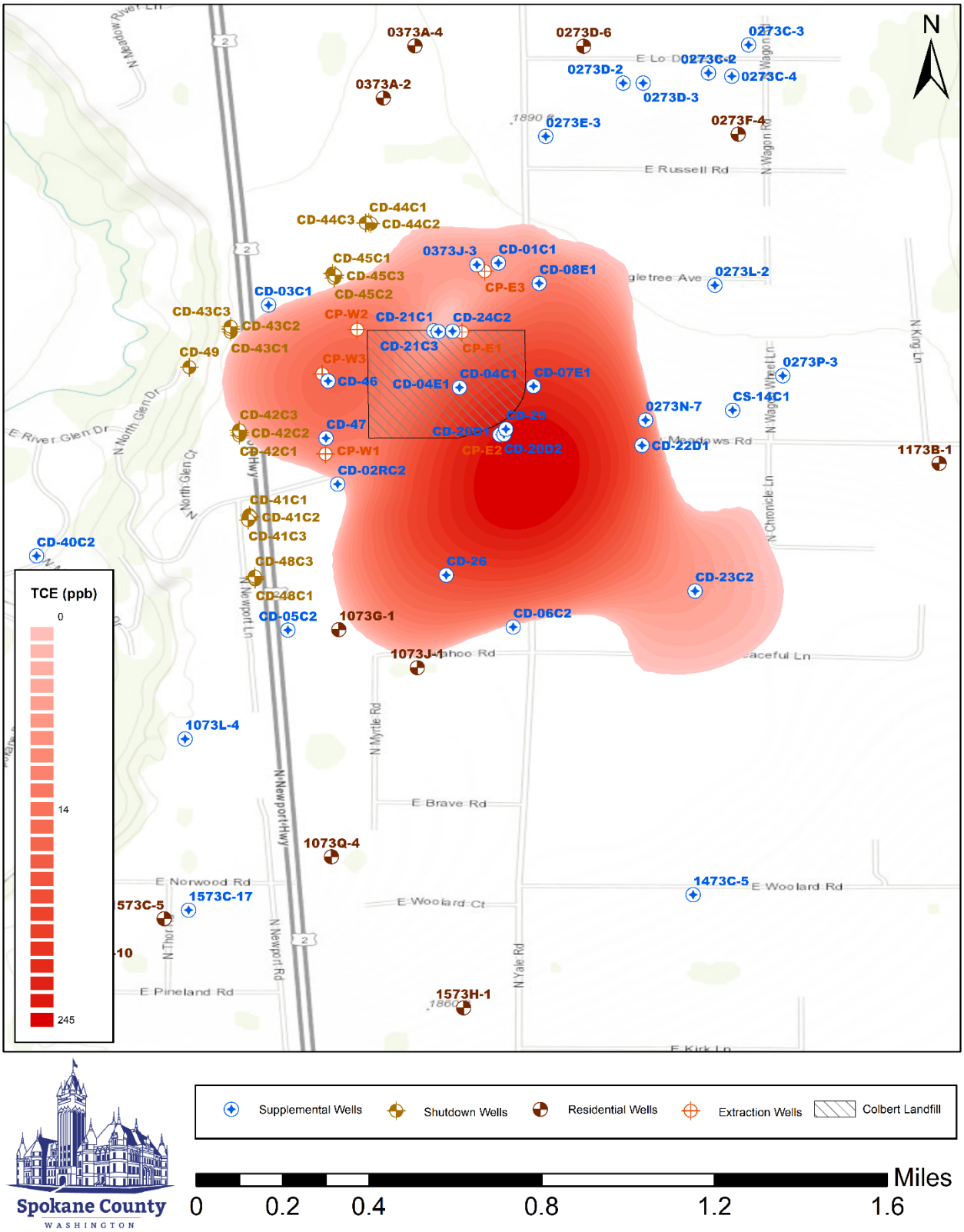


Figure 2-30 Lower Aquifer TCE Detections Map

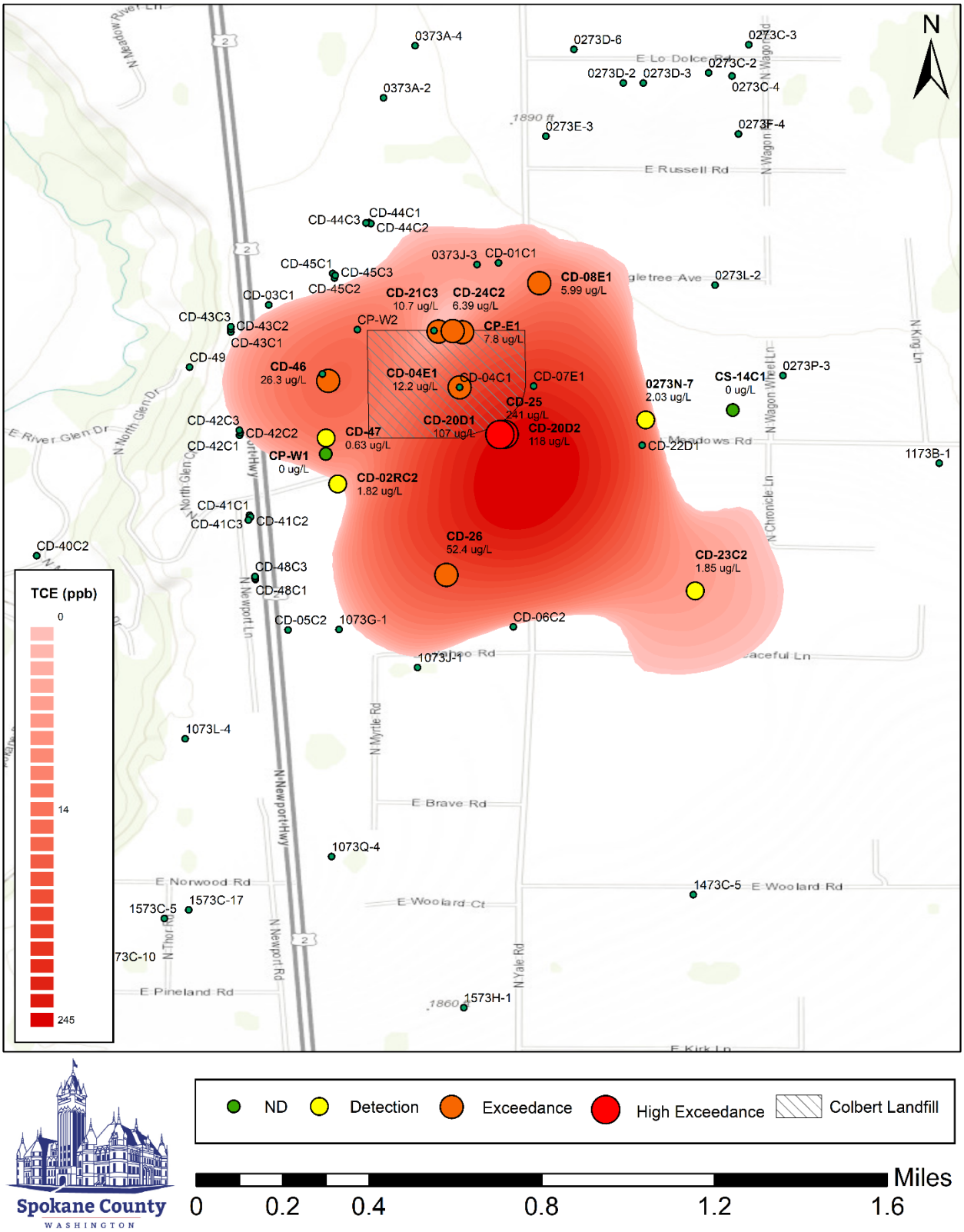


Figure 2-31 Lower Aquifer All Analytes Estimated Plume Map

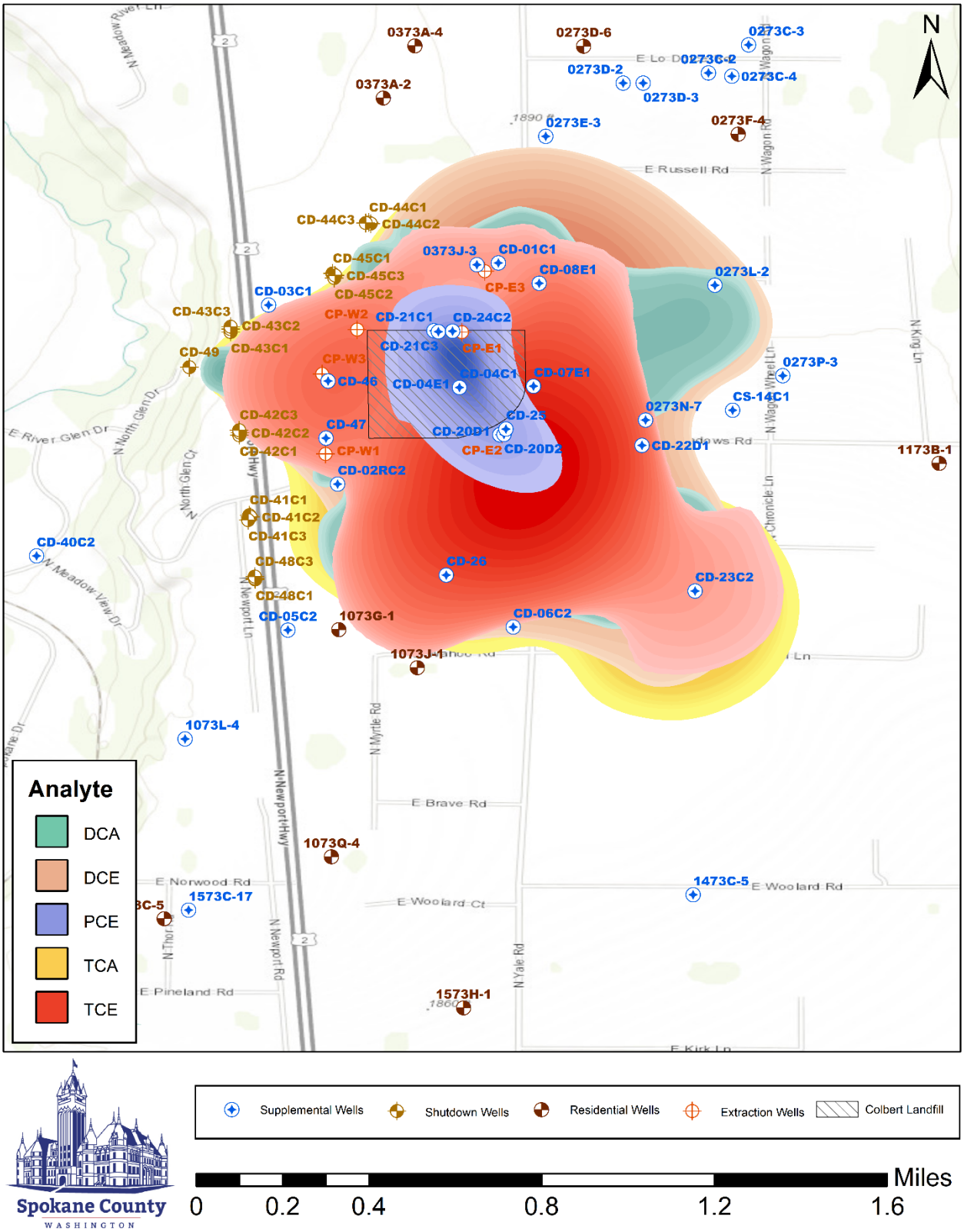
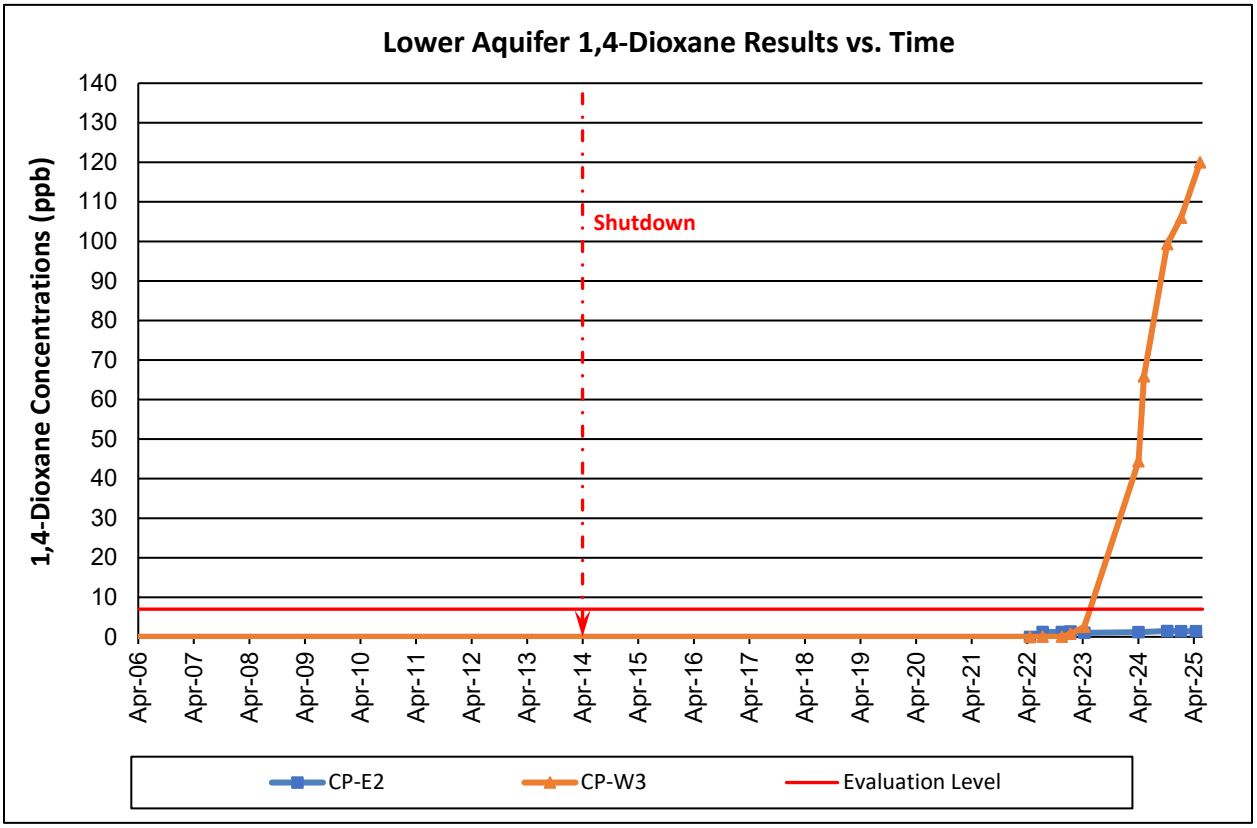
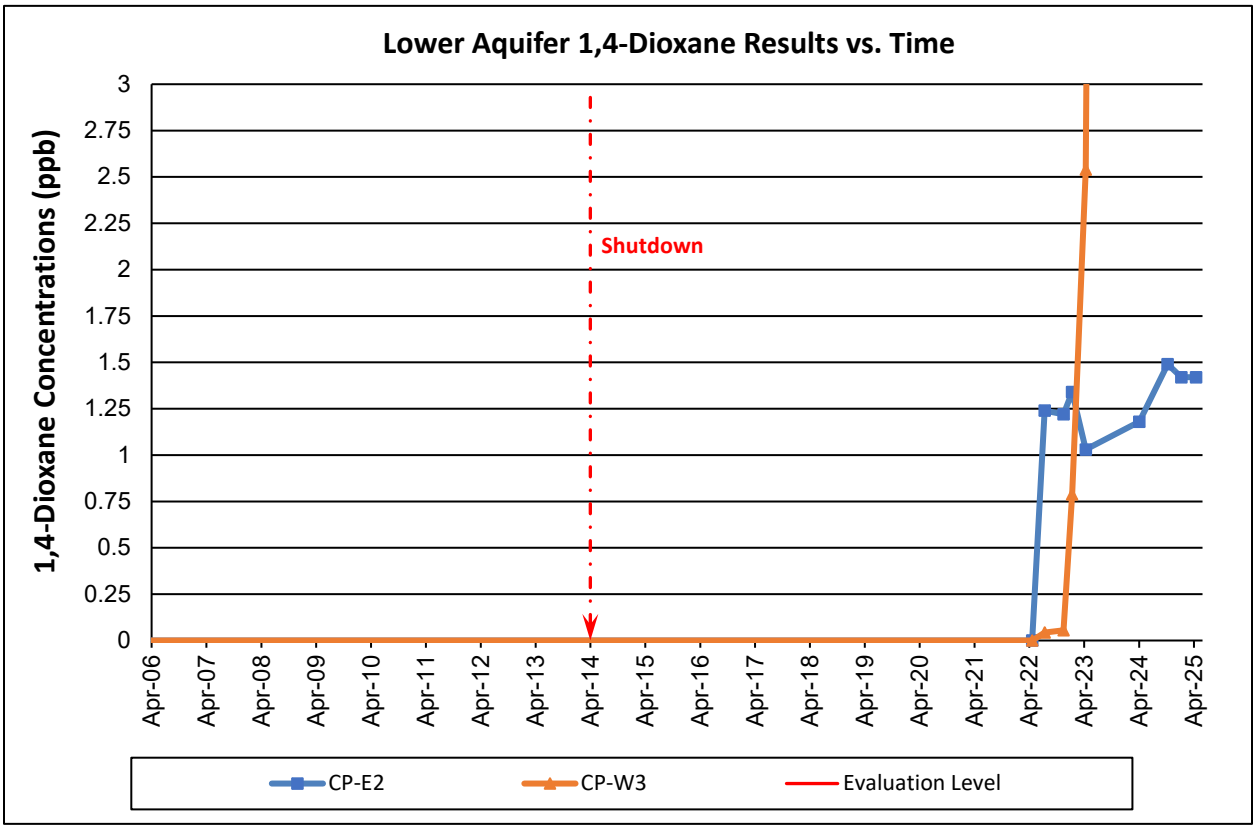


Table 2-9 Lower Aquifer 1,4-Dioxane Monitoring Results

StationID	Aquifer	Analyte	SampleDate	Result	Units	Reporting Limit	Qualifier
CD-21C3	lower	1,4-Dioxane	4/16/2025	0.495	ug/L	0.05	
CD-42C1	lower	1,4-Dioxane	10/8/2024	0.05	ug/L	0.1	U
CD-42C1	lower	1,4-Dioxane	1/7/2025	0.05	ug/L	0.1	U
CD-42C1	lower	1,4-Dioxane	4/15/2025	0.05	ug/L	0.05	U
CD-43C1	lower	1,4-Dioxane	10/9/2024	0.05	ug/L	0.1	U
CD-43C1	lower	1,4-Dioxane	1/7/2025	0.05	ug/L	0.1	U
CD-43C1	lower	1,4-Dioxane	4/15/2025	0.05	ug/L	0.05	U
CD-45C1	lower	1,4-Dioxane	10/8/2024	0.05	ug/L	0.1	U
CD-45C1	lower	1,4-Dioxane	1/7/2025	0.05	ug/L	0.1	U
CD-45C1	lower	1,4-Dioxane	4/16/2025	0.05	ug/L	0.05	U
CD-49	lower	1,4-Dioxane	10/8/2024	0.05	ug/L	0.1	U
CD-49	lower	1,4-Dioxane	4/16/2025	0.05	ug/L	0.05	U
CP-E1	lower	1,4-Dioxane	10/8/2024	0.0668	ug/L	0.1	J
CP-E1	lower	1,4-Dioxane	1/7/2025	0.0884	ug/L	0.1	J
CP-E2	lower	1,4-Dioxane	4/2/2024	1.18	ug/L	0.1	D
CP-E2	lower	1,4-Dioxane	10/8/2024	1.49	ug/L	0.1	
CP-E2	lower	1,4-Dioxane	1/7/2025	1.42	ug/L	0.1	
CP-E2	lower	1,4-Dioxane	4/15/2025	1.28	ug/L	0.05	
CP-E3	lower	1,4-Dioxane	10/8/2024	0.05	ug/L	0.1	U
CP-E3	lower	1,4-Dioxane	1/7/2025	0.05	ug/L	0.1	U
CP-W1	lower	1,4-Dioxane	10/8/2024	0.05	ug/L	0.1	U
CP-W1	lower	1,4-Dioxane	1/7/2025	0.05	ug/L	0.1	U
CP-W2	lower	1,4-Dioxane	10/8/2024	0.05	ug/L	0.1	U
CP-W2	lower	1,4-Dioxane	1/7/2025	0.05	ug/L	0.1	U
CP-W3	lower	1,4-Dioxane	4/2/2024	**44.4**	ug/L	0.1	D
CP-W3	lower	1,4-Dioxane	5/8/2024	**65.9**	ug/L	0.1	
CP-W3	lower	1,4-Dioxane	10/8/2024	**99.3**	ug/L	0.2	D
CP-W3	lower	1,4-Dioxane	1/7/2025	**106**	ug/L	2	D
CP-W3	lower	1,4-Dioxane	5/12/2025	**120**	ug/L	1	

Figure 2-32 Lower Aquifer Dioxane Results vs. Time





3.0 Upper Aquifer Monitoring

The upper aquifer monitoring program includes the sampling of compliance indicator COCs (VOCs), 1,4-dioxane sample collection, and MFS sampling from selected monitoring wells. Table 3-1 presents all wells located in the upper aquifer monitoring program and the sample analyses assigned to each well. Upper aquifer monitoring locations are presented in Figure 3-1. All upper aquifer monitoring occurs on an annual basis with the exception of the extraction wells and CD-36A1, which are operated and sampled quarterly.

3.1 Field Data and Groundwater Elevations

All upper aquifer compliance monitoring field parameters and groundwater elevations for this reporting period are shown in Table 3-3. Conductivity values ranged from 363 to 913 umhos/cm. Field pH values ranged from 6.65 to 7.99. The highest Conductivity values and some of the lowest pH values seem to be located in the southern extraction wells. Upper aquifer groundwater elevation contours/flow paths and elevation maps are presented in Figure 3-4 and Figure 3-5.

3.2 Compliance Monitoring (VOC's)

All wells in the upper aquifer have VOC samples collected from them and analyzed, even though the VOC analysis is not required in the MFS or 1,4-Dioxane work plan specifications.

3.2.1 Chemical Data

Constituents of Concern concentrations at the south system extraction wells are presented in Table 3-4. Select upper aquifer wells' COC concentrations vs. time are presented in Figure 3-7 through Figure 3-11. Upper aquifer COC estimated plume boundaries and COC detection maps are shown in Figure 3-12 through Figure 3-22. DCE concentrations for CD-36A1 increaesed from 1.76 ppb in April 2024 to 2.08 ppb in January 2025, and then decreased to 1.71 ppb in April 2025. DCA concentrations for CD-36A1 increased from 11 ppb in April 2024 to 15.2 ppb in January 2025, and then decreased to 9.62 ppb in April 2025. There were several COC concentration increases and decreases in the upper aquifer compliance monitoring wells during this reporting period. DCA in 1573A-1, DCA/DCE in CD-40C1, PCE in CD-60A1, TCA/DCA/DCE/TCE for CP-S1, and DCA/TCE for CP-S4 all exhibited concentration increases during this reporting period. DCA/DCE in CD-36A1, DCA/TCE in CS-04A1, and DCA/TCE in CP-S6 all exhibited concentration increases during this reporting period. DCA concentrations in both CD-36A1 and CP-S1 continued to exceed the Regional Screening Level of 2.8 ppb, but no exceedances of the Consent Decree criteria occurred during this reporting period. DCE and DCA concentrations in CD-36A1 exhibited concentration increases that began in April 2022, but the most recent data indicate that concentrations are stabilizing/ potentially beginning to decrease. PCE concentrations found in CP-S4 continue to remain below the cleanup criteria. A comparison summarizing the differences in COC concentrations observed in the upper aquifer monitoring wells between 2020, 2024, and 2025 is presented in Table 3-8.

3.2.2 Criteria

Criteria for the upper aquifer programs are presented in Table 3-2. All criteria exceedances in the upper aquifer programs are presented in Table 3-5 (Consent Decree criteria) and Table 3-6 (updated criteria values from the Colbert Landfill 6th Five-year Review, which includes an increase

for Trichloroethene [PCE] from the performance standard in the ROD [0.7 µg/L] to the current MCL [5µg/L], and a decrease for 1,1-Dichloroethane [1,1-DCA] to the regional screening level [RSL] of 2.8 µg/L). There were no exceedances of the Consent Decree criteria in the upper aquifer monitoring wells during this reporting period. DCA concentrations for CD-36A1 and CP-S1 continued to exceed the RSL during this reporting period. Monitoring well CD-36A1 has been added to the quarterly sampling schedule to better evaluate and confirm the COC concentrations found in this well/vicinity (CP-S1 and CP-S4 are currently on the quarterly sampling schedule).

3.3 1,4-Dioxane Sampling

As outlined in the *1,4-Dioxane Workplan for the Colbert Landfill (December 2007)*, five locations were selected for annual 1,4-dioxane sampling to further evaluate the extent of 1,4-Dioxane as well as protect residential wells at the Colbert Landfill site (see Table 3-1). Given potential changes in 1,4-Dioxane extent/prevalence, along with a potential change in groundwater flow conditions/ contaminant transport in post-P&T system shutdown conditions, Spokane County conducted another evaluation for 1,4-Dioxane at the Colbert Landfill that began in 2021 and ended in 2023. CD-36A1 was added to the annual 1,4-Dioxane sampling schedule for the upper aquifer due to high 1,4-Dioxane concentrations found at this well. See Table 3-7 for more information.

3.3.1 Chemical Data

The results for the 1,4-dioxane sampling during this reporting period are shown in Table 3-7. Concentrations versus time graphs are presented in Figure 3-6. 1,4-Dioxane concentrations for CD-36A1 were undetectable during this reporting period.

3.4 Upper Aquifer Minimal Functional Standards (MFS) Monitoring

Upper aquifer locations designated in the MFS groundwater monitoring program were sampled in April 2025.

3.4.1 Chemical Data

Concentrations of analytes tested for under MFS monitoring were consistent with previous results (see Figure 3-23 and Figure 3-24). CS-04A1 exhibited decreases in concentrations for DCA and TCE, and CD-60A1 exhibited an increase in PCE concentrations.

3.4.2 Criteria

None of the MFS sampling locations exceeded any of the applicable criteria during this reporting period.

3.4.3 Statistical Analysis

The MFS Groundwater Monitoring Plan (Landau Assoc., 1996) requires three statistical methods to be used when evaluating groundwater Quality in accordance with MFS requirements. Time series plots were performed and discussed previously. Box plots were required after one year of data was collected. Box plots are presented in Figure 3-27. The third statistical method required is the Mann-Whitney nonparametric significance test. The summary results for this test are presented in Table 3-9. Although lower aquifer locations are no longer scheduled for sampling, previous results are shown here as well. A statistically significant change (less than 0.05 level of significance) from this test indicates that a difference may exist between background and downgradient wells, but does

not differentiate between sets. While it is true that a difference in nitrate and chloride concentrations may exist between background and downgradient wells, when taking time series plots and box plots into consideration, it is not likely that these differences were due to influence by the landfill.

Table 3-1 Upper Aquifer Monitoring Programs and Locations

Program	Schedule	Parameters	Wells
Compliance Monitoring	Annual (Quarterly at extraction wells)	VOC's	CD-31A1, CD-34A1, CD-36A1, CD-37A1, CD-38A1, CD-40C1**, CP-S1, CP-S3, CP-S4, CP-S5, CP-S6
1,4-Dioxane Sampling	Annual	1,4-Dioxane	CP-S1, 1073D-1*, 1473M-1*, 1573A-1*, CD-40C1**, CD-36A1
MFS Monitoring	Annual	Cl/NH3/NO2/NH3/SO4/ Fe/Mn/Zn/TOC/COD	CD-03A1, CD-60A1, CD-61A1, CS-04A1

* Residential use wells

**Well considered to be screened in the fluvial aquifer and COC source is from the upper aquifer west of Hwy 2 (see *Phase 1 Engineering Report. Landau Assoc, 1991*.)

Table 3-2 Upper Aquifer Criteria

PROGRAM	CRITERIA	TCA	DCE	DCA	TCE	PCE	MC	1,4-Dioxane		Units
CONSENT DECREE	Performance	200	7	4050	5	0.7	2.5			ug/L
(Compliance)	Evaluation	200	7	4050	5	0.7	2.5	7		
		Cl	Fe	Mn	Zn	TOC	COD	SO4	NO3	
MFS	(mg/L)	250	0.3	0.05	5	NA	NA	250	10	mg/L

Figure 3-1 Upper Aquifer Compliance Monitoring Locations

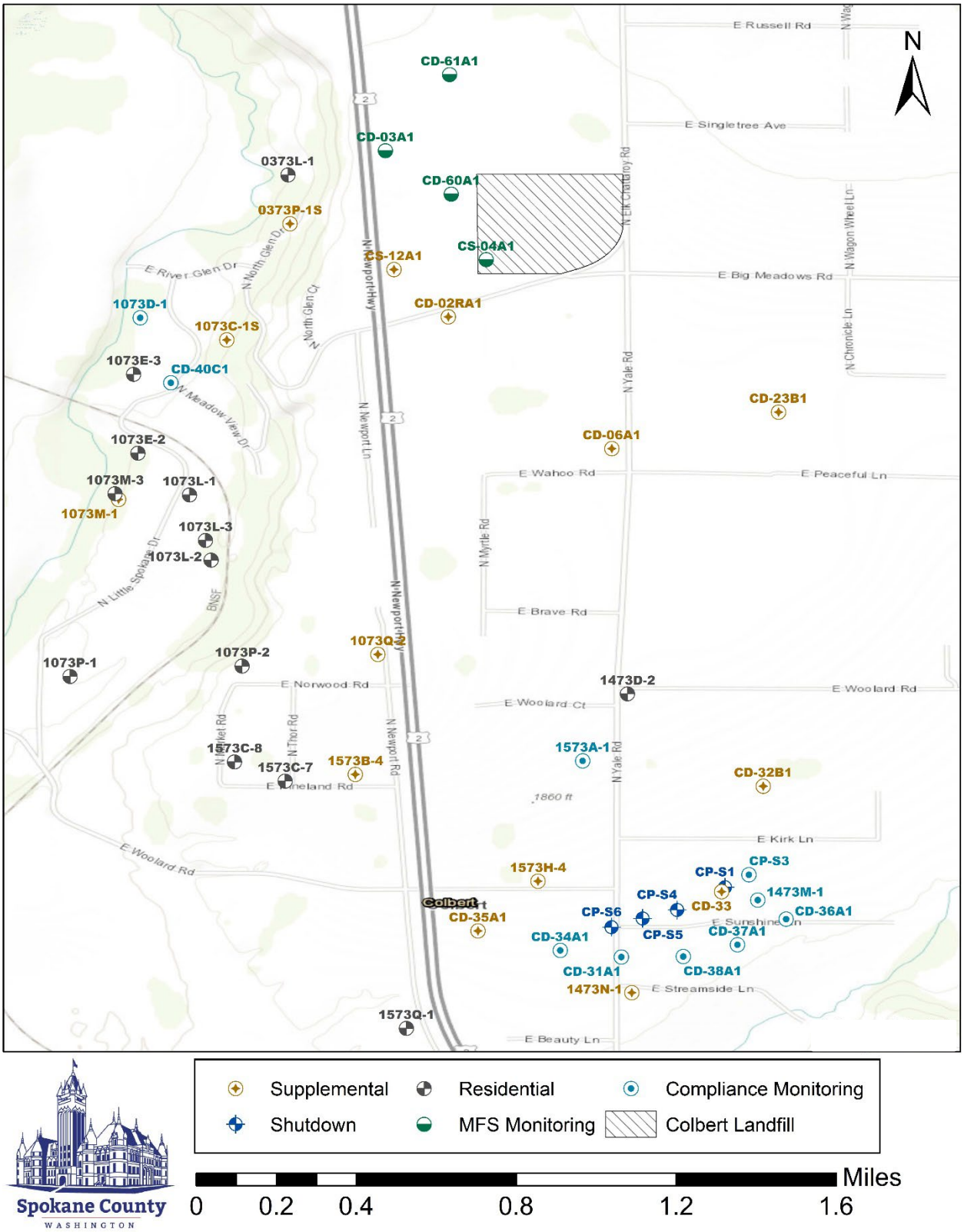
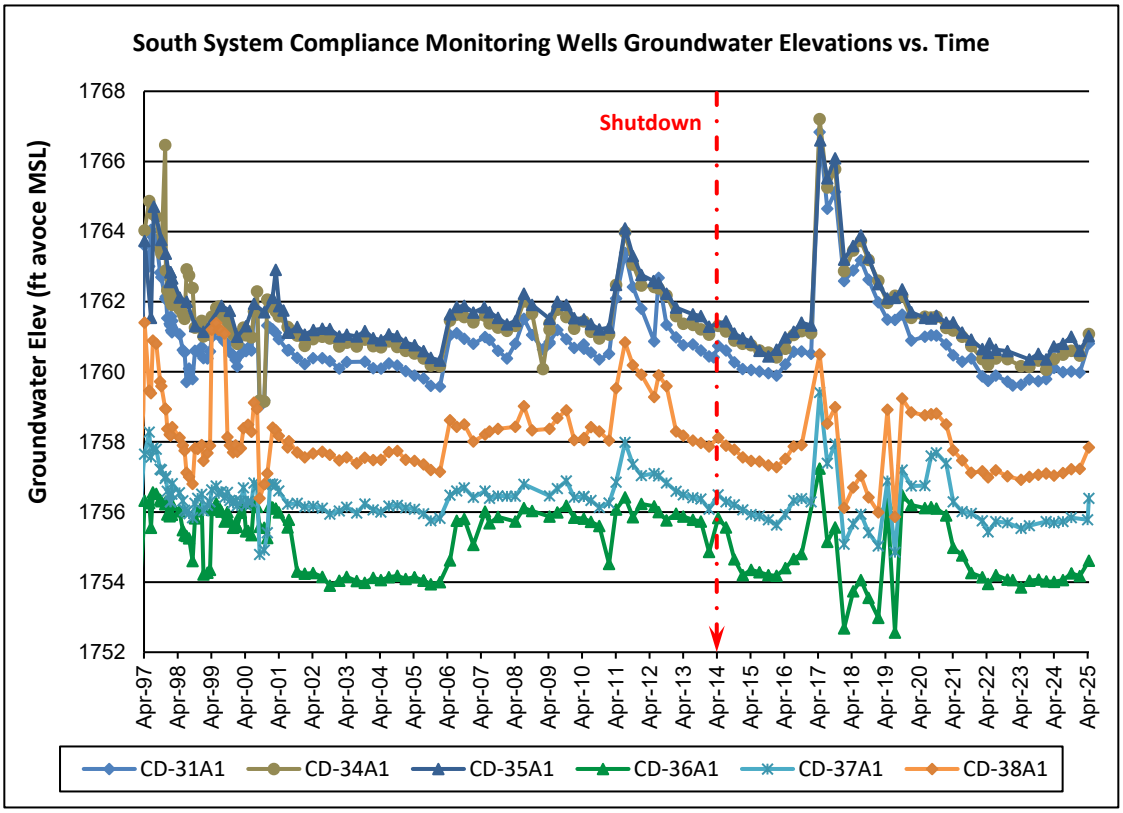


Table 3-3 Upper Aquifer Field Parameters

SampleDate	StationID	WtrElev	Temp	PH	Conductivity	Turbidity	Aquifer	Program
4/21/2025	1573A-1	1760.99	11.5	7.75	502	0.61	upper	CCM
5/28/2025	1573A-1	1760.01	11.9	7.68	520	0.17	upper	CCM
4/15/2025	CD-31A1	1760.81	10.1	7.65	695	0.31	upper	CCM
4/15/2025	CD-34A1	1761.08	10.8	7.65	641	0.49	upper	CCM
7/9/2024	CD-36A1	1754.06	11.5	7.6	619	0.65	upper	CCM
10/8/2024	CD-36A1	1754.25	9.8	7.44	642	1.75	upper	CCM
1/7/2025	CD-36A1	1754.17	9.8	7.48	637	2.33	upper	CCM
4/15/2025	CD-36A1	1754.61	10.9	7.65	630	0.98	upper	CCM
5/13/2025	CD-36A1	1754.26	11.1	7.66	629	0.99	upper	CCM
4/15/2025	CD-37A1	1756.39	11.2	7.45	755	0.42	upper	CCM
4/15/2025	CD-38A1	1757.84	10.8	7.67	610	0.41	upper	CCM
4/16/2025	CD-40C1	1668.22	11	7.85	566	0.19	upper	CCM
4/15/2025	CP-S3	1759.54	11.6	7.55	623	0.89	upper	CCM
4/22/2025	1073D-1		10.1	7.99	412		upper	CCM/res
4/22/2025	1473M-1	1754.15	11.1	7.74	561		upper	CCM/res
4/16/2025	CD-03A1	1773.87	9.6	7.7	363	0.17	upper	MFS
4/16/2025	CD-60A1	1773.33	10.3	7.19	570	0.09	upper	MFS
4/16/2025	CD-61A1	1774.67	10.7	7.74	368	0.12	upper	MFS
4/16/2025	CS-04A1		10.8	6.65	558	0.49	upper	MFS
7/9/2024	CP-S1	1758.94	11	7.46	579	0.42	upper	SD
10/8/2024	CP-S1	1758.8	10.5	7.39	617	1.92	upper	SD
1/7/2025	CP-S1		10.3	7.46	621	1.44	upper	SD
4/15/2025	CP-S1	1759.32	10.4	7.58	594	0.69	upper	SD
7/9/2024	CP-S4	1759.75	11	7.22	668	0.24	upper	SD
10/8/2024	CP-S4	1759.73	10.5	7.23	712	1.05	upper	SD
1/7/2025	CP-S4		10.1	7.29	727	0.43	upper	SD
4/15/2025	CP-S4	1760.32	10.3	7.36	719	0.94	upper	SD
7/9/2024	CP-S5		11.7	7.26	718	0.44	upper	SD
10/8/2024	CP-S5		11.5	7.23	801	2.36	upper	SD
1/7/2025	CP-S5		10.8	7.28	797	2.53	upper	SD
4/15/2025	CP-S5		10.8	7.37	787	1.8	upper	SD
7/9/2024	CP-S6	1760.55	11.3	7.24	806	0.42	upper	SD
10/8/2024	CP-S6	1760.47	10.5	7.22	913	1.52	upper	SD
1/7/2025	CP-S6		10.1	7.27	889	2.26	upper	SD
4/15/2025	CP-S6	1761.3	10.3	7.41	896	0.86	upper	SD

Temp=degrees C; Conductivity=umhos/cm; Turbidity= NTU

Figure 3-2 Upper Aquifer Groundwater Elevations vs. Time



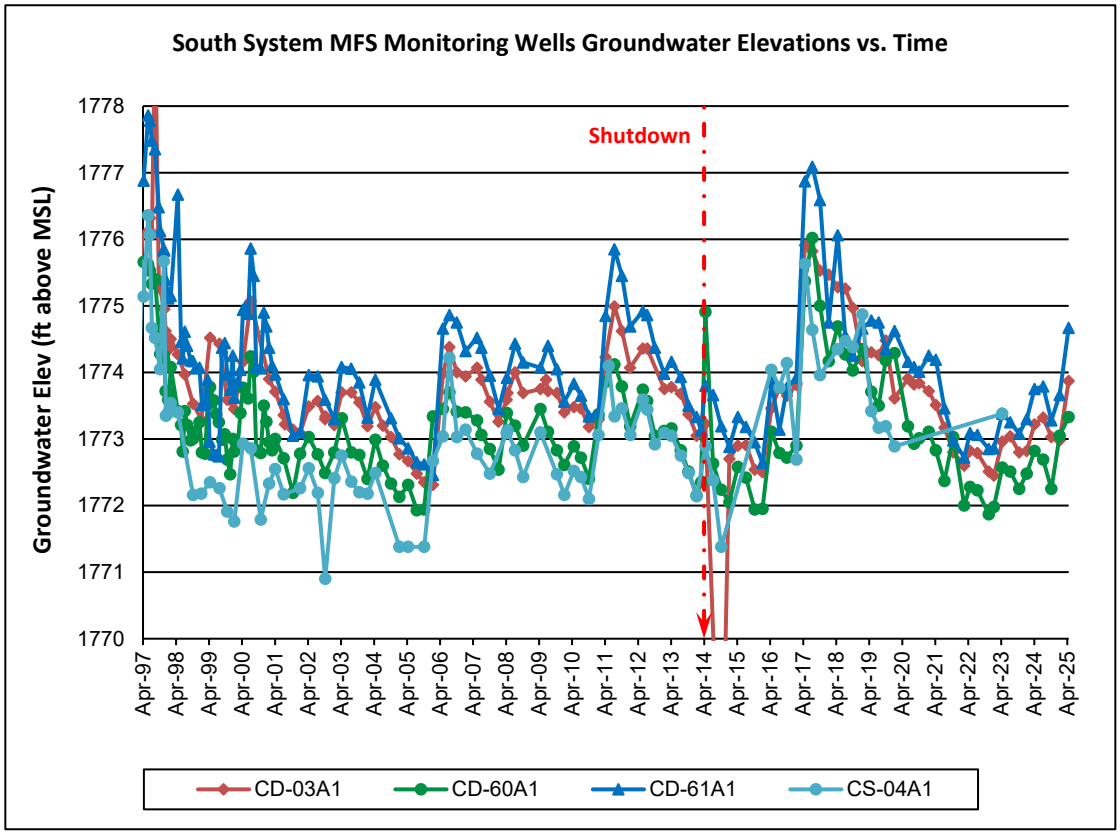
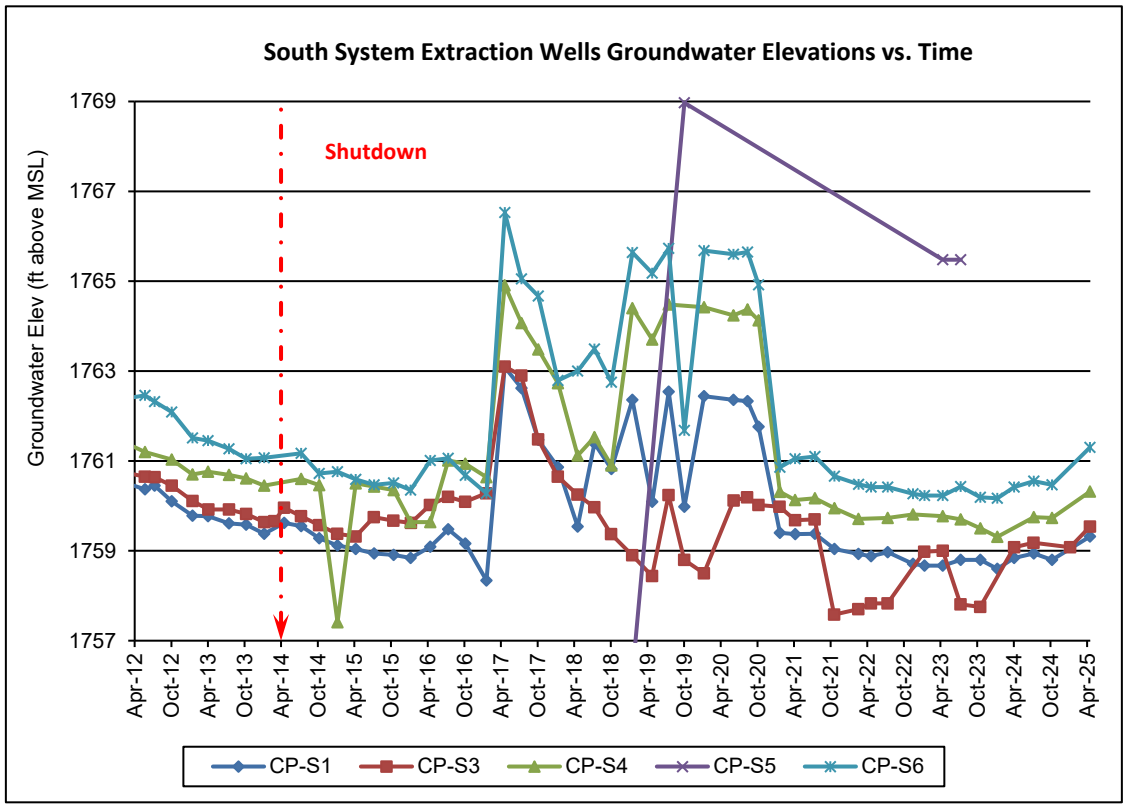


Figure 3-3 Upper Aquifer Groundwater Elevations vs. Time (cont.)



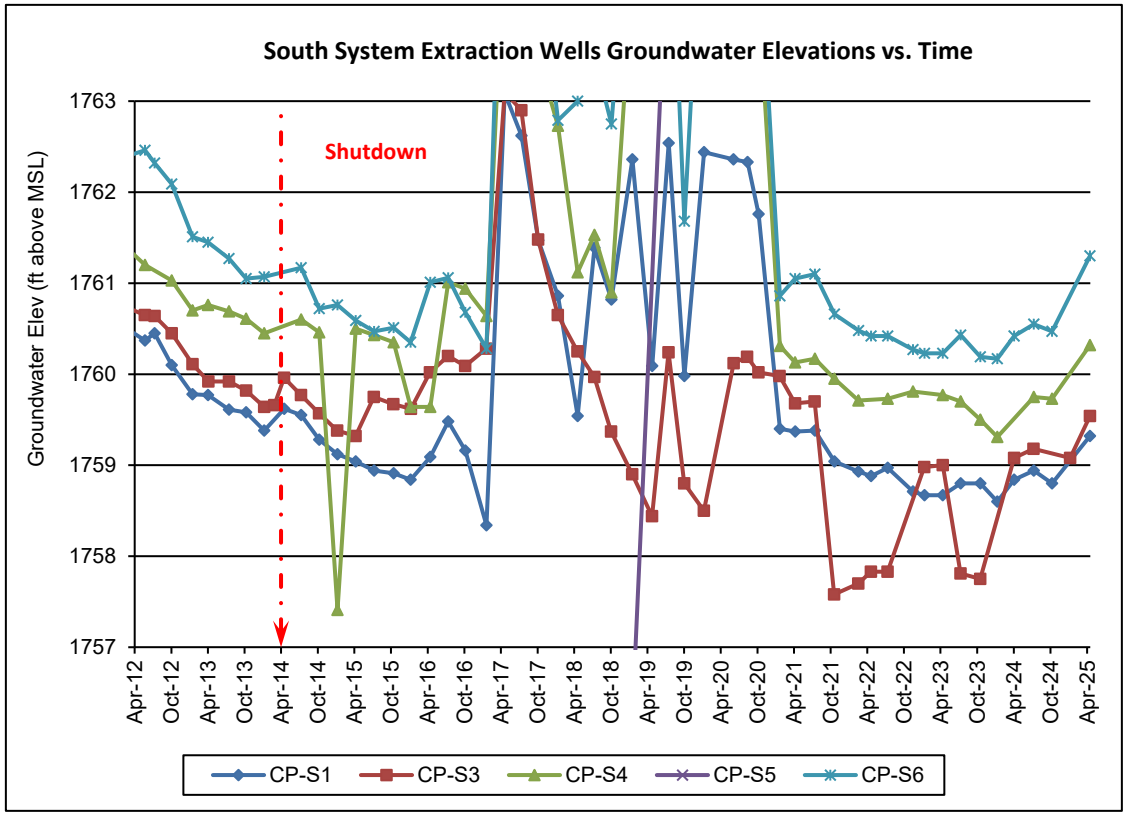


Figure 3-4 Upper Aquifer Estimated Groundwater Elevation Contours

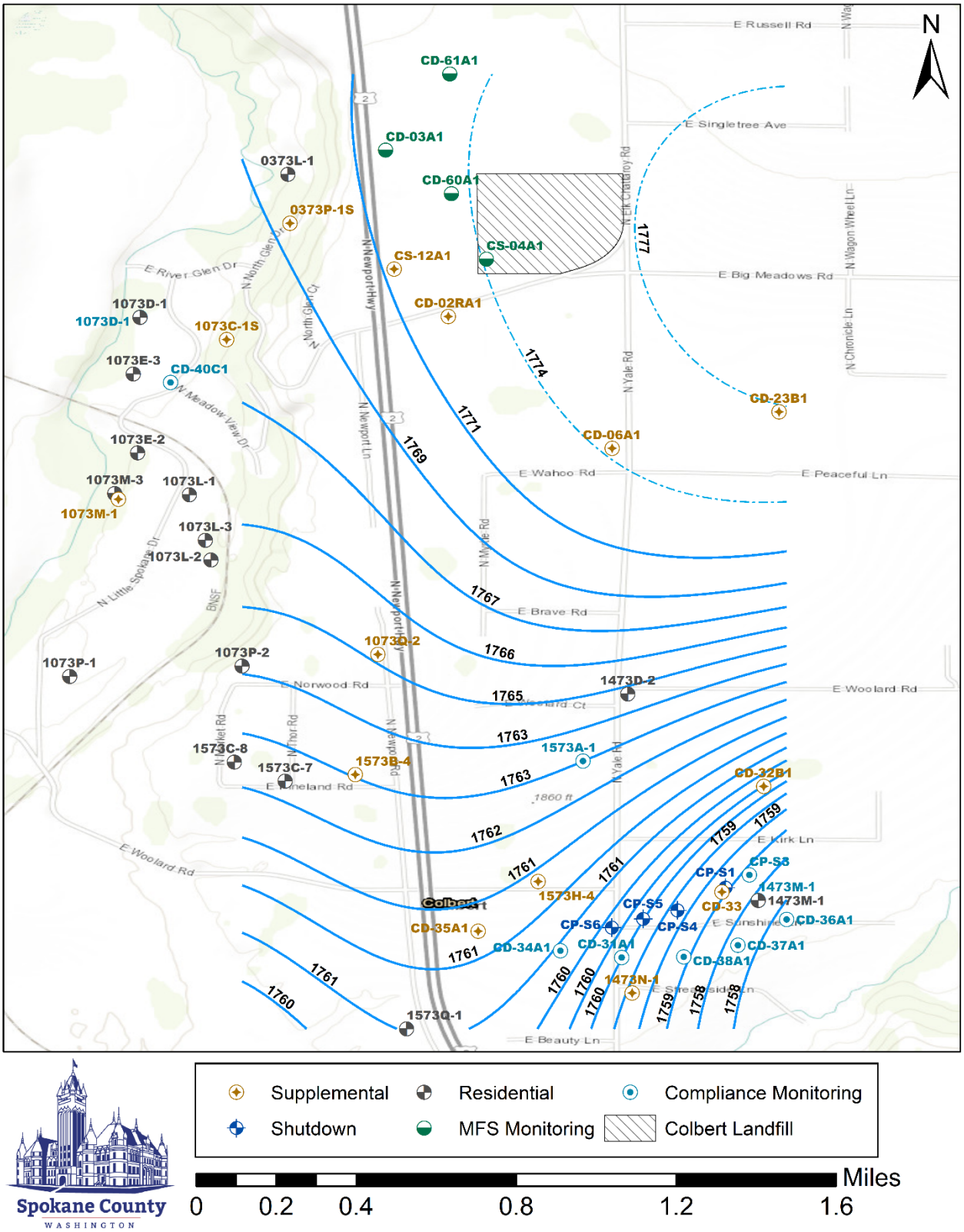


Figure 3-5 Upper Aquifer Groundwater Elevation Map

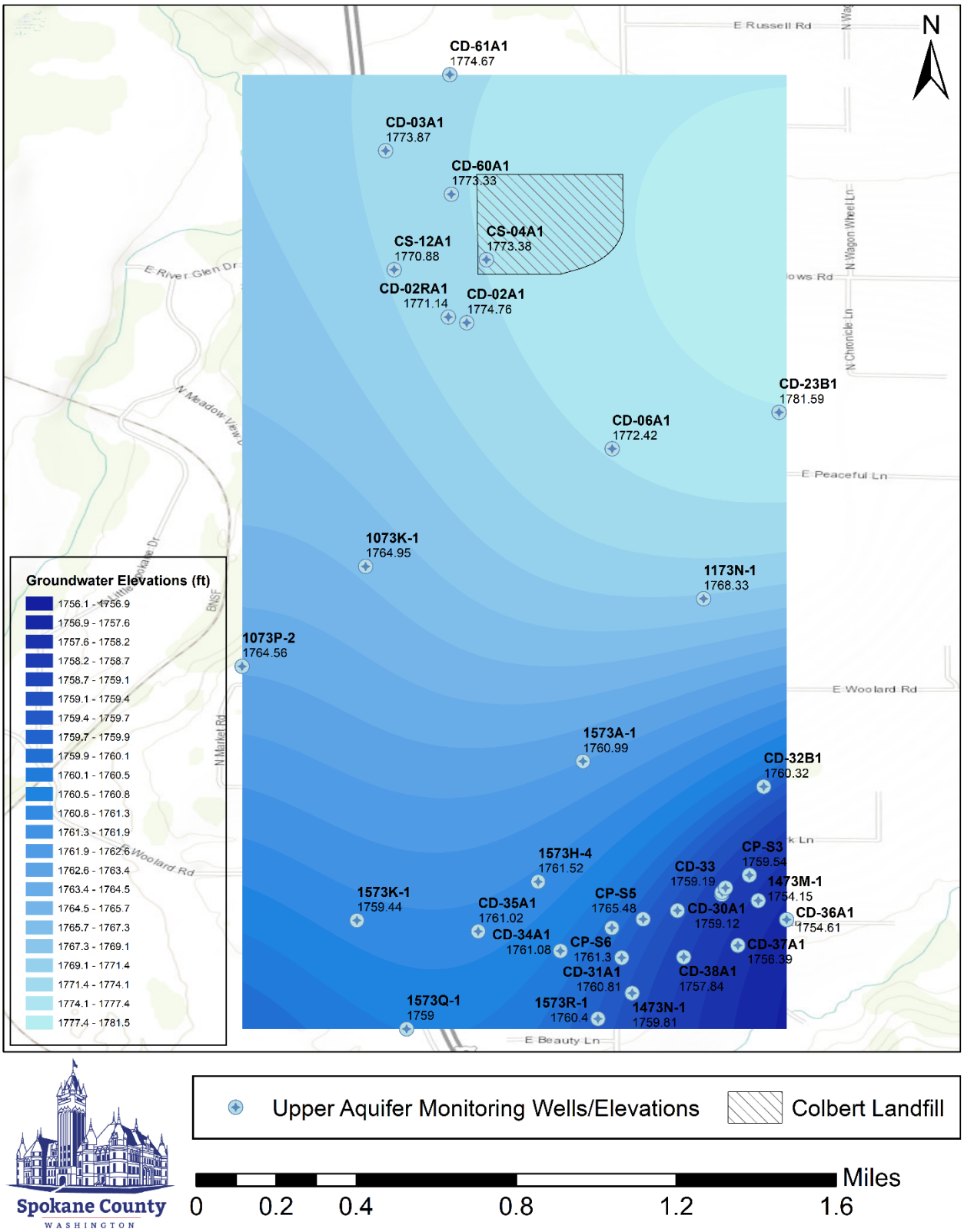


Table 3-4 Upper Aquifer Groundwater Monitoring Results

				ug/L						mg/L								
StationID	Aquifer	Program	SampleDate	DCA	DCE	MC	PCE	TCA	TCE	Cl	COD	Fe	Mn	N-NH3	N-NO3	SO4	TOC	Zn
1573A-1	upper	CCM	4/21/2025	0.62	<0.50	<0.50	<0.50	0.6	<0.50									
CD-31A1	upper	CCM	4/15/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CD-34A1	upper	CCM	4/15/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CD-36A1	upper	CCM	7/9/2024	10.8	1.98	<0.50	<0.50	<0.50	<0.50									
CD-36A1	upper	CCM	10/8/2024	12.7	1.94	<0.50	<0.50	<0.50	<0.50									
CD-36A1	upper	CCM	1/7/2025	15.2	2.08	<0.50	<0.50	<0.50	<0.50									
CD-36A1	upper	CCM	4/15/2025	9.62	1.71	<0.50	<0.50	<0.50	<0.50									
CD-37A1	upper	CCM	4/15/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CD-38A1	upper	CCM	4/15/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CD-40C1	upper	CCM	4/16/2025	0.72	0.85	<0.50	<0.50	<0.50	<0.50									
CP-S3	upper	CCM	4/15/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CD-03A1	upper	MFS	4/16/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.56	<0.50	<0.50	<0.50	<0.50	0.214	5.71	<0.50	<0.50
CD-60A1	upper	MFS	4/16/2025	<0.50	<0.50	<0.50	0.6	<0.50	<0.50	4	5	<0.50	<0.50	<0.50	1.7	6.85	1.17	<0.50
CD-61A1	upper	MFS	4/16/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.72	<0.50	<0.50	<0.50	<0.50	0.134	8.79	<0.50	<0.50
CS-04A1	upper	MFS	4/16/2025	0.79	<0.50	<0.50	<0.50	<0.50	<0.50	2.49	8.8	<0.50	<0.50	<0.50	2.57	6.32	1.47	<0.50
CP-S1	upper	SD	7/9/2024	0.91	<0.50	<0.50	<0.50	<0.50	1.02									
CP-S1	upper	SD	10/8/2024	1.24	<0.50	<0.50	<0.50	0.65	1.33									
CP-S1	upper	SD	1/7/2025	3.35	1.79	<0.50	<0.50	1.54	2.67									
CP-S1	upper	SD	4/15/2025	1	0.82	<0.50	<0.50	0.52	1.12									
CP-S4	upper	SD	7/9/2024	0.58	<0.50	<0.50	0.52	<0.50	1.79									
CP-S4	upper	SD	10/8/2024	0.9	<0.50	<0.50	0.57	<0.50	1.93									
CP-S4	upper	SD	1/7/2025	1.19	<0.50	<0.50	0.61	0.52	2.36									
CP-S4	upper	SD	4/15/2025	0.73	<0.50	<0.50	<0.50	<0.50	1.62									
CP-S5	upper	SD	7/9/2024	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CP-S5	upper	SD	10/8/2024	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CP-S5	upper	SD	1/7/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CP-S5	upper	SD	4/15/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CP-S6	upper	SD	7/9/2024	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CP-S6	upper	SD	10/8/2024	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CP-S6	upper	SD	1/7/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									
CP-S6	upper	SD	4/15/2025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50									

Table 3-5 Upper Aquifer Criteria Exceedances (Consent Decree criteria)

There were no upper aquifer Consent Decree criteria exceedances observed during this reporting period.

StationID	SampleDate	Aquifer	Program	Analyte	Result	Units	Flag

Table 3-6 Shutdown Program Criteria Exceedances (*updated criteria values)

*Increase for Trichloroethene (PCE) from the performance standard in the ROD (0.7 µg/L) to the current MCL (5µg/L), and a decrease for 1,1-Dichloroethane (1,1-DCA) to the regional screening level (RSL) of 2.8 µg/L.

StationID	SampleDate	Aquifer	Program	Analyte	Result	Units	Flag
CD-36A1	7/9/2024	upper	CCM	1,1-Dichloroethane	10.8	ug/L	Exceedance
CD-36A1	10/8/2024	upper	CCM	1,1-Dichloroethane	12.7	ug/L	Exceedance
CD-36A1	1/7/2025	upper	CCM	1,1-Dichloroethane	15.2	ug/L	Exceedance
CD-36A1	4/15/2025	upper	CCM	1,1-Dichloroethane	9.62	ug/L	Exceedance
CP-S1	1/7/2025	upper	SD	1,1-Dichloroethane	3.35	ug/L	Exceedance

Table 3-7 1,4-Dioxane Monitoring Results

StationID	Aquifer	Analyte	SampleDate	Result	Units	Reporting Limit	Qualifier
1073D-1	upper	1,4-Dioxane	4/22/2025	0.18	ug/L	0.05	
1473M-1	upper	1,4-Dioxane	4/22/2025	0.05	ug/L	0.05	U
1573A-1	upper	1,4-Dioxane	5/28/2025	0.05	ug/L	0.05	U
CD-36A1	upper	1,4-Dioxane	5/13/2025	0.05	ug/L	0.05	U
CD-40C1	upper	1,4-Dioxane	4/16/2025	1.9	ug/L	0.05	
CP-S1	upper	1,4-Dioxane	4/15/2025	2.58	ug/L	0.05	

Figure 3-6 1,4-Dioxane Concentrations vs. Time

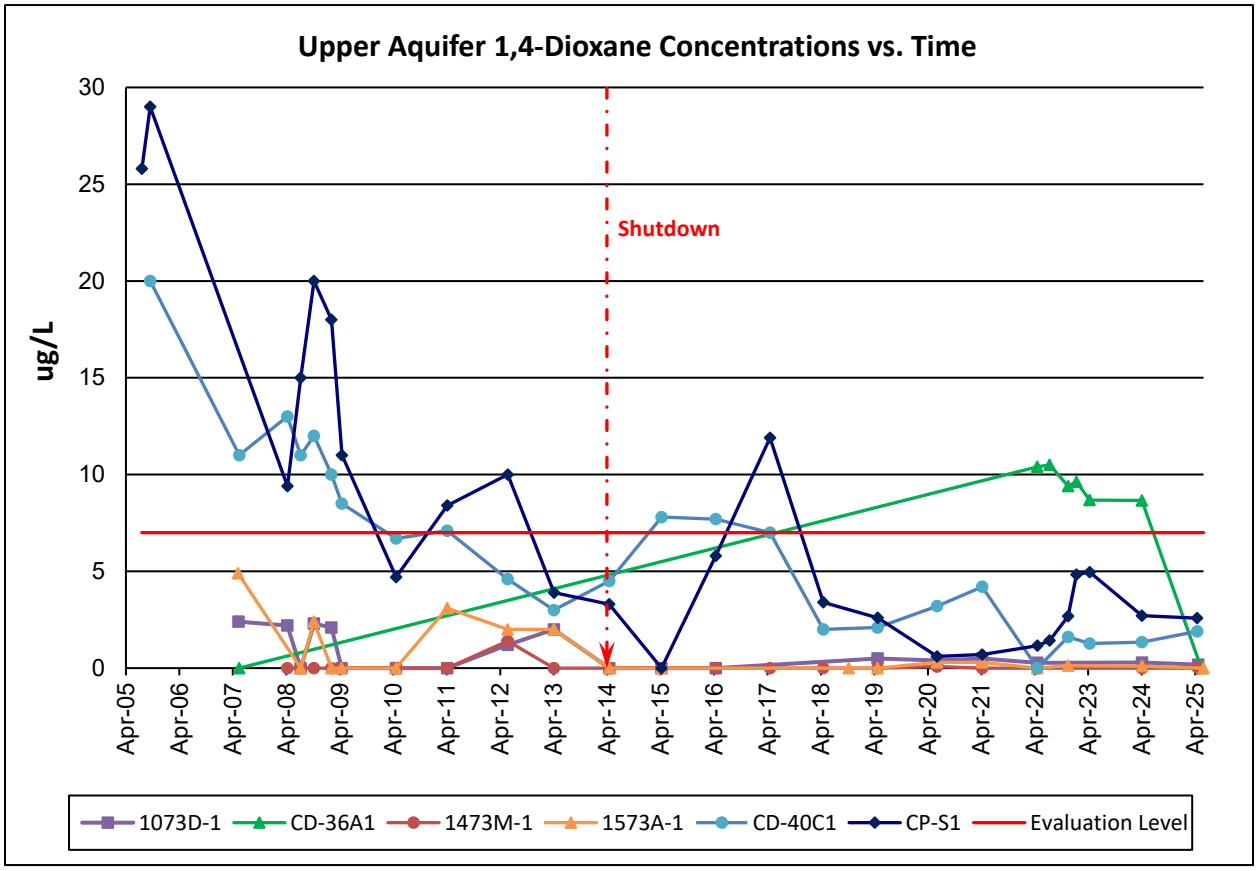


Table 3-8 Upper Aquifer Well Concentrations: Summary of 5-year/1-year Differences

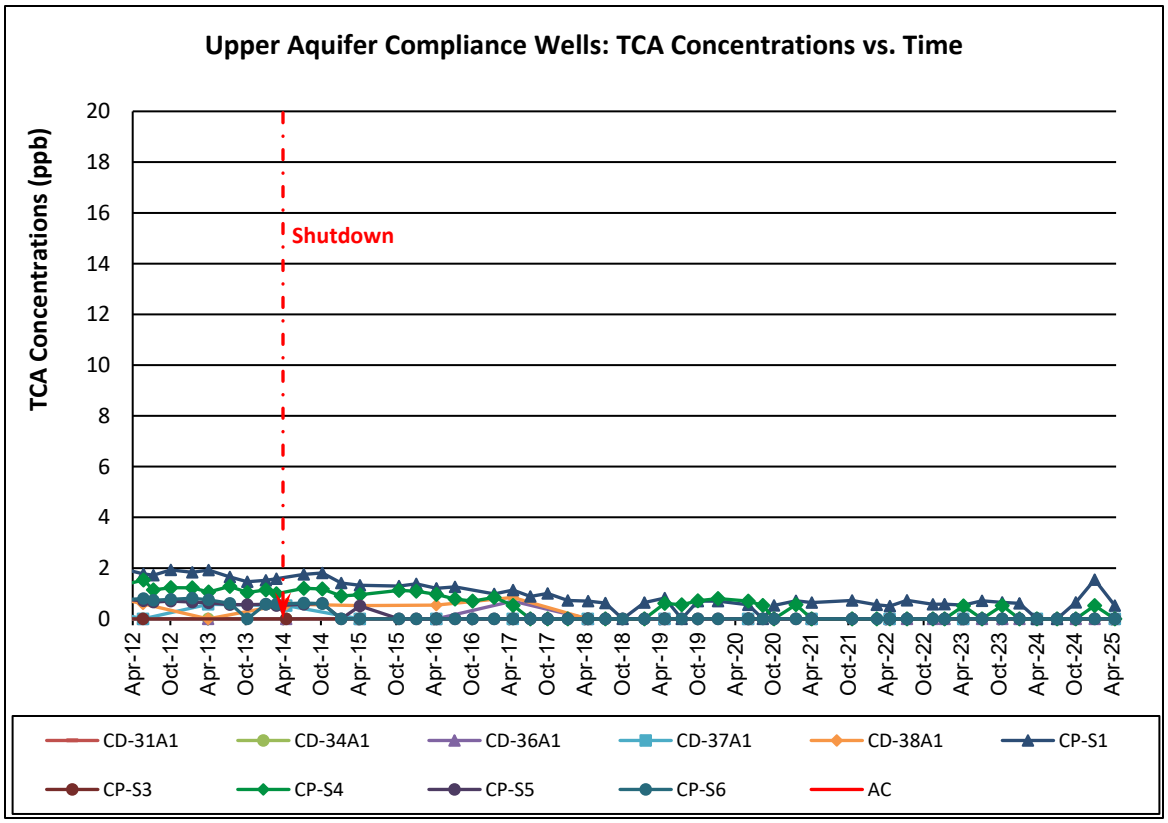
StationID	Aquifer	Program	Analyte	2020 Results	2024 Results	2025 Results	5-Year Difference	1-Year Difference	Units
1573A-1	upper	CCM	TCA	1.04	0.6	0.6	-0.44	0	ug/L
1573A-1	upper	CCM	DCA	0.75	0	0.62	-0.13	0.62	ug/L
1573A-1	upper	CCM	DCE	0	0	0	0	0	ug/L
1573A-1	upper	CCM	MC	0	0	0	0	0	ug/L
1573A-1	upper	CCM	PCE	0	0	0	0	0	ug/L
1573A-1	upper	CCM	TCE	0.76	0	0	-0.76	0	ug/L
1573A-1	upper	CCM	VC	0	0	0	0	0	ug/L
CD-31A1	upper	CCM	TCA	0	0	0	0	0	ug/L
CD-31A1	upper	CCM	DCA	0	0	0	0	0	ug/L
CD-31A1	upper	CCM	DCE	0	0	0	0	0	ug/L
CD-31A1	upper	CCM	MC	0	0	0	0	0	ug/L
CD-31A1	upper	CCM	PCE	0	0	0	0	0	ug/L
CD-31A1	upper	CCM	TCE	0	0	0	0	0	ug/L
CD-31A1	upper	CCM	VC	0	0	0	0	0	ug/L
CD-34A1	upper	CCM	TCA	0	0	0	0	0	ug/L
CD-34A1	upper	CCM	DCA	0	0	0	0	0	ug/L
CD-34A1	upper	CCM	DCE	0	0	0	0	0	ug/L
CD-34A1	upper	CCM	MC	0	0	0	0	0	ug/L
CD-34A1	upper	CCM	PCE	0	0	0	0	0	ug/L
CD-34A1	upper	CCM	TCE	0	0	0	0	0	ug/L
CD-34A1	upper	CCM	VC	0	0	0	0	0	ug/L
CD-36A1	upper	CCM	TCA	0	0	0	0	0	ug/L
CD-36A1	upper	CCM	DCA	0	11	9.62	9.62	-1.38	ug/L
CD-36A1	upper	CCM	DCE	0	1.76	1.71	1.71	-0.05	ug/L
CD-36A1	upper	CCM	MC	0	0	0	0	0	ug/L
CD-36A1	upper	CCM	PCE	0	0	0	0	0	ug/L
CD-36A1	upper	CCM	TCE	0	0	0	0	0	ug/L
CD-36A1	upper	CCM	VC	0	0	0	0	0	ug/L
CD-37A1	upper	CCM	TCA	0	0	0	0	0	ug/L
CD-37A1	upper	CCM	DCA	0	0	0	0	0	ug/L
CD-37A1	upper	CCM	DCE	0	0	0	0	0	ug/L
CD-37A1	upper	CCM	MC	0	0	0	0	0	ug/L
CD-37A1	upper	CCM	PCE	0	0	0	0	0	ug/L
CD-37A1	upper	CCM	TCE	0	0	0	0	0	ug/L
CD-37A1	upper	CCM	VC	0	0	0	0	0	ug/L
CD-38A1	upper	CCM	TCA	0	0	0	0	0	ug/L
CD-38A1	upper	CCM	DCA	0	0	0	0	0	ug/L
CD-38A1	upper	CCM	DCE	0	0	0	0	0	ug/L
CD-38A1	upper	CCM	MC	0	0	0	0	0	ug/L
CD-38A1	upper	CCM	PCE	0	0	0	0	0	ug/L

StationID	Aquifer	Program	Analyte	2020 Results	2024 Results	2025 Results	5-Year Difference	1-Year Difference	Units
CD-38A1	upper	CCM	TCE	0	0	0	0	0	ug/L
CD-38A1	upper	CCM	VC	0	0	0	0	0	ug/L
CD-40C1	upper	CCM	TCA	1.44	0	0	-1.44	0	ug/L
CD-40C1	upper	CCM	DCA	1.71	0.61	0.72	-0.99	0.11	ug/L
CD-40C1	upper	CCM	DCE	0.99	0.67	0.85	-0.14	0.18	ug/L
CD-40C1	upper	CCM	MC	0	0	0	0	0	ug/L
CD-40C1	upper	CCM	PCE	0	0	0	0	0	ug/L
CD-40C1	upper	CCM	TCE	0	0	0	0	0	ug/L
CD-40C1	upper	CCM	VC	0	0	0	0	0	ug/L
CP-S3	upper	CCM	TCA	0	0	0	0	0	ug/L
CP-S3	upper	CCM	DCA	0	0	0	0	0	ug/L
CP-S3	upper	CCM	DCE	0	0	0	0	0	ug/L
CP-S3	upper	CCM	MC	0	0	0	0	0	ug/L
CP-S3	upper	CCM	PCE	0	0	0	0	0	ug/L
CP-S3	upper	CCM	TCE	0	0	0	0	0	ug/L
CP-S3	upper	CCM	VC	0	0	0	0	0	ug/L
1473M-1	upper	CCM/res	TCA	0	0	0	0	0	ug/L
1473M-1	upper	CCM/res	DCA	0	0	0	0	0	ug/L
1473M-1	upper	CCM/res	DCE	0	0	0	0	0	ug/L
1473M-1	upper	CCM/res	MC	0	0	0	0	0	ug/L
1473M-1	upper	CCM/res	PCE	0	0	0	0	0	ug/L
1473M-1	upper	CCM/res	TCE	0	0	0	0	0	ug/L
1473M-1	upper	CCM/res	VC	0	0	0	0	0	ug/L
CD-03A1	upper	MFS	TCA	0	0	0	0	0	ug/L
CD-03A1	upper	MFS	DCA	0	0	0	0	0	ug/L
CD-03A1	upper	MFS	DCE	0	0	0	0	0	ug/L
CD-03A1	upper	MFS	MC	0	0	0	0	0	ug/L
CD-03A1	upper	MFS	PCE	0	0	0	0	0	ug/L
CD-03A1	upper	MFS	TCE	0	0	0	0	0	ug/L
CD-03A1	upper	MFS	VC	0	0	0	0	0	ug/L
CD-60A1	upper	MFS	TCA	0	0	0	0	0	ug/L
CD-60A1	upper	MFS	DCA	0	0	0	0	0	ug/L
CD-60A1	upper	MFS	DCE	0	0	0	0	0	ug/L
CD-60A1	upper	MFS	MC	0	0	0	0	0	ug/L
CD-60A1	upper	MFS	PCE	0	0	0.6	0.6	0.6	ug/L
CD-60A1	upper	MFS	TCE	0	0	0	0	0	ug/L
CD-60A1	upper	MFS	VC	0	0	0	0	0	ug/L
CD-61A1	upper	MFS	TCA	1.43	0	0	-1.43	0	ug/L
CD-61A1	upper	MFS	DCA	0	0	0	0	0	ug/L
CD-61A1	upper	MFS	DCE	0	0	0	0	0	ug/L
CD-61A1	upper	MFS	MC	0	0	0	0	0	ug/L
CD-61A1	upper	MFS	PCE	0	0	0	0	0	ug/L

StationID	Aquifer	Program	Analyte	2020 Results	2024 Results	2025 Results	5-Year Difference	1-Year Difference	Units
CD-61A1	upper	MFS	TCE	0	0	0	0	0	ug/L
CD-61A1	upper	MFS	VC	0	0	0	0	0	ug/L
CS-04A1	upper	MFS	TCA	0	0	0	0	0	ug/L
CS-04A1	upper	MFS	DCA	0.88	1.2	0.79	-0.09	-0.41	ug/L
CS-04A1	upper	MFS	DCE	0	0	0	0	0	ug/L
CS-04A1	upper	MFS	MC	0	0	0	0	0	ug/L
CS-04A1	upper	MFS	PCE	0	0	0	0	0	ug/L
CS-04A1	upper	MFS	TCE	0.56	0.62	0	-0.56	-0.62	ug/L
CS-04A1	upper	MFS	VC	0	0	0	0	0	ug/L
CP-S1	upper	SD	TCA	0.55	0	0.52	-0.03	0.52	ug/L
CP-S1	upper	SD	DCA	0.74	0.95	3.35	2.61	2.4	ug/L
CP-S1	upper	SD	DCE	0	0	0.82	0.82	0.82	ug/L
CP-S1	upper	SD	MC	0	0	0	0	0	ug/L
CP-S1	upper	SD	PCE	0	0	0	0	0	ug/L
CP-S1	upper	SD	TCE	1.26	0.82	1.12	-0.14	0.3	ug/L
CP-S1	upper	SD	VC	0	0	0	0	0	ug/L
CP-S4	upper	SD	TCA	0.7	0	0	-0.7	0	ug/L
CP-S4	upper	SD	DCA	2.61	0	0.73	-1.88	0.73	ug/L
CP-S4	upper	SD	DCE	0	0	0	0	0	ug/L
CP-S4	upper	SD	MC	0	0	0	0	0	ug/L
CP-S4	upper	SD	PCE	0.6	0	0	-0.6	0	ug/L
CP-S4	upper	SD	TCE	1.88	0	1.62	-0.26	1.62	ug/L
CP-S4	upper	SD	VC	0	0	0	0	0	ug/L
CP-S5	upper	SD	TCA	0	0	0	0	0	ug/L
CP-S5	upper	SD	DCA	0	0	0	0	0	ug/L
CP-S5	upper	SD	DCE	0	0	0	0	0	ug/L
CP-S5	upper	SD	MC	0	0	0	0	0	ug/L
CP-S5	upper	SD	PCE	0	0	0	0	0	ug/L
CP-S5	upper	SD	TCE	0	0	0	0	0	ug/L
CP-S5	upper	SD	VC	0	0	0	0	0	ug/L
CP-S6	upper	SD	TCA	0	0	0	0	0	ug/L
CP-S6	upper	SD	DCA	0	0.68	0	0	-0.68	ug/L
CP-S6	upper	SD	DCE	0	0	0	0	0	ug/L
CP-S6	upper	SD	MC	0	0	0	0	0	ug/L
CP-S6	upper	SD	PCE	0	0	0	0	0	ug/L
CP-S6	upper	SD	TCE	0	1.64	0	0	-1.64	ug/L
CP-S6	upper	SD	VC	0	0	0	0	0	ug/L

Analytes that exceeded clean-up criteria this reporting period are displayed in **ORANGE**.
Increases in analyte concentrations are highlighted in **RED**.
Decreases in analyte concentrations are highlighted in **BLUE**.

Figure 3-7 Upper Aquifer Compliance Wells TCA Concentrations vs. Time



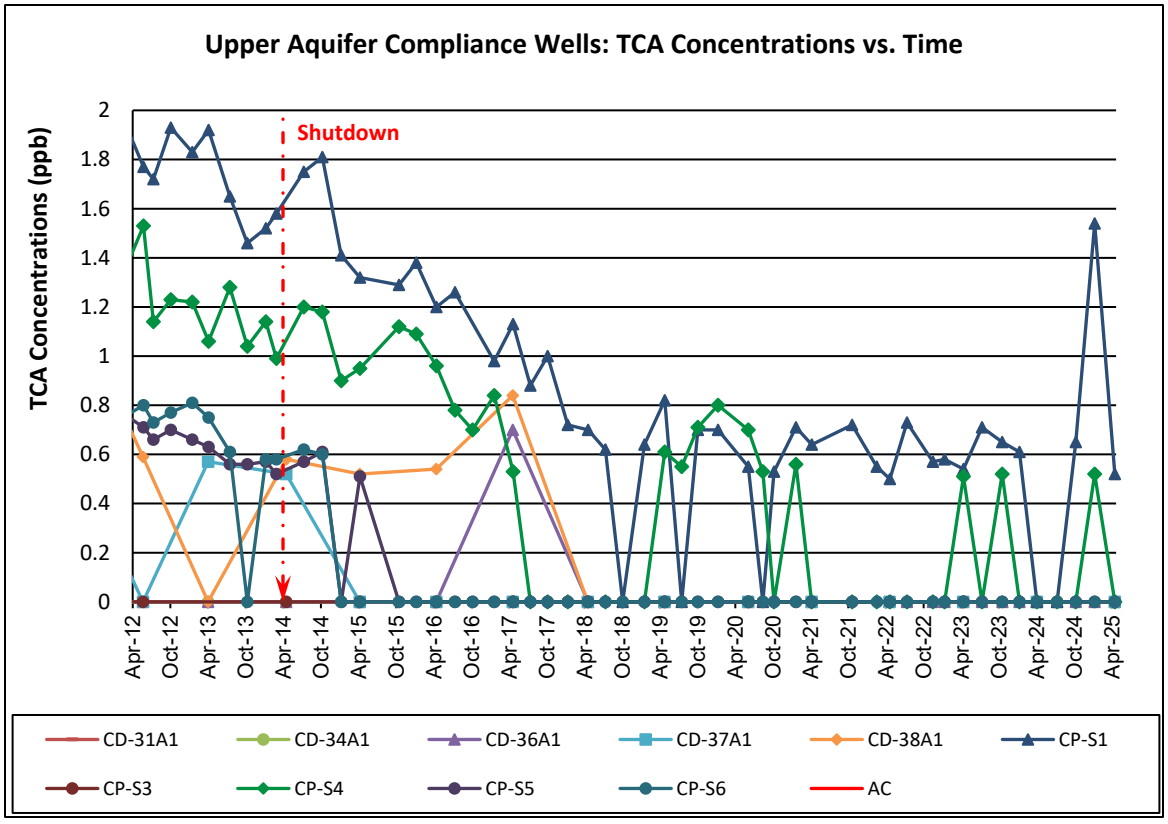
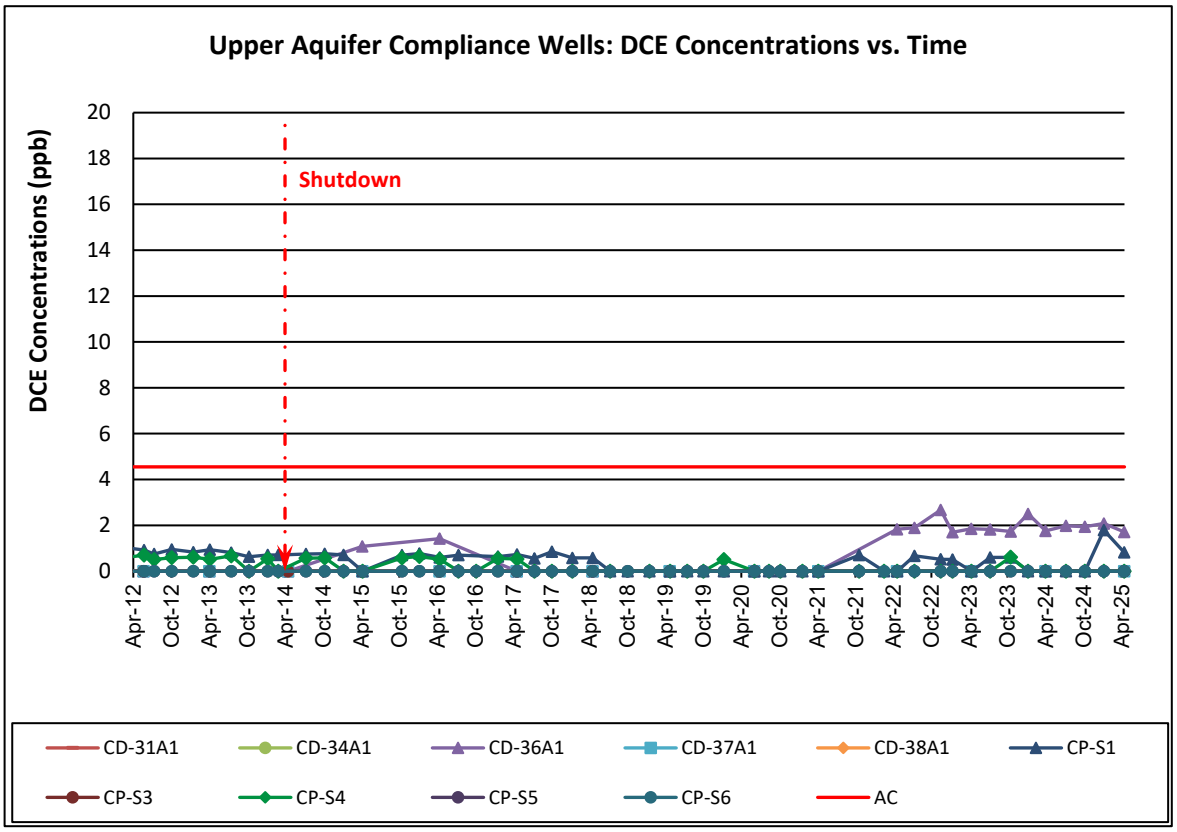


Figure 3-8 Upper Aquifer Compliance Wells DCE Concentrations vs. Time



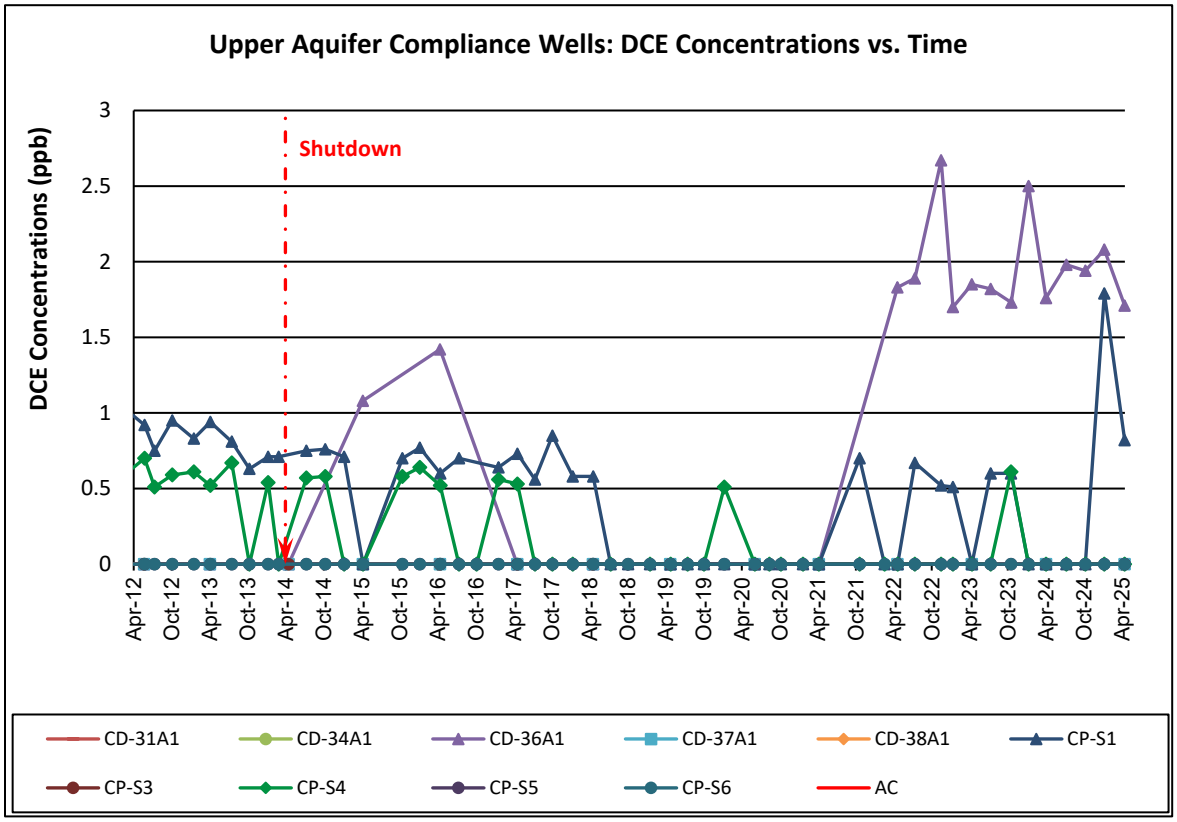
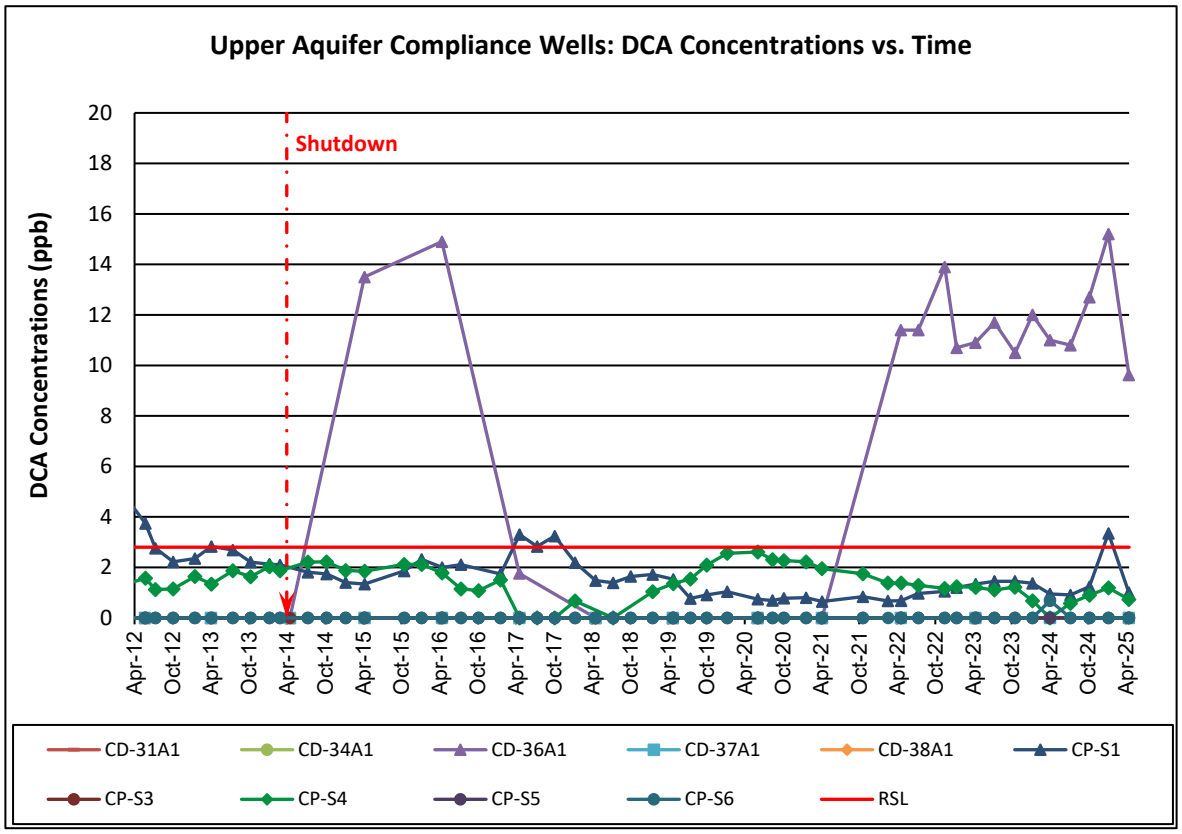


Figure 3-9 Upper Aquifer Compliance Wells DCA Concentrations vs. Time



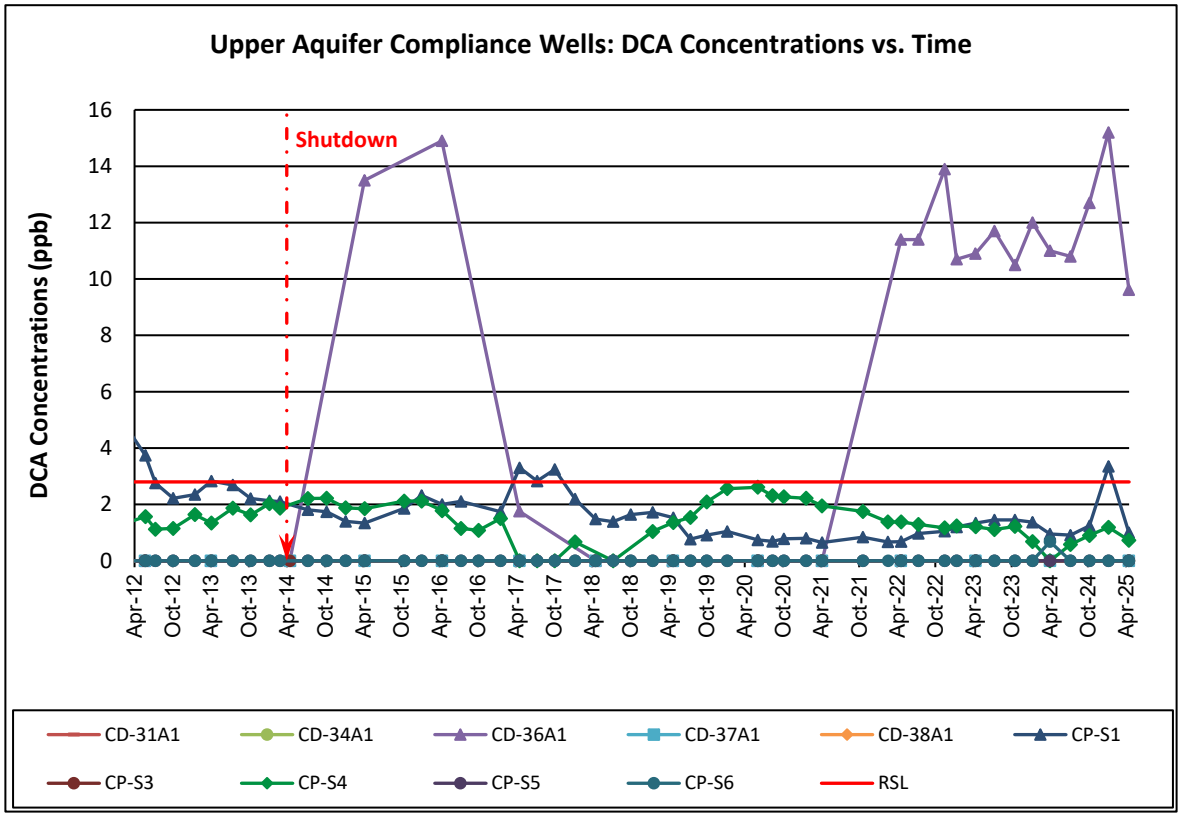
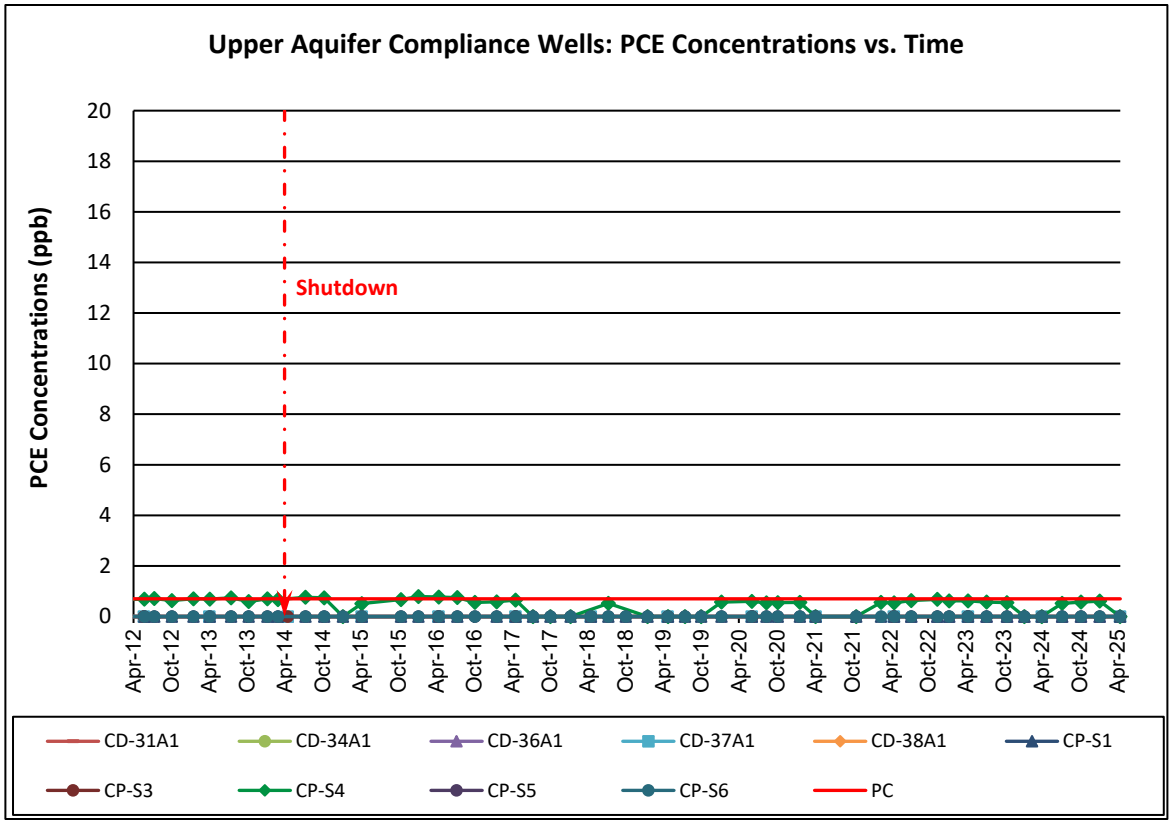


Figure 3-10 Upper Aquifer Compliance Wells PCE Concentrations vs. Time



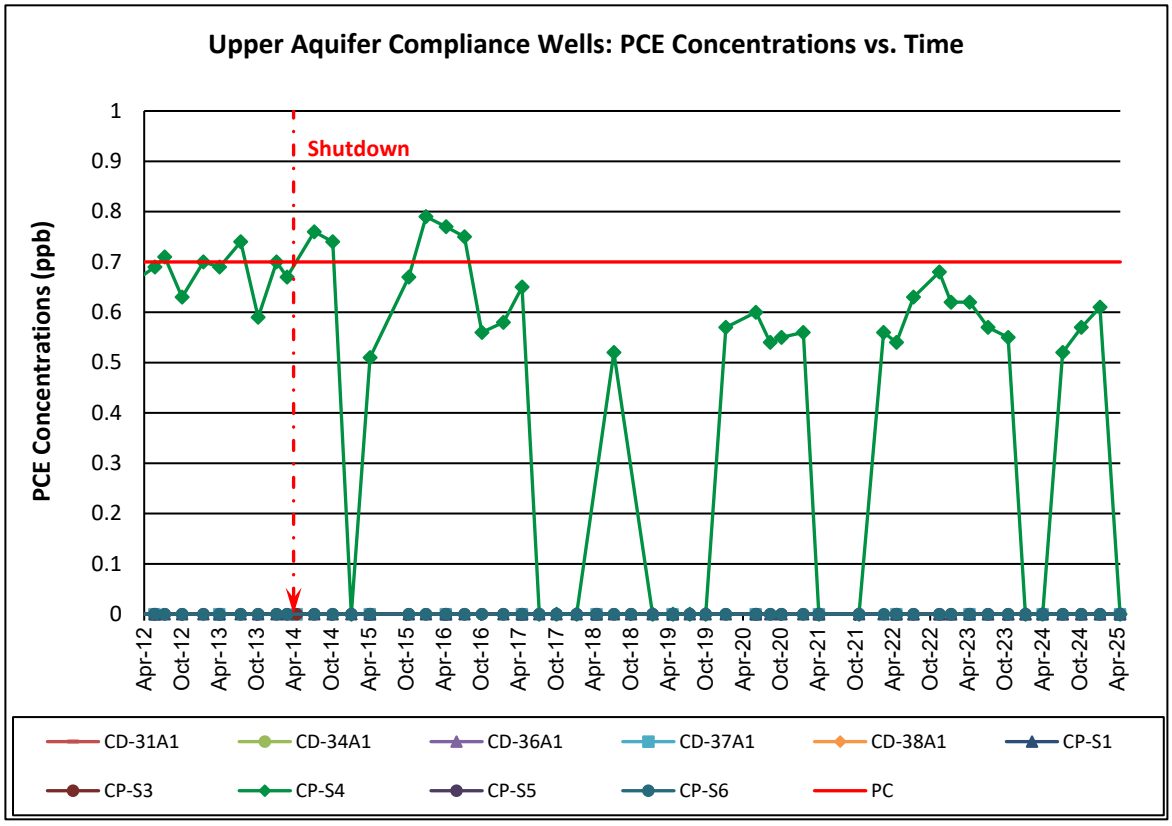
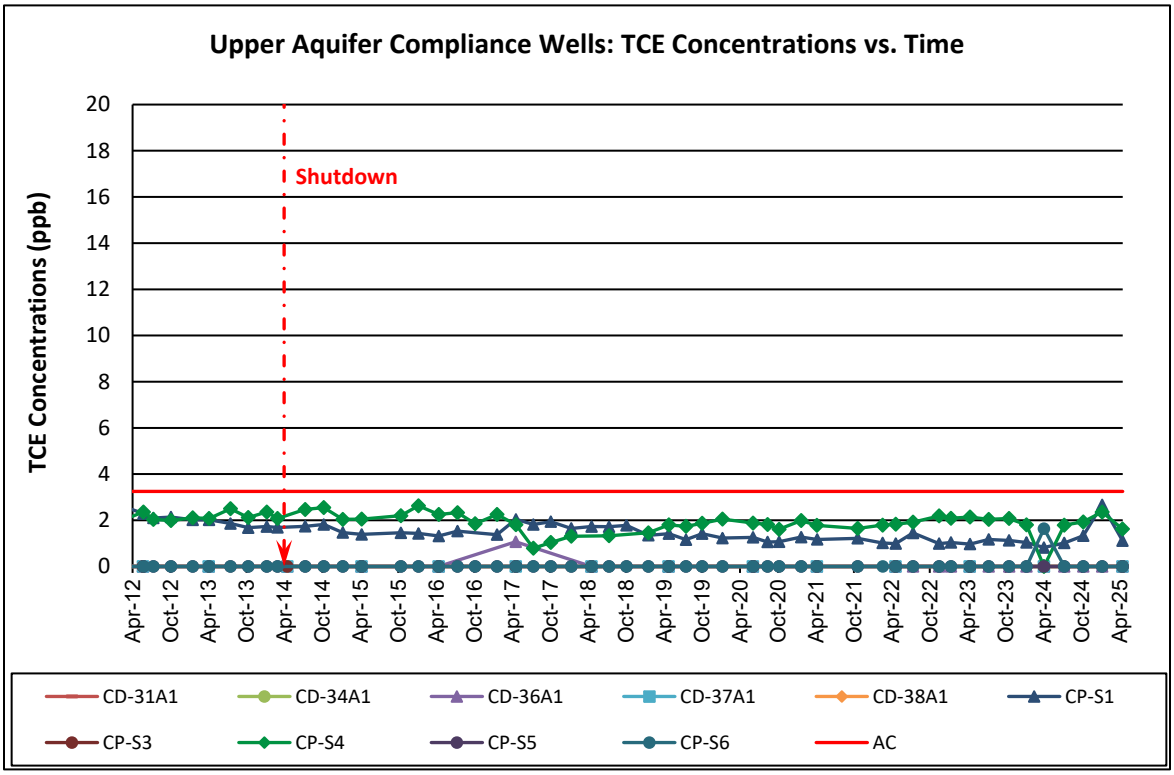
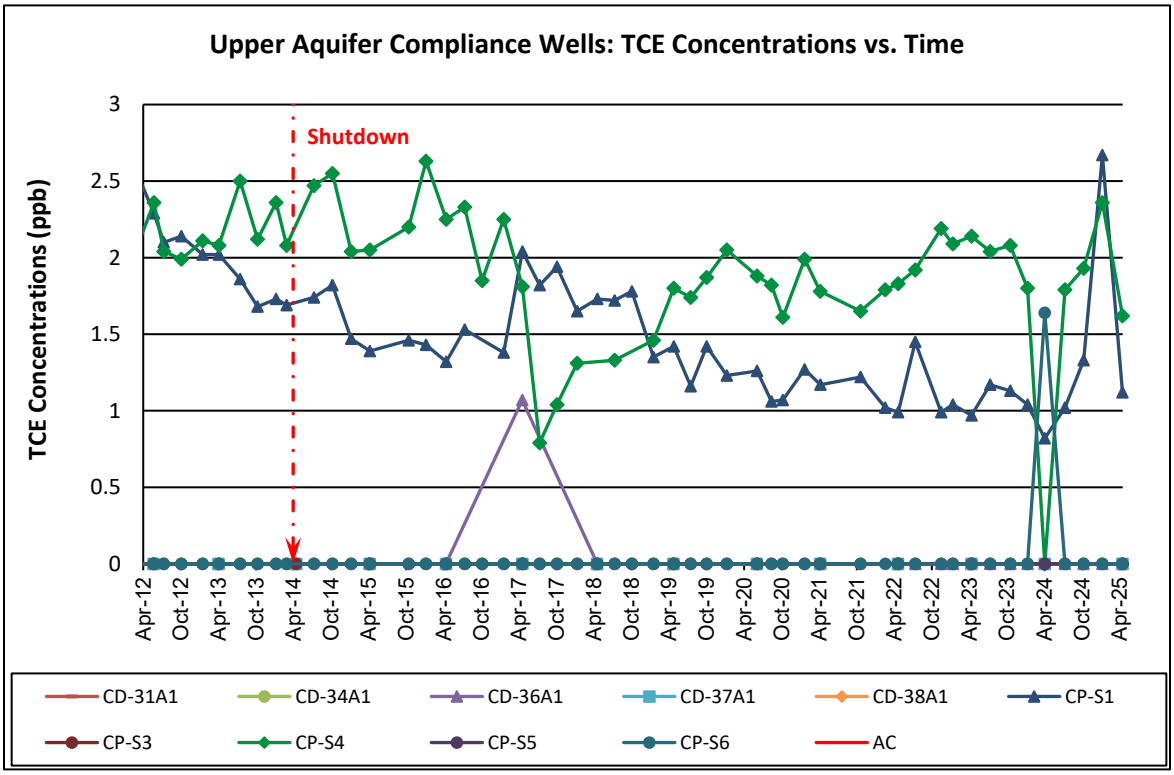


Figure 3-11 Upper Aquifer Compliance Wells TCE Concentrations vs. Time





For all of the COC concentrations vs. time graphs above, non-detection values from the laboratory are displayed as 0 ppb.

Figure 3-12 Upper Aquifer Estimated TCA Plume

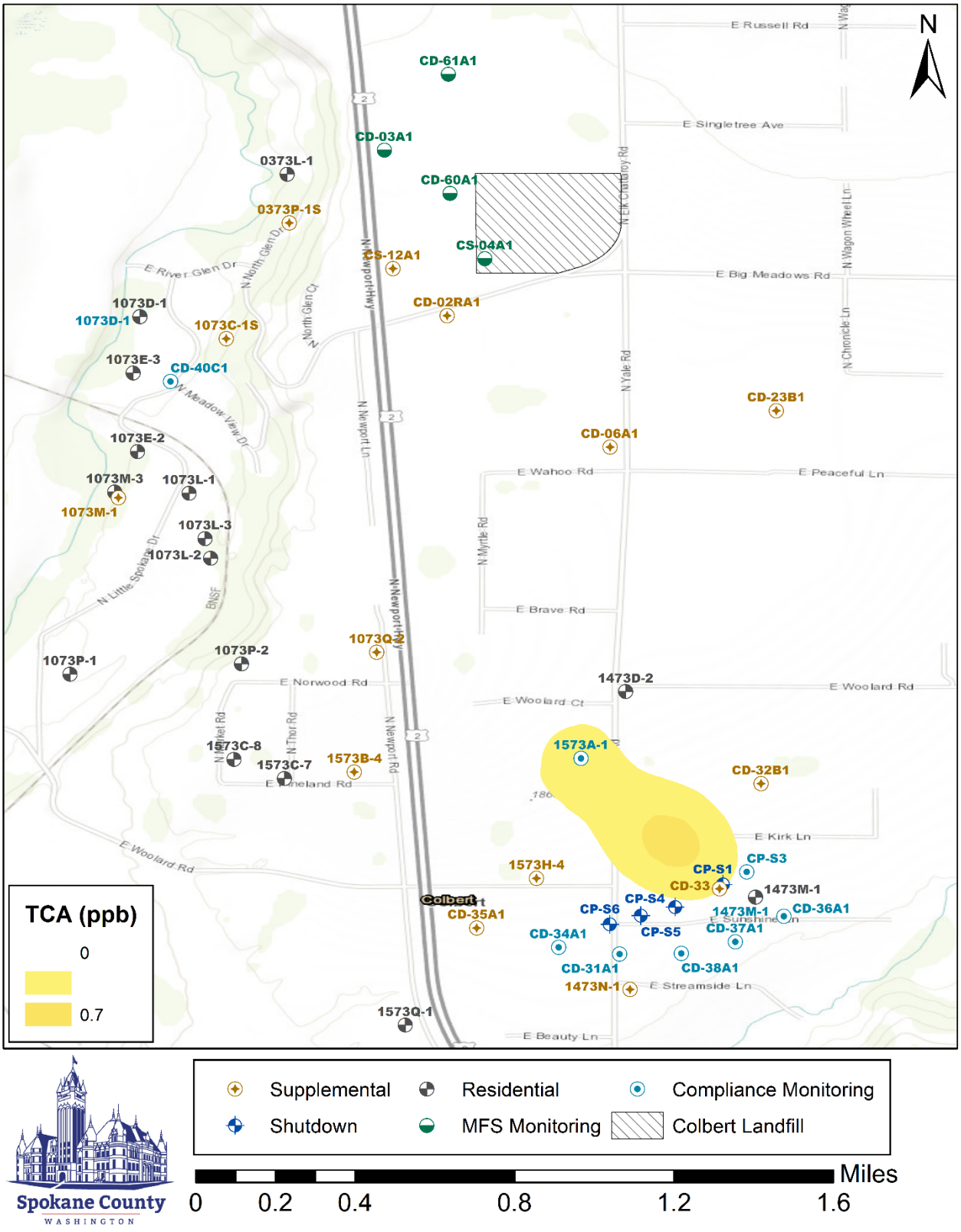


Figure 3-13 Upper Aquifer TCA Detections Map

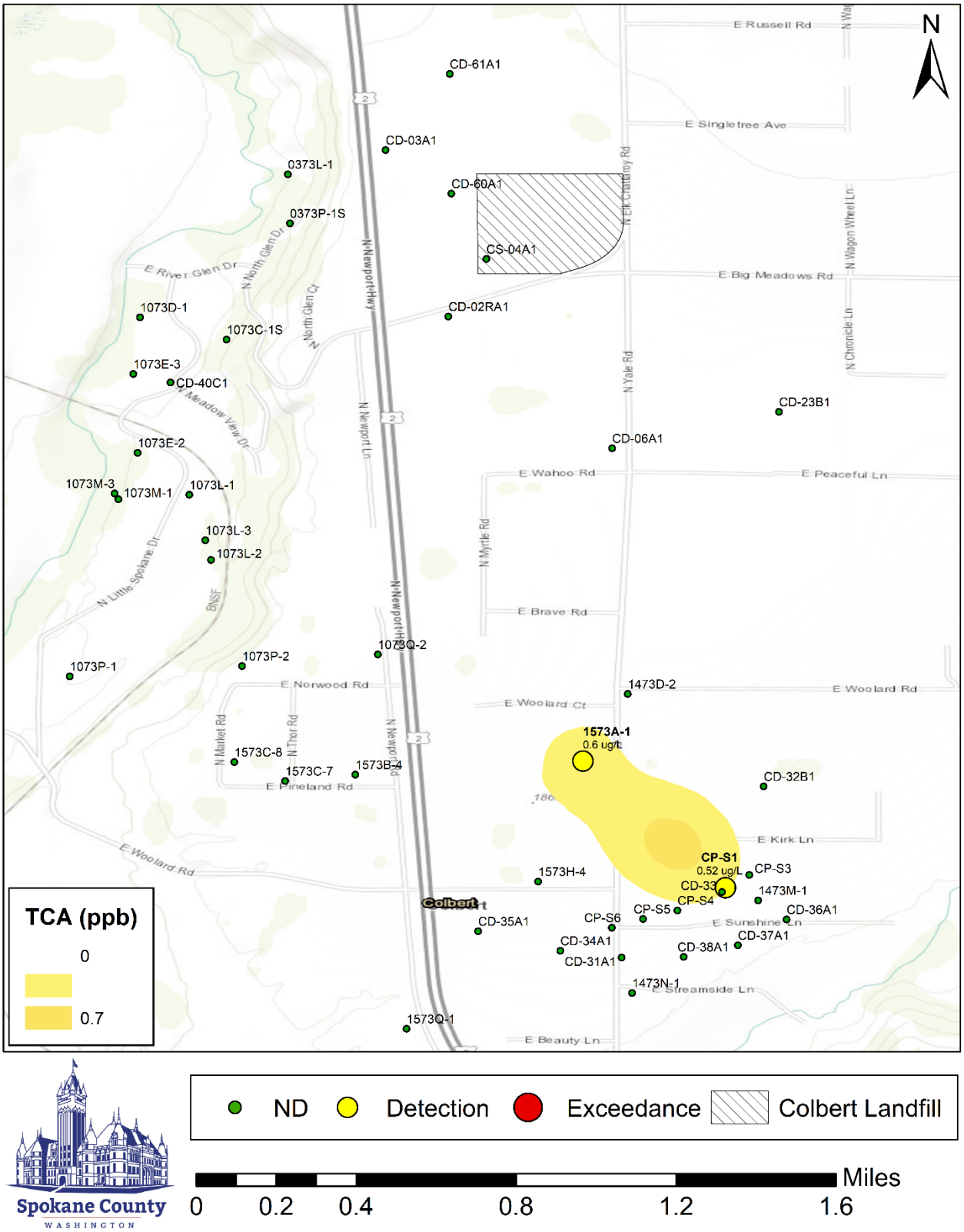


Figure 3-14 Upper Aquifer Estimated DCA Plume

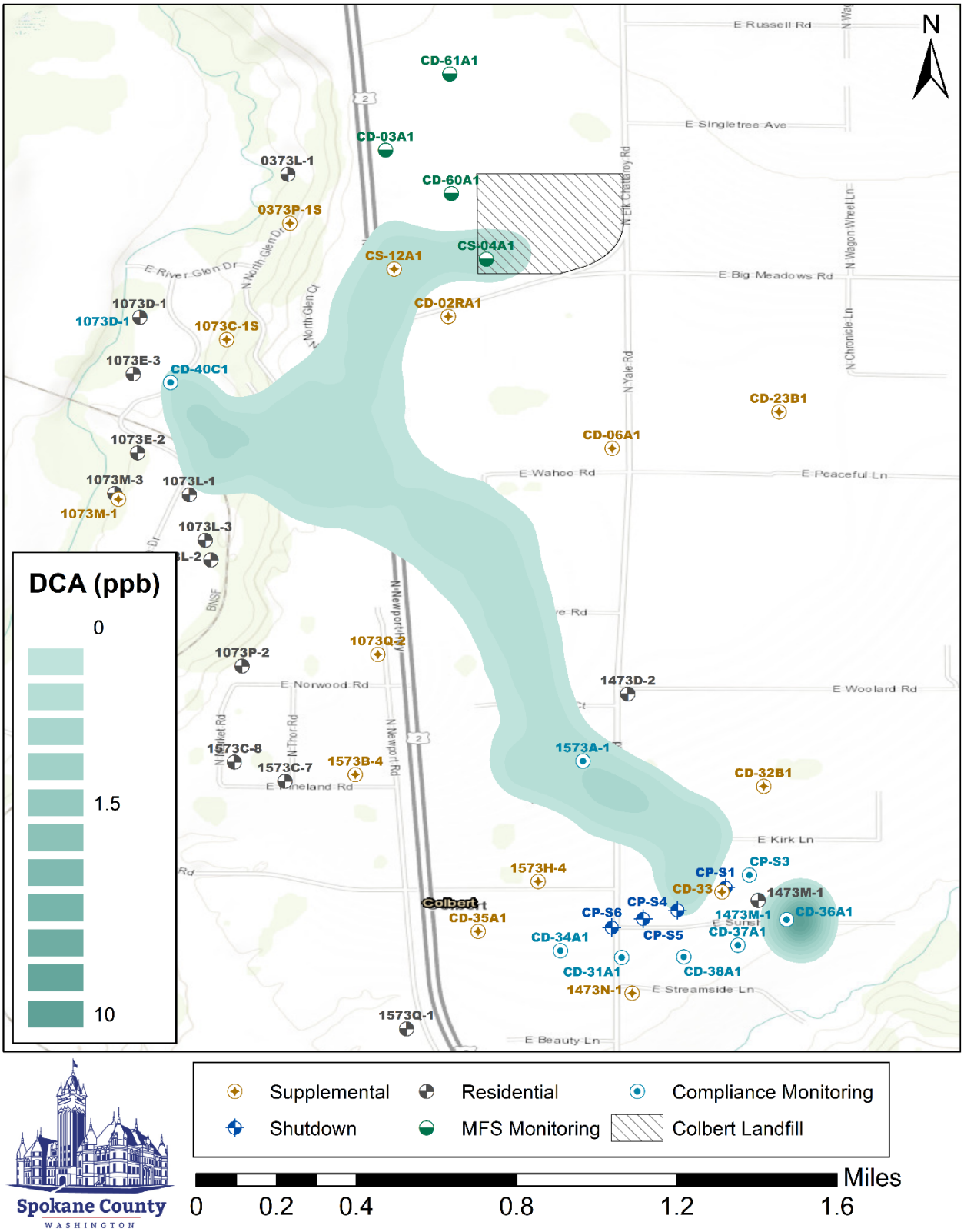


Figure 3-15 Upper Aquifer DCA Detections Map

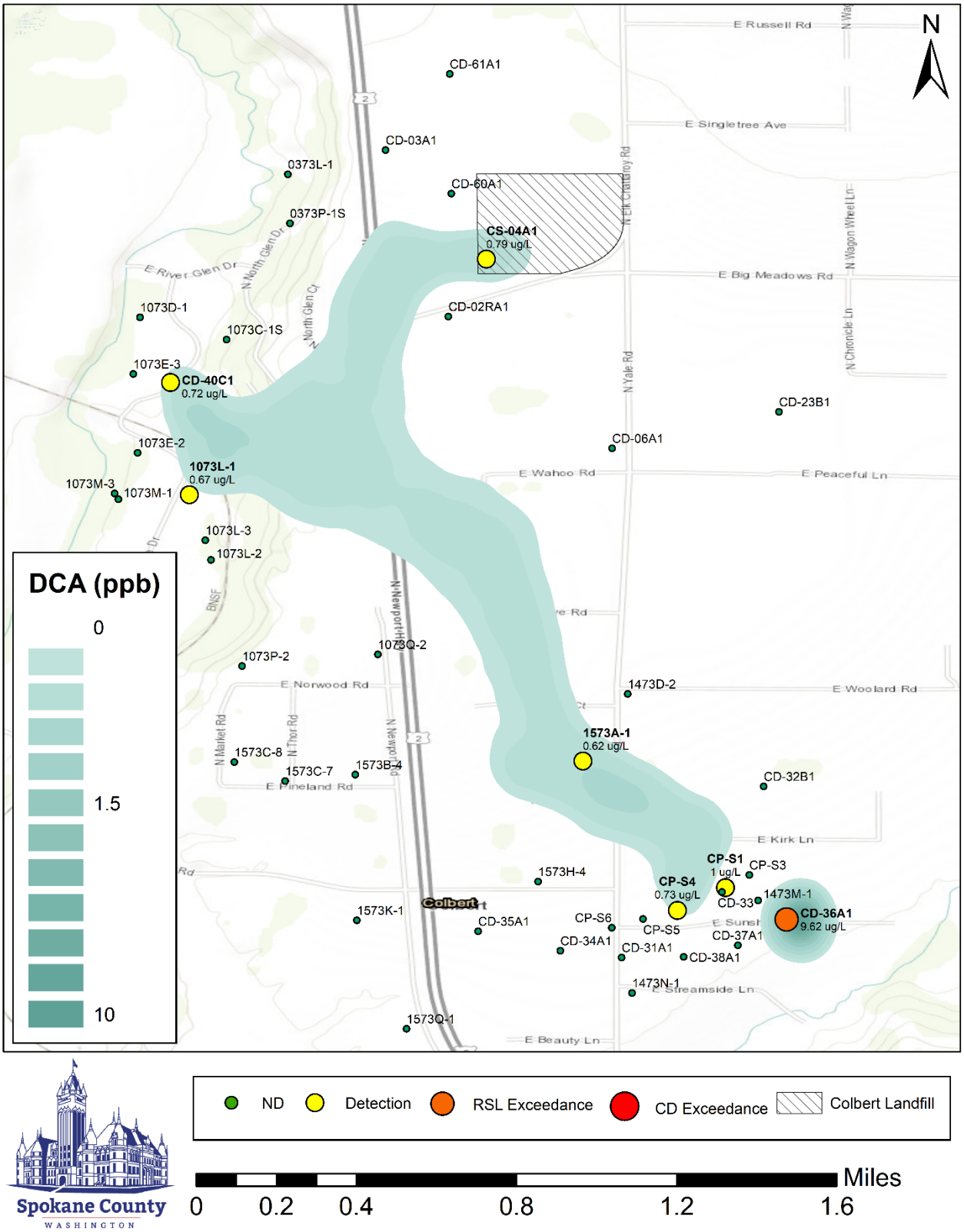


Figure 3-16 Upper Aquifer Estimated DCE Plume

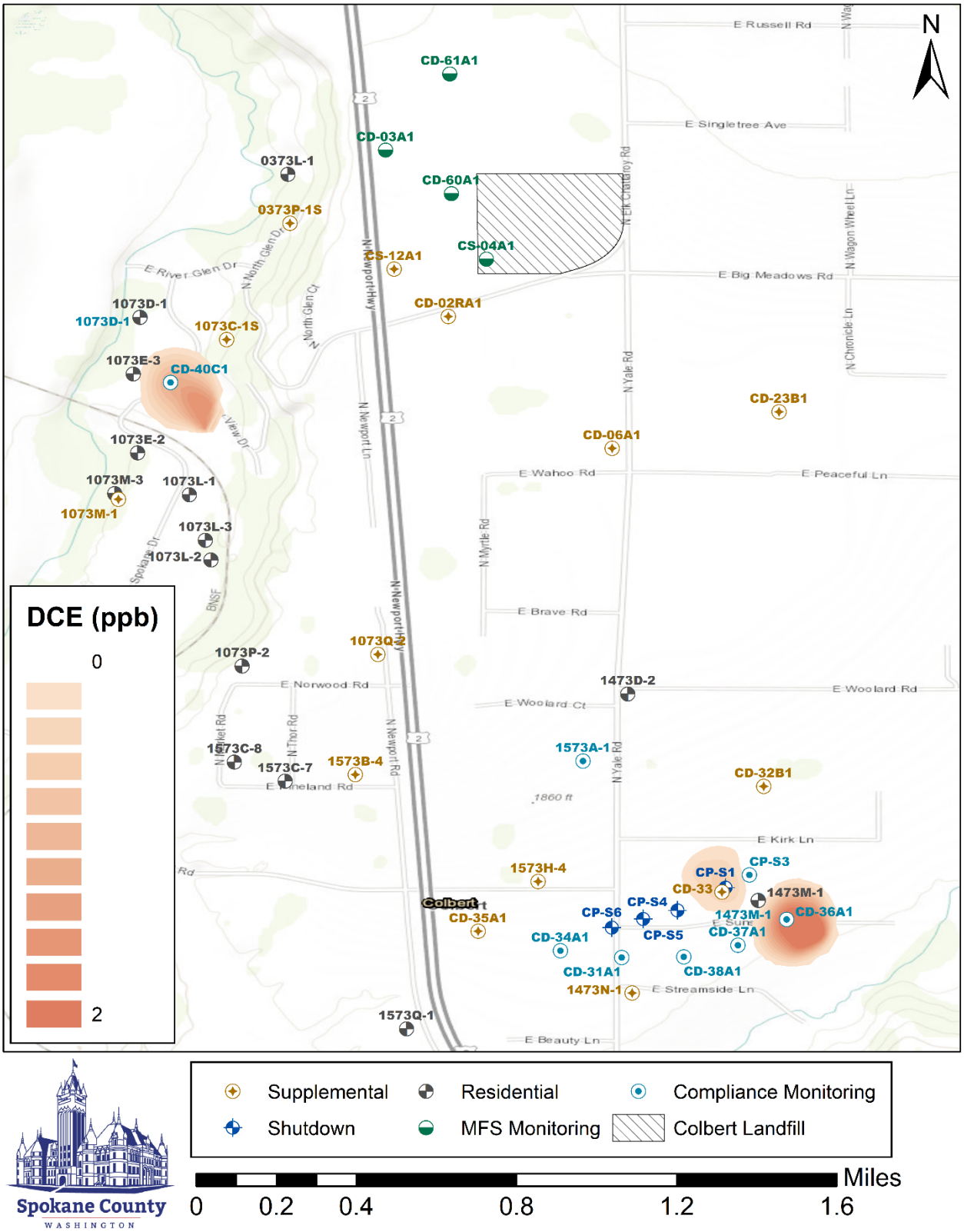


Figure 3-17 Upper Aquifer DCE Detections Map

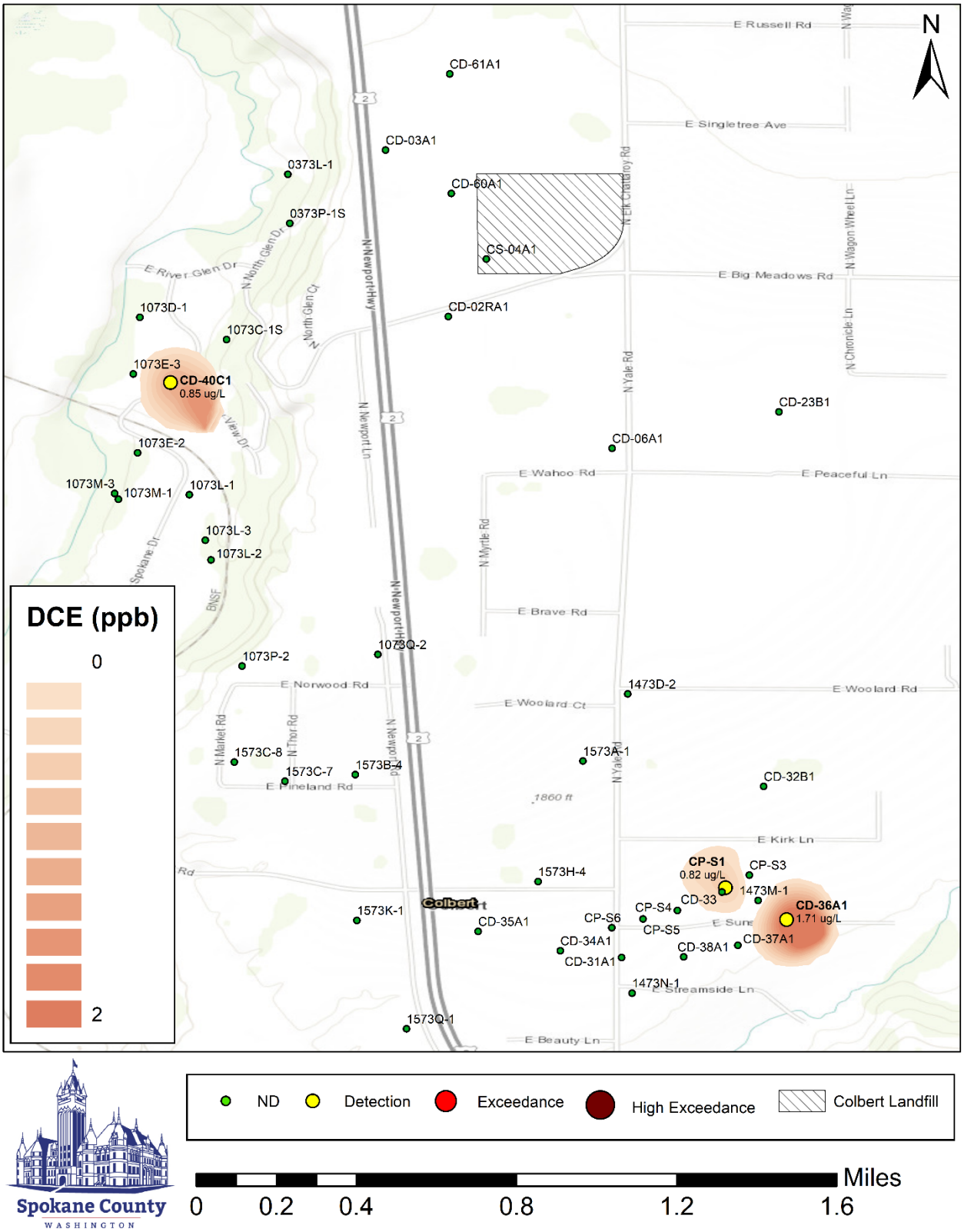


Figure 3-18 Upper Aquifer Estimated PCE Plume

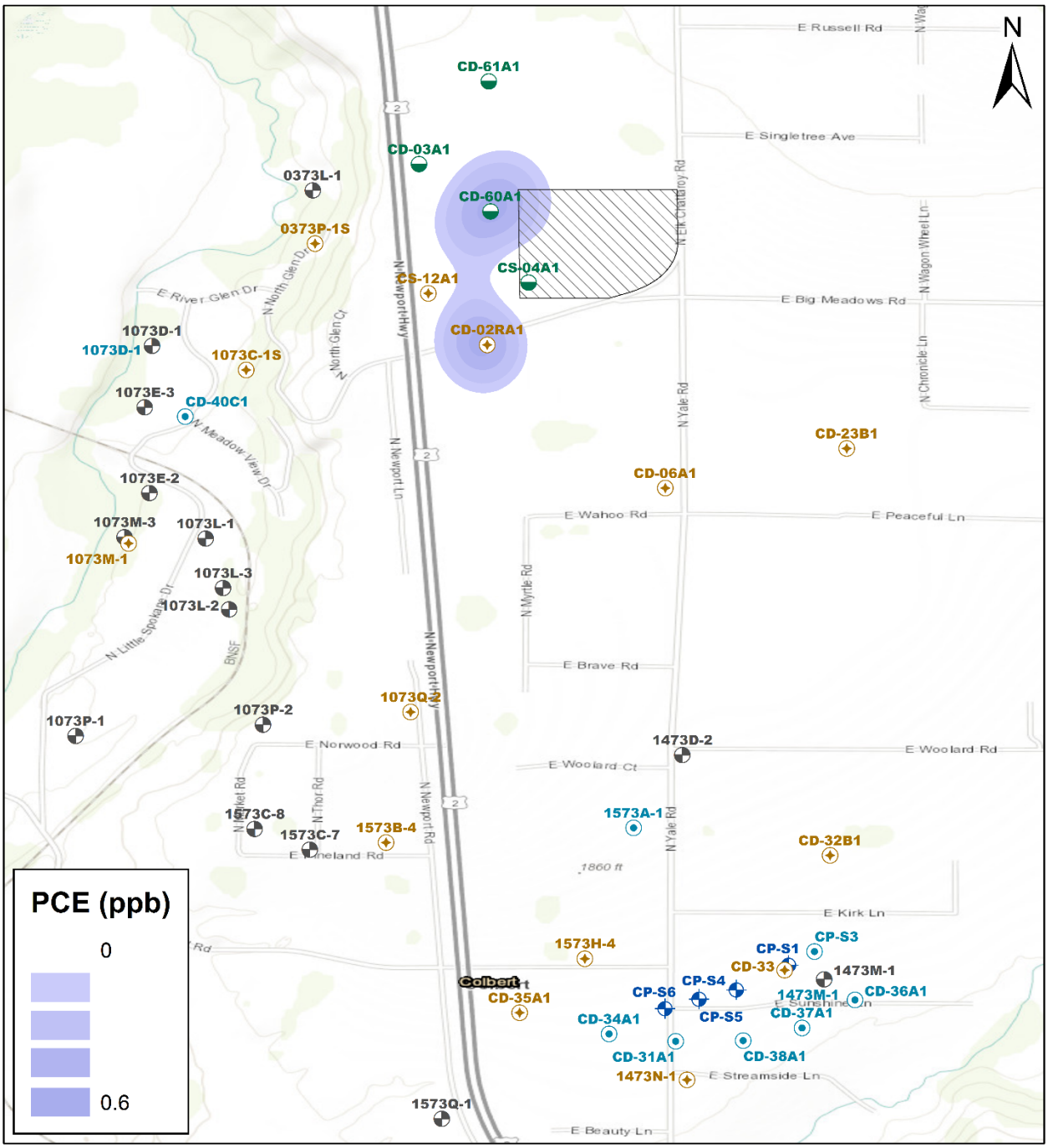


Figure 3-19 Upper Aquifer PCE Detections Map

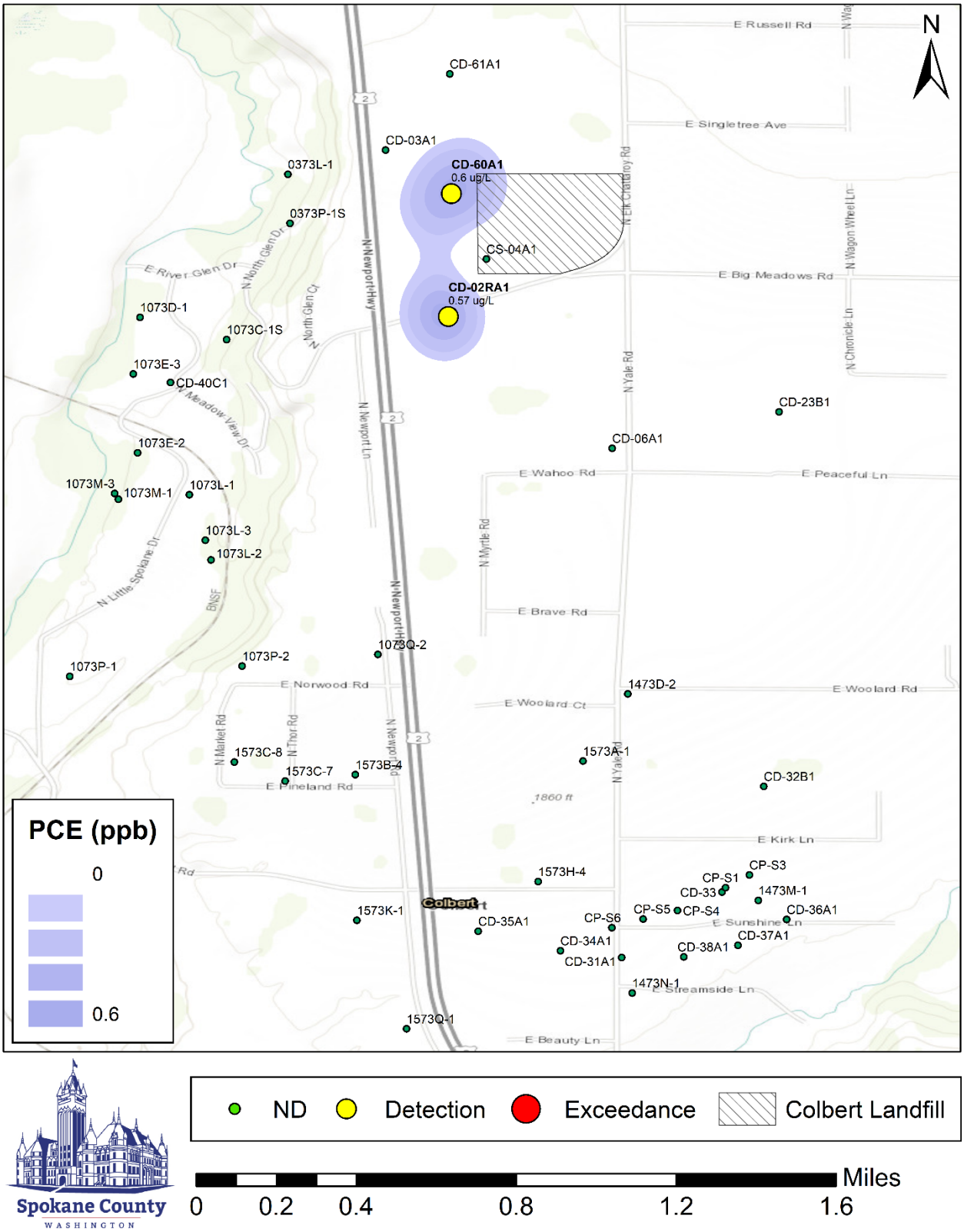


Figure 3-20 Upper Aquifer Estimated TCE Plume

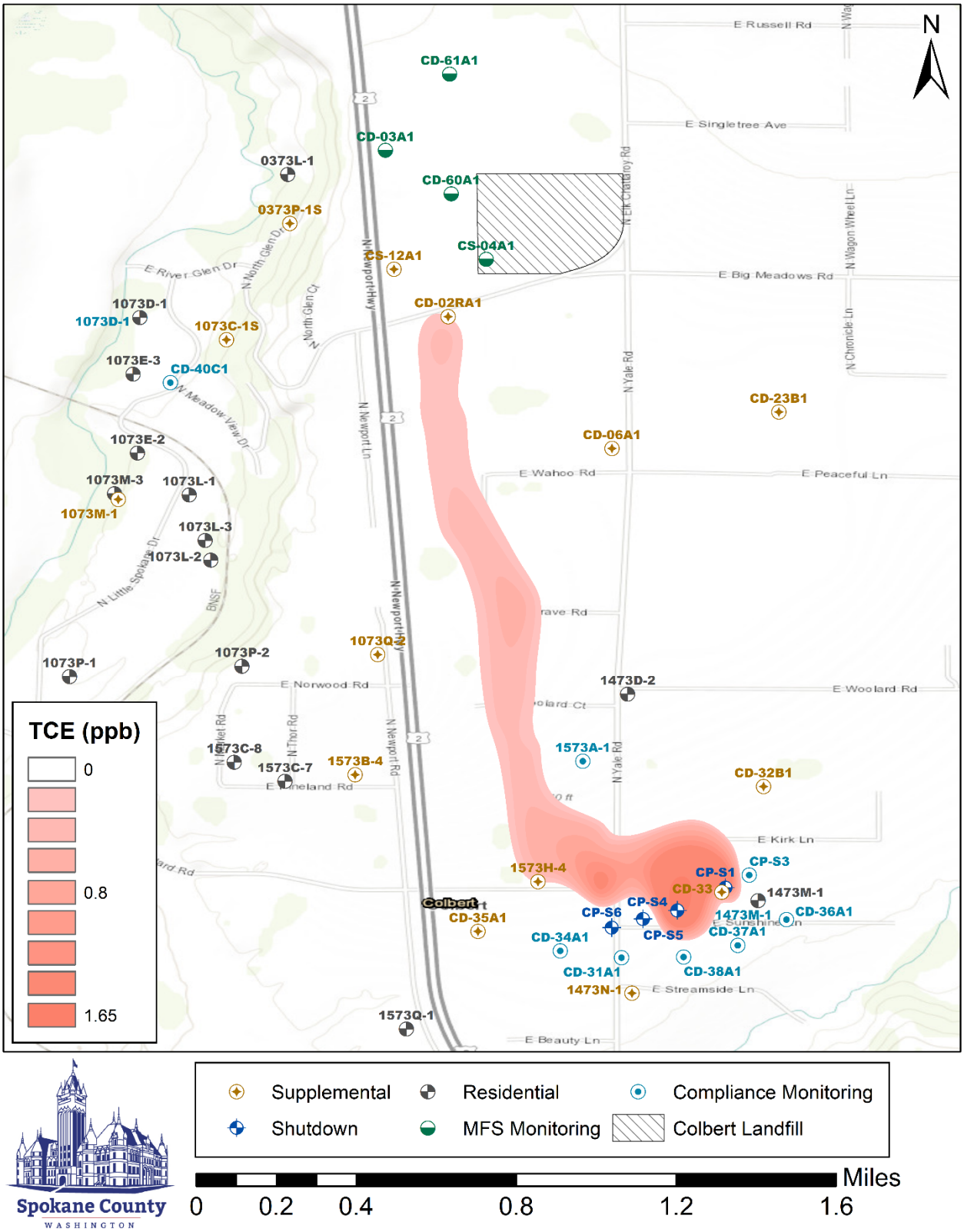


Figure 3-21 Upper Aquifer TCE Detections Map

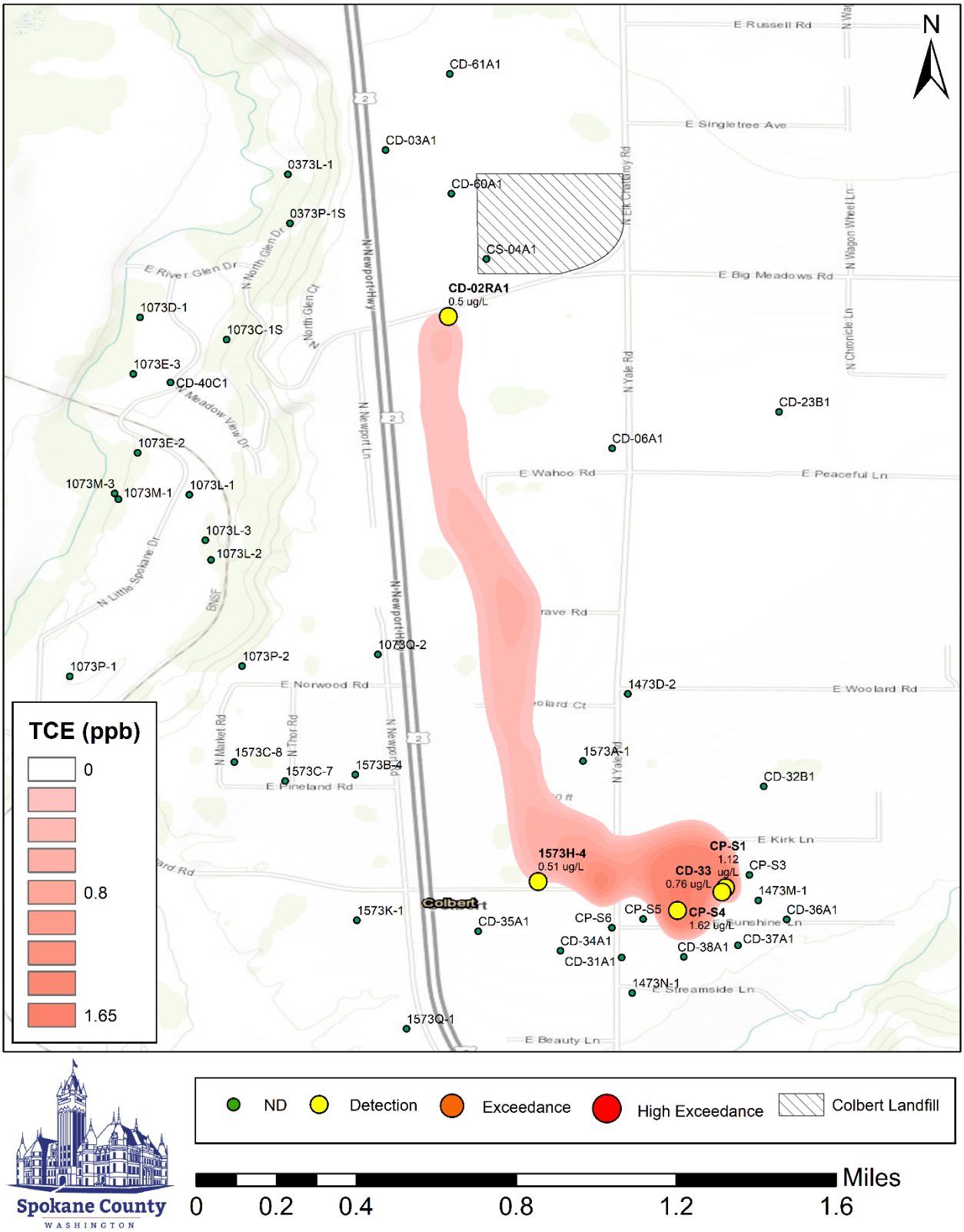


Figure 3-22 Upper Aquifer All Analytes Estimated Plume Map

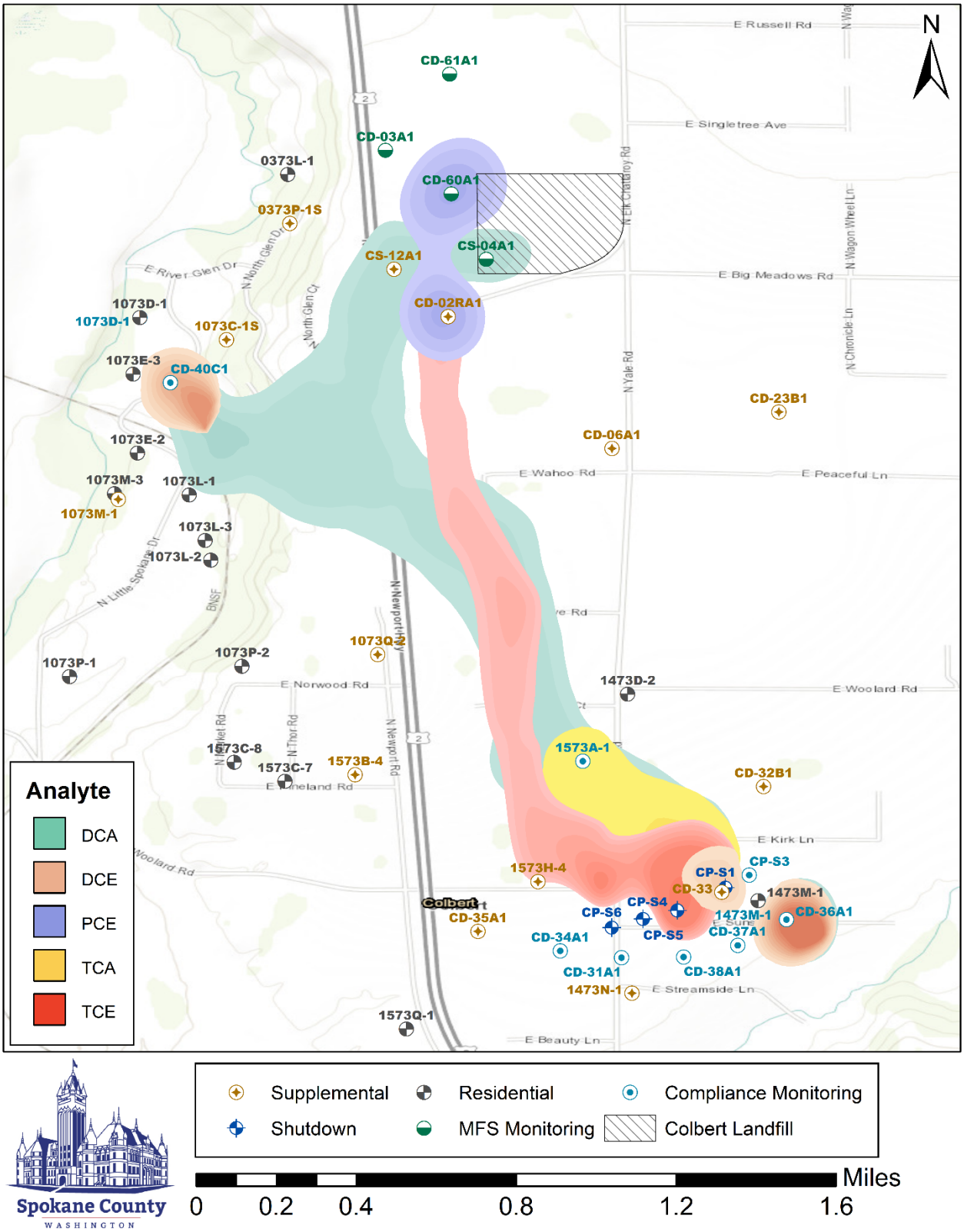
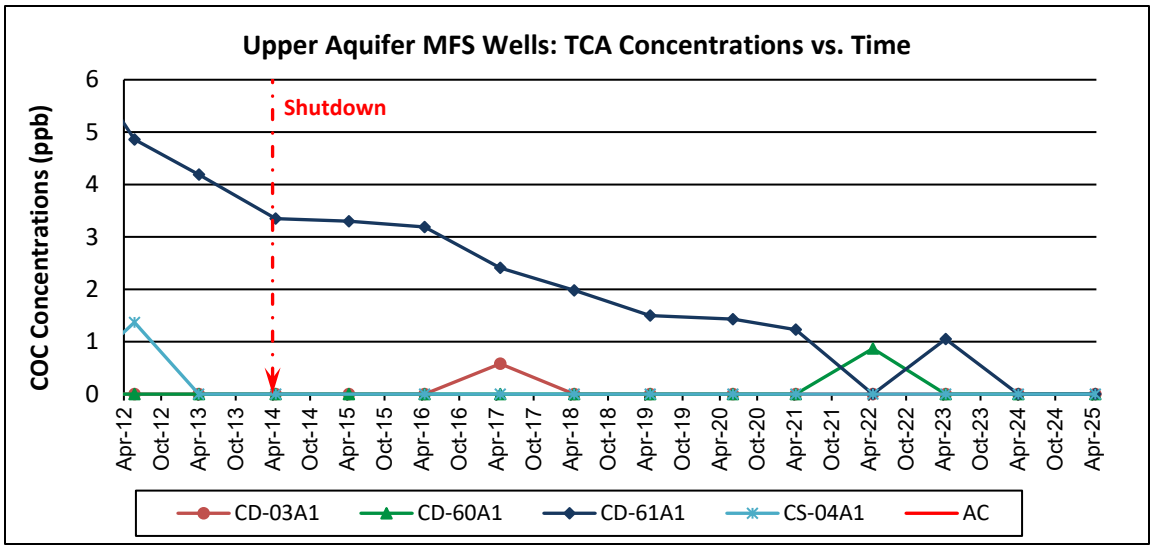
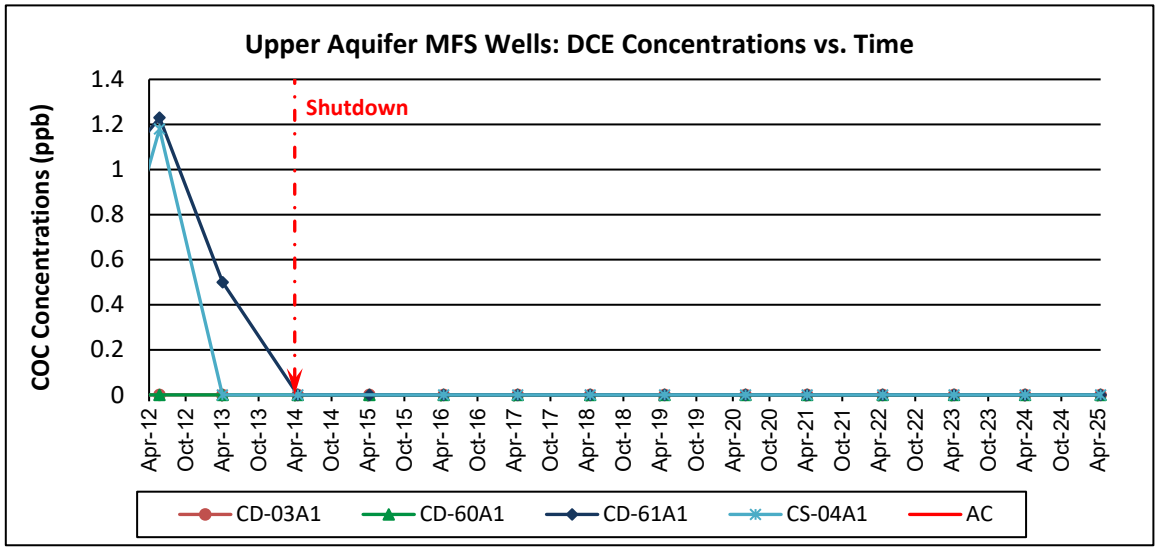


Figure 3-23 Upper Aquifer MFS Wells COC Concentrations vs. Time





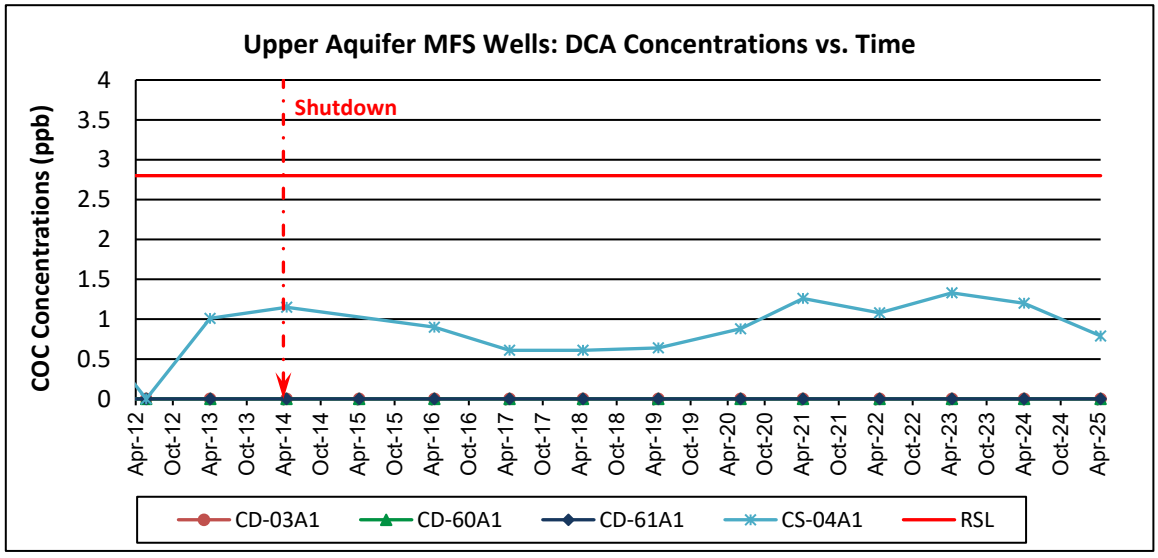
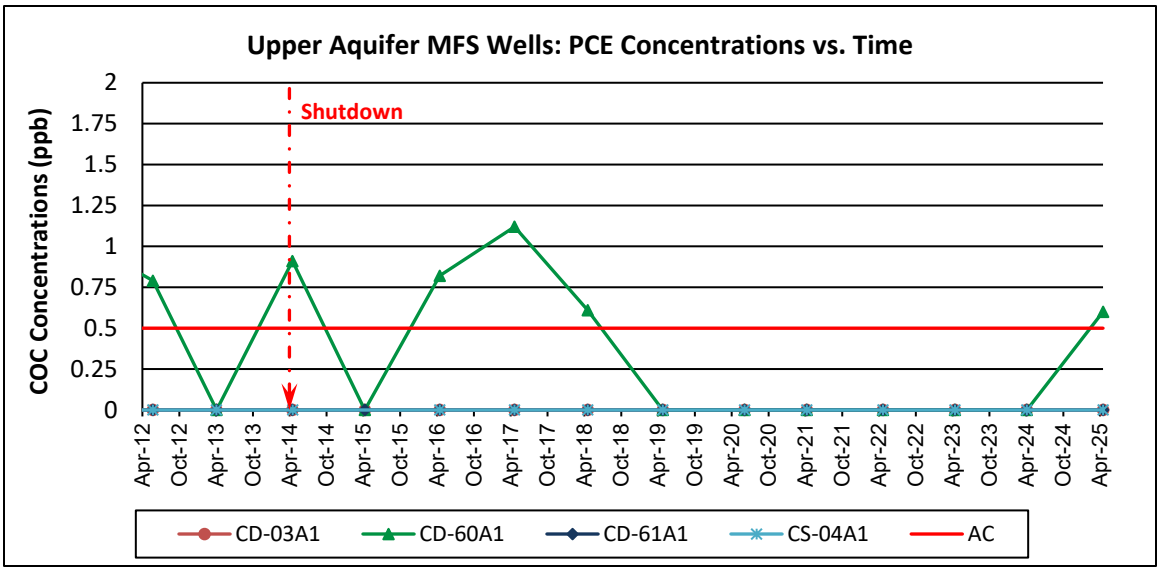


Figure 3-24 Upper Aquifer MFS Wells COC Concentrations vs. Time



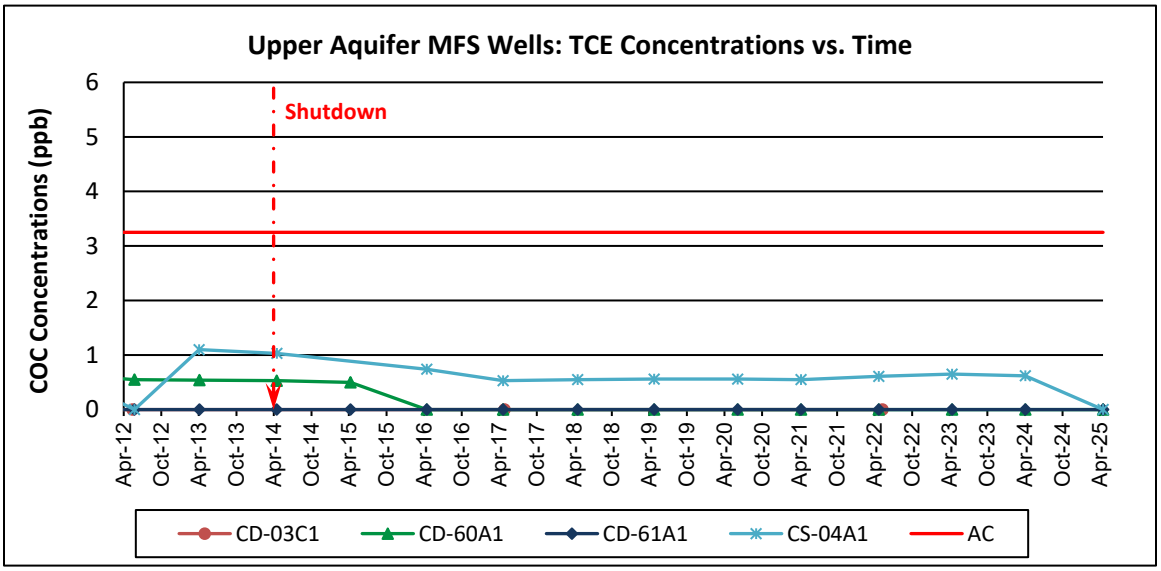
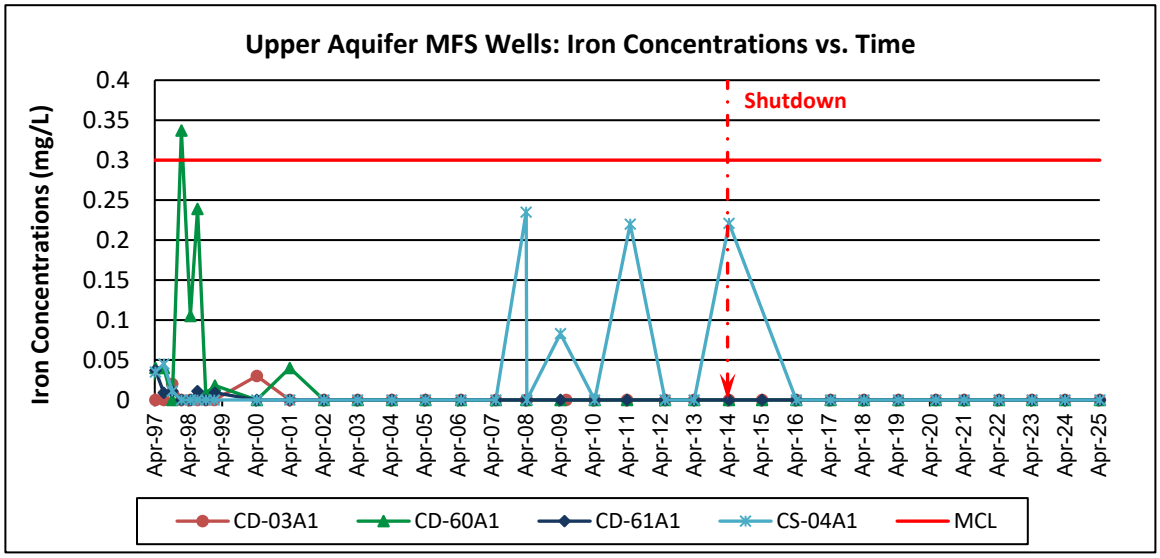
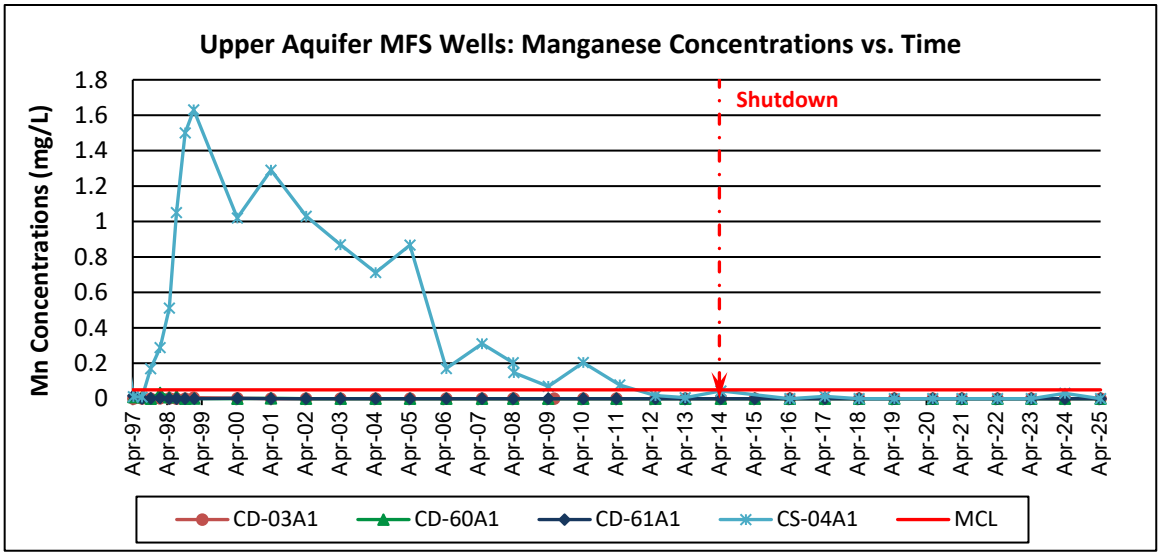


Figure 3-25 Upper Aquifer MFS Parameters vs. Time





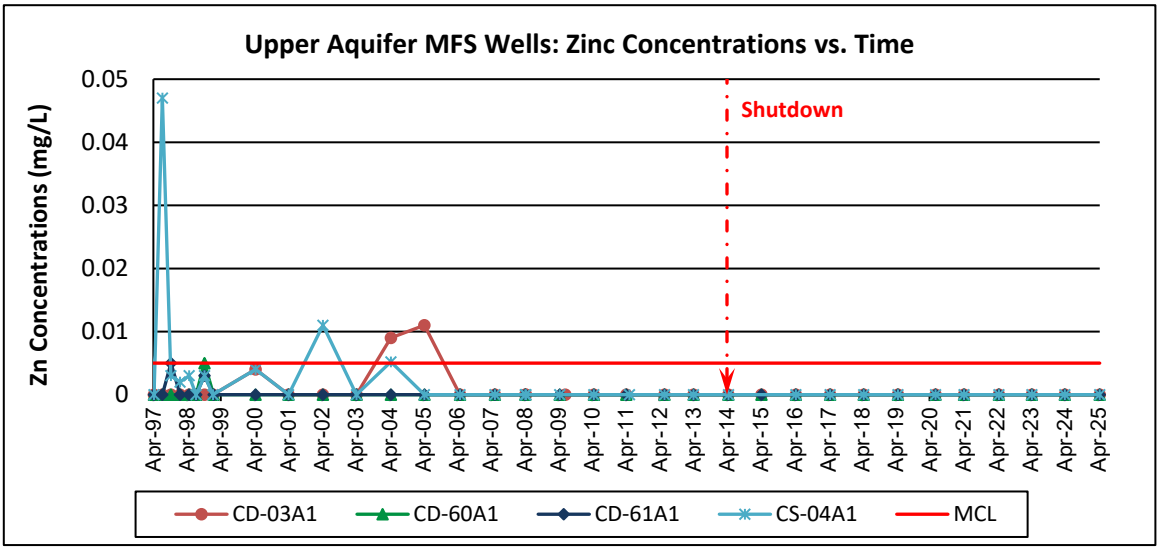
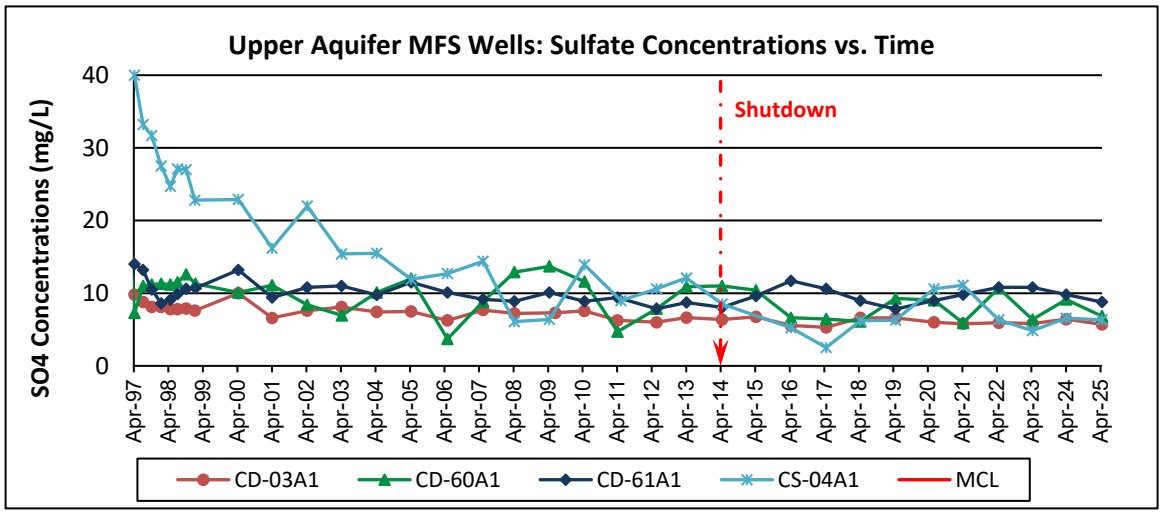
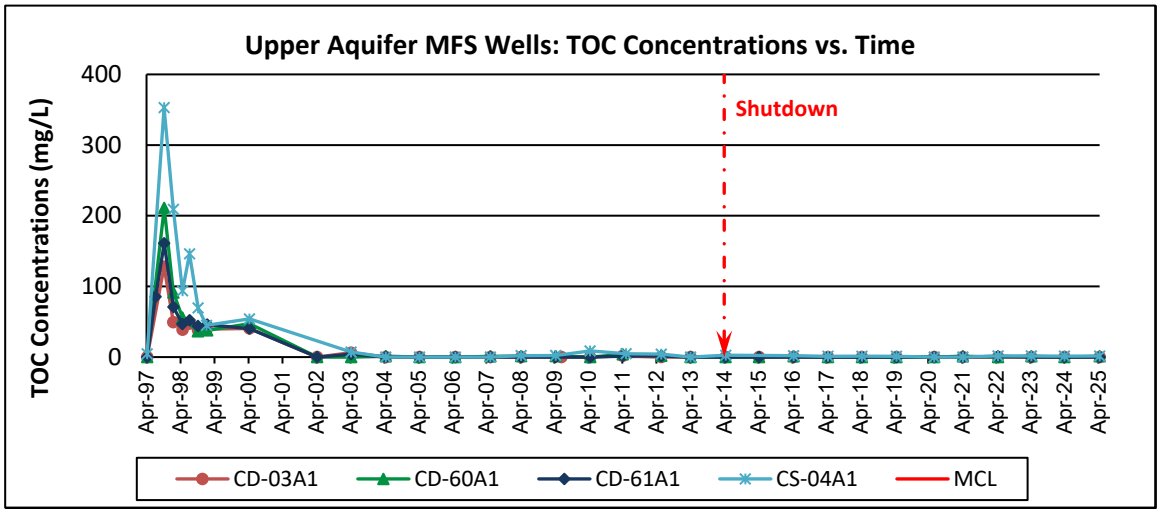
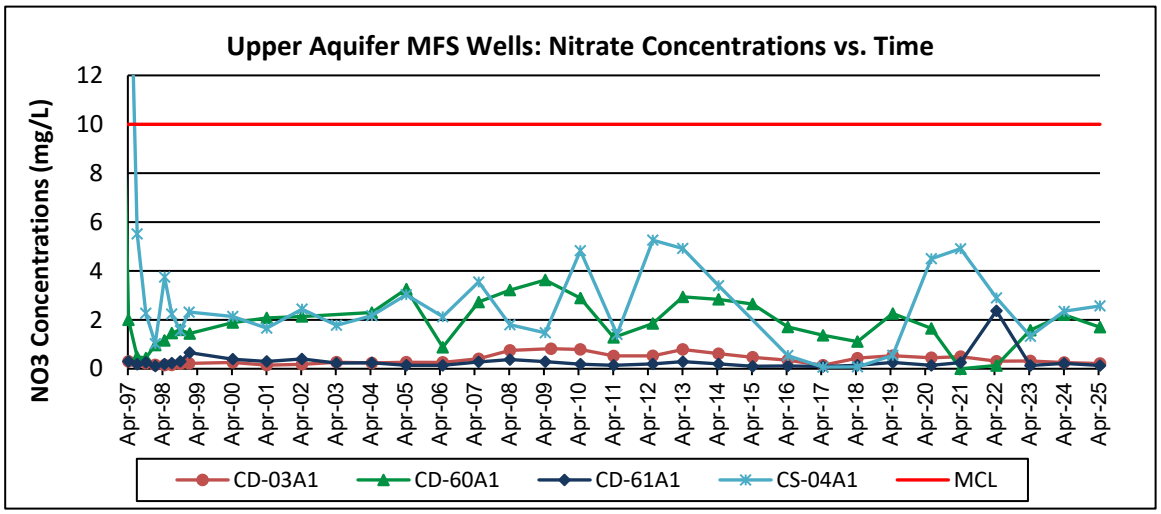


Figure 3-26 Upper Aquifer MFS Parameters vs Time







For all of the COC/analyte concentrations vs. time graphs above, non-detection values from the laboratory are displayed as 0 ppb.

Table 3-9 Summary Results for the Mann-Whitney Nonparametric Significance Test (2025)

	Level of Significance (p)	
Constituent	**Upper Aquifer**	***Lower Aquifer (1999)**
Chloride (Cl)	**7.15E-06**	**0.006**
Chemical Oxygen Demand (COD)	0.1909	0.48
Iron (FE)	0.1409	0.17
Manganese (MN)	0.08456	0.86
Ammonia (NH3)	0.5175	0.42
Nitrite (NO2)	0.4174	1.13
Nitrate (NO3)	**6.20E-05**	0.08
Sulfate	0.4115	**0.0006**
Total Organic Carbon	0.8134	0.32
Zinc	0.07039	0.06

***** Lower aquifer results from January 1999 using CP-E2 and CD-48C2 analytical results for calculations.

Bold number indicates a level of significance under 0.05, test run as two-tailed method.

Figure 3-27 Box Plots for Background and Downgradient MFS Wells (2025)

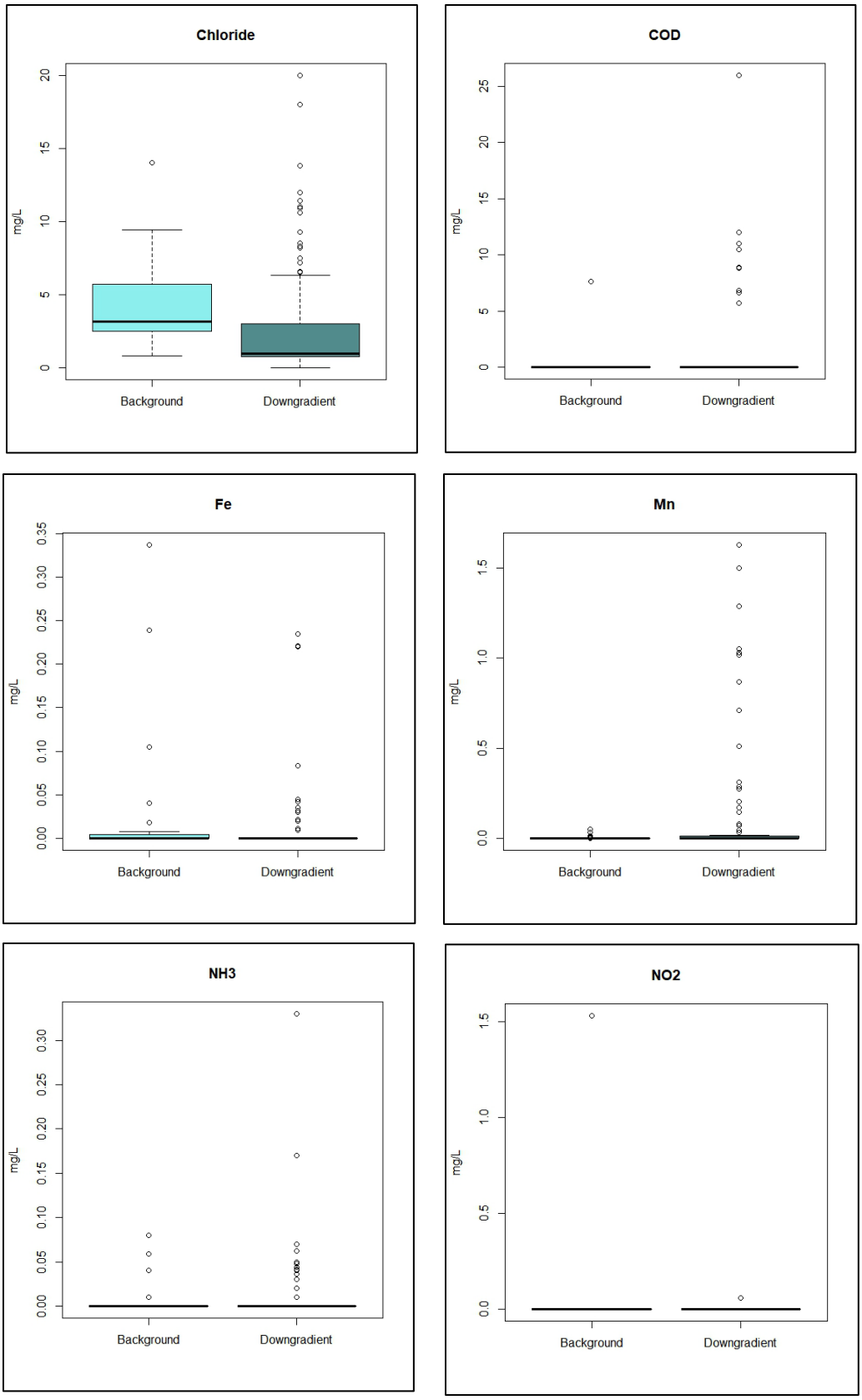
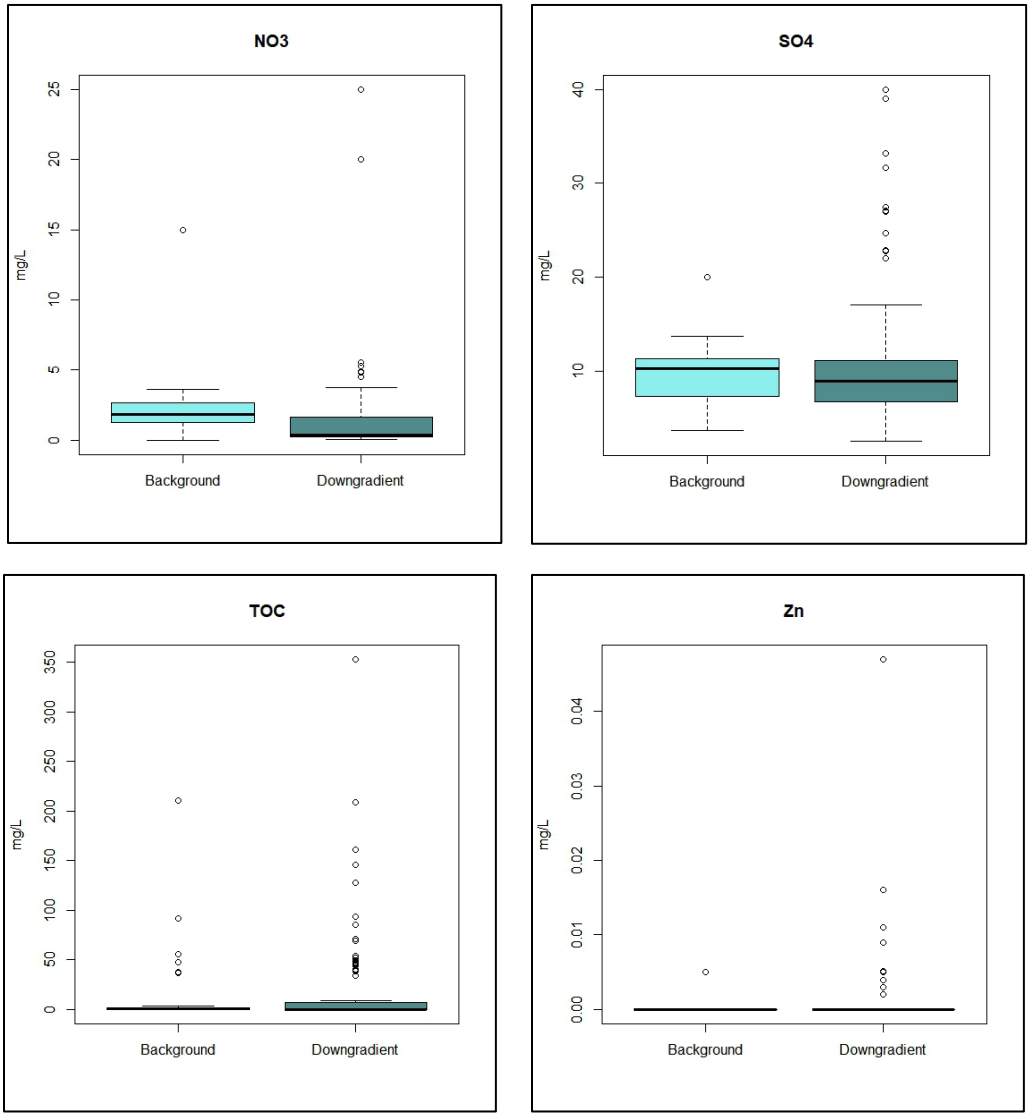


Figure 3-23 continued



4.0 Residential Program

4.1 Locations and Schedule

Current residential well sampling locations can be found in Figure 4-1. The residential sampling schedule is included in Table 4-1.

4.2 Monitoring Results and Criteria

Criteria for residential use wells were established in the Consent Decree. The Consent Decree states that if any residential well with a concentration over the evaluation criteria OR any residential well that has an average concentration over 65% of the evaluation criteria over 12 months, the county shall supply that residence with an alternative water source.

All residential well results were well below established criteria. Results from sampling are presented in Table 4-2. Time-series plots for wells with COC detections are shown in Figure 4-2 through Figure 4-4.

4.3 Data Evaluation

Only 1 residential well measured COC concentrations above the method detection limits for the 2024-2025 sampling year. Residential well 1073L-1 exhibited low detections of DCA (0.67 ppb) during this reporting period.

4.4 Program Modifications

On a regular basis, the program schedule is re-evaluated to determine if any changes are needed. With the initiation of the Shutdown Test, a re-evaluation was performed comparing plume maps and well locations as well as a list of residences connected to a public water supply. Some modifications to increase sampling in specific areas were made to the schedule to ensure a conservative approach concerning public health.

12 changes have been made to the schedule for the upcoming 2025-2026 sampling year. There were 4 decreases in the sampling schedule (2 decreases to semi-annual sampling, 1 decrease to annual sampling, and 1 decrease to supplemental sampling), and 8 changes in the sampling months for residential wells to better distribute the amount sampled per month. Changes are not required by any documentation or work plan.

The 2025 residential well sampling schedule and changes to the program are presented in Table 4-1.

Figure 4-1 Residential Well Sampling Locations

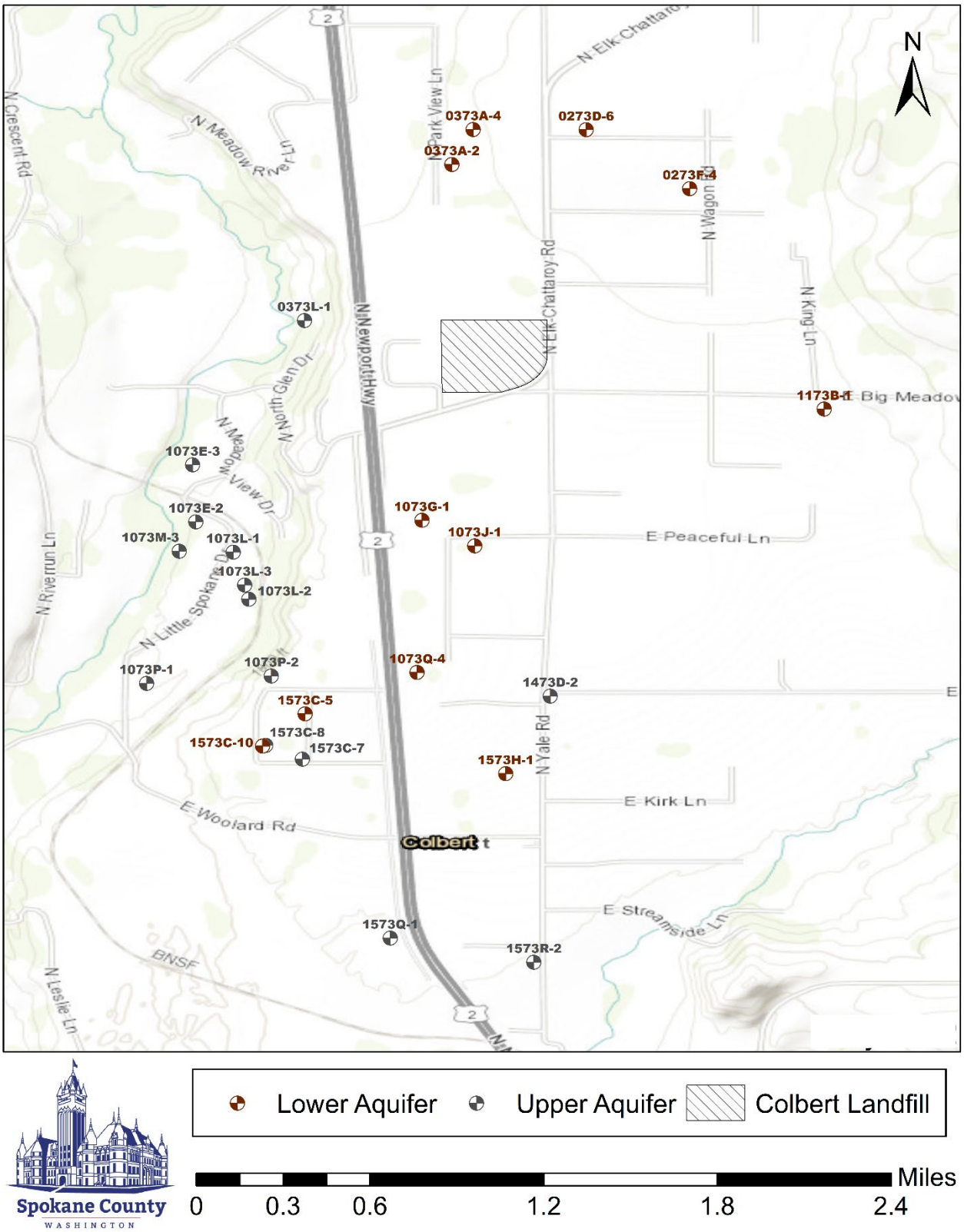


Table 4-1 Residential Well Sampling Schedule for Reporting Period

Colbert Residential Sampling Plan 2025

Station ID	Facility Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Select Comments
0273C-2	Jones/Schmidt	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Supplemental Sampling.
0273C-3	Warden	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Supplemental Sampling.
0273C-4	McQuesten	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Supplemental Sampling.
0273D-6	Thornton	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	
0273F-4	Gander	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	
0373A-2	Resseman	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☑	
0373A-4	Walker	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
0373L-1	Sterling	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	
1073D-1	Nerren	☐	☐	☐	☑	☐	☐	☐	☐	☐	☑	☐	☐	
1073E-2	Muglia	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	
1073E-3	Clark	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	
1073E-4	Carpenter	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	
1073F-1S	Adams	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	This is a spring sample
1073G-1	Rux	☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	☑	
1073J-1	Raines	☑	☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	
1073L-1	Halpin	☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	☑	
1073L-2	Countryman	☑	☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	
1073L-3	Anderson	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	
1073L-4	Thomas	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Supplemental Sampling.
1073M-1	Bertholf	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	
1073M-3	Lane	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	
1073P-1	Greenen	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	
1073P-2	Petrelli	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	
1073Q-4	NORTH MEADOWS W	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	
1173B-1	Bise	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	

Station ID	Facility Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Select Comments
1473C-5	Overmyer	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Supplemental Sampling.
1473D-2	Wardian	☐	☑	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	
1473M-1	Richard	☑	☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	
1573C-10	Lake	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
1573C-17	RESIDENT	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Supplemental Sampling.
1573C-5	Shelp	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	
1573C-7	Kirby	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
1573C-8	Williams	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	
1573H-1	Hunter	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	
1573Q-1	Saunder	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	
1573R-2	Bell	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	

Changes made to the Colbert Residential Sampling Schedule

StationID	Still active?	Comments/changes - ColRes review on 02/19/2025
1073D-1	Yes	Decrease to semi-annual sampling in April and October.
1473D-2	Yes	Decrease to semi-annual sampling in February and August.
1073L-3	Yes	Decreased to annual sampling in August.
1573C-7	Yes	Decreased to supplemental sampling.
1073M-1	Yes	Keep annual - sampling in July.
1573C-8	Yes	Keep annual sampling, but move to December.
1073Q-4	Yes	Keep annual sampling, but move to July.
0373L-1	Yes	Keep annual sampling, but move to March.
1073M-3	Yes	Keep annual sampling, but move to March.
1173B-1	Yes	Keep annual sampling, but move to October.
0273F-4	Yes	Keep annual sampling, but move to September.
1073E-2	Yes	Keep quarterly, but move to Feb., May, Aug., and Nov.

Table 4-2 Residential Groundwater Monitoring Program Results

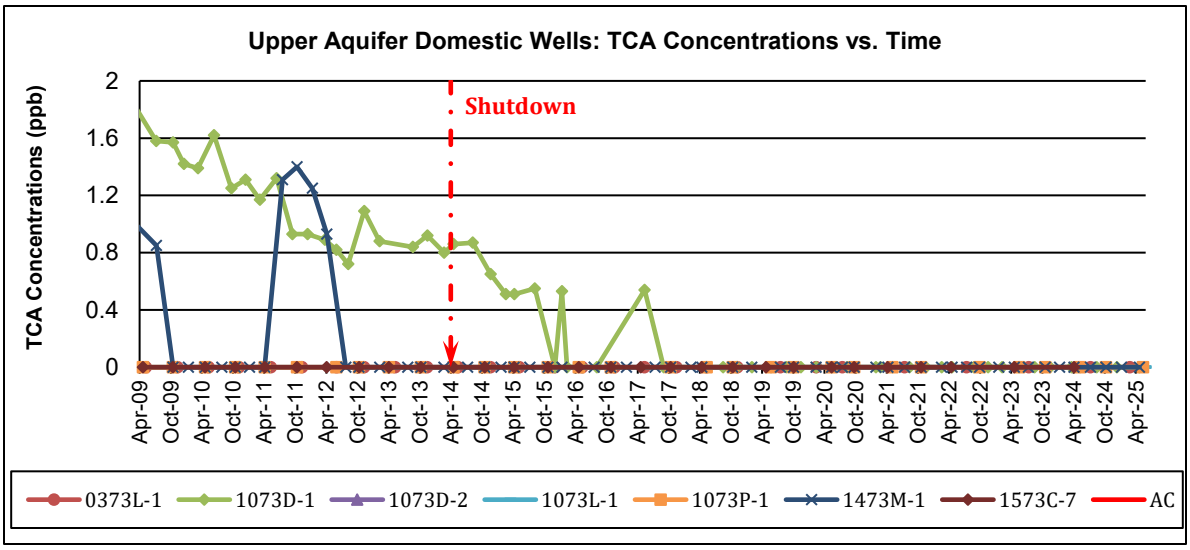
(June 2024 through April 2025)

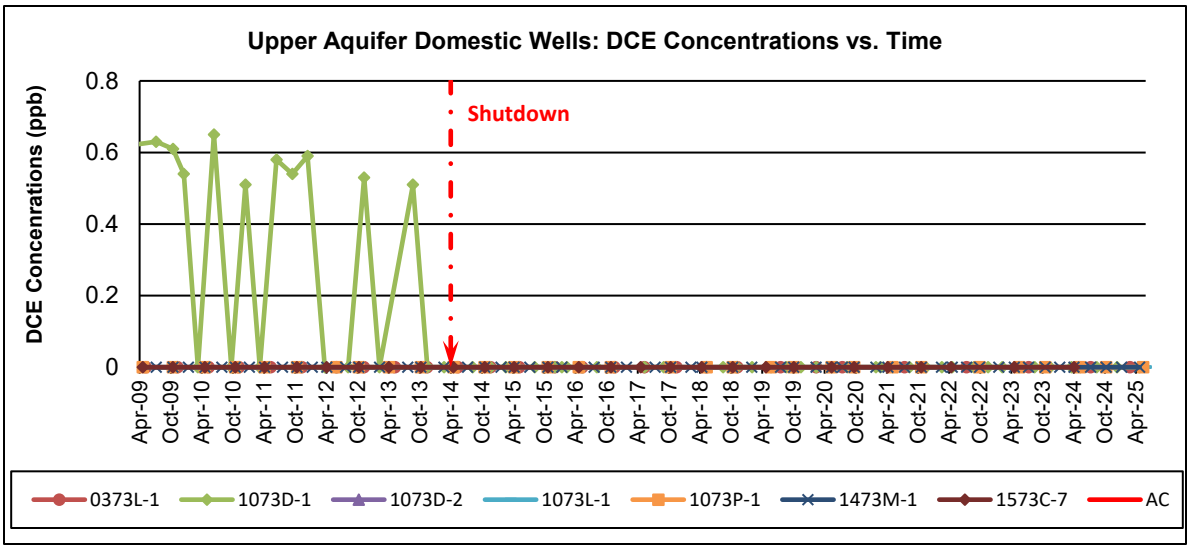
StationID	Aquifer	SampleDate	LastName	DCA	DCE	MC	PCE	TCA	TCE	VC
0273D-6	lower	9/12/2024	Thornton	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
0273F-4	lower	12/10/2024	Gander	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
0373A-2	lower	12/10/2024	Resseman	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
0373A-2	lower	5/28/2025	Resseman	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
0373L-1	upper	7/9/2024	Sterling	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
0373L-1	upper	2/25/2025	Sterling	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073D-1	upper	8/14/2024	Nerren	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073D-1	upper	12/11/2024	Nerren	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073D-1	upper	4/22/2025	Nerren	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-2	upper	7/9/2024	Muglia	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-2	upper	10/8/2024	Muglia	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-2	upper	1/8/2025	Muglia	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-2	upper	2/25/2025	Muglia	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-2	upper	5/13/2025	Muglia	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-3	upper	8/14/2024	Clark	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-3	upper	12/10/2024	Clark	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-3	upper	2/25/2025	Clark	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073E-3	upper	5/13/2025	Clark	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073G-1	lower	9/12/2024	Rux	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073G-1	lower	12/10/2024	Rux	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073G-1	lower	2/25/2025	Rux	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073G-1	lower	5/28/2025	Rux	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073J-1	lower	7/9/2024	Raines	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073J-1	lower	10/8/2024	Raines	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073J-1	lower	4/21/2025	Raines	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073L-1	upper	9/12/2024	Halpin	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

StationID	Aquifer	SampleDate	LastName	DCA	DCE	MC	PCE	TCA	TCE	VC
1073L-1	upper	12/11/2024	Halpin	**0.67**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073L-1	upper	2/25/2025	Halpin	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073L-1	upper	5/28/2025	Halpin	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073L-2	upper	7/9/2024	Countryman	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073L-2	upper	10/8/2024	Countryman	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073L-2	upper	1/7/2025	Countryman	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073L-2	upper	4/22/2025	Countryman	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073M-1	upper	7/9/2024	Bertholf	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073M-1	upper	1/7/2025	Bertholf	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073M-3	upper	2/25/2025	Lane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073P-1	upper	10/8/2024	Greenen	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073P-1	upper	5/13/2025	Greenen	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073P-2	upper	9/12/2024	Petrelli	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073Q-4	lower	7/9/2024	NORTH MEADOWS WATER	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1073Q-4	lower	1/7/2025	NORTH MEADOWS WATER	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1173B-1	lower	12/10/2024	Bise	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1473D-2	upper	8/14/2024	Wardian	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1473D-2	upper	12/10/2024	Wardian	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1473D-2	upper	2/25/2025	Wardian	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1473M-1	upper	7/9/2024	Richard	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1473M-1	upper	10/8/2024	Richard	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1473M-1	upper	1/7/2025	Richard	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1473M-1	upper	4/22/2025	Richard	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1573C-5	lower	8/14/2024	Shelp	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1573H-1	lower	2/25/2025	Hunter	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1573Q-1	upper	7/9/2024	Saunder	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1573R-2	upper	5/13/2025	Bell	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

***Bold** indicates a value greater than non-detection.

Figure 4-2 Upper Aquifer Residential Wells Concentrations vs Time





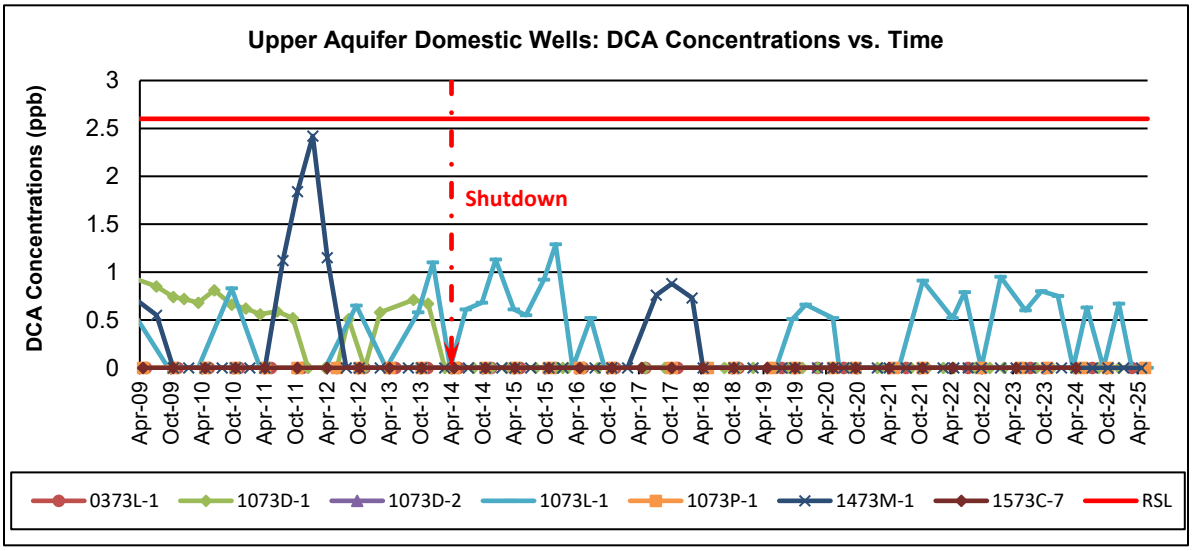
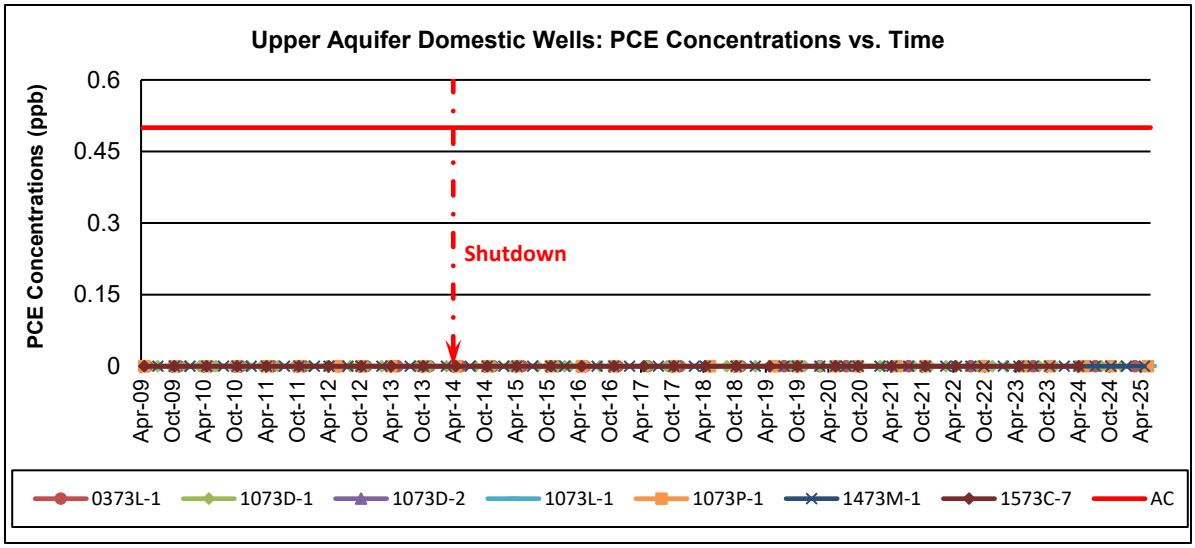


Figure 4-3 Upper Aquifer Residential Wells Concentrations vs Time



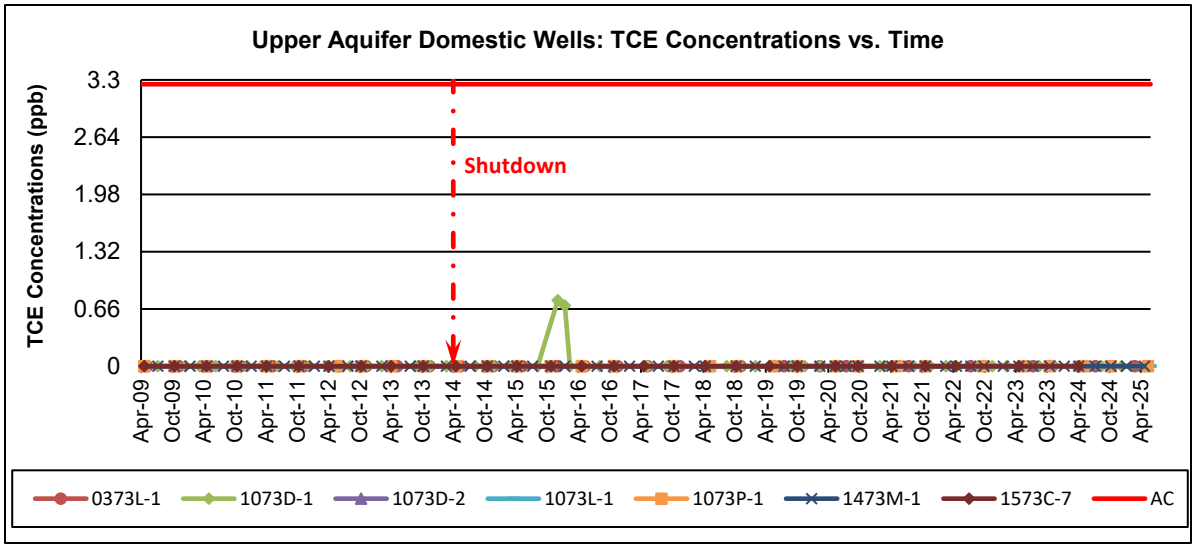
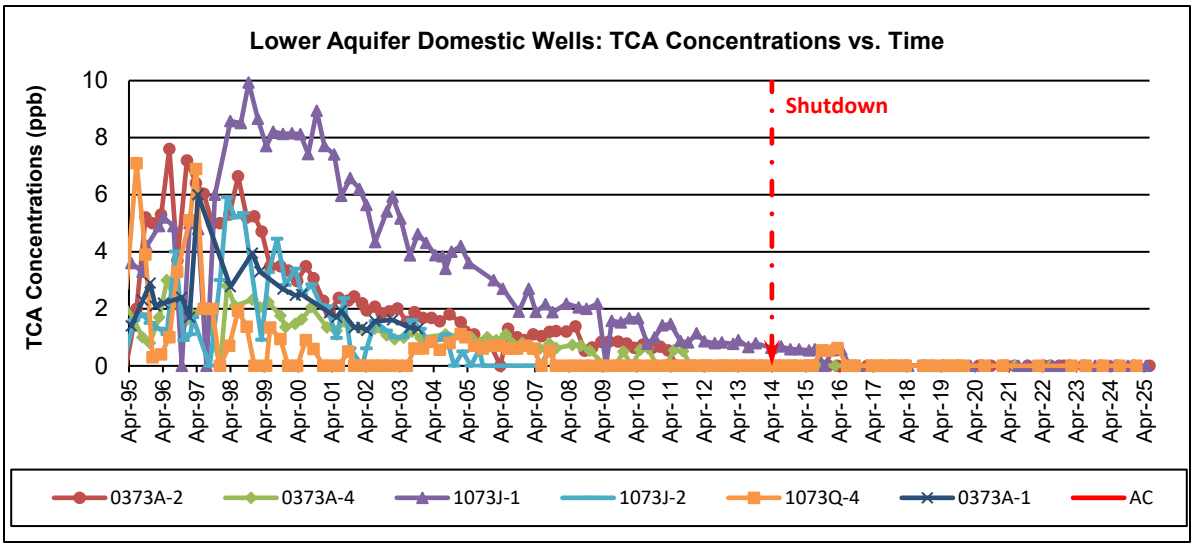
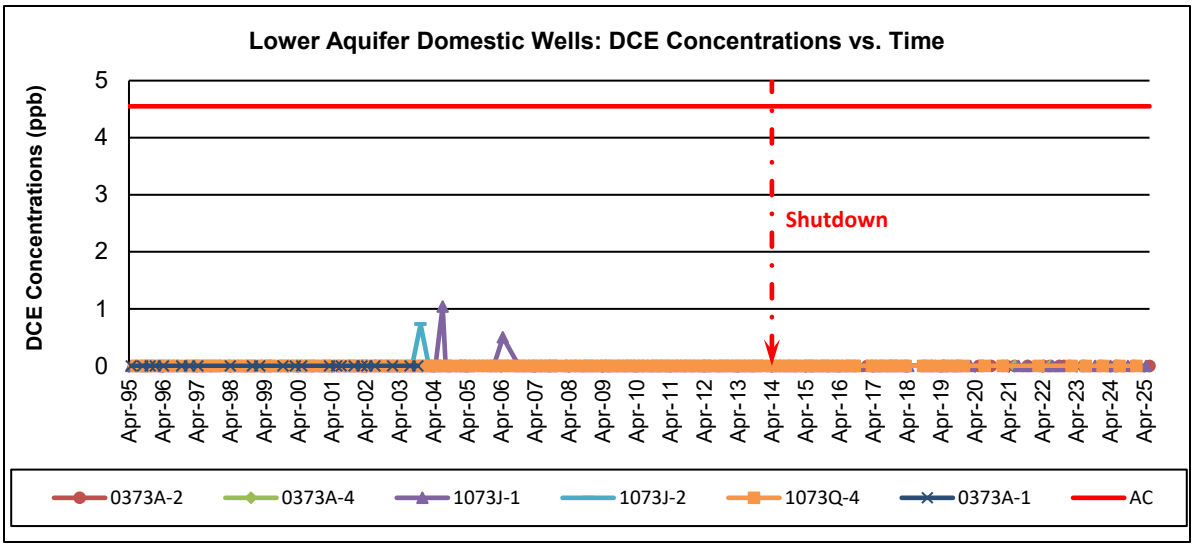


Figure 4-4 Lower Aquifer Residential Wells Concentrations vs Time





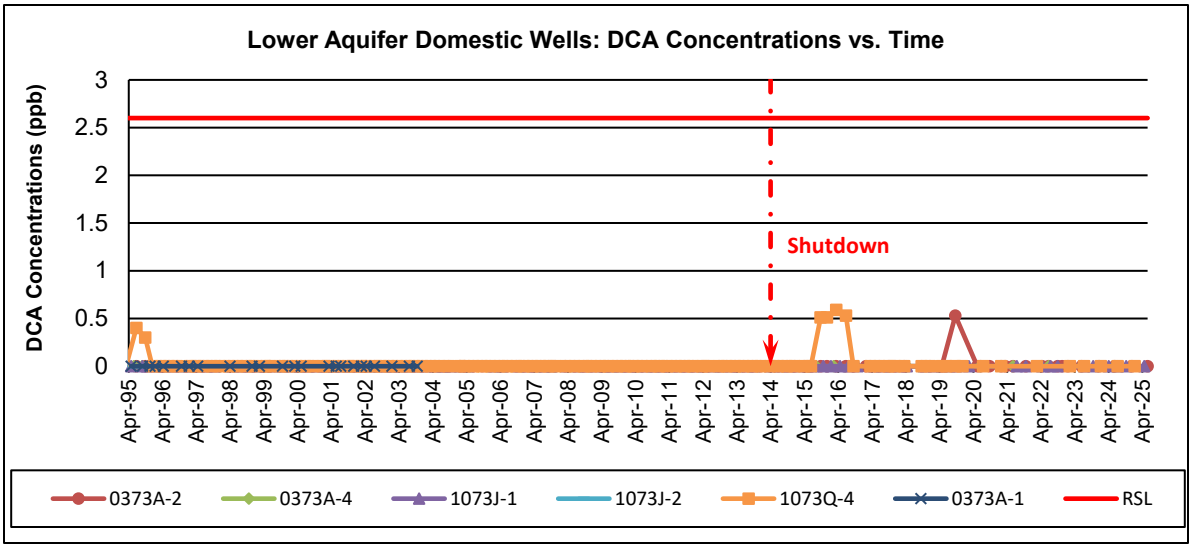
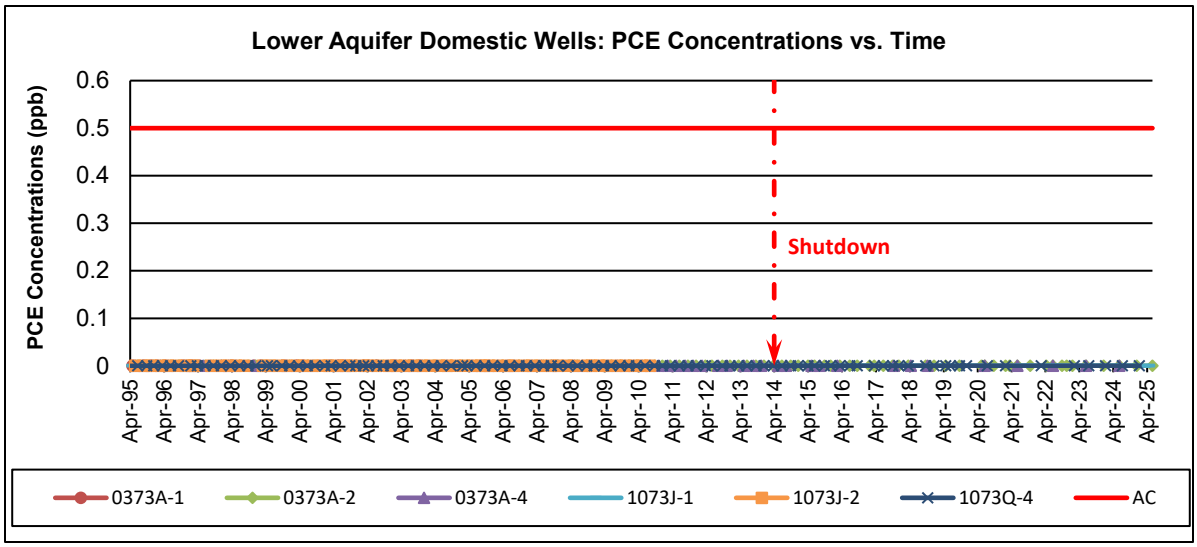
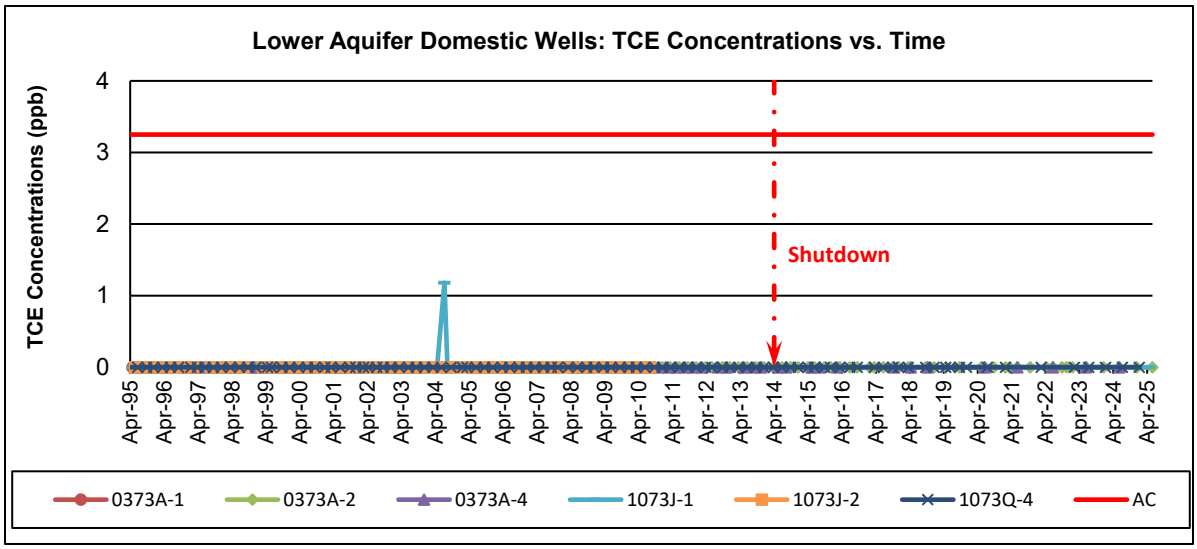


Figure 4-5 Lower Aquifer Residential Wells Concentrations vs Time





For all of the COC concentrations vs. time graphs above, non-detection values from the laboratory are displayed as 0 ppb.

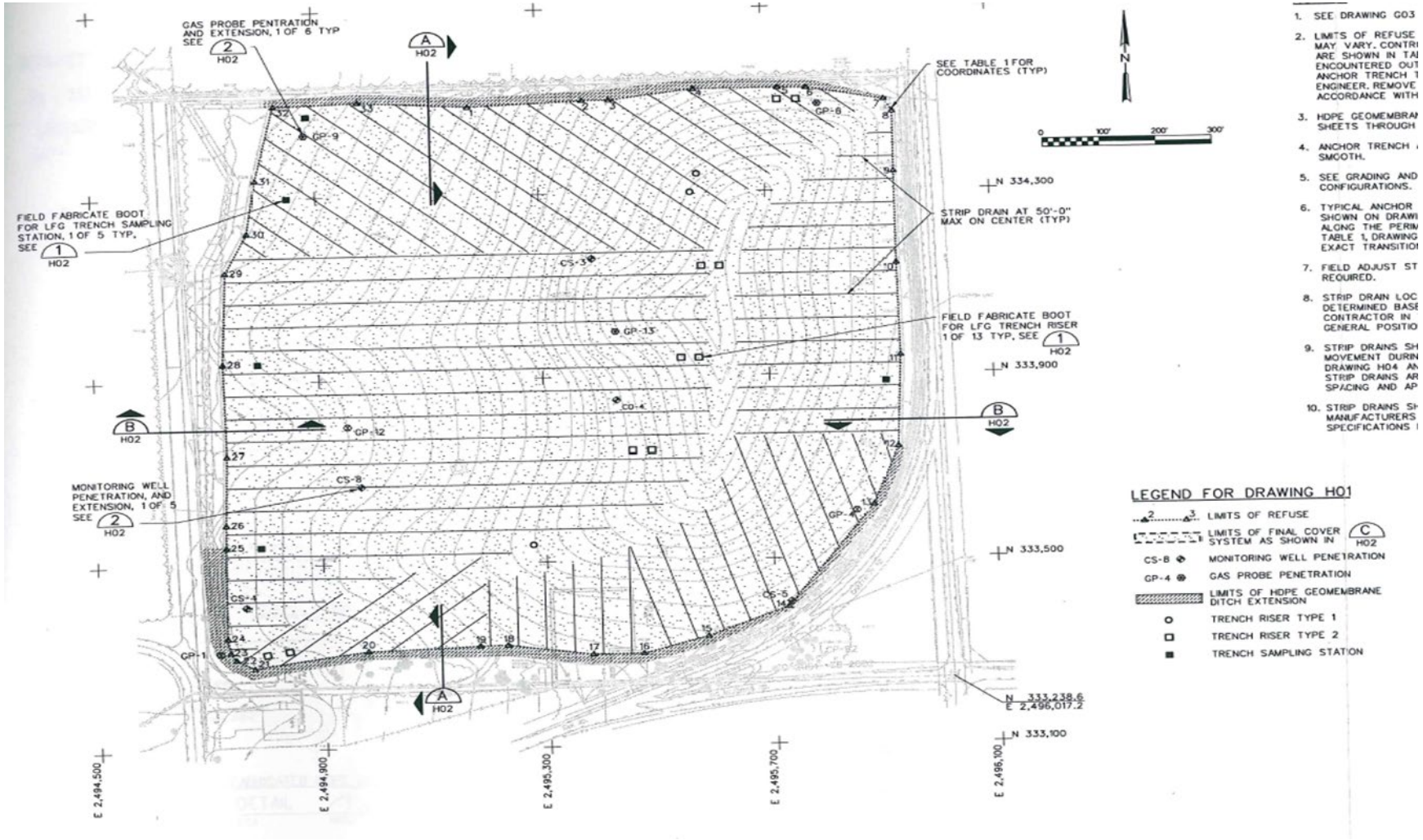
5.0 Colbert Landfill Gas System

5.1 Colbert Landfill Gas Collection System Summary

The landfill gas (LFG) system was installed to prevent off-site gas migration and to prevent the build-up of gas pressure. The Colbert Landfill gas collection system uses a combination of interior and perimeter gas collection trenches connected through a main gas manifold. The Colbert Landfill gas collection system is presented in Figure 5-1.

The gas is moved toward the control system with the use of a 15-hp blower (no VFD) at the main facility. Landfill condensate is collected in both an underground storage tank and an above-ground storage tank. The amount of gas collected from each area of the interior and perimeter system is controlled through valve adjustments in the trench riser wellhead assemblies installed in each of the gas collection trenches. The overall amount of vacuum available for gas collection in the manifold is controlled by valve adjustments at the main facility. The gas collection station includes a condensate knockout vessel, a gas exhauster, several carbon adsorber vessels, and an exhaust stack. The landfill gas is passed through the carbon adsorber (granular activated carbon, or GAC) vessels to remove VOCs and is then exhausted out of the stack. Monitoring is performed at sample ports before and after the carbon vessels, at each trench riser, and interior and perimeter gas probes.

Figure 5-1 Colbert Landfill Gas Collection System



5.2 Colbert Landfill Gas Monitoring

Monitoring for gas at the Colbert Landfill is performed at sample ports before and after the carbon vessels, at each trench riser, and at interior and perimeter gas probes. Spokane County personnel perform monthly monitoring of the gas probes and exhaust system, monthly condensate tank level checks, monthly gas fan maintenance (greasing, belt tension adjustments, etc.), and contaminant analyses on an annual basis (Method TO-15). TO-15 sampling is typically conducted in July or August during the reporting period. TO-15 results and the Colbert Landfill Perimeter Gas Probe results/summary are presented in Appendix A. In summary, there are only non-detections or very low concentrations of landfill gas at the perimeter gas probes.

The most recent Carbon vessel change-out was conducted on 9/1/2021, and the following landfill gas monitoring activities were conducted during this reporting period:

- Landfill gas sampling and analysis (Method TO-15) will be performed in July 2025.
- Monthly monitoring of gas probes and exhaust system.
- Monthly gas fan maintenance (greasing, belt tension adjustments, etc.)
- Quarterly monitoring of trench risers (June, October, February, and April).

County personnel reviewed the Colbert GAC system TO-15 results in July 2024, and the results indicated that the non-halogenated organic contaminants were still well below/not approaching their designated Small Quantity Emission Rates (SQERs), and therefore does not warrant a carbon changeout during this reporting period. The County will collect TO-15 samples and review the data in July 2025 to determine if a changeout/recharge of the carbon system is necessary.

Monitoring:

The GAC carbon unit will be inspected monthly by County personnel. Landfill gas concentrations of CH4, CO2, O2, flow rate, and any pressure loss at the carbon adsorber unit will be measured and recorded regularly (if applicable). County personnel will conduct quarterly scheduled inspections to confirm that the TSU/2000S GAC unit is operating smoothly and check for signs of wear and tear and/or condensate accumulation. The TO-15 results will be evaluated regularly to determine when the carbon unit needs to be changed out/recharged.

Data Evaluation/Carbon Changeout:

County personnel will collect TO-15 samples annually to evaluate contaminant concentrations in comparison to their designated Small Quantity Emission Rates (SQERs). County personnel will evaluate the non-halogenated organics as indicators for breakthrough, with a heavier weight placed on contaminants with an “annual” averaging time (such as Ethyl Benzene). Once concentrations are approaching their designated SQERs, County personnel will coordinate the changing out/recharging of the carbon unit and fill out a “Spent Carbon Profile Form” (SCPF) to accommodate the TO-15 results. A “dip” sample will then be taken and sent to the company providing the carbon changeout so that the recharging can occur.

6.0 Landfill Operations and Maintenance

Spokane County personnel conduct O&M activities in accordance with the Colbert Landfill 1999 O&M Plan. From May 2024 through April 2025, the following O&M activities were conducted at the Colbert Landfill:

- Monthly inspections of the gas probes and exhaust system
- Monthly condensate tank levels/inspections
- Monthly gas fan maintenance (greasing, belt tension adjustments, etc.)
- Quarterly inspections of trench risers (June, October, February, and April).
- Cover and ditch weed control was ongoing throughout the growing season.

Additional O&M activities were conducted for the Colbert landfill gas system and the groundwater extraction system/extraction wells. The Colbert Landfill gas system monitoring and maintenance is described above in section 5.2. The landfill cover assessments/settlement marker surveying occur every 2 years, and are described below in section 6.1. Inspections for the P&T extraction wells are conducted on a quarterly basis. Extraction well inspection reports can be found in Appendix C and include (but are not limited to) the following:

- Sump evaluation: Hi-Float Alarm, cleaning, and pertinent notes.
- VFD evaluation: cleaning the filters, and inspecting wiring and components.
- Piping evaluation: exercising gate valves, inspecting piping, inspecting air/vac valve.
- Pit evaluation: inspection for leaks, checking for zero reading(s).
- PCP evaluation: inspecting wiring/relays/comp, checking indicator lights, and cleaning filters.
- Vault evaluation: inspecting ladder bolts/rungs/lower and upper lid bolts.
- Final inspections and other pertinent notes.

All additional relevant operations and maintenance documentation (field notes summarizing field activities and results, field sheets for sampling events within the reporting period, etc.) is presented in Appendix B.

6.1 Colbert Landfill Settlement

- Spokane County installed 10 new settlement markers (CSM10 – CSM19) in June 2019 across several known areas of concern to monitor settlement on the landfill. These settlement markers will be surveyed every 2 years, and will be monitored for any additional settling that might occur on the Colbert landfill.

Figure 6-1: Colbert Landfill Settlement Marker Locations

Spokane County conducted settlement marker surveys at the Colbert landfill on 12/09/2024. The next landfill settlement survey will occur in 2026. The following table shows the difference in elevation for each settlement marker from 2023 to 2025:

Table 6-1: Settlement Elevation Summary

Settlement Marker ID	Elevation - 2024	Difference in Elevation from 2023		Difference in Elevation from 1999
CSM1	1863.85	0.000	–	-0.093
CSM2	1865.22	-0.036	▼	-0.100
CSM3	1875.46	-0.042	▼	-0.225
CSM4	1868.98	-0.090	▼	-0.341
CSM5	1856.71	-0.046	▼	-0.147
CSM6	1856.93	-0.180	▼	-0.508
CSM10	1860.76	0.000	–	N/A
CSM11	1860.79	-0.089	▼	N/A
CSM12	1863.09	-0.034	▼	N/A
CSM13	1860.34	-0.159	▼	N/A
CSM14	1861.41	-0.073	▼	N/A
CSM15	1863.31	-0.024	▼	N/A
CSM16	1864.48	-0.102	▼	N/A
CSM17	1860.54	-0.115	▼	N/A
CSM18	1857.89	-0.186	▼	N/A
CSM19	1856.43	-0.130	▼	N/A

7.0 Institutional Controls

The goal of Spokane County's Institutional Control (IC) Program is to ensure the protection of public health and the environment in the Colbert Landfill Superfund Site vicinity. Institutional Controls are defined as non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human and ecological exposure to contamination and/or protect the integrity of the remedy. Although Spokane County's IC program has proven effective since its implementation, the County created an Institutional Control Implementation and Assurance Plan (ICIAP) in March 2021 to describe the process for recordable and enforceable controls, along with the key strategies to ensure the protection of public health and the environment in the area surrounding the Colbert Landfill. The ICIAP document can be found on the Spokane County Solid Waste website. The County will conduct the following activities to ensure the success of the Institutional Controls program:

- Generate Constituent of Concern (COC) plume maps using geospatial analysis to define plume boundaries/areas of concern.

- Report plume maps/boundaries to the SRHD to establish boundaries and areas of concern regarding potential well drilling. This will ensure that if an individual/organization is interested in drilling a new well or planning a well use change, the SRHD will have boundaries/areas of concern to reference.

- Coordinate with the Spokane Regional Health District (SRHD) to investigate any individuals/ interested in drilling wells or changing a well use in any areas of concern within the annual reporting period timeframe.

- Report plume maps/boundaries to the Washington Department of Ecology (Ecology) to establish boundaries and areas of concern regarding potential well drilling. This will ensure that if an individual/organization applies for a permit to drill a new well or change an established well's use, Ecology will have boundaries/areas of concern to reference.

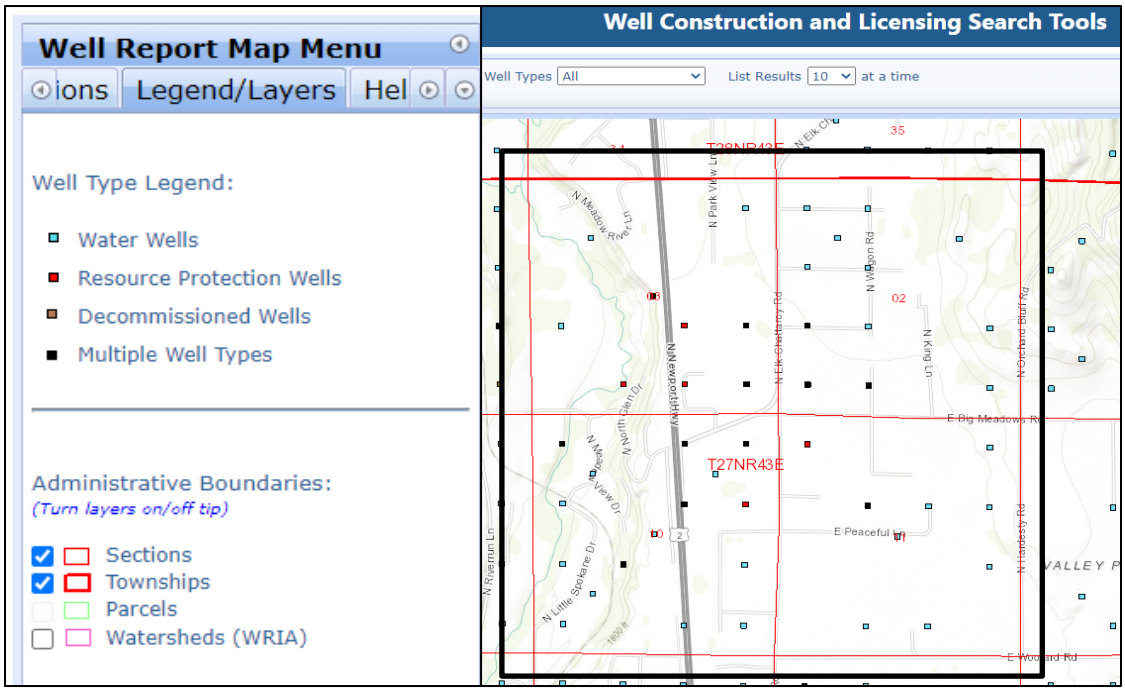
- Coordinate with Ecology to investigate any individuals/organizations interested in drilling wells or changing a well use in any areas of concern within the annual reporting period timeframe.

- Utilize the Well Construction and Licensing Search Tools to account for any new or unknown well construction that may have occurred near any areas of concern.

Records of IC Evaluation Activities for 2025

The following activities have been conducted/completed by Spokane County, Washington Department of Ecology, and Spokane Regional Health District personnel:

- Spokane County personnel consulted the contamination plume maps created for 2025 and used the Washington Department of Ecology's Well Construction and Licensing Search Tools to define a search area to evaluate for new well installs/well use changes:



  Spokane County personnel reviewed the most recent well data based on the listed well completion date(s), the well report received date, and well type/proximity to the plumes/landfill. Using the same search boundaries that were used in previous years, County personnel did not find any new domestic wells/well reports that were added to the Department of Ecology's Well Construction and Licensing Database. All of the domestic well locations were evaluated in relation to the upper and lower aquifer plume boundaries, and all of the domestic wells were outside of the contamination plume areas of concern.

  The well reports that had "blank" well completion dates/well report received dates were also investigated. All of these wells are either Spokane County-owned wells, wells on the Colbert Landfill residential monitoring program, or decommissioned.

- Spokane County personnel sent the 2025 contamination plume maps to the Washington Department of Ecology and the Spokane Regional Health District on 5/5/2025, and inquired about their findings regarding an evaluation for new well requests/well use changes in the Colbert Landfill vicinity. Both organizations reported that, in their investigations, there were no new wells drilled or change requests for wells in the vicinity of the Colbert Landfill plume.

8.0 References

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CH2MHill. May 1997*. Operations and Maintenance Manual for Colbert Landfill Closure*

U.S. District Court, Eastern District of Washington. 1988. Consent Decree No. C-89-033-RJM. The Washington State Department of Ecology and The United States of America on behalf of the U.S. Environmental Protection Agency (plaintiffs) v. County of Spokane and Key Tronic Corporation (defendants). February 28.

Appendix A

Colbert Landfill Perimeter Gas Probe and TO-15 Results

COLBERT PERIMETER GAS MONITORING REPORT

Barometer: 30.58

Tech: MT **Calibration:** Zeroed CH to AB air, calibrated to 15.0% CH4 and 15.0% CO2; Zeroed O2 with COLGAS, then calibrated 20.9% Abair **FanFlow:** 42 **Weather** Clear and cool 38

Equipment: Gem 500 #410

Location	Date	Time	CH4	CO2	O2	Balance	Static Press	Diff. Press.	Comments
CGP0001L	1/15/2025		0	2.2	17.4	80.4	0	0	
CGP0001L	6/9/2025		0	2.9	15.6	81.5	0	0	
CGP0001L	5/23/2025		0	2.8	6.9	90.3	0	0	
CGP0001L	4/2/2025		0	2.4	17.5	80.1	0	-0.01	
CGP0001L	2/14/2025		0	3	16.7	80.3	0	0	
CGP0001L	3/14/2025		0	3.5	16.8	79.7	0	0	
CGP0001L	8/15/2024		0	2.3	17.7	80	0	-0.02	
CGP0001L	12/9/2024		0	2.5	17.3	80.2	0	-0.01	
CGP0001L	11/22/2024		0	3.4	17	79.6	0	-0.02	
CGP0001L	10/30/2024		0	3.5	7	89.5	0	0	
CGP0001L	9/27/2024		0	3.6	17.1	79.3	0	0	
CGP0001L	7/18/2024		0	3.1	16.7	80.2	0	-0.01	
CGP0001U	11/22/2024		0	6.6	13.3	80.1	0	-0.02	
CGP0001U	10/30/2024		0	7.2	5.5	87.3	0	0	
CGP0001U	5/23/2025		0	5.5	5.6	88.9	0	0	
CGP0001U	12/9/2024		0	6	6	88	0	0	
CGP0001U	1/15/2025		0	6.1	5.6	88.3	0	0	
CGP0001U	7/18/2024		0	5.9	6.1	88	0	-0.01	
CGP0001U	8/15/2024		0	5.6	6.2	88.2	0	-0.01	
CGP0001U	3/14/2025		0	6.6	5.3	88.1	0	-0.01	
CGP0001U	2/14/2025		0	4.6	7	88.4	0	0	
CGP0001U	4/2/2025		0	5.5	13.9	80.6	0	0	
CGP0001U	6/9/2025		0	4.9	6.1	89	0	-0.01	
CGP0001U	9/27/2024		0	5.7	6	88.3	0	-0.01	
CGP0002L	6/9/2025		0	6.1	6	87.9	0	0	
CGP0002L	10/30/2024		0	7.1	5.6	87.3	0	-0.01	
CGP0002L	11/22/2024		0	6.7	13.2	80.1	0	0	
CGP0002L	2/14/2025		0	6.8	5.6	87.6	0	-0.01	
CGP0002L	1/15/2025		0	6.7	5.6	87.7	0	-0.01	
CGP0002L	12/9/2024		0	7.1	5.5	87.4	0	0	
CGP0002L	8/15/2024		0	6.6	5.9	87.5	0	0	

COLBERT PERIMETER GAS MONITORING REPORT

Barometer: 30.03

Tech: CC **Calibration:** Calibrated by CC @1100 noted **FanFlow:** 42 **Weather** PT Cloudy mid 60's

Equipment: Gem 500 #410

Location	Date	Time	CH4	CO2	O2	Balance	Static Press	Diff. Press.	Comments
CGP0002L	5/23/2025		0	5.8	5.7	88.5	0	-0.01	
CGP0002L	9/27/2024		0	7.1	5.5	87.4	0	-0.01	
CGP0002L	7/18/2024		0	6.9	5.7	87.4	0	-0.01	
CGP0002L	4/2/2025		0	6.4	13.4	80.2	0	0	
CGP0002L	3/14/2025		0	6.3	6.1	87.6	0	-0.01	
CGP0002U	11/22/2024		0	2.1	17.9	80	0	-0.01	
CGP0002U	9/27/2024		0	2.3	17.9	79.8	0	0	
CGP0002U	5/23/2025		0	1.8	18.7	79.5	0	-0.01	
CGP0002U	10/30/2024		0	1.9	18.4	79.7	0	0	
CGP0002U	1/15/2025		0	1.8	18.4	79.8	0	0	
CGP0002U	12/9/2024		0	2	18.3	79.7	0	0	
CGP0002U	8/15/2024		0	1.5	18.7	79.8	0	0	
CGP0002U	6/9/2025		0	1.9	18.1	80	0	0	
CGP0002U	3/14/2025		0	2	19.1	78.9	0	-0.02	
CGP0002U	2/14/2025		0	2.4	17.5	80.1	0	-0.02	
CGP0002U	4/2/2025		0	1.5	18.4	80.1	0	0	
CGP0002U	7/18/2024		0	2	18.3	79.7	0	0	
CGP0003L	3/14/2025		0	9.3	4.2	86.5	0	-0.02	
CGP0003L	10/30/2024		0	9.8	4.2	86	0	0	
CGP0003L	2/14/2025		0	9.5	4.1	86.4	0	0	
CGP0003L	12/9/2024		0	10.1	4	85.9	0	0	
CGP0003L	7/18/2024		0	9.9	4.2	85.9	0	0	
CGP0003L	4/2/2025		0	9.5	6.7	83.8	0	-0.02	
CGP0003L	1/15/2025		0	9.7	4.2	86.1	0	-0.02	
CGP0003L	9/27/2024		0	9.7	4.1	86.2	0	0	
CGP0003L	5/23/2025		0	9.1	3.9	87	0	0	
CGP0003L	8/15/2024		0	9.9	4.5	85.6	0	0	
CGP0003L	11/22/2024		0	9.1	10.7	80.2	0	0	
CGP0003L	6/9/2025		0	9.6	3.3	87.1	0	0	
CGP0003U	11/22/2024		0	2.1	18.5	79.4	0	0	
CGP0003U	4/2/2025		0	1.4	18.7	79.9	0	0	

COLBERT PERIMETER GAS MONITORING REPORT

Barometer: 30.11

Tech: MT

Calibration: Zeroed CH4 to AB air-> CALGAS CH4 reading 14.0% calibrated to 15.0% CH4; CO2 reading 14.7% calibrated to 15.0%; Zeroed O2 to CALGAS -> O2 reading 20.5 cal to

FanFlow: 42

Weather Partly Cloudy 40's-50's

Equipment: GEM 500 #410

Location	Date	Time	CH4	CO2	O2	Balance	Static Press	Diff. Press.	Comments
CGP0003U	10/30/2024		0	2.1	18	79.9	0	-0.01	
CGP0003U	2/14/2025		0	2.1	17.7	80.2	0	0	
CGP0003U	1/15/2025		0	1.3	18.8	79.9	0	0	
CGP0003U	12/9/2024		0	1.3	18.6	80.1	0	0	
CGP0003U	7/18/2024		0	1.2	18.7	80.1	0	0	
CGP0003U	8/15/2024		0	1.5	19.2	79.3	0	-0.02	
CGP0003U	3/14/2025		0	2	19	79	0	0	
CGP0003U	6/9/2025		0	2	17.2	80.8	0	0	
CGP0003U	5/23/2025		0	1.7	18.3	80	0	-0.02	
CGP0003U	9/27/2024		0	1.4	18.6	80	0	-0.01	
CGP0004L	5/23/2025		0	5.8	5.3	88.9	0	0	
CGP0004L	2/14/2025		0	7.5	4.7	87.8	0	0	
CGP0004L	9/27/2024		0	6.9	5.3	87.8	0	0	
CGP0004L	10/30/2024		0	7.3	5.3	87.4	0	0	
CGP0004L	6/9/2025		0	5.5	5.8	88.7	0	-0.01	
CGP0004L	11/22/2024		0	5.8	13.4	80.8	0	-0.01	
CGP0004L	12/9/2024		0	7.3	4.9	87.8	0	-0.01	
CGP0004L	7/18/2024		0	6.9	5.3	87.8	0	0	
CGP0004L	8/15/2024		0	6.6	7.1	86.3	0	-0.01	
CGP0004L	1/15/2025		0	7.5	4.9	87.6	0	0	
CGP0004L	4/2/2025		0	6.7	12.3	81	0	-0.03	
CGP0004L	3/14/2025		0	5.5	6.3	88.2	0	0	
CGP0004U	12/9/2024		0	3.8	6.6	89.6	0	-0.01	
CGP0004U	10/30/2024		0	3.7	6.8	89.5	0	0	
CGP0004U	6/9/2025		0	2.1	16.2	81.7	0	0	
CGP0004U	11/22/2024		0	3.5	16.4	80.1	0	-0.01	
CGP0004U	2/14/2025		0	3.7	6.9	89.4	0	-0.01	
CGP0004U	8/15/2024		0	3.4	7.2	89.4	0	-0.02	
CGP0004U	1/15/2025		0	3.4	6.7	89.9	0	0	
CGP0004U	3/14/2025		0	3.2	17	79.8	0	0	
CGP0004U	4/2/2025		0	3.7	15.1	81.2	0	-0.02	

COLBERT PERIMETER GAS MONITORING REPORT

Barometer: 30.11

Tech: MT

Calibration: Zeroed CH4 -> CALGAS CH4 reading 14.8% cal to 15.0%; CO2 reading 14.9% cal to 15.0%; zeroed O2 to CALGAS -> O2 reading 20.6 cal to 20.9% AB air

FanFlow: 51

Weather Clear Warm 80's

Equipment: Gem 500 #410

Location	Date	Time	CH4	CO2	O2	Balance	Static Press	Diff. Press.	Comments
CGP0004U	7/18/2024		0	3.9	6.5	89.6	0	-0.02	
CGP0004U	5/23/2025		0	3.3	6.3	90.4	0	-0.01	
CGP0004U	9/27/2024		0	4	6.4	89.6	0	-0.01	
CGP0005L	5/23/2025		0	5.1	4.9	90	0	0	
CGP0005L	11/22/2024		0	7.8	9.9	82.3	0	0	
CGP0005L	2/14/2025		0	7.7	3.5	88.8	0	0	
CGP0005L	12/9/2024		0	9.9	2	88.1	0	-0.01	
CGP0005L	7/18/2024		0	9.1	2.2	88.7	0	0	
CGP0005L	8/15/2024		0	8.2	3.2	88.6	0	0	
CGP0005L	1/15/2025		0	8.5	2.6	88.9	0	0	
CGP0005L	10/30/2024		0	8.6	3.8	87.6	0	-0.02	
CGP0005L	4/2/2025		0	5.8	6.8	87.4	0	0	
CGP0005L	9/27/2024		0	9.4	2	88.6	0	0	
CGP0005L	3/14/2025		0	7.2	5.5	87.3	0	0	
CGP0005L	6/9/2025		0	4.4	5.6	90	0	0	
CGP0005U	6/9/2025		0	2.5	15.9	81.6	0	0	
CGP0005U	10/30/2024		0	2.2	7	90.8	0	0	
CGP0005U	4/2/2025		0	1.4	17.7	80.9	0	0	
CGP0005U	11/22/2024		0	2.5	16.4	81.1	0	0	
CGP0005U	2/14/2025		0	2.2	16.8	81	0	-0.01	
CGP0005U	12/9/2024		0	1.6	7	91.4	0	0	
CGP0005U	8/15/2024		0	1.9	17.9	80.2	0	-0.01	
CGP0005U	1/15/2025		0	1.2	17.2	81.6	0	0	
CGP0005U	3/14/2025		0	2	18	80	0	-0.01	
CGP0005U	5/23/2025		0	1.5	7.3	91.2	0	0	
CGP0005U	7/18/2024		0	1.9	6.7	91.4	0	0	
CGP0005U	9/27/2024		0	2.1	6.6	91.3	0	-0.01	
CGP0007L	3/14/2025		0	1.2	19.1	79.7	0	0	
CGP0007L	9/27/2024		0	1.2	17.9	80.9	0	0	
CGP0007L	6/9/2025		0	1.9	18.1	80	0	0	
CGP0007L	10/30/2024		0	1.4	18.1	80.5	0	0	

COLBERT PERIMETER GAS MONITORING REPORT

Barometer: 30.11

Tech: MT

Calibration: Zeroed CH4 to AB air CALGAS-> CH4 reading 14.8% cal to 15.0%; CO2 reading 14.9% cal to 15.0%; zeroed O2 to CALGAS-> calibrated to 20.9% AB air

FanFlow: 41

Weather Partly Cloudy 40's rain showers

Equipment: Gem 500 #410

Location	Date	Time	CH4	CO2	O2	Balance	Static Press	Diff. Press.	Comments
CGP0007L	11/22/2024		0	1.1	19.6	79.3	0	0	
CGP0007L	2/14/2025		0	1.3	18.9	79.8	0	0	
CGP0007L	5/23/2025		0	0.8	19.8	79.4	0	-0.01	
CGP0007L	4/2/2025		0	0.8	19.9	79.3	0	0	
CGP0007L	12/9/2024		0	1.5	18.7	79.8	0	0	
CGP0007L	8/15/2024		0	0.8	18.9	80.3	0	0	
CGP0007L	7/18/2024		0	0.9	18.8	80.3	0	0	
CGP0007L	1/15/2025		0	1.1	19.6	79.3	0	-0.01	
CGP0007U	9/27/2024		0	6.1	5.8	88.1	0	-0.01	
CGP0007U	4/2/2025		0	4.2	14.2	81.6	0	-0.01	
CGP0007U	8/15/2024		0	5.1	6.5	88.4	0	-0.02	
CGP0007U	6/9/2025		0	0.8	18.8	80.4	0	-0.01	
CGP0007U	10/30/2024		0	6.2	5.9	87.9	0	0	
CGP0007U	11/22/2024		0	4	15.3	80.7	0	-0.02	
CGP0007U	12/9/2024		0	5.7	5.7	88.6	0	-0.01	
CGP0007U	7/18/2024		0	5.7	5.7	88.6	0	-0.01	
CGP0007U	1/15/2025		0	4.1	15.2	80.7	0	0	
CGP0007U	5/23/2025		0	3.4	6.4	90.2	0	0	
CGP0007U	2/14/2025		0	4.1	7	88.9	0	0	
CGP0007U	3/14/2025		0	3.1	6.9	90	0	0	
CGP0010L	1/15/2025		0	5.7	5.5	88.8	0	0	
CGP0010L	9/27/2024		0	6.3	5.4	88.3	0	0	
CGP0010L	6/9/2025		0	3.6	6.5	89.9	0	-0.01	
CGP0010L	10/30/2024		0	6.9	5	88.1	0	0	
CGP0010L	4/2/2025		0	4.5	13.9	81.6	0	0	
CGP0010L	12/9/2024		0	5.7	5.6	88.7	0	0	
CGP0010L	3/14/2025		0	6.3	5.4	88.3	0	0	
CGP0010L	8/15/2024		0	5.2	6.3	88.5	0	0	
CGP0010L	7/18/2024		0	6.1	5.1	88.8	0	0	
CGP0010L	2/14/2025		0	5.1	5.5	89.4	0	0	
CGP0010L	5/23/2025		0	4.5	5.4	90.1	0	-0.02	

COLBERT PERIMETER GAS MONITORING REPORT

Barometer: 30.11

Tech: MT

Calibration: Zeroed CH4 to AB air CALGAS-> CH4 reading 14.8% cal to 15.0%; CO2 reading 14.9% cal to 15.0%; zeroed O2 to CALGAS-> calibrated to 20.9% AB air

FanFlow: 41

Weather Partly Cloudy 40's rain showers

Equipment: Gem 500 #410

Location	Date	Time	CH4	CO2	O2	Balance	Static Press	Diff. Press.	Comments
CGP0010L	11/22/2024		0	6.4	12.1	81.5	0	0	
CGP0010U	6/9/2025		0	1.8	16.4	81.8	0	0	
CGP0010U	3/14/2025		0	3	16.7	80.3	0	0	
CGP0010U	9/27/2024		0	2.3	8.8	88.9	0	-0.02	
CGP0010U	10/30/2024		0	2.9	7	90.1	0	-0.02	
CGP0010U	11/22/2024		0	3.1	16.6	80.3	0	0	
CGP0010U	2/14/2025		0	2.5	6.9	90.6	0	0	
CGP0010U	12/9/2024		0	2.3	7.2	90.5	0	0	
CGP0010U	7/18/2024		0	2.1	8.1	89.8	0	-0.02	
CGP0010U	1/15/2025		0	2.3	7.1	90.6	0	0	
CGP0010U	5/23/2025		0	2.2	6.7	91.1	0	0	
CGP0010U	4/2/2025		0	2.4	16.3	81.3	0	-0.01	
CGP0010U	8/15/2024		0	1.6	18.4	80	0	0	
CGP0011L	1/15/2025		0	1	18.7	80.3	0	0	
CGP0011L	8/15/2024		0	0.9	18.9	80.2	0	0	
CGP0011L	9/27/2024		0	1.2	19.1	79.7	0	0	
CGP0011L	6/9/2025		0	0.4	19.7	79.9	0	0	
CGP0011L	7/18/2024		0	0.8	19.9	79.3	0	0	
CGP0011L	10/30/2024		0	1.3	19.4	79.3	0	0	
CGP0011L	3/14/2025		0	0.7	19.5	79.8	0	0	
CGP0011L	4/2/2025		0	0.4	20.7	78.9	0	-0.01	
CGP0011L	5/23/2025		0	0.3	19.8	79.9	0	-0.02	
CGP0011L	12/9/2024		0	0.4	20.1	79.5	0	0	
CGP0011L	11/22/2024		0	1.2	19	79.8	0	-0.01	
CGP0011U	3/14/2025		0	5.2	5.9	88.9	0	0	
CGP0011U	9/27/2024		0	4.1	6.6	88.8	0	-0.01	
CGP0011U	6/9/2025		0	2.2	16.3	81.5	0	-0.02	
CGP0011U	7/18/2024		0	3.7	7.3	89	0	-0.01	
CGP0011U	10/30/2024		0	4.2	8.1	87.7	0	0	
CGP0011U	11/22/2024		0	1.7	15.9	82.4	0	0	
CGP0011U	2/14/2025		0	3.3	7.2	89.5	0	0	

COLBERT PERIMETER GAS MONITORING REPORT

Barometer: 30.58

Tech: MT

Calibration: Zeroed CH to AB air, calibrated to 15.0% CH4 and 15.0% CO2; Zeroed O2 with COLGAS, then calibrated 20.9% Abair

FanFlow: 42

Weather Clear and cool 38

Equipment: Gem 500 #410

Location	Date	Time	CH4	CO2	O2	Balance	Static Press	Diff. Press.	Comments
CGP0011U	1/15/2025		0	3.8	6.7	89.5	0	0	
CGP0011U	4/2/2025		0	2.8	16.9	80.3	0	-0.02	
CGP0011U	5/23/2025		0	3.3	6	90.7	0	-0.02	
CGP0011U	8/15/2024		0	3.7	16.3	80	0	-0.01	
CGP0011U	12/9/2024		0	3.7	7.3	89	0	-0.01	

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7/17/2024
Mr. Mike Terris
Spokane County Utilities
22515 N. Elk Chattaroy Road

Colbert WA 99005

Project Name: COLBERT ANNUAL TO-15
Project #:
Workorder #: 2407298

Dear Mr. Mike Terris

The following report includes the data for the above referenced project for sample(s) received on 7/12/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

eurofins | Air Toxics

WORK ORDER #: 2407298

Work Order Summary

CLIENT:	Mr. Mike Terris Spokane County Utilities 22515 N. Elk Chattaroy Road Colbert, WA 99005	**BILL TO:**	Mr. Mike Terris Spokane County Utilities 22515 N. Elk Chattaroy Road Colbert, WA 99005
PHONE:	509-238-6607	**P.O. #**	MT404C
FAX:	509-238-6812	**PROJECT #**	COLBERT ANNUAL TO-15
DATE RECEIVED:	07/12/2024	**CONTACT:**	Monica Tran
DATE COMPLETED:	07/17/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	CGI-003-240710	TO-15	6.5 "Hg	9.6 psi
02A	CGE-001-240710	TO-15	8.6 "Hg	9.8 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 07/17/24

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

LABORATORY NARRATIVE
EPA Method TO-15
Spokane County Utilities
Workorder# 2407298

Two 1 Liter Summa Canister samples were received on July 12, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample CGI-003-240710 due to the presence of high level target species.

The presence of a closely eluting non-target peak in sample CGI-003-240710 is interfering with the quantitation mass ion for 4-Ethyltoluene. The reported 4-Ethyltoluene concentration is flagged with a "CN" flag to indicate a high bias due to matrix contribution.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: CGI-003-240710

Lab ID#: 2407298-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.5	240	17	1200
Freon 114	3.5	33	24	230
Vinyl Chloride	3.5	83	9.0	210
Chloroethane	14	64	37	170
Freon 11	3.5	14	20	81
Ethanol	35	410	66	780
1,1-Dichloroethene	3.5	18	14	71
Hexane	3.5	95	12	340
1,1-Dichloroethane	3.5	8.2	14	33
cis-1,2-Dichloroethene	3.5	95	14	380
Tetrahydrofuran	3.5	52	10	150
Cyclohexane	3.5	62	12	210
2,2,4-Trimethylpentane	3.5	42	16	190
Benzene	3.5	18	11	58
Heptane	3.5	77	14	320
Trichloroethene	3.5	3.6	19	20
Toluene	7.0	16	26	60
Ethyl Benzene	3.5	370	15	1600
m,p-Xylene	7.0	680	30	2900
o-Xylene	3.5	64	15	280
Cumene	3.5	19	17	94
Propylbenzene	3.5	14	17	68
4-Ethyltoluene	3.5	36 CN	17	180 CN
1,3,5-Trimethylbenzene	3.5	38	17	190
1,2,4-Trimethylbenzene	3.5	100	17	490
1,4-Dichlorobenzene	3.5	32	21	190

Client Sample ID: CGE-001-240710

Lab ID#: 2407298-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	170	5.8	830
Freon 114	1.2	68	8.2	470

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: CGE-001-240710

Lab ID#: 2407298-02A

Vinyl Chloride	1.2	99	3.0	250
Chloroethane	4.7	88	12	230
Freon 11	1.2	8.9	6.6	50
1,2,4-Trimethylbenzene	1.2	1.4	5.8	7.1

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Client Sample ID: CGI-003-240710

Lab ID#: 2407298-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071518**	**Date of Collection:**	**7/10/24 10:06:00 AM**
Dil. Factor:	**7.03**	**Date of Analysis:**	**7/15/24 09:04 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.5	240	17	1200
Freon 114	3.5	33	24	230
Chloromethane	35	Not Detected	72	Not Detected
Vinyl Chloride	3.5	83	9.0	210
1,3-Butadiene	3.5	Not Detected	7.8	Not Detected
Bromomethane	35	Not Detected	140	Not Detected
Chloroethane	14	64	37	170
Freon 11	3.5	14	20	81
Ethanol	35	410	66	780
Freon 113	3.5	Not Detected	27	Not Detected
1,1-Dichloroethene	3.5	18	14	71
Acetone	35	Not Detected	83	Not Detected
2-Propanol	14	Not Detected	34	Not Detected
Carbon Disulfide	14	Not Detected	44	Not Detected
3-Chloropropene	14	Not Detected	44	Not Detected
Methylene Chloride	35	Not Detected	120	Not Detected
Methyl tert-butyl ether	14	Not Detected	51	Not Detected
trans-1,2-Dichloroethene	3.5	Not Detected	14	Not Detected
Hexane	3.5	95	12	340
1,1-Dichloroethane	3.5	8.2	14	33
2-Butanone (Methyl Ethyl Ketone)	14	Not Detected	41	Not Detected
cis-1,2-Dichloroethene	3.5	95	14	380
Tetrahydrofuran	3.5	52	10	150
Chloroform	3.5	Not Detected	17	Not Detected
1,1,1-Trichloroethane	3.5	Not Detected	19	Not Detected
Cyclohexane	3.5	62	12	210
Carbon Tetrachloride	3.5	Not Detected	22	Not Detected
2,2,4-Trimethylpentane	3.5	42	16	190
Benzene	3.5	18	11	58
1,2-Dichloroethane	3.5	Not Detected	14	Not Detected
Heptane	3.5	77	14	320
Trichloroethene	3.5	3.6	19	20
1,2-Dichloropropane	3.5	Not Detected	16	Not Detected
1,4-Dioxane	14	Not Detected	51	Not Detected
Bromodichloromethane	3.5	Not Detected	24	Not Detected
cis-1,3-Dichloropropene	3.5	Not Detected	16	Not Detected
4-Methyl-2-pentanone	3.5	Not Detected	14	Not Detected
Toluene	7.0	16	26	60
trans-1,3-Dichloropropene	3.5	Not Detected	16	Not Detected
1,1,2-Trichloroethane	3.5	Not Detected	19	Not Detected
Tetrachloroethene	3.5	Not Detected	24	Not Detected
2-Hexanone	14	Not Detected	58	Not Detected

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Client Sample ID: CGI-003-240710

Lab ID#: 2407298-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071518**	**Date of Collection: 7/10/24 10:06:00 AM**	
Dil. Factor:	**7.03**	**Date of Analysis: 7/15/24 09:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	3.5	Not Detected	30	Not Detected
1,2-Dibromoethane (EDB)	3.5	Not Detected	27	Not Detected
Chlorobenzene	3.5	Not Detected	16	Not Detected
Ethyl Benzene	3.5	370	15	1600
m,p-Xylene	7.0	680	30	2900
o-Xylene	3.5	64	15	280
Styrene	3.5	Not Detected	15	Not Detected
Bromoform	3.5	Not Detected	36	Not Detected
Cumene	3.5	19	17	94
1,1,2,2-Tetrachloroethane	3.5	Not Detected	24	Not Detected
Propylbenzene	3.5	14	17	68
4-Ethyltoluene	3.5	36 CN	17	180 CN
1,3,5-Trimethylbenzene	3.5	38	17	190
1,2,4-Trimethylbenzene	3.5	100	17	490
1,3-Dichlorobenzene	3.5	Not Detected	21	Not Detected
1,4-Dichlorobenzene	3.5	32	21	190
alpha-Chlorotoluene	3.5	Not Detected	18	Not Detected
1,2-Dichlorobenzene	3.5	Not Detected	21	Not Detected
1,2,4-Trichlorobenzene	14	Not Detected	100	Not Detected
Hexachlorobutadiene	14	Not Detected	150	Not Detected

CN =See Case Narrative explanation

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: CGE-001-240710

Lab ID#: 2407298-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071519**	**Date of Collection:**	**7/10/24 10:37:00 AM**
Dil. Factor:	**2.34**	**Date of Analysis:**	**7/15/24 09:30 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	170	5.8	830
Freon 114	1.2	68	8.2	470
Chloromethane	12	Not Detected	24	Not Detected
Vinyl Chloride	1.2	99	3.0	250
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	12	Not Detected	45	Not Detected
Chloroethane	4.7	88	12	230
Freon 11	1.2	8.9	6.6	50
Ethanol	12	Not Detected	22	Not Detected
Freon 113	1.2	Not Detected	9.0	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	12	Not Detected	28	Not Detected
2-Propanol	4.7	Not Detected	12	Not Detected
Carbon Disulfide	4.7	Not Detected	14	Not Detected
3-Chloropropene	4.7	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	41	Not Detected
Methyl tert-butyl ether	4.7	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Hexane	1.2	Not Detected	4.1	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.7	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	1.2	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Cyclohexane	1.2	Not Detected	4.0	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.4	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.5	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.7	Not Detected
Heptane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	Not Detected	6.3	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.4	Not Detected
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	7.8	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.8	Not Detected
Toluene	2.3	Not Detected	8.8	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	Not Detected	7.9	Not Detected
2-Hexanone	4.7	Not Detected	19	Not Detected

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Client Sample ID: CGE-001-240710

Lab ID#: 2407298-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071519**	**Date of Collection:**	**7/10/24 10:37:00 AM**
Dil. Factor:	**2.34**	**Date of Analysis:**	**7/15/24 09:30 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.0	Not Detected
Chlorobenzene	1.2	Not Detected	5.4	Not Detected
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
m,p-Xylene	2.3	Not Detected	10	Not Detected
o-Xylene	1.2	Not Detected	5.1	Not Detected
Styrene	1.2	Not Detected	5.0	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.0	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.8	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	1.4	5.8	7.1
1,3-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.0	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,2,4-Trichlorobenzene	4.7	Not Detected	35	Not Detected
Hexachlorobutadiene	4.7	Not Detected	50	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2407298-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071506a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/15/24 11:07 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2407298-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071506a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/15/24 11:07 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: CCV

Lab ID#: 2407298-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071503a**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 7/15/24 09:55 AM**

Compound	%Recovery
Freon 12	96
Freon 114	94
Chloromethane	99
Vinyl Chloride	93
1,3-Butadiene	94
Bromomethane	89
Chloroethane	89
Freon 11	92
Ethanol	86
Freon 113	100
1,1-Dichloroethene	90
Acetone	88
2-Propanol	88
Carbon Disulfide	92
3-Chloropropene	94
Methylene Chloride	86
Methyl tert-butyl ether	99
trans-1,2-Dichloroethene	91
Hexane	100
1,1-Dichloroethane	91
2-Butanone (Methyl Ethyl Ketone)	91
cis-1,2-Dichloroethene	93
Tetrahydrofuran	108
Chloroform	90
1,1,1-Trichloroethane	94
Cyclohexane	103
Carbon Tetrachloride	93
2,2,4-Trimethylpentane	98
Benzene	93
1,2-Dichloroethane	85
Heptane	113
Trichloroethene	90
1,2-Dichloropropane	93
1,4-Dioxane	94
Bromodichloromethane	91
cis-1,3-Dichloropropene	92
4-Methyl-2-pentanone	101
Toluene	97
trans-1,3-Dichloropropene	96
1,1,2-Trichloroethane	98
Tetrachloroethene	102
2-Hexanone	106

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Client Sample ID: CCV

Lab ID#: 2407298-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071503a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/15/24 09:55 AM**	

Compound	%Recovery
Dibromochloromethane	96
1,2-Dibromoethane (EDB)	98
Chlorobenzene	100
Ethyl Benzene	108
m,p-Xylene	112
o-Xylene	109
Styrene	114
Bromoform	96
Cumene	109
1,1,2,2-Tetrachloroethane	103
Propylbenzene	111
4-Ethyltoluene	113
1,3,5-Trimethylbenzene	109
1,2,4-Trimethylbenzene	114
1,3-Dichlorobenzene	106
1,4-Dichlorobenzene	105
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	104
1,2,4-Trichlorobenzene	124
Hexachlorobutadiene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: LCS

Lab ID#: 2407298-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/15/24 10:18 AM**	

Compound	%Recovery	Method Limits
Freon 12	92	70-130
Freon 114	90	70-130
Chloromethane	94	70-130
Vinyl Chloride	90	70-130
1,3-Butadiene	90	70-130
Bromomethane	87	70-130
Chloroethane	87	70-130
Freon 11	89	70-130
Ethanol	92	70-130
Freon 113	95	70-130
1,1-Dichloroethene	83	70-130
Acetone	82	70-130
2-Propanol	92	70-130
Carbon Disulfide	89	70-130
3-Chloropropene	90	70-130
Methylene Chloride	83	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	98	70-130
1,1-Dichloroethane	88	70-130
2-Butanone (Methyl Ethyl Ketone)	92	70-130
cis-1,2-Dichloroethene	92	70-130
Tetrahydrofuran	108	70-130
Chloroform	87	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	102	70-130
Carbon Tetrachloride	93	70-130
2,2,4-Trimethylpentane	99	70-130
Benzene	96	70-130
1,2-Dichloroethane	85	70-130
Heptane	111	70-130
Trichloroethene	92	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	101	70-130
Bromodichloromethane	88	70-130
cis-1,3-Dichloropropene	93	70-130
4-Methyl-2-pentanone	102	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	95	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	101	70-130
2-Hexanone	101	70-130

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Client Sample ID: LCS

Lab ID#: 2407298-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/15/24 10:18 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	94	70-130
1,2-Dibromoethane (EDB)	97	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	109	70-130
m,p-Xylene	111	70-130
o-Xylene	108	70-130
Styrene	113	70-130
Bromoform	95	70-130
Cumene	106	70-130
1,1,2,2-Tetrachloroethane	101	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	111	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	114	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	104	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	120	70-130
Hexachlorobutadiene	102	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: LCSD

Lab ID#: 2407298-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071505**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/15/24 10:41 AM**	

Compound	%Recovery	Method Limits
Freon 12	89	70-130
Freon 114	92	70-130
Chloromethane	99	70-130
Vinyl Chloride	94	70-130
1,3-Butadiene	95	70-130
Bromomethane	89	70-130
Chloroethane	89	70-130
Freon 11	91	70-130
Ethanol	97	70-130
Freon 113	97	70-130
1,1-Dichloroethene	86	70-130
Acetone	88	70-130
2-Propanol	98	70-130
Carbon Disulfide	91	70-130
3-Chloropropene	96	70-130
Methylene Chloride	85	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	89	70-130
Hexane	100	70-130
1,1-Dichloroethane	91	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	92	70-130
Tetrahydrofuran	111	70-130
Chloroform	88	70-130
1,1,1-Trichloroethane	95	70-130
Cyclohexane	103	70-130
Carbon Tetrachloride	93	70-130
2,2,4-Trimethylpentane	100	70-130
Benzene	95	70-130
1,2-Dichloroethane	85	70-130
Heptane	98	70-130
Trichloroethene	92	70-130
1,2-Dichloropropane	92	70-130
1,4-Dioxane	106	70-130
Bromodichloromethane	88	70-130
cis-1,3-Dichloropropene	96	70-130
4-Methyl-2-pentanone	103	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	95	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	103	70-130
2-Hexanone	105	70-130

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Client Sample ID: LCSD

Lab ID#: 2407298-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91071505**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/15/24 10:41 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	94	70-130
1,2-Dibromoethane (EDB)	98	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	112	70-130
m,p-Xylene	113	70-130
o-Xylene	109	70-130
Styrene	116	70-130
Bromoform	96	70-130
Cumene	109	70-130
1,1,2,2-Tetrachloroethane	102	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	113	70-130
1,3,5-Trimethylbenzene	111	70-130
1,2,4-Trimethylbenzene	115	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	105	70-130
1,2-Dichlorobenzene	105	70-130
1,2,4-Trichlorobenzene	124	70-130
Hexachlorobutadiene	106	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	102	70-130

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Method : TO-15

CAS Number	Compound	Rpt. Limit (ppbv)
75-71-8	Freon 12	0.50
76-14-2	Freon 114	0.50
74-87-3	Chloromethane	5.0
75-01-4	Vinyl Chloride	0.50
106-99-0	1,3-Butadiene	0.50
74-83-9	Bromomethane	5.0
75-00-3	Chloroethane	2.0
75-69-4	Freon 11	0.50
64-17-5	Ethanol	5.0
76-13-1	Freon 113	0.50
75-35-4	1,1-Dichloroethene	0.50
67-64-1	Acetone	5.0
67-63-0	2-Propanol	2.0
75-15-0	Carbon Disulfide	2.0
107-05-1	3-Chloropropene	2.0
75-09-2	Methylene Chloride	5.0
1634-04-4	Methyl tert-butyl ether	2.0
156-60-5	trans-1,2-Dichloroethene	0.50
110-54-3	Hexane	0.50
75-34-3	1,1-Dichloroethane	0.50
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
156-59-2	cis-1,2-Dichloroethene	0.50
109-99-9	Tetrahydrofuran	0.50
67-66-3	Chloroform	0.50
71-55-6	1,1,1-Trichloroethane	0.50
110-82-7	Cyclohexane	0.50
56-23-5	Carbon Tetrachloride	0.50
540-84-1	2,2,4-Trimethylpentane	0.50
71-43-2	Benzene	0.50
107-06-2	1,2-Dichloroethane	0.50
142-82-5	Heptane	0.50
79-01-6	Trichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
123-91-1	1,4-Dioxane	2.0
75-27-4	Bromodichloromethane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
108-10-1	4-Methyl-2-pentanone	0.50
108-88-3	Toluene	1.0
10061-02-6	trans-1,3-Dichloropropene	0.50
79-00-5	1,1,2-Trichloroethane	0.50
127-18-4	Tetrachloroethene	0.50
591-78-6	2-Hexanone	2.0
124-48-1	Dibromochloromethane	0.50
106-93-4	1,2-Dibromoethane (EDB)	0.50

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Method : TO-15

CAS Number	Compound	Rpt. Limit (ppbv)
108-90-7	Chlorobenzene	0.50
100-41-4	Ethyl Benzene	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
100-42-5	Styrene	0.50
75-25-2	Bromoform	0.50
98-82-8	Cumene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
103-65-1	Propylbenzene	0.50
622-96-8	4-Ethyltoluene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
95-50-1	1,2-Dichlorobenzene	0.50
120-82-1	1,2,4-Trichlorobenzene	2.0
87-68-3	Hexachlorobutadiene	2.0

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

Appendix B

Colbert Annual Sampling Field Sheets/Paperwork

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25

Field Personnel: Craig Campbell

StationID: CP-S1

Weather: Sunny, 65°F pm - 38°F am

Sample ID: CP-S1-250415

Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: MS/MSD

Well Depth: 103 — Screens from: 104 To 109 — Casing Size (in): 6

− Depth to Water: 80.27

= Water Column Depth: 22.73 x Gallons per linear foot: 1.5 R = Calc. Purge vol./casing vol.: 40 x3 well volumes = Total Purge Vol. (gal): 120

Purge Rate: 40gpm

Purge Begin Time: 1305

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
(6)	1.5
8	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1312	280	7.59	583	11.4		Clear, odorless
1314	360	7.55	591	10.6		"
1316	440	7.58	594	10.4		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.69	(must meet criteria within 3 consecutive measurements)

Sample Time: 1317

QAQC Sample Time: 1317

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr 11+	Hach 2100P
S/N 2307124	S/N 1312423	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522) *	B324902VB
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments: Purged 5 min to clear lines before taking parameters

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-15-25 | Field Personnel: M. TERRIS

StationID: CP-S3 | Weather: CLEAR COOL 40°F

Sample ID: CP-S3 250415 | Purge Method: Disp. ~~bailer~~, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: NA

Well Depth: 99 | Screens from: | To | Casing Size (in): 6"

− Depth to Water: 85.95'

= Water Column Depth: 13.05' -x Gallons per linear foot: 1.50 = Calc. Purge vol./casing vol.: 20 GAL / 19.57 x3 well volumes = Total Purge Vol. (gal): 60 GAL

Purge Rate: 1 GPM | Purge Begin Time: 0900

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0919	20 GAL	7.60	624	12.0		CLEAR A LITTLE RUSTY
0939	40 GAL	7.56	621	11.7		CLEAR - A LITTLE RUSTY
0959	60 GAL	7.55	623	11.6		CLEAR
Stabilization Criteria:	√ OK	+/- 0.1 unit	+/- 5%		0.89	(must meet criteria within 3 consecutive measurements)

Sample Time: 1000 | QAQC Sample Time:

Meters:	pH	Conductivity	Turbidity
	Meter: EXTECH100	Meter: ECTestr 11+	Hach 2100P
	S/N 2401662	S/N 24B	S/N 940700005619/_____
	Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: Craig Campbell
StationID: CP-S4
Weather: Sunny, 65°F pm - 38°F am
Sample ID: CP-S4-250415
Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: N/A

Well Depth: 109
Screens from: To
Casing Size (in): 6

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
(6)	1.5
8	2.6

Depth to Water: 83.20
Water Column Depth: 25.80 x Gallons per linear foot: 1.5 = Calc. Purge vol./casing vol.: 40 x3 well volumes = Total Purge Vol. (gal): 120

Purge Rate: 30gpm
Purge Begin Time: 1355

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1402	210	7.27	716	10.9		Clear, odorless
1404	270	7.35	718	10.4		
1406	330	7.36	719	10.3		
Stabilization Criteria:		+/- 0.1 unit	+/- 5%			(must meet criteria within 3 consecutive measurements)

Sample Time: 1407
QAQC Sample Time: N/A

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr 11+	Hach 2100P
S/N Z307124	S/N 1312423	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	*	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments: Purged 5 min to clear lines before taking parameters.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: Craig Campbell
StationID: CP-S5
Weather: Sunny, 65°F pm - 38°F am
Sample ID: CP-S5 - 250415
Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: N/A

Well Depth: 101
Screens from: To
Casing Size (in): 6

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
(6)	1.5
8	2.6

Depth to Water: NT 80*
Water Column Depth: 21.00 x Gallons per linear foot: 1.5 = Calc. Purge vol./casing vol.: 40 x3 well volumes = Total Purge Vol. (gal): 120

Purge Rate: 25gpm
Purge Begin Time: 1430

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1437	175	7.41	784	11.3		Clear, odorless
1439	225	7.35	791	10.9		"
1441	275	7.37	787	10.8		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		1.80	(must meet criteria within 3 consecutive measurements)

Sample Time: 1442
QAQC Sample Time: N/A

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr 11+	Hach 2100P
S/N 2307124	S/N 131423	(S/N 940700005619/)
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	x	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments: Purged 5 min to clear lines before taking parameters.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: Craig Campbell
StationID: CP-S6
Weather: Sunny, 65°F pm - 38°F am
Sample ID: CP-S6-250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: N/A

Well Depth: 106
Screens from: To
Casing Size (in): 6
Depth to Water: 86.38
Water Column Depth: 19.62 x Gallons per linear foot: 1.5 = Calc. Purge vol./casing vol.: 30 x3 well volumes = Total Purge Vol. (gal): 90

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
(6)	1.5
8	2.6

Purge Rate: 80gpm
Purge Begin Time: 1500

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1507	560	7.38	873	10.7		Clear, odorless
1509	720	7.41	899	10.4		"
1511	880	7.41	896	10.3		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.86	(must meet criteria within 3 consecutive measurements)

Sample Time: 1512
QAQC Sample Time: N/A

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr 11+	Hach 2100P
S/N 2307124	S/N 1312423	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments: Purged 5 minutes to clear lines before taking parameters.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: Craig Campbell
StationID: CP-E1
Weather: Sunny, 65°F pm - 38°F am
Sample ID: CP-E1-250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: N/A

Well Depth: 257
Screens from: 235 To 258
Casing Size (in): 8
Depth to Water: 183.37
Water Column Depth: 73.63 x Gallons per linear foot: 2.6 = Calc. Purge vol./casing vol.: 200 x3 well volumes = Total Purge Vol. (gal): 600

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
(8)	2.6

Purge Rate: 100 gpm
Purge Begin Time: 1130

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1137	700	7.01	994	13.0		Clear, odorless
1139	900	6.99	984	12.9		"
1141	1100	6.98	1014	12.8		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		1.13	(must meet criteria within 3 consecutive measurements)

Sample Time: 1142
QAQC Sample Time: N/A

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr 11+	Hach 2100P
S/N 230724	S/N 312423	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments: Purged 5 min to clear lines before taking parameters.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25

Field Personnel: Craig Campbell

StationID: CP-E2

Weather: Sunny, 65°F pm, 38°F am

Sample ID: CP-E2 - 250415

Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: CD-50-250415

Well Depth: 188

Screens from: To

Casing Size (in): 6

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
(6)	1.5
8	2.6

− Depth to Water: 149.97

= Water Column Depth: 38.03 x Gallons per linear foot: 1.5 = Calc. Purge vol./casing vol.: 60 x3 well volumes = Total Purge Vol. (gal): 180

Purge Rate: 1.5gpm

Purge Begin Time: 0815

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0910	75	7.07	1139	12.8		Clear, odorless
0950	135	7.12	1153	13.0		"
1030	202.5	7.03	1160	13.3		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.70	(must meet criteria within 3 consecutive measurements)

Sample Time: 1031

QAQC Sample Time: 1000

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr 11+	Hach 2100P
S/N 2307124	S/N 1312423	(S/N 940700005619)
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522) *	B324902VB
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: Craig Campbell
StationID: CP-E3
Weather: Sunny, 65°F pm - 38°F am
Sample ID: CP-E3-250415
Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: N/A

Well Depth: 267
Screens from: To
Casing Size (in): 8

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
(8)	2.6

Depth to Water: 182.48
Water Column Depth: 84.52 x Gallons per linear foot: 2.6 = R Calc. Purge vol./casing vol.: 220 x3 well volumes = Total Purge Vol. (gal): 660

Purge Rate: 100gpm
Purge Begin Time: 0835

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0843	800	7.07	896	12.6		Clear, odorless
0846	1100	7.08	912	11.9		"
0849	1400	7.08	902	11.8		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		1.47	(must meet criteria within 3 consecutive measurements)

Sample Time: 0850
QAQC Sample Time: N/A

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr 11+	Hach 2100P
S/N 2307124	S/N 1312423	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments: Purged 5 min to clear lines before taking parameters.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: Craig Campbell
StationID: CP-W1
Weather: Sunny, 65°F pm - 38°F am
Sample ID: CP-W1-250415
Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: N/A

Well Depth: 300
Screens from: 280 To 300
Casing Size (in): 8
− Depth to Water: 174.42
= Water Column Depth: 125.58 x Gallons per linear foot: 2.6 = Calc. Purge vol./casing vol.: 330 x3 well volumes = Total Purge Vol. (gal): 990

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
(8)	2.6

Purge Rate: 75gpm
Purge Begin Time: 1000

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1010	750	7.91	478	11.9		clear, odorless
1015	1250	7.92	478	11.7		"
1020	1500	7.91	477	11.6		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.44	(must meet criteria within 3 consecutive measurements)

Sample Time: 1021
QAQC Sample Time: N/A

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr11+	Hach 2100P
S/N Z307124	S/N 1312423	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	x	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments: Purged 5 min to clear lines before taking parameters.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25 | Field Personnel: Craig Campbell

StationID: CP-W2 | Weather: Sunny, 65°F pm - 38°F am

Sample ID: CP-W2-250415 | Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: N/A

Well Depth: 280 | Screens from: | To | Casing Size (in): 8

− Depth to Water: 169.92

= Water Column Depth: 110.08 x Gallons per linear foot: 2.6 = R Calc. Purge vol./casing vol.: 300 x3 well volumes = Total Purge Vol. (gal): 900

Purge Rate: 100 gpm | Purge Begin Time: 1200

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
(8)	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1208	800	7.66	510	11.6		Clear, odorless
1211	1100	7.70	515	10.9		"
1214	1400	7.69	518	10.8		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.81	(must meet criteria within 3 consecutive measurements)

Sample Time: 1215 | QAQC Sample Time: N/A

Meters:

pH	Conductivity	Turbidity
Meter: Extech PH100	Meter: EcTestr 11+	Hach 2100P
S/N 2307124	S/N 1312423	(S/N 940700005619/)
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	x	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments: Purged 5 min to clear lines before taking parameters.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: Craig Campbell
StationID: CP-W3
Weather: Sunny, 65°F pm - 38°F am
Sample ID: CP-W3-250415
Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: N/A

Well Depth: 281.5
Screens from: To
Casing Size (in): 8
Depth to Water: 171.59
Water Column Depth: 109.91 x Gallons per linear foot: 2.6 = Calc. Purge vol./casing vol.: 300 (R) x3 well volumes = Total Purge Vol. (gal): 900

Purge Rate: 100 gpm
Purge Begin Time: 1230

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
(8)	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1238	800	7.32	870	11.9		Clear, odorless
1241	1100	7.34	893	11.9		"
1244	1400	7.33	892	11.8		"
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.89	(must meet criteria within 3 consecutive measurements)

Sample Time: 1245
QAQC Sample Time: N/A

Meters:

pH	Conductivity	Turbidity
Meter: Extech pH100	Meter: EcTestr II+	Hach 2100P
S/N 2307124	S/N 1312423	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	A0447367
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments: Purged 5 min to clear lines before taking parameters.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-15-25 | Field Personnel: GF

StationID: CD-41C1 | Weather: Clear, 48°

Sample ID: CD-41C1-250415 | Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: NA

Well Depth: 233 | Screens from: 214 To 233 | Casing Size (in): 2.5

− Depth to Water: 176.99

= Water Column Depth: 56.01 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 15 x3 well volumes = Total Purge Vol. (gal): 45

Purge Rate: 2.1 gpm | Purge Begin Time: 1031

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1039	15	7.92	452			clear
1047	30	7.92	455			clear
1055	45	7.91	453			clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.08	(must meet criteria within 3 consecutive measurements)

Sample Time: 1059 | QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	Apera Hach 2100P
S/N 476432	S/N 7810	S/N ~~940700005619~~ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0.20 STD. to ~~4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	*	✓
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-15-2025
Field Personnel: GF
StationID: CD-41C2
Weather: Clear, 48°
Sample ID: CD-41C2 - 250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 291
Screens from: 271 To 291
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 177.41'
Water Column Depth: 113.59 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 30 x3 well volumes = Total Purge Vol. (gal): 90

Purge Rate: 2.8 gpm
Purge Begin Time: 0950

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1001	30	7.96	461	11.6		Clear
1012	60	7.98	463	11.7		Clear
1023	90	7.97	462	11.7		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.08	(must meet criteria within 3 consecutive measurements)

Sample Time: 1024
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~/ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0.10 STD. to ~~4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	*	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/2025
Field Personnel: GF
StationID: CD-41C3
Weather: Clear, 48°
Sample ID: CD-41C3 - 250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES-40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 403
Screens from: 384 To 403
Casing Size (in): 2.5
Depth to Water: 177.52
Water Column Depth: 225.48 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 59 x3 well volumes = Total Purge Vol. (gal): 177

CASING INFO DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Purge Rate: 2.6 gpm
Purge Begin Time: 0946

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1009	59	7.84	512	11.9		Clear
1032	118	7.85	513	11.9		Clear
1055	177	7.85	511	12.0		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%	3	0.09	(must meet criteria within 3 consecutive measurements)

Sample Time: 1056
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EcTestr 11+	Aperq ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N 940700005619/ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0, 20 STD. to ~~4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	✓
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: GF
StationID: CD-42C1
Weather: Clear, 50°
Sample ID: CD-42C1 -250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 227 Screens from: 208 To 227 Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 174.04
Water Column Depth: 52.96 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 14 x3 well volumes = Total Purge Vol. (gal): 42

Purge Rate: 2.4 gpm
Purge Begin Time: 1220

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1226	14	7.82	524	12.4		Clear
1232	28	7.85	529	12.4		Clear
1238	42	7.83	528	12.5		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.03	(must meet criteria within 3 consecutive measurements)

Sample Time: 1239
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~/ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0.20 STD. ~~to 4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

	Bottle Batch #
✓ 3-40ml Glass w/ MA/AA - VOC's (524.3) *	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
✓ 2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522) *	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/2025
StationID: CD-42C2
Sample ID: CD-42C2 -250415
QA/QC Sample ID: NA

Field Personnel: GF
Weather: Clear, 50°
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

Well Depth: 312
Screens from: 293 To 312
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 173.82
Water Column Depth: 138.18 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 36 x3 well volumes = Total Purge Vol. (gal): 108

Purge Rate: 2.8 gpm
Purge Begin Time: 1137

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1150	36	7.86	526	12.1		Clear
1203	72	7.84	522	12.2		Clear
1216	108	7.85	523	12.2		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.03	(must meet criteria within 3 consecutive measurements)

Sample Time: 1217
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: ECTestr11+	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~ B1003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to ~~4.8, 43.8, 420~~ 0, 10

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	✓
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

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Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
StationID: CD-42C3
Sample ID: CD-42C3 -250415
QA/QC Sample ID: NA

Field Personnel: GF
Weather: Clear, 50°
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

Well Depth: 402
Screens from: 383 To 402
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 173.69'
Water Column Depth: 228.31 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 60 x3 well volumes = Total Purge Vol. (gal): 180

Purge Rate: ~~2.5~~ 2.5
Purge Begin Time: 1134

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1158	60	7.88	421	12.1		Clear
1222	120	7.91	431	12.2		Clear
1246	180	7.92	440	12.5		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.68	(must meet criteria within 3 consecutive measurements)

Sample Time: 1247
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to ~~4.8, 43.8, 420~~ 0.20

Lab Analysis:(Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	✓
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

359 H2 max@ 2.5 gpm

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-15-2025
Field Personnel: GF
StationID: CD-43C1
Weather: ~~X~~ mstly clear, 62°
Sample ID: CD-43C1 -250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 230
Screens from: 211 To 230
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 170.91
Water Column Depth: 59.09 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 10 x3 well volumes = Total Purge Vol. (gal): 48

Purge Rate: 2.4 gpm
Purge Begin Time: 1401

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1408	16	7.93	502	11.3		Clear
1415	32	7.90	496	11.5		Clear
1422	48	7.92	500	11.2		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.05	(must meet criteria within 3 consecutive measurements)

Sample Time: 1423
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: ECTestr11+	~~Apera~~ Hach 2100P
S/N 476432	S/N 7810	S/N ~~940700005619~~ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0,20 STD. to ~~4.8, 43.8, 420~~

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
✓ 3-40ml Glass w/ MA/AA - VOC's (524.3) *	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
✓ 2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522) *	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/2025
Field Personnel: GF
StationID: CD-43C2
Weather: mostly clear, 60
Sample ID: CD-43C2 -250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 299
Screens from: 280 To 299
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

− Depth to Water: 170.67'
= Water Column Depth: 128.33 -x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 34 x3 well volumes = Total Purge Vol. (gal): 102

Purge Rate: 3.3 gpm
Purge Begin Time: 1320

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1331	34	7.95	410	12.4		Clear
1342	68	7.98	420	11.4		clear
1353	102	8.01	423	11.3		clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.02	(must meet criteria within 3 consecutive measurements)

Sample Time: 1354
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	~~Hach 2100P~~ Apera
S/N 476432	S/N 7810	S/N ~~940700005619~~ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to ~~4.8, 43.8, 420~~ 0, 20

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
✓ 3-40ml Glass w/ MA/AA - VOC's (524.3) X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/2025
Field Personnel: GF
StationID: CD-43C3
Weather: mstly clear, 60°
Sample ID: CD-43C3 - 250415
Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 401
Screens from: 382 To 401
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 170.39
Water Column Depth: 230.61 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 60 x3 well volumes = Total Purge Vol. (gal): 180

Purge Rate: 3.0 gpm
Purge Begin Time: 1319

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1339	60	7.89	342	12.2		Clear
1359	120	7.93	348	12.0		Clear
1419	180	7.90	344	12.1		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		2.85	(must meet criteria within 3 consecutive measurements)

Sample Time: 1420
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~/ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0,20 STD. to ~~4.8, 43.8, 420~~

Lab Analysis: (Check parameters to be analyzed)

		Bottle Batch #
✓	3-40ml Glass w/ MA/AA - VOC's (524.3)	
	1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
	1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
	1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
	1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: GF
StationID: CD-48C1
Weather: clear, 38°
Sample ID: CD-48C1 - 250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 243
Screens from: 220.5 To 240.5
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 176.47
Water Column Depth: 66.53 x 0.26 = 18 x3 well volumes = 54
Gallons per linear foot: 0.26
Calc. Purge vol./casing vol.: 18
Total Purge Vol. (gal): 54

Purge Rate: 2.8
Purge Begin Time: 0851

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0858	18	7.76	537	11.6		clear
0905	36	7.72	540	11.4		clear
0912	54	7.71	539	11.5		clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.02	(must meet criteria within 3 consecutive measurements)

Sample Time: 0913
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~ 81093
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0 20 STD. to ~~4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
StationID: CD-48C2
Sample ID: CD-48C2 - 250415
QA/QC Sample ID: NA

Field Personnel: GF
Weather: Clear, 38°
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

Well Depth: 302
Screens from: 279.7 To 299.7
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 176.36'
Water Column Depth: 125.64 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 33 x3 well volumes = Total Purge Vol. (gal): 99

Purge Rate: 2.1
Purge Begin Time: 0755

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0811	33	7.79	477	11.6		Clear
0827	66	7.77	474	11.6		Clear
0843	99	7.79	474	11.4		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		1.09	(must meet criteria within 3 consecutive measurements)

Sample Time: 0845
QAQC Sample Time: NA

Meters:

pH
Meter: Extech
S/N 476432
Calib. to 4.0, 7.0 and 10.0

Conductivity
Meter: ECtestr 11+
S/N 7810
STD. to 700 umhos/cm

Turbidity
~~Hach 2100P~~ Apera
S/N ~~940700005619~~/ 81003
STD. to ~~4.8, 43.8, 420~~ 0, 20

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: GF
StationID: CD-48C3
Weather: Clear, 38°
Sample ID: CD-48C3 -250415
Purge Method: Disp. bailer, (Ded. Grundfos) Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 386
Screens from: 374 To 384
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 176.19
Water Column Depth: 209.81 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 55 x3 well volumes = Total Purge Vol. (gal): 165

Purge Rate: 3.0
Purge Begin Time: 0750

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0809	55	7.74	502	11.6		Clear
0828	110	7.73	505	11.7		clear
0847	165	7.75	504	11.8		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.03	(must meet criteria within 3 consecutive measurements)

Sample Time: 0849
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: Ectestr11	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	~~S/N 9407000056191~~ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0,20 STD. to ~~4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

	Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3) *	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/16/2025 | Field Personnel: M. TERRIS

StationID: CD-03A1 | Weather: CLEAR COOL 39°F

Sample ID: CD-03A1 - 250416 | Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: NA

Well Depth: 98 | Screens from: 70 To 90 | Casing Size (in): 2

Depth to Water: 70.83

Water Column Depth: 27.17' x Gallons per linear foot: 0.17 = Calc. Purge vol./casing vol.: 5GAL 4.61 x3 well volumes = Total Purge Vol. (gal): 15GAL

Purge Rate: — | Purge Begin Time: 0815

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0827	5GAL	7.71	363	9.7°c		CLEAR
0839	10GAL	7.71	365	9.6		CLEAR
0852	15GAL	7.70	363	9.6		CLEAR
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.17	(must meet criteria within 3 consecutive measurements)

Sample Time: 0900 | QAQC Sample Time: -NA-

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH100	Meter: ECTestr 11+	Hach 2100P
S/N 2401662	S/N 24B	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	X	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	X	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	X	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)	X	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-16-25
Field Personnel: M. TERRIS
StationID: CS-04A1
Weather: CLEAR COOL 37°
Sample ID: CS-04A1 - 250416
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 89.51
Screens from: To
Casing Size (in)

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

− Depth to Water: NT 81'
= Water Column Depth: 8.51 -x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 2.5 GAL 2.2 = x3 well volumes = Total Purge Vol. (gal): 7.5 GAL

Purge Rate: —
Purge Begin Time: 0650

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0707	2.5GA	6.71	551	10.9		CLEAR
0721	5.0GAL	6.66	559	10.8		CLEAR
0728	7.5GA	6.65	558	10.8		CLEAR
Stabilization Criteria:	VOL	+/- 0.1 unit	+/- 5%		0.49	(must meet criteria within 3 consecutive measurements)

Sample Time: 0730
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH 100	Meter: EC Testr 11+	Hach 2100P
S/N 24001662	S/N 243	S/N 940700005619/_____
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	*	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	*	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	*	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	*	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)	*	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-16-25
Field Personnel: M. TERRIS
StationID: CD-60A1
Weather: CLEAR UPPER 40S
Sample ID: CD-60A1-250416
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: CD-51-250416

Well Depth: 96.2
Screens from: To
Casing Size (in)

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 79.49
Water Column Depth: 16.71 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 5 GAL / 4.34 x3 well volumes = Total Purge Vol. (gal): 15GAL

Purge Rate: 2GPM
Purge Begin Time: 1000

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1004	5 GAL	7.20	573	10.5		CLEAR
1008	10GAL	7.21	571	10.3		
1012	15GAL	7.19	570	10.3		
Stabilization Criteria:	Vol	+/- 0.1 unit	+/- 5%		0.09	(must meet criteria within 3 consecutive measurements)

Sample Time: 1015
QAQC Sample Time: 1000

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH 100	Meter: EC Testr 11+	Hach 2100P
S/N 2401662	S/N 24B	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	X	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	X	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	X	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)	X	

- DUPE TAKEN HERE

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/16/25
Field Personnel: M. TERRIS
StationID: CD-61A1
Weather: CLEAR 40'S
Sample ID: CD-61A1-250416
Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: MS/MSD

Well Depth: 75.9
Screens from: To
Casing Size (in)

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

− Depth to Water: 68.20'
= Water Column Depth: 7.70 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 2 x3 well volumes = Total Purge Vol. (gal): 6 GAL

Purge Rate: 1.5 GPM
Purge Begin Time: 0920

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0924	4 GAL	7.72	370	10.9		CLEAR
0929	8 GAL	7.74	368	10.7		CLEAR
0934	12 GAL	7.74	368	10.7		CLEAR
Stabilization Criteria:	1 VOL	+/- 0.1 unit	+/- 5%		0.12	(must meet criteria within 3 consecutive measurements)

Sample Time: 0930
QAQC Sample Time: SAME AS SAMPLE

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH100	Meter: Ectestr11+	Hach 2100P
S/N 2401662	S/N 24B	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	X	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	X	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	X	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)	X	

Comments: - MS/MSD TAKEN HERE, FILLED 2 EXTRA SETS OF BOTTLES

COLBERT LANDFILL SUPPLEMENTAL GROUNDWATER SAMPLING

Date: 4/16/25 Address/Phone: 509 238-6607 Field Personnel: GF

StationID: CD-21C3 Weather: mstly clear 64

SampleID: CD-21C3 -250416

QA/QC Sample ID: NA

Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

Dedicated Pump?: NO Yes

PURGE INFORMATION

Screens from: 283 To 292

Press. Tank Vol: (if applicable) NA

Well Depth: 302

Depth to Water: 186.61'

Water Column Depth: 115.39 x 0.26 = 31 (rounded up)

Gallons per linear foot:

Calc. Purge vol./casing vol.:

Estimated Total Purge Vol. (gal)

Approx. Depth of Non-Ded. Equip

Purge Rate 1.6 gpm

Purge Begin Time 1230

CASING INFO

Casing Size (in)	DIA.	VOL. (gal/ft)
2.5	1.25	0.08
	2.0	0.17
	2.5	0.26
	3	0.38
	4	0.66
	6	1.50

FIELD PARAMETERS

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1250	31	7.25	824	13.6		Clear
1310	62	7.23	836	13.5		clear
1330	93	7.21	843	13.5		Clear
Stabilization Criteria		+/- 0.1 unit	+/- 5%		0.01	(must meet criteria within 3 consecutive measurements)

Sample Time: 1331

QAQC Sample Time: NA

METERS

pH

pH Testr Extech

S/N 476432

Calib. to 4.0, 7.0 and 10.0

Conductivity

TDS Testr ECTestr 11+

S/N 7810

STD. to 700 umhos/cm

Turbidity

~~Hach 2100P~~ Apera

S/N ~~940700005619~~ 81003

STD. to ~~4.8, 43.8, 420~~ 0, 20

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
✓	3-40ml Glass w/ MA/AA - VOC's (524.3)	
✓	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	

Comments:

Added to list on 5/11/2022, don't know much about the well.

360 H_2 ≈ 1.5 gpm

370 H_2 ≈ 1.6 gpm

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-15-25 | Field Personnel: M TERRIS

StationID: CD-31A1 | Weather: CLEAR COOL 39°F

Sample ID: CD-31A1 -250415 | Purge Method: Disp. bailer, Ded. Grundfos, (Ded. Bladder), Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: -NA-

Well Depth: 110 | Screens from: 103 To 108 | Casing Size (in): 2.5

− Depth to Water: 92.79

= Water Column Depth: 17.21 -x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 4.4745 x3 well volumes = Total Purge Vol. (gal): 13.5GAL

Purge Rate: | Purge Begin Time: 0745

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
(2.5)	(0.26)
4	0.66
6	1.5
8	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0802	4.5GAL	7.66	692	10.3		CLEAR
0818	9.0GAL	7.64	697	10.2		CLEAR
0839	13.5GAL	7.65	695	10.1		CLEAR
Stabilization Criteria:	√ OIL	+/- 0.1 unit	+/- 5%		0.31	(must meet criteria within 3 consecutive measurements)

Sample Time: 0840 | QAQC Sample Time:

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH 100	Meter: ECTestr11+	Hach 2100P
S/N 2401662	S/N 248	(S/N 940700005619/)
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-15-2025
Field Personnel: M. TERRIS
StationID: CD-34A1
Weather: CLEAR COOL 38°F
Sample ID: CD-34A1-250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 110
Screens from: 100 To 110
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

− Depth to Water: 97.09
= Water Column Depth: 12.91 ' -x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 335.35 x3 well volumes = Total Purge Vol. (gal): 10.5GAL

Purge Rate:
Purge Begin Time: 0650

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0705	3.5GAL	7.75	640	10.9		CLEAR
0719	7.0GAL	7.66	638	10.8		CLEAR
0733	10.5GAL	7.65	641	10.8		CLEAR
Stabilization Criteria:	✓ OK	+/- 0.1 unit	+/- 5%		0.49	(must meet criteria within 3 consecutive measurements)

Sample Time: 0735
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH 100	Meter: ECTestr11+	Hach 2100P
S/N 2401662	S/N 24B	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
Field Personnel: M. TERRIS
StationID: CD-36A1
Weather: CLEAR 64°F
Sample ID: CD-36A1-250415
Purge Method: Disp. bailer, Ded. Grundfos, (Ded. Bladder), Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 102
Screens from: To
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
(2.5)	(0.26)
4	0.66
6	1.5
8	2.6

Depth to Water: 89.66
Water Column Depth: 12.34 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 3.5 GAL / 3.20 x3 well volumes = Total Purge Vol. (gal): 10.5 GAL

Purge Rate:
Purge Begin Time: 1230

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1244	3.5 GAL	7.66	627	11.1		CLEAR
1259	7.0 GAL	7.65	630	10.9		CLEAR
1314	10.5 GAL	7.65	630	10.9		CLEAR.
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.98	(must meet criteria within 3 consecutive measurements)

Sample Time: 1315
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH100	Meter: ECTestr 11+	Hach 2100P
S/N 2401662	S/N 24B	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments: * DO NOT DRIVE INTO FIELD SAMPLE FROM WALKING IN.

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/2025
Field Personnel: M. TERRIS
StationID: CD-37A1
Weather: CLEAR WARM 52°F
Sample ID: CD-37A1 - 250415
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 104
Screens from: To
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

− Depth to Water: 90.01'
= Water Column Depth: 13.99' x Gallons per linear foot: 026 = Calc. Purge vol./casing vol.: 4 GAL / 3.63 x3 well volumes = Total Purge Vol. (gal): 12 GAL

Purge Rate:
Purge Begin Time: 1015

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1034	4 GAL	7.47	751	11.4		CLEAR
1051	8 GAL	7.44	754	11.3		CLEAR
1104	12 GAL	7.45	755	11.2		CLEAR
Stabilization Criteria:	Vol	+/- 0.1 unit	+/- 5%		0.42	(must meet criteria within 3 consecutive measurements)

Sample Time: 1105
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH 100	Meter: ECTestr 11+	Hach 2100P
S/N 2401662	S/N 24B	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/15/25
StationID: CD-38A1
Sample ID: CD-38A1-250415
QA/QC Sample ID: -NA-

Field Personnel: M. TERRIS
Weather: CLEAR WARMER 62°F
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

Well Depth: 111
Screens from: To
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

− Depth to Water: 90.07
= Water Column Depth: 20.93 -x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 5.5GAL / 5.44 x3 well volumes = Total Purge Vol. (gal): 16.5GAL

Purge Rate:
Purge Begin Time: 1115

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1133	5.5GAL	7.66	610	11.1		CLEAR
1151	11.0GAL	7.66	611	10.9		CLEAR
1207	16.5GAL	7.67	610	10.8		CLEAR
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.41	(must meet criteria within 3 consecutive measurements)

Sample Time: 1210
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH 100	Meter: ECTestr 11+	Hach 2100P
S/N 24011662	S/N 24B	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
3-40ml Glass w/ MA/AA - VOC's (524.3)	X	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)		
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)		
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)		
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)		
1-40mL Glass w/ HCL - TOC (SM 2540C)		

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/16/25 **Field Personnel:** M. TERRIS

StationID: CD-40C1 **Weather:** CLEAR WINDY 50s

Sample ID: CD-40C1-250416 **Purge Method:** Disp. bailer, Ded. Grundfos, (Ded. Bladder), Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: -NA-

Well Depth: 46 **Screens from:** 36 **To** 46 **Casing Size (in)** 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
(2.5)	(0.26)
4	0.66
6	1.5
8	2.6

Depth to Water: 3.45'

Water Column Depth: 42.55' **Gallons per linear foot:** x 0.26 **Calc. Purge vol./casing vol.:** = 11 GAL / 10.98 **x3 well volumes** **Total Purge Vol. (gal)** = 33 GAL

Purge Rate **Purge Begin Time** 1215

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1240	11 GAL	7.82	567	11.2		CLEAR
1305	22 GAL	7.86	564	11.1		CLEAR
1334	33 GAL	7.85	~~5~~566	11.0		CLEAR
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.19	(must meet criteria within 3 consecutive measurements)

Sample Time: 1335 **QAQC Sample Time:** -NA-

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH100	Meter: ECTestr 11+	Hach 2100P
S/N 2401662	S/N 24B	S/N 940700005619
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
X	3-40ml Glass w/ MA/AA - VOC's (524.3)	
	1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
	1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
	1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
X	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
	1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-16-2025
Field Personnel: GF
StationID: CD-49
Weather: Clear, 65°
Sample ID: CD-49 – 250416
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 241.5
Screens from: 218 To 238
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

– Depth to Water: 166.97
= Water Column Depth: 74.53 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 20 x3 well volumes = Total Purge Vol. (gal): 60

Purge Rate: 1.6 gpm
Purge Begin Time: 1120

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1133	20	7.76	500	12.6		Clear
1146	40	7.77	495	12.6		Clear
1159	60	7.79	496	12.7		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.01	(must meet criteria within 3 consecutive measurements)

Sample Time: 1201
QAQC Sample Time: NA

Meters:
pH — Meter: Extech S/N 476432 — Calib. to 4.0, 7.0 and 10.0
Conductivity — Meter: ECTestr11+ S/N 7810 — STD. to 700 umhos/cm
Turbidity — Apera ~~Hach 2100P~~ S/N ~~940700005619~~/ 81003 — 0,20 NTU STD. to ~~4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
✓	3-40ml Glass w/ MA/AA - VOC's (524.3)	X
	1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
	1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
	1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
✓	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	X
	1-40mL Glass w/ HCL - TOC (SM 2540C)	

set @ 360 Hz (close to max)

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/16/2025
Field Personnel: GF
StationID: CD-44C1
Weather: clear, 65°
Sample ID: CD-44C1 - 250416
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 200
Screens from: 187 To 197
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 173.79'
Water Column Depth: 26.21 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 6.8 use 7.0 x3 well volumes = Total Purge Vol. (gal): 21.0

Purge Rate: slow
Purge Begin Time: 0905

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0931	5.0	7.61	456	14.8		clear
0940	7.0	7.71	449	15.1		clear
0953	10.5	7.70	443	16.2		clear
1012	14.0	7.62	446	15.3		clear
1025	17.5	7.66	448	15.2		clear
1037	21.0	7.69	446	14.9		clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.60	(must meet criteria within 3 consecutive measurements)

Sample Time: 1041
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11	~~Hach 2100P~~ Apera
S/N 476432	S/N 7810	S/N ~~940700005619~~/ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to ~~4.8, 43.8, 420~~ 0, 20

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
✓ 3-40ml Glass w/ MA/AA - VOC's (524.3) *	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:
- VFD must be set @ 300 - 302 HZ to match well recharge rate. This is a very low recovery well
Mike, please add these notes to all future field sheets for this location yz

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-16-2025 | Field Personnel: GT

StationID: CD-44C2 | Weather: Clear, 61

Sample ID: CD-44C2 - 250416 | Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES-40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: NA

Well Depth: 247 | Screens from: 228 To 247 | Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 173.44

Water Column Depth: 73.56 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 20 x3 well volumes = Total Purge Vol. (gal): 60 ~~17~~

Purge Rate: 2.3 | Purge Begin Time: 1005

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1014	20	7.54	438	12.4		Clear
1023	40	7.55	448	11.6		Clear
1032	60	7.57	441	12.3		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.01	(must meet criteria within 3 consecutive measurements)

Sample Time: 1033 | QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11	Apera Hach ~~2100P~~
S/N 476432	S/N 7810	S/N ~~9407000056197~~ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to ~~4.8, 43.8, 420~~ 0.20

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
✓ 3-40ml Glass w/ MA/AA - VOC's (524.3) *	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/16/25
Field Personnel: GF
StationID: CD-44C3
Weather: clear, 61
Sample ID: CD-44C3 - 250416
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 292
Screens from: 282 To 292
Casing Size (in): 2.5
− Depth to Water: 173.37
= Water Column Depth: 118.63 -x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 31 x3 well volumes = Total Purge Vol. (gal): 93
Purge Rate: 2.3
Purge Begin Time: 0918

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0932	31	7.60	428	12.9		clear
0946	62	7.58	432	12.7		clear
1000	93	7.57	431	12.9		clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.26	(must meet criteria within 3 consecutive measurements)

Sample Time: 1001
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~ 81003 020
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to ~~4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
✓	3-40ml Glass w/ MA/AA - VOC's (524.3)	✶
	1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
	1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
	1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
	1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-16-25
Field Personnel: GT
StationID: CD-45C1
Weather: Clear, 41°
Sample ID: CD-45C1 - 250416
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 200
Screens from: 187 To 197
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 170.56
Water Column Depth: 29.44 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 8 x3 well volumes = Total Purge Vol. (gal): 24

Purge Rate: 2.0
Purge Begin Time: 0816

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0820	8	7.53	490	10.9		Clear
0824	16	7.57	492	10.9		Clear
0828	24	7.55	491	10.9		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%			(must meet criteria within 3 consecutive measurements)

Sample Time: 0835
QAQC Sample Time: NA

Meters:

pH
Meter: Extech
S/N 476432
Calib. to 4.0, 7.0 and 10.0

Conductivity
Meter: EcTestr11+
S/N 7810
STD. to 700 umhos/cm

Turbidity
Apera ~~Hach 2100P~~
S/N ~~940700005619~~ 81003
STD. to ~~4.8, 43.8, 420~~ 020

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
✓	3-40ml Glass w/ MA/AA - VOC's (524.3)	*
	1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
	1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
	1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
✓	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	*
	1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-16-2025 | Field Personnel: GF

StationID: CD-45C2 | Weather: Clear 40°

Sample ID: CD-45C2 -250416 | Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: NA

Well Depth: 247 | Screens from: 222 To 246 | Casing Size (in): 2.5

− Depth to Water: 170.90'

= Water Column Depth: 76.10 -x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 20 x3 well volumes = Total Purge Vol. (gal): 60

Purge Rate: 2.6 gpm | Purge Begin Time: 0740

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0745	20	7.44	442	11.0		Clear
0753	40	7.45	447	11.0		Clear
0801	60	7.46	448	11.0		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.03	(must meet criteria within 3 consecutive measurements)

Sample Time: 0802 | QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: EC Testr 11+	Apery ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0.20 STD. to ~~4.8, 43.8, 420~~

Lab Analysis:(Check parameters to be analyzed)

	Bottle Batch #
✓ 3-40ml Glass w/ MA/AA - VOC's (524.3) *	
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4/16/2025
Field Personnel: GF
StationID: CD-45C3
Weather: Clear, 38°
Sample ID: CD-45C3 - 250416
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve
QA/QC Sample ID: NA

Well Depth: 339
Screens from: 325.2 To 335.2
Casing Size (in): 2.5

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 171.37
Water Column Depth: 167.63 x Gallons per linear foot: 0.26 = Calc. Purge vol./casing vol.: 44 x3 well volumes = Total Purge Vol. (gal): 132

Purge Rate: 2.7gpm
Purge Begin Time: 0737

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0745	44	7.88	352	11.2		Clear
0753	89	7.89	351	11.1		Clear
0801	132	7.91	351	11.1		Clear
Stabilization Criteria:		+/- 0.1 unit	+/- 5%		0.03	(must meet criteria within 3 consecutive measurements)

Sample Time: 0829
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: Extech	Meter: ECTestr11+	Apera ~~Hach 2100P~~
S/N 476432	S/N 7810	S/N ~~940700005619~~/ 81003
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	0,20 STD. to ~~4.8, 43.8, 420~~

Lab Analysis: (Check parameters to be analyzed)

	Bottle Batch #
✓ 3-40ml Glass w/ MA/AA - VOC's (524.3)	✗
1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

COLBERT LANDFILL SUPPLEMENTAL GROUNDWATER SAMPLING

Date: 4/16/25 Address/Phone: Field Personnel: Craig Campbell

StationID: IN20-11 Weather: Sunny, 57°F

SampleID: IN20-11-250416 Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: Dedicated Pump?: NO

PURGE INFORMATION

Screens from: N/A To N/A Press. Tank Vol: (if applicable) N/A

Well Depth: N/A

Depth to Water: N/A

Water Column Depth: N/A x Gallons per linear foot: N/A = Calc. Purge vol./casing vol.: N/A

Estimated Total Purge Vol. (gal) 42000 Approx. Depth of Non-Ded. Equip N/A

Purge Rate 200gpm Purge Begin Time 0800

CASING INFO

Casing Size (in)	DIA.	VOL. (gal/ft)
N/A	1.25	0.08
	2.0	0.17
	2.5	0.26
	3	0.38
	4	0.66
	6	1.50

FIELD PARAMETERS

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0910	14000	6.94	969	12.1		Clear, odorless
1010	28000	6.99	1011	12.2		"
1110	42000	7.03	1012	12.4		"
Stabilization Criteria		+/- 0.1 unit	+/- 5%		0.42	(must meet criteria within 3 consecutive measurements)

Sample Time: 1111 QAQC Sample Time: N/A

METERS

pH	Conductivity	Turbidity
pH Testr Extech PH100	TDS Testr EcTestr 11+	Hach 2100P
S/N 2307124	S/N 1312423	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)			Bottle Batch #
	X	3-40ml Glass w/ MA/AA - VOC's (524.3)	
		2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	

Comments:

IF WATER Wells E-2@1.5gpm, E-1@100gpm, MW-3@100gpm. Sample is from these wells only. Other System extraction wells were not running.

COLBERT LANDFILL SUPPLEMENTAL GROUNDWATER SAMPLING

Date: 4/16/25 Address/Phone:

Field Personnel: Craig Campbell

StationID: EF24-02

Weather: Sunny, 57°F

SampleID: EF24-02-250416

Purge Method: Disp. bailer, (Ded. Grundfos), Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID:

Dedicated Pump?: NO

PLANT LOCATION

PURGE INFORMATION

Screens from: N/A To N/A

Press. Tank Vol: (if applicable) N/A

Well Depth:	N/A
− Depth to Water:	N/A
= Water Column Depth:	N/A

x Gallons per linear foot: N/A = Calc. Purge vol./casing vol.: N/A

Estimated Total Purge Vol. (gal): 36000

Approx. Depth of Non-Ded. Equip: N/A

Purge Rate: 200gpm

Purge Begin Time: 0800

CASING INFO

Casing Size (in)	DIA.	VOL. (gal/ft)
N/A	1.25	0.08
	2.0	0.17
	2.5	0.26
	3	0.38
	4	0.66
	6	1.50

FIELD PARAMETERS

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
0900	12000	8.23	951	12.1		clear, odorless
1000	24000	8.31	967	11.9		"
1100	36000	8.30	970	12.3		"
Stabilization Criteria		+/- 0.1 unit	+/- 5%		0.55	(must meet criteria within 3 consecutive measurements)

Sample Time: 1101

QAQC Sample Time: N/A

METERS

pH

pH Testr Extech PH100

S/N 2307124

Calib. to 4.0, 7.0 and 10.0

Conductivity

TDS Testr EcTestr11+

S/N 13124123

STD. to 700 umhos/cm

Turbidity

Hach 2100P

S/N 940700005619/

STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)		Bottle Batch #
X	3-40ml Glass w/ MA/AA - VOC's (524.3)	
X	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
X	Cl ONLY	
X	Mn & FE ONLY	

Comments:

IF WATER. Wells E-2 @ 1.5gpm, E-1 @ 100 gpm, W-3 @ 100gpm. Sample is from these wells only. Other system extraction wells were not running.

COLBERT LANDFILL WATER LEVEL FIELD SHEET

QTR

Aquifer	Station ID	Other Name	Reference Elev.	Date	Depth to Water	Initials
lower	0273C-1	WAKEFIELD	1887.69	4/14/2025	85.23' Leak in vertical water pipe causes water to run down SWL line so unable to take SWL	GF
lower	0273E-3	COSTELLO	1889.09		90.47'	
lower	0273F-4	Gander	1884.75		78.10'	
lower	0273P-3	Griffith formerly Elliot	1863.53		168.08-5.08'	
lower	0373A-2	RESSEMAN	1837.21		188.02'	
lower	0373J-5	Carter	1860.41		78.79'	
upper	1073K-1	BURGESS	1843.74		74.11'	
upper	1073P-2	PETRELLI	1838.67		93.61'	
upper	1573A-1	Johnson formerly Volk/Crowder	1854.6		159.58'	
upper	1573F-3	CLARK	1840.58		95.43'	
upper	1573H-4	MOORE LNDSCP	1856.95		Wellhead blocked SWL not taken	
upper	1573R-1	BAKER	1851.75			
lower	CD-01C1	CD-1	1863.75			
upper	CD-02RA1	CD-2A1 Repla	1852.57			
lower	CD-02RC2	CD-2C2 Repla	1853.28			
upper	CD-03A0	CD-3U	1845			
upper	CD-03A1	CD-3M	1844.7			
lower	CD-03C1	CD-3L	1845			
lower	CD-04C1	CD-4U	1872.13			
lower	CD-04E1	CD-4L	1872.11			
lower	CD-05C2	CD-5	1854.33			
upper	CD-06A1	CD-6U	1861.94			
lower	CD-06C2	CD-6L	1861.8			
lower	CD-07E1	CD-7L	1866.94			
lower	CD-08E1	CD-8M	1866.76			
lower	CD-08F1	CD-8L	1866.74			
lower	CD-20D1	Was CD-20E1	1864.62			
lower	CD-20D2	Was CD-20E2	1865.06			
lower	CD-21C1		1855.88			
lower	CD-21C3		1857.41			
lower	CD-22D1	Ackerman	1865.35			
upper	CD-23B1		1860.61			
lower	CD-23C2		1861.08			
lower	CD-24C2		1859.85			
lower	CD-25		1865			

COLBERT LANDFILL WATER LEVEL FIELD SHEET

QTR

Aquifer	Station ID	Other Name	Reference Elev.	Date	Depth to Water	Initials
lower	0273C-1	WAKEFIELD	1887.69			
lower	0273E-3	COSTELLO	1889.09			
lower	0273F-4	Gander	1884.75			
lower	0273P-3	Griffith	1863.53			
lower	0373A-2	RESSEMAN	1837.21			
lower	0373J-5	Carter	1860.41			
upper	1073K-1	BURGESS	1843.74			
upper	1073P-2	PETRELLI	1838.67			
upper	1573A-1	Johnson	1854.6			
upper	1573F-3	CLARK	1840.58			
upper	1573H-4	MOORE LNDSCP	1856.95			
upper	1573R-1	BAKER	1851.75			
lower	CD-01C1	CD-1	1863.75			
upper	CD-02RA1	CD-2A1 Repla	1852.57			
lower	CD-02RC2	CD-2C2 Repla	1853.28			
upper	CD-03A0	CD-3U	1845		46.39	
upper	CD-03A1	CD-3M	1844.7		70.83	
lower	CD-03C1	CD-3L	1845		175.16	
lower	CD-04C1	CD-4U	1872.13			
lower	CD-04E1	CD-4L	1872.11			
lower	CD-05C2	CD-5	1854.33			
upper	CD-06A1	CD-6U	1861.94		178.32	
lower	CD-06C2	CD-6L	1861.8			
lower	CD-07E1	CD-7L	1866.94			
lower	CD-08E1	CD-8M	1866.76			
lower	CD-08F1	CD-8L	1866.74			
lower	CD-20D1	Was CD-20E1	1864.62			
lower	CD-20D2	Was CD-20E2	1865.06			
lower	CD-21C1		1855.88			
lower	CD-21C3		1857.41			
lower	CD-22D1	Ackerman	1865.35			
upper	CD-23B1		1860.61			
lower	CD-23C2		1861.08			
lower	CD-24C2		1859.85			
lower	CD-25		1865			

COLBERT LANDFILL WATER LEVEL FIELD SHEET

QTR 2025

Aquifer	Station ID	Other Name	Reference Elev.	Date	Depth to Water	Initials
lower	CD-26		1860.79			
upper	CD-30A1		1845.95			
upper	CD-31A1		1853.6	4/15	92.79'	MT
upper	CD-32B1		1853.44			
upper	CD-33		1846.57			
upper	CD-34A1		1858.17	4/15	97.09	MT
upper	CD-35A1		1855.01		93.99	
upper	CD-36A1		1844.27		89.66	
upper	CD-37A1		1846.4		90.01	
upper	CD-38A1		1847.91		90.07	
upper	CD-40C1		1671.67		8.29'	
lower	CD-40C2		1671.84		~~8.29~~ 2.01	
lower	CD-40C3		1672.29		~~2.01~~ 7.01	
lower	CD-41C1		1848.64		176.99'	
lower	CD-41C2		1849.1		177.41'	
lower	CD-41C3		1849.41		177.52'	
lower	CD-42C1		1844		174.04'	
lower	CD-42C2		1843.72		173.82'	
lower	CD-42C3		1843.63		~~1~~73.69'	
lower	CD-43C1		1839.98		170.91'	
lower	CD-43C2		1840.01		170.67'	
lower	CD-43C3		1840.52		170.39'	
lower	CD-44C1		1844.84		173.79'	
lower	CD-44C2		1844.28		173.44'	
lower	CD-44C3		1844.24		173.37'	
lower	CD-45C1		1840.75		170.56'	
lower	CD-45C2		1841.4		170.90'	
lower	CD-45C3		1841.89		171.37'	
lower	CD-46		1852.7			
lower	CD-47		1850.73			
lower	CD-48C1		1849.73		176.47'	MT
lower	CD-48C2		1850.42		176.36'	
lower	CD-48C3		1850.08		176.19'	
lower	CD-49		1835.41		166.97'	
upper	CD-60A1		1852.82		79.49'	

COLBERT LANDFILL WATER LEVEL FIELD SHEET

MTH

Aquifer	Station ID	Other Name	Reference Elev.	Date	Depth to Water	Initials
upper	CD-61A1		1842.87		~~68.80~~ 68.20	
lower	CP-E1		1854.2			
lower	CP-E2		1857.7			
lower	CP-E3		1853.29			
upper	CP-S1		1839.59			
upper	CP-S3		1845.49			
upper	CP-S4		1843.52			
upper	CP-S5		1847.48		NA	
upper	CP-S6		1847.68			
lower	CP-W1		1845.02			
lower	CP-W2		1840.36			
lower	CP-W3		1841.72			
upper	CS-04A1	CS-4	1858.38			
upper	CS-12A1		1848.48			
lower	CS-14C1	CS-14U	1868.25			
lower	CS-14D1	CS-14L	1868.19			

COLBERT LANDFILL WATER LEVEL FIELD SHEET

QTR

Aquifer	Station ID	Other Name	Reference Elev.	Date	Depth to Water	Initials
lower	0273C-1	WAKEFIELD	1887.69			
lower	0273E-3	COSTELLO	1889.09			
lower	0273F-4	Gander	1884.75			
lower	0273P-3	Griffith	1863.53			
lower	0373A-2	RESSEMAN	1837.21			
lower	0373J-5	Carter	1860.41			
upper	1073K-1	BURGESS	1843.74			
upper	1073P-2	PETRELLI	1838.67			
upper	1573A-1	Johnson	1854.6			
upper	1573F-3	CLARK	1840.58			
upper	1573H-4	MOORE LNDSCP	1856.95			
upper	1573R-1	BAKER	1851.75	4/14/25	192.85	
lower	CD-01C1	CD-1	1863.75	"	192.55	CC
upper	CD-02RA1	CD-2A1 Repla	1852.57	"	81.43	"
lower	CD-02RC2	CD-2C2 Repla	1853.28	"	182.31	"
upper	CD-03A0	CD-3U	1845			
upper	CD-03A1	CD-3M	1844.7			
lower	CD-03C1	CD-3L	1845			
lower	CD-04C1	CD-4U	1872.13			
lower	CD-04E1	CD-4L	1872.11			
lower	CD-05C2	CD-5	1854.33			
upper	CD-06A1	CD-6U	1861.94	"	89.52	"
lower	CD-06C2	CD-6L	1861.8	"	176.98	"
lower	CD-07E1	CD-7L	1866.94	"	155.38	"
lower	CD-08E1	CD-8M	1866.76	"	N/A	"
lower	CD-08F1	CD-8L	1866.74	"	N/A	"
lower	CD-20D1	Was CD-20E1	1864.62	"	156.93	"
lower	CD-20D2	Was CD-20E2	1865.06	"	157.34	"
lower	CD-21C1		1855.88	"	185.15	"
lower	CD-21C3		1857.41	"	186.61	"
lower	CD-22D1	Ackerman	1865.35	"	92.61	"
upper	CD-23B1		1860.61	"	79.02	"
lower	CD-23C2		1861.08	"	170.87	"
lower	CD-24C2		1859.85	"	188.98	"
lower	CD-25		1865	"	158.38	"

COLBERT LANDFILL WATER LEVEL FIELD SHEET

QTR

Aquifer	Station ID	Other Name	Reference Elev.	Date	Depth to Water	Initials
lower	CD-26		1860.79	4/14/25	181.45	CC
upper	CD-30A1		1845.95	"	86.83	"
upper	CD-31A1		1853.6			
upper	CD-32B1		1853.44	"		
upper	CD-33		1846.57		87.38	"
upper	CD-34A1		1858.17			
upper	CD-35A1		1855.01			
upper	CD-36A1		1844.27			
upper	CD-37A1		1846.4			
upper	CD-38A1		1847.91			
upper	CD-40C1		1671.67			
lower	CD-40C2		1671.84			
lower	CD-40C3		1672.29			
lower	CD-41C1		1848.64			
lower	CD-41C2		1849.1			
lower	CD-41C3		1849.41			
lower	CD-42C1		1844			
lower	CD-42C2		1843.72			
lower	CD-42C3		1843.63			
lower	CD-43C1		1839.98			
lower	CD-43C2		1840.01			
lower	CD-43C3		1840.52			
lower	CD-44C1		1844.84			
lower	CD-44C2		1844.28			
lower	CD-44C3		1844.24			
lower	CD-45C1		1840.75			
lower	CD-45C2		1841.4			
lower	CD-45C3		1841.89			
lower	CD-46		1852.7	"	182.39	"
lower	CD-47		1850.73	"	180.07	"
lower	CD-48C1		1849.73			
lower	CD-48C2		1850.42			
lower	CD-48C3		1850.08			
lower	CD-49		1835.41			
upper	CD-60A1		1852.82			

CHAIN OF CUSTODY COLBERT LANDFILL
2025

LABORATORY:
Anatek Moscow
1282 Alturas DR
Moscow ID 83843
(208)883-2839
Attention: Sample Receiving

Colbert Landfill
Spokane County Environmental Services
22515 N. Elk-Chattaroy RD.
Colbert , WA 99005
(509) 385-9606

Tracking number: **Colbert- 250417-1500**
Shipping CO: **Anatek Courier**
No. Coolers: **1**

DATE : **4/16/2025**
PAGE: **2 OF 3**

PARAMETERS:			VOLATILES	1,4 Dioxane (DW)	SAMPLERS: Gordie Fisette, Mike Terris, Craig Campbell		
CONTAINERS:			3-40 ml	2-60 ml			
PRESERVATION:			MA/AA to pH<2	Sodium Sulfate pH<2			
HOLDING TIME:			14 days	28 Days			
METHOD:			524.3	522	COOLER NUMBER	TOTAL NO. OF BOTTLES	COMMENTS:
Sample ID:	Date:	Time:					
CP-W2-250415	4/15/2025	1215			1500	3	
CD-42C2-250415	4/15/2025	1217			1500	3	
CD-42C1-250415	4/15/2025	1239			1500	3	
CP-W3-250415	4/15/2025	1245			1500	3	
CD-42C3-250415	4/15/2025	1247			1500	3	
CD-36A1-250415	4/15/2025	1315			1500	3	
CP-S1-250415	4/15/2025	1317			1500	9	MS/MSD
CD-43C2-250415	4/15/2025	1354			1500	3	
CP-S4-250415	4/15/2025	1407			1500	3	
CD-43C3-250415	4/15/2025	1420			1500	3	
CD-43C1-250415	4/15/2025	1423			1500	3	
CP-S5-250415	4/15/2025	1442			1500	3	
CP-S6-250415	4/15/2025	1512			1500	3	
CS-04A1-250416	4/16/2025	730			1500	3	
CD-03A1-250416	4/16/2025	900			1500	3	
CD-61A1-250416	4/16/2025	930			1500	9	MS/MSD

RELINQUISHED BY:
Signature:
Print: Mike S Terris
SPOKANE COUNTY ENVIRONMENTAL SERVICES
Date: 4/17/2025
Time: 0830

RECEIVED BY:
Signature:
Print Name:
ANATEK LAB
Date:
Time:

COMMENTS: Please email a copy of the sample condition report to Mike and Austin ASAP; mterris@spokanecounty.org & astewart@spokanecounty.org

COLCOC.XLS

CHAIN OF CUSTODY COLBERT LANDFILL
2025

LABORATORY:
Anatek Moscow
1282 Alturas DR
Moscow ID 83843
(208)883-2839
Attention: Sample Receiving

Colbert Landfill
Spokane County Environmental Services
22515 N. Elk-Chattaroy RD.
Colbert , WA 99005
(509) 385-9606

Tracking number: **Colbert- 250417-1500**
Shipping CO: **Anatek Courier**
No. Coolers: **1**

DATE : **4/16/2025**
PAGE **1** OF **3**

PARAMETERS:			VOLATILES	1,4 Dioxane (DW)	SAMPLERS: Gordie Fisette, Mike Terris, Craig Campbell		
CONTAINERS:			3-40 ml	2-60 ml			
PRESERVATION:			MA/AA to pH<2	Sodium Sulfate pH<2			
HOLDING TIME:			14 days	28 Days			
METHOD:			524.3	522	COOLER NUMBER	TOTAL NO. OF BOTTLES	COMMENTS:
Sample ID:	Date:	Time:					
CD-34A1-250415	4/15/2025	735			1500	3	
CD-31A1-250415	4/15/2025	840			1500	3	
CD-48C2-250415	4/15/2025	845			1500	3	
CD-48C3-250415	4/15/2025	849			1500	3	
CP-E3-250415	4/15/2025	850			1500	3	
CD-48C1-250415	4/15/2025	913			1500	3	
CP-S3-250415	4/15/2025	1000			1500	3	
CD-50-250415	4/15/2025	1000			1500	3	
CP-W1-250415	4/15/2025	1021			1500	3	
CD-41C2-250415	4/15/2025	1024			1500	3	
CP-E2-250415	4/15/2025	1031			1500	3	
CD-41C3-250415	4/15/2025	1056			1500	3	
CD-41C1-250415	4/15/2025	1059			1500	3	
CD-37A1-250415	4/15/2025	1105			1500	3	
CP-E1-250415	4/15/2025	1142			1500	3	
CD-38A1-250415	4/15/2025	1210			1500	3	

RELINQUISHED BY:
Signature:
Pint: Mike S Terris
SPOKANE COUNTY ENVIRONMENTAL SERVICES
Date: 4/17/2025
Time: 0830

RECEIVED BY:
Signature:
Print Name:
ANATEK LAB
Date:
Time:

COMMENTS: Please email a copy of the sample condition report to Mike and Austin ASAP; mterris@spokanecounty.org & astewart@spokanecounty.org

COLCOC.XLS

CHAIN OF CUSTODY COLBERT LANDFILL
2025

LABORATORY:
Anatek Moscow
1282 Alturas DR
Moscow ID 83843
(208)883-2839
Attention: Sample Receiving

Colbert Landfill
Spokane County Environmental Services
22515 N. Elk-Chattaroy RD.
Colbert , WA 99005
(509) 385-9606

Tracking number: **Colbert- 250417-1500**
Shipping CO: **Anatek Courier**
No. Coolers: **1**

DATE : **4/16/2025**
PAGE: **3 OF 3**

PARAMETERS:			VOLATILES	1,4 Dioxane (DW)	SAMPLERS: Gordie Fisette, Mike Terris, Craig Campbell		
CONTAINERS:			3-40 ml	2-60 ml			
PRESERVATION:			MA/AA to pH<2	Sodium Sulfate pH<2			
HOLDING TIME:			14 days	28 Days			
METHOD:			524.3	522	COOLER NUMBER	TOTAL NO. OF BOTTLES	COMMENTS:
Sample ID:	Date:	Time:					
CD-51-250416	4/16/2025	1000			1500	3	
CD-60A1-250416	4/16/2025	1015			1500	3	
EF24-02-250416	4/16/2025	1101			1500	3	
IN20-11-250416	4/16/2025	1111			1500	3	
CD-40C1-250416	4/16/2025	1335			1500	3	
CD-21C3-250416	4/16/2025	1331			1500	3	
CD-49-250416	4/16/2025	1201			1500	3	
CD-44C1-250416	4/16/2025	1041			1500	3	
CD-44C2-250416	4/16/2025	1033			1500	3	
CD-44C3-250416	4/16/2025	1001			1500	3	
CD-45C1-250416	4/16/2025	835			1500	3	
CD-45C2-250416	4/16/2025	802			1500	3	
CD-45C3-250416	4/16/2025	829			1500	3	
Colbert Trip Blanks	4/16/2025	—			1500	2	Trips

RELINQUISHED BY:
Signature: Mike Terris
Pint: Mike S Terris
SPOKANE COUNTY ENVIRONMENTAL SERVICES
Date: 4/17/2025
Time: 0830

RECEIVED BY:
Signature:
Print Name:
ANATEK LAB
Date:
Time:

COMMENTS: Please email a copy of the sample condition report to Mike and Austin ASAP; mterris@spokanecounty.org & astewart@spokanecounty.org

COLCOC.XLS

CHAIN OF CUSTODY COLBERT LANDFILL
2025

LABORATORY:
Anatek Moscow
1282 Alturas DR
Moscow ID 83843
(208)883-2839
Attention: Sample Receiving

Colbert Landfill
Spokane County Environmental Services
22515 N. Elk-Chattaroy RD.
Colbert , WA 99005
(509) 385-9606

Tracking number: **Colbert- 250415**
Shipping CO: **Anatek Courier**
No. Coolers: **1**

DATE : **4/16/2025**
PAGE **1** OF **1**

PARAMETERS:			VOLATILES	1,4 Dioxane (DW)	SAMPLERS: Mike Terris, Gordie Fisette, Craig Campbell		
CONTAINERS:			3-40 ml	2-60 ml			
PRESERVATION:			MA/AA to pH<2	Sodium Sulfate pH<2			
HOLDING TIME:			14 days	28 Days			
METHOD:			524.3	522	COOLER NUMBER	TOTAL NO. OF BOTTLES	COMMENTS:
Sample ID:	Date:	Time:					
CD-50-250415	4/15/2025	1000				2	
CP-E2-250415	4/15/2025	1031				2	
CD-42C1-250415	4/15/2025	1239				2	
CP-S1-250415	4/15/2025	1317				6	MS/MSD
CD-43C1-250415	4/15/2025	1423				2	
EF24-02-250416	4/16/2025	1101				2	
CD-40C1-250416	4/16/2025	1335				2	
CD-21C3-250416	4/16/2025	1331				2	
CD-49-250416	4/16/2025	1201				2	
CD-45C1-250416	4/16/2025	835				2	
Colbert Trip Blanks	4/16/2025	—				2	Trips

RELINQUISHED BY:
Signature: Mike Terris
Print: Mike S Terris
SPOKANE COUNTY ENVIRONMENTAL SERVICES
Date: 4/17/2025
Time: 0830

RECEIVED BY:
Signature:
Print Name:
ANATEK LAB
Date:
Time:

COMMENTS: Please email a copy of the sample condition report to Mike and Austin ASAP; mterris@spokanecounty.org & astewart@spokanecounty.org

COLCOC.XLS

COLBERT LANDFILL SUPPLEMENTAL GROUNDWATER SAMPLING

Date: 4-21-25 Address/Phone: Field Personnel: M. TERRIS

StationID: 1073F-1S Weather: P.C. 50'S

SampleID: 1073F-1S-250421

Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve

QA/QC Sample ID: NA Dedicated Pump?: NO SPRING.

PURGE INFORMATION

Screens from: To Press. Tank Vol: (if applicable)

Well Depth: SPRING

Depth to Water:

Water Column Depth: x

Gallons per linear foot: =

Calc. Purge vol./casing vol.:

Estimated Total Purge Vol. (gal)

Approx. Depth of Non-Ded. Equip

Purge Rate

Purge Begin Time 1100

Casing Size (in)

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
3	0.38
4	0.66
6	1.50

FIELD PARAMETERS

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
1120	NA	7.49	467	10.1		CLEAR
1135	NA	7.54	459	10.0		CLEAR
1141	NA	7.54	455	9.8		CLEAR
X						
Stabilization Criteria		+/- 0.1 unit	+/- 5%		1.41	(must meet criteria within 3 consecutive measurements)

Sample Time: 1145 QAQC Sample Time: NA

METERS

pH	Conductivity	Turbidity
pH Testr 100 S/N 2601662	TDS Testr 11+ S/N 24 B	Hach 2100P S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis: (Check parameters to be analyzed)		Bottle Batch #
X	3-40ml Glass w/ MA/AA - VOC's (524.3)	
X	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	

*NEW ~~OWNER~~ OWNER! KELSI AND MIKE ADAMS
21523 N MEADOWVIEW DR.
COLBERT WA 99005
KELSI # 509-280-7399

Comments:

IF WATER NEW SPRING. SAMPLED FROM 2" PVC MT/HOME OWNER CREATED. COMING OUT OF SPRING. MT USED A BAILER W/ SLIGHT SLOPE TO GET A GRAB SAMPLE

PREPARED BY:	DATE:
PROJECT TITLE:	

Kelsi and Mike Adams
21523 N. Meadowview Dr.
Colbert, WA 99005

Kelsi - 509.280.7399 4/21/25
Kelsi.adams05@gmail.com

Outlook

Colbert Homeowner - Sampling

LABEL 1073F-5

From Stewart, Austin R. <ASTEWART@spokanecounty.org>
Date Mon 4/14/2025 11:45 AM
To Campbell, Craig A. <CACAMPBELL@SpokaneCounty.org>; Terris, Mike <MTERRIS@spokanecounty.org>; Fisette, Gordon <GFisette@SpokaneCounty.org>

Hey Supertechs!

I know this week is the sampling for our Colbert annual round, so I hope it goes well, and please let me know if there is anything I can help with.

Last week, a homeowner reached out to Deb. Her name is Kelsey Adams, and she and her family reside at 21523 N Meadowview Dr (part of the North Glen neighborhood).
They are on Whitworth water, but have a spring that runs through their property and she is interested in knowing more about possible contaminants in this water as her kids and animals are in it frequently.

I am not sure which spring this is exactly, but Deb mentioned that we might have already sampled it in the past, and that y'all have discussed getting out there and getting another round of samples for the springs in that area. I tried to call her but she did not answer, so I left her a voicemail. I know you are all very busy this week, but if I hear back from her and we have availability this week/next week to obtain a sample, we should probably do that. I just wanted to give you a heads up and see if this is possible. If it would be better to tack this on the residential sampling, that would be fine as well.

Thanks!

Austin

KELSEY 4/21 ellAM

Colbert Residential Field Data Sheet

17-Apr-25

Well **1073J-1**

TC **TA**
R R Jack Raines
E 4024 Wahoo Road

Colbert Wa 99005

Home Phone (406) 239-6383 **Work Phone**

Last Sample Date 10/8/2024 **Sample I.D.** 1073J-1-241008

FIELD PARAMETERS	Previous	Current		
			Sample Date	4-21-25
			Sample Time	1245
pH	7.79	7.87	**Start Purge**	1200
Cond (uMhos)	441	461	**End Purge**	1247
Temp	12.1	10.9	**Rate (gpm)**	12 GPM
SWL (Feet)		NT 180'	**Purge Vol (gal)**	564 GAL

PURGE VOLUME CALCULATIONS

				Casing Size	**Gal/Foot**
Total Depth (ft)	280	**Casing Vol (gal)**	147=150GAL	**2"**	**0.16**
SWL (ft)	180'	**Casing Vol X 3**	450 GAL	**4"**	**0.65**
Water Column (ft)	100	**PT Vol (gal)**	30	**6"**	**1.47**
Casing Size (in)	6	**Total Vol (gal)**	480GAL	**8"**	**2.61**

Previous Sample Point Hose bib by front gate

Special Instructions TEFLON SPLITTER

Comment

* MT SAMPLED VOC'S 5243 FROM HOSE BIB @ FRONT GATE.

- NEW ID 1073J-1-250421

IF CANNOT TAKE WL, ENTER ASSUMED READING HERE:

COLBERT LANDFILL ANNUAL GROUNDWATER SAMPLING

Date: 4-21-25
Field Personnel: M. TERRIS
StationID: 1573A-1
Weather: CLOUDY, 50S
Sample ID: 1573A-1-250421
Purge Method: Disp. bailer, Ded. Grundfos, Ded. Bladder, Ded. Bennett, Env. Tech ES 40, Port. Grundfos, Port. Bennet, PDB, Hydrasleeve RES. WELL
QA/QC Sample ID: -NA-

Well Depth: 105
Screens from: To
Casing Size (in): 6

CASING INFO

DIA.	VOL. (gal/ft)
1.25	0.08
2.0	0.17
2.5	0.26
4	0.66
6	1.5
8	2.6

Depth to Water: 93.61'
Water Column Depth: 11.39 x Gallons per linear foot: 1.50 = Calc. Purge vol./casing vol.: 20GAL / 17.08 x3 well volumes = Total Purge Vol. (gal): 60GAL

Purge Rate: 12GPM
Purge Begin Time: 1300

Field Parameters

Time	Purge Vol/gal	pH	Cond. (umhos/cm)	Temp. (C)	Turb.	Comments
120GAL	1310	7.78	497	11.7		CLEAR
228GAL	1319	7.74	501	11.6		CLEAR
348GAL	1329	7.75	502	11.5		CLEAR
Stabilization Criteria:	Vol	+/- 0.1 unit	+/- 5%		0.61	(must meet criteria within 3 consecutive measurements)

Sample Time: 1330
QAQC Sample Time: NA

Meters:

pH	Conductivity	Turbidity
Meter: EXTECH100	Meter: ECTestr11+	Hach 2100P
S/N 2401662	S/N 248	S/N 940700005619/
Calib. to 4.0, 7.0 and 10.0	STD. to 700 umhos/cm	STD. to 4.8, 43.8, 420

Lab Analysis:(Check parameters to be analyzed)

		Bottle Batch #
*	3-40ml Glass w/ MA/AA - VOC's (524.3)	
	1-500mL Poly w/H2SO4-COD/Ammonia (410.4/350.1)	
	1-500mL Poly unpreserv.- Cl/NO3/NO2/SO4 (300.0/300.0/354.0/300.0)	
	1-500mL Poly w/HNO3 Field Filtered- Fe/Mn/Zn (6010)	
	2-60mL Amber glass w/ NaSO4 - 1,4-Dioxane (522)	
	1-40mL Glass w/ HCL - TOC (SM 2540C)	

Comments:

Colbert Residential Field Data Sheet

17-Apr-25

Well **1073L-2**

TC **TA**
R R Steve Countryman
N 21202 Little Spokane River D

Colbert Wa 99005

Home Phone **Work Phone**
(509) 466-2232

Last Sample Date 1/7/2025 **Sample I.D.** 1073L-2-250107

FIELD PARAMETERS	**Previous**	**Current**		**Sample Date**	4/22/25
				Sample Time	0945
pH	7.91	7.97		**Start Purge**	0900
Cond (uMhos)	363	357		**End Purge**	0947
Temp	10.9	11.1°C		**Rate (gpm)**	10GPM
SWL (Feet)	4.18	4.79'		**Purge Vol (gal)**	470GAL

PURGE VOLUME CALCULATIONS				**Casing Size**	**Gal/Foot**
Total Depth (ft)	67	**Casing Vol (gal)**	91.4=95G	**2"**	**0.16**
SWL (ft)	4.79'	**Casing Vol X 3**	285GAL	**4"**	**0.65**
Water Column (ft)	62.21'	**PT Vol (gal)**	100	**6"**	**1.47**
Casing Size (in)	6	**Total Vol (gal)**	385GAL	**8"**	**2.61**

Previous Sample Point Hose bib on west side of house

Special Instructions Splitter; Teflon tubing.

Comment

* MT SAMPLED @ HOSE BIB BACK OF PUMP HOUSE, FILLED 3-40 ml VOC's W/HCl FOR 524.3 BY ANATEK LAB IN MOSCOW ID

-NEW ID 1073L-2-250422

IF CANNOT TAKE WL, ENTER ASSUMED READING HERE:

Colbert Residential Field Data Sheet

17-Apr-25

Well **1473M-1**

TC **TA**
R R Jonathan Richard
N 19826 Yale Road

Colbert Wa 99005

Home Phone **Work Phone**
(509) 954-3762

Last Sample Date 1/7/2025 **Sample I.D.** 1473M-1-250107

FIELD PARAMETERS	**Previous**	**Current**		**Sample Date**	4/22/25
				Sample Time	1245
pH	7.66	7.74		**Start Purge**	1215
Cond (uMhos)	579	561		**End Purge**	1252
Temp	10.9	11.1°C		**Rate (gpm)**	8.5 GPM
SWL (Feet)		85' APPROX		**Purge Vol (gal)**	314 GAL

PURGE VOLUME CALCULATIONS

				Casing Size	**Gal/Foot**
Total Depth (ft)	105	**Casing Vol (gal)**	29.40=30GAL	**2"**	**0.16**
SWL (ft)	85'	**Casing Vol X 3**	90 GAL	**4"**	**0.65**
Water Column (ft)	20'	**PT Vol (gal)**	100	**6"**	**1.47**
Casing Size (in)	6	**Total Vol (gal)**	190GAL	**8"**	**2.61**

Previous Sample Point Hose bib front of house

Special Instructions TEFLON SPLITTER

Comment

* MT SAMPLED @ HOSE BIB FRONT OF HOUSE, FILLED 9-40ml VOCS + 6-60ml 1,4 DIOXANE. FOR ANATEK LAB IN MOSCOW ID.

* NEW ID 1473M-1-250422
1473M-1-250422 MS
1473M-1-250422 MSD

IF CANNOT TAKE WL, ENTER ASSUMED READING HERE:

Colbert Residential Field Data Sheet

17-Apr-25

Well **1073D-1**

TC	TA		Home Phone	Work Phone
R	R	David Nerren N. 22115 Meadow View Dr. Colbert Wa 99005	(509) 998-9671	

Last Sample Date 12/11/2024 **Sample I.D.** 2073D-1-241211

FIELD PARAMETERS	Previous	Current		Sample Date	4/22/25	
				Sample Time	1545	1500 DUPE
pH		7.99		Start Purge	1515	
Cond (uMhos)		412		End Purge	1549	
Temp		10.1°c		Rate (gpm)	12GPM	
SWL (Feet)		4.01'		Purge Vol (gal)	408GAL	

PURGE VOLUME CALCULATIONS

				Casing Size	Gal/Foot
Total Depth (ft)	76	Casing Vol (gal)	1058-110	2"	0.16
SWL (ft)	4.01'	Casing Vol X 3	330 GAL	4"	0.65
Water Column (ft)	71.99'	PT Vol (gal)	20	6"	1.47
Casing Size (in)	6	Total Vol (gal)	350GAL	8"	2.61

Previous Sample Point

Special Instructions Special Equipment: Plastic Y, Teflon Tubing, purge hose; GATE CODE: 9876

Comment Dupe ID taken along with 1073D-1-241211

* MT SAMPLED @ YARD HYDRANT NEAR RV TRAILER NEXT TO SHOP
FILLED 8-40ml VOCS + 1,4 DIOXANE & 60ml
ANATEK LAB IN MOSCOW ID

- NEW ID 1073D-1-250422
DUPE ID 2073D-1-250422

IF CANNOT TAKE WL, ENTER ASSUMED READING HERE: *1*

CHAIN OF CUSTODY COLBERT LANDFILL
2025

LABORATORY:
Anatek Moscow
1282 Alturas DR
Moscow ID 83843
(208)883-2839
Attention: Sample Receiving

Colbert Landfill
Spokane County Environmental Services
22515 N. Elk-Chattaroy RD.
Colbert , WA 99005
(509) 238-6607 FAX:(509)238-6812

Tracking #: COLRES-250424-1001
Shipping CO: ANATEK COURIER
No. Coolers: 1

DATE: 4/24/2025
PAGE 1 OF 1

PARAMETERS:			VOLATILES	1,4 Dioxane (DW)	SAMPLERS: M. TERRIS		
CONTAINERS:			3-40 ml	2-60 ml			
PRESERVATION:			MA/AA to pH<2	Sodium Sulfate pH<2			
HOLDING TIME:			14 days	28 Days			
METHOD:			524.3	522	COOLER NUMBER	TOTAL NO. OF BOTTLES	COMMENTS:
Sample ID:	Date:	Time:					
1073F-IS-250421	4/21/25	1145		X	1001	2	
1473M-1-250422	4/22/25	1245		X	1001	6	MS/MSD
2073D-1-250422	4/22/25	1500		X	1001	2	
1073D-1-250422	4/22/25	1545		X	1001	2	
COLRES TRIPS	4/22/25	–		X	1001	2	TRIP-BLANKS

RELINQUISHED BY:
Signature: [signature]
Print: MIKES TERRIS
SPOKANE COUNTY ENVIRONMENTAL SERVICES
Date: 4/24/25
Time: 0900

RECEIVED BY:
Signature: [signature]
Print Name: ANGELA
ANATEK LAB
Date: 4/24/25
Time: 0857

COMMENTS: Please email a copy of the sample condition report to Mike and Austin ASAP; mterris@spokanecounty.org & astewart@spokanecounty.org

CHAIN OF CUSTODY COLBERT LANDFILL
2025

LABORATORY:
Anatek Moscow
1282 Alturas DR
Moscow ID 83843
(208)883-2839
Attention: Sample Receiving

Colbert Landfill
Spokane County Environmental Services
22515 N. Elk-Chattaroy RD.
Colbert , WA 99005
(509) 238-6607 FAX:(509)238-6812

Tracking #: COLRES-250424-1001
Shipping CO: ANATECK COURIER
No. Coolers: 1
DATE: 4/24/25
PAGE 1 OF 1

PARAMETERS: / CONTAINERS: / PRESERVATION: / HOLDING TIME: / METHOD:			VOLATILES 3-40 ml MA/AA to pH<2 14 days 524.3	1,4 Dioxane (DW) 2-60 ml Sodium Sulfate pH<2 28 Days 522	SAMPLERS: M. TERRIS		
Sample ID:	Date:	Time:			COOLER NUMBER	TOTAL NO. OF BOTTLES	COMMENTS:
1073F-1S-250421	4/21/25	1145	X		1001	3	
1073J-1-250421	4/21/25	1245	X		1001	3	
1573A-1-250421	4/21/25	1330	X		1001	3	
1073L-2-250422	4/22/25	0945	X		1001	3	
1473M-1-250422	4/22/25	1245	X		1001	9	MS/MSD
2073D-1-250422	4/22/25	1500	X		1001	3	
1073D-1-250422	4/22/25	1545	X		1001	3	
COLRES TRIPS	4/22/25	-	X		1001	2	TRIP BLANKS

RELINQUISHED BY:
Signature: Mike S. Terris
Print: MIKE S. TERRIS
SPOKANE COUNTY ENVIRONMENTAL SERVICES
Date: 4/24/25
Time: 0900

RECEIVED BY:
Signature:
Print Name:
ANATEK LAB
Date: 4/24/25
Time: 0857

COMMENTS: Please email a copy of the sample condition report to Mike and Austin ASAP; mterris@spokanecounty.org & astewart@spokanecounty.org

COLCOC.XLS

Appendix C

Extraction Well Inspections/Maintenance Checklists

TECHS: M. TERRIS
DATE(S): 7-5-24

EXTRACTION WELL MAINTENANCE
QUARTERLY INSPECTION

TASK	MAINTENANCE	CP-S1	CP-S4	CP-S5	CP-S6	CP-E1	CP-E2	CP-E3	CP-W1	CP-W2	CP-W3
SUMP:											
	VERIFY HI FLOAT ALARM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	CLEAN AS NEEDED (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:											
VFD:											
	CLEAN FILTER	A	A	A	A	A	A	A	A	A	A
	INSPECT WIRING/COMPONENTS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:											
PIPING:											
	EXERCISE GATE VALVE (2X)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT PIPING FOR LEAKS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT AIR/VAC VALVE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	EVERYTHING LOOK GOOD for SAMPLING										
PIT:											
	INSPECT FOR LEAKS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK ZERO READING	A	A	A	A	A	A	A	A	A	A
NOTES:	WILL ZERO ON W/METER ON ANNUAL										
PCP:											
	CLEAN (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT ALL WIRING/RELAYS/COMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK INDICATOR LIGHTS/REPLACE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK SLC/KE CARD LIGHTS BATT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TURN FAN TO WARM/COOL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CLEAN FILTERS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK/TIGHTEN ALL CABLES/RADIO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DESSICANT CHANGE OUT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UPS BATTERY CHECK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	LOOK GOOD										
VAULT:											
	CLEAN AND INSPECT (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT LADDER BOLTS/RUNGS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT LID BOLTS UPPER/LOWER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK/TIGHTEN MAGNET WELL/LID	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:											
FINAL:											
	RESET RADIO	—	—	—	—	—	—	—	—	—	—
	RESET WELL										
	IS PIT OPEN?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	IS GATE VALVE OPEN?	C	C	C	C	C	C	C	C	C	C

QT INSPECTION / CLEAN for QT SAMPLING ON 7/9/24

EXTRA NOTES:

TECHS: M. TERRIS
DATE(S): 10/2/24 - 10/3

EXTRACTION WELL MAINTENANCE
QUARTERLY INSPECTION

TASK	MAINTENANCE	CP-S1	CP-S4	CP-S5	CP-S6	CP-E1	CP-E2	CP-E3	CP-W1	CP-W2	CP-W3
SUMP:											
	VERIFY HI FLOAT ALARM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CLEAN AS NEEDED (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	UNABLE TO VERIFY SINCE RADIOS DONT WORK										
VFD:											
	CLEAN FILTER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT WIRING/COMPONENTS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	ALL LOOK GREAT										
PIPING:											
	EXERCISE GATE VALVE (2X)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAMPLING	INSPECT PIPING FOR LEAKS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAMPLING	INSPECT AIR/VAC VALVE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:											
PIT:											
	INSPECT FOR LEAKS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK ZERO READING (W/METER)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:											
PCP:											
	CLEAN (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT ALL WIRING/RELAYS/COMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK INDICATOR LIGHTS/REPLACE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK SLC/KE CARD LIGHTS BATT	G	G	G	G	G	G	G	G	G	G
	TURN FAN TO WARM/COOL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CLEAN FILTERS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK/TIGHTEN ALL CABLES/RADIO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DESSICANT CHANGE OUT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UPS BATTERY CHECK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	ALL LOOK GOOD										
VAULT:											
	CLEAN AND INSPECT (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT LADDER BOLTS/RUNGS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT LID BOLTS UPPER/LOWER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK/TIGHTEN MAGNET WELL/LID	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:											
FINAL:											
OPENED WHEN SAMPLING	RESET RADIO	—	—	—	—	—	—	—	—	—	—
	RESET WELL	—	—	—	—	—	—	—	—	—	—
	IS PIT OPEN?										
	IS GATE VALVE OPEN?	C	C	C	C	C	C	C	C	C	C

EXTRA NOTES: *THIS WAS PART OF MY ANNUAL PLANT MAINT PERFORMED

TECHS: M. TERRIS
DATE(S): 12/30/24 (MON)

EXTRACTION WELL MAINTENANCE QUARTERLY INSPECTION

TASK	MAINTENANCE	CP-S1	CP-S4	CP-S5	CP-S6	CP-E1	CP-E2	CP-E3	CP-W1	CP-W2	CP-W3
SUMP:											
	VERIFY HI FLOAT ALARM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CLEAN AS NEEDED (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	UNABLE TO VERIFY RADIO SYSTEM DOWN										
VFD:											
	CLEAN FILTER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT WIRING/COMPONENTS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	GOOD SHAPE										
PIPING: 1/7/25 CC											
	EXERCISE GATE VALVE (2X)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT PIPING FOR LEAKS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT AIR/VAC VALVE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	INSPECTED WHILE SAMPLE EVENT CC										
PIT: 1/7/25 CC											
	INSPECT FOR LEAKS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK ZERO READING	—	—	—	—	—	—	—	—	—	—
NOTES:	ZERO ONLY ~~ANNUALLY~~ ANNUALLY										
PCP:											
	CLEAN (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT ALL WIRING/RELAYS/COMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK INDICATOR LIGHTS/REPLACE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK SLC/KE CARD LIGHTS BATT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TURN FAN TO WARM/COOL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CLEAN FILTERS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK/TIGHTEN ALL CABLES/RADIO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DESSICANT CHANGE OUT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UPS BATTERY CHECK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	GOOD SHAPE										
VAULT:											
	CLEAN AND INSPECT (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT LADDER BOLTS/RUNGS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT LID BOLTS UPPER/LOWER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK/TIGHTEN MAGNET WELL/LID	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	VAULTS WERE CLEAN OUT BROOM/SWEEP										
FINAL: OPEN WHEN SAMPLING											
	RESET RADIO	—	—	—	—	—	—	—	—	—	—
	RESET WELL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	IS PIT OPEN?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	IS GATE VALVE OPEN?	C	C	C	C	C	C	C	C	C	C

EXTRA NOTES:

TECHS: M. TERRIS

DATE(S): 4/23/25

EXTRACTION WELL MAINTENANCE

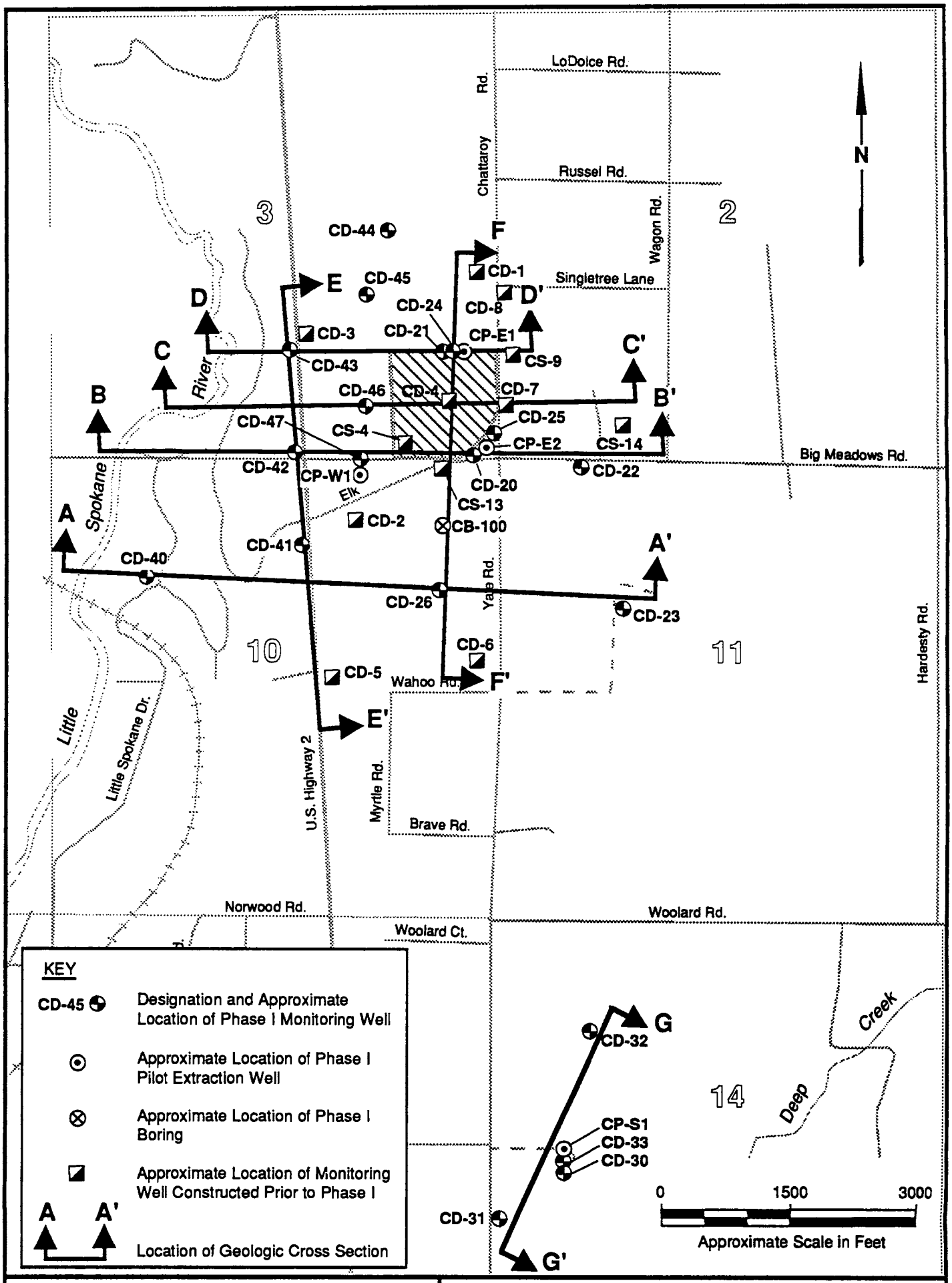
QT ✓ AND CLEAN 4/2025

TASK	MAINTENANCE	CP-S1	CP-S4	CP-S5	CP-S6	CP-E1	CP-E2	CP-E3	CP-W1	CP-W2	CP-W3
SUMP:											
	VERIFY HI FLOAT ALARM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	CLEAN AS NEEDED (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:											
VFD:											
	CLEAN FILTER	W	W	W	W	W	W	W	W	W	W
	INSPECT WIRING/COMPONENTS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	W = WASHED CLEAN WATER										
PIPING:											
	EXERCISE GATE VALVE (2X)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT PIPING FOR LEAKS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT AIR/VAC VALVE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	CLOSED ALL VALVES AFTER EXCERCISED										
PIT:											
	INSPECT FOR LEAKS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK ZERO READING	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOTES:											
PCP:											
	CLEAN (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT ALL WIRING/RELAYS/COMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK INDICATOR LIGHTS/REPLACE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK SLC/KE CARD LIGHTS BATT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TURN FAN TO WARM/COOL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CLEAN FILTERS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK/TIGHTEN ALL CABLES/RADIO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DESSICANT CHANGE OUT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UPS BATTERY CHECK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:	WILL NEED TO CHANGE BATT. THIS SUMMER EVERYTHING LOOK GREAT UPS / SLC										
VAULT:											
	CLEAN AND INSPECT (SHOPVAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT LADDER BOLTS/RUNGS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	INSPECT LID BOLTS UPPER/LOWER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CHECK/TIGHTEN MAGNET WELL/LID	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTES:											
FINAL:											
	RESET RADIO	NA	NA	NA	NA	✓	✓	✓	✓	✓	✓
	RESET WELL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	IS PIT OPEN?	C	C	C	C	C	C	C	C	C	C
	IS GATE VALVE OPEN?	C	C	C	C	C	C	C	C	C	C

EXTRA NOTES: ANNUAL MAINT WILL BE PERFORMED IN JULY ON ALL EXTRACTION WELLS

Appendix D

Colbert Landfill Hydrogeologic Cross-sections



LANDAU ASSOCIATES, INC.

Geologic Cross Section Location Map

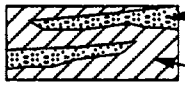
124-01.61 Spokane Co./Colbert Landfill/RD/RA Phase I /Final Engineering Report 12/91

Figure ER-4.1

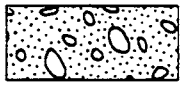
KEY TO GEOLOGIC CROSS SECTIONS

Fluvial sands, silts and gravels

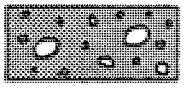
Upper Sand/Gravel Unit (Unit A), composed of gravelly, fine to coarse sand



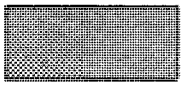
Lacustrine Unit (Unit B), composed of silt and clay with interbedded fine sand



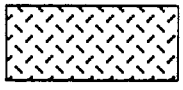
Lower Sand/Gravel Unit (Unit C), composed of gravelly, fine to coarse sand



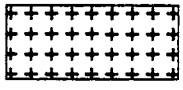
Weathered Latah Subunit (Unit D_1), composed of gravelly (basalt) silt and clayey silt



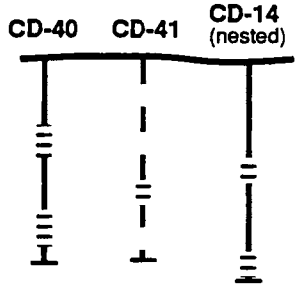
Latah Formation (Unit D), composed of silt, clayey silt and fine sand



Basalt Unit (Unit E), composed of highly fractured to massive Basalt rock

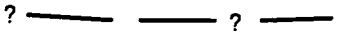


Granite Unit (Unit F), composed of Pre-Tertiary granitic rock, highly weathered with zones encountered during Phase I

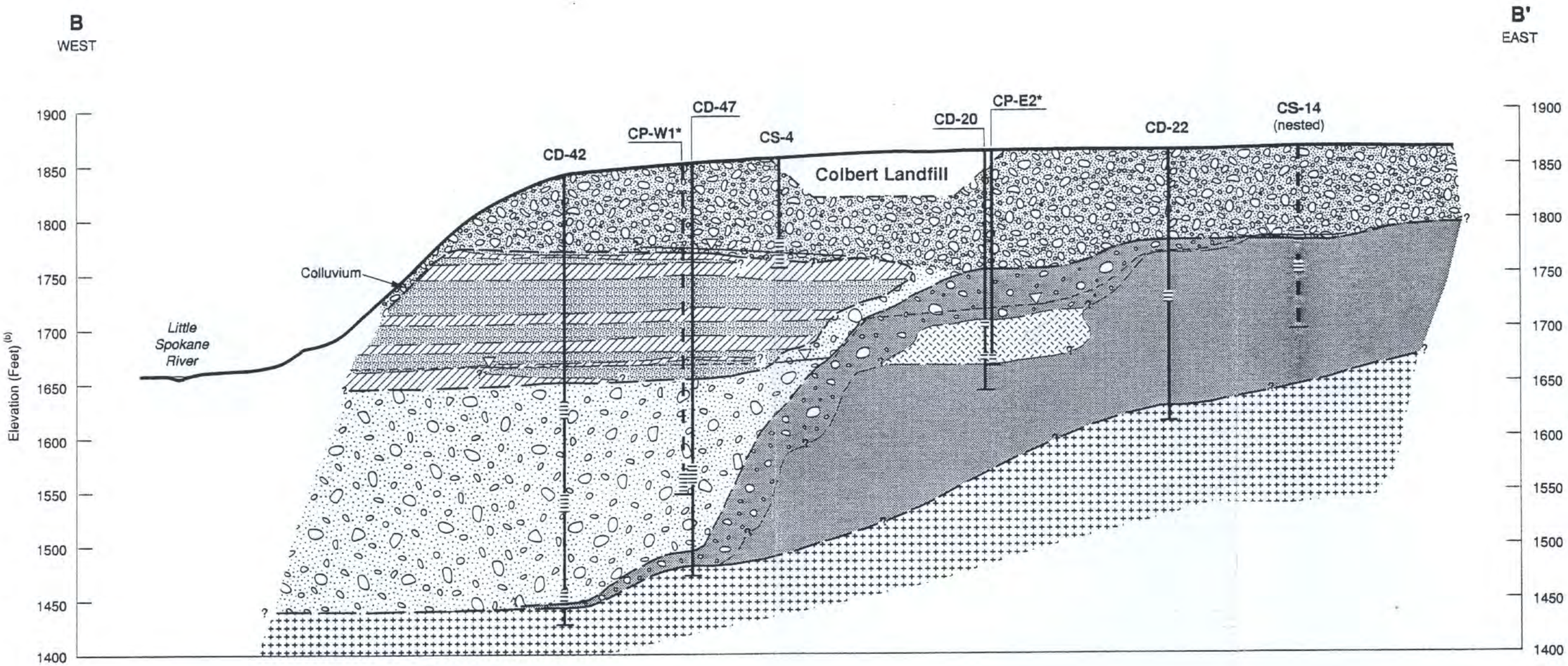


Approximate location and number of monitoring well cluster, with screen intervals shown for individual monitoring wells. Projected boring logs have dashed lines. Nested wells are noted, and screen intervals shown.

Ground water elevation line, dashed when representing a piezometric surface in a confined aquifer



Contact between stratigraphic units; question marks indicate contact projection based on limited data



Notes: a) Subsurface profiles shown have been generalized from data obtained during Phase I and other Site investigations. Variations between this profile and the actual soil conditions may be encountered. The boring logs and the discussion in the text of this Report must be referenced for a proper understanding of the nature of subsurface materials.

b) All elevations in feet above mean sea level (MSL) based on 1929, National Geodetic Vertical Datum.

* Pilot Well included in cross section to show screen interval, geologic information is based on adjacent monitoring well boring data.

0 600 1200

Approximate Scale in Feet

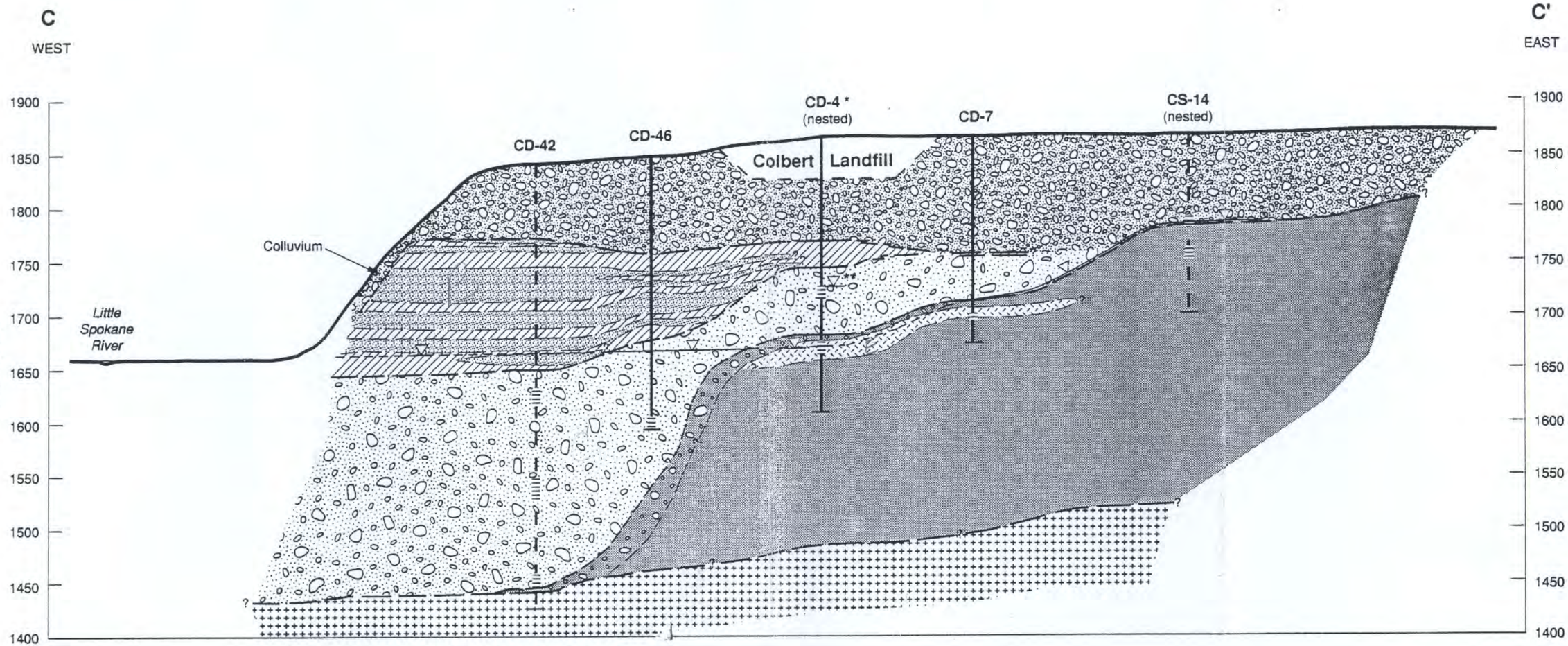
Vertical Scale Exaggeration: 6x

LANDAU ASSOCIATES, INC.

Geologic Cross Section B-B'

Figure ER-4.4

124-01 61 Spokane Co./Colbert Landfill/RD/RA Phase I/Final Engineering Report 12/91



Notes: a) Subsurface profiles shown have been generalized from data obtained during Phase I and other Site investigations. Variations between this profile and the actual soil conditions may be encountered. The boring logs and the discussion in the text of this Report must be referenced for a proper understanding of the nature of subsurface materials.

b) All elevations in feet above mean sea level (MSL) based on 1929, National Geodetic Vertical Datum.

* Well drilled by air rotary; detailed geology not identified in Lacustrine Aquitard Unit.
** Ground water in CD-4(U) appears to be perched. However, an underlying aquitard is not identified on the boring log.

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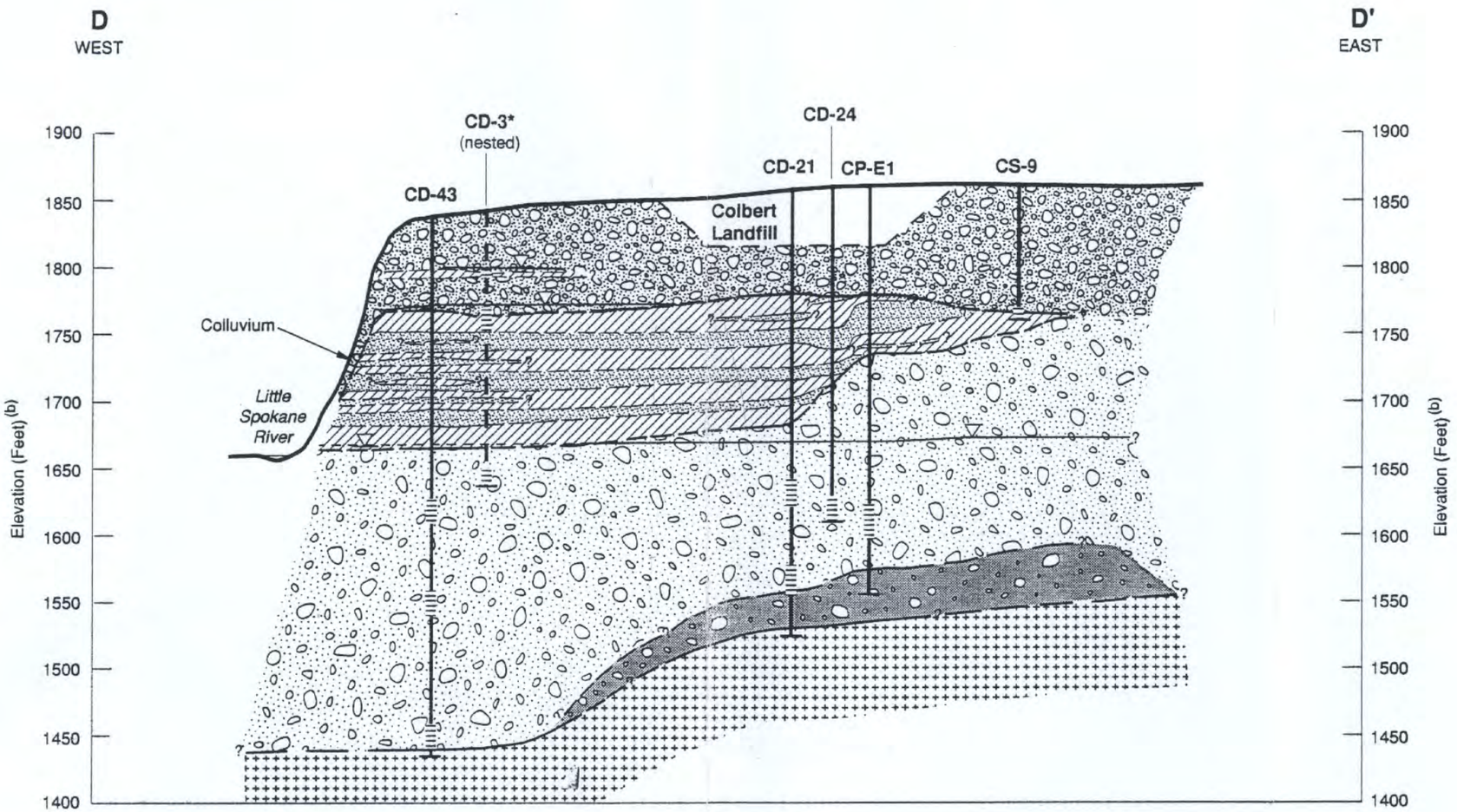
Geologic Cross Section C-C'

Figure ER-4.5



Notes: a) Subsurface profiles shown have been generalized from data obtained during Phase I and other Site investigations. Variations between this profile and the actual soil conditions may be encountered. The boring logs and the discussion in the text of this Report must be referenced for a proper understanding of the nature of subsurface materials.

b) All elevations in feet above mean sea level (MSL) based on 1929, National Geodetic Vertical Datum.

0 600 1200
Approximate Scale in Feet
Vertical Scale Exaggeration: 6x

* Well drilled by air rotary; detailed geology in Lacustrine Aquitard Unit based on CD-43 boring data.

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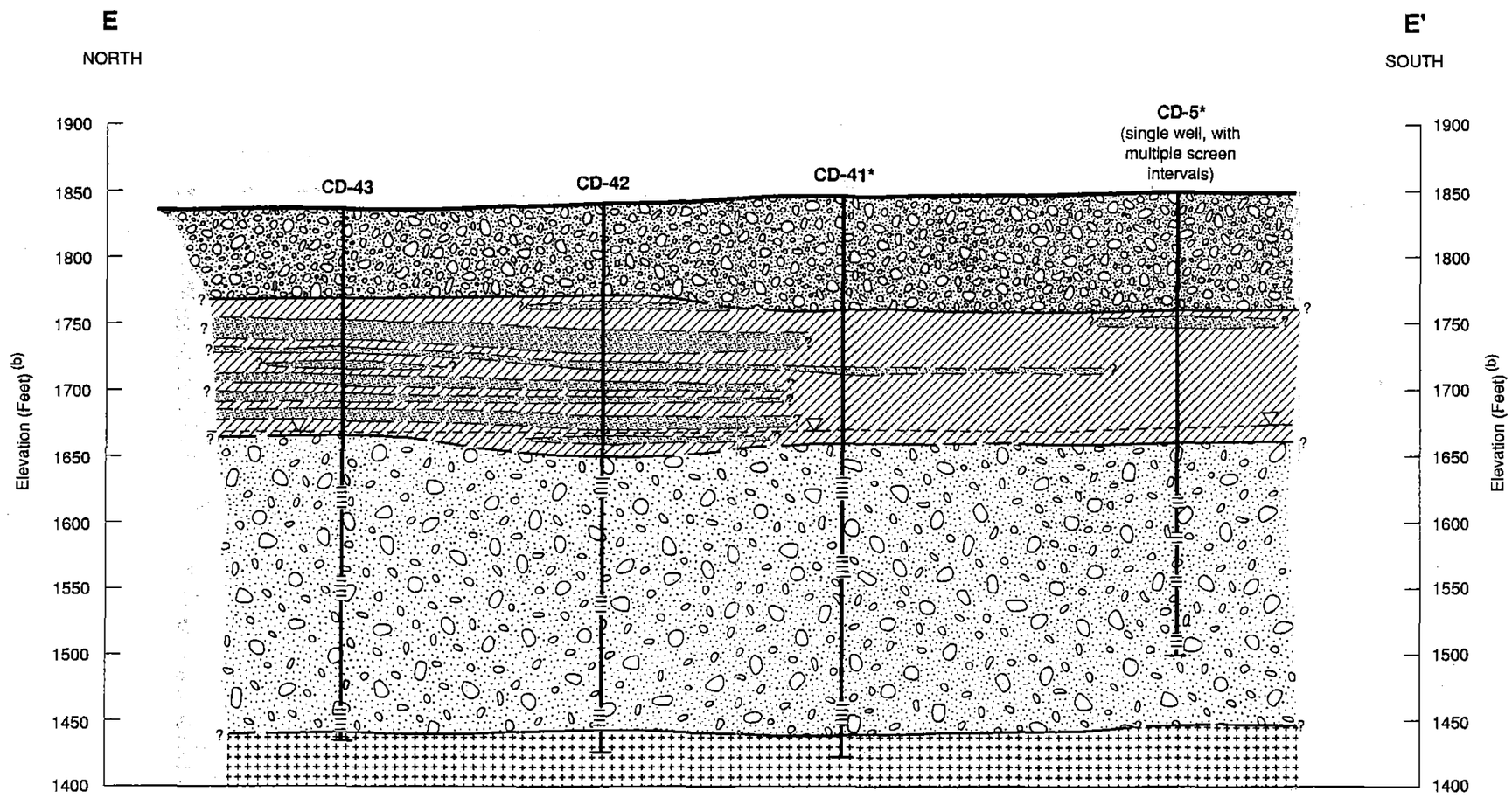
LANDAU ASSOCIATES, INC.

Geologic Cross Section D-D'

Figure ER-4.6



Notes: a) Subsurface profiles shown have been generalized from data obtained during Phase I and other Site investigations. Variations between this profile and the actual soil conditions may be encountered. The boring logs and the discussion in the text of this Report must be referenced for a proper understanding of the nature of subsurface materials.

b) All elevations in feet above mean sea level (MSL) based on 1929, National Geodetic Vertical Datum.

0 600 1200
Approximate Scale in Feet
Vertical Scale Exaggeration: 6x

* Well drilled by air rotary; detailed geology not identified in Lacustrine Aquitard Unit.

124-01.61 Spokane Co./Colbert Landfill/RD/RA Phase I/Final Engineering Report 12/91

LANDAU ASSOCIATES, INC.

Geologic Cross Section E-E'

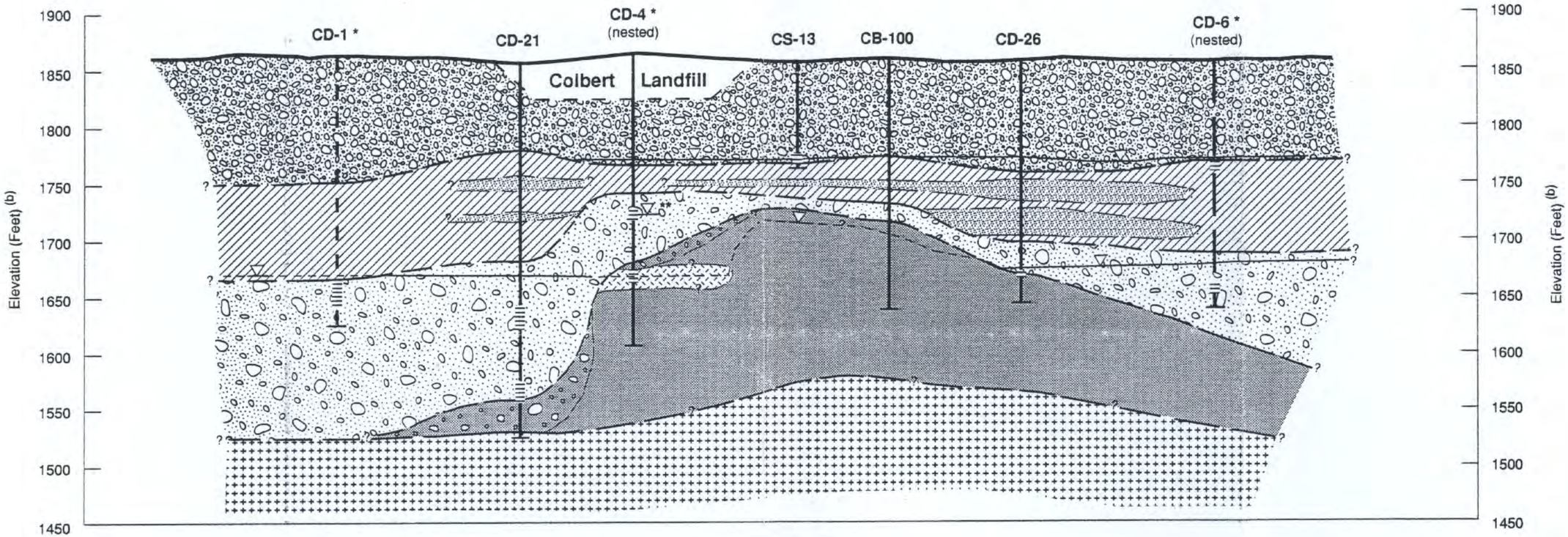
Figure ER-4.7

F

NORTH

F'

SOUTH



Notes: a) Subsurface profiles shown have been generalized from data obtained during Phase I and other Site investigations. Variations between this profile and the actual soil conditions may be encountered. The boring logs and the discussion in the text of this Report must be referenced for a proper understanding of the nature of subsurface materials.

b) All elevations in feet above mean sea level (MSL) based on 1929, National Geodetic Vertical Datum.

0 600 1200

Approximate Scale in Feet

Vertical Scale Exaggeration: 6x

* Well drilled by air rotary; detailed geology not identified in Lacustrine Aquitard Unit.

** Ground water in CD-4(U) appears to be perched. However, an underlying aquitard is not identified on the boring log.

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Geologic Cross Section F-F'

Figure ER-4.8